PROJECT NO.: TCS/00408/08

DSD CONTRACT NO. DC/2007/17 DRAINAGE IMPROVEMENT WORKS IN CHEUNG PO, MA ON KONG, YUEN KONG SAN TSUEN AND TIN SAM TSUEN OF YUEN LONG DISTRICT AND SEWERAGE AT TSENG TAU CHUNG TSUEN, TUEN MUN

SECOND QUARTERLY EM&A SUMMARY REPORT – KT13 (JANUARY – MARCH 2009)

PREPARED FOR
CHINA ROAD & BRIDGE CORPORATION

Quality Index

Date	Reference No.	Prepared By	Certified by
8 April 2009	TCS00408/08/600/R0932	 Nicola Hon Environmental Consultant	 Andrew Lau Environmental Team Leader

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1	8 April 2009	Nicola Hon	Andrew Lau	First submission

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By Fax and Post

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Attention: Mr. Clive Cheng

ARUP

Dear Mr. Cheng,

Contract No. DC/2007/17 Drainage Improvement Works in Cheung Po, Ma On Kong, Yuen King San and Tin Sam Tsuen of Yuen Long District and Sewerage at Tseng Tau Chung Tsuen, Tuen Mun
2nd Quarterly EM&A Summary Report – KT13 (January to March 2009) Revision 2

We refer to the captioned submission (letter ref.: TCS00408/08/600/R0932r2) and advise that we have no further comment on the captioned report.

We hereby endorse the captioned report for your onward submission.

If you require any further information, please do not hesitate to contact the undersigned.

Yours sincerely,

Coleman Ng
Independent Environmental Consultant

cc: China Road and Bridge Corporation (Mr. Raymond Mau) (Fax: 2478 9612)
AUES (Mr. TW Tam / Mr. Andrew Lau) (Fax: 2959 6079)

Executive Summary

ES01 This is the second quarterly EM&A summary report that highlights the EM&A results for the Designated Project of Channel KT13. It contains key environmental monitoring results during the period from 26 December 2008 to 25 March 2009 on air quality, construction noise, water quality, ecology and waste management.

Progress of the EM&A Programme

ES02 The impact EM&A program was undertaken in accordance with the relevant EM&A manuals. A summary of the monitoring activities in this quarter is listed below:

Environmental Issues	**Channel KT13**
1-hour TSP Monitoring	90 monitoring events
24-hour TSP Monitoring	30 monitoring events
Noise Monitoring	30 monitoring events
Water Quality Monitoring	37 monitoring days
Ecology	5 monitoring days
Site Inspection Audit	13 occasions

Breaches of Environmental Quality Criteria

ES03 Monitoring results of the Reporting Period demonstrated no exceedance of environmental quality criteria for air quality, construction noise and ecology.

ES04 For water quality, however, a total of 21 exceedances of Action/Limit Levels of which 1 and 20 exceedances were recorded at W2 and W6 respectively. The overall compliance rate of water quality monitoring in the second quarter is 97.6%. Investigation showed that all exceedances were not works related.

ES05 During the Reporting Period, there was no construction work conducted within 100m of the cultural heritage site at CKT13. Therefore, no cultural heritage monitoring was required in accordance with the approved methodology. No significant changes were observed for the identified landscape resources and visual sensitive receivers, except for minor changes due to channel excavation, site clearance and preparation work at the identified landscape resources including LR1, LR2.1, LR2.2, LCA1, LCA3 and LCA4.

ES07 A summary of all environmental exceedances is presented as follows:

Issues	Parameters	Compliance Rate % Channel KT13	Investigation Results & Corrective Actions
Air Quality	24-hour TSP	100%	N/A
	1-hour TSP	100%	N/A
Noise	Leq(30min) Daytime	100%	N/A
Water Quality	Suspended Solids	94.6%	Investigation completed for Jan 09 & Feb 09. Investigation in progress for Mar 09
	Turbidity	91.2%	
	Dissolved Oxygen	100%	N/A
	pH	100%	N/A
	Ammonia-N	100%	N/A
	Zinc	100%	N/A
Ecology	Decrease in number of breeding egrets since previous year	100%	N/A

Environmental Complaint, Notifications of Summons and Prosecutions

ES08 No documented complaint, notification of summons and successful prosecution was received during the Reporting Period. No major environmental impacts were observed during the weekly site inspection. Environmental audit of the Reporting Period, indicated that the implemented mitigation measures for air quality, construction noise and ecology were effective. Minor deficiencies found in the weekly site inspection were in general rectified within the specified

deadlines. The environmental performance of the Project was therefore considered satisfactory.

Reporting Changes

ES09 No reporting changes were made during the Reporting Period.

Future key issues

ES10 As wet season has come water quality mitigation measures to avoid ingress of runoff into Channel KT13 should be properly installed and maintained, as appropriate.

ES11 To prevent exceedance of water quality, it is recommended that water quality mitigation measures stipulated in the EIA and summarized in the EM&A Manual, including containment structure such as temporary earth bunds, sand bags, sheet pile barriers or other similar techniques, should be fully implemented. In addition, other mitigation measures such as sand bags downstream of the excavation site may also be improved to cater for additional water flows during the coming wet season.

ES12 Proposal for adopting the pH range of 6 to 9 pH value in place of the existing pH Action and Limit Level has been approved by ER and IEC's. The submission has been proceeding to EPD for formal approval.

END OF TEXT

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1 INTRODUCTION

1.1.1 BASIC PROJECT BACKGROUND

CRBC has been awarded the DSD Contract No. DC/2007/17 (the Project) for a package of drainage improvement works in areas located in Kam Tin, Pat Heung and Tuen Mun as shown in ***Appendix A***.

The Project involves construction of five drainage channels, namely Channels KT12, KT13 (under Environmental Permit No.EP263/2007), KT14A (under Environmental Permit No. EP231/2005A), KT14B and KT14C in Kam Tin and Pat Heung and the sewerage works at Tseng Tau Chung Tsuen in Tuen Mun. For ease of reporting, the EM&A report under the Project is split to the following three stand-alone parts:

EM&A Report – Channel KT13 (under EP No.EP263/2007);

EM&A Report – Channel KT14A (under EP No. EP231/2005A); and

EM&A Report – Channels KT12, KT14B and KT14C (Non-Designated works, under no Environmental Permit)

This report presents the EM&A results of the Designated Projects works for Channel KT13. It is the Second Quarterly EM&A Summary Report covering a three-month period from 26 December 2008 to 25 March 2009 (the Reporting Period).

1.1.2 REPORT STRUCTURE

This Report is structured as follows:

Section 1	Introduction
Section 2	Summary of Impact Environmental Monitoring and Audit Requirements
Section 3	Monitoring Results and Breaches of Environmental Quality Criteria
Section 4	Non-compliance, Complaint, Notificatios of Summons and Successful Prosecution
Section 5	Conclusion

1.1.3 PROJECT ORGANISATION AND CONSTRUCTION PROGRESS

1.1.4 ENVIRONMENTAL MANAGEMENT ORGANIZATION

The environmental management team comprises: DSD (Project Proponent), CRBC (main Contractor), EPD and AFCD (supervisory departments in Government), BVHKL (ER); ARUP (IEC) and AUES (ET). Detailed management organization including organisation structure and key personnel contacts is presented in ***Appendix B.***

1.1.5 WORKS UNDERTAKEN DURING THE QUARTER REPORTING PERIOD

Construction activities implemented during the Reporting Period are presented in ***Appendix C***. In addition to the preparation works and site clearance, including underground utility investigation, tree survey, tree pruning and tree transplant, major construction activities are summarized as follows:

26 December 2008 to 25 January 2009

- Excavation for channel formation;
- Construction of channel structure; and
- Disposal of excavated materials.

26 January to 25 February 2009

- Channel excavation ;
- Construction of channel structure; and
- Disposal of excavated materials.

26 February to 25 March 2009

- Excavation of channel formation ;
- Construction of channel structure; and

- Backfilling.

1.1.6 ENVIRONMENTAL LICENSING STATUS

The environmental licensing status in the quarter reporting period is summarized in ***Table 1-1***.

Table 1.1 Status of Environmental Licenses and Permits

Item	License / Permit Description	Status
1	Air Pollution Control (Construction Dust)	Notified EPD on 14-Feb-08
2	Water Pollution Control (Discharge License) License No. 1U461/1	Valid
3	Chemical Waste Producer Registration WPN: 5611-531-C3124-28	Registration on 2-May-08
4	Construction Waste Disposal Billing Account Number 7006524	Valid on 9 Jan 2008

2 SUMMARY OF IMPACT ENVIRONMENTAL MONITORING AND AUDIT REQUIREMENTS

2.1.1 MONITORING PARAMETERS

The ET has compiled the EM&A requirements set out in the associated EM&A Manuals in the ***Environmental Monitoring Methodology***, which has been agreed by the ER and IEC. The monitoring parameters are summarized below.

Table 2-1 Summary of Monitoring Parameters

Environmental Issues	Monitoring Parameters	
Air Quality	(a) 1-hour Total Suspended Particulate (1-hr TSP); and (b) 24-hour Total Suspended Particulate (24-hr TSP).	
Construction Noise	(a) A-weighted equivalent continuous sound pressure level (30min) (Leq(30min) during the normal working hours; and (b) A-weighted equivalent continuous sound pressure level (5min) (Leq(5min) for construction work during the Restricted Hours.	
Water Quality	(a) In Situ Measurement	temperature, dissolved oxygen (DO), pH & Turbidity
	(b) Laboratory Analysis	suspended solids (SS), Ammonia Nitrogen (NH_3-N) and Zinc (Zn)
Ecology	Vegetation, All bird species of wetland, Ho Pui Egret, Ma On Hong Egret and Flight Line Survey	
Waste Management	Inspection and the document audit	
Cultural Heritage	Condition survey for a historical grave	
Landscape & Visual	To audit the implementation of the proposed construction phase mitigation measure stipulated in EIA.	

2.1.2 MONITORING LOCATIONS

Details of monitoring locations are summarized in ***Table 2-2*** and shown in ***Appendix A***.

Table 2-2 Summary of Monitoring Locations

Environmental Issue	Monitoring Location ID	Identified Address / Co-ordinates	Status of Monitoring Locations / Rationale for Recommended Replacement
Air	A1(a)	No.68 Ho Pui Village	The original location of EM&A Manuals A1 has permanently been abandoned. No access can be acquired in the vicinity of A1. Taken into consideration that Ho Pui Village is one of the most important sensitive receivers near KT-13 without monitoring, the most fronting house, No. 68 Ho Pui Village, is therefore recommended as the replacement location A1(a).
	A2	No.1 Ma On Kong Village	Original location of the EM&A Manual; access granted.
Noise	N1(a)	168-169 Kam Ho Road, Ma On Kong Village,	Original location of N1 identified in the EM&A Manual was relocated to proposed area as recommended by IEC.
	N2(a)	No. 68 Ho Pui Village,	The original location of EM&A Manuals N2 has permanently been abandoned. No access can be acquired in the vicinity of N2. Taken into consideration that Ho Pui Village is one of the most important sensitive receivers near KT-13 without monitoring, the most fronting house, No. 68 Ho Pui Village, is therefore recommended as the replacement location N2(a).
	N3	No.1 Ma On Kong Village	Original locations of the EM&A Manual; access granted.
Water	W1	E824539 / N830283	Original locations of the EM&A Manual; access resolved.

Environmental Issue	Monitoring Location ID	Identified Address / Co-ordinates	Status of Monitoring Locations / Rationale for Recommended Replacement
	W2	E824693 / N830258	Original locations of the EM&A Manual; access resolved.
	W3(a)	E824833 / N830374	The W3 is proposed to be relocated about 55 m down stream to W3(a) for safety reason as there is no any discharge point observed between W3 and the proposed W3(a).
	W4	E824936 / N830618	Original locations of the EM&A Manual; access resolved.
	W5	E825008 / N830812	Original locations of the EM&A Manual; access resolved.
	W6	E825100 / N830987	Original locations of the EM&A Manual; access resolved.
Ecology	Monthly monitoring along the boundary of the works area to confirm that there are no adverse impacts on habitats outside the site in particular the Conservation Area (CA) zone and Ho Pui Egretry. Photographic records at six-month intervals; Monthly monitoring of all bird numbers including wetland species and species identified as being of conservation importance; Monitoring of Ho Pui egretry during March to August. The Ma On Kong egretry is also surveyed to provide reference information on the breeding egrets nearby; and Flight line surveys twice per month during April to June.		
Waste Management	Whole constriction site and document		
Cultural Heritage	Ma On Kong	Refer to EM&A Manual (KT13) Figure 7.1.	
Landscape & Visual	Refer to EIA Section 10		

2.1.3 MONITORING FREQUENCY

The impact monitoring frequency and duration for air quality, construction noise, water quality, ecology and other parameters are summarized below.

2.1.4 Air Quality

Frequency: Once every 6 days for 24-hr TSP and three times every 6 days for 1-hr TSP, when the highest construction dust impacts are anticipated.

Duration: Throughout the construction period

2.1.5 Construction Noise

Frequency: Measurement of Leq 30min: Once a week during 0700-1900 hours on normal weekdays for Leq30min

If the construction work is undertake at restrict hour, the frequency of noise monitoring will be conducted in accordance with the requirements under the related Construction Noise Permit issued by EPD as follows:

- 3 consecutive Leq5min at restrict hour from 1700 – 2300;
- 3 consecutive Leq5min for restrict hour from 2300 – 0700 next day;
- 3 consecutive Leq5min for Sunday or public holiday from 0700 – 1900;

Duration: Throughout the construction period

2.1.6 Water Quality

Frequency: Three times a week with at least 36 hour intervals between any two consecutive monitoring events

Depths: As the water columns in the stream water within KT13 is generally less than 3 m, measurement is performed at the mid-depths of the monitoring locations. In case the water columns are deeper than 6 m, measurement shall be carried out at three water depths, namely, 1 m below water surface, mid-depth, and 1 m above river bed. If the water depths are between 3 to 6 m, the mid-depth measurement is omitted.

Duration: Throughout the construction period.

2.1.7 Ecology

The Ecology Monitoring is required in accordance with the EM&A Manual.

Parameters: Vegetation, All bird species including wetland birds, Ho Pui and Ma On Hong Egretries and Flight line survey

Frequency: Vegetation – Impact monitoring – monthly;
Photographic records/checks against baseline records– six monthly
Wetland Bird survey – Monthly of half-day survey;
Ma On Kong egretry – Monthly between March to August; and
Ho Pui egretry – Bi-weekly between March and August;
Flight line Survey – Month during the period from April to June

Duration: Throughout the whole construction period

2.1.8 Waste Management Audit

Frequency: Once per month

Duration: Throughout the construction period.

2.1.9 Cultural Heritage

Frequency: Bi-monthly

Requirement: Condition survey of a Qing Dynasty Grave.

Duration: Throughout the construction phase period.

2.1.10 Landscape & Visual

Frequency: Bi-weekly

Duration: Throughout the construction phase period.

2.1.11 ENVIRONMENTAL QUALITY CRITERIA

The environmental quality criteria i.e. Action and Limit levels (A/L levels) are summarized as follows:

Table 2-4-1 Summary of Air Quality Monitoring Results at KT14A-A8(a)

Monitoring Station	Action Level (μg /m³)		Limit Level (μg/m³)	
	1-hr TSP	24-hr TSP	1-hr TSP	24-hr TSP
KT13(A1(a))	309	144	500	260
KT13(A2)	307	141	500	260

Table 2-4-2 Action and Limit Levels of Construction Noise Monitoring (Leq $_{(30mins)}$)

Time Period	Action Level in dB(A)	Limit Level in dB(A)
0700-1900 hrs on normal weekdays	When one documented complaint is received	75* dB(A)

Note: * Reduces to 70 dB(A) for schools and 65dB(A) during the school examination periods.

Table 2-4-3 Water Quality Action and Limit Levels

Monitoring Location	DO (mg/L)		Turbidity (NTU)		pH		SS (mg/L)		Ammonia (mg/L)		Zinc (μg/L)	
	Action Level	Limit Level	Action Level	Limit Level	Action Level	Limit Level	Action Level	Limit Level	Action Level	Limit Level	Action Level	Limit Level
W1 (Upstream) Control Station	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
W2 (Downstream) Impact Station	1.04	1.00	36.81	37.16	8.65	8.69	79.0	86.2	16.85	16.89	234.95	266.19
W3(a) (Upstream) Control Station	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
W4 (Upstream) Control Station	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
W5 (Upstream) Control Station	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
W6 (Downstream) Impact Station	0.93	0.91	27.88	30.02	8.7	8.7	73.40	78.68	51.62	54.56	191.90	201.58

Notes: # Act as Control Station for the Impact Water Quality Monitoring.
* Alternative Action Level of the Turbidity, pH, Suspended Solid, Ammonia Nitrogen and Zinc are 120% of upstream control station of same day.
** Alternative Action Level of the Turbidity, pH, Suspended Solid, Ammonia Nitrogen and Zinc are 130% of upstream control station of same day.

Table 2-4-4 Action and Limit Levels for Cultural Heritage Resources

Action Level	Limit Level
When damage or structural instability is first detected	Signs of deterioration and structural instability continues on subsequent visits after action level is triggered

Table 2-4-5 Ecological Action and Limit Levels

Parameters	Action Level	Limit Level
Decrease in number of breeding egrets since previous year	> 20%	> 40%

2.1.12 Environmental Mitigation Measures

CRBC has committed to implement environmental protection and pollution control and mitigation measures, as recommended in the EIA, EP and the EM&A Manuals, summarized in the Mitigation Measures Implementation Schedules in the EM&A Manual and enclosed in ***Appendix D***. The implemented mitigation measures include:

(a) Watering of stockpiles of rip-rap at KT13;
(b) Covering of the loose soil at KT13 to minimize water quality impacts;
(c) Hard pavement of haul road leading to public roads at KT13;
(d) Classification and disposal of illegally dumped construction and demolishment materials at KT13;
(e) Construction of noise barriers; and
(f) Erection of dams with sand bags downstream the excavation site within the water course of KT13 to enhance sedimentation of Turbidity and SS,

3 MONITORING RESULTS AND BREACHES OF ENVIRONMENTAL QUALITY CRITERIA

The environmental monitoring results will be compared against the Action and Limit Levels established based on the baseline monitoring results and statutory criteria. In case the measured data exceed the environmental quality criteria, remedial actions will be triggered according to the Event and Action Plan. In the report quarter, the graphical plots of the treads pf monitored parameter over the past four months are presented in ***Appendix E.***

3.1.1 AIR QUALITY

Results of air quality monitoring at the identified locations during the Reporting Period are summarized in ***Tables 3-1*** below. In this quarter period, a total of 45 events of 1-hour TSP and 15 days of 24-hour TSP measurements were conducted at Locations A1(a) and A2. No exceedance of Action or Limit Levels was recorded during the Reporting Period. No Notification of Exceedance (NOE) of air quality criteria or corrective action was required.

Table 3-1 Summary of 1-hour and 24-hour TSP at KT13 in the Reporting Period

Channel	Station	1-hour TSP			24-hour TSP		
		Max	Min	Mean	Max	Min	Mean
KT13	A1(a)	184	55	111	78	7	31
Record Date		2 Mar 09	24 Feb 09	45 events	5 Feb 09	6 Mar 09	15 events
KT13	A2	201	67	121	141	8	32
Record Date		2 Mar 09	24 Feb 09	45 events	5 Feb 09	6 Mar 09	15 events

3.1.2 CONSTRUCTION NOISE

Summary of construction noise monitoring at the identified locations during the Reporting Period are summarized in ***Table 3-2*** below and graphic plots are presented in ***Appendix E.*** In this reporting quarter, a total of 30 events of construction noise measurement were conducted while no documented construction complaint was received and all the construction noise results were below the Limit level. No NOE or corrective action was recommended for this parameter.

Table 3-2 Summary of Construction Noise at Channel TKL 07 in the Reporting Period

Channel	Station	Leq(30min)	
		Max	Min
KT13	N1	61.2	54.9
Record Date		27 Dec 08	2 Jan 09
KT13	N2	61.7	45.7
Record Date		8 Jan 09	25 Mar 09
KT13	N3	62.9	51.9
Record Date		13 Mar 09	31 Jan 09

3.1.3 WATER QUALITY

3.3.1 Breaches of the Existing Water Quality A/L Levels

In this reporting quarter, a total of 37 days of water quality monitoring were conducted. There were 21 exceedances of water quality Action/Limit levels: one (1) at W2 and twenty (20) at W6, were recorded. Breaches of water quality A/L levels and statistics of the compliance status during the Reporting Period are summarized in ***Table 3-3***.

Table 3-3 Summaries of Breaches of the Existing Water Quality A/L Levels

Location	Exceedance	DO	Turbidity	pH	SS	NH_4^+-N	Zn	Total
January 2009								
W2	Action Level	0	0	0	0	0	0	0
	Limit Level	0	0	0	1	0	0	1
W6	Action Level	0	0	0	0	0	0	0
	Limit Level	0	5	0	6	0	0	11
Sub-Total	Action Level	0	0	0	0	0	0	0
	Limit Level	0	5	0	7	0	0	12
February 2009								
W2	Action Level	0	0	0	0	0	0	0
	Limit Level	0	0	0	0	0	0	0
W6	Action Level	0	3	0	0	0	0	3
	Limit Level	0	2	0	0	0	0	2
Sub-Total	Action Level	0	3	0	0	0	0	3
	Limit Level	0	2	0	0	0	0	2
March 2009								
W2	Action Level	0	0	0	0	0	0	0
	Limit Level	0	0	0	0	0	0	0
W6	Action Level	0	0	0	1	0	0	1
	Limit Level	0	3	0	0	0	0	3
Sub-Total	Action Level	0	0	0	1	0	0	1
	Limit Level	0	3	0	0	0	0	3
Total of exceedance	Action Level	0	3	0	1	0	0	4
	Limit Level	0	10	0	7	0	0	17
Compliance (%)	Action Level	100	95.9	100	98.6	100	100	99.0
	Limit Level	100	86.5	100	90.5	100	100	96.2
Overall Compliance (%)		100	91.2	100	94.6	100	100	97.6

Monitoring results show that all exceedances were due to turbidity and suspended solid. In this reporting period, temperature recorded at impact stations W2 and W6 fluctuated within 13.1°C to 23.9°C; DO fluctuated within 2.55mg/L to 7.32mg/L while pH fluctuated well within 6.80 and 7.30. Total of 13 exceedances were recoded in Turbidity which fluctuated within 3.50NTU to 91.75NTU.

For Suspended Solids, total of 8 exceedances were recorded in the reporting period. The laboratory results data shown that the concentration fluctuated between 2 and 1650mg/L.

Investigation report for exceedances in January 2009 and February 2009 has been completed and concluded not to be works related. No corrective actions were therefore required. For exceedances recorded in March, investigation is still in progress. Statistical compliance with the environmental criteria is shown in ***Table 3-3.***

3.3.2 Recommendation on Revision of the Existing pH A/L Levels

As pointed out in the monthly EM&A reports of the Reporting Period, the percentile definition deviates from the consensus of the pH significance and should not be applied for establishment of pH A/L levels. A proposal on the recommended pH range of 6 to 9 to be used in place of the existing pH Action and Limit level has been submitted and awaiting EPD's approval.

3.1.4 ECOLOGY

Ecological monitoring was conducted on 18 January 2009, 14 February 2009 and 8, 20 & 23 March 2009. No breaches of ecological A/L levels were recorded during the Reporting Period.

<u>January 2009</u>

51 individuals of birds from 18 species were recorded during the survey for the present monthly monitoring on 18 January 2009. Among the birds recorded, 4 individuals of wetland dependent birds (from 2 species) were recorded. Egretry survey was NOT required in the present monitoring. During the walk through survey, neither intrusions into the Conservation Area and the location of Ho Pui Egretry nor adverse impacts on habitats outside the site were found during

the reporting period. No non-compliance of ecology was recorded.

February 2009
55 individuals of birds from 19 species were recorded during the survey for the present monthly monitoring on 14 February 2009. Among the birds recorded, 6 individuals of wetland dependent birds (from 3 species) were recorded. Egretry survey was NOT required in the present monitoring. During the walk through survey, no adverse impacts on habitats outside the boundary of the works area including the Conservation Area and the location of Ho Pui Egretry was found. No non-compliance of ecology was recorded.
March 2009
70 individuals of birds from 23 species were recorded during the survey for the present monthly monitoring on 20 March 2009. Among the birds recorded, 6 individuals of wetland dependent birds (from 3 species) were recorded. Biweekly egretry surveys on Ho Pui Egretry were conducted on 8 and 22 March 2009. No nest was found at the Ho Pui egretry during the present survey. During the walk through survey, no adverse impacts on habitats outside the boundary of the works area including the Conservation Area and the location of Ho Pui Egretry were found.

3.1.5 OTHER MONITORING AND AUDIT

3.5.1 Waste Management

Waste management audit was performed regularly on a monthly basis. A Billing Account (The account number 7006524) under the ***Waste Disposal (Charges for Disposal of Construction Waste) Regulation*** has already been assigned on 9 Jan 2008, a discharge license No. 1U461/1 under Section 20 of the ***Water Pollution Control Ordinance*** has been issued. CRBC has also registered as a Chemical Waste Producer with EPD under the Waste Disposal (Chemical Waste) (General) Regulation and the Waste Producer Number assigned is WPN: 5611-531-C3124-28 dated 2 May 08.

3.5.2 Cultural Heritage

There was no construction work conducted within 100 m area from the grave, so the captioned monitoring was not required for the Reporting Period.

3.5.3 Landscape and Visual

A total of six (6) occasions of landscape and visual audit was undertaken on 5 and 23 January 2009, 9 and 23 February 2009 and 11 and 23 March 2009. The landscape and visual audit confirmed that the conditions of the identified landscape resources during the Reporting Period remained the same as those of the baseline, except minor changes of river/stream/fish pond landscape character area at LR1, LR2.1, LR2.2, LCA3 and LCA4 due to site clearance, soil stockpiling and preparation work within KT13.

Detailed landscape and visual reports and the associated mitigation measures can be found in the appendix of the corresponding previous monthly EM&A reports of the Reporting Period.

3.1.6 WEATHER CONDITIONS

January 2009

January 2009 was sunnier and drier than usual. The total bright sunshine duration for the month was 226.5 hours, about 60 percent above the normal figure of 141.7 hours. Only a trace of rainfall was recorded during the month, making it the driest January since 1994. The monthly mean temperature of 15.3 degrees was 0.8 degrees below normal. Under the influence of a strong winter monsoon, the weather was fine, dry and cold in the first week of the year. A replenishment of the northeast monsoon brought cold and very dry conditions to the territory on 8 January and stayed cold in the next eight days. Frost was reported on 11 & 12 January. Then the weather stayed fine and dry from 17 to 19 January. The cold air associated with an intense winter monsoon reached the south China coastal areas in the evening of 23 January bringing cloudy and rather cool weather to Hong Kong. It was generally cloudy and cold in the ensuing four days. With the moderation of the northeast monsoon, temperatures rose gradually during the next two days. It was generally fine for the last two days of the month.

February 2009

February 2009 was the warmest February since records began in 1884. The monthly mean temperature of 20.5 degrees was 4.2 degrees higher than normal. The temperature of 28.3 degrees recorded on February 25 was the highest daily maximum temperature for February. The month was also sunnier than normal. The total bright sunshine duration for the month was 140.7 hours, about 50 percent above normal. Only 1.1 millimetres of rainfall was recorded in February 2009, much below the normal figure of 52.3 millimetres. The weather in Hong Kong was generally cloudy on the first day of the month. Under the influence of a ridge of high pressure over southeastern China, the local weather became generally fine for the ensuing 9 days. A humid maritime airstream dominated over the south China coastal areas and brought cloudy and humid weather to the territory from 12 to 15 February. It was also foggy on 15 February. The visibility dropped below 400 meters in the harbour on that day. Under the influence of an easterly airstream, the weather in Hong Kong was windy, rainy and slightly cooler from 16 to 18 February. It remained cloudy with light rain patches on 19 February. It was humid with fog from 23 to 25 February when Hong Kong was affected by a warm and humid maritime airstream. The temperature at the Hong Kong Observatory rose to a maximum of 28.3 degrees on 25 February, the highest of the month.

March 2009

March 2009 was wetter and milder than usual. The total rainfall in the month was 120.7 millimetres, about 69 percent above the normal figure of 71.4 millimetres. The mean temperature was 19.7 degrees, 0.8 degrees above the normal figure of 18.9 degrees. Under the influence of the northeast monsoon, the weather was cloudy with a few light rain and mist patches in the first four days of the month. A cold front developed over the northern part of southern China and moved towards the coast of Guangdong on 5 March, bringing rainy and rather cool weather to Hong Kong. Hails were reported at Tsuen Wan, Tsing Yi and northern Lantau on that morning. Affected by the northeast monsoon behind the cold front, it remained cool with a few rain patches in the ensuing three days. Llocal weather was cloudy and windy from 10 to 12 March. An intense cold front crossed the coastal areas of southern China on 13 March. Temperatures at the Hong Kong Observatory dropped appreciably from around 25 degrees in the afternoon to around 14 degrees before mid-night of that day. A maritime airstream brought cloudy and foggy weather to the territory from 19 to 23 March. Visibility fell to below 400 metres in the harbour on 20 March. With the strengthening of the northeast monsoon over southern China, local weather was windy with a few squally thunderstorms on 24 and 25 March.

4 NON-COMPLIANCE, COMPLAINT, NOTIFICATION OF SUMMONS & SUCCESSFUL PROSECUTION

4.1.1 NON-COMPLIANCE

Apart from the exceedances of water quality A/L levels respectively summarized in ***Table 3-3*** above, no non-compliance or deficiency was identified during regular site inspection and environmental audit. No associated remedial actions were recommended. No other non-compliance or deficiency was identified during regular site inspection and environmental audit. No associated remedial actions were recommended.

4.1.2 ENVIRONMENTAL COMPLAINTS

No written or verbal complaints were received for each environmental issue during the Reporting Period. No associated remedial actions were recommended.

4.1.3 NOTIFICATIONS OF SUMMONS AND SUCCESSFUL PROSECUTIONS

No notifications of summons and successful prosecutions were recorded during the Reporting Period. No associated remedial actions were recommended.

4.1.4 OTHERS

4.4.1 Waste Management Status

All types of waste arising from the construction work are classified into the following:

- Construction & Demolition (C&D) Material;
- Chemical Waste;
- General Refuse; and
- Excavated Soil and sediment

Waste generated, re-used, recycled and disposed of during the Reporting Period is shown in ***Appendix F***: ***Monthly Summary Waste Flow Table***. Disposal of Type I and Type II contaminated sediment is also presented in ***Table 4-4-1***.

Table 4-4-1 Summary of Quantities of Type I Contaminated soil disposal off site

Date	Tons	Volume (m^3)	No of Truck
19 Feb 2009	1190	696	116
20 Feb 2009	1190	696	116

4.4.2 Site Inspection and Environmental Audit

A total of twelve (12) occasions of weekly environmental site inspection and audit were conducted jointly by the ER, EO and ET during the Reporting Period. As no major construction activities were undertaken, no adverse environmental impacts were registered, indicating the mitigation measures implemented were effective and sufficient for the construction activities or preparation work and site clearance undertaken. Minor deficiencies found in the site inspection and audit were in general rectified within the specified deadlines. Findings of the site inspection and environmental audit are listed in ***Table 4-4-2***.

Table 4-4-2 Summary of Findings of Site Inspection and Environmental Audit

Date	Findings / Deficiencies	Follow-Up Status
2 Jan 2009	No adverse environmental impacts were observed during the site inspection. However, further improvement of house keeping is reminded to contractor as scattered of general waste was observed on site. More frequent water spraying during dry season was reminded	Reminded measures based on the observation were observed on 08 Jan 2009.
8 Jan 2009	Haul road within the site were observed dry and general waste was found scattered on excavation site. Thorough water spraying and wheel washing of the vehicles leaving the site is reminded. The Contractor is reminded to fully implement construction dust suppression measures when carrying out dusty works including vehicle movement during dry and sunny days	Reminded measures based on the observation were observed on 15 Jan 2009.
15 Jan 2009	Stockpile exposed to the site was observed. The contractor is reminded to remove or cover the stockpile with tarpaulin to minimize the dust generation. During dry season, construction dust suppression measures are reminded during dry and dusty works as well as vehicle movement.	Reminded measures based on the observation were observed on 19 Jan 2009.
19 Jan 2009	Mosquito control measures is reminded to prevent mosquito breeding as stagnant water was observed. Stockpile shall be removed or covered with tarpaulin sheet to avoid dust pollution. As in dry season, The Contractor is reminded to fully implement construction dust suppression measures when carrying out dusty works including vehicle movement during dry and sunny days	Reminded measures based on the observation to be followed-up on the forth coming site inspection.
30 Jan 2009	Open Stockpile exposure to the site was observed. The contractor is reminded to remove or cover the stockpile with tarpaulin sheet to minimize the dust generation. During dry season, construction dust suppression measures are reminded during dry and dusty works as well as vehicle movement.	Reminded measures based on the observation were observed on 06 Feb 2009.
6 Feb 2009	No adverse environmental impacts were observed during the site inspection. However, further improvement of house keeping is reminded to contractor as general waste was observed on site.	Reminded measures based on the observation were observed on 12 Feb 2009.
12 Feb 2009	No adverse environmental impacts were observed during the site inspection. Haul road within the site were observed dry. Thorough water spraying and wheel washing of the vehicles leaving the site is reminded. The Contractor is reminded to fully implement construction dust suppression measures when carrying out dusty works including vehicle movement during dry and sunny days.	Reminded measures based on the observation were observed on 18 Feb 2009.
18 Feb 2009	General waste and debris were observed on the construction site. Further improvement of house keeping is reminded to contractor in order to maintain tidiness of the construction area. As wet season approach, open slope and stockpile shall be covered with tarpaulin or similar to prevent runoff to the river stream.	Reminded measures based on the observation to be followed-up on the forth coming site inspection.
26 Feb 2009	Exposed slope surface next to the existing stream was observed. The contractor is reminded to cover the open slope with tarpaulin sheet to minimize the dust generation or prevent surface runoff during rainstorm.	Reminded measures based on the observation were observed on 4 Mar 2009.
4 Mar 2009	Construction waste was observed scattered within the site. Good site practice is reminded to avoid excessive accumulation of the waste.	Reminded measures based on the observation were observed on 12 Mar 2009.
12 Mar 2009	No adverse environmental impacts were observed during the site inspection. However, further improvement of house keeping is reminded to contractor as general waste was observed on site.	Reminded measures based on the observation were observed on 17 Mar 2009.
17 Mar 2009	Free standing chemical container was observed at KT13, the contractor was reminded to provide drip tray for all chemical or oil container.	Reminded measures based on the observation to be followed-up on the forth coming site inspection.

5 CONCLUSION

This is the Second Quarterly EM&A Report for Designated Project works during the period from 26 December 2008 to 25 March 2009 summarising the environmental impact monitoring and audit results on air quality, construction noise, water quality, ecology and waste management.

Monitoring results demonstrated that no exceedances of environmental quality criteria of air quality, construction noise and ecology were recorded during the Reporting Period.

For water quality, however, a total of 21 exceedances of water quality A/L Levels exceedances were recorded, of which 1 was recorded at W2 and 20 at W6. The overall compliance of water quality monitoring during this 2nd reporting quarter is 97.6%. Investigation for exceedances in March is still in progress. Prior investigations confirmed that the exceedances were not works related.

No cultural heritage monitoring was conducted during the Reporting Period as no construction works were undertaken within 100 m area from the historical grave. The conditions of the landscape resources during the Reporting Period remained the same as the baseline, except minor changes of river/stream/fish pond landscape character area at LR1, LR2.1, LR2.2, LCA3 and LCA4 due to site clearance, soil stockpiling and preparation work within KT13.

No written or verbal complaints, notifications of summons and successful prosecutions were received (written or verbal) from any medium during the Reporting Period. No adverse environmental impacts were observed during the weekly site inspection and environmental audit which indicated that the implemented mitigation measures for air quality, construction noise, water quality and ecology were effective. Minor deficiencies were found in the weekly site inspection and audit which were in general rectified within the specified deadlines. The environmental performance of the Project was therefore considered satisfactory.

As wet season has approached, water quality mitigation measures to avoid ingress of runoff into Channel KT13 should be properly installed and maintained, as appropriate. In particularly, open stockpiles and exposed slope should be covered thoroughly with tarpaulin sheet and applied with hydroseeding, as appropriate. In addition, attention should also be paid to construction noise and other environmental issues identified in the EM&A Manual. Mitigation measures recommended in the Environmental Study Report and summarized in the Mitigation Measure Implementation Schedule should be fully implemented.

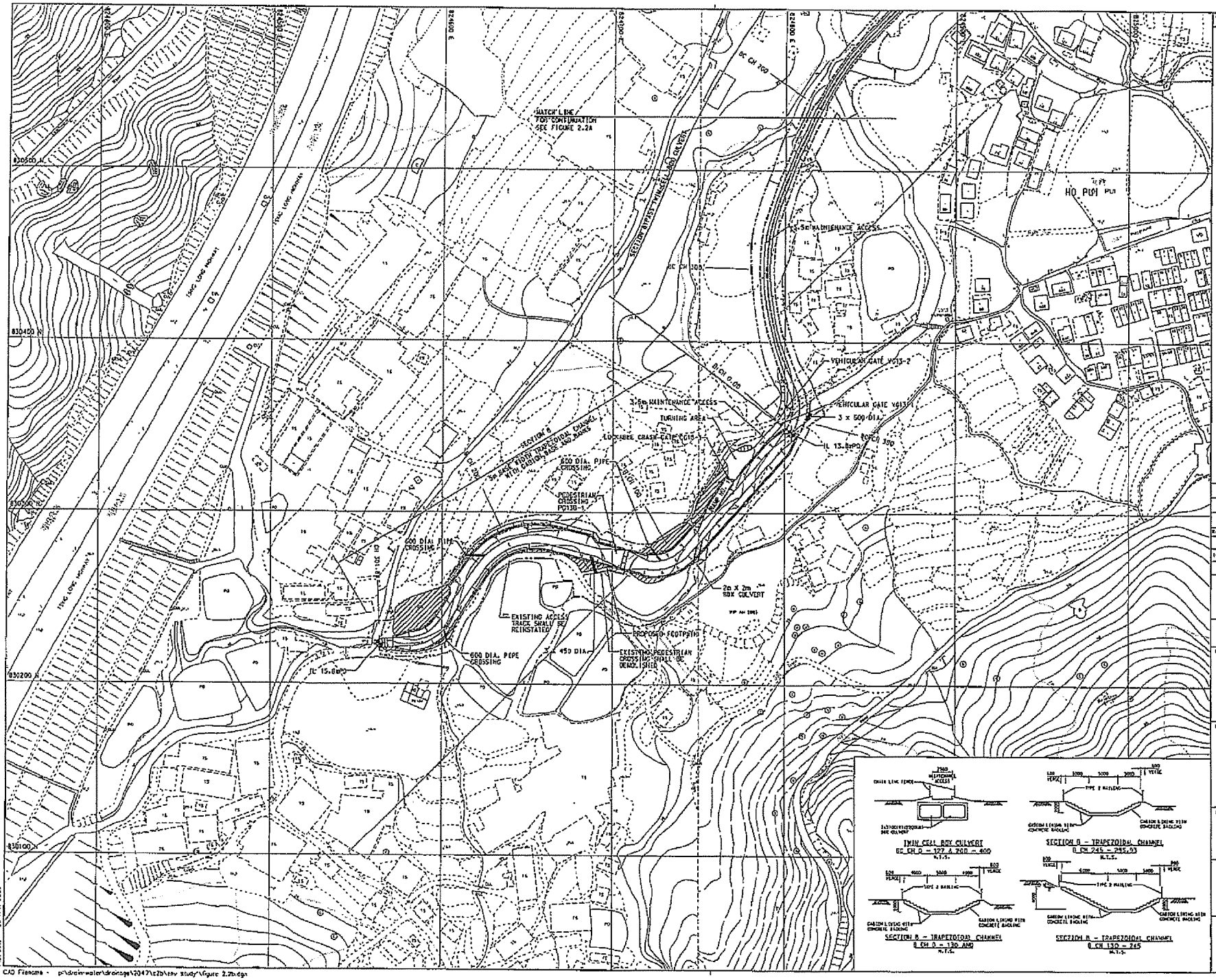
In addition, special attention should also be paid to construction noise and other environmental issues identified in the EM&A Manual. Mitigation measures recommended in the EIA and summarized in Mitigation Measure Implementation Schedule should be fully implemented.

It is recommended that the consensual pH range used in the EPD water discharge license and Technical Memorandum for Effluents Discharged into Drainage and Sewerage System, Inland and Coastal Water, etc. be used in place of the existing pH Action and Limit level.

END OF TEXT

Appendix A

Location Plan of the Project and Environmental Monitoring Locations



NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS STATED OTHERWISE.
2. GRID LINES ARE HONG KONG METRIC GRID 1980.
3. TYPE 2 RAILING WITH DEBRIS TRAP BAR AND GENERAL MESH FILL SHALL BE PROVIDED AT BOTH SIDES OF THE CHANNEL BANKS

LEGEND :

- SITE BOUNDARY
- PROPOSED CHANNEL
- PROPOSED SLOPE
- AREA TO BE FILLED TO ADJACENT GROUND LEVEL
- I.L. INVERT LEVEL
- PROPOSED RETAINING WALL

Revision	Date	Description	Initial
C	03/06	AMENDMENT TO BY-PASS CULVERT	KIL
B	10/05	MINOR AMENDMENT TO CHANNEL LAYOUT	KIL
A	05/05	MINOR AMENDMENTS TO SITE BOUNDARY	KIL

	Designed	Checked	Drawn	Verified
Initial	TW	KIL	MK	KIL
Date	04/04	04/04	04/04	04/04

Approved

AGREEMENT NO. CE 67/98

Contract title

YUEN LONG, KAM TIN, NGAU TAM MEI AND TIN SHUI WAI DRAINAGE IMPROVEMENT, STAGE 1, PHASE 2B - KAM TIN

Drawing title

MA ON KONG CHANNEL KT13 PROPOSED LAYOUT PLAN (SHEET 2 OF 2)

Drawing no.	Scale
FIGURE 1.3b	1:1000 A1 1:2000 A3

香港特別行政區政府渠務署
THE GOVERNMENT OF THE HONG KONG SPECIAL ADMINISTRATIVE REGION DRAINAGE SERVICES DEPARTMENT

BLACK & VEATCH HONG KONG LIMITED
柏威工程顧問有限公司

Plot Date - 26 APR 2006

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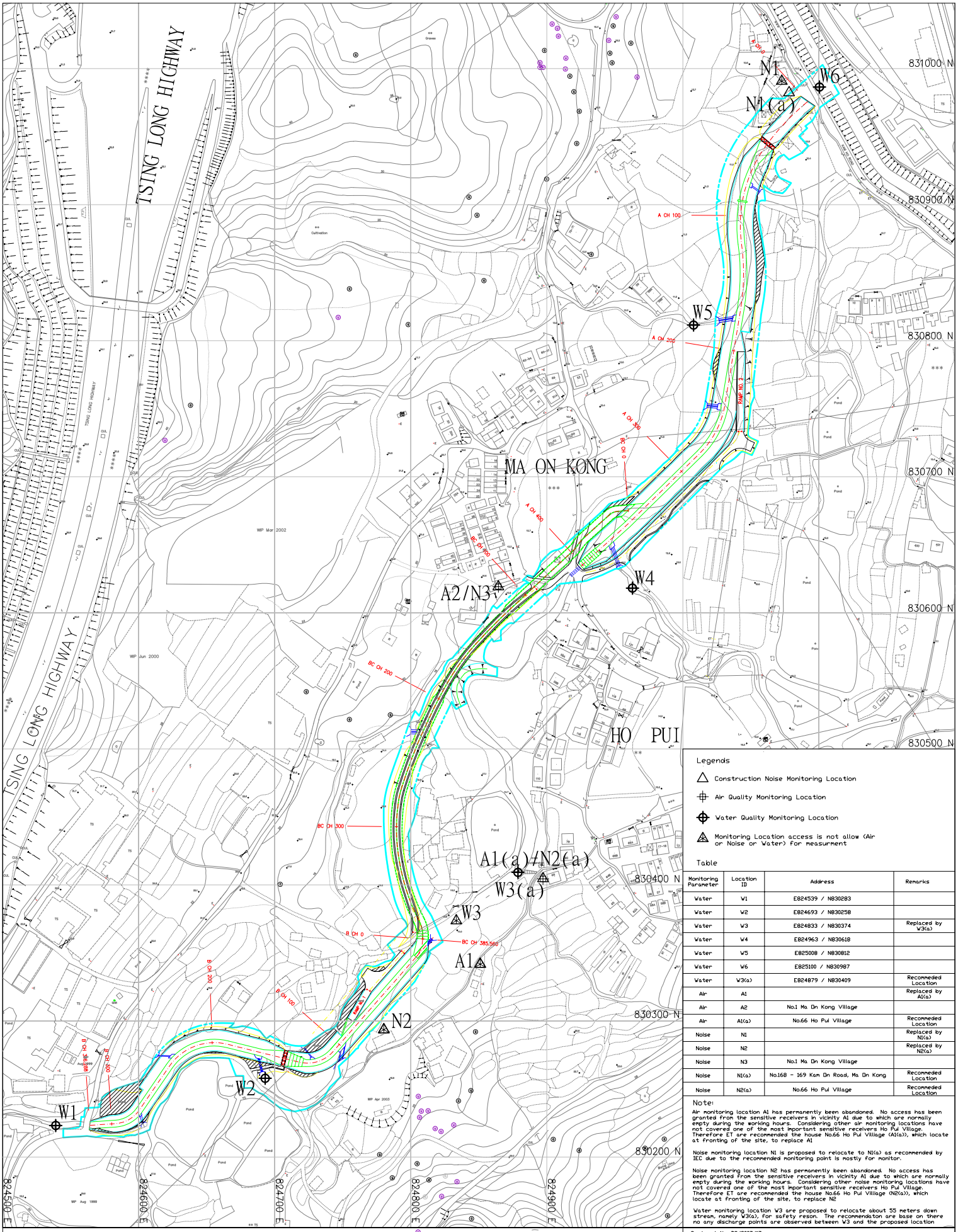


Legends

- Construction Noise Monitoring Location
- Air Quality Monitoring Location
- Water Quality Monitoring Location
- Monitoring Location access is not allow (Air or Noise or Water) for measurment

Table

Monitoring Parameter	Location ID	Address	Remarks
Water	W1	E824539 / N830283	
Water	W2	E824693 / N830258	
Water	W3	E824833 / N830374	Replaced by W3(a)
Water	W4	E824963 / N830618	
Water	W5	E825008 / N830812	
Water	W6	E825100 / N830987	
Water	W3(a)	E824879 / N830409	Recommeded Location
Air	A1		Replaced by A1(a)
Air	A2	No.1 Ma On Kong Village	
Air	A1(a)	No.66 Ho Pui Village	Recommeded Location
Noise	N1		Replaced by N1(a)
Noise	N2		Replaced by N2(a)
Noise	N3	No.1 Ma On Kong Village	
Noise	N1(a)	No.168 - 169 Kam On Road, Ma On Kong	Recommeded Location
Noise	N2(a)	No.66 Ho Pui Village	Recommeded Location

Note:

Air monitoring location A1 has permanently been abandoned. No access has been granted from the sensitive receivers in vicinity A1 due to which are normally empty during the working hours. Considering other air monitoring locations have not covered one of the most important sensitive receivers Ho Pui Village. Therefore ET are recommended the house No.66 Ho Pui Village (A1(a)), which locate at fronting of the site, to replace A1

Noise monitoring location N1 is proposed to relocate to N1(a) as recommended by IEC due to the recommended monitoring point is mostly for monitor.

Noise monitoring location N2 has permanently been abandoned. No access has been granted from the sensitive receivers in vicinity A1 due to which are normally empty during the working hours. Considering other noise monitoring locations have not covered one of the most important sensitive receivers Ho Pui Village. Therefore ET are recommended the house No.66 Ho Pui Village (N2(a)), which locate at fronting of the site, to replace N2

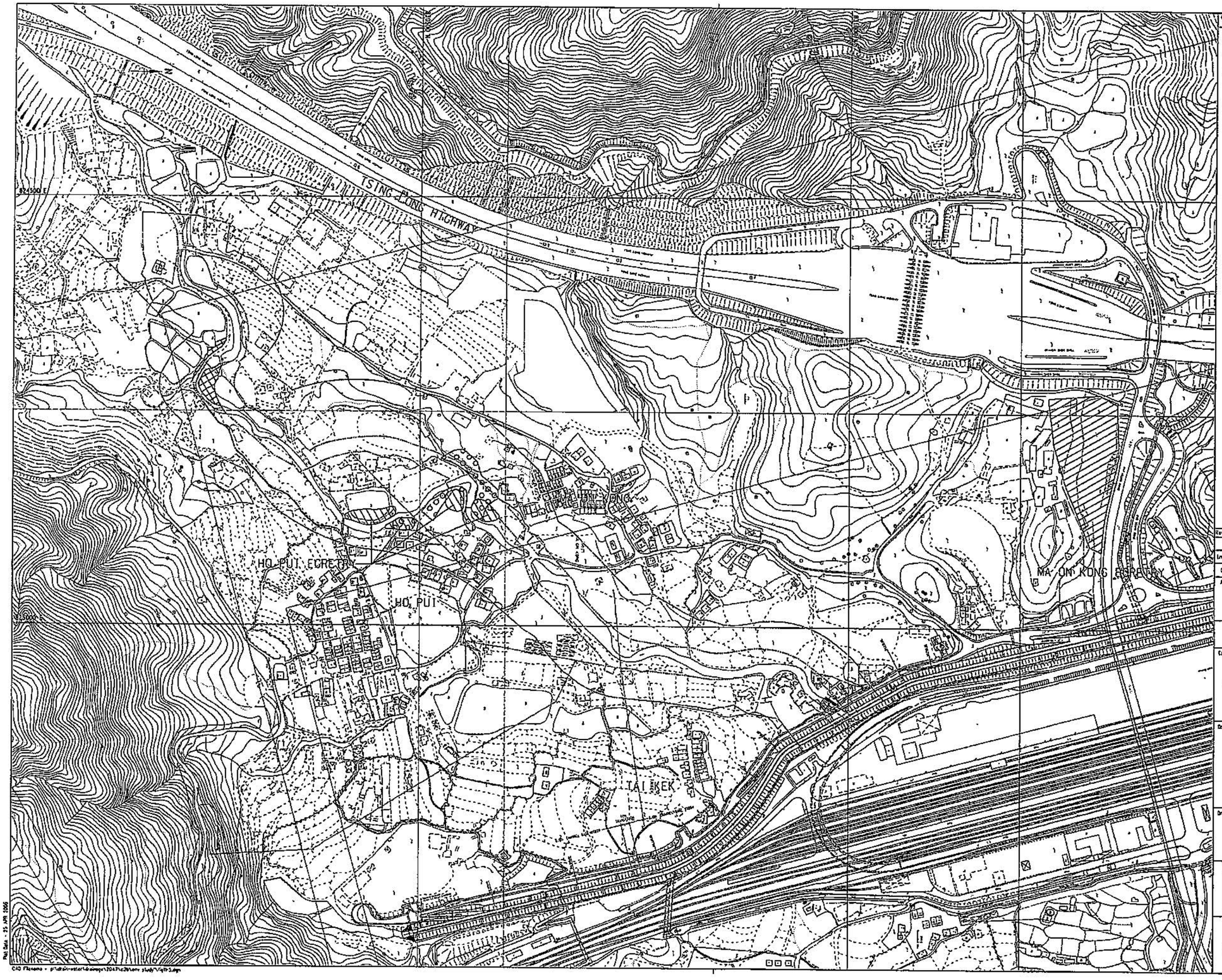
Water monitoring location W3 are proposed to relocate about 55 meters down stream, namely W3(a), for safety reson. The recommendaton are base on there no any discharge points are observed between W3 and the proposed location

Drawing:

Air, Noise and Stream Water Monitoring Location at KT-13

Contract No. DC/2007/17-
Drainage Improvement Works in Cheung Po, Ma On Kong, Yuen Kong San Tsuen and Tin San Tsuen of Yuen Long District and Sewerage at Tseng Tau Chung Tsuen, Tuen Mun

AUES



NOTES :

1. GRID LINES ARE HONG KONG METRIC GRID 1980.

LEGEND:

- MA ON KONG AND HO PUI ECRETARIES
- PROPOSED COMPENSATORY TREE PLANTING
- CONSERVATION AREA DENOTED ON OUTLINE ZONING PLAN
- WORKS BOUNDARY OF CHANNEL KY13
- ECOLOGY MONITORING AREAS

Revision	Date	Description			Initial
	Designed	Checked	Drawn		Checked
Initial	MC	KIL	YLL		KIL
Date	09/05	09/05	09/05		09/05

Approved

AGREEMENT NO. CE 67/98

Contract title

YUEN LONG, KAM TIN,
NGAU TAM MEI AND TIN SHUI WAI
DRAINAGE IMPROVEMENT, STAGE 1,
PHASE 2B – KAM TIN

Drawing title

ECOLOGY MONITORING AREAS
RECOMMENDED FOR
CONSTRUCTION PHASE AND
OPERATION PHASE

Drawing no.

Figure 6.1

Scale

1:2000 A1
1:4000 A3

香港特別行政區政府渠務署
THE GOVERNMENT OF THE
HONG KONG
SPECIAL ADMINISTRATIVE REGION
DRAINAGE SERVICES DEPARTMENT

BLACK & VEATCH HONG KONG LIMITED
柏威工程顧問有限公司

Plot Date : 25 APR 2006

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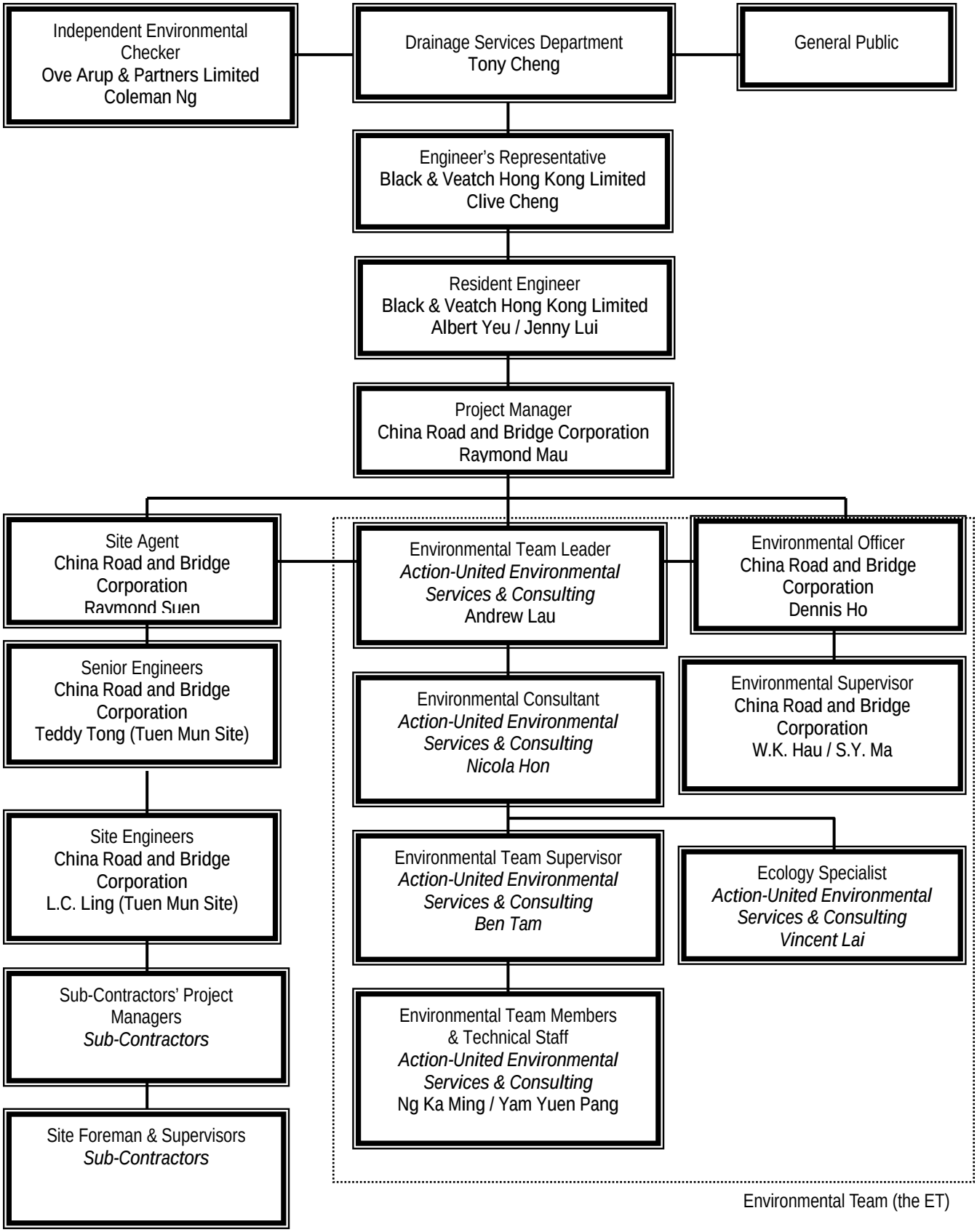
Appendix B

Environmental Management Organization and Contacts of Key Personnel



Environmental Management Organization

Contact Details of Key Personnel

Organization	Project Role	Name of Key Staff	Tel No.	Fax No.
DSD	Employer	Mr. Tony Cheng	2594-7264	2827-8526
B&V	Engineer's Representative	Mr. Clive Cheng	2478-9161	2478-9369
B&V	Resident Engineer	Mr. Albert Yeu	2478-9161	2478-9369
B&V	Resident Engineer	Mr. Jenny Lui	2478-9161	2478-9369
OAP	Independent Environmental Checker	Mr. Coleman Ng	2268-3097	2268-3950
CRBC	Project Director	Mr. Wang Yanhua	2283-1688	2283-1689
CRBC	Project Manager	Mr. Raymond Mau	9048-3669	2283-1689
CRBC	Site Agent	Mr. Raymond Suen	9779-8871	2283-1689
CRBC	Senior Engineer (Tuen Mun Site)	Mr. Teddy Tong	6283-9684	2283-1689
CRBC	Site Engineer (Tuen Mun Site)	Mr. L.C. Ling	6770-4010	2283-1689
CRBC	Environmental Officer	Mr. Dennis Ho	6474-6975	2283-1689
CRBC	Environmental / Construction Supervisor (Tuen Mun and Yuen Long site)	Mr. W.K. Hau	6283-9696	2283-1689
CRBC	Environmental / Construction Supervisor (Yuen Long site)	Mr. S.Y. Ma	9401-6296	2283-1689
CRBC	Safety Officer	Kenny Sze	9374-8954	2283-1689
AUES	Environmental Team Leader	Mr. Andrew Lau	2959-6059	2959-6079
AUES	Environmental Consultant	Miss Nicola Hon	2959-6059	2959-6079
AUES	Environmental Site Inspector	Mr. Ben Tam	2959-6059	2959-6079
AUES	Ecologist	Mr. Vincent Lai	2959-6059	2959-6079

Legend:
DSD (Employer) – Drainage Services Department
B&V (Engineer) – Black & Veatch Hong Kong Limited
CRBC (Main Contractor) – China Road and Bridge Corporation
OAP (IEC) – Ove Arup & Partners Ltd
AUES (ET) – Action-United Environmental Services & Consulting

Appendix C

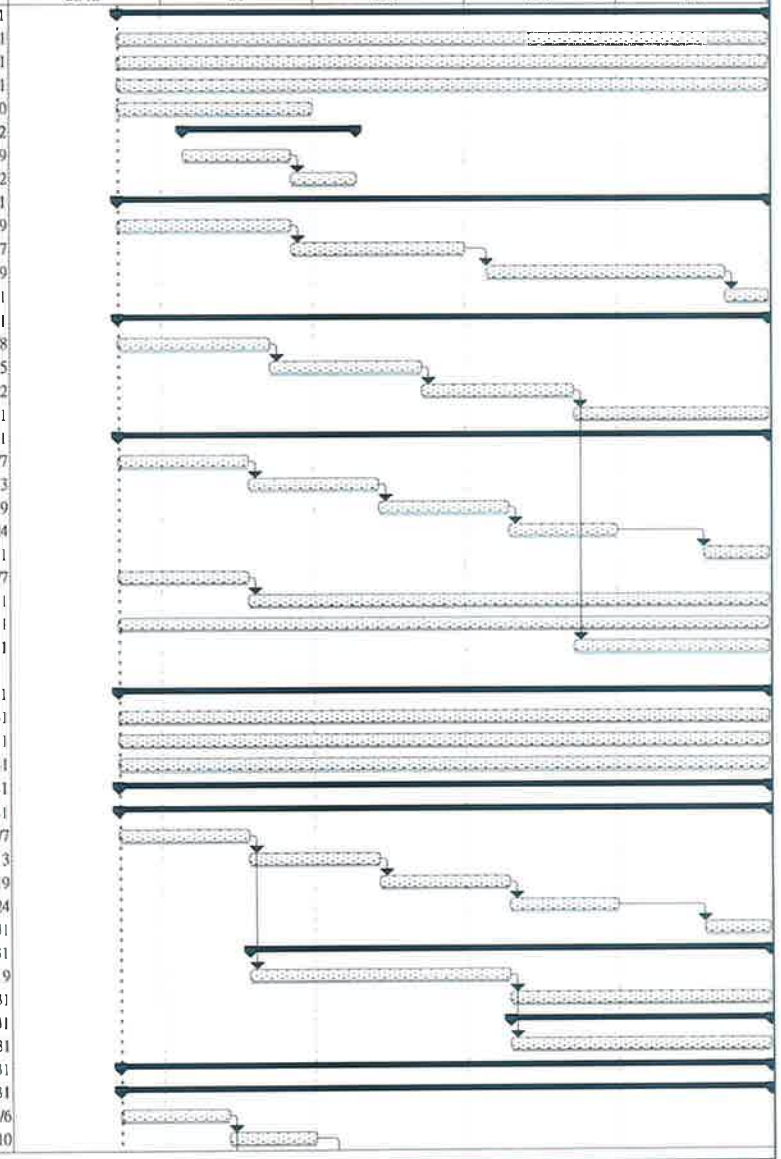
Construction Program

Contract No. : DC/2007/17

Drainage Improvement Works in Cheung Po, Ma On Kong, Yuen Kong San Tsuen and Tin Sam Tsuen of Yuen Long District and Sewerage at Tseng Tau Chung Tsuen, Tuen Mun

One Month Rolling Programme (January 2009)

No	Task Name	Duration	Start	Finish
1	Section I (Channel KT12)	23 days	2009/1/2	2009/1/31
2	Regular Environmental Impact Monitoring	23 days	2009/1/2	2009/1/31
3	Regular Tree Survey	23 days	2009/1/2	2009/1/31
4	Regular Structural Condition Survey	23 days	2009/1/2	2009/1/31
5	Backfilling (CH4.00 - CH105.00)	8 days	2009/1/2	2009/1/10
6	Bay TC7 - East Wall	7 days	2009/1/5	2009/1/12
7	1st Pour	5 days	2009/1/5	2009/1/9
8	2nd Pour	2 days	2009/1/10	2009/1/12
9	Laying of Gabion Block Inside the Channel	23 days	2009/1/2	2009/1/31
10	Bay TC3	7 days	2009/1/2	2009/1/9
11	Bay TC4	7 days	2009/1/10	2009/1/17
12	Bay TC5	7 days	2009/1/19	2009/1/29
13	Bay TC6	2 days	2009/1/30	2009/1/31
14	Construction of Catch Pit / U-Channel / Manholc	23 days	2009/1/2	2009/1/31
15	Bay TC1	6 days	2009/1/2	2009/1/8
16	Bay TC2	6 days	2009/1/9	2009/1/15
17	Bay TC3	6 days	2009/1/16	2009/1/22
18	Bay TC4	5 days	2009/1/23	2009/1/31
19	Installation of Type 2 Railing	23 days	2009/1/2	2009/1/31
20	Bay TC1	5 days	2009/1/2	2009/1/7
21	Bay TC2	5 days	2009/1/8	2009/1/13
22	Bay TC7	5 days	2009/1/14	2009/1/19
23	Bay TC8	5 days	2009/1/20	2009/1/24
24	Bay TC9	3 days	2009/1/29	2009/1/31
25	Construction of Inlet at CH178.00	5 days	2009/1/2	2009/1/7
26	2 x 600mm Dia. Pipe Crossing at CH178.00 East Bank	18 days	2009/1/8	2009/1/31
27	Diversion of Existing Water Main to Pedestrian Crossing PC12-1	23 days	2009/1/2	2009/1/31
28	Installation of Sign Plate / Street Furniture along the sides of Channel (CH0.00 to CH178.00)	5 days	2009/1/23	2009/1/31
29				
30	Section II (Channel KT13)	23 days	2009/1/2	2009/1/31
31	Regular Environmental Impact Monitoring	23 days	2009/1/2	2009/1/31
32	Regular Tree Survey & Protection	23 days	2009/1/2	2009/1/31
33	Regular Structural Condition Survey	23 days	2009/1/2	2009/1/31
34	Section A	23 days	2009/1/2	2009/1/31
35	Excavation to Channel Formation & Laying of Rock Fill Material	23 days	2009/1/2	2009/1/31
36	Bay 1 (A CH00.00 - A CH20.00)	5 days	2009/1/2	2009/1/7
37	Bay 2 (A CH20.00 - A CH40.00)	5 days	2009/1/8	2009/1/13
38	Bay 3 (A CH40.00 - A CH60.00)	5 days	2009/1/14	2009/1/19
39	Bay 4 (A CH60.00 - A CH80.00)	5 days	2009/1/20	2009/1/24
40	Bay 5 (A CH80.00 - A CH100.00)	3 days	2009/1/29	2009/1/31
41	Construction of Channel Structures	18 days	2009/1/8	2009/1/31
42	Bay 1 (A CH00.00 - A CH20.00)	10 days	2009/1/8	2009/1/19
43	Bay 2 (A CH20.00 - A CH40.00)	8 days	2009/1/20	2009/1/31
44	Backfilling along the completed Channel Structures	8 days	2009/1/20	2009/1/31
45	Bay 1 (A CH00.00 - A CH20.00)	8 days	2009/1/20	2009/1/31
46	Section of Box Culvert BC13-1	23 days	2009/1/2	2009/1/31
47	Excavation to Channel Formation & Laying of Rock Fill Material	23 days	2009/1/2	2009/1/31
48	Bay 1 (BC CH00.00 - BC CH12.00)	4 days	2009/1/2	2009/1/6
49	Bay 2 (BC CH12.00 - BC CH24.00) & Demolition of Existing Playground	4 days	2009/1/7	2009/1/10



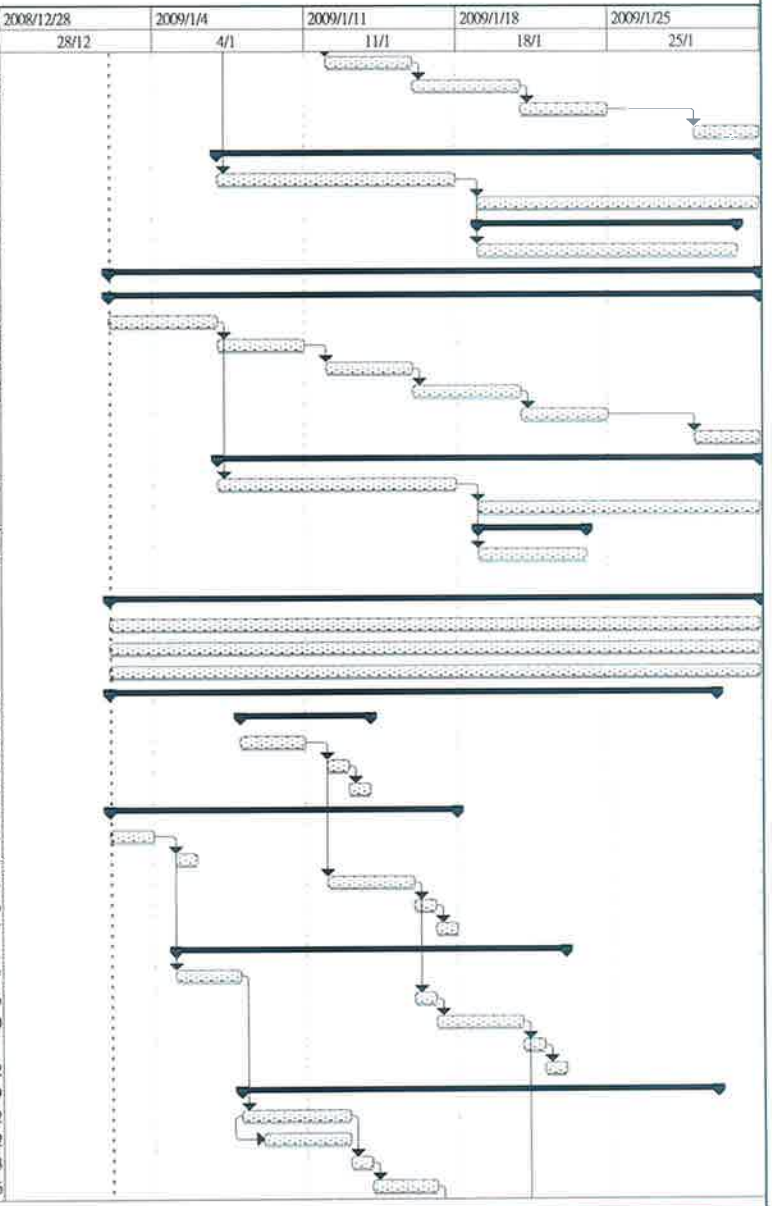
Task | Progress | Summary | External Tasks | Deadline
Split | Milestone | Project Summary | External Milestone

Contract No. : DC/2007/17

Drainage Improvement Works in Cheung Po, Ma On Kong, Yuen Kong San Tsuen and Tin Sam Tsuen of Yuen Long District and Sewerage at Tseng Tau Chung Tsuen, Tuen Mun

One Month Rolling Programme (January 2009)

No	Task Name	Duration	Start	Finish
50	Bay 3 (BC CH24.00 - BC CH36.00)	4 days	2009/1/12	2009/1/15
51	Bay 4 (BC CH36.00 - BC CH48.00)	4 days	2009/1/16	2009/1/20
52	Bay 5 (BC CH48.00 - BC CH60.00)	4 days	2009/1/21	2009/1/24
53	Bay 6 (BC CH60.00 - BC CH72.00)	3 days	2009/1/29	2009/1/31
54	Construction of Channel Structures	19 days	2009/1/7	2009/1/31
55	Bay 1 (BC CH00.00 - BC CH12.00)	10 days	2009/1/7	2009/1/17
56	Bay 2 (BC CH12.00 - BC CH24.00)	9 days	2009/1/19	2009/1/31
57	Backfilling along the Completed Channel Structures	8 days	2009/1/19	2009/1/30
58	Bay 1 (BC CH00.00 - BC CH12.00)	8 days	2009/1/19	2009/1/30
59	Section B	23 days	2009/1/2	2009/1/31
60	Excavation to Channel Formation & Laying of Rock Fill Material	23 days	2009/1/2	2009/1/31
61	Bay 26 (B CH260.00 - B CH272.00)	4 days	2009/1/2	2009/1/6
62	Bay 27 (B CH272.00 - B CH284.00)	4 days	2009/1/7	2009/1/10
63	Bay 28 (B CH284.00 - B CH296.00)	4 days	2009/1/12	2009/1/15
64	Bay 20 (B CH186.00 - B CH198.00)	4 days	2009/1/16	2009/1/20
65	Bay 21 (B CH198.00 - B CH210.00)	4 days	2009/1/21	2009/1/24
66	Bay 22 (B CH210.00 - B CH222.00)	3 days	2009/1/29	2009/1/31
67	Construction of Channel Structures	19 days	2009/1/7	2009/1/31
68	Bay 26 (B CH260.00 - B CH272.00)	10 days	2009/1/7	2009/1/17
69	Bay 27 (B CH272.00 - B CH284.00)	9 days	2009/1/19	2009/1/31
70	Backfilling along the sides of channel & laying of underground drain	5 days	2009/1/19	2009/1/23
71	Bay 26 (B CH260.00 - B CH272.00)	5 days	2009/1/19	2009/1/23
72				
73	Section III (Channel KT14A)	23 days	2009/1/2	2009/1/31
74	Regular Environmental Impact Monitoring	23 days	2009/1/2	2009/1/31
75	Regular Tree Survey	23 days	2009/1/2	2009/1/31
76	Regular Structural Condition Survey	23 days	2009/1/2	2009/1/31
77	Construction of Rectangular Channel	21 days	2009/1/2	2009/1/29
78	Bay 2 (CH11.00 - CH23.00)	5 days	2009/1/8	2009/1/13
79	Construction of Vertical Wall	3 days	2009/1/8	2009/1/10
80	Backfilling	1 day	2009/1/12	2009/1/12
81	Removal of Sheet Piling	1 day	2009/1/13	2009/1/13
82	Bay 3 (CH23.00 - CH35.00)	14 days	2009/1/2	2009/1/17
83	Construction of Base Slab	2 days	2009/1/2	2009/1/3
84	Backfilling to the Kicker Level	1 day	2009/1/5	2009/1/5
85	Construction of Vertical Wall	4 days	2009/1/12	2009/1/15
86	Backfilling	1 day	2009/1/16	2009/1/16
87	Removal of Sheet Piling	1 day	2009/1/17	2009/1/17
88	Bay 4 (CH35.00 - CH48.00)	16 days	2009/1/5	2009/1/22
89	Construction of Base Slab	3 days	2009/1/5	2009/1/7
90	Backfilling to the Kicker Level	1 day	2009/1/16	2009/1/16
91	Construction of Vertical Wall	3 days	2009/1/17	2009/1/20
92	Backfilling	1 day	2009/1/21	2009/1/21
93	Removal of Sheet Piling	1 day	2009/1/22	2009/1/22
94	Bay 5 (CH48.00 - CH52.00)	16 days	2009/1/8	2009/1/29
95	Excavation	4 days	2009/1/8	2009/1/12
96	Installation of Sheet Piling	3 days	2009/1/9	2009/1/12
97	Cast Blinding Layer	1 day	2009/1/13	2009/1/13
98	Construction of Base Slab	3 days	2009/1/14	2009/1/16



Task — Progress — Summary — External Tasks — Deadline

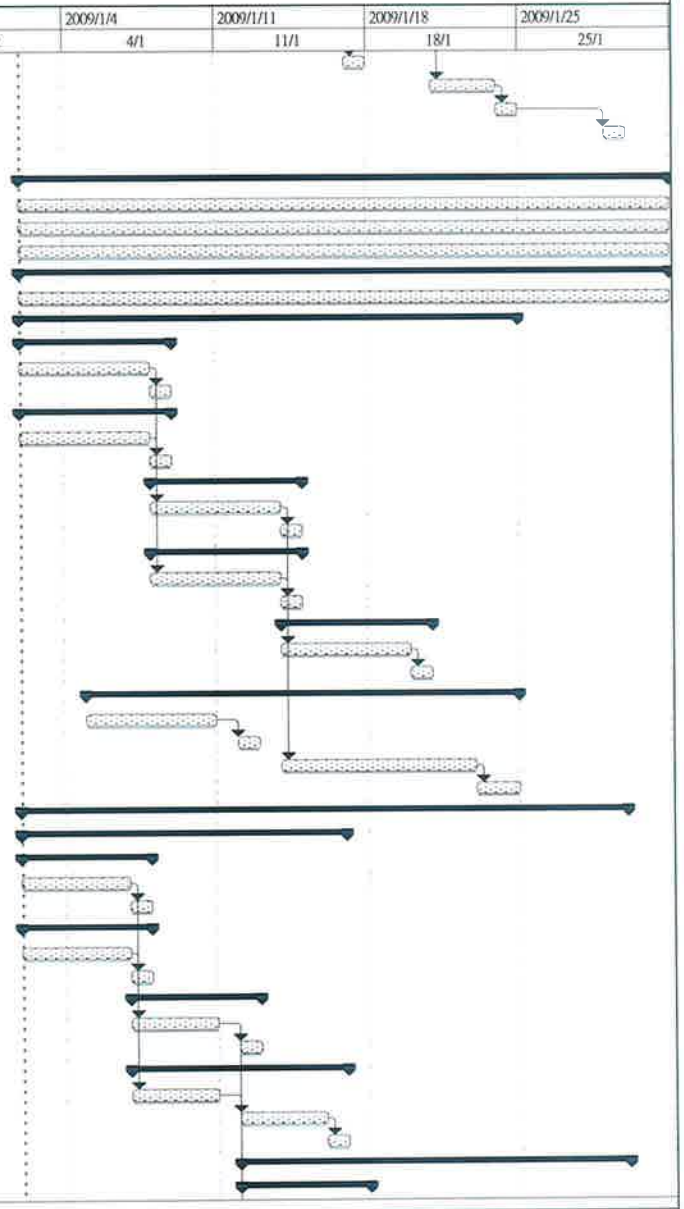
Split — Milestone — Project Summary — External Milestone

Contract No. : DC/2007/17

Drainage Improvement Works in Cheung Po, Ma On Kong, Yuen Kong San Tsuen and Tin Sam Tsuen of Yuen Long District and Sewerage at Tseng Tau Chung Tsuen, Tuen Mun

One Month Rolling Programme (January 2009)

No	Task Name	Duration	Start	Finish
99	Backfilling to the Kicker Level	1 day	2009/1/17	2009/1/17
100	Construction of Vertical Wall	3 days	2009/1/21	2009/1/23
101	Backfilling	1 day	2009/1/24	2009/1/24
102	Removal of Sheet Piling	1 day	2009/1/29	2009/1/29
103				
104	Section IV (Channel KT14B & KT14C)	23 days	2009/1/2	2009/1/31
105	Regular Environmental Impact Monitoring	23 days	2009/1/2	2009/1/31
106	Regular Tree Survey & Protection	23 days	2009/1/2	2009/1/31
107	Regular Structural Condition Survey	23 days	2009/1/2	2009/1/31
108	Construction of Kam Sheung Road (Portion 8B)	23 days	2009/1/2	2009/1/31
109	Construction of Channel between CP9 and CP8	23 days	2009/1/2	2009/1/31
110	Construction of Rectangular Channel of KT14B	20 days	2009/1/2	2009/1/24
111	Bay 16 (CH158.00 - CH171.00)	6 days	2009/1/2	2009/1/8
112	Construction of Base Slab & Vertical Wall	5 days	2009/1/2	2009/1/7
113	Backfilling	1 day	2009/1/8	2009/1/8
114	Bay 18 (CH183.00 - CH195.00)	6 days	2009/1/2	2009/1/8
115	Construction of Base Slab & Vertical Wall	5 days	2009/1/2	2009/1/7
116	Backfilling	1 day	2009/1/8	2009/1/8
117	Bay 28 (CH284.00 - CH296.00)	6 days	2009/1/8	2009/1/14
118	Construction of Base Slab & Vertical Wall	5 days	2009/1/8	2009/1/13
119	Backfilling	1 day	2009/1/14	2009/1/14
120	Bay 26 (CH260.00 - CH272.00)	6 days	2009/1/8	2009/1/14
121	Construction of Base Slab & Vertical Wall	5 days	2009/1/8	2009/1/13
122	Backfilling	1 day	2009/1/14	2009/1/14
123	Bay 27 (CH272.00 - CH284.00)	6 days	2009/1/14	2009/1/20
124	Construction of Base Slab & Vertical Wall	5 days	2009/1/14	2009/1/19
125	Backfilling	1 day	2009/1/20	2009/1/20
126	Bay 25 (CH248.00 - CH260.00)	18 days	2009/1/5	2009/1/24
127	Excavation	6 days	2009/1/5	2009/1/10
128	Cast Blinding Layer	1 day	2009/1/12	2009/1/12
129	Construction of Base Slab & Vertical Wall	8 days	2009/1/14	2009/1/22
130	Backfilling	2 days	2009/1/23	2009/1/24
131	Construction of Rectangular Channel of KT14C	21 days	2009/1/2	2009/1/29
132	East Portion (CH183.00 - CH484.00)	13 days	2009/1/2	2009/1/16
133	Bay 12E (CH348.00 - CH360.00)	5 days	2009/1/2	2009/1/7
134	Construction of Base Slab & Vertical Wall	4 days	2009/1/2	2009/1/6
135	Backfilling	1 day	2009/1/7	2009/1/7
136	Bay 14E (CH324.00 - CH336.00)	5 days	2009/1/2	2009/1/7
137	Construction of Base Slab & Vertical Wall	4 days	2009/1/2	2009/1/6
138	Backfilling	1 day	2009/1/7	2009/1/7
139	Bay 15E-2 (CH310.00 - CH318.00)	5 days	2009/1/7	2009/1/12
140	Construction of Base Slab & Vertical Wall	4 days	2009/1/7	2009/1/10
141	Backfilling	1 day	2009/1/12	2009/1/12
142	Bay 16E (CH298.00 - CH310.00)	9 days	2009/1/7	2009/1/16
143	Construction of Base Slab	4 days	2009/1/7	2009/1/10
144	Construction of Vertical Wall & Top Slab	4 days	2009/1/12	2009/1/15
145	Backfilling	1 day	2009/1/16	2009/1/16
146	West Portion (CH0.00 - CH183.00)	13 days	2009/1/12	2009/1/29
147	Bay 13W (CH128.00 - CH139.00)	6 days	2009/1/12	2009/1/17



Task — Progress — Summary — External Tasks — Deadline

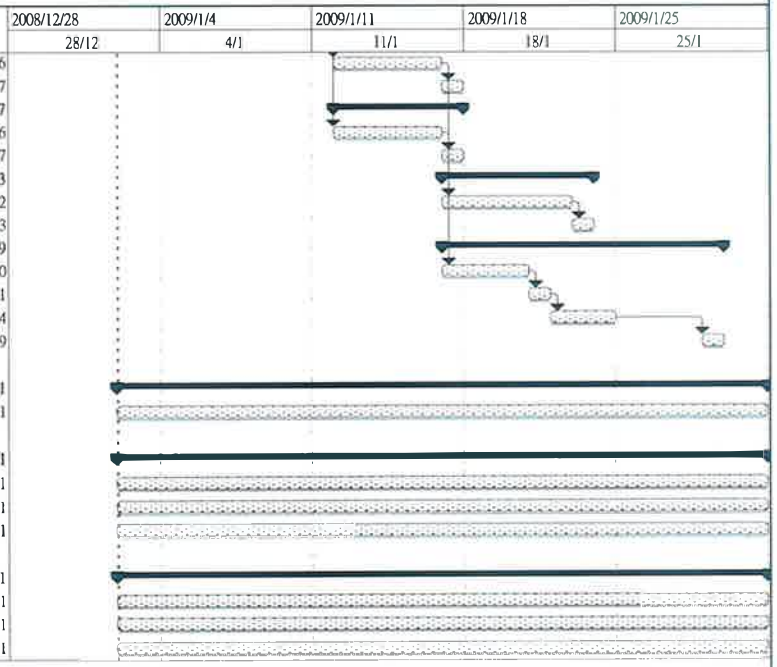
Split — Milestone — Project Summary — External Milestone

Contract No. : DC/2007/17

Drainage Improvement Works in Cheung Po, Ma On Kong, Yuen Kong San Tsuen and Tin Sam Tsuen of Yuen Long District and Sewerage at Tseng Tau Chung Tsuen, Tuen Mun

One Month Rolling Programme (January 2009)

No	Task Name	Duration	Start	Finish
148	Construction of Base Slab & Vertical Wall	5 days	2009/1/12	2009/1/16
149	Backfilling	1 day	2009/1/17	2009/1/17
150	Bay 14W (CH139.00 - CH149.00)	6 days	2009/1/12	2009/1/17
151	Construction of Base Slab & Vertical Wall	5 days	2009/1/12	2009/1/16
152	Backfilling	1 day	2009/1/17	2009/1/17
153	Bay 15W (CH149.00 - CH162.00)	6 days	2009/1/17	2009/1/23
154	Construction of Base Slab & Vertical Wall	5 days	2009/1/17	2009/1/22
155	Backfilling	1 day	2009/1/23	2009/1/23
156	Bay 16W (CH162.00 - CH174.00)	8 days	2009/1/17	2009/1/29
157	Construction of Base Slab	3 days	2009/1/17	2009/1/20
158	Backfilling to the Kicker Level	1 day	2009/1/21	2009/1/21
159	Construction of Vertical Wall & Top Slab	3 days	2009/1/22	2009/1/24
160	Backfilling	1 day	2009/1/29	2009/1/29
161				
162	Section V (For Section I, II, III & IV)	23 days	2009/1/2	2009/1/31
163	Preservation and Protection of Trees	23 days	2009/1/2	2009/1/31
164				
165	Section VI - Portion 9A & 9B (Tuen Mun Sewerage Work)	23 days	2009/1/2	2009/1/31
166	Structural Survey and Monitoring	23 days	2009/1/2	2009/1/31
167	Construction of Manhole, Timber Box and Trench Excavation	23 days	2009/1/2	2009/1/31
168	Apply XP Approval for Construction	23 days	2009/1/2	2009/1/31
169				
170	Section VII - Portion 10A, 10B & 10C (Tuen Mun Sewerage Work)	23 days	2009/1/2	2009/1/31
171	Structural Survey and Monitoring	23 days	2009/1/2	2009/1/31
172	Construction of Manhole, Timber Box and Trench Excavation	23 days	2009/1/2	2009/1/31
173	Apply XP Approval for Construction	23 days	2009/1/2	2009/1/31



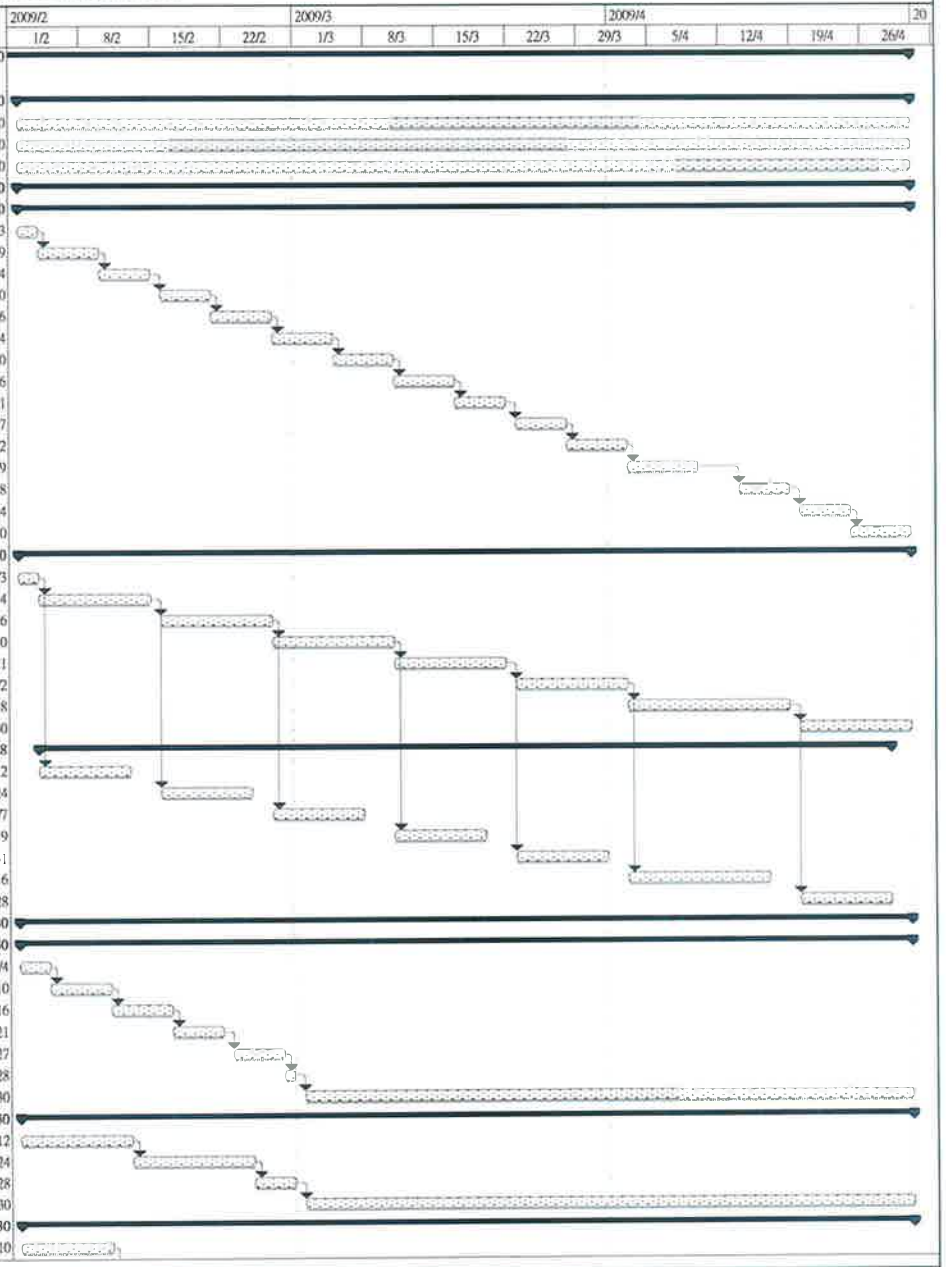
Task Progress Summary External Tasks Deadline
Split Milestone Project Summary External Milestone

Contract No. : DC/2007/17

Drainage Improvement Works in Cheung Po, Ma On Kong, Yuen Kong San Tsuen and Tin Sam Tsuen of Yuen Long District and Sewerage at Tseng Tau Chung Tsuen, Tuen Mun

Three Months Rolling Programme (February 2009 to April 2009)

No	Task Name	Duration	Start	Finish
1	Section I (Channel KT12)	95 days	2009/1/2	2009/4/30
25				
26	Section II (Channel KT13)	72 days	2009/2/2	2009/4/30
27	Regular Environmental Impact Monitoring	72 days	2009/2/2	2009/4/30
28	Regular Tree Survey & Protection	72 days	2009/2/2	2009/4/30
29	Regular Structural Condition Survey	72 days	2009/2/2	2009/4/30
30	Section A	72 days	2009/2/2	2009/4/30
31	Excavation to Channel Formation & Laying of Rock Fill Material	72 days	2009/2/2	2009/4/30
32	Bay 5 (A CH80.00 - A CH100.00)	2 days	2009/2/2	2009/2/3
33	Bay 6 (A CH100.00 - A CH120.00)	5 days	2009/2/4	2009/2/9
34	Bay 7 (A CH120.00 - A CH140.00)	5 days	2009/2/10	2009/2/14
35	Bay 8 (A CH140.00 - A CH160.00)	5 days	2009/2/16	2009/2/20
36	Bay 9 (A CH160.00 - A CH180.00)	5 days	2009/2/21	2009/2/26
37	Bay 10 (A CH180.00 - A CH200.00)	5 days	2009/2/27	2009/3/4
38	Bay 11 (A CH200.00 - A CH220.00)	5 days	2009/3/5	2009/3/10
39	Bay 12 (A CH220.00 - A CH240.00)	5 days	2009/3/11	2009/3/16
40	Bay 13 (A CH240.00 - A CH260.00)	5 days	2009/3/17	2009/3/21
41	Bay 14 (A CH260.00 - A CH280.00)	5 days	2009/3/23	2009/3/27
42	Bay 15 (A CH280.00 - A CH300.00)	5 days	2009/3/28	2009/4/2
43	Bay 16 (A CH300.00 - A CH320.00)	5 days	2009/4/3	2009/4/9
44	Bay 17 (A CH320.00 - A CH340.00)	5 days	2009/4/14	2009/4/18
45	Bay 18 (A CH340.00 - A CH360.00)	5 days	2009/4/20	2009/4/24
46	Bay 19 (A CH360.00 - A CH380.00)	5 days	2009/4/25	2009/4/30
47	Construction of Channel Structures	72 days	2009/2/2	2009/4/30
48	Bay 2 (A CH20.00 - A CH40.00)	2 days	2009/2/2	2009/2/3
49	Bay 3 (A CH40.00 - A CH60.00)	10 days	2009/2/4	2009/2/14
50	Bay 4 (A CH60.00 - A CH80.00)	10 days	2009/2/16	2009/2/26
51	Bay 5 (A CH80.00 - A CH100.00)	10 days	2009/2/27	2009/3/10
52	Bay 6 (A CH100.00 - A CH120.00)	10 days	2009/3/11	2009/3/21
53	Bay 7 (A CH120.00 - A CH140.00)	10 days	2009/3/23	2009/4/2
54	Bay 8 (A CH140.00 - A CH160.00)	10 days	2009/4/3	2009/4/18
55	Bay 9 (A CH160.00 - A CH180.00)	10 days	2009/4/20	2009/4/30
56	Backfilling along the completed Channel Structures	68 days	2009/2/4	2009/4/28
57	Bay 2 (A CH20.00 - A CH40.00)	8 days	2009/2/4	2009/2/12
58	Bay 3 (A CH40.00 - A CH60.00)	8 days	2009/2/16	2009/2/24
59	Bay 4 (A CH60.00 - A CH80.00)	8 days	2009/2/27	2009/3/7
60	Bay 5 (A CH80.00 - A CH100.00)	8 days	2009/3/11	2009/3/19
61	Bay 6 (A CH100.00 - A CH120.00)	8 days	2009/3/23	2009/3/31
62	Bay 7 (A CH120.00 - A CH140.00)	8 days	2009/4/3	2009/4/16
63	Bay 8 (A CH140.00 - A CH160.00)	8 days	2009/4/20	2009/4/28
64	Section of Box Culvert BC13-1	72 days	2009/2/2	2009/4/30
65	Excavation to Channel Formation & Laying of Rock Fill Material	72 days	2009/2/2	2009/4/30
66	Bay 6 (BC CH60.00 - BC CH72.00)	3 days	2009/2/2	2009/2/4
67	Bay 7 (BC CH72.00 - BC CH84.00)	5 days	2009/2/5	2009/2/10
68	Bay 8 (BC CH84.00 - BC CH96.00)	5 days	2009/2/11	2009/2/16
69	Bay 9 (BC CH96.00 - BC CH108.00)	5 days	2009/2/17	2009/2/21
70	Bay 10 (BC CH108.00 - BC CH118.00)	5 days	2009/2/23	2009/2/27
71	Bay 11 (BC CH118.00 - BC CH122.00)	1 day	2009/2/28	2009/2/28
72	Cease work (01/03/09 - 31/05/09) - Restriction of EP-263/2007 Requirement	48 days	2009/3/2	2009/4/30
73	Construction of Channel Structures	72 days	2009/2/2	2009/4/30
74	Bay 3 (BC CH24.00 - BC CH36.00)	10 days	2009/2/2	2009/2/12
75	Bay 4 (BC CH36.00 - BC CH48.00)	10 days	2009/2/13	2009/2/24
76	Bay 5 (BC CH48.00 - BC CH60.00)	4 days	2009/2/25	2009/2/28
77	Cease work (01/03/09 - 31/05/09) - Restriction of EP-263/2007 Requirement	48 days	2009/3/2	2009/4/30
78	Backfilling along the Completed Channel Structures	72 days	2009/2/2	2009/4/30
79	Bay 2 (BC CH12.00 - BC CH24.00)	8 days	2009/2/2	2009/2/10



Task Progress Summary External Tasks Deadline

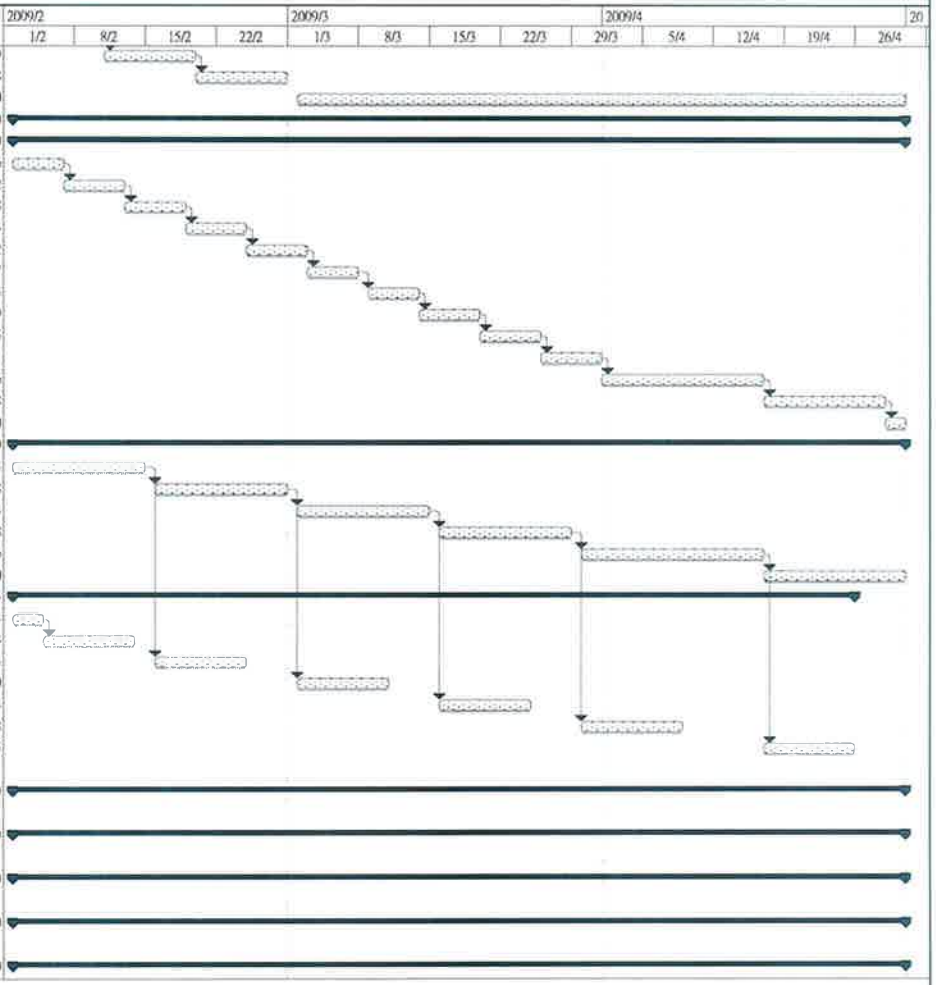
Split Milestone Project Summary External Milestone

Contract No. : DC/2007/17

Drainage Improvement Works in Cheung Po, Ma On Kong, Yuen Kong San Tsuen and Tin Sam Tsuen of Yuen Long District and Sewerage at Tseng Tau Chung Tsuen, Tuen Mun

Three Months Rolling Programme (February 2009 to April 2009)

No	Task Name	Duration	Start	Finish
80	Bay 3 (BC CH24.00 - BC CH36.00)	8 days	2009/2/11	2009/2/19
81	Bay 4 (BC CH36.00 - BC CH48.00)	8 days	2009/2/20	2009/2/28
82	Cease work (01/03/09 - 31/05/09) - Restriction of EP-263/2007 Requirement	48 days	2009/3/2	2009/4/30
83	Section B	72 days	2009/2/2	2009/4/30
84	Excavation to Channel Formation & Laying of Rock Fill Material	72 days	2009/2/2	2009/4/30
85	Bay 29 (B CH297.00 - B CH305.00)	5 days	2009/2/2	2009/2/6
86	Bay 30 (B CH305.00 - B CH312.00)	5 days	2009/2/7	2009/2/12
87	Bay 25 (B CH247.00 - B CH260.00)	5 days	2009/2/13	2009/2/18
88	Bay 24 (B CH235.00 - B CH247.00)	5 days	2009/2/19	2009/2/24
89	Bay 23 (B CH222.00 - B CH235.00)	5 days	2009/2/25	2009/3/2
90	Bay 19 (B CH174.00 - B CH186.00)	5 days	2009/3/3	2009/3/7
91	Bay 18 (B CH162.00 - B CH174.00)	5 days	2009/3/9	2009/3/13
92	Bay 17 (B CH154.00 - B CH162.00)	5 days	2009/3/14	2009/3/19
93	Bay 16 (B CH147.00 - B CH154.00)	5 days	2009/3/20	2009/3/25
94	Bay 15 (B CH144.00 - B CH147.00)	5 days	2009/3/26	2009/3/31
95	Bay 14 (B CH137.00 - B CH144.00)	10 days	2009/4/1	2009/4/16
96	Bay 13 (B CH129.00 - B CH137.00)	10 days	2009/4/17	2009/4/28
97	Bay 12 (B CH119.00 - B CH129.00)	2 days	2009/4/29	2009/4/30
98	Construction of Channel Structures	72 days	2009/2/2	2009/4/30
99	Bay 28 (B CH284.00 - B CH296.00)	12 days	2009/2/2	2009/2/14
100	Bay 20 (B CH186.00 - B CH198.00)	12 days	2009/2/16	2009/2/28
101	Bay 21 (B CH198.00 - B CH210.00)	12 days	2009/3/2	2009/3/14
102	Bay 22 (B CH210.00 - B CH222.00)	12 days	2009/3/16	2009/3/28
103	Bay 29 (B CH297.00 - B CH305.00)	12 days	2009/3/30	2009/4/16
104	Bay 30 (B CH305.00 - B CH312.00)	12 days	2009/4/17	2009/4/30
105	Backfilling along the sides of channel & laying of underground drain	68 days	2009/2/2	2009/4/25
106	Bay 26 (B CH260.00 - B CH272.00)	3 days	2009/2/2	2009/2/4
107	Bay 27 (B CH272.00 - B CH284.00)	8 days	2009/2/5	2009/2/13
108	Bay 28 (B CH284.00 - B CH296.00)	8 days	2009/2/16	2009/2/24
109	Bay 20 (B CH186.00 - B CH198.00)	8 days	2009/3/2	2009/3/10
110	Bay 21 (B CH198.00 - B CH210.00)	8 days	2009/3/16	2009/3/24
111	Bay 22 (B CH210.00 - B CH222.00)	8 days	2009/3/30	2009/4/8
112	Bay 29 (B CH297.00 - B CH305.00)	8 days	2009/4/17	2009/4/25
113				
114	Section III (Channel KT14A)	72 days	2009/2/2	2009/4/30
226				
227	Section IV (Channel KT14B & KT14C)	72 days	2009/2/2	2009/4/30
485				
486	Section V (For Section I, II, III & IV)	72 days	2009/2/2	2009/4/30
488				
489	Section VI - Portion 9A & 9B (Tuen Mun Sewerage Work)	72 days	2009/2/2	2009/4/30
493				
494	Section VII - Portion 10A, 10B & 10C (Tuen Mun Sewerage Work)	72 days	2009/2/2	2009/4/30



Task Progress Summary External Tasks Deadline

Split Milestone Project Summary External Milestone

Appendix D

Mitigation Measure Implementation Schedule

Appendix A
Mitigation Measures Implementation Schedule

Ecological Impact Mitigation

EIA Ref.	Mitigation Measures	Objectives of Proposed Measures	Location/Duration of Measures/Timing of Completion of Measures	Implementation Agent(s)	Implementation Stage			Relevant Legislation & Guidelines
					Design	Construction	Operation	
4.9.2	To avoid potential impacts to the egretry and the associated habitats, the proposed layout and gabion structures shown in Figures 2.2A, 2.2B and 2.4 of the EIA shall be adopted. The bypass culvert design shall ensure that continuous flow of the existing unmodified stream is maintained. Reprovide the stream section affected by the bypass culvert with gabion banks and natural substrates as stream bed materials.	Minimize loss of egretry, stream and conservation area, and the associated ecological habitats	Design Stage Refer to Figures 2.2A, 2.2B and 2.4 for locations	Detailed Design Engineer	✓	✓		Environmental Impact Assessment Ordinance (EIAO)
4.9.7	Chain link fence to be provided along the site boundary near the CA zone and Ho Pui Egretry (Figure 4.13). Prohibit the disturbance of vegetation outside the site boundary. Signage to be provided at conspicuous location to warn workers from entering and disturbing the sensitive areas.	Minimize the disturbance and access to the CA zone and Ho Pui Egretry during construction	Construction Stage at locations shown in Figure 4.13 of the EIA before commencement of bypass culvert construction	Construction Contractor		✓		EIAO
4.9.8	Compensatory planting of about 148 heavy standard size trees (in 2:1 ratio) for the approximately 74 trees to be felled.	Compensatory planting of trees that inevitably need to be felled	Construction Stage at locations shown in Figures 4.13, LP-001 and LP-002 of the EIA before commencement of operation stage	Construction Contractor		✓		EIAO
4.9.9 & Table 4.35	Planting an area (855 m²) of appropriate tree and bamboo species as shown in Figure 4.13: *Bambusa eutuldoides* 40% of total species *Cinnamomum camphora* 15% of total species *Celtis tetranda* 15% of total species *Ficus virens* 15% of total species *Ficus microcarpa* 15% of total species	Replace lost vegetation and conservation area by enhancing a stream side area to become suitable habitats for egrets	Construction Stage at locations shown in Figure 4.13 of the EIA before commencement of operation stage	Construction Contractor		✓		EIAO

Ecological Impact Mitigation

EIA Ref.	Mitigation Measures	Objectives of Proposed Measures	Location/Duration of Measures/Timing of Completion of Measures	Implementation Agent(s)	Implementation Stage			Relevant Legislation & Guidelines
					Design	Construction	Operation	
4.9.2 (ii)	Potentially adverse impacts arising from the maintenance of the channelized sections will be minimized by restricting routine channel maintenance to annual silt removal by hand or light machinery during the dry season (October to March). The management of woody / emergent vegetation will be limited to manual cutting, to be carried out only when unchecked growth of such vegetation is very likely to impede channel flow.	Minimize impacts arising from the maintenance of KT13	KT13 during Operation Stage	DSD (or DSD's maintenance contractor)			✓	EIAO

Noise Impact Mitigation

EIA Ref.	Mitigation Measures	Objectives of Proposed Measures	Location/Duration of Measures/Timing of Completion of Measures	Implementation Agent(s)	Implementation Stage			Relevant Legislation & Guidelines
					Design	Construction	Operation	
5.5.22	Level 1 Mitigation Measure Plant to be used in the construction phase are listed in Appendix F1 of the EIA. Quiet and silenced plant should be used (Appendix F2). No nighttime works will be carried out.	Prevent noise impact at sensitive receivers	To be implemented at the works sites during the Construction Phase.	Construction Contractor		✓		EIAO
5.5.23 - 5.5.24	Level 2 Mitigation Measure Temporary noise barrier of minimum height 3m should be erected along the site boundary of the construction work which is closest to the NSRs. These barrier shall be gap free apart from the necessary entrances/exits. The overall length for which noise barriers are required is shown in Figure 5.3. These barriers shall be constructed in such a way that no construction works and PME are visible from the low rise noise sensitive receivers they protect. A minimum surface density of 10 kg/m² is required. Where the affected sensitive receivers are very close to the construction works so that they cannot be adequately screened by the proposed temporary noise barrier as described on Figure 5.3, the Contractor is required to fully or partially modify the design of the temporary noise barriers, such as adding cantilevered portion or the use of mobile barrier, to screen the construction works away from the line of sight of the affected sensitive receivers.	Prevent noise impact at sensitive receivers	To be implemented at the works sites during the Construction Phase (see Figure 5.3).	Construction Contractor		✓		EIAO

Air Quality Impact Mitigation

EIA Ref.	Mitigation Measures	Objectives of Proposed Measures	Location/Duration of Measures/Timing of Completion of Measures	Implementation Agent(s)	Implementation Stage			Relevant Legislation & Guidelines
					Design	Construction	Operation	
6.5.12	Dust Mitigation Measures The Contractor shall prevent dust nuisance arising from the construction activities. The Contractor is required to follow all the requirements for dust control stipulated in the Air Pollution Control (Construction Dust) Regulation. Dust suppression measures should be installed as part of proper construction practice, and these should be incorporated in the Contract Specification and implemented to minimize dust nuisance to within acceptable levels. The following are examples of the dust suppression measures: (i) The Contractor shall frequently clean and water the site to minimize fugitive dust emissions. (ii) Effective water sprays shall be used during the delivery and handling of aggregate, and other similar materials, when dust is likely to be created and to dampen all stored materials during dry and windy weather. (iii) Watering of exposed surfaces shall be exercised as often as possible depending on the circumstances. (iv) Areas within the site where there is a regular movement of vehicles must be regularly watered as often as necessary for effective suppression of dust or as often as directed by the Engineer. (v) Where dusty material are being discharged to vehicle from a conveying system at a fixed transfer point, a three-sided roofed enclosure with a flexible curtain across the entry shall be provided. Exhaust fans shall be provided for this enclosure and vented to a suitable fabric filter system.	Prevent dust / odour nuisance	To be implemented at the works sites during the Construction Phase.	Construction Contractor		✓		Air Pollution Control Ordinance [Air Pollution Control (Construction Dust) Regulation]

Air Quality Impact Mitigation

EIA Ref.	Mitigation Measures	Objectives of Proposed Measures	Location/Duration of Measures/Timing of Completion of Measures	Implementation Agent(s)	Implementation Stage			Relevant Legislation & Guidelines
					Design	Construction	Operation	
6.5.12 (cont'd)	(vi) The Contractor shall restrict all motorised vehicles within the site, excluding those on public roads, to a maximum speed of 15 km per hour and confine haulage and delivery vehicles to designated roadways inside the site. (vii) Wheel washing facilities shall be installed and used by all vehicles leaving the site. No earth, mud, debris, dust and the like shall be deposited on public roads. Water in the wheel cleaning facility shall be changed at frequent intervals and sediments shall be removed regularly. The Contractor shall submit details of proposals for the wheel cleaning facility. Such wheel washing facilities shall be usable prior to any earthworks excavating activity on the site. The Contractor shall also provide a hard-surfaced road between any washing facility and the public road. (viii) All vehicle exhausts should be directly vertically upwards or directed away from the ground. (ix) Any materials dropped on paved roads will need to be cleaned up immediately to prevent dust nuisance. *Odour Mitigation Measures* (x) Any odourous excavated material should be placed away from sensitive receivers. The material shall be removed within 1 day. (xi) Any odourous material stockpiled should be of the shortest duration. Also, all stockpiled materials must be stored in covered skips. Any leachate from these storage skips shall be collected in covered tanks or buckets and removed from site with toilet waste by licensed collectors for discharging to government sewer.							

Air Quality Impact Mitigation

EIA Ref.	Mitigation Measures	Objectives of Proposed Measures	Location/Duration of Measures/Timing of Completion of Measures	Implementation Agent(s)	Implementation Stage			Relevant Legislation & Guidelines
					Design	Construction	Operation	
6.5.4	No on-site concrete batching plant shall be erected.	Prevent dust nuisance	To be implemented at the works sites during the construction phase			✓		Air Pollution Control Construction Dust Regulation
6.5.13	During the Operation Phase, excavated sediment deposits should be regularly removed from the channel to maintain adequate water flow as well as to remove odourous materials. Potentially odourous materials should be stockpiled for the minimum time possible and away from ASRs. The material should be stored in covered impermeable skips and removed from site within 1 day.	Prevent odor nuisance during operation phase	To be implemented along KT13 during the Operation Phase.	DSD's Maintenance Contractor			✓	

Water Quality Impact Mitigation

EIA Ref.	Mitigation Measures	Objectives of Proposed Measures	Location/Duration of Measures/Timing of Completion of Measures	Implementation Agent(s)	Implementation Stage			Relevant Legislation & Guidelines
					Design	Construction	Operation	
7.5.5 - 7.5.7	Temporary earth bunds and sand barriers should be used to direct stormwater run-off to temporary settlement area. The settlement area should be within the channel itself. A cofferdam should be formed to keep the working area dry. The channel will be dug out to a depth of around 1 – 2m for a length of approximately 12m, to form a sedimentation area. The volume will be approximately 50m^3 (with a channel width of 3.5m). Sediment flowing downstream should settle in this settlement pond, while run-off from the surface should be channel through a local site drainage system into the settlement area. The settlement area should be maintained and the deposited materials should be removed regularly, at the onset of and after each rainstorm to ensure proper functioning at all times. No sediment removal shall be allowed in rainy weather. Open stockpiles susceptible to erosion should be covered with tarpaulin or similar fabric, especially during the wet season (Apr-Sep) or when heavy rainstorm is predicted.	Prevent additional pollution load being added to stream due to KT13 works (site formation)	To be implemented at the works sites during the Construction Phase.	Construction Contractor		✓		Water Pollution Control Ordinance ProPECC Note (PN 1/94)
7.5.8 - 7.5.10	The Contractor should provide temporary drainage diversion during construction to ensure continuous water flow to the unmodified portion of the stream. The use of containment structure such as temporary earth bunds, sand bags, sheetpile barriers or similar techniques is recommended to facilitate a dry or at least confined excavation within watercourses. Excavated sediment from streams and channel is likely to be wet and contaminated. The material should be stored in covered impermeable skips and disposed on the same day, or within 1 day, to avoid both odour and inadvertent release of contaminants to nearby water bodies.	Prevent additional pollution load being added to stream due to KT13 works (stream diversion and dredging)	To be implemented at the works sites during the Construction Phase.	Construction Contractor		✓		Water Pollution Control Ordinance ProPECC Note (PN 1/94)

Water Quality Impact Mitigation

EIA Ref.	Mitigation Measures	Objectives of Proposed Measures	Location/Duration of Measures/Timing of Completion of Measures	Implementation Agent(s)	Implementation Stage			Relevant Legislation & Guidelines
					Design	Construction	Operation	
7.5.11 - 7.5.12	Runoff should be carefully channelled to prevent concrete-contaminated water from entering watercourses. Adjustment of pH can be achieved by adding a suitable neutralising reagent to wastewater prior to discharge. Re-use of the supernatant from the sediment pits for washing out of concrete lorries should be practised. Any exceedance of acceptable range of pH levels in the nearby water bodies caused by inadvertent release of site runoff containing concrete should be monitored and rectified under the EM&A programme for this Project.	Prevent additional pollution load being added to stream due to KT13 works (concreting work)	To be implemented at the works sites during the Construction Phase.	Construction Contractor		✓		Water Pollution Control Ordinance ProPECC Note (PN 1/94)
7.5.13	Any Contractor generating waste oil or other chemicals as a result of his activities should register as a chemical waste producer and provide a safe storage area for chemicals on site. The storage site should be located away from existing water courses. Hard standing compounds should drain via an oil interceptor. To prevent spillage of fuels or other chemicals to water courses, all fuel tanks and storage areas should be sited on sealed areas, within a bund of a capacity equal to 110% of the storage capacity of the largest tank. Disposal of the waste oil should be done by a licensed collector. Oil interceptors should be regularly inspected and cleaned to avoid wash-out of oil during storm conditions. A bypass should be provided to avoid overload of the interceptor's capacity. Good housekeeping practices should be implemented to minimise careless spillage and to keep the storage and the work space in a tidy and clean condition. Appropriate training including safety codes and relevant manuals should be given to the personnel who regularly handle the chemicals on site.	Prevent additional pollution load being added to stream due to KT13 works (site workshop or depot)	To be implemented at the works sites during the Construction Phase.	Construction Contractor		✓		Water Pollution Control Ordinance ProPECC Note (PN 1/94)

Water Quality Impact Mitigation

EIA Ref.	Mitigation Measures	Objectives of Proposed Measures	Location/Duration of Measures/Timing of Completion of Measures	Implementation Agent(s)	Implementation Stage			Relevant Legislation & Guidelines
					Design	Construction	Operation	
7.5.14 - 7.5.15	Sewage arising from the additional population of workers on site should be collected in a suitable storage facility, such as portable chemical toilets. An adequate number of portable toilets should be provided for the construction workforce. The portable toilets should be maintained in a state that will not deter the workers from using them. The collected wastewater from sewage facilities and also from eating areas or washing facilities must be disposed of properly, in accordance with the WPCO requirements. Wastewater collected should be discharged into foul sewers and collected by licensed collectors. Either chemical toilets or other types of sewage treatment facilities without local discharge of wastewater shall be used to handle the foul water effluent arising from the project sites.	Prevent additional pollution load being added to stream due to KT13 works (wastewater from workers)	To be implemented at the works sites during the Construction Phase.	Construction Contractor		✓		Water Pollution Control Ordinance ProPECC Note (PN 1/94)

Waste Management

EIA Ref.	Mitigation Measures	Objectives of Proposed Measures	Location/Duration of Measures/Timing of Completion of Measures	Implementation Agent(s)	Implementation Stage			Relevant Legislation & Guidelines
					Design	Construction	Operation	
8.2.5	All construction wastes shall be sorted on site into inert and non-inert components. Non-inert materials (wood, glass and plastics) shall be recycled or reused and disposed to NENT Landfill as a last resort. Inert materials (soil, rubble, sand, rock, brick and concrete) shall be separated and reused on site prior to final disposal at the public filling facility at Tuen Mun Area 38.	Waste reduction, re-use, recycling and proper disposal	Throughout the construction sites during the Construction Phase	Construction Contractor		✓		WBTC No. 12/2000 ETWB TCW No. 33/2002 19/2005 31/2004
8.2.7	Any excavated material from the stream shall be removed within 1 day of excavation, taking measures to reduce odour and potential runoff.	Waste reduction, re-use, recycling and proper disposal	Throughout the construction sites during the Construction Phase	Construction Contractor		✓		WBTC No. 12/2000 ETWB TCW No. 33/2002 19/2005 31/2004
8.2.13 – 8.2.18 & 8.3.3	The excavated sediments shall be managed in accordance with ETWB TCW No. 34/2002 and WBTC No. 12/2000. The excavated sediment shall be disposed to marine disposal sites allocated by the Marine Fill Committee (MFC) – Pit IVa / Pit IVb of the East Sha Chau facility as capping material for Type 1 disposal and Pit IVc of the East Sha Chau facility for Type 2 disposal. The general allocation conditions as stipulated by the MFC shall be followed.	To properly manage the excavated sediment	Proposed works area during the Construction Phase	Construction Contractor		✓		WBTC No. 12/2000 ETWB TCW No. 34/2002 Dumping at Sea Ordinance
8.2.20	Dry concrete waste shall be sorted out from the other wastes and recycled at Tuen Mun Area 38 to form aggregates for road sub-base.	Waste reduction, re-use, recycling and proper disposal	Throughout the construction sites during the Construction Phase	Construction Contractor		✓		WBTC No. 12/2000 ETWB TCW No. 33/2002 19/2005 31/2004
8.2.22 – 8.2.24	Hoarding, shutters, form works and false works made of reusable materials such as steel or plastic / concrete panels shall be used as a preferred alternative to non-reusable materials such as wood and timber, with reference to WBTC No. 19/2001 - Metallic Site Hoarding and Signboards.	Waste reduction, re-use, recycling and proper disposal	Throughout the construction sites during the Construction Phase	Construction Contractor		✓		WBTC No. 19/2001

Waste Management

EIA Ref.	Mitigation Measures	Objectives of Proposed Measures	Location/Duration of Measures/Timing of Completion of Measures	Implementation Agent(s)	Implementation Stage			Relevant Legislation & Guidelines
					Design	Construction	Operation	
8.2.25 – 8.2.29	Where the construction processes produce chemical waste, the contractor must register with EPD as a Chemical Waste Producer. Storage, handling, transport and disposal of chemical waste shall be arranged in accordance with the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes published by EPD. All chemical waste shall be collected by a licensed collector for disposal at a licensed chemical waste treatment facility.	Waste reduction, re-use, recycling and proper disposal of chemical waste	Throughout the construction sites during the Construction Phase	Construction Contractor		✓		Waste Disposal Ordinance Waste Disposal (Chemical Waste) (General Regulation)
8.2.30	Settled sediments from wheel wash facilities should be dried and disposed of in the same way as inert excavated material.	Waste reduction, re-use, recycling and proper disposal	Throughout the construction sites during the Construction Phase	Construction Contractor		✓		WBTC No. 12/2000 ETWB TCW No. 33/2002 19/2005 31/2004
8.2.32	A temporary refuse collection station shall be set up by the Contractor. Municipal waste shall be collected regularly and delivered to the North East New Territories (NENT) Landfill.	Waste reduction, re-use, recycling and proper disposal	Throughout the construction sites during the Construction Phase	Construction Contractor		✓		Waste Disposal Ordinance Public Health and Municipal Services Ordinance
8.4.2	Appropriate waste management measures should be incorporated as part of the Environmental Management Plan (EMP) to be prepared and implemented by the Contractor.	Waste reduction, re-use, recycling and proper disposal	Throughout the construction sites during the Construction Phase	Construction Contractor		✓		ETWB TCW No. 19/2005
8.4.3	Training of construction staff should be undertaken by the Contractor in order to increase awareness of waste management issues.	Waste reduction, re-use, recycling and proper disposal	Throughout the construction sites during the Construction Phase	Construction Contractor		✓		ETWB TCW No. 19/2005
8.3.4 & 8.4.9	The Contractor shall refer and strictly follow the requirements stipulated in the ETWB TCW No. 31/2004 – Trip Ticket System for Disposal of Construction and Demolition Materials.	Waste reduction, re-use, recycling and proper disposal	Throughout the construction sites during the Construction Phase	Construction Contractor		✓		ETWB TCW No. 31/2004

Cultural Heritage

EIA Ref.	Mitigation Measures	Objectives of Proposed Measures	Location/Duration of Measures/Timing of Completion of Measures	Implementation Agent(s)	Implementation Stage			Relevant Legislation & Guidelines
					Design	Construction	Operation	
Table 9.3	A condition survey will be required before and during the construction phase to ensure the structure of the identified historic grave (KT13-02-02) remains intact. Measures will have to be taken to ensure the structural stability of the identified historic grave (KT13-02-02). Details will be presented in the condition survey.	To ensure the structure of the identified historic grave (KT13-02-02) remains intact during construction phase	Historic grave (KT13-02-02) / Before and during construction of the bypass culvert	Construction Contractor / Qualified archaeologist to conduct condition survey		✓		EIAO

Landscape/Visual Impact Mitigation

EIA Ref.	Mitigation Measures	Objectives for Proposed Measures	Location/Duration of Measures/Timing of Completion of Measures	Implementation Agent(s)	Implementation Stage			Relevant Legislation & Guidelines
					Design	Construction	Operation	
Table 10.2	CONSTRUCTION PHASE CM1 Topsoil, where identified, should be stripped and stored for re-use in the construction of the soft landscape works, where practical. CM2 Temporary access to site should be planned with care and located to minimize disturbance to existing riparian vegetation. CM3 Existing trees to be retained on site should be carefully protected during construction. CM4 Trees unavoidably affected by the works should be transplanted where practical. CM5 Compensatory tree planting should be provided to compensate for felled trees. CM6 Erection of decorative screen hoarding compatible with the surrounding rural setting.	Improves visual quality of project area and proposed works	To be implemented along KT13 works area during the Construction Phase.	Construction Contractor		✓		Works Bureau Technical Circular No. 14/2002
Table 10.3, Figures LP-001 & LP-002	OPERATION PHASE OM1 Buffer planting of trees and shrubs to screen off and blend in the channel with the adjacent settings OM2 Compensation planting of tree and bamboo species as recommended in Ecological Assessment compensates and reinstates riparian woodland disturbed on top of hydroseeding. OM3 Gabion embankment and substratum for natural colonization of vegetation OM4 Chromatic treatment of vehicular and pedestrian crossing to match adjacent setting. OM5 Aesthetic/ Quality design to re-provision of sitting out area of Ma On Kong. OM6 Approximate 50m stretch of grasscrete lined maintenance access road within CA zone.	Improved visual quality of proposed project	To be implemented along KT13 as shown in Figures LP-001 & LP-002 during Construction Phase / To be completed before commencement of Operation	Construction Contractor		✓		WBTC No. 14/2002 & ETWBTC No. 2/2004

Landscape/Visual Impact Mitigation

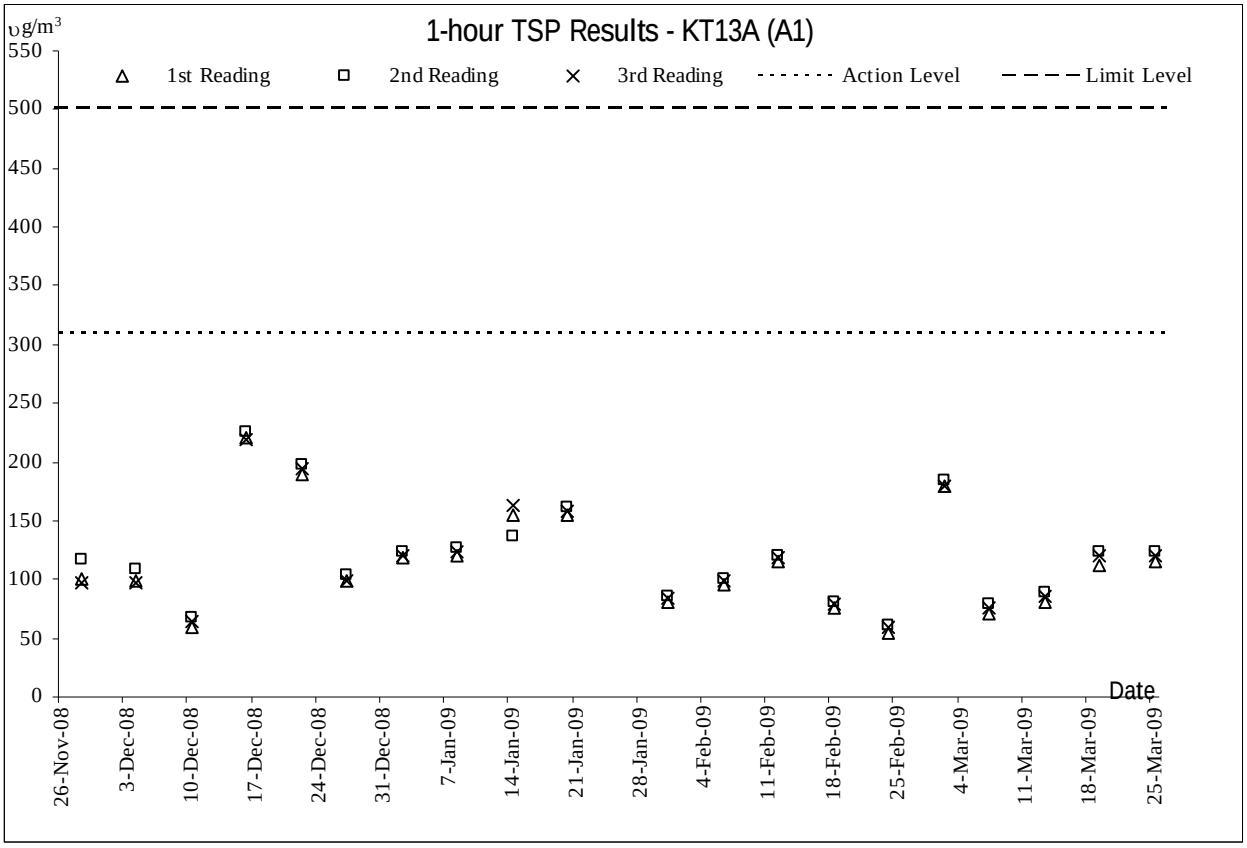
<table>
<tr><th rowspan="2">EIA Ref.</th><th rowspan="2">Mitigation Measures</th><th rowspan="2">Objectives for Proposed Measures</th><th rowspan="2">Location/Duration of Measures/Timing of Completion of Measures</th><th rowspan="2">Implementation Agent(s)</th><th colspan="3">Implementation Stage</th><th rowspan="2">Relevant Legislation & Guidelines</th></tr>
<tr><th>Design</th><th>Construction</th><th>Operation</th></tr>
<tr><td>10.8.18 Figures LP-001, LP-002 & 4.13</td><td>Compensatory planting of trees and bamboos with requirements as below.<table><tr><td>Size of compensatory tree planting</td><td>At least heavy standard size</td></tr><tr><td>Quantity of compensatory tree planting</td><td>2 times of the tree to be felled (approximately 148 nos. of tree to be compensated)</td></tr><tr><td>Proposed species</td><td>Bambusa eutuldoides*
Celtis tetranda
Cinnamomum camphora
Ficus virens
Ficus microcarpa</td></tr><tr><td>Requirements*</td><td>To ensure the right species of bamboo is planted, an experience botanist shall be acquired by the Contractor to source the correct bamboo species. In addition, the bamboos should have a minimum stem diameter of 8-10 cm and clump size of 5 shoots per plant.</td></tr></table></td><td>To address both landscape / visual and ecological mitigation needs</td><td>To be implemented along KT13 as shown in Figures LP-001 and LP-002 (with reference to Figure 4.13) during Construction Phase / To be completed before commencement of Operation</td><td>Construction Contractor</td><td></td><td>✓</td><td></td><td>WBTC No. 14/2002 & ETWBTC No. 2/2004</td></tr>
</table>

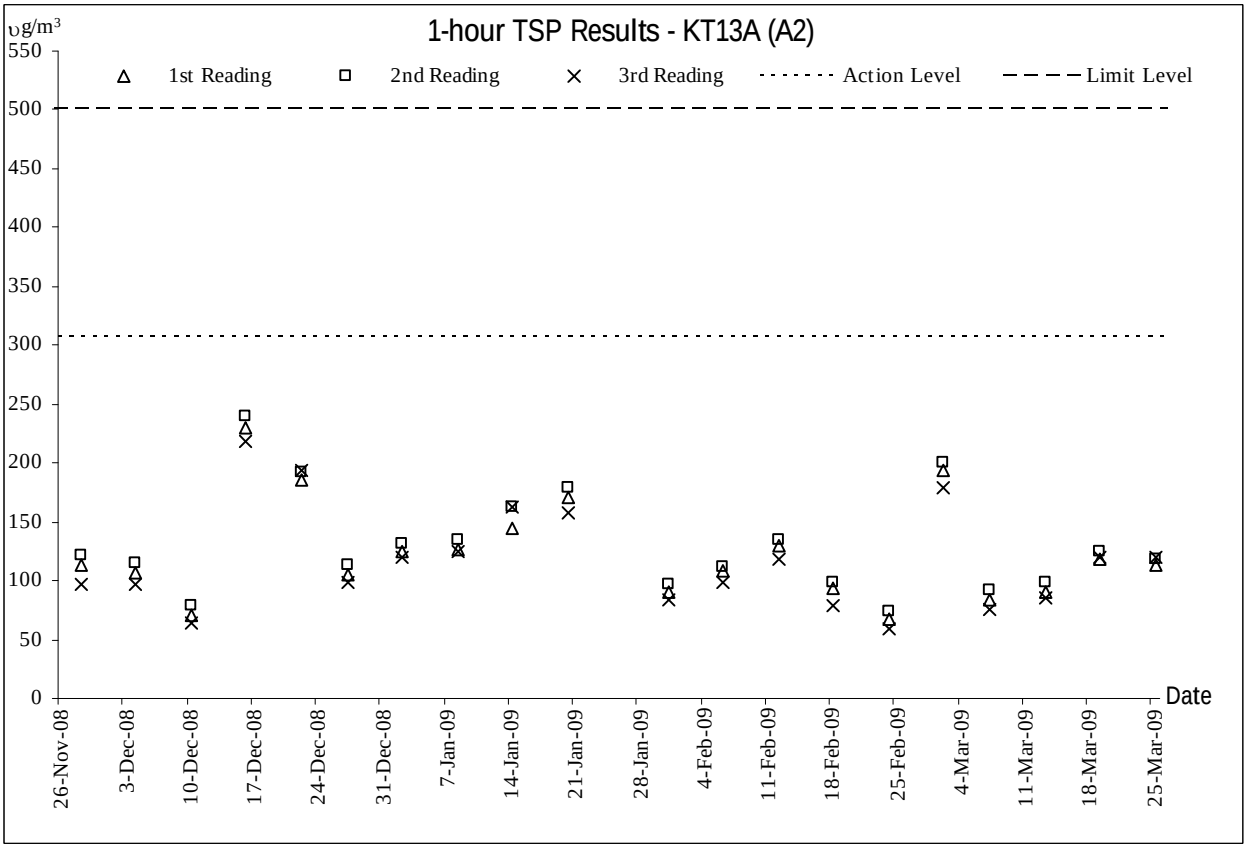
Appendix E

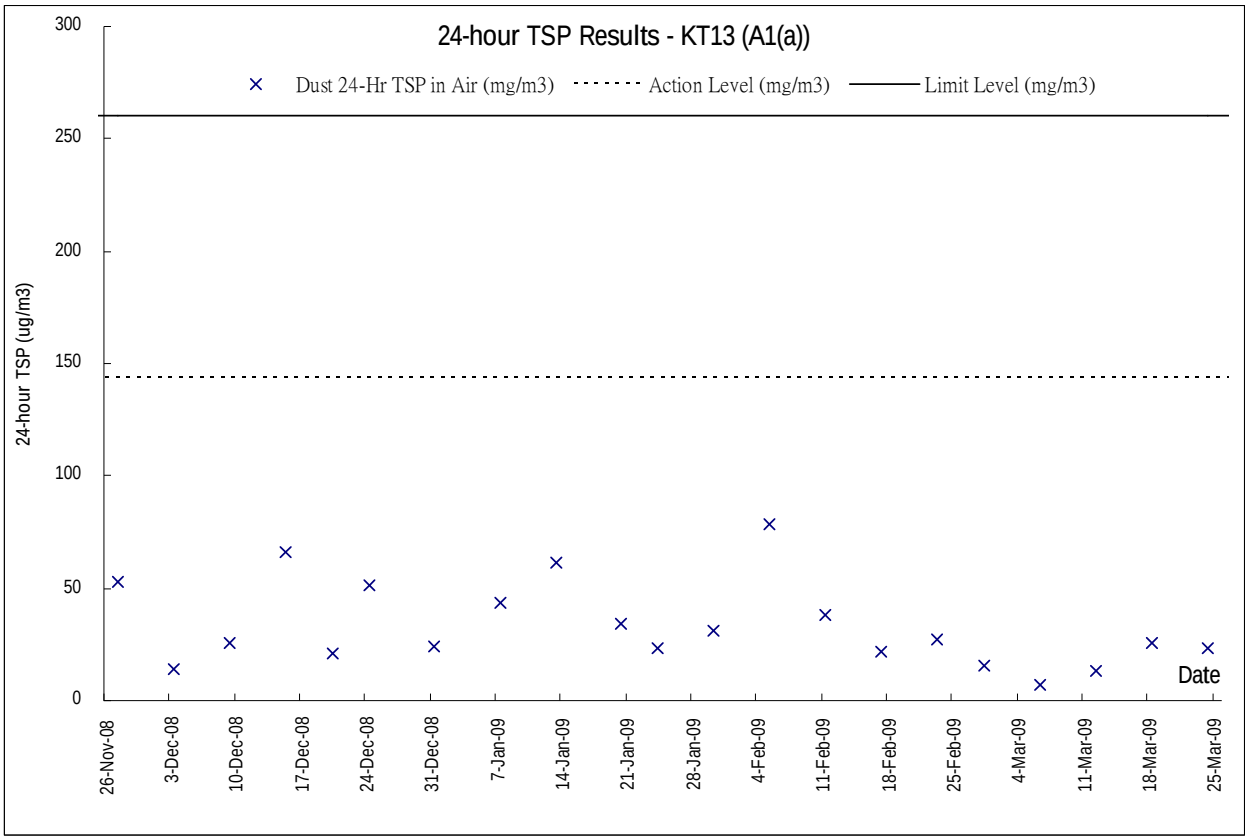
Graphic Plots of

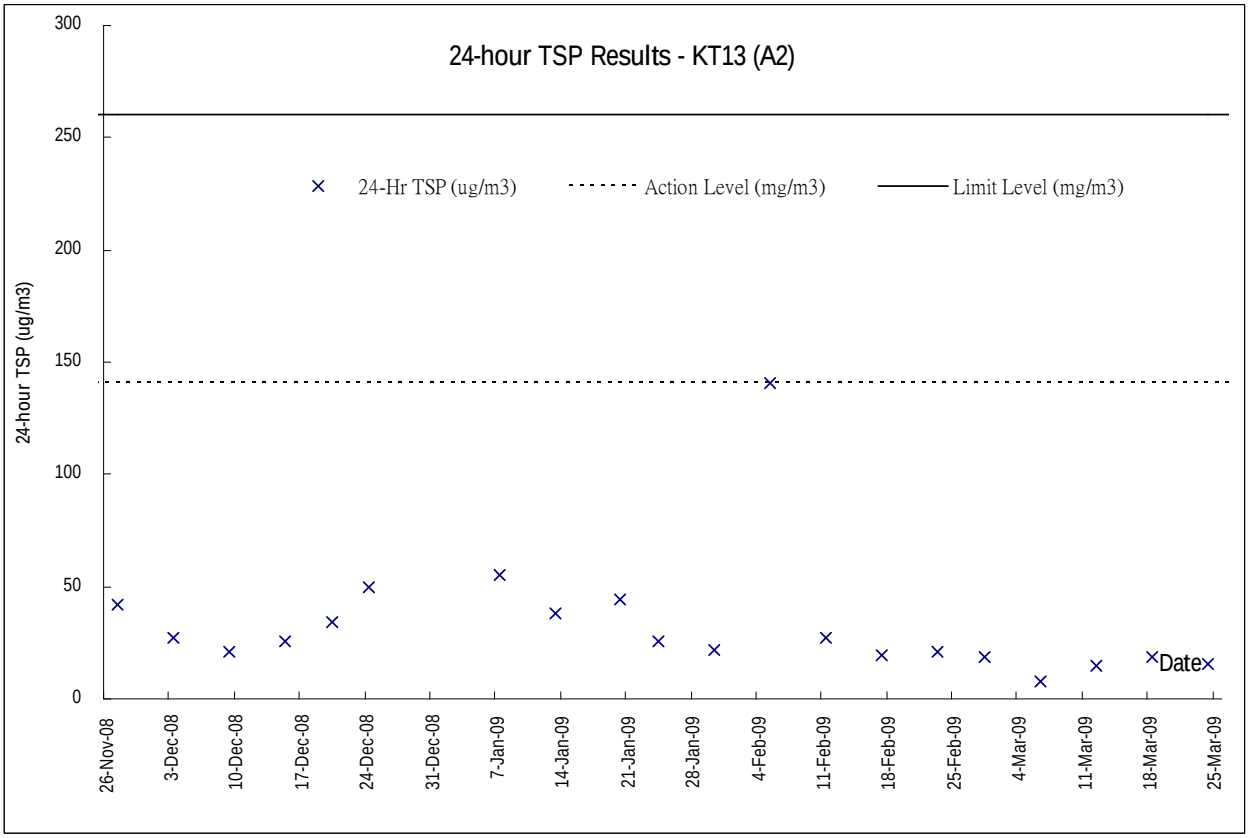
(a) Air Quality
(b) Construction Noise
(c) Water Quality

(a) Air Quality

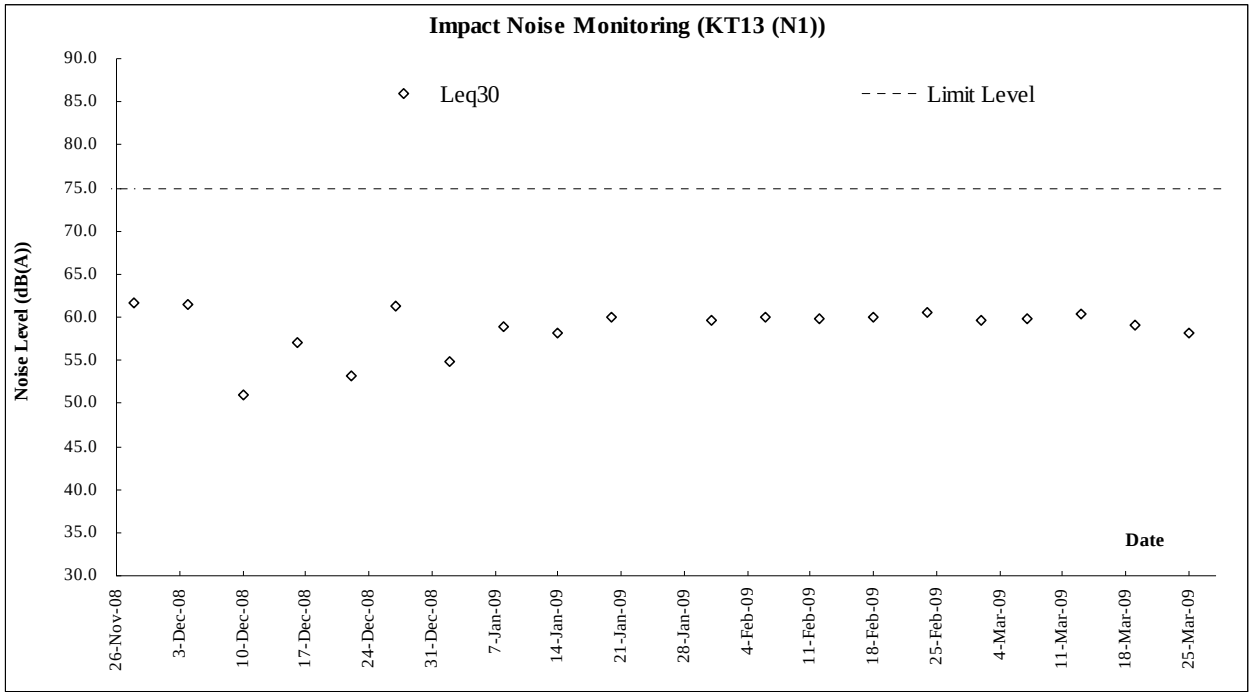


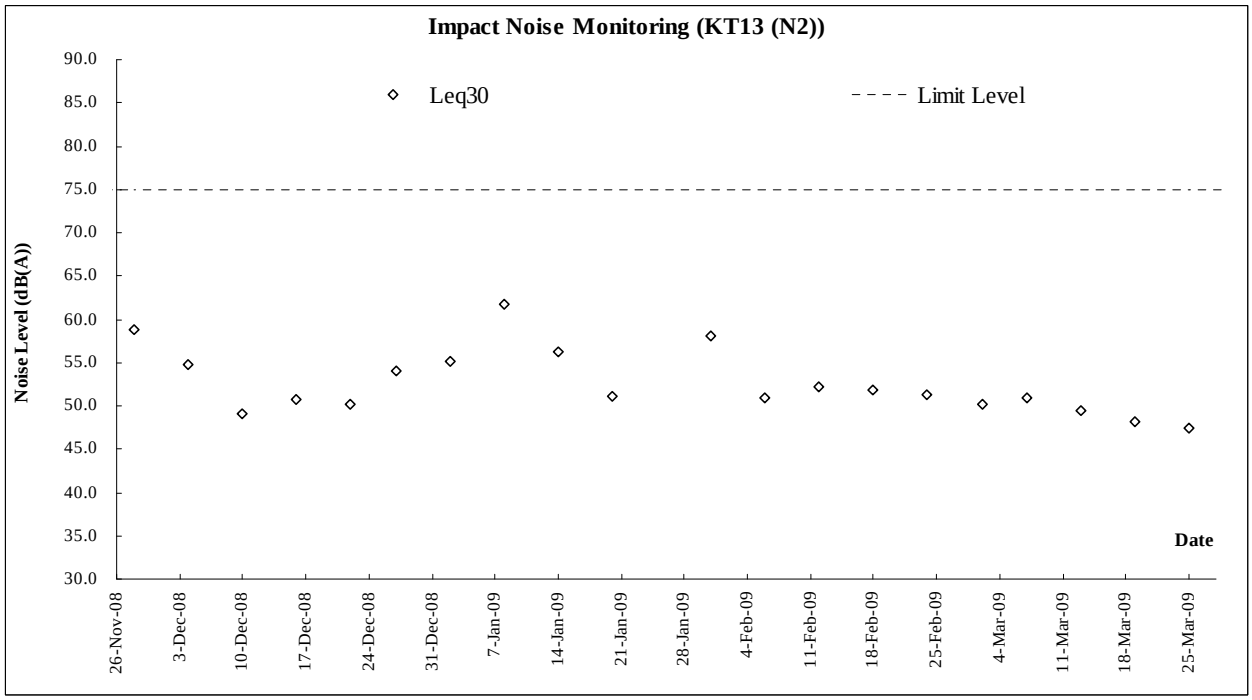


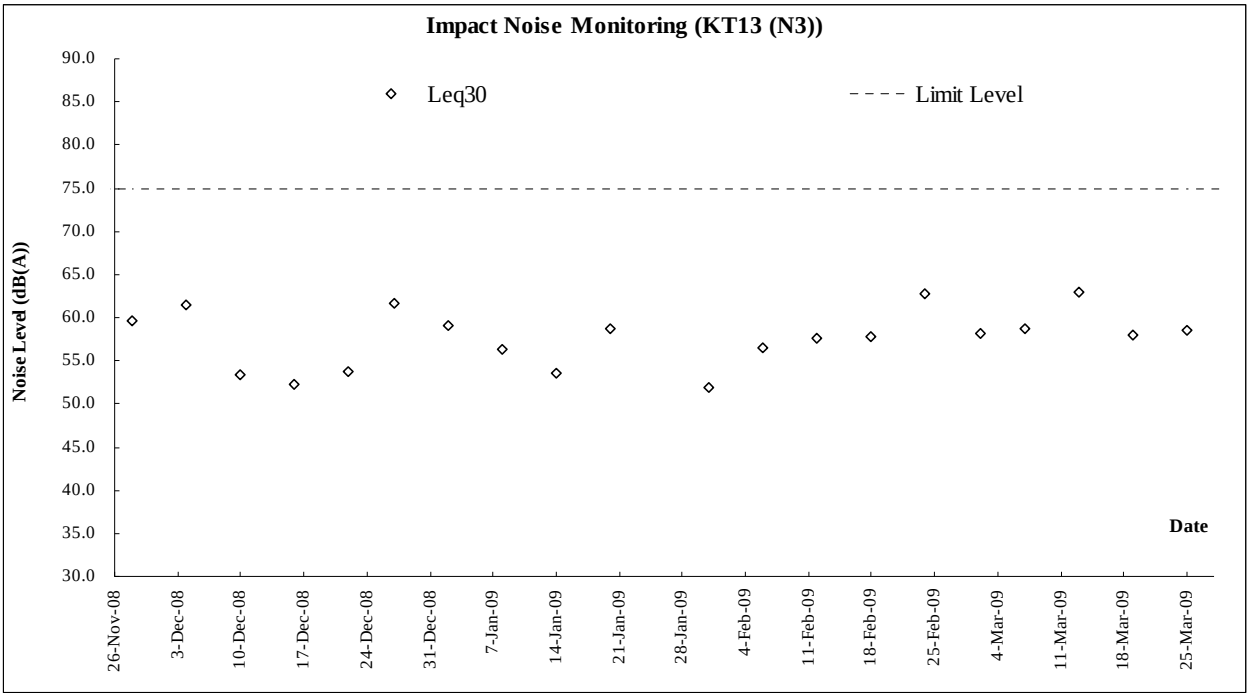

24-hour TSP Results - KT13 (A1(a))
Dust 24-Hr TSP in Air (mg/m3)
Action Level (mg/m3)
Limit Level (mg/m3)
24-hour TSP (ug/m3)
300
250
200
150
100
50
0
Date
26-Nov-08
3-Dec-08
10-Dec-08
17-Dec-08
24-Dec-08
31-Dec-08
7-Jan-09
14-Jan-09
21-Jan-09
28-Jan-09
4-Feb-09
11-Feb-09
18-Feb-09
25-Feb-09
4-Mar-09
11-Mar-09
18-Mar-09
25-Mar-09


24-hour TSP Results - KT13 (A2)
24-Hr TSP (ug/m3)
Action Level (mg/m3)
Limit Level (mg/m3)
24-hour TSP (ug/m3)
300
250
200
150
100
50
0
Date
26-Nov-08
3-Dec-08
10-Dec-08
17-Dec-08
24-Dec-08
31-Dec-08
7-Jan-09
14-Jan-09
21-Jan-09
28-Jan-09
4-Feb-09
11-Feb-09
18-Feb-09
25-Feb-09
4-Mar-09
11-Mar-09
18-Mar-09
25-Mar-09

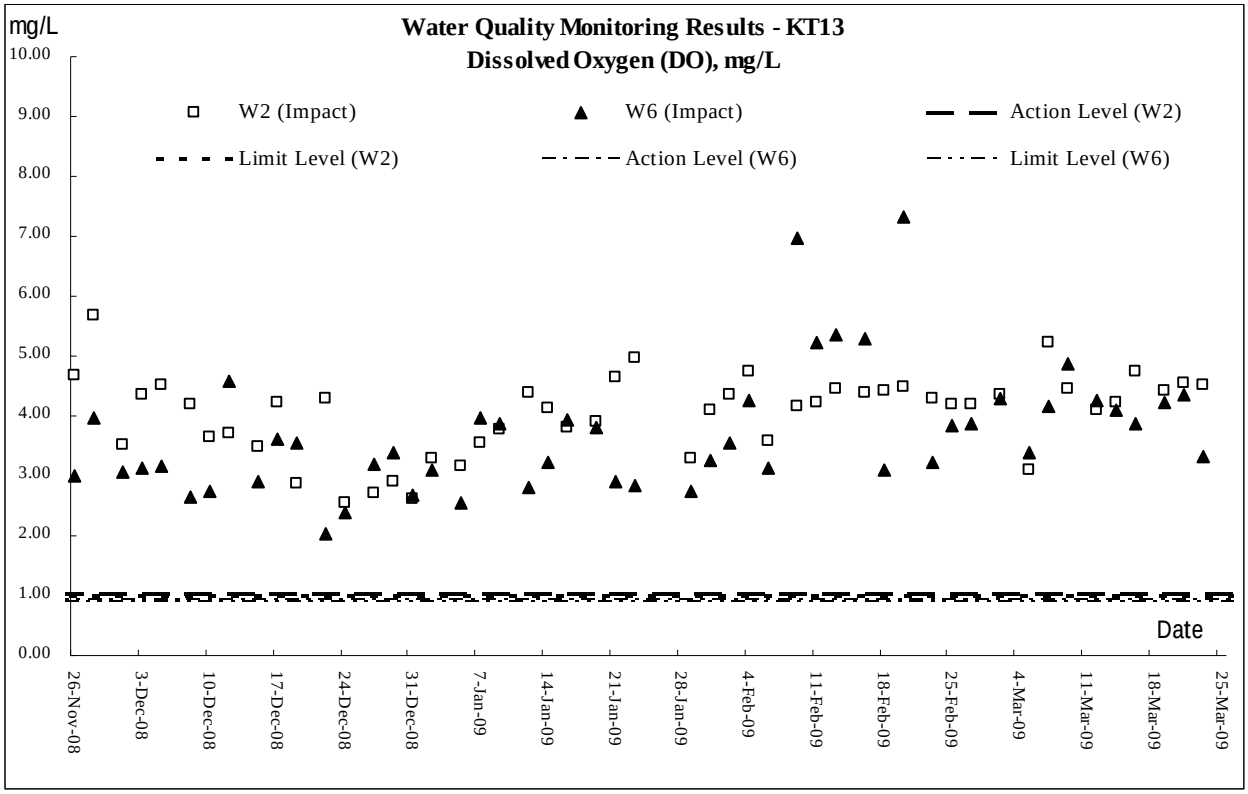
(b) Construction Noise

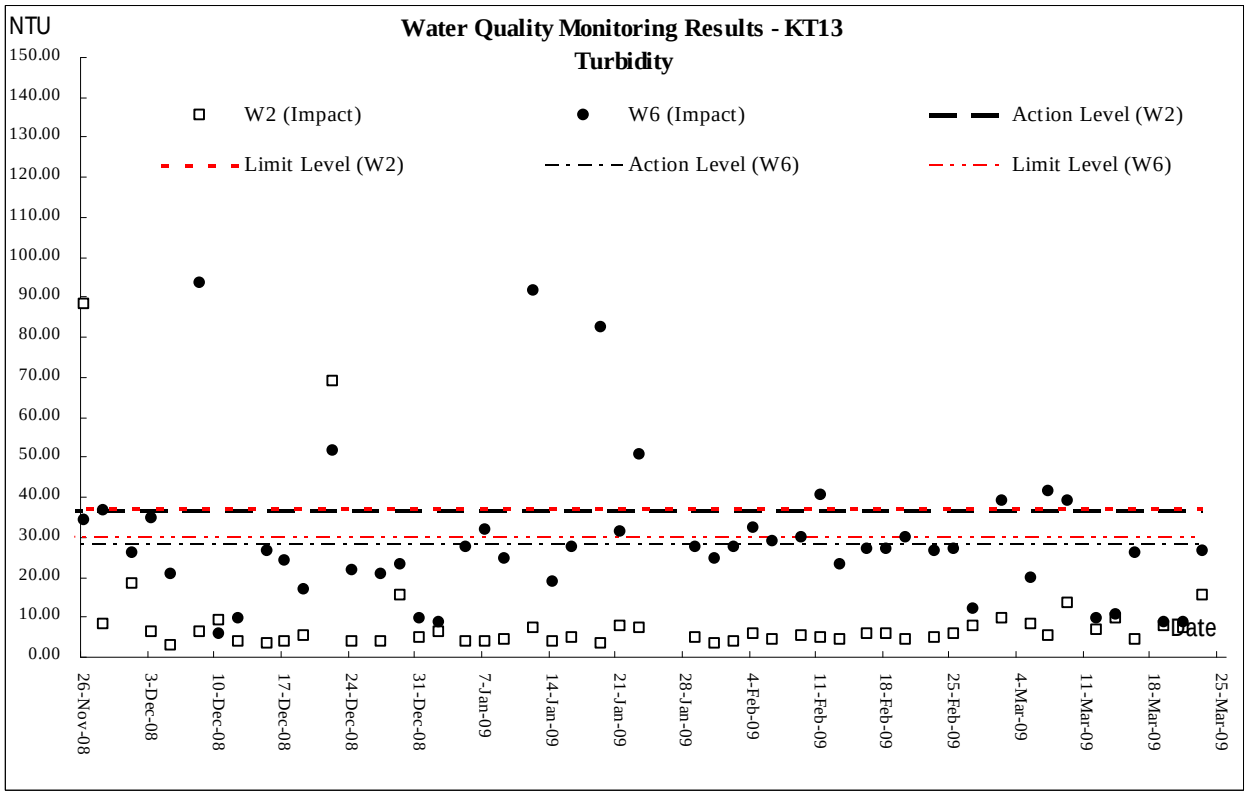


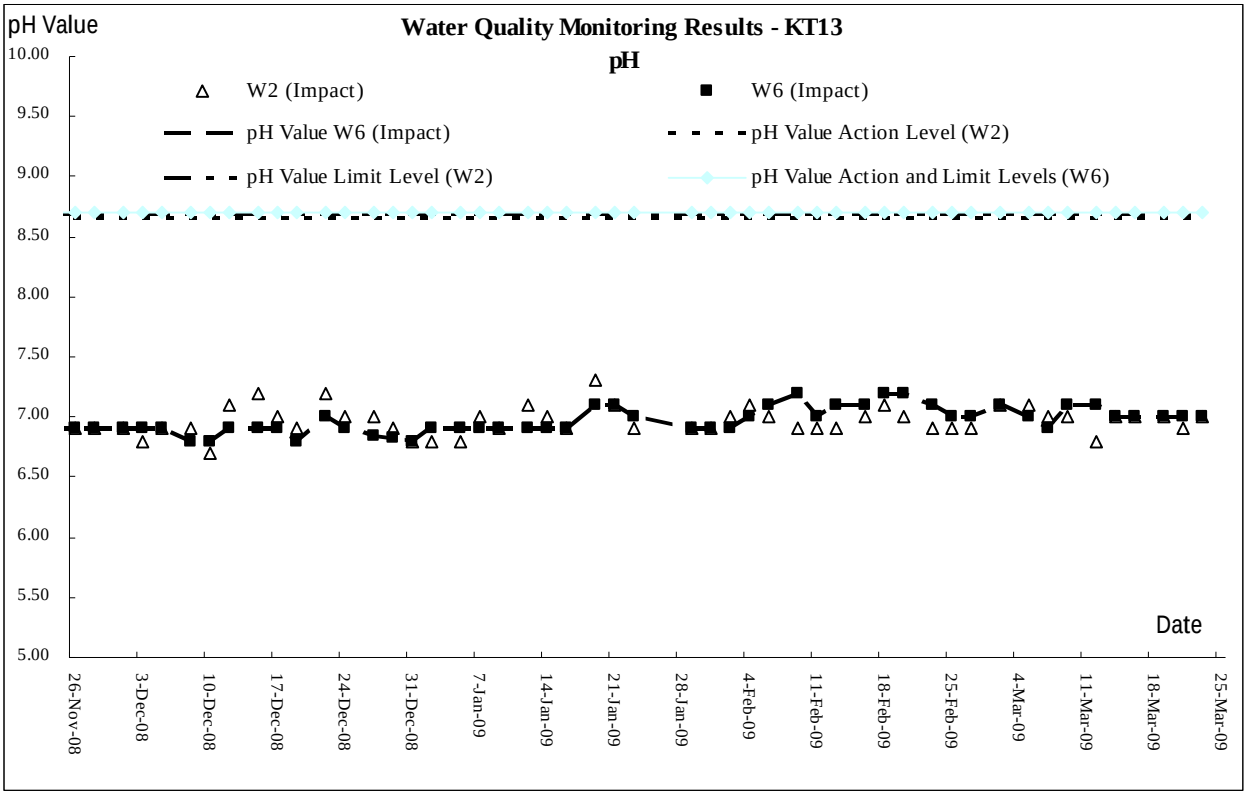



Impact Noise Monitoring (KT13 (N3))
Leq30
Limit Level
Noise Level (dB(A))
90.0
85.0
80.0
75.0
70.0
65.0
60.0
55.0
50.0
45.0
40.0
35.0
30.0
Date
26-Nov-08
3-Dec-08
10-Dec-08
17-Dec-08
24-Dec-08
31-Dec-08
7-Jan-09
14-Jan-09
21-Jan-09
28-Jan-09
4-Feb-09
11-Feb-09
18-Feb-09
25-Feb-09
4-Mar-09
11-Mar-09
18-Mar-09
25-Mar-09

(c) Water Quality






Water Quality Monitoring Results - KT13
pH
pH Value
W2 (Impact)
W6 (Impact)
pH Value W6 (Impact)
pH Value Action Level (W2)
pH Value Limit Level (W2)
pH Value Action and Limit Levels (W6)
10.00
9.50
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
Date
26-Nov-08
3-Dec-08
10-Dec-08
17-Dec-08
24-Dec-08
31-Dec-08
7-Jan-09
14-Jan-09
21-Jan-09
28-Jan-09
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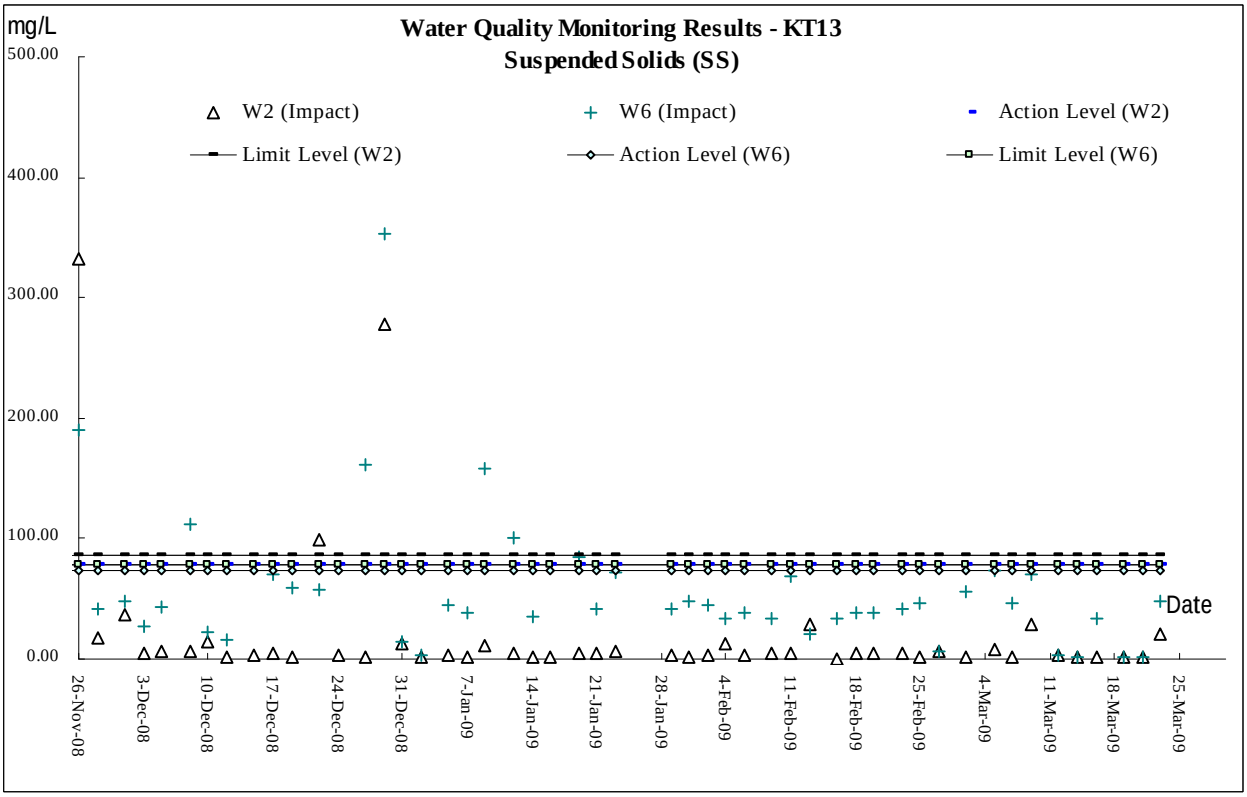
11-Mar-09
18-Mar-09
25-Mar-09


Water Quality Monitoring Results - KT13
Suspended Solids (SS)
mg/L
W2 (Impact)
W6 (Impact)
Action Level (W2)
Limit Level (W2)
Action Level (W6)
Limit Level (W6)
500.00
400.00
300.00
200.00
100.00
0.00
Date
26-Nov-08
3-Dec-08
10-Dec-08
17-Dec-08
24-Dec-08
31-Dec-08
7-Jan-09
14-Jan-09
21-Jan-09
28-Jan-09
4-Feb-09
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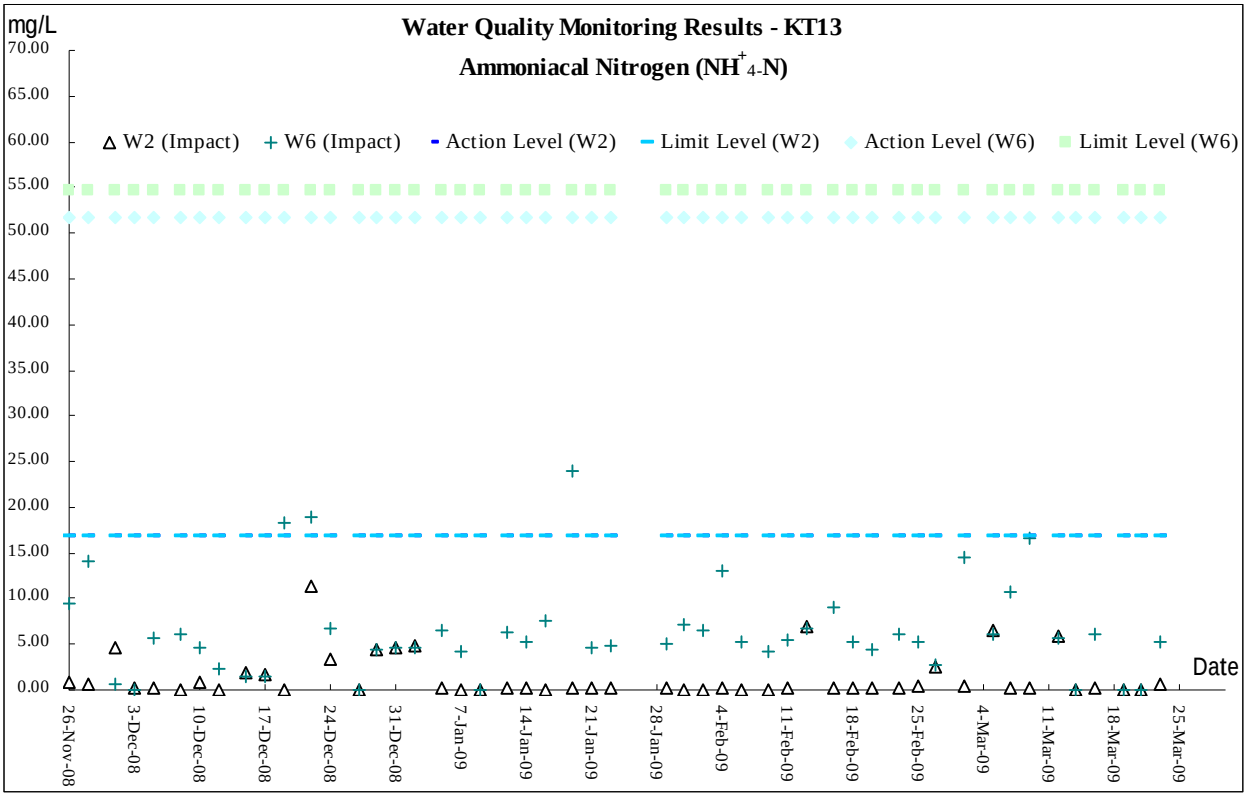
25-Feb-09
4-Mar-09
11-Mar-09
18-Mar-09
25-Mar-09


Water Quality Monitoring Results - KT13
Ammoniacal Nitrogen (NH^+_4-N)
mg/L
W2 (Impact)
W6 (Impact)
Action Level (W2)
Limit Level (W2)
Action Level (W6)
Limit Level (W6)
70.00
65.00
60.00
55.00
50.00
45.00
40.00
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
Date
26-Nov-08
3-Dec-08
10-Dec-08
17-Dec-08
24-Dec-08
31-Dec-08
7-Jan-09
14-Jan-09
21-Jan-09
28-Jan-09
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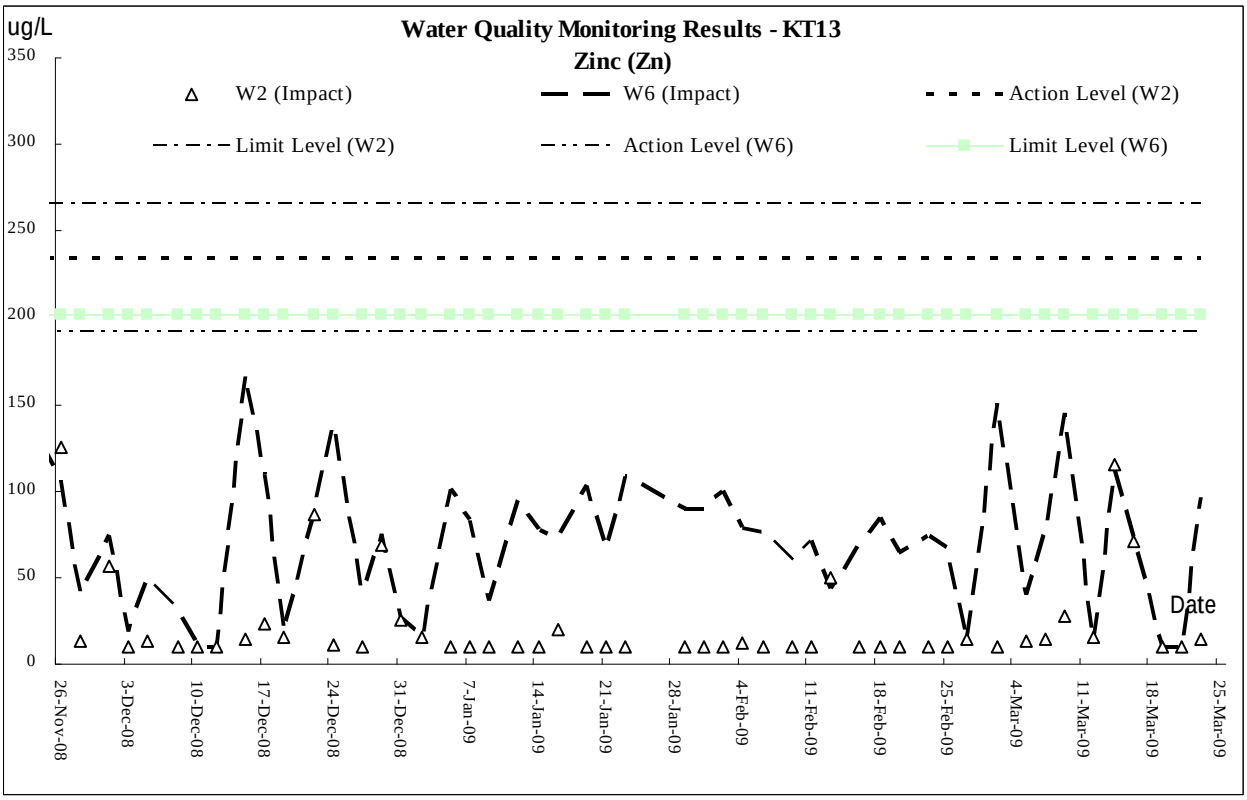
11-Mar-09
18-Mar-09
25-Mar-09


Water Quality Monitoring Results - KT13
Zinc (Zn)
ug/L
W2 (Impact)
W6 (Impact)
Action Level (W2)
Limit Level (W2)
Action Level (W6)
Limit Level (W6)
350
300
250
200
150
100
50
0
Date
26-Nov-08
3-Dec-08
10-Dec-08
17-Dec-08
24-Dec-08
31-Dec-08
7-Jan-09
14-Jan-09
21-Jan-09
28-Jan-09
4-Feb-09
11-Feb-09
18-Feb-09
25-Feb-09
4-Mar-09
11-Mar-09
18-Mar-09
25-Mar-09

Appendix F

Monthly Summary Waste Flow Table

Monthly Summary Waste Flow Table

Date: 31-Mar-09
Year/Month: Mar-09

Monthly Summary Waste Flow Table for February 2009										
Year	Actual Quantities of Inert C & D Materials Generated Monthly					Estimated Annual Quantities of C & D Wastes Generated Monthly				
	Total Quantitiy Generated	Broken Concrete (see note 4)	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Metals	Paper/ Cardboard packaging	Plastics (see note 3)	Chemical Waste	Others, e.g. General refuse
	(in '000M^3)	(in '000M^3)	(in '000M^3)	(in '000M^3)	(in '000M^3)	(in '000KG)	(in '000KG)	(in '000KG)	(in '000KG)	(in '000M^3)
Jan	6.716	0.008	6.708	0	0	0	0	0	0	0
Feb	8.001	0.009	7.632	0.36	0	0	0	0	0	0
Mar	5.792	0.014	5.778	0	0	0	0	0	0	0
Apr										
May										
Jun										
Sub-Total	20.51	0.031	20.118	0.36	0	0	0	0	0	0
Jul										
Aug										
Sep										
Oct										
Nov										
Dec										
Total	20.509	0.031	20.118	0.360	0.000	0.000	0.000	0.000	0.000	0.000

Notes: (1) The performance targets are given in PS Clause 28.10(14)
(2) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
(3) Plastics refer to plastic bottles/ containers, plastic sheets/ foam form packaging material
(4) Broken concrete for recycling into aggregates