

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 December 2011


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Executive summary

This is the fortieth 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 December 2011 to 31st December 2011. Construction of retaining walls TR2 & TR3, construction of inclined no-fines / mass concrete walls, construction of additional boulder trap, construction of gabion wall TG 3B, construction of footing and abutment of footbridges TB 03, TB 05 and TB 06 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 monitoring was scheduled on 16th & 19th January 2012. The summary of ecological site inspection findings and implementation status of environmental protection and mitigation for ecology, prepared by the Ecologist, are provided in table 6.2 and Appendix G respectively.

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

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

There was no non-compliance events recorded in this reporting month.

A complaint incident regarding dust emission and earth deposition to public area was referred by EPD on 1st December 2011. 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.

Construction of retaining walls TR 2 & TR 5, additional boulder trap, gabion wall TG 3B, footing & abutment of footbridge TB 03, TB 04 & TB 07 and demolition of the temporary check dam would be carried out in the upcoming month.

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

1.0 Introduction

This is the fortieth 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 December 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 starts from Ta Tit Yan of Yai Mo Shan, flows from southeast to northeast alongside Wilson Trail, turning northward before joining the Lam Tsuen River and then runs towards Tai Po Market. For the east of the river, there are active and abandoned cultivated lands. 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

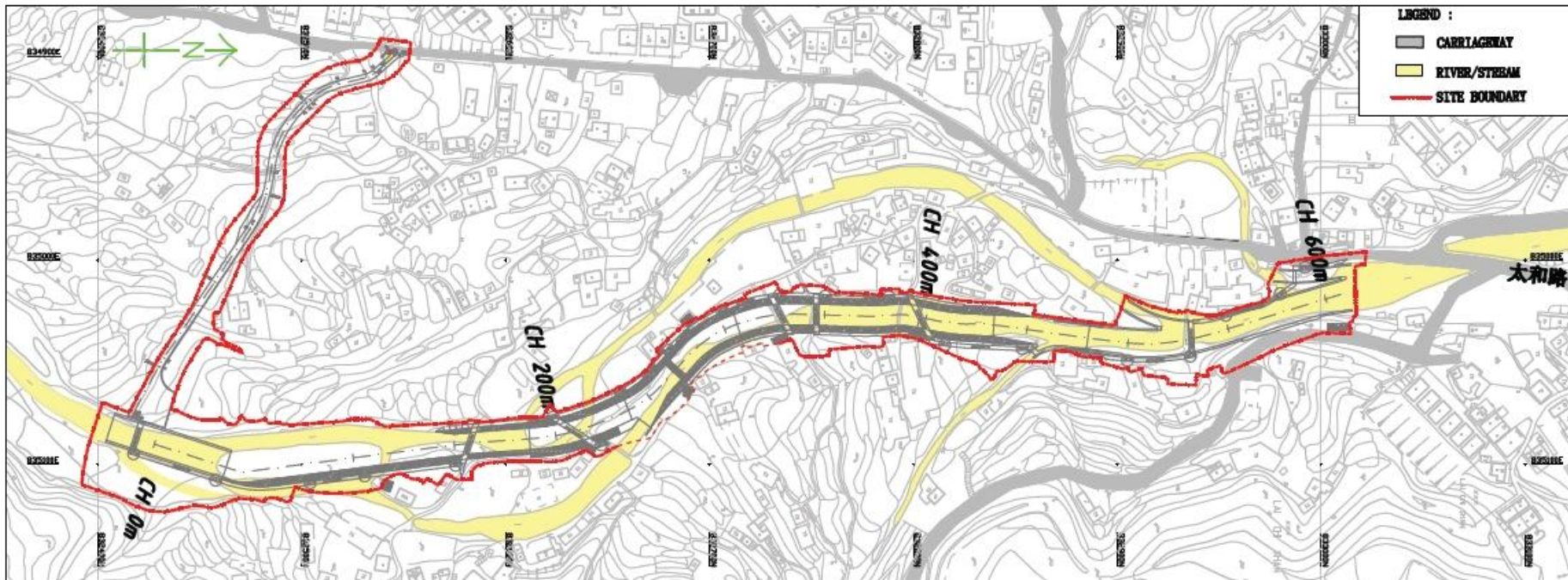
The construction of the proposed improvement works for Upper Tai Po River has been commenced on September 15th 2008 and anticipated to complete in April 2012.

2.3 Proposed construction sequences

The proposed construction sequences are shown in the following:

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

Fig 2.1 Layout of construction area



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 walls TR2 & TR3
- 2.) Construction of inclined no-fines / mass concrete walls
- 3.) Construction of additional boulder trap
- 4.) Construction of gabion wall TG 3B
- 5.) Construction of footing and abutment of footbridges TB 03, TB 05 and TB 06

2.5 Construction activities for the next reporting period

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

- 1.) Construction of retaining walls TR 2 & TR 5
- 2.) Additional boulder trap, gabion wall TG 3B
- 3.) Footing & abutment of footbridge TB 03, TB 04 & TB 07
- 4.) Demolition of the temporary check dam

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

A complaint incident regarding dust emission and earth deposition to public area was referred by EPD on 1st December 2011. ET has conducted investigations with representatives from Contractor on 5th December 2011 and recommendations were given to the contractor and mitigation measures were implemented to minimize environmental impacts generated from project works. In total, twenty-two 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 monitoring was scheduled on 16th & 19th January 2012.

4.0 Noise monitoring results

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

TABLE 4.1 Description of Noise Sensitive Receivers

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. The scheduled monitoring dates were 2nd, 9th, 16th, 23rd and 30th December 2011. Measured $L_{eq(30min)}$ results ranged from 45.8dB(A) to 71.0dB(A).

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

5.0 Vibration monitoring results

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

6.0 Environmental issues and actions

6.1 Site inspections and key environmental issues

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

Within this reporting month, site inspections were conducted on 1st, 7th, 14th, 22nd and 28th December 2011. A detailed checklist of each site inspections together with comments and relevant photos have been filed and kept for record. The findings from inspections were summarized in Table 6.1.

Ecological inspections by the Ecologist Dr. Mark Shea were carried out on 5th, 12th, 19th, 28th and 31st December 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
6 Oct 11	Noise barriers were not yet erected by Contractor along UTPR.	Observation	Since more frequent construction works is expected in dry season, serious noise nuisance may be generated to the village nearby. Contractor was urged to install noise barriers to minimize the noise impact arisen from construction activities.	To be followed during the next reporting period.	Ongoing	--
26 Oct 11	The roots of trees was observed to be damaged by construction activities at approximate ch.400.	Observation	Contractor was reminded to provide proper measures for protecting the trees within the site. Contractor was advised to rectify the discrepancy as soon as possible.	The exposed tree roots at approximate ch.400 of UTPR were restored	1 Dec 11	--
16 Nov 11	Cement bags was found near the river at ch.450 of UTPR.	Observation	Contractor was urged to remove the cement bags away from river channel to prevent river contamination and assign proper location for storage.	The Cement bags placed near the river at ch.450 were removed.	7 Dec 11	--
24 Nov 11	Earthy stockpile was observed at ch.50.	Observation	Contractor was advised to cover the stockpile to avoid air pollution and surface runoff.	The earthy stockpile at ch.50 of UTPR was removed by Contractor.	14 Dec 11	--
24 Nov 11	Overflow of river water and construction vehicle operating within the river were observed at ch.500, which seriously contaminated the river	Observation	Contractor was urged to provide proper maintenance to the river channel and proper access for the vehicles to avoid further contamination to the river.	The river bank was maintained and no construction vehicle operating within the river was observed.	1 Dec 11	--
24 Nov 11	Muddy waters and muddy surface runoff	Observation	Contractor was advised to cover exposed soil of the	Geo-textile covering for river bank was provided	1 Dec 11	--

Date	Findings	Identification	Advice from ET	Action taken	Closing date	Remarks
	from exposed river banks were observed near ch.200 and ch.400 of UTPR which polluting the river quality of downstream.		river bank with geo-textile to avoid soil erosion and surface runoff. Contractor was also reminded to provide treatment to muddy water and muddy surface runoff before discharging into the river.	at ch.200 and ch.400. No muddy waters and muddy surface runoff was observed.		
1 Dec 11	Fuel container without secondary containment measure and oil stain on ground was observed at ch.0.	Observation	Contractor was advised to provide drip tray for fuel container storage to avoid soil or river contamination and remove the contaminated soil as chemical waste.	The fuel container was removed.	14 Dec 11	--
1 Dec 11	The haul road of UTPR was very dry and dusty .	Observation	Contractor was reminded to provide water spraying for dust suppression.	Water spraying was being carried out on the haul road for dust suppression.	14 Dec 11	--
1 Dec 11	Wire was hanged on a retaining tree and a hoarding was attached on that tree at ch.300.	Observation	Contractor was advised to remove the wire and relocate the hoarding to avoid damage on the retaining tree.	The wire tied on the retaining tree at ch.300 was removed.	7 Dec 11	--
7 Dec 11	Construction material was stockpiled near a retain tree and wire was tied on the tree at ch.400. Also, tree protective net was missed.	Observation	Contractor was advised to set up tree protection zone by erecting fencing at dripline. No stockpile inside the protection zone was allowed.	As reported by Contractor, the retain trees (No. B117 & B117) were not inside the site boundary. Contractor was reminded to provide necessary protective measure for the retain tree to avoid damage on the trees.	14 Dec 11	--
7 Dec 11	A fuel container was observed without secondary containment at ch.550.	Observation	Contractor was reminded to provide drip tray for the fuel container to provide oil leakage and soil contamination.	The fuel container was removed.	14 Dec 11	--
7 Dec 11	Wrapping of breaker tips and water spraying were missing for the rock breaking activities at ch.0.	Observation	Contractor was urged to wrap the breaker tips with acoustic material and provide water spraying to minimize noise and dust impacts to the near sensitive receivers.	To be followed during the next reporting period.	Ongoing	--
7 Dec 11	Construction equipments and materials were placed on the river banks and in the river channel at ch.450.	Observation	Contractor was urged to remove the equipments and materials and assign a temporary storage area which away from the river channel to maintain good housekeeping and prevent river contamination.	The construction equipments and materials placed on the river banks and in the river channel at ch.450 were removed	14 Dec 11	--
14 Dec 11	The tree protective net was broken at ch.0.	Observation	Contractor was reminded to repair the protective net as soon as possible.	The tree protective net was at ch.0 was repaired by Contractor	22 Dec 11	--
14 Dec 11	Muddy water was observed at ch.500	Observation	Contractor was advised to cover exposed river banks	Earth bunds were formed and no muddy	22 Dec 11	--

Date	Findings	Identification	Advice from ET	Action taken	Closing date	Remarks
	which potentially caused by soil erosion.		and soil by impervious sheeting to prevent surface runoff and erosion. Also, Contractor was reminded to provide sedimentation tank for treating the contaminated site water before discharge into water body.	water and surface runoff was observed at ch.500		
22 Dec 11	Oil stain was observed at ch.0.	Observation	Contractor was reminded to remove the contaminated soil as chemical waste and provide regular maintenance for the construction machine.	To be followed during the next reporting period.	Ongoing	--
22 Dec 11	Construction waste was observed near the river channel at ch.100.	Observation	Contractor was recommended to remove the waste as soon as possible and assign designated area for temporary storage of construction material and waste.	To be followed during the next reporting period.	Ongoing	--
22 Dec 11	The haul road along UTPR was very dry and dusty.	Observation	Contractor was advised to provide regular water spraying for dust suppression.	To be followed during the next reporting period.	Ongoing	--
28 Dec 11	The tree protective nets were observed to be damaged by construction material at ch.0.	Observation	Contractor was recommended to repair the net immediately for proper tree protection. Contractor was also reminded to avoid carrying out construction activities and stockpiling near the tree protection zone.	To be followed during the next reporting period.	Ongoing	--
28 Dec 11	General waste was found inside the river channel at ch.200.	Observation	Contractor was recommended to remove the waste as soon as possible and assign designated area for temporary storage of construction material and waste.	To be followed during the next reporting period.	Ongoing	--
28 Dec 11	Wrapping of breaker tips and water spraying were missing for the rock breaking activities at ch.500.	Observation	Contractor was urged to wrap the breaker tips with acoustic material and provide water spraying to minimize noise and dust impacts to the near sensitive receivers.	To be followed during the next reporting period.	Ongoing	--
28 Dec 11	Muddy water was observed to be entering into the river directly at ch.100.	Observation	Contractor was urged to provide sandbag barriers to stop muddy water and surface runoff further entering the river. Contractor was seriously reminded to provide sedimentation tanks for proper water treatment and discharge.	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.

Table 6.2 Summary results of ecological site inspection findings				
Date	Observations	Advice from Ecologist	Action Taken	Closing Date
5 December 2011	No Major findings for this inspection	No Advice is required	No Action is required to be taken	N/A
12 December 2011	No Major findings for this inspection	No Advice is required	No Action is required to be taken	N/A
19 December 2011	No Major findings for this inspection	No Advice is required	No Action is required to be taken	N/A
28 December 2011	No Major findings for this inspection	No Advice is required	No Action is required to be taken	N/A
31 December 2011	No Major findings for this inspection	No Advice is required	No Action is required to be taken	N/A

6.2 Non-compliance

There was no non-compliance events recorded in this reporting month.

6.3 Recommendations

Contractor was reminded that all the measures stated in the Environmental Permit should be followed. Contractor was advised that excavation work shall be carried out in sections and in enclosed dewatered condition. Dewatering of the excavation area should be carried out prior to excavation work. All site water shall be well de-silted and treated before discharge. Also, sufficient temporary earth bunds and barriers should be used to entirely enclose the excavation area and exposed slope surface should be covered (e.g. by tarpaulin sheet) to prevent river contamination. Contractor was reminded that discharge of contaminated water is an environmental offence and should be prohibited.

Chemicals using on site should be provided with proper drip tray as to avoid chemical spillage from causing contamination to surrounding area. Powered equipment should be serviced regularly as to maintain good condition and minimize oil leakage. Contractor should also implement necessary measures to mitigate air quality impact from construction works. Earthy stockpiles should be covered with tarpaulin

coverings and dusty static area should be dampened regularly for dust suppression.

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

6.4 Implementation status and effectiveness of the mitigation measures

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.

7.0 Waste management status

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

From the report of Contractor, all the C&D materials generated were reused at Lam Tsuen River for rock filling. No inert waste was disposed from the Project. The non-inert waste was sent to the North East New Territories (NENT) Landfill. Chemical waste were first collected by a black plastic bag with labeling (collection point, chemical name, producer's name), then placed into the Chemical Storing Area for temporary storage. A licensed collector was appointed for the collection and disposal of the chemical waste. All chemical waste was transported to the Chemical Waste Treatment Centre (CWTC). The following table showed the amount of waste generation, reused and disposed from this project site in this reporting month.

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

Table 7.1 Summary of Waste generated and disposed in December 2011

Type of waste	Amount generated	Amount reused	Amount disposed
Inert waste	877 m ³	877 m ³	0 m ³
Non-inert waste	45 kg	0	45 kg
Chemical waste	1 kg	N/A	1 kg

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

Construction of retaining walls TR 2 & TR 5, additional boulder trap, gabion wall TG 3B, footing & abutment of footbridge TB 03, TB 04 & TB 07 and demolition of the temporary check dam would be carried out in the upcoming month. The construction activities for these items will generate environmental impacts in several aspects.

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

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

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

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

10.0 Conclusion

Construction of retaining walls TR2 & TR3, construction of inclined no-fines / mass concrete walls, construction of additional boulder trap, construction of gabion wall TG 3B, construction of footing and abutment of footbridges TB 03, TB 05 and TB 06 were the major site activities being carried out in this reporting period.

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

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

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

From the summary of ecological site inspection findings and implementation status of environmental protection and mitigation for ecology, prepared by the Ecologist Dr. Mark Shea, there is no abnormal finding observed in the reporting month. The ecologist has no further advice and no action suggested to the contractor. The next ecological impact monitoring was schedule on 16th & 19th January 2012

There was no non-compliance events recorded in this reporting month.

An environmental complaint regarding dust emission and earth deposition to public area 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	64.3	67.4	54.5	2-Dec-11	15:04-15:34	Rock transfer	- Background noise - Traffic noise	Sunny	Façade
UTP 2	64.5	70.4	41.9	2-Dec-11	14:32-15:02	Rock breaking	- Background noise - Traffic noise	Sunny	Façade
UTP 3	65.8	65.3	52.7	2-Dec-11	14:00-14:30	Rock breaking	- Background noise	Sunny	Façade
UTP 4	53.7	58.7	38.3	2-Dec-11	12:58-13:28	Rock breaking	- Background noise	Sunny	Façade
UTP 5	56.0	60.9	41.6	2-Dec-11	13:28-13:58	Rock breaking	- Background noise	Sunny	Façade
UTP 6	56.1	58.4	38.6	2-Dec-11	11:30-12:00	N/A	- Background noise	Sunny	Façade
UTP 7	57.0	59.2	47.5	2-Dec-11	11:00-11:30	Rock transfer	- Background noise	Sunny	Façade
UTP 8	64.6	68.0	53.4	2-Dec-11	10:30-11:00	Rock transfer	- Background noise	Sunny	Façade
UTP 9	56.6	59.6	49.6	2-Dec-11	10:03-10:33	Rock breaking	- Background noise	Sunny	Façade
UTP 10	51.1	52.9	34.5	2-Dec-11	9:30-10:00	N/A	- Background noise	Sunny	Façade
UTP 11	52.0	52.9	40.2	2-Dec-11	9:00-9:30	N/A	- 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	61.2	63.0	48.4	9-Dec-11	13:24-13:54	N/A	- Traffic noise - Background noise	Cloudy	Façade
UTP 2	52.1	52.7	39.3	9-Dec-11	12:52-13:22	N/A	- Traffic noise - Background noise	Cloudy	Façade
UTP 3	59.1	60.0	51.2	9-Dec-11	13:56-14:26	Soil transfer	- Background noise	Cloudy	Façade
UTP 4	51.3	54.3	41.6	9-Dec-11	15:00-15:30	Rock breaking	- Background noise	Cloudy	Façade
UTP 5	52.3	55.6	44.3	9-Dec-11	14:28-14:58	Rock breaking	- Background noise	Cloudy	Façade
UTP 6	66.1	71.7	40.3	9-Dec-11	11:30-12:00	Rock breaking	- Background noise	Cloudy	Façade
UTP 7	70.4	67.4	51.0	9-Dec-11	11:00-11:30	Rock breaking Soil transfer	- Background noise	Cloudy	Façade
UTP 8	65.0	69.6	49.3	9-Dec-11	10:30-11:00	Soil transfer	- Background noise	Cloudy	Façade
UTP 9	54.7	57.9	45.7	9-Dec-11	10:00-10:30	Rock breaking	- Background noise	Cloudy	Façade
UTP 10	49.8	53.1	36.2	9-Dec-11	9:28-9:58	N/A	- Background noise	Cloudy	Façade
UTP 11	45.8	46.4	39.9	9-Dec-11	8:53-9:23	N/A	- Background noise	Cloudy	*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	61.3	62.7	50.4	16-Dec-11	13:24-13:54	N/A	-Traffic noise - Background noise	Sunny	Façade
UTP 2	56.8	57.0	42.0	16-Dec-11	12:53-13:23	Soil sorting	-Traffic noise - Background noise	Sunny	Façade
UTP 3	67.8	67.9	52.2	16-Dec-11	13:55-14:25	Rock breaking	- Background noise	Sunny	Façade
UTP 4	61.7	65.7	48.6	16-Dec-11	14:27-14:57	Rock breaking	- Background noise	Sunny	Façade
UTP 5	65.2	68.1	48.3	16-Dec-11	14:57-15:27	Rock breaking	- Background noise	Sunny	Façade
UTP 6	56.3	58.7	39.1	16-Dec-11	11:30-12:00	Soil sorting	- Background noise	Sunny	Façade
UTP 7	64.4	67.6	51.3	16-Dec-11	11:00-11:30	Construction waste sorting	- Background noise	Sunny	Façade
UTP 8	64.4	67.6	53.8	16-Dec-11	10:28-10:58	Cage manufacturing	- Background noise	Sunny	Façade
UTP 9	56.5	57.6	48.8	16-Dec-11	9:58-10:28	N/A	- Background noise	Sunny	Façade
UTP 10	49.3	53.0	40.0	16-Dec-11	9:26-9:56	N/A	- Background noise	Sunny	Façade
UTP 11	51.2	54.2	41.8	16-Dec-11	8:55-9:25	N/A	- 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	63.2	67.7	51.2	23-Dec-11	13:22-13:52	Rock breaking	-Traffic noise - Background noise	Sunny	Façade
UTP 2	64.3	67.3	44.4	23-Dec-11	12:50-13:20	Rock breaking	-Traffic noise - Background noise	Sunny	Façade
UTP 3	58.6	61.0	51.7	23-Dec-11	13:53-14:23	N/A	- Background noise	Sunny	Façade
UTP 4	58.6	61.7	48.8	23-Dec-11	14:53-15:23	Soil sorting	- Background noise	Sunny	Façade
UTP 5	67.8	69.1	49.6	23-Dec-11	14:23-14:53	Soil sorting	- Background noise	Sunny	Façade
UTP 6	58.1	60.4	42.7	23-Dec-11	11:31-12:01	Soil sorting	- Background noise	Sunny	Façade
UTP 7	65.4	69.0	50.5	23-Dec-11	11:01-11:31	Soil transfer	- Background noise	Sunny	Façade
UTP 8	71.0	74.6	58.0	23-Dec-11	10:29-10:59	Soil sorting	- Background noise	Sunny	Façade
UTP 9	65.6	70.0	49.5	23-Dec-11	9:59-10:29	Soil transfer	- Background noise	Sunny	Façade
UTP 10	56.0	58.5	35.1	23-Dec-11	9:27-9:57	N/A	- Background noise	Sunny	Façade
UTP 11	57.7	60.8	39.7	23-Dec-11	8:55-9:25	N/A	- Background noise	Sunny	*Free field

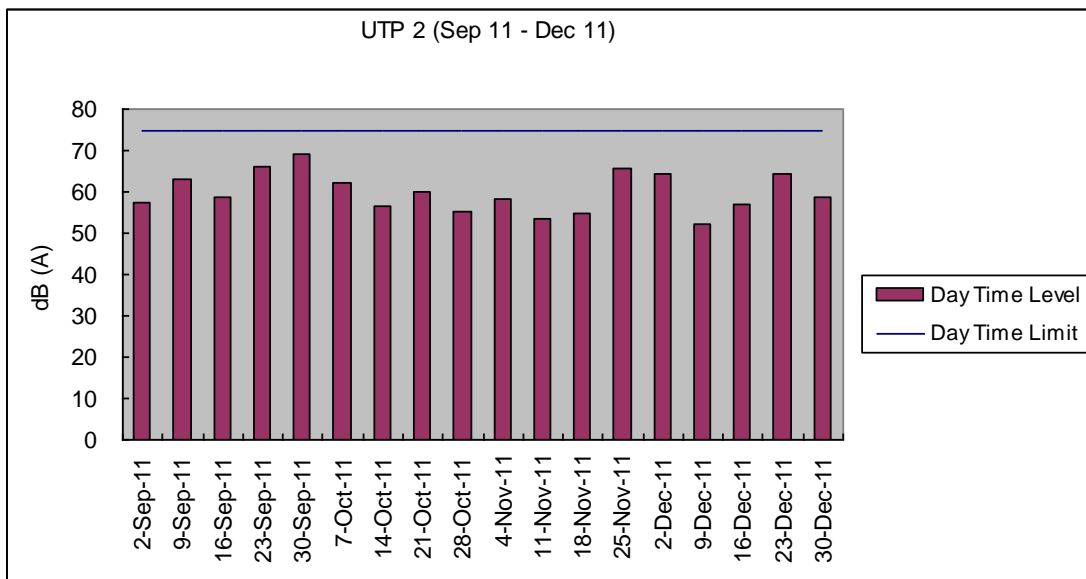
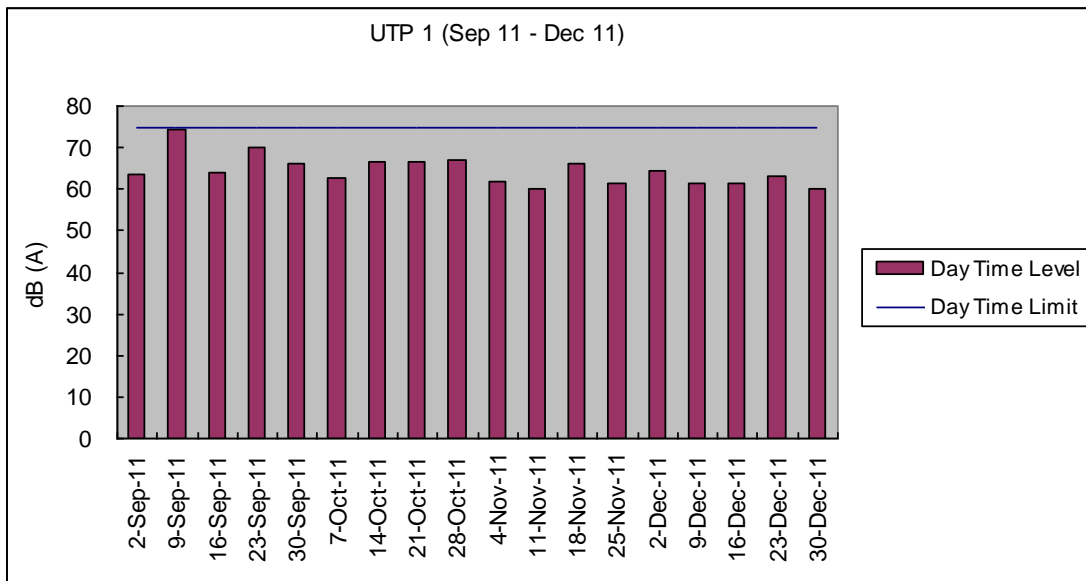
Note* An Additional of 3dB(A) had been added to the measurement result due to Free Field Correction

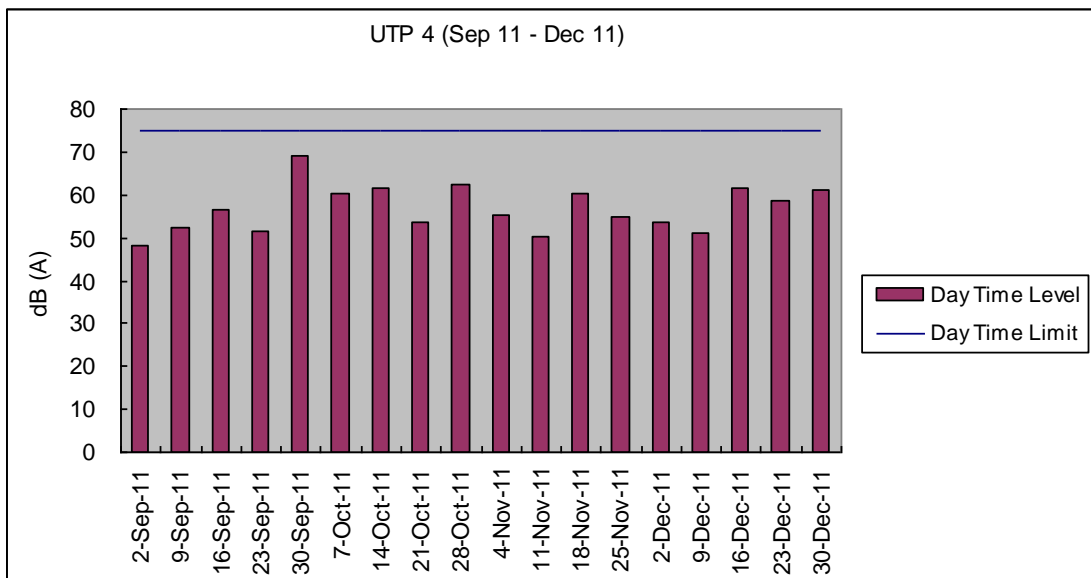
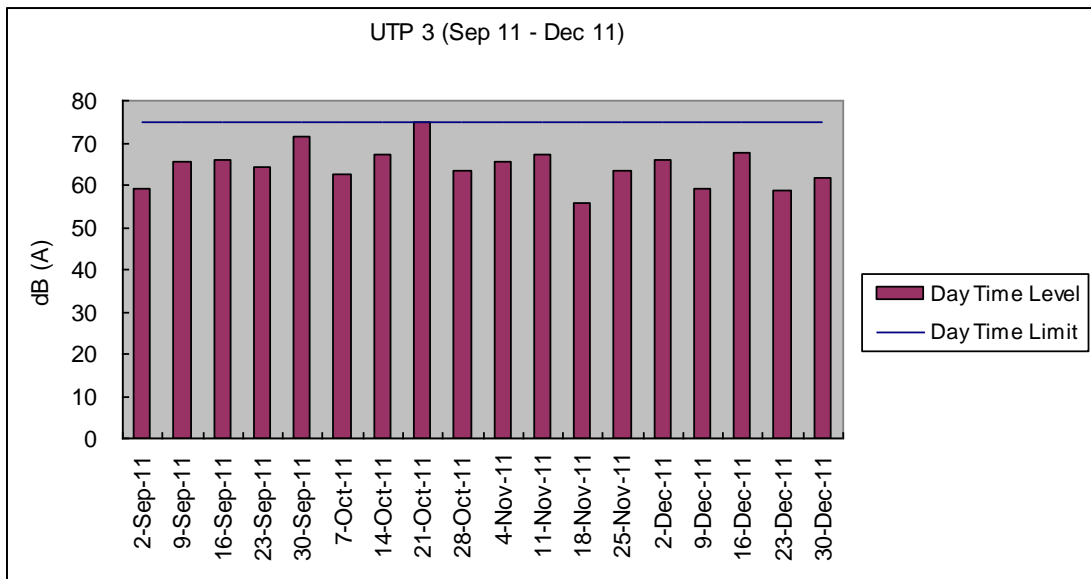
Location	Leq 30min	L ₁₀ 30min	L ₉₀ 30min	Date	Time Duration	Major Construction Noise	Other Noise source	Weather	Location description
UTP 1	60.0	62.6	48.5	30-Dec-11	13:23-13:53	N/A	-Traffic noise - Background noise	Sunny	Façade
UTP 2	58.8	62.7	44.3	30-Dec-11	12:52-13:22	N/A	-Traffic noise - Background noise	Sunny	Façade
UTP 3	61.7	65.9	52.8	30-Dec-11	13:54-14:24	N/A	- Background noise	Sunny	Façade
UTP 4	61.0	65.1	48.2	30-Dec-11	14:55-15:25	Rock Breaking	- Background noise	Sunny	Façade
UTP 5	57.0	60.6	43.4	30-Dec-11	14:25-14:55	Rock Breaking	- Background noise	Sunny	Façade
UTP 6	59.8	60.0	38.8	30-Dec-11	11:32-12:02	Rock Transfer	- Background noise	Sunny	Façade
UTP 7	66.0	63.9	47.2	30-Dec-11	11:02-11:32	N/A	- Background noise	Sunny	Façade
UTP 8	65.0	68.4	55.2	30-Dec-11	10:30-11:00	Rock Transfer	- Background noise	Sunny	Façade
UTP 9	59.4	62.4	47.8	30-Dec-11	10:00-10:30	Rock Transfer	- Background noise	Sunny	Façade
UTP 10	60.6	63.1	39.2	30-Dec-11	9:27-9:57	Rock Breaking	- Background noise	Sunny	Façade
UTP 11	54.0	57.7	39.8	30-Dec-11	8:56-9:26	Rock Breaking	- Background noise	Sunny	*Free field

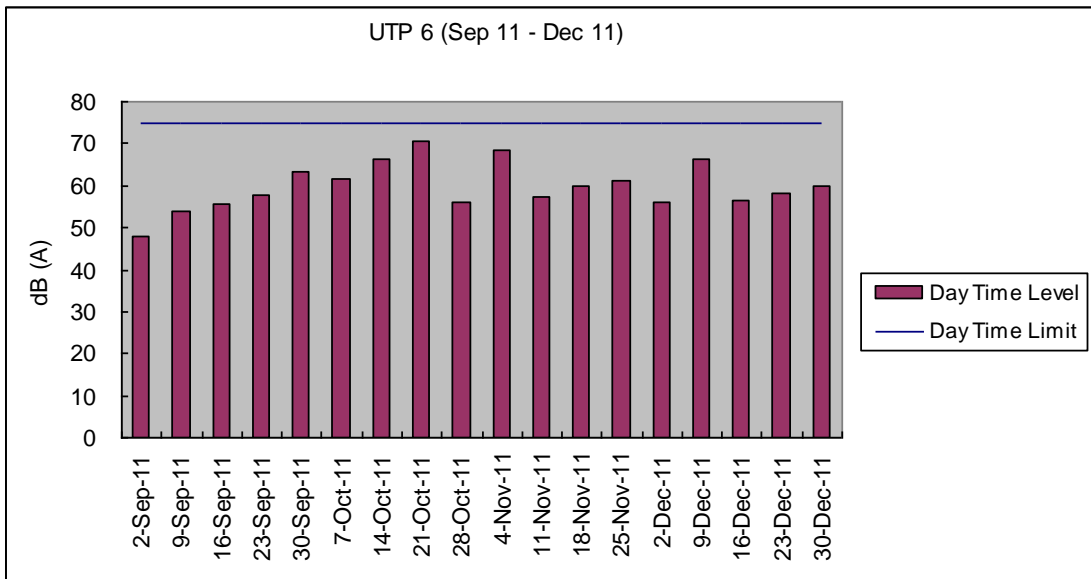
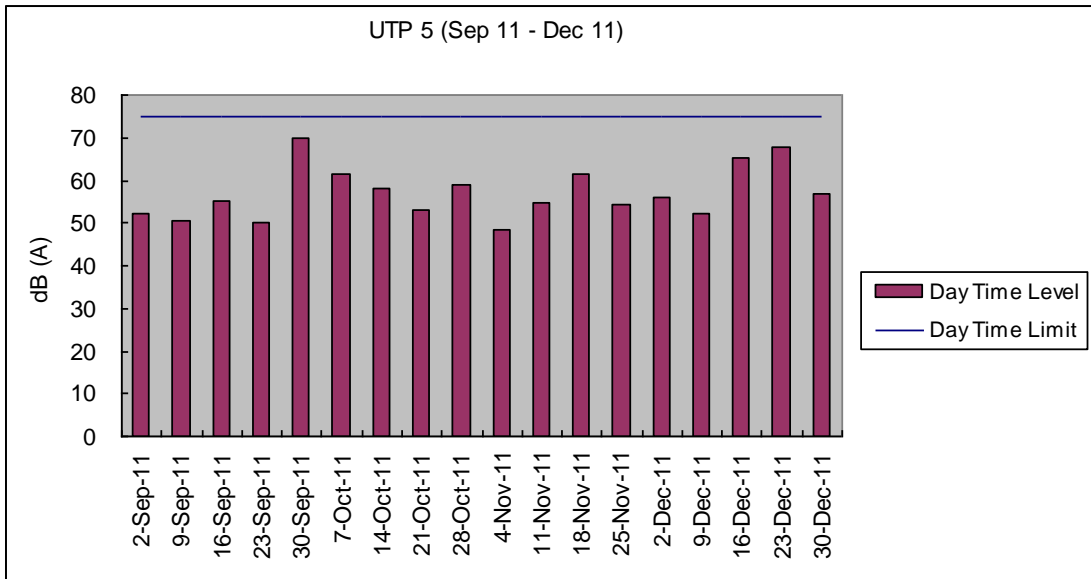
Note* An Additional of 3dB(A) had been added to the measurement result due to Free Field Correction

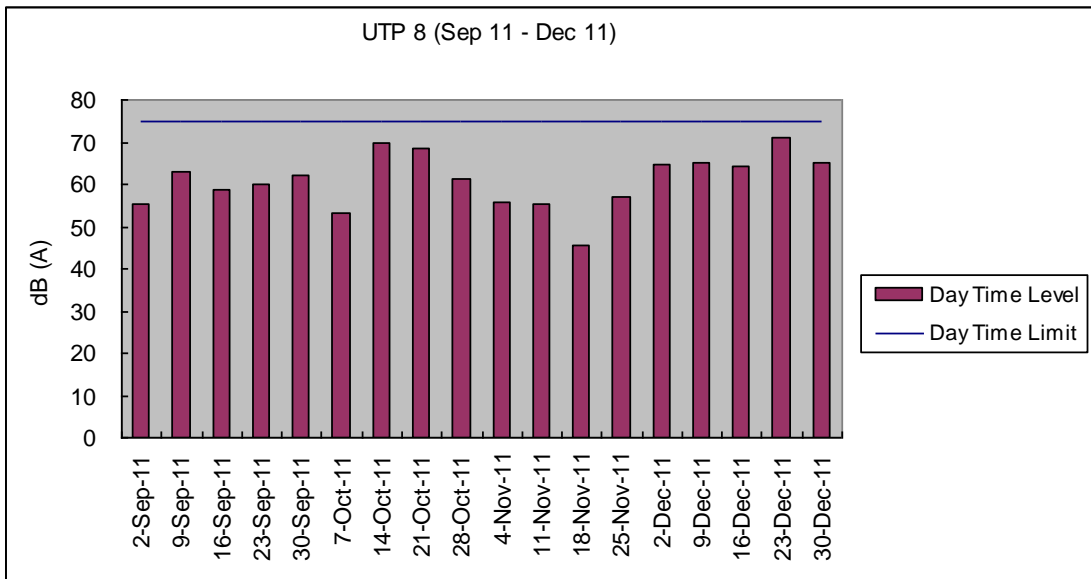
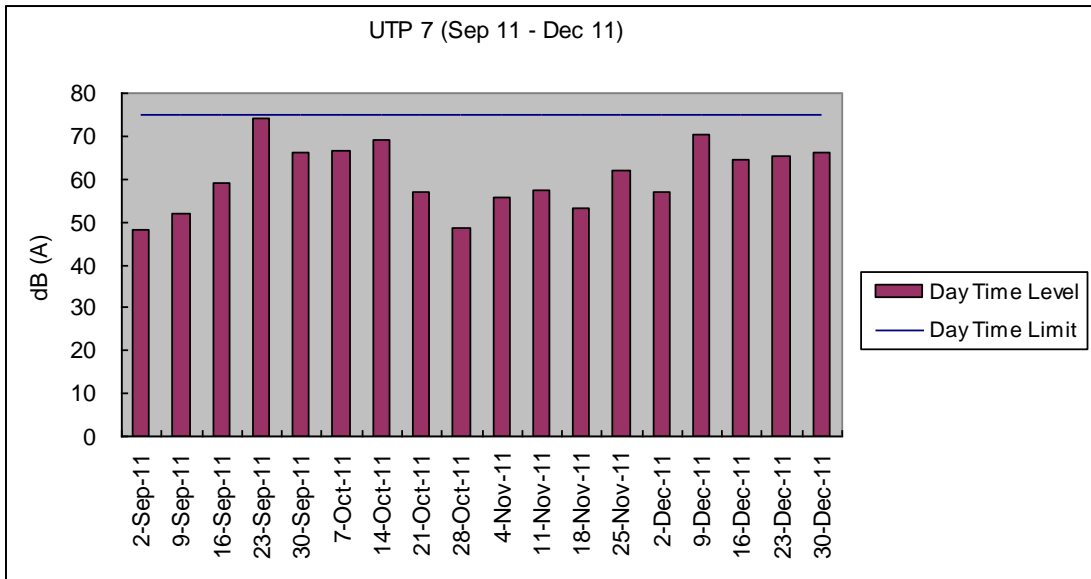
Graphical plot for noise measurements

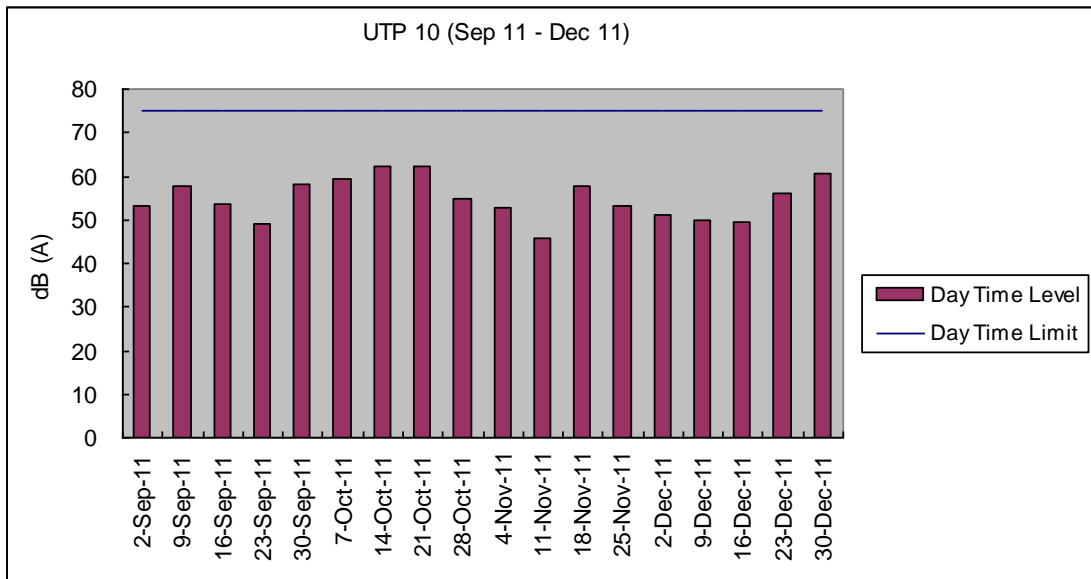
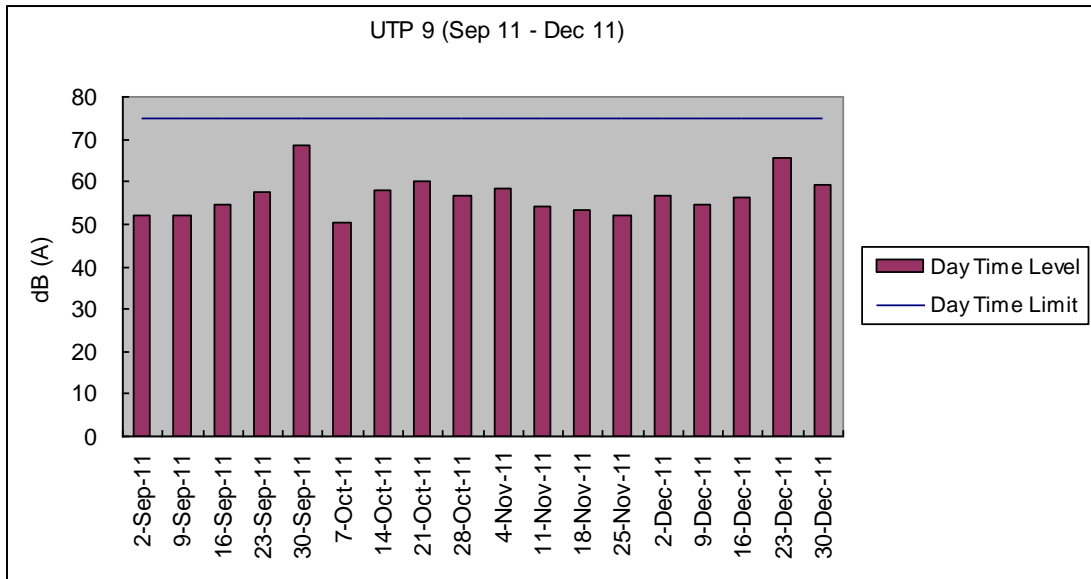
The followings were the graphical plots for the 11 monitoring locations. Each plot showed the date of measurement taken, day time limit of 75 dB(A) as well as the measured daytime level for each location. The graphs contain the data recorded from September 2011 to December 2011.

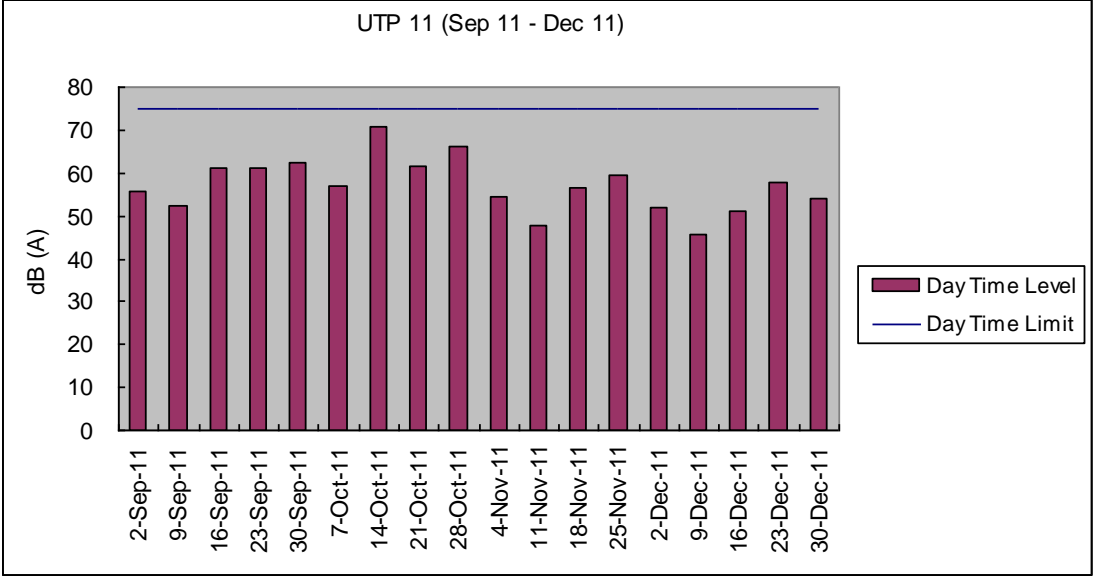


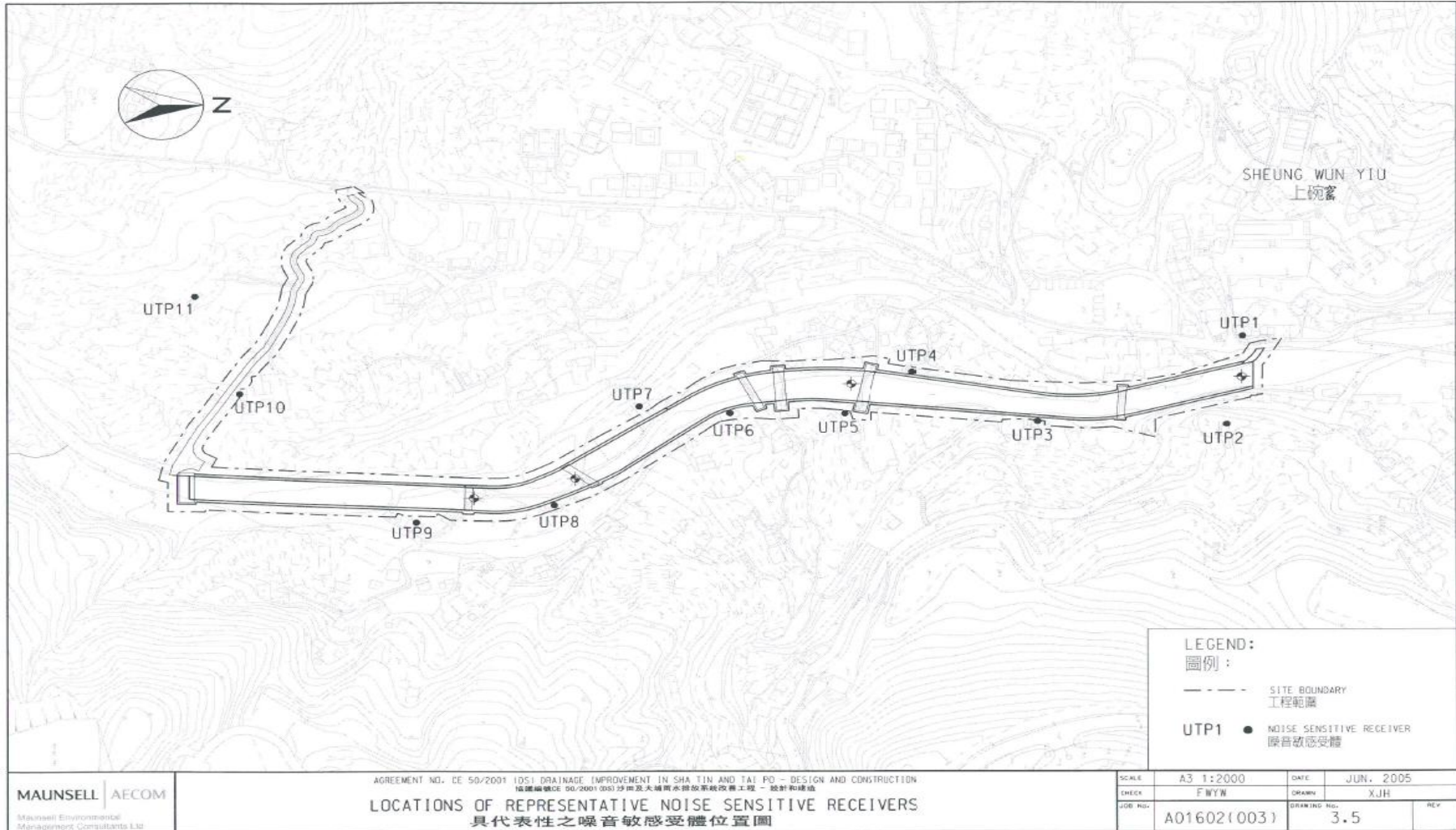












Appendix E: Monitoring schedule for the present and next reporting period

Master Schedule of EM&A works in December 2011

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

Master Schedule of EM&A works in January 2012

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

Appendix F: Cumulative complaint log

Environmental Parameters	Cumulative no. Brought forward	No. of complaint December 2011	Overall Total
Air/Dust	5	1	6
Noise	5	0	5
Water	11	0	11
House Keeping Hygiene	0	0	0
Chemical waste	0	0	0
Total	21	1	22

Appendix G: Implementation status of environmental protection and mitigation measures

Implementation status of environmental protection and mitigation

Environmental Aspect	Protection / Mitigation Measures	Implementation status	Follow-up action
Construction Noise	No percussive piling shall be carried out	Implemented	Not required
	-Use well maintained construction plant	Implemented	Not required
	-Shut down plants between work periods	Implemented	Not required
	-Install silencers on construction equipment	Implemented	Not required
	-Locate mobile plant far away from NSRs	Implemented	Not required
	-Quiet plants should be used	Implemented	Not required
	-2m high temporary noise barriers, as stipulated in EP condition 2.9, shall be installed	Deficient	Ongoing
Fugitive Dust Emission	-Implement regular watering and vehicle washing facilities	Deficient	Ongoing
	-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	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 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	0	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
June 2011	3 m ³	3 m ³	0	0.001 tonnes	0	0.001 tonnes	0	0
July 2011	0	0	0	0	0	0	0	0
August 2011	0	0	0	0	0	0	0	0
September 2011	392 m ³	392 m ³	0	0.035 tonnes	0	0.035 tonnes	2kg	2kg
October 2011	740 m ³	725 m ³	15 m ³	0.048 tonnes	0	0.048 tonnes	0	0
November 2011	566 m ³	566 m ³	0	0.050 tonnes	0	0.050 tonnes	0	0
December 2011	877 m ³	877 m ³	0	0.045 tonnes	0	0.045 tonnes	1kg	1kg
Total	7496.9m³	7445m³	51.9m³	2.568 tonnes	0	2.568 tonnes	23kg	23kg

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. 18)

識別碼	任務名稱	工期	開始時間	完成時間	2012年				
					第四季	第一季	第二季	第三季	第四季
1118	River Diversion	4 days	2011/11/1	2011/11/4					
1119	Construct Haul Road to RHS	10 days	2011/11/5	2011/11/16					
1120	Remove Existing Gabion	14 days	2011/11/17	2011/12/2					
1121	Piling (right bank)	18 days	2011/12/3	2011/12/23					
1122	Pile cap (right bank)	8 days	2012/2/1	2012/2/20					
1123	Pier (right bank)	8 days	2012/2/21	2012/2/29					
1124	Piling (middle)	18 days	2011/12/24	2012/1/7					
1125	Pile cap (middle)	8 days	2012/3/1	2012/3/9					
1126	Pier (middle)	8 days	2012/3/10	2012/3/19					
1127	Piling (left bank)	18 days	2012/1/18	2012/2/10					
1128	Pile cap (left bank)	8 days	2012/3/20	2012/3/28					
1129	Pier (left bank)	8 days	2012/3/29	2012/4/10					
1130	Bridge deck	14 days	2012/4/11	2012/4/26					
1131	Reinstatement of Gabion	14 days	2012/4/27	2012/5/15					
1132	Const. Dwarf Wall	21 days	2012/5/16	2012/6/8					
1133	Construct Drainage & Footpath	14 days	2012/6/9	2012/6/26					
1134	Utility Installation	21 days	2012/6/27	2012/7/21					
1135	Public Lighting Installation	21 days	2012/6/27	2012/7/21					
1136	WSD installation	21 days	2012/6/27	2012/7/21					
1137	PCCW installation	21 days	2012/6/27	2012/7/21					
1138									
1139	Section 2 - She Shan River (Area K) Ch 1850 to 1550	735 days	2010/7/20	2012/11/19					0%
1140	From CHL 1850 to CHL 1550	442 days	2011/5/31	2012/11/19					0%
1141	Dwarf wall (CH1755-1857)(VO178)	48 days	2012/6/27	2012/8/22					
1142	Footpath construction at LHS (Ch1550 to 1850)	45 days	2012/8/23	2012/10/15					
1143	Drainage pipe and U-channel construction (Ch1550-1850)	45 days	2012/8/23	2012/10/15					
1144	Install Handrails/Chainage Markers	28 days	2012/10/16	2012/11/19					
1145	Chainlink fencing	28 days	2012/10/16	2012/11/19					
1146	Footbridge SB01 - Dwarf Wall	60 days	2011/5/31	2011/8/10					
1147	Drawpit and Ducting Construction	60 days	2011/8/11	2011/10/21					
1148	Public Lighting Installation (CE2278/79)	14 days	2011/10/22	2011/11/7					
1149	T&C	7 days	2011/11/8	2011/11/15					
1150	Watermain Diversion	21 days	2011/10/22	2011/11/15					
1151									
1152	Variation Order No. 116	564 days	2010/7/20	2012/4/25					0%
1153	Fabrication of Precast Concrete Planter	35 days	2010/7/20	2010/8/23					
1154	Material delivery	14 days	2010/8/24	2010/9/6					
1155	Temp. drainage diversion/ haul rd	14 days	2011/6/1	2011/6/17					
1156	Blinding layer	3 days	2011/6/18	2011/6/21					
1157	PVC sheeting	3 days	2011/6/22	2011/6/24					
1158	Installation of Planters	14 days	2011/6/25	2011/7/12					
1159	Infill of Planting Soil	12 days	2012/4/12	2012/4/25					
1160	Variation Order No. 232	30 days	2012/4/26	2012/6/1					
1168	Variation Order No. 145	38 days	2012/6/2	2012/7/18					
1173									
1174	Programme of Upper Tai Po River	768 days	2010/4/1	2012/8/17					1%
1175	Wet Season of 2010	214 days	2010/4/1	2010/10/31					

專案: DC0706 River Prog
日期: 2011/12/29

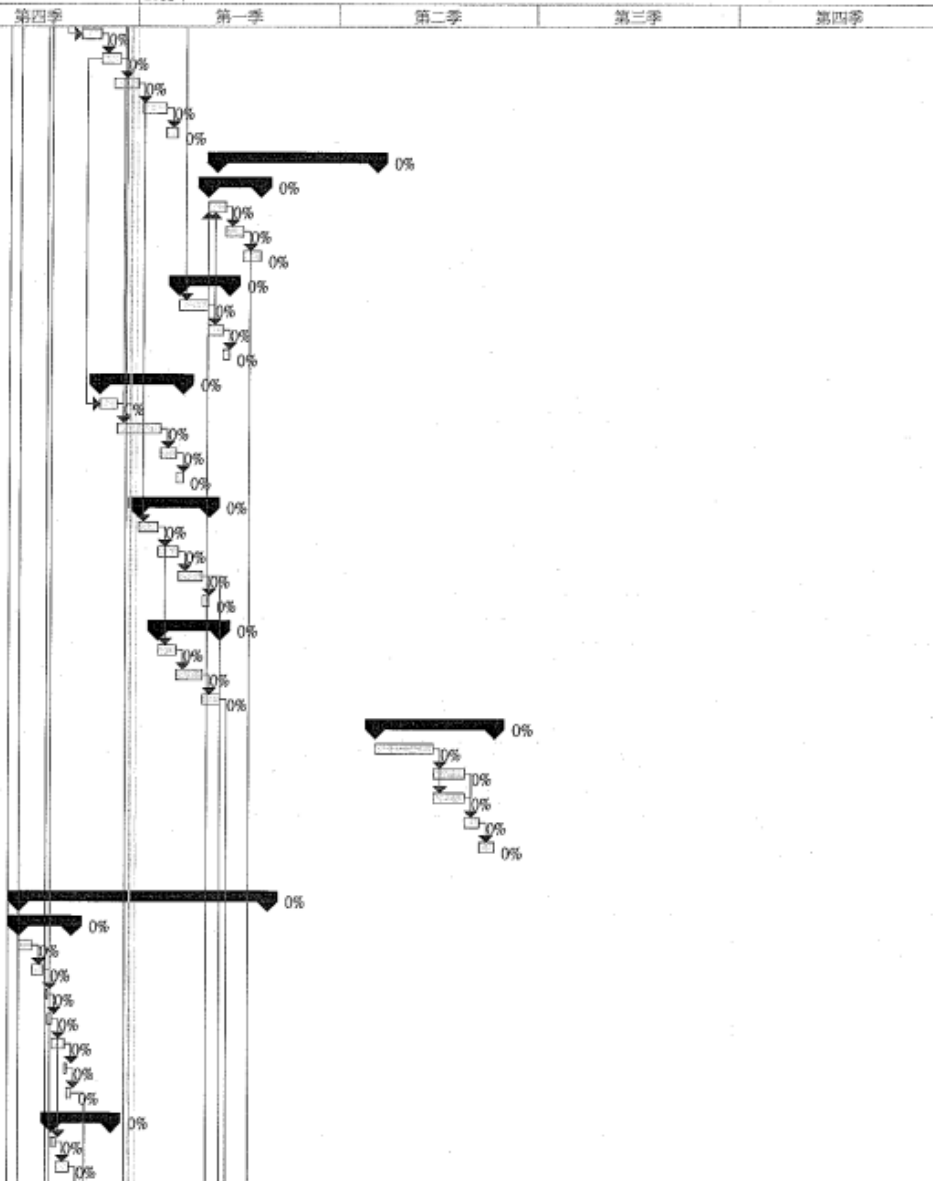
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識別碼	任務名稱	工期	開始時間	完成時間	2012年				
					第四季	第一季	第二季	第三季	第四季
1176	Wet Season of 2011	149 days	2011/4/1	2011/9/30	0%				
1177	Works Suspended Due to Villager's Rally	42 days	2010/11/7	2010/12/18					
1178	Ch 230-350	412 days	2011/1/28	2012/6/12					3%
1179	Gabion Wall (Ch 230-275 RHS) TG1/TG1A	40 days	2011/1/28	2011/3/12					
1183	Retaining Wall (Ch 275-330 RHS) TR1 (replaced by AD1)	183 days	2011/3/7	2011/10/15	64%				
1184	Excavation and Formation	12 days	2011/3/7	2011/3/19					
1185	Laying Concrete block and gabion units (Ch275-320 RHS)	12 days	2011/3/21	2011/4/2					
1186	Backfilling	6 days	2011/4/4	2011/4/11					
1187	Excavation and Formation	7 days	2011/1/0/1	2011/1/0/10	0%				
1188	Laying Concrete block and gabion units (Ch320-330 RHS)	4 days	2011/1/0/11	2011/1/0/14	0%				
1189	Backfilling	1 day	2011/1/0/15	2011/1/0/15	0%				
1190	Drainage & Footpath (CH 275-320 RHS)	21 days	2011/1/0/1	2011/1/0/26	0%				
1191	Construction of drainage & footpath	21 days	2011/1/0/1	2011/1/0/26	0%				
1192	Gabion Wall (Ch 315-330 LHS) TG2A (Inclined gabion)	21 days	2011/11/14	2011/12/7		0%			
1193	Remove Concrete Blocks and shotcrete + 1st No fine	5 days	2011/1/1/14	2011/1/1/18	0%				
1194	Excavation toe	5 days	2011/1/1/19	2011/1/1/24	0%				
1195	Mass concrete toe	5 days	2011/1/1/23	2011/1/1/28	0%				
1196	2nd stage no-fine concrete and inclined gabion	6 days	2011/1/1/29	2011/1/2/5	0%				
1197	Concrete blocks at slope toe and Backfilling	2 days	2011/1/2/6	2011/1/2/7	0%				
1198	Maintenance Staircase (Ch 315 LHS)	4 days	2011/12/24	2011/12/30		0%			
1199	Formwork and concreting	4 days	2011/12/24	2011/12/30		0%			
1200	Drainage & Footpath (Ch 307-330 LHS)	14 days	2011/1/1/29	2011/1/2/14		0%			
1201	Construction of drainage & footpath	14 days	2011/1/1/29	2011/1/2/14		0%			
1202									
1203	Temp Utility and Pedestrian Diversion at Ch230	148 days	2011/9/27	2012/3/24					0%
1204	Temp UU diversion near Ch230	29 days	2011/9/27	2011/10/31	0%				
1205	Implementation of Pedestrian diversion Scheme	119 days	2011/11/1	2012/3/24					0%
1206									
1207	Demolition of Interim Footbridge at Ch230	17 days	2011/11/1	2011/11/19		21%			
1208	Construct Temp crossing at Ch230	7 days	2011/11/1	2011/11/8	50%				
1209	Demolition of Interim Footbridge	10 days	2011/11/9	2011/11/19	0%				
1210									
1211	Gabion Wall (Ch 230-257 LHS) TG2/TG2A/TG2B (Inclined gabion)	26 days	2012/1/7	2012/2/9					0%
1212	Remove Concrete Blocks and shotcrete + 1st No fine	5 days	2012/1/7	2012/1/12					0%
1213	Excavation toe	6 days	2012/1/13	2012/1/19					0%
1214	Mass concrete toe	6 days	2012/1/17	2012/1/26					0%
1215	2nd stage no-fine concrete and inclined gabion	8 days	2012/1/27	2012/2/4					0%
1216	Concrete blocks at slope toe and Backfilling	3 days	2012/2/6	2012/2/8					0%
1217	Maintenance Staircase (Ch 242 LHS)	4 days	2012/2/6	2012/2/9					0%
1218	Formwork and concreting	4 days	2012/2/6	2012/2/9					0%
1219	Gabion Wall (Ch 257-270 LHS) TG4 (Inclined gabion)	18 days	2011/12/23	2012/1/16					0%
1220	Remove Concrete Blocks and shotcrete + 1st No fine	5 days	2011/12/23	2011/12/30					0%
1221	Excavation toe	5 days	2011/12/31	2012/1/6					0%
1222	Mass concrete toe	5 days	2012/1/5	2012/1/10					0%
1223	2nd stage no-fine concrete and inclined gabion	6 days	2012/1/7	2012/1/13					0%
1224	Concrete blocks at slope toe and Backfilling	2 days	2012/1/14	2012/1/16					0%
1225	Retaining Wall (Ch 275-315 LHS) TR1 (replaced by AD1)	35 days	2011/12/6	2012/1/18					0%

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要徑		任務		比較基準		里程碑		專案摘要報告		期限	
要徑分層		分割		比較基準分層		摘要進度		外部任務			
要徑進度		任務進度		比較基準里程碑		摘要		外部里程碑			

職別碼	任務名稱	工期	開始時間	完成時間	2012年				
					第四季	第一季	第二季	第三季	第四季
1226	Remove Concrete Blocks and shotcrete + 1st No fine	8 days	2011/1/26	2011/1/2/14					
1227	Excavation toe	8 days	2011/1/2/15	2011/1/2/23					
1228	Mass concrete toe	8 days	2011/1/2/21	2011/1/2/31					
1229	2nd stage no-fine concrete and inclined gabion	10 days	2012/1/3	2012/1/13					
1230	Concrete blocks at slope toe and Backfilling	4 days	2012/1/14	2012/1/18					
1231	Drainage & Footpath (Ch 200-307 LHS)	60 days	2012/2/6	2012/4/18					
1233	River Bed formation (Ch205-236)	21 days	2012/2/2	2012/2/25					
1234	Excavation (Ch205-236)(From TB03 to Step2)	7 days	2012/2/2	2012/2/9					
1235	Placement of Concrete Block at Embankment Toe	7 days	2012/2/10	2012/2/17					
1236	Fixing steel meshes	7 days	2012/2/18	2012/2/25					
1237	Step 2 & Stilling Basin (Ch 236)	17 days	2012/1/20	2012/2/11					
1238	Construction of Step 2 (Assume Mass Concrete)	8 days	2012/1/20	2012/2/1					
1239	Construction of Stilling Basin (base slab)	6 days	2012/2/2	2012/2/8					
1240	Construction of Baffle Blocks	3 days	2012/2/9	2012/2/11					
1241	Cascade (Ch 275)	30 days	2011/12/15	2012/1/21					
1242	River Bed formation (Ch236-275)	7 days	2011/1/2/15	2011/1/2/22					
1243	Construction of Cascade (Ch 275)	14 days	2011/1/2/23	2012/1/11					
1244	Construction of Stilling Basin (base slab)	6 days	2012/1/12	2012/1/18					
1245	Construction of Baffle Blocks	3 days	2012/1/19	2012/1/21					
1246	Step 3 (Ch 307)	24 days	2012/1/2	2012/2/2					
1247	River Bed formation (Ch275-307)	7 days	2012/1/2	2012/1/10					
1248	Construction of Step 3 (Assume Mass Concrete)	8 days	2012/1/11	2012/1/19					
1249	Construction of Stilling Basin (base slab)	6 days	2012/1/20	2012/1/30					
1250	Construction of Baffle Blocks	3 days	2012/1/31	2012/2/2					
1251	River Bed formation (Ch 307-330)	21 days	2012/1/11	2012/2/7					
1252	Excavation (Ch205-236)(From 307-330)	7 days	2012/1/11	2012/1/18					
1253	Placement of Concrete Block at Embankment Toe	7 days	2012/1/19	2012/1/30					
1254	Fixing steel meshes	7 days	2012/1/31	2012/2/7					
1255	Lighting at CH 250-320	45 days	2012/4/19	2012/6/12					
1256	Construction of Drawpits / Ductings	21 days	2012/4/19	2012/5/15					
1257	Public lighting Installation (CE2318)	12 days	2012/5/16	2012/5/29					
1258	Public lighting Installation (CE2317)	12 days	2012/5/16	2012/5/29					
1259	T&C	6 days	2012/5/30	2012/6/5					
1260	Removal of existing lighting (VA1311-Z1)	6 days	2012/6/6	2012/6/12					
1261									
1262	Footbridge TB04 (Ch 330)	91 days	2011/1/9	2012/2/29					
1263	Construction of Abutment A (RHS)	21 days	2011/1/9	2011/1/2/2					
1264	Excavation and Blinding	5 days	2011/1/9	2011/1/14					
1265	Formwork and rebar fixing for base slab	5 days	2011/1/15	2011/1/19					
1266	Concreting of base slab	1 day	2011/1/21	2011/1/21					
1267	Stripping off formwork	2 days	2011/1/22	2011/1/23					
1268	Rebar fixing and shuttering formwork for column	5 days	2011/1/24	2011/1/29					
1269	Concreting of column	1 day	2011/1/30	2011/1/30					
1270	Stripping off formwork	2 days	2011/1/2/1	2011/1/2/2					
1271	Construction of Abutment B (LHS)	23 days	2011/1/24	2011/1/2/20					
1272	Remove shotcrete	2 days	2011/1/24	2011/1/25					
1273	Excavation and Blinding	5 days	2011/1/26	2011/1/2/1					



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要徑	任務	比較基準	里程碑	專案摘要報告	期限
要徑分割	分割	比較基準分割	摘要進度	外部任務	
要徑進度	任務進度	比較基準里程碑	摘要	外部里程碑	

識別碼	任務名稱	工期	開始時間	完成時間	2012年				
					第四季	第一季	第二季	第三季	第四季
1274	Formwork and rebar fixing for base slab	5 days	2011/12/2	2011/12/7					
1275	Concreting of base slab	1 day	2011/12/8	2011/12/8					
1276	Stripping off formwork	2 days	2011/12/9	2011/12/10					
1277	Rebar fixing and shuttering formwork for column	5 days	2011/12/12	2011/12/16					
1278	Concreting of column	1 day	2011/12/17	2011/12/17					
1279	Stripping off formwork	2 days	2011/12/19	2011/12/20					
1280	Construction of decking (steel deck)	16 days	2012/2/8	2012/2/25					
1281	Erection of steel deck+ conc deck	4 days	2012/2/8	2012/2/11					
1282	Deck finishing	10 days	2012/2/13	2012/2/23					
1283	Railing installation	2 days	2012/2/24	2012/2/25					
1284	Demolition of Bridge TB-A	52 days	2011/12/24	2012/2/29					
1285	Remove concrete pipes and reprovide footpath	14 days	2011/12/24	2012/1/12					
1286	Complete removal of TB-A crossing	3 days	2012/2/27	2012/2/29					
1287	Lighting at Footbridge TB04	11 days	2012/2/13	2012/2/24					
1288	Construction of Drawpits / Ductings	7 days	2012/2/13	2012/2/20					
1289	Public lighting Installation (CE2315)	3 days	2012/2/21	2012/2/23					
1290	Public lighting Installation (CE2316)	3 days	2012/2/21	2012/2/23					
1291	T&C	1 day	2012/2/24	2012/2/24					
1292	Construction of Gabion Wall at TB-A?	5 days	2012/3/1	2012/3/6					
1293	Excavation and Formation	2 days	2012/3/1	2012/3/2					
1294	Gabion Wall Construction (adj TBA LHS)	2 days	2012/3/3	2012/3/5					
1295	Backfilling	1 day	2012/3/6	2012/3/6					
1296									
1297	Footbridge TB05 (ch 350)	329 days	2011/3/10	2012/4/17					
1298	Construction of Abutment A (LHS)	21 days	2011/12/8	2012/1/4					
1299	Excavation and Binding	5 days	2011/12/8	2011/12/13					
1300	Formwork and rebar fixing for base slab	5 days	2011/12/14	2011/12/19					
1301	Concreting of base slab	1 day	2011/12/20	2011/12/20					
1302	Stripping off formwork	2 days	2011/12/21	2011/12/22					
1303	Rebar fixing and shuttering formwork for column	5 days	2011/12/23	2011/12/30					
1304	Concreting of column	1 day	2011/12/31	2011/12/31					
1305	Stripping off formwork	2 days	2012/1/3	2012/1/4					
1306	Construction of Abutment B (RHS)	19 days	2011/3/10	2011/3/31					
1314	Construction of decking	75 days	2011/12/8	2012/3/10					
1315	Modification of table top	10 days	2011/12/8	2011/12/19					
1316	Erection of steel deck+ conc deck	4 days	2012/2/22	2012/2/25					
1317	Deck finishing	10 days	2012/2/27	2012/3/8					
1318	Railing installation	2 days	2012/3/9	2012/3/10					
1319	Demolition of Bridge TB-B	99 days	2011/12/8	2012/4/11					
1320	Remove concrete pipes and reprovide footpath	14 days	2011/12/8	2011/12/23					
1321	Remove concrete pipes and demolition works	3 days	2012/4/5	2012/4/11					
1322	Lighting at Footbridge TB05	10 days	2011/12/20	2012/1/3					
1323	Construction of Drawpits / Ductings	6 days	2011/12/20	2011/12/28					
1324	Public lighting Installation (CE2313)	3 days	2011/12/29	2011/12/31					
1325	Public lighting Installation (CE2314)	3 days	2011/12/29	2011/12/31					
1326	T&C	1 day	2012/1/3	2012/1/3					
1327	Construction of Gabion Wall at TB-B	5 days	2012/4/12	2012/4/17					

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要徑 任務 比較基準 里程碑 專案摘要報告 期限
 要徑分隔 分割 比較基準分割 摘要進度 外部任務
 要徑進度 任務進度 比較基準里程碑 摘要 外部里程碑

識別碼	任務名稱	工期	開始時間	完成時間	2012年				
					第四季	第一季	第二季	第三季	第四季
1328	Excavation and Formation	2 days	2012/4/12	2012/4/13					
1329	Gabion Wall Construction (adj TBB LHS)	2 days	2012/4/14	2012/4/16					
1330	Backfilling	1 day	2012/4/17	2012/4/17					
1331									
1332									
1333	Gabion Wall (Ch 335-345 LHS) TG2/TG2A	17 days	2011/11/29	2011/12/17					
1334	Remove Concrete Blocks and shotcrete + 1st No fine	4 days	2011/11/29	2011/12/2					
1335	Excavation toe	4 days	2011/12/3	2011/12/7					
1336	Mass concrete toe	4 days	2011/12/6	2011/12/9					
1337	2nd stage no-fine concrete and inclined gabion	5 days	2011/12/10	2011/12/15					
1338	Concrete blocks at slope toe and Backfilling	2 days	2011/12/16	2011/12/17					
1339	Drainage & Footpath (Ch 335-345 LHS)	12 days	2011/12/19	2012/1/4					
1340	Construction of drainage & footpath	12 days	2011/12/19	2012/1/4					
1341	Gabion Wall (Ch 330-345 RHS) TG2	22 days	2011/11/9	2011/12/5					
1342	Remove Concrete Blocks and shotcrete + 1st No fine	5 days	2011/11/9	2011/11/14					
1343	Excavation toe	5 days	2011/11/12	2011/11/17					
1344	Mass concrete toe	5 days	2011/11/18	2011/11/23					
1345	2nd stage no-fine concrete and inclined gabion	6 days	2011/11/24	2011/11/30					
1346	Concrete blocks at slope toe and Backfilling	3 days	2011/12/1	2011/12/3					
1347	Drainage & Footpath (Ch 330-340 RHS)	12 days	2011/12/5	2011/12/17					
1348	Construction of drainage & footpath	12 days	2011/12/5	2011/12/17					
1349									
1350	River Bed formation (Ch 330-350)	12 days	2012/2/13	2012/2/25					
1351	Excavation	4 days	2012/2/13	2012/2/16					
1352	Placement of Concrete Block at Embankment Toe	4 days	2012/2/17	2012/2/21					
1353	Fixing steel meshes	4 days	2012/2/22	2012/2/25					
1354	Step 4 (Ch 350)	20 days	2012/2/27	2012/3/20					
1355	River Bed formation (Ch340-350)	3 days	2012/2/27	2012/2/29					
1356	Construction of Step 3 (Assume Mass Concrete)	8 days	2012/3/1	2012/3/9					
1357	Construction of Stilling Basin (base slab)	6 days	2012/3/10	2012/3/16					
1358	Construction of Baffle Blocks	3 days	2012/3/17	2012/3/20					
1359	Ch 45-230	506 days	2010/1/1	2012/6/20					
1360	Additional Boulder Trap	149 days	2011/10/1	2012/3/30					
1361	Water diversion	20 days	2011/10/1	2011/10/25					
1362	Bay 1	34 days	2011/10/26	2011/11/23					
1363	Excavation and Blinding, temp work	14 days	2011/10/26	2011/11/10					
1364	Formwork and rebar fixing of base slab	7 days	2011/11/11	2011/11/18					
1365	Concreting of base slab	1 day	2011/11/19	2011/11/19					
1366	Stripping off formwork	2 days	2011/11/21	2011/11/22					
1367	Rebar fixing and shuttering formwork for Wall	7 days	2011/11/23	2011/11/30					
1368	Concreting	1 day	2011/11/21	2011/11/21					
1369	Stripping off formwork	2 days	2011/11/22	2011/11/23					
1370	Bay 2	34 days	2011/11/21	2012/1/12					
1371	Excavation and Blinding, temp work	14 days	2011/11/21	2011/12/16					
1372	Formwork and rebar fixing of base slab	7 days	2011/12/17	2011/12/24					
1373	Concreting of base slab	1 day	2011/12/28	2011/12/28					
1374	Stripping off formwork	2 days	2011/12/29	2011/12/30					

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要徑 (Key Path) 任務 (Task) 比較基準 (Comparison Basis) 里程碑 (Milestone) 專案摘要報告 (Project Summary Report) 期限 (Deadline)

要徑分層 (Key Path Layer) 分劃 (Division) 比較基準分層 (Comparison Basis Layer) 摘要進度 (Summary Progress) 外部任務 (External Task)

要徑進度 (Key Path Progress) 任務進度 (Task Progress) 比較基準里程碑 (Comparison Basis Milestone) 摘要 (Summary) 外部里程碑 (External Milestone)

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識別碼	任務名稱	工期	開始時間	完成時間	2012年				
					第四季	第一季	第二季	第三季	第四季
1375	Rebar fixing and shuttering formwork for Wall	7 days	2011/12/31	2012/1/9					
1376	Concreting	1 day	2012/1/10	2012/1/10					
1377	Stripping off formwork	2 days	2012/1/11	2012/1/12					
1378	Bay 3	34 days	2012/1/11	2012/2/22					
1379	Excavation and Blinding, temp work	14 days	2012/1/11	2012/1/30					
1380	Formwork and rebar fixing of base slab	7 days	2012/1/31	2012/2/7					
1381	Concreting of base slab	1 day	2012/2/8	2012/2/8					
1382	Stripping off formwork	2 days	2012/2/9	2012/2/10					
1383	Rebar fixing and shuttering formwork for Wall	7 days	2012/2/11	2012/2/18					
1384	Concreting	1 day	2012/2/20	2012/2/20					
1385	Stripping off formwork	2 days	2012/2/21	2012/2/22					
1386	Bay 4	34 days	2012/2/21	2012/3/30					
1387	Excavation and Blinding, temp work	14 days	2012/2/21	2012/3/7					
1388	Formwork and rebar fixing of base slab	7 days	2012/3/8	2012/3/15					
1389	Concreting of base slab	1 day	2012/3/16	2012/3/16					
1390	Stripping off formwork	2 days	2012/3/17	2012/3/19					
1391	Rebar fixing and shuttering formwork for Wall	7 days	2012/3/20	2012/3/27					
1392	Concreting	1 day	2012/3/28	2012/3/28					
1393	Stripping off formwork	2 days	2012/3/29	2012/3/30					
1394									
1395	Access Road (LHS)	21 days	2011/12/5	2011/12/30					
1396	Footbridge TB02 (Ch 150)	506 days	2010/1/1	2012/6/20					
1397	Construction of Abutment A (LHS)	23 days	2010/1/1	2010/11/23					
1405	Construction of decking	14 days	2012/4/16	2012/5/3					
1406	Erection of steel deck+ conc deck	4 days	2012/4/16	2012/4/19					
1407	XXConcreting	0 days	2012/4/19	2012/4/19					
1408	Deck finishing	10 days	2012/4/20	2012/5/3					
1409	Railing installation	7 days	2012/4/20	2012/4/27					
1410	Lighting at Footbridge TB02	51 days	2012/4/20	2012/6/20					
1411	Construction of Drawpits / Ductings	21 days	2012/4/20	2012/5/16					
1412	Public lighting Installation (CE2308)	12 days	2012/5/17	2012/5/30					
1413	Public lighting Installation (CE2309)	12 days	2012/5/31	2012/6/13					
1414	Removal of existing lighting (VA2642-A1)	6 days	2012/6/14	2012/6/20					
1415									
1416	River Bed formation (Ch 100-150)	15 days	2012/4/18	2012/5/7					
1417	Excavation	8 days	2012/4/20	2012/4/30					
1418	Placement of Concrete Block at Embankment Toe	10 days	2012/4/18	2012/4/30					
1419	Fixing steel meshes	5 days	2012/5/2	2012/5/7					
1420	Gabion Wall (Ch 150-178 LHS) TG3A	222 days	2011/4/4	2011/12/30					
1421	Excavation and formation	19 days	2011/4/4	2011/4/29					
1422	Construction of 450 Pipe/Pit at back of Gabion Wall	10 days	2011/12/17	2011/12/30					
1423	Gabion Wall construction (Ch 150-178 LHS)	5 days	2011/11/8	2011/11/12					
1424	Backfilling	5 days	2011/11/14	2011/11/18					
1425	Gabion Wall (Ch 178-230 LHS) TG5A/TG2	15 days	2011/10/15	2011/11/1					
1426	Gabion Wall construction (Ch 178-230 LHS)	10 days	2011/10/15	2011/10/26					
1427	Backfilling	5 days	2011/10/27	2011/11/1					
1428	Maintenance Staircase (Ch 178 LHS)	4 days	2011/11/14	2011/11/17					

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要徑		任務		比較基準		里程碑		專案摘要報告		期限	
要徑分節		分割		比較基準分節		摘要進度		外部任務			
要徑進度		任務進度		比較基準里程碑		摘要		外部里程碑			

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識別碼	任務名稱	工期	開始時間	完成時間	2012年				
					第四季	第一季	第二季	第三季	第四季
1429	Formwork and concreting	4 days	2011/11/14	2011/11/17					
1430	Drainage & Footpath (Ch 150-Ch230 LHS)	21 days	2011/11/10	2011/12/3					
1431	Drainage & Footpath	21 days	2011/11/10	2011/12/3					
1432	Gabion Wal (Ch 100-150 RHS) TG2	38 days	2011/10/25	2011/12/27					
1433	Remove Concrete Blocks and shotcrete + 1st No fine	5 days	2011/10/25	2011/10/29					
1434	Excavation toe	10 days	2011/10/28	2011/11/8					
1435	Mass concrete toe	10 days	2011/11/9	2011/11/19					
1436	2nd stage no-fine concrete and inclined gabion	10 days	2011/11/21	2011/12/1					
1437	Concrete blocks at slope toe and Backfilling	5 days	2011/12/2	2011/12/7					
1438	Maintenance Staircase (Ch 130 RHS)	4 days	2011/11/28	2011/12/1					
1439	Formwork and concreting	4 days	2011/11/28	2011/12/1					
1440	Drainage & Footpath (Ch 0-150 RHS)	45 days	2011/12/2	2012/1/30					
1441	Construction of drainage & footpath	45 days	2011/12/2	2012/1/30					
1442									
1443	Gabion Wall (Ch 150-178 RHS) TG4A	22 days	2011/11/17	2011/12/12					
1444	Remove Existing footpath and shotcrete	2 days	2011/11/17	2011/11/18					
1445	Excavation and 1st stage No fine concrete	6 days	2011/11/19	2011/11/25					
1446	Mass concrete wall	6 days	2011/11/22	2011/11/28					
1447	2nd stage no-fine concrete and inclined gabion	8 days	2011/11/29	2011/12/7					
1448	Concrete blocks at slope toe and Backfilling	4 days	2011/12/8	2011/12/12					
1449	Footbridge TB03 (Ch 200)	121 days	2011/11/21	2012/4/19					
1450	Construction of Abutment B (RHS)	34 days	2011/11/21	2011/12/31					
1451	Excavation and Blinding, temp work	14 days	2011/11/21	2011/12/6					
1452	Formwork and rebar fixing of base slab	7 days	2011/12/7	2011/12/14					
1453	Concreting of base slab	1 day	2011/12/15	2011/12/15					
1454	Stripping off formwork	2 days	2011/12/16	2011/12/17					
1455	Rebar fixing and shuttering formwork for column	7 days	2011/12/19	2011/12/28					
1456	Concreting	1 day	2011/12/29	2011/12/29					
1457	Stripping off formwork	2 days	2011/12/30	2011/12/31					
1458	Construction of Decking (TB03)	71 days	2011/12/7	2012/3/5					
1459	Modification of LHS table top	18 days	2011/12/7	2011/12/29					
1460	Erection of steel deck+ conc deck	4 days	2012/2/18	2012/2/22					
1461	Deck finishing	10 days	2012/2/23	2012/3/5					
1462	Railing installation	2 days	2012/2/23	2012/2/24					
1463	Lighting at Footbridge TB03	27 days	2012/2/25	2012/3/27					
1464	Construction of Drawpits / Ductings	12 days	2012/2/25	2012/3/9					
1465	Public lighting Installation (CE2321)	6 days	2012/3/10	2012/3/16					
1466	Public lighting Installation (CE2322)	6 days	2012/3/17	2012/3/23					
1467	T&C	1 day	2012/3/24	2012/3/24					
1468	Removal of existing lighting (VA1309-Z1)	2 days	2012/3/26	2012/3/27					
1469									
1470	TR6 at Ch220	34 days	2011/11/21	2011/12/31					
1471	Excavation and Blinding, temp work	14 days	2011/11/21	2011/12/6					
1472	Formwork and rebar fixing of base slab	7 days	2011/12/7	2011/12/14					
1473	Concreting of base slab	1 day	2011/12/15	2011/12/15					
1474	Stripping off formwork	2 days	2011/12/16	2011/12/17					
1475	Rebar fixing and shuttering formwork for column	7 days	2011/12/19	2011/12/28					

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要徑		任務		比較基準		里程碑		專案摘要報告		期限	
要徑分隔		分割		比較基準分隔		摘要進度		外部任務			
要徑進度		任務進度		比較基準里程碑		摘要		外部里程碑			

識別碼	任務名稱	工期	開始時間	完成時間	2012年			
					第四季	第一季	第二季	第三季
1476	Concreting	1 day	2011/12/29	2011/12/29				
1477	Stripping off formwork	2 days	2011/12/30	2011/12/31				
1478								
1479	Cascade at Ch230	42 days	2011/11/21	2012/1/11				
1480	Excavation and Blinding, temp work	14 days	2011/11/21	2011/12/6				
1481	Formwork and rebar fixing of base slab	7 days	2011/12/16	2011/12/23				
1482	Concreting of base slab	1 day	2011/12/24	2011/12/24				
1483	Stripping off formwork	2 days	2011/12/28	2011/12/29				
1484	Rebar fixing and shuttering formwork for column	7 days	2011/12/30	2012/1/7				
1485	Concreting	1 day	2012/1/9	2012/1/9				
1486	Stripping off formwork	2 days	2012/1/10	2012/1/11				
1487								
1488	River Bed formation (Ch178-230)	23 days	2012/2/23	2012/3/20				
1489	River Bed formation (Ch178-230)	8 days	2012/2/23	2012/3/2				
1490	Placement of Concrete Block at Embankment Toe	10 days	2012/2/29	2012/3/10				
1491	Fixing steel meshes	8 days	2012/3/12	2012/3/20				
1492	Step 1 (Ch 178)	17 days	2012/3/12	2012/3/30				
1493	Construction of Step 3 (Assume Mass Concrete)	8 days	2012/3/12	2012/3/20				
1494	Construction of Silling Basin (base slab)	6 days	2012/3/21	2012/3/27				
1495	Construction of Baffle Blocks	3 days	2012/3/28	2012/3/30				
1496	River Bed formation (Ch 150-178)	14 days	2012/3/31	2012/4/19				
1497	Excavation	5 days	2012/3/31	2012/4/5				
1498	Placement of Concrete Block at Embankment Toe	7 days	2012/4/3	2012/4/14				
1499	Fixing steel meshes	4 days	2012/4/16	2012/4/19				
1500								
1501								
1502	Ch -23-45	617 days	2010/8/30	2012/8/17				
1503	Retaining Wall at Access D (Boulder Trap)	41 days	2010/9/1	2010/10/11				
1523	Filling Work at Boulder Trap (RHS of downstream)	6 days	2010/8/30	2010/9/4				
1525	Dwarf Wall (Ch 60-75) RHS	23 days	2012/1/31	2012/2/25				
1526	Excavation and Blinding	4 days	2012/1/31	2012/2/5				
1527	Formwork and rebar fixing of base slab	5 days	2012/2/4	2012/2/9				
1528	Concreting of base slab	1 day	2012/2/10	2012/2/10				
1529	Stripping off formwork	1 day	2012/2/11	2012/2/11				
1530	Rebar fixing and shuttering formwork for column	5 days	2012/2/13	2012/2/17				
1531	Concreting	1 day	2012/2/18	2012/2/18				
1532	Stripping off formwork	1 day	2012/2/20	2012/2/20				
1533	Backfill	5 days	2012/2/21	2012/2/25				
1534	Box Culvert 03 (Ch 45)	31 days	2012/2/27	2012/4/1				
1535	Construction of Base Slab	21 days	2012/2/27	2012/3/21				
1536	Remove boulder and wire fence	5 days	2012/2/27	2012/3/2				
1537	Excavation and Blinding	7 days	2012/3/3	2012/3/10				
1538	Formwork and rebar fixing	5 days	2012/3/12	2012/3/16				
1539	Concreting	1 day	2012/3/17	2012/3/17				
1540	Stripping off formwork	3 days	2012/3/19	2012/3/21				
1541	Construction of Wall Stem and Top Slab	10 days	2012/3/22	2012/4/1				
1542	Formwork and rebar fixing	4 days	2012/3/22	2012/3/26				

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 要徑進度 任務進度 比較基準里程碑 摘要 外部任務 外部里程碑 期限

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識別碼	任務名稱	工期	開始時間	完成時間	2012年					
					第四季	第一季	第二季	第三季	第四季	
1543	Concreting	1 day	2012/3/27	2012/3/27						
1544	Stripping off formwork	5 days	2012/3/28	2012/4/1						
1545	Retaining Wall at Access D (Boulder Trap)	326 days	2011/7/18	2012/8/17	0%					
1546	Retaining Wall (LHS)	49 days	2012/5/2	2012/6/28						0%
1547	Excavation and blinding	14 days	2012/5/2	2012/5/17						10%
1548	Construction of Base Slab, Bay 2	8 days	2012/5/18	2012/5/26						0%
1549	Formwork and rebar fixing	4 days	2012/5/18	2012/5/22						0%
1550	Concreting	1 day	2012/5/23	2012/5/23						0%
1551	Stripping off formwork	3 days	2012/5/24	2012/5/26						0%
1552	Construction of Base Slab, Bay 1	8 days	2012/5/28	2012/6/5						0%
1553	Formwork and rebar fixing	4 days	2012/5/28	2012/5/31						0%
1554	Concreting	1 day	2012/6/1	2012/6/1						0%
1555	Stripping off formwork	3 days	2012/6/2	2012/6/5						0%
1556	Construction of Wall Stem, Bay 2	8 days	2012/6/6	2012/6/14						0%
1557	Formwork and rebar fixing	4 days	2012/6/6	2012/6/9						0%
1558	Concreting	1 day	2012/6/11	2012/6/11						0%
1559	Stripping off formwork	3 days	2012/6/12	2012/6/14						0%
1560	Construction of Wall Stem, Bay 1	11 days	2012/6/15	2012/6/28						0%
1561	Formwork and rebar fixing	4 days	2012/6/15	2012/6/19						0%
1562	Concreting	1 day	2012/6/20	2012/6/20						0%
1563	Stripping off formwork	3 days	2012/6/21	2012/6/25						0%
1564	Backfill the Retaining Wall	3 days	2012/6/26	2012/6/28						0%
1565	Vehicular Access D	326 days	2011/7/18	2012/8/17	0%					
1566	Road Kerb and formation	64 days	2011/7/18	2011/9/30	0%					0%
1567	Pavement	30 days	2012/6/29	2012/8/5						0%
1568	Railing and street furniture	12 days	2012/8/4	2012/8/17						0%
1569	Lighting at Access D	100 days	2011/11/21	2012/3/22	0%					
1570	Construction of Drawpits / Ductings	21 days	2011/11/21	2011/12/14	0%					
1571	Public lighting installation (CE2300)	3 days	2012/3/14	2012/3/16						0%
1572	Public lighting installation (CE2301)	3 days	2012/3/14	2012/3/16						0%
1573	Public lighting installation (CE2302)	3 days	2012/3/14	2012/3/16						0%
1574	T&C	1 day	2012/3/17	2012/3/17						0%
1575	Removal of existing lighting (VA1278-A1)	2 days	2012/3/19	2012/3/20						0%
1576	Removal of existing lighting (VA1279-A1)	2 days	2012/3/21	2012/3/22						0%
1577										
1578	Ch 350-450	393 days	2011/1/5	2012/4/19	0%					
1579	Gabion Wall (Ch 350-400 LHS) TR1 (AD)	43 days	2011/1/23	2012/1/14	0%					
1580	Remove Concrete Blocks and shotcrete + 1st No fine	10 days	2011/1/23	2011/1/23						0%
1581	Excavation toe	10 days	2011/1/21	2011/1/21						0%
1582	Mass concrete toe	10 days	2011/1/23	2011/1/23						0%
1583	2nd stage no-fine concrete and inclined gabion	12 days	2011/1/24	2012/1/10						0%
1584	Concrete blocks at slope toe and Backfilling	4 days	2012/1/1	2012/1/4						0%
1585	Gabion Wall (Ch 400-450 LHS) TR1 (AD)	44 days	2011/10/21	2011/12/10	0%					
1586	Remove Concrete Blocks and shotcrete + 1st No fine	10 days	2011/10/21	2011/11/1						0%
1587	Excavation toe	10 days	2011/10/31	2011/11/10						0%
1588	Mass concrete toe	10 days	2011/11/1	2011/11/22						0%
1589	2nd stage no-fine concrete and inclined gabion	12 days	2011/1/23	2011/1/26						0%

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 要徑進度 任務進度 比較基準里程碑 摘要 外部里程碑

識別碼	任務名稱	工期	開始時間	完成時間	2012年				
					第四季	第一季	第二季	第三季	第四季
1590	Concrete blocks at slope toe and Backfilling	4 days	2011/12/7	2011/12/10					
1591	River Bed formation (Ch 350-400)	24 days	2012/2/22	2012/3/20					
1592	Excavation	10 days	2012/2/22	2012/3/3					
1593	Placement of Concrete Block at Embankment Toe	12 days	2012/2/27	2012/3/10					
1594	Fixing steel meshes	8 days	2012/3/12	2012/3/20					
1595	Footbridge TB06 (Ch 400)	393 days	2011/1/3	2012/4/19					
1596	Construction of Abutment A (LHS)	28 days	2011/12/12	2012/1/16					
1597	Remove Concrete block and shotcrete	2 days	2011/12/12	2011/12/13					
1598	Excavation and Blinding	10 days	2011/12/14	2011/12/24					
1599	Formwork and rebar fixing of base slab	5 days	2011/12/28	2012/1/3					
1600	Concreting of base slab	1 day	2012/1/4	2012/1/4					
1601	Stripping off formwork	2 days	2012/1/5	2012/1/6					
1602	Rebar fixing and shuttering formwork for column	5 days	2012/1/7	2012/1/12					
1603	Concreting	1 day	2012/1/13	2012/1/13					
1604	Stripping off formwork	2 days	2012/1/14	2012/1/16					
1605	Construction of decking	14 days	2012/3/21	2012/4/5					
1606	Erection of steel deck+ conc deck	4 days	2012/3/21	2012/3/24					
1607	Deck finishing	10 days	2012/3/26	2012/4/5					
1608	NA	0 days	2012/3/24	2012/3/24					
1609	Railing installation	2 days	2012/3/26	2012/3/27					
1610	Lighting at Footbridge TB06	14 days	2012/3/26	2012/4/13					
1611	Construction of Drawpits / Ductings	6 days	2012/3/26	2012/3/31					
1612	Public lighting Installation (CE2311)	3 days	2012/4/1	2012/4/3					
1613	Public lighting Installation (CE2310)	3 days	2012/4/5	2012/4/11					
1614	T&C	2 days	2012/4/12	2012/4/13					
1615	Demolition of Bridge TB-C	124 days	2011/11/1	2012/3/30					
1616	Water Pipe Diversion	6 days	2011/11/1	2011/11/7					
1617	Remove concrete pipes and reprovide footpath	4 days	2011/11/8	2011/11/11					
1618	Remove concrete pipes and demolition works	3 days	2012/3/28	2012/3/30					
1619	Consturction of Gabion Wall at TB-C	7 days	2012/3/31	2012/4/11					
1620	Excavation and Formation	3 days	2012/3/31	2012/4/2					
1621	Gabion Wall Construction (TBC LHS)	2 days	2012/4/3	2012/4/5					
1622	Backfilling	2 days	2012/4/10	2012/4/11					
1623									
1624	Gabion Wall (Ch 400-450 RHS) TR1 (replaced by AD1)	30 days	2011/1/3	2011/2/1					
1628	Gabion Wall (Ch 400-450 LHS) TR1 (replaced by AD1)	0 days	2011/12/10	2011/12/10					
1633	Maintenance Staircase (Ch 420 LHS)	99 days	2011/12/2	2012/4/1					
1634	Formwork and concreting	4 days	2011/12/2	2011/12/6					
1635									
1636	Step 5 (Ch 410)	19 days	2012/3/12	2012/4/1					
1637	River Bed Formation (Ch400-410)	2 days	2012/3/12	2012/3/13					
1638	Construction of Step 3 (Assume Miss Concrete)	8 days	2012/3/14	2012/3/22					
1639	Construction of Stilling Basin (base slab)	6 days	2012/3/23	2012/3/29					
1640	Constructioe of Baffle Blocks	3 days	2012/3/30	2012/4/1					
1641	River Bed formation (Ch 410-450)	21 days	2012/3/23	2012/4/19					
1642	Excavation	7 days	2012/3/23	2012/3/30					
1643	Placement of Concrete Block at Embankment Toe	7 days	2012/3/31	2012/4/11					

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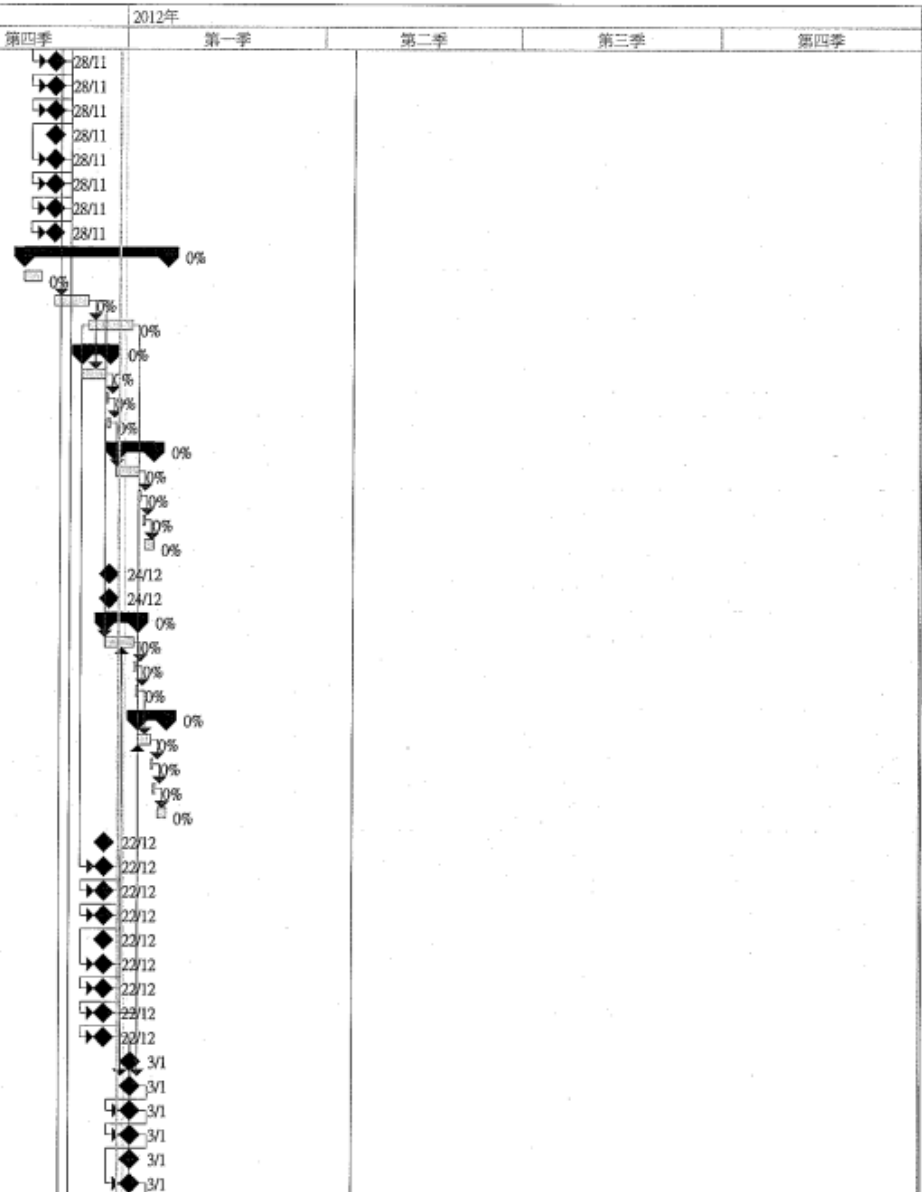
要徑		任務		比較基準		里程碑		專案摘要報告		期限	
要徑分隔		分割		比較基準分隔		摘要進度		外部任務			
要徑進度		任務進度		比較基準里程碑		摘要		外部里程碑			

識別碼	任務名稱	工期	開始時間	完成時間	2012年				
					第四季	第一季	第二季	第三季	第四季
1644	Fixing steel meshes	7 days	2012/4/12	2012/4/19					
1645	Box Culvert TB01 (Ch 450)	40 days	2011/3/10	2011/4/29					
1646	Construction of Base Slab	21 days	2011/3/10	2011/4/2					
1651	Construction of Wall Stem and Top Slab	19 days	2011/4/4	2011/4/29					
1655									
1656	Drainage & Footpath (Ch350-450) LHS & RHS	45 days	2011/1/23	2012/1/17					
1657	Drainage & Footpath (Ch350-450) LHS & RHS	45 days	2011/1/23	2012/1/17					
1658									
1659	Lighting at CH 350-380	23 days	2012/1/18	2012/2/16					
1660	Construction of Drawpits / Ductings	14 days	2012/1/18	2012/2/6					
1661	Public lighting Installation (CE2312)	7 days	2012/2/7	2012/2/14					
1662	T&C	2 days	2012/2/15	2012/2/16					
1663									
1664	Ch 450-525	350 days	2011/3/16	2012/5/19					
1665	Retaining Wall (ch 450-500) TR2 (RHS)	49 days	2011/10/1	2011/11/28					
1666	Remove Concrete block and shotcrete	7 days	2011/10/1	2011/10/10					
1667	Excavation and Formation	35 days	2011/10/7	2011/11/16					
1668	Base Slab Construction Bay 1+3 (RHS)	12 days	2011/10/17	2011/10/29					
1669	Formwork and rebar fixing	10 days	2011/10/17	2011/10/27					
1670	Concreting	1 day	2011/10/28	2011/10/28					
1671	Stripping off formwork	1 day	2011/10/29	2011/10/29					
1672	Wall Stem Construction Bay 1+3 (RHS)	13 days	2011/10/31	2011/11/14					
1673	Formwork and rebar fixing	6 days	2011/10/31	2011/11/5					
1674	Concreting	1 day	2011/11/7	2011/11/7					
1675	Stripping off formwork	2 days	2011/11/8	2011/11/9					
1676	Backfill	4 days	2011/11/10	2011/11/14					
1677	Base Slab Construction Bay 2 (RHS) del	0 days	2011/10/29	2011/10/29					
1681	Wall Stem Construction Bay 2 (RHS) del	0 days	2011/10/29	2011/10/29					
1686	Base Slab Construction Bay 2 + 4 + step 6(RHS)	12 days	2011/10/31	2011/11/12					
1687	Formwork and rebar fixing	10 days	2011/10/31	2011/11/10					
1688	Concreting	1 day	2011/11/11	2011/11/11					
1689	Stripping off formwork	1 day	2011/11/12	2011/11/12					
1690	Wall Stem Construction Bay 2 + 4(RHS)	13 days	2011/11/14	2011/11/28					
1691	Formwork and rebar fixing	6 days	2011/11/14	2011/11/19					
1692	Concreting	1 day	2011/11/21	2011/11/21					
1693	Stripping off formwork	2 days	2011/11/22	2011/11/23					
1694	Backfill	4 days	2011/11/24	2011/11/28					
1695	NA	0 days	2011/11/28	2011/11/28					
1696	NA	0 days	2011/11/28	2011/11/28					
1697	NA	0 days	2011/11/28	2011/11/28					
1698	NA	0 days	2011/11/28	2011/11/28					
1699	NA	0 days	2011/11/28	2011/11/28					
1700	NA	0 days	2011/11/28	2011/11/28					
1701	NA	0 days	2011/11/28	2011/11/28					
1702	NA	0 days	2011/11/28	2011/11/28					
1703	NA	0 days	2011/11/28	2011/11/28					
1704	NA	0 days	2011/11/28	2011/11/28					

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要徑分層	分割	比較基準分層	摘要進度	外部任務	
要徑進度	任務進度	比較基準里程碑	摘要	外部里程碑	

識別碼	任務名稱	工期	開始時間	完成時間	2012年				
					第四季	第一季	第二季	第三季	第四季
1705	NA	0 days	2011/1/28	2011/1/28					
1706	NA	0 days	2011/1/28	2011/1/28					
1707	NA	0 days	2011/1/28	2011/1/28					
1708	NA	0 days	2011/1/28	2011/1/28					
1709	NA	0 days	2011/1/28	2011/1/28					
1710	NA	0 days	2011/1/28	2011/1/28					
1711	NA	0 days	2011/1/28	2011/1/28					
1712	NA	0 days	2011/1/28	2011/1/28					
1713	Retaining Wall (ch 450-500) TR2 (LHS)	54 days	2011/1/15	2012/1/19					
1714	Demolition of House 2 Sha Po Tsai	7 days	2011/1/15	2011/1/22					
1715	Excavation and Formation for TR2 Bay 1 to Bay 3	14 days	2011/1/29	2011/2/14					
1716	Excavation and Formation for TR2 Bay 4 to Bay 5	14 days	2011/1/29	2012/1/3					
1717	Base Slab Construction Bay 1+3 (LHS)	12 days	2011/12/12	2011/12/24					
1718	Formwork and rebar fixing (with DWF)	10 days	2011/12/12	2011/12/22					
1719	Concreting	1 day	2011/12/23	2011/12/23					
1720	Stripping off formwork	1 day	2011/12/24	2011/12/24					
1721	Wall Stem Construction Bay 1+3 (LHS)	14 days	2011/12/28	2012/1/13					
1722	Formwork and rebar fixing	8 days	2011/12/28	2012/1/6					
1723	Concreting	1 day	2012/1/7	2012/1/7					
1724	Stripping off formwork	1 day	2012/1/9	2012/1/9					
1725	Backfill	4 days	2012/1/10	2012/1/13					
1726	Base Slab Construction Bay 2 (LHS) del	0 days	2011/12/24	2011/12/24					
1730	Wall Stem Construction Bay 2 (LHS) del	0 days	2011/12/24	2011/12/24					
1735	Base Slab Construction Bay 2 +4 + step 6 (LHS)	10 days	2011/12/23	2012/1/6					
1736	Formwork and rebar fixing (with DWF)	8 days	2011/12/23	2012/1/4					
1737	Concreting	1 day	2012/1/5	2012/1/5					
1738	Stripping off formwork	1 day	2012/1/6	2012/1/6					
1739	Wall Stem Construction Bay 2 + 4 (LHS)	11 days	2012/1/7	2012/1/19					
1740	Formwork and rebar fixing	5 days	2012/1/7	2012/1/12					
1741	Concreting	1 day	2012/1/13	2012/1/13					
1742	Stripping off formwork	1 day	2012/1/14	2012/1/14					
1743	Backfill	4 days	2012/1/16	2012/1/19					
1744	NA	0 days	2011/12/22	2011/12/22					
1745	NA	0 days	2011/12/22	2011/12/22					
1746	NA	0 days	2011/12/22	2011/12/22					
1747	NA	0 days	2011/12/22	2011/12/22					
1748	NA	0 days	2011/12/22	2011/12/22					
1749	NA	0 days	2011/12/22	2011/12/22					
1750	NA	0 days	2011/12/22	2011/12/22					
1751	NA	0 days	2011/12/22	2011/12/22					
1752	NA	0 days	2011/12/22	2011/12/22					
1753	NA	0 days	2012/1/3	2012/1/3					
1754	NA	0 days	2012/1/3	2012/1/3					
1755	NA	0 days	2012/1/3	2012/1/3					
1756	NA	0 days	2012/1/3	2012/1/3					
1757	NA	0 days	2012/1/3	2012/1/3					
1758	NA	0 days	2012/1/3	2012/1/3					



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要徑		任務		比較基準		里程碑		專案摘要報告		期限	
要徑分隔		分割		比較基準分隔		摘要速度		外部任務			
要徑速度		任務速度		比較基準里程碑		摘要		外部里程碑			

識別碼	任務名稱	工期	開始時間	完成時間	2012年				
					第四季	第一季	第二季	第三季	第四季
1759	NA	0 days	2012/1/3	2012/1/3					
1760	NA	0 days	2012/1/3	2012/1/3					
1761	NA	0 days	2012/1/3	2012/1/3					
1762									
1763	Drainage & Footpath (Ch 450-490 RHS)	14 days	2011/11/29	2011/12/14					
1764	Construction of drainage & footpath	14 days	2011/11/29	2011/12/14					
1765	Retaining Wall (Ch 500-530) TR3 (RHS)	272 days	2011/3/16	2012/2/13					
1766	Base Slab Construction Bay 1 (incl. Step 7) (RHS)	28 days	2011/3/16	2011/4/18					
1771	Wall Stem Construction Bay 1 (RHS)	10 days	2011/4/19	2011/5/3					
1776	Base Slab Construction Bay 2 (incl. Step 7)(RHS)	20 days	2012/1/4	2012/1/30					
1777	Excavation and Formation	12 days	2012/1/4	2012/1/17					
1778	Formwork and rebar fixing	6 days	2012/1/18	2012/1/27					
1779	Concreting	1 day	2012/1/28	2012/1/28					
1780	Stripping off formwork	1 day	2012/1/30	2012/1/30					
1781	Wall Stem Construction Bay 2 (RHS)	12 days	2012/1/31	2012/2/13					
1782	Formwork and rebar fixing	5 days	2012/1/31	2012/2/4					
1783	Concreting	1 day	2012/2/6	2012/2/6					
1784	Stripping off formwork	2 days	2012/2/7	2012/2/8					
1785	Backfill	4 days	2012/2/9	2012/2/13					
1786									
1787	Cascades (Ch 500 LHS)	42 days	2011/10/1	2011/11/19					
1788	Water Diversion	21 days	2011/10/1	2011/10/26					
1789	Excavation	9 days	2011/10/27	2011/11/5					
1790	Formwork and rebar fixing	10 days	2011/11/7	2011/11/17					
1791	Concreting	1 day	2011/11/18	2011/11/18					
1792	Stripping off formwork	1 day	2011/11/19	2011/11/19					
1793									
1794	Retaining Wall (Ch 500-530) TR3 (LHS) 7777	46 days	2011/11/29	2012/1/27					
1795	Base Slab Construction Bay 1 (incl. Step 7)(LHS)	14 days	2011/11/29	2011/12/14					
1796	Remove Concrete Block and shotcrete	2 days	2011/11/29	2011/11/30					
1797	Excavation & blinding	5 days	2011/11/29	2011/12/3					
1798	Formwork and rebar fixing (with DWF)	7 days	2011/12/5	2011/12/12					
1799	Concreting	1 day	2011/12/13	2011/12/13					
1800	Stripping off formwork	1 day	2011/12/14	2011/12/14					
1801	Wall Stem Construction Bay 1 (LHS)	10 days	2011/12/15	2011/12/28					
1802	Formwork and rebar fixing	4 days	2011/12/15	2011/12/19					
1803	Concreting	1 day	2011/12/20	2011/12/20					
1804	Stripping off formwork	1 day	2011/12/21	2011/12/21					
1805	Backfill	4 days	2011/12/22	2011/12/28					
1806	Base Slab Construction Bay 2 (incl. Step 7)(LHS)	16 days	2011/12/24	2012/1/14					
1807	Remove Concrete Block and shotcrete	4 days	2011/12/24	2011/12/30					
1808	Excavation & blinding	5 days	2011/12/31	2012/1/6					
1809	Formwork and rebar fixing (with DWF)	5 days	2012/1/7	2012/1/12					
1810	Concreting	1 day	2012/1/13	2012/1/13					
1811	Stripping off formwork	1 day	2012/1/14	2012/1/14					
1812	Wall Stem Construction Bay 2 (LHS)	8 days	2012/1/16	2012/1/27					
1813	Formwork and rebar fixing	4 days	2012/1/16	2012/1/19					

專案: DC0706 River Prog
日期: 2011/12/29

要徑 任務 比較基準 里程碑 專案摘要報告 期限
 要徑分隔 分割 比較基準分隔 摘要進度 外部任務
 要徑進度 任務進度 比較基準里程碑 摘要 外部里程碑

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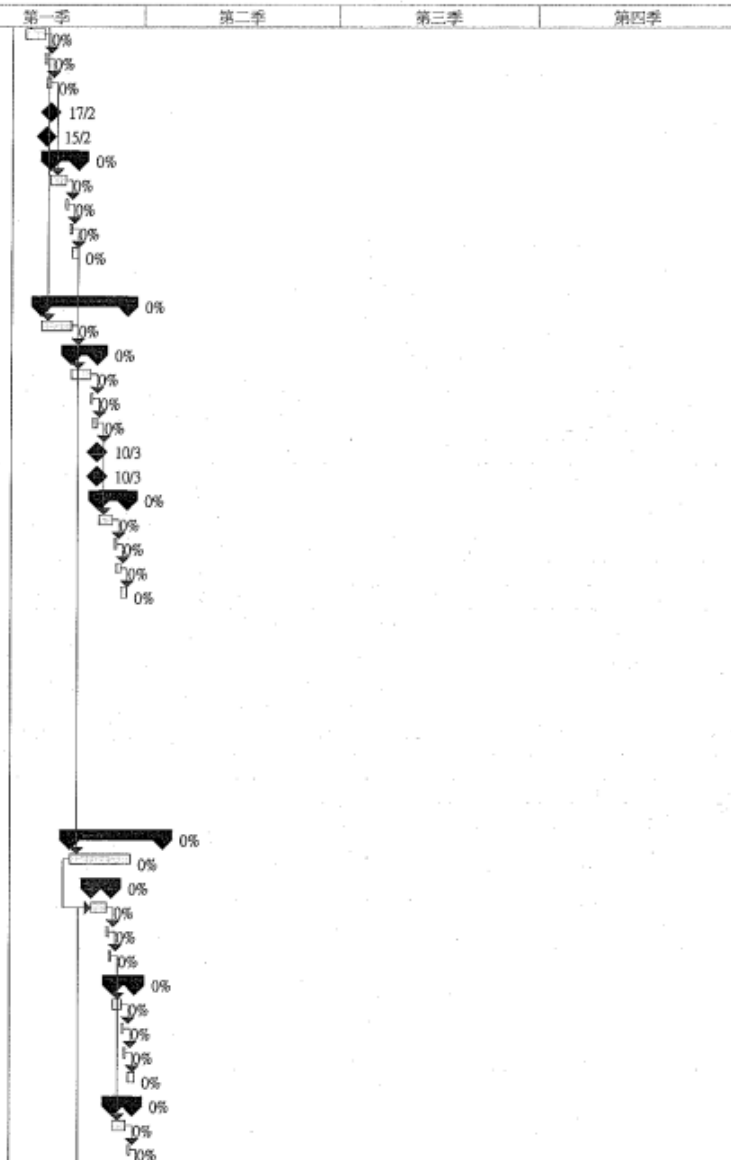
識別碼	任務名稱	工期	開始時間	完成時間	2012年				
					第四季	第一季	第二季	第三季	第四季
1814	Concreting	1 day	2012/1/20	2012/1/20					
1815	Stripping off formwork	1 day	2012/1/21	2012/1/21					
1816	Backfill	2 days	2012/1/26	2012/1/27					
1817									
1818	Drainage & Footpath (Ch 490-525 RHS)	30 days	2012/2/9	2012/3/14					
1819	Construction of drainage & footpath	30 days	2012/2/9	2012/3/14					
1820									
1821	Footbridge TB07 (Ch 525)	119 days	2011/10/3	2012/2/25					
1822	Temporary Pedestrian Division	15 days	2011/10/3	2011/10/20					
1823	Temporary Pedestrian Division (at grade)	14 days	2011/10/3	2011/10/20					
1824	Demolition of existing Footbridge TB-D (Ch 525)	3 days	2011/10/21	2011/10/24					
1825	Remove concrete pipes and demolition works	3 days	2011/10/21	2011/10/24					
1826	Construction of Abutment A (LHS)	27 days	2011/12/31	2012/2/4					
1827	Excavation and Blinding	7 days	2011/12/31	2012/1/9					
1828	Formwork and rebar fixing for base slab	5 days	2012/1/10	2012/1/14					
1829	Concreting of base slab	1 day	2012/1/16	2012/1/16					
1830	Stripping off formwork	3 days	2012/1/17	2012/1/19					
1831	Rebar fixing and shuttering formwork for column	4 days	2012/1/20	2012/1/27					
1832	Concreting	1 day	2012/1/28	2012/1/28					
1833	Stripping off formwork	2 days	2012/1/30	2012/1/31					
1834	Backfill	4 days	2012/2/1	2012/2/4					
1835	Construction of Abutment B (RHS)	31 days	2012/1/18	2012/2/25					
1836	Excavation and Blinding	12 days	2012/1/18	2012/2/3					
1837	Formwork and rebar fixing for base slab	5 days	2012/2/4	2012/2/9					
1838	Concreting of base slab	1 day	2012/2/10	2012/2/10					
1839	Stripping off formwork	2 days	2012/2/11	2012/2/13					
1840	Rebar fixing and shuttering formwork for column	4 days	2012/2/14	2012/2/17					
1841	Concreting	1 day	2012/2/18	2012/2/18					
1842	Stripping off formwork	2 days	2012/2/20	2012/2/21					
1843	Backfill	4 days	2012/2/22	2012/2/25					
1844	Footbridge TB07 (Ch 525)	31 days	2012/4/12	2012/5/19					
1845	Construction of decking	16 days	2012/4/12	2012/5/2					
1846	Erection of steel deck+ conc deck	4 days	2012/4/12	2012/4/16					
1847	Deck finishing	10 days	2012/4/17	2012/4/27					
1848	NA	0 days	2012/4/27	2012/4/27					
1849	Railing installation	2 days	2012/4/30	2012/5/2					
1850	Footbridge TB07 Lighting	15 days	2012/5/3	2012/5/19					
1851	Construction of Drawpits / Ducting	7 days	2012/5/3	2012/5/10					
1852	Public lighting Installation (CE2328)	6 days	2012/5/11	2012/5/17					
1853	Public lighting Installation (CE2329)	6 days	2012/5/11	2012/5/17					
1854	T&C	2 days	2012/5/18	2012/5/19					
1855									
1856	Ch 525-615	497 days	2010/10/15	2012/5/21					
1857		7 days	2011/10/1	2011/10/10					
1858	Retaining Wall (Ch 535-546) TR4 (LHS)	36 days	2012/1/17	2012/3/1					
1859	Excavation and Formation	14 days	2012/1/17	2012/2/4					
1860	Base Slab Construction Bay 1&2 (LHS)	11 days	2012/2/6	2012/2/17					

專案: DC0706 River Prog
日期: 2011/12/29

要徑: 任務:
 要徑分層: 分割:
 要徑進度: 任務進度:
 比較基準: 里程碑:
 比較基準分層: 摘要進度:
 比較基準里程碑: 摘要:
 專家摘要報告:
 外部任務:
 外部里程碑:

期限

識別碼	任務名稱	工期	開始時間	完成時間	2012年				
					第四季	第一季	第二季	第三季	第四季
1861	Formwork and rebar fixing	8 days	2012/2/6	2012/2/14					
1862	Concreting	1 day	2012/2/15	2012/2/15					
1863	Stripping off formwork	2 days	2012/2/16	2012/2/17					
1864	Wall Stem Construction Bay 1 (LHS) delete	0 days	2012/2/17	2012/2/17					
1869	Base Slab Construction Bay 2 (LHS) del	0 days	2012/2/15	2012/2/15					
1873	Wall Stem Construction Bay 1&2 (LHS)	11 days	2012/2/18	2012/3/1					
1874	Formwork and rebar fixing	6 days	2012/2/18	2012/2/24					
1875	Concreting	1 day	2012/2/25	2012/2/25					
1876	Stripping off formwork	1 day	2012/2/27	2012/2/27					
1877	Backfill	3 days	2012/2/28	2012/3/1					
1878									
1879	Retaining Wall (Ch 535-546) TR4 (RHS)	35 days	2012/2/14	2012/3/24					
1880	Excavation and Formation	12 days	2012/2/14	2012/2/27					
1881	Base Slab Construction Bay 1+2 (RHS)	11 days	2012/2/28	2012/3/10					
1882	Formwork and rebar fixing (with DWF)	8 days	2012/2/28	2012/3/7					
1883	Concreting	1 day	2012/3/8	2012/3/8					
1884	Stripping off formwork	2 days	2012/3/9	2012/3/10					
1885	Wall Stem Construction Bay 1 (RHS) del	0 days	2012/3/10	2012/3/10					
1890	Base Slab Construction Bay 2 (RHS) del	0 days	2012/3/10	2012/3/10					
1894	Wall Stem Construction Bay 1+2 (RHS)	12 days	2012/3/12	2012/3/24					
1895	Formwork and rebar fixing	6 days	2012/3/12	2012/3/17					
1896	Concreting	1 day	2012/3/19	2012/3/19					
1897	Stripping off formwork	2 days	2012/3/20	2012/3/21					
1898	Backfill	3 days	2012/3/22	2012/3/24					
1899	Retaining Wall TR5 Ch (546-596 RHS) TR5 (AD)	306 days	2010/10/15	2011/9/27					
1900	Construction of temp haul road	25 days	2010/10/15	2010/11/8					
1901	Demolition of Existing structure at slope crest	8 days	2010/11/9	2010/11/16					
1902	Suspension of Work due to villagers rally	17 days	2010/12/2	2010/12/18					
1903	Construction of temporary ground beam	5 days	2010/12/19	2010/12/23					
1904	Trimming of rock slope (from downstream to upstream)	73 days	2010/12/24	2011/3/11					
1905	Install rock dowel	45 days	2011/2/22	2011/4/14					
1906	Construction of skin wall (from D/S to U/S, from toe to crest)	165 days	2011/3/10	2011/9/27					
1907									
1908	Retaining Wall TR5A CH546-585 LHS	34 days	2012/2/28	2012/4/10					
1909	River diversion, Excavation and Formation	24 days	2012/2/28	2012/3/26					
1910	Base Slab Construction TR5A Bay 1 LHS	8 days	2012/3/9	2012/3/17					
1911	Formwork and rebar fixing	6 days	2012/3/9	2012/3/15					
1912	Concreting	1 day	2012/3/16	2012/3/16					
1913	Stripping off formwork	1 day	2012/3/17	2012/3/17					
1914	Wall Stem Construction TR5A Bay 1 LHS	9 days	2012/3/19	2012/3/28					
1915	Formwork and rebar fixing	4 days	2012/3/19	2012/3/22					
1916	Concreting	1 day	2012/3/23	2012/3/23					
1917	Stripping off formwork	1 day	2012/3/24	2012/3/24					
1918	Backfill	3 days	2012/3/26	2012/3/28					
1919	Base Slab Construction TR5A Bay 2 LHS	8 days	2012/3/19	2012/3/27					
1920	Formwork and rebar fixing	6 days	2012/3/19	2012/3/24					
1921	Concreting	1 day	2012/3/26	2012/3/26					

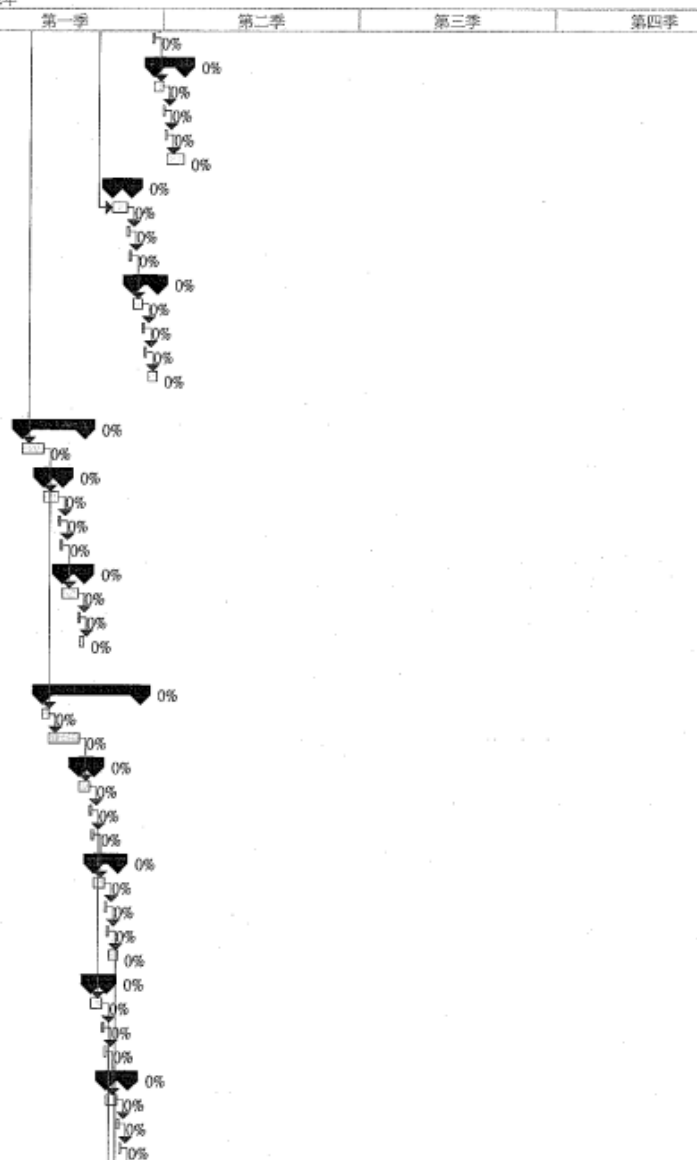


專案: DC0706 River Prog
日期: 2011/12/29

要徑	任務	比較基準	里程碑	專案摘要報告	期限
要徑分隔	分割	比較基準分隔	摘要進度	外部任務	
要徑進度	任務進度	比較基準里程碑	摘要	外部里程碑	

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識別碼	任務名稱	工期	開始時間	完成時間	2012年				
					第四季	第一季	第二季	第三季	第四季
1922	Stripping off formwork	1 day	2012/3/27	2012/3/27					
1923	Wall Stem Construction TR5A Bay 2 LHS	9 days	2012/3/28	2012/4/10					
1924	Formwork and rebar fixing	4 days	2012/3/28	2012/3/31					
1925	Concreting	1 day	2012/4/1	2012/4/1					
1926	Stripping off formwork	1 day	2012/4/2	2012/4/2					
1927	Backfill	3 days	2012/4/3	2012/4/10					
1928	Base Slab Construction TR5A Bay 3 LHS	8 days	2012/3/9	2012/3/17					
1929	Formwork and rebar fixing	6 days	2012/3/9	2012/3/15					
1930	Concreting	1 day	2012/3/16	2012/3/16					
1931	Stripping off formwork	1 day	2012/3/17	2012/3/17					
1932	Wall Stem Construction TR5A Bay 3 LHS	10 days	2012/3/19	2012/3/29					
1933	Formwork and rebar fixing	4 days	2012/3/19	2012/3/22					
1934	Concreting	1 day	2012/3/23	2012/3/23					
1935	Stripping off formwork	1 day	2012/3/24	2012/3/24					
1936	Backfill	4 days	2012/3/26	2012/3/29					
1937									
1938	Box Culvert TB02 (ch 580)	25 days	2012/1/28	2012/2/25					
1939	Haul Road Diversion to TR3 Bay 3, River diversion, Excavation	8 days	2012/1/28	2012/2/6					
1940	Construction of Base Slab	8 days	2012/2/7	2012/2/15					
1941	Formwork and rebar fixing	6 days	2012/2/7	2012/2/13					
1942	Concreting	1 day	2012/2/14	2012/2/14					
1943	Stripping off formwork	1 day	2012/2/15	2012/2/15					
1944	Construction of Wall Stem and Top Slab	9 days	2012/2/16	2012/2/25					
1945	Formwork and rebar fixing	6 days	2012/2/16	2012/2/22					
1946	Concreting	1 day	2012/2/23	2012/2/23					
1947	Stripping off formwork	2 days	2012/2/24	2012/2/25					
1948									
1949	Retaining Wall TR5A & TR6 CH585-595 LHS	39 days	2012/2/7	2012/3/22					
1950	River/Haul Road Diversion (to TR3 and TR5 RHS)	3 days	2012/2/7	2012/2/9					
1951	Excavation and Blinding	12 days	2012/2/10	2012/2/23					
1952	Base Slab Construction TR6 Bay 1 LHS	6 days	2012/2/24	2012/3/1					
1953	Formwork and rebar fixing	4 days	2012/2/24	2012/2/28					
1954	Concreting	1 day	2012/2/29	2012/2/29					
1955	Stripping off formwork	1 day	2012/3/1	2012/3/1					
1956	Wall Stem Construction TR6 Bay 1 LHS	9 days	2012/3/2	2012/3/12					
1957	Formwork and rebar fixing	4 days	2012/3/2	2012/3/6					
1958	Concreting	1 day	2012/3/7	2012/3/7					
1959	Stripping off formwork	1 day	2012/3/8	2012/3/8					
1960	Backfill	3 days	2012/3/9	2012/3/12					
1961	Base Slab Construction TR5A Bay 4 LHS	6 days	2012/3/1	2012/3/7					
1962	Formwork and rebar fixing	4 days	2012/3/1	2012/3/5					
1963	Concreting	1 day	2012/3/6	2012/3/6					
1964	Stripping off formwork	1 day	2012/3/7	2012/3/7					
1965	Wall Stem Construction TR5A Bay 4 LHS	9 days	2012/3/8	2012/3/17					
1966	Formwork and rebar fixing	4 days	2012/3/8	2012/3/12					
1967	Concreting	1 day	2012/3/13	2012/3/13					
1968	Stripping off formwork	1 day	2012/3/14	2012/3/14					



專案: DC006 River Prog
日期: 2011/12/29

要徑 任務 比較基準 里程碑
 要徑分層 分劃 比較基準分層 摘要進度
 要徑進度 任務進度 比較基準里程碑 摘要

專案摘要報告 類訊

外部任務 外部里程碑

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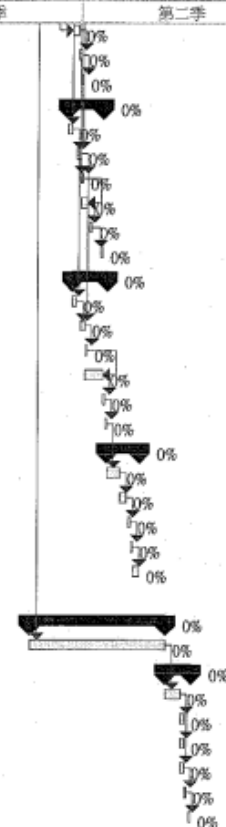
識別碼	任務名稱	工期	開始時間	完成時間	2012年				
					第四季	第一季	第二季	第三季	第四季
1969	Backfill	3 days	2012/3/15	2012/3/17					
1970	Base Slab Construction TR5A Bay 5 LHS	6 days	2012/3/6	2012/3/12					
1971	Formwork and rebar fixing	4 days	2012/3/6	2012/3/9					
1972	Concreting	1 day	2012/3/10	2012/3/10					
1973	Stripping off formwork	1 day	2012/3/12	2012/3/12					
1974	Wall Stem Construction TR5A Bay 5 LHS	9 days	2012/3/13	2012/3/22					
1975	Formwork and rebar fixing	4 days	2012/3/13	2012/3/16					
1976	Concreting	1 day	2012/3/17	2012/3/17					
1977	Stripping off formwork	1 day	2012/3/19	2012/3/19					
1978	Backfill	3 days	2012/3/20	2012/3/22					
1979									
1980	Retaining Wall (ch 595-615) TR3 (Bay 3)	63 days	2011/1/01	2011/12/14					
1981	River diversion, Excavation and Formation	12 days	2011/1/01	2011/1/015					
1982	Base Slab Construction Bay 3 RHS	10 days	2011/1/01	2011/1/021					
1983	Formwork and rebar fixing	8 days	2011/1/01	2011/1/019					
1984	Concreting	1 day	2011/1/020	2011/1/020					
1985	Stripping off formwork	1 day	2011/1/021	2011/1/021					
1986	Wall Stem Construction TR3 Bay 3 RHS	6 days	2011/1/022	2011/1/028					
1987	Formwork and rebar fixing	4 days	2011/1/022	2011/1/026					
1988	Concreting	1 day	2011/1/027	2011/1/027					
1989	Stripping off formwork	1 day	2011/1/028	2011/1/028					
1990	Base Slab Construction Bay 3 LHS	10 days	2011/11/23	2011/12/3					
1991	Formwork and rebar fixing	8 days	2011/11/23	2011/12/1					
1992	Concreting	1 day	2011/12/2	2011/12/2					
1993	Stripping off formwork	1 day	2011/12/3	2011/12/3					
1994	Wall Stem Construction TR3 Bay 3 LHS	9 days	2011/12/5	2011/12/14					
1995	Formwork and rebar fixing	4 days	2011/12/5	2011/12/8					
1996	Concreting	1 day	2011/12/9	2011/12/9					
1997	Stripping off formwork	1 day	2011/12/10	2011/12/10					
1998	back fill & diversion	3 days	2011/12/12	2011/12/14					
1999	Concrete Slab (Ch546 - Ch596) LHS	144 days	2011/1/12	2012/4/27					
2000	Bay 1,2,3 RHS	14 days	2011/11/2	2011/11/17					
2001	Excavation/Blinding	3 days	2011/11/2	2011/11/4					
2002	Formwork and rebar fixing for slab	6 days	2011/11/5	2011/11/11					
2003	Concreting of slab	3 days	2011/11/12	2011/11/15					
2004	Stripping off formwork	2 days	2011/11/16	2011/11/17					
2005	Bay 1 LHS	10 days	2012/3/20	2012/3/30					
2006	Excavation/Blinding	3 days	2012/3/20	2012/3/22					
2007	Formwork and rebar fixing for DWF	2 days	2012/3/23	2012/3/24					
2008	Concreting of DWF	1 day	2012/3/26	2012/3/26					
2009	Formwork and rebar fixing for slab	3 days	2012/3/26	2012/3/28					
2010	Concreting of slab	1 day	2012/3/29	2012/3/29					
2011	Stripping off formwork	1 day	2012/3/30	2012/3/30					
2012	Bay 2 LHS	9 days	2012/3/23	2012/4/1					
2013	Excavation/Blinding	2 days	2012/3/23	2012/3/24					
2014	Formwork and rebar fixing for DWF	2 days	2012/3/26	2012/3/27					
2015	Concreting of DWF	1 day	2012/3/28	2012/3/28					

專案: DC0706 River Prog
日期: 2011/12/29

要徑		任務		比較基準		里程碑		專案摘要報告		期限	
要徑分割		分割		比較基準分割		摘要進度		外部任務			
要徑進度		任務進度		比較基準里程碑		摘要		外部里程碑			

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識別碼	任務名稱	工期	開始時間	完成時間	2012年				
					第四季	第一季	第二季	第三季	第四季
2016	Formwork and rebar fixing for slab	3 days	2012/3/28	2012/3/30					
2017	Concreting of slab	1 day	2012/3/31	2012/3/31					
2018	Stripping off formwork	1 day	2012/4/1	2012/4/1					
2019	Bay 3 LHS	11 days	2012/3/26	2012/4/10					
2020	Excavation/Blinding	2 days	2012/3/26	2012/3/27					
2021	Formwork and rebar fixing for DWF	2 days	2012/3/30	2012/3/31					
2022	Concreting of DWF	1 day	2012/4/1	2012/4/1					
2023	Formwork and rebar fixing for slab	3 days	2012/4/1	2012/4/3					
2024	Concreting of slab	1 day	2012/4/5	2012/4/5					
2025	Stripping off formwork	1 day	2012/4/10	2012/4/10					
2026	Bay 4 LHS	11 days	2012/3/28	2012/4/12					
2027	Excavation/Blinding	2 days	2012/3/28	2012/3/29					
2028	Formwork and rebar fixing for DWF	2 days	2012/4/1	2012/4/2					
2029	Concreting of DWF	1 day	2012/4/3	2012/4/3					
2030	Formwork and rebar fixing for slab	3 days	2012/4/3	2012/4/10					
2031	Concreting of slab	1 day	2012/4/11	2012/4/11					
2032	Stripping off formwork	1 day	2012/4/12	2012/4/12					
2033	Bay 4 RHS	13 days	2012/4/13	2012/4/27					
2034	Excavation/Blinding	5 days	2012/4/13	2012/4/18					
2035	Formwork and rebar fixing for slab	3 days	2012/4/19	2012/4/21					
2036	Concreting of slab	1 day	2012/4/23	2012/4/23					
2037	Stripping off formwork	1 day	2012/4/24	2012/4/24					
2038	remove haul road	3 days	2012/4/25	2012/4/27					
2039									
2040	Drainage and Footpath (Ch525-615 LHS & RHS)	48 days	2012/3/9	2012/5/9					
2041	Construction of footpath & drainage works	48 days	2012/3/9	2012/5/9					
2042	Lighting at CH 550-610	10 days	2012/5/10	2012/5/21					
2043	Construction of Drawpits / Ducting	6 days	2012/5/10	2012/5/16					
2044	Public lighting Installation (CE2325)	2 days	2012/5/17	2012/5/18					
2045	Public lighting Installation (CE2326)	2 days	2012/5/17	2012/5/18					
2046	Public lighting Installation (CE2327)	2 days	2012/5/17	2012/5/18					
2047	T&C	1 day	2012/5/19	2012/5/19					
2048	Removal of existing lighting (CE1600-B2)	1 day	2012/5/21	2012/5/21					
2049									
2050	Section 4 - Box Culvert at Ping Long	0 days	2009/12/9	2009/12/9					
2051	Section 4 - Box Culvert (Area A)	0 days	2009/12/9	2009/12/9					
2052	Completion of Work at Section 4	0 days	2009/12/9	2009/12/9					
2053									
2054	Section 5 - Landscape Establishment Works (Portion B, C, D, E, F, G, H & I)	1951 days	2007/9/28	2013/7/1					
2055	Section 5 Landscape Works	1665 days	2007/9/28	2012/7/26					
2056	Commencement of Works	1 day	2007/9/28	2007/9/28					
2057	Material Submission	120 days	2007/9/29	2008/1/26					
2058	Submission Approval	0 days	2008/2/9	2008/2/9					
2059	Landscaping Hardworks	1541 days	2007/11/11	2012/4/19					
2060	Landscaping Softworks	365 days	2011/1/30	2012/4/18					
2061	Submission of Tree Survey	400 days	2007/9/29	2008/1/11					
2062	Preservation and Protection of Preserved Trees	1550 days	2008/11/2	2013/7/1					



專案: DC0706 River Prog
日期: 2011/12/29

要徑		任務		比較基準		里程碑		專案摘要報告		期限	
要徑分層		分期		比較基準分期		摘要進度		外部任務			
要徑強度		任務強度		比較基準里程碑		摘要		外部里程碑			

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識別碼	任務名稱	工期	開始時間	完成時間	2012年				
					第四季	第一季	第二季	第三季	第四季
2063	Landscape Establishment Works	1550 days	2008/11/2	2013/7/1					
2064	Completion of Works	0 days	2013/7/1	2013/7/1					
2065									
2066	Section 6 - Landscape Establishment Works (Portion J, K & M)	1701 days	2007/9/28	2012/9/6					
2067	Section 6 Landscape Works	1665 days	2007/9/28	2012/7/26					
2068	Commencement of Works	1 day	2007/9/28	2007/9/28					
2069	Material Submission	120 days	2007/9/29	2008/1/26					
2070	Submission Approval	0 days	2008/2/9	2008/2/9					
2071	Landscaping Hardworks	1161 days	2008/11/25	2012/4/19					
2072	Landscaping Softworks	365 days	2011/1/31	2012/4/19					
2073	Submission of Tree Survey	400 days	2007/9/29	2008/1/1					
2074	Preservation and Protection of Preserved Trees	1300 days	2008/11/2	2012/9/6					
2075	Landscape Establishment Works	1300 days	2008/11/2	2012/9/6					
2076	Completion of Works	0 days	2012/9/6	2012/9/6					
2077									
2078	Section 7 - Landscape Establishment Works (Portion L, N & P)	1701 days	2007/9/28	2012/9/6					
2079	Section 7 Landscape Works	1665 days	2007/9/28	2012/7/26					
2080	Commencement of Works	1 day	2007/9/28	2007/9/28					
2081	Material Submission	120 days	2007/9/29	2008/1/26					
2082	Submission Approval	0 days	2008/2/9	2008/2/9					
2083	Landscaping Hardworks	1176 days	2008/11/10	2012/4/19					
2084	Landscaping Softworks	365 days	2011/1/31	2012/4/19					
2085	Submission of Tree Survey	400 days	2007/9/29	2008/1/1					
2086	Preservation and Protection of Preserved Trees	1300 days	2008/11/2	2012/9/6					
2087	Landscape Establishment Works	1300 days	2008/11/2	2012/9/6					
2088	Completion of Works	0 days	2012/9/6	2012/9/6					
2089									
2090	Section 8 - All Remaining Work at All Portions	1950 days?	2007/9/28	2013/6/29					
2091	Commencement of Works	1 day	2007/9/28	2007/9/28					
2092	All remaining works at all Area	1950 days	2007/9/28	2013/6/29					
2093	Completion of Works	0 days	2013/2/13	2013/2/13					
2094		1 day?	2007/9/28	2007/9/28					

專案: DC0706 River Prog
日期: 2011/12/29

要徑		任務		比較基準		里程碑		專案摘要報告		期限	
要徑分節		分節		比較基準分節		摘要進度		外部任務			
要徑進度		任務進度		比較基準里程碑		摘要		外部里程碑			

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Appendix J: Complaint Investigation Reports and Log



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

豐盛創建機電業集團附屬公司 *Subsidiary of FSE Engg Group*
豐盛創建企業成員 *Member of Fung Seng Enterprises*

Our ref. no.: DC0706-CL-111201(EPD)

8th December 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/00024845-11
Date received:	1 st December 2011
Incident location:	Upper Tai Po River (UTPR), nearby Sheung Wun Yiu
Description:	Complaint was referred by EPD regarding the complaint on dust emission and earth deposition to 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,

Goldie Fung
ET leader

Environmental Pioneers and Solutions Limited

c.c. SRE/AECOM (Mr. Colin Cheng)
RE/AECOM (Mr. Adrian Ng)
IEC/ERM (Ms. Winnie Ko)
Chiu Hing Project Manager (Mr. Alvin Ma)
Chiu Hing Site Agent (Mr. Gary Chan)
Chiu Hing Environmental Officer (Ms. Macy Fung)

Flat A, 19/F Chai Wan Industrial Centre, 20 Lee Chung Street, Chai Wan, Hong Kong
香港柴灣利眾街 20 號柴灣工業中心 19 字樓 A 座
Tel: (852) 2556 9172 Fax: (852) 2856 2010 <http://www.epsl.com.hk>



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-111201(EPD)

EPD complaint ref.: EP3/N05/RN/00024845-11

Sheet: 1 of 2

RECIPIENT

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

Details: Complaint was referred by EPD regarding the complaint on dust emission and earth deposition to public area at Upper Tai Po River (UTPR), nearby Sheung Wun Yiu.

Received Date: 1st December 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: 1st December 2011

Location: Upper Tai Po River (UTPR), nearby Sheung Wun Yiu.

INVESTIGATION RESULTS, RECOMMENDATIONS & MITIGATION MEASURES

1. A complaint on 1st December 2011 was recorded regarding the complaint on dust emission and earth deposition to 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. ET has conducted a site investigation on 5th December 2011 with representatives from 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.
3. During the investigation, vehicle washing facility such as high jet water sprayers and wheel washing area were provided at site entrance of ch.600 and Access Road D respectively. No earth deposition on the public road was observed.
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).
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. During site investigation, it was observed that water spraying was performed by frontline staff and wheel washing bay was used by drivers for wheel washing before leaving from site (Fig.5.1). However, the condition of water in the wheel washing bay was observed to be muddy (Fig.5.2). 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 on not arising possible environmental impacts in the future.

Signature:



Goldie Fung, ET Leader

Date: 8-12-2011

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.5.1 –High jet water sprayer and wheel washing bay was used for wheel washing at site entrance at ch.600.



Fig.5.2 –Condition of Wheel Washing Bay at site entrance located at ch.600 was muddy.



COMPLAINT / CONCERN LOG

Ref: DC0706-CL-111201(EPD)

Log Ref	Event Date/Location	Complainant/Date of Contact	Details of Complaint	Investigation/Mitigation Action	File Closed
<p>Our REF: DC0706-CL-111201(EPD)</p> <p>EPD complaint ref.: EP3/N05/RN/0024845-11</p>	<p>1st December 2011, Upper Tai Po River (UTPR), nearby Sheung Wun Yiu</p>	<p>A Complaint was referred by EPD on 1st December 2011</p>	<p>Complaint was referred by EPD regarding the complaint on dust emission and earth deposition to public area at Upper Tai Po River (UTPR), nearby Sheung Wun Yiu.</p>	<ol style="list-style-type: none"> 1. A complaint on 1st December 2011 was recorded regarding the complaint on dust emission and earth deposition to 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. ET has conducted a site investigation on 5th December 2011 with representatives from 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. 3. During the investigation, vehicle washing facility such as high jet water sprayers and wheel washing area were provided at site entrance of ch.600 and Access Road D respectively. No earth deposition on the public road was observed. 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). 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. 	<p>Yes</p>

				<p>During site investigation, it was observed that water spraying was performed by frontline staff and wheel washing bay was used by drivers for wheel washing before leaving from site (Fig.5.1). However, the condition of water in the wheel washing bay was observed to be muddy (Fig.5.2). 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> <ul 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>	
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				8. ET has reminded the contractor to pay serious attention on not arising possible environmental impacts in the future.	
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Filed by Environmental Team Leader:  _____

Date: 8th December 2011