


-CCECC & CRWJ Joint Venture

Contract No. HY/2003/19

**Improvement to Tung Chung Road
between Lung Tseng Tau and Cheung Sha**

**Monthly EM&A Report
(Version 1.0)**

November 2009

Certified By	 (Environmental Team Leader)
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REMARKS:

The information supplied and contained within this report is, to the best of our knowledge, correct at the time of printing.

CINOTECH accepts no responsibility for changes made to this report by third parties.

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ABBREVIATION AND ACRONYM

AL Levels	Action and Limit Levels
E / ER	Engineer/Engineer's Representative
EIA	Environmental Impact Assessment
EM&A	Environmental Monitoring and Audit
EMIS	Environmental Mitigation Implementation Schedule
EP	Environmental Permit
EPD	Environmental Protection Department
ET	Environmental Team
HVS	High Volume Sampler
HyD	Highways Department
IEC	Independent Environmental Checker
NOE	Notification of Exceedance
QA/QC	Quality Assurance / Quality Control
RE	Resident Engineer
RH	Relative Humidity
SLM	Sound Level Meter
TSP	Total Suspended Particulates
WMP	Waste Management Plan

EXECUTIVE SUMMARY***Introduction***

1. This is the 61th monthly Environmental Monitoring and Audit (EM&A) Report prepared by Cinotech Consultants Limited for the project “Improvement to Tung Chung Road between Lung Tseng Tau and Cheung Sha” (the Project). This report documents the findings of EM&A Works conducted in November 2009.
2. The construction activities undertaken in the reporting month included:
 - Landscaping works;
 - Street furniture installation; and
 - Reinstatement works of the footpath.

Environmental Monitoring Works

3. The construction phase environmental monitoring for air quality, construction noise and water quality of the Project was approved by EPD to cease since end of August 2009.
4. Site audits were conducted once per two weeks. The implementation of the environmental mitigation measures and environmental complaint handling procedures were also checked.

Environmental Licensing and Permitting

5. License/Permits granted to the Project include Environmental Permit (License No.: EP-170/2003/C), Registration of Chemical Waste Producer (License: WPN5214-950-C1213-01), Water Discharge License (License No.: EP890/W7/XP089, EP890/W7/XP090 and EP890/W2/XG013).

Key Information in the Reporting Month

6. Summary of key information in the reporting month is tabulated in Table I.

Table I Summary Table for Key Information in the Reporting Month

Event	Event Details		Action Taken	Status	Remark
	Number	Nature			
Complaint received	0	---	N.A.	N.A.	---
Changes to the assumptions and key construction / operation activities recorded	0	---	N.A.	N.A.	---
Notifications of any summons received	0	---	N.A.	N.A.	---
Notifications of any successful prosecution received	0	---	N.A.	N.A.	---

Complaints and Prosecutions

7. No environmental complaint was received in the reporting month.
8. No warning and summons or notification of successful prosecution was received in the reporting month.

Future Key Issues

9. All civil works for this project have been substantially completed by the Contractor. No key issue was identified for the coming month.

1. INTRODUCTION

Background

- 1.1 The Project “Improvement to Tung Chung Road between Lung Tseng Tau and Cheung Sha” involves the widening and realignment of Tung Chung Road between Lung Tseng Tau in North Lantau and Cheung Sha in South Lantau. The layout plan of the Project is shown in **Figure 1**.
- 1.2 The scope of the Project includes:
- a) widening and realignment of a 3.6 km section of Tung Chung Road (TCR) between Lung Tseng Tau and Pak Kung Au from a single-lane road for two-way traffic to a single two-lane road for two-way traffic with a footpath having a minimum width of 1.6 m, and construction of a 2.6 km long single two-lane road between Pak Kung Au and Cheung Sha, including elevated highway structures of a total length of 750 m, with a footpath of a minimum width of 1.6 m;
 - b) provision of 21 passing bays/bus-bays along the road and a roundabout at Cheung Sha; and
 - c) associated works including road rehabilitation, drainage, utility, environmental mitigation measures, landscaping, slope stabilization, traffic aids, road safety enhancement measures, lighting, traffic control and surveillance system, and electrical and mechanical (E&M) works.
- 1.3 The Environmental Impact Assessment (EIA) Report for the Project was approved on 4 July 2002 under the Environmental Impact Assessment Ordinance (EIAO). An Environmental Permit (EP- 170/2003) for the works was also granted on 27 June 2003. Two varied Environmental Permits (EP) (EP-170/2003/B and EP-170/2003/C) were issued in June 2006 and July 2007 respectively. Environmental Monitoring and Audit (EM&A) Manual for the Project was also included as part of the EIA reports in the register. An updated EM&A Manual (Revision C) has been issued on 28 April 2006.
- 1.4 Highways Department awarded the construction of the Project to CCECC & CRWJ Joint Venture (being a joint venture of China Civil Engineering Construction Corporation & China Railway Wujun Group Corporation) (hereinafter called “the Contractor”) in June 2004. The construction works commenced on 4 November 2004 and are scheduled to be completed by September 2007.
- 1.5 Cinotech Consultants Limited (Cinotech) was commissioned by the Contractor to undertake the Environmental Team (ET) Services for the Project since 1 September 2006. All environmental and audit works were conducted by Cinotech and the laboratory testing works were conducted by a HOKLAS laboratory, Wellab Limited. This is the 61th monthly EM&A report summarizing the EM&A works for the Project in November 2009.

Project Organizations

- 1.6 Different parties with different levels of involvement in the project organization include:
- Project Proponent – Major Works Project Management Office (MWPMO) of Highways Department (HyD)
 - Engineer (E) / Engineer's Representative (ER) – Mott Connell Limited
 - Contractor – CCECC & CRWJ Joint Venture
 - Environmental Team (ET) – Cinotech Consultants Limited
 - Independent Environmental Checker (IEC) – AECOM Asia Co. Ltd.
- 1.7 The responsibilities of respective parties are detailed in Section 1.5 of the Updated EM&A Manual (Revision C, issued on 28 April 2006) of the Project. The project organization chart is presented in **Figure 2**.

Construction Programme

- 1.8 The construction activities undertaken in the reporting month were:

Northern Section

- Street furniture installation at Zone A to Zone F;
- Reinstatement work of the footpath.

Southern Section

- Site clearance works.

Summary of EM&A Requirements

- 1.9 The EM&A programme requires construction phase monitoring for air quality and construction noise, water quality and environmental site audit. The EM&A requirements for each parameter are described in the following sections, including:
- All monitoring parameters;
 - Action and Limit levels for all environmental parameters;
 - Event Action Plans;
 - Environmental mitigation measures, as recommended in the project EIA report; and
 - Environmental requirements in contract documents.
- 1.10 The advice on the implementation status of environmental protection and pollution control/mitigation measures is summarized in Section 2 of this report.
- 1.11 The construction phase environmental monitoring for air quality, construction noise and water quality of the Project was approved by EPD to cease since end of August 2009. However, bi-weekly site audit works were still carried out in order to check for any inappropriate practices by the Contractor and to follow-up the previous observation/recommendations.

1.12 This report presents the site audit works for the Project in November 2009.

2. ENVIRONMENTAL AUDIT

Site Audits

- 2.1 Site audits were carried out on a bi-weekly basis to monitor the timely implementation of proper environmental management practices and mitigation measures in the Project site.
- 2.2 ET site audits were conducted on 5th and 19th November 2009 in the reporting month. IEC site inspection was conducted on 19th November 2009. The summaries of site audits are attached in **Appendix A**.
- 2.3 Landscape and visual resources audit and ecological mitigation audit were conducted by ET on 17th November 2009 and 28th November 2009 respectively. The results of these two audits are summarized in a separate report.

Status of Environmental Licensing and Permitting

- 2.4 All permits/licenses obtained for the Project are summarized in Table 2.1.

Table 2.1 Summary of Environmental Licensing and Permit Status

Permit No.	Valid Period		Details	Status
	From	To		
Environmental Permit (EP)				
EP-170/2003/C	31/7/07	N/A	<u>Construction of</u> (a) Widening and realignment of an approximate 3.6 kilometre long section of Tung Chung Road between Lung Tseng Tau and Pak Kung Au from a single-lane road for two-way traffic to a single two-lane road with footpath; (b) Construction of an approximate 2.6 kilometre long single two-lane road between Pak Kung Au and Cheung Sha with footpath and elevated highway structures; and (c) Provision of passing bays/bus lay-bys along Tung Chung Road.	Valid
Registration of Chemical Waste Producer				
WPN5214 – 950-C1213-01	---	N/A	Chemical waste types: spent Indication oil, surplus paint, spent diesel, spent thinner, mixing residue containing pesticides, spent mineral oil	Valid
Water Discharge License				
EP890/W7/XP089	---	N/A	Discharge from Sewage Treatment System (Northern Section)	Valid
EP890/W7/XP090	---	N/A	Industrial discharge (Northern Section)	Valid
EP890/W2/XG013	---	N/A	Industrial discharge (Southern Section)	Valid

Status of Waste Management

- 2.5 The waste management of the Project has to follow the requirements and procedures stated in the Waste Management Plan which was prepared by the Contractor.
- 2.6 The solid waste generated from the Project was mainly general refuse that was collected by a licensed collector on an as need basis.

Implementation Status of Environmental Mitigation Measures

- 2.7 During site inspections in the reporting month, no non-conformance was identified. The observations and recommendations are summarized in Table 2.2.

Table 2.2 Observations and Recommendations of Site Inspections

Parameters	Date	Observations and Recommendations	Follow-up
<i>Waste / Chemical Management</i>	05/11/09	The Contractor was reminded of the followings: - Clear the construction waste at Shan Shak Wan and STR4.	The situation was observed improved/rectified in audit session 91119.
	19/11/09	The Contractor was reminded of the followings: - Oil seepage was observed from a truck at the site office. The Contractor was reminded to clear the oil stains.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.
	19/11/09	The Contractor was reminded of the followings: - Clear the construction waste at Shan Shak Wan.	This item was not rectified during the follow-up audit session. Follow-up action was needed for the outstanding item.

Non-compliance Recorded during Site Inspections

- 2.8 No non-compliance was recorded in the reporting period.

Summary of Mitigation Measures Implemented

- 2.9 The Contractor has implemented the mitigation measures as recommended in the EIA and the Updated EM&A Manual. The mitigation measures implemented by the Contractor in the reporting month are summarized as follow:

Water Quality

- (1) The construction waste, silt, debris and sediment in the culvert and U-channel at CH7000 were cleared.

Waste/Chemical Management

- (1) Proper disposal of empty oil containers and discarded hose at Shan Shek Wan.
(2) C&D wastes were kept clear and sorted near Stream 27, 30 and 36.

- 2.10 According to the Updated EM&A Manual, mitigation measures are required to be implemented. An updated summary of the EMIS is provided in **Appendix B**.

Summary of Complaint, Warning, Notification of any Summons and Successful Prosecution

- 2.11 No environmental complaint was received in the reporting month.
- 2.12 No warning and summons or notification of successful prosecution was received in the reporting month.
- 2.13 There were a total of 56 environmental complaints, 13 warnings, 3 summons and 2 successful prosecutions received since the commencement of the Project.
- 2.14 The Complaint Log is attached in **Appendix C** and the summary of warnings issued by the EPD and prosecution is attached in **Appendix D**.

3. FUTURE KEY ISSUES

Key Issues for the Coming Month

- 3.1 All civil works for this project have been substantially completed by the Contractor. No key issue was identified for the coming month.

Monitoring Schedule for the Next Month

- 3.2 The tentative environmental site audit schedule for the next reporting month is shown in **Appendix E**

Construction Program for the Project (Construction Program for the Next Month)

- 3.3 Construction activities were will be undertaken in the coming month:
- Landscaping works;
 - Street furniture installation; and
 - Reinstatement works of the footpath.

4. CONCLUSIONS AND RECOMMENDATIONS

Conclusions

- 4.1 No environmental complaint was received in the reporting month.
- 4.2 No warning and summons and notification of successful prosecution was received in the reporting month.
- 4.3 The construction phase environmental monitoring for air quality, construction noise and water quality of the Project was approved by EPD to cease since end of August 2009. However, bi-weekly site audit works were still carried out in order to check for any inappropriate practices by the Contractor and to follow-up the previous observation/recommendations.

Recommendations

- 4.4 According to the environmental audit performed in the reporting month, the following recommendations were made:

Dust Impact

- To ensure that all vehicles carrying dusty material are properly covered before leaving the site.
- To maintain the machinery and vehicles in a good working condition on site.

Noise Impact

- To space out noisy equipment and position as far away as possible from sensitive receivers.

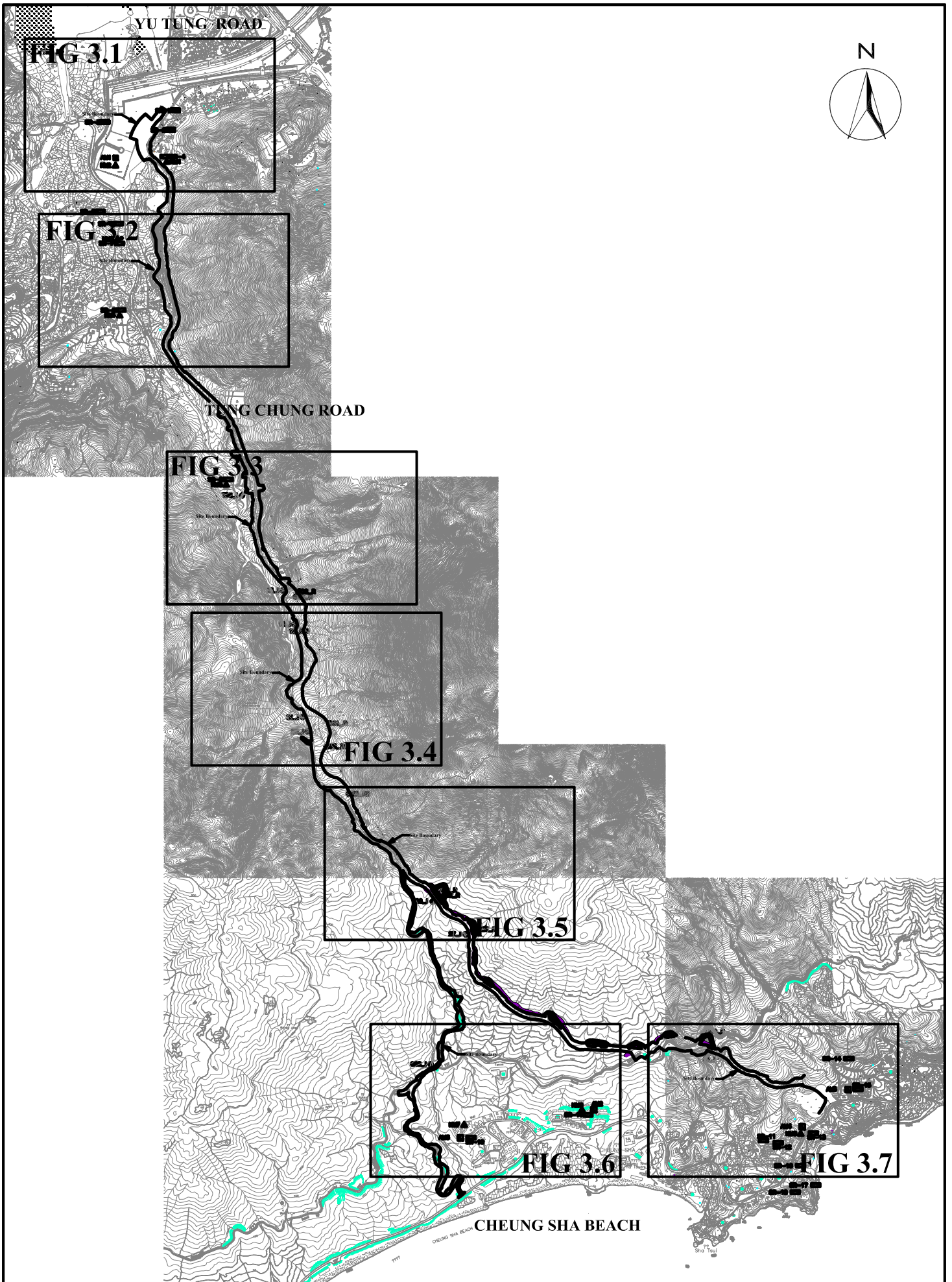
Water Quality Impact

- To prevent any surface runoff discharge into any stream course.
- To avoid accumulation of stagnant and ponding water on site.
- To review the capacity of de-silting facilities for discharge.

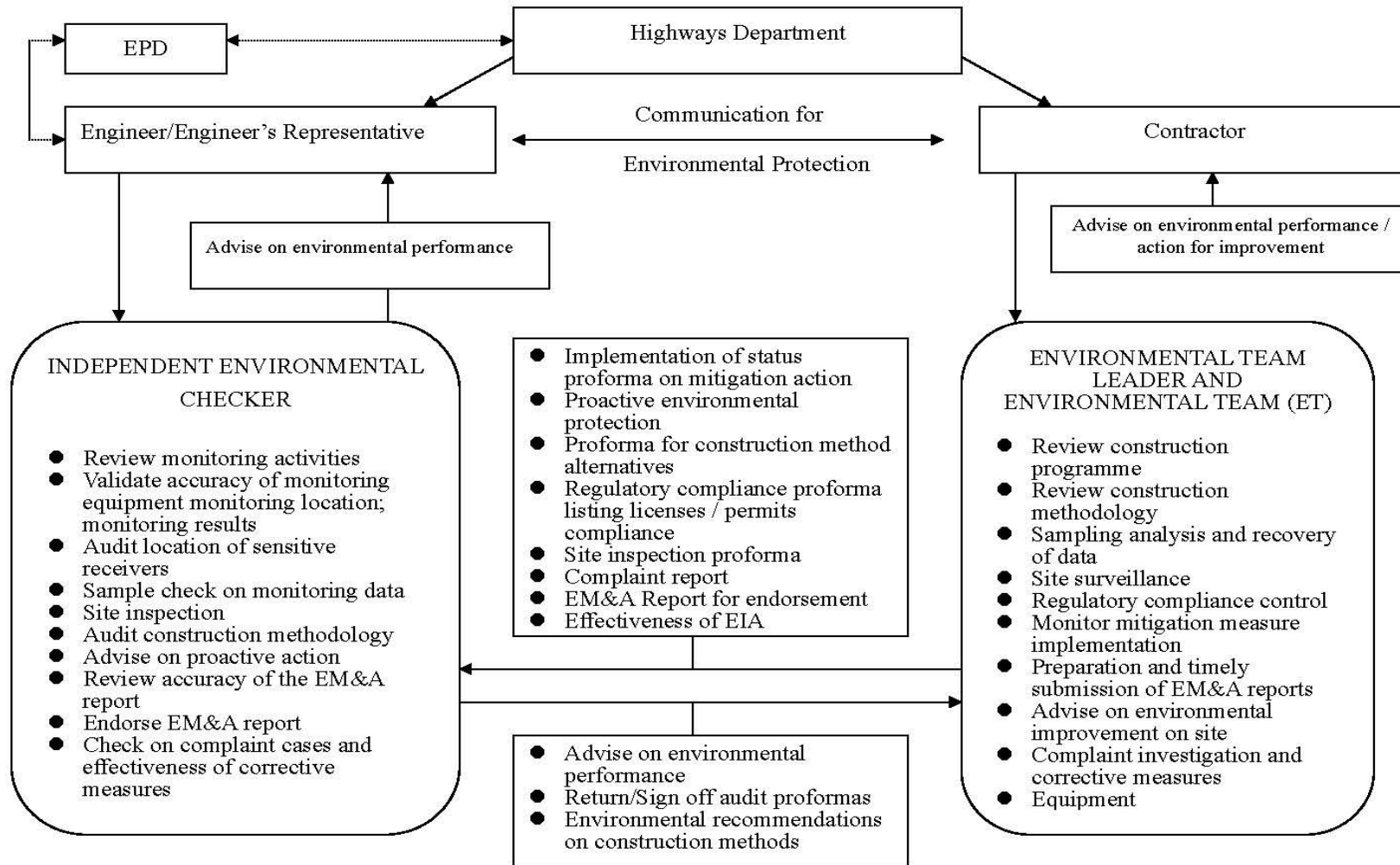
Waste / Chemical Management

- To remove ponding water regularly in drip trays on site.
- To ensure proper collection and disposal of rubbish generated on site.
- To avoid storage of construction materials at any stream.
- To check for any accumulation of waste materials or rubbish on site.

FIGURES



 <p>CINOTECH Cinotech Consultants Limited</p>	<p>IMPROVEMENT TO TUNG CHUNG ROAD BETWEEN LUNG TSENG TAU AND CHEUNG SHA</p> <p>SITE LOCATION PLAN</p>	SCALE	N.T.S.	DATE	OCT 2006
		CHECK	JY	DRAWN	VL
		JOB No.	MA6030	DRAWING No.	FIG 1



SCALE	N.T.S.	DATE	2007
CHECK	KL	DRAWN	FL
JOB NO.	MA6030	DRAWING No.	2
		Rev	1

**APPENDIX A
SITE AUDIT SUMMARY**

Bi-Weekly Site Inspection Record Summary

Inspection Information

Checklist Reference Number	91105
Date	05 November 2009 (Thursday)
Time	10:30 – 11:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	A. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	E. Ecology	
	• No environmental deficiency was identified during site inspection.	
	F. Others	
	• Follow-up on previous audit section (Ref. No.:91022), all environmental deficiencies were improved/rectified by the Contractor.	



	Reminders	Related Item No.
	The Contractor was reminded to implement the following preventive measures:	
	A. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Waste / Chemical Management	
91105-R01	• Clear the construction waste at Shan Shak Wan and STR 4.	Eli

Contract No. HY/2003/19

Improvement to Tung Chung Road Between Lung Tseng Tau and Cheung Sha

Bi-Weekly Site Inspection Record Summary

Ref. No.	Proposed Completion Date	Completion Date	Remarks
91022-R01	5 November 2009	5 November 2009	
91022-R02			
91022-R03			
91022-R04			
91105-R01	19 November 2009		Follow Up Required

	Name	Signature	Date
Recorded by	Tony.ng		06 November 2009
Checked by	Dr. Priscilla Choy		06 November 2009

Bi-Weekly Site Inspection Record Summary

Inspection Information



Checklist Reference Number	91119
Date	19 November 2009 (Thursday)
Time	09:45 – 10:30

Ref. No.	Non-Compliance	Related Item No.
-	None identified	-
Ref. No.	Remarks/Observations	Related Item No.
	A. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Noise	
	• No environmental deficiency was identified during site inspection.	
	D. Waste / Chemical Management	
	• No environmental deficiency was identified during site inspection.	
	E. Ecology	
	• No environmental deficiency was identified during site inspection.	
	F. Others	
	• Follow-up on previous audit section (Ref. No.:91105), all environmental deficiencies identified in previous audit session were not improved/ rectified during the site inspection. Follow-up action is needed for the outstanding items.	

	Reminders	Related Item No.
	The Contractor was reminded to implement the following preventive measures:	
	A. Water Quality	
	• No environmental deficiency was identified during site inspection.	
	B. Air Quality	
	• No environmental deficiency was identified during site inspection.	
	C. Waste / Chemical Management	
91119-R01	• Clear the construction waste at Shan Shak Wan.	E1i
91119-R02	• Oil seepage was observed from a truck at the site office. The Contractor was reminded to clear the oil stains.	E6i

Bi-Weekly Site Inspection Record Summary

Ref. No.	Proposed Completion Date	Completion Date	Remarks
91022-R01	5 November 2009	5 November 2009	
91022-R02			
91022-R03			
91022-R04			
91105-R01	03December 2009		Follow-up
91119-R01	03December 2009		Outstanding
91119-R02	03December 2009		

	Name	Signature	Date
Recorded by	Tony.ng		20 November 2009
Checked by	Dr. Priscilla Choy		20 November 2009

**APPENDIX B
ENVIRONMENTAL MITIGATION
IMPLEMENTATION SCHEDULE (EMIS)**

Appendix B - Summary of Environmental Mitigation Implementation Schedule

Types of Impacts	Mitigation Measures	Status
Construction Dust	<ul style="list-style-type: none"> • A stockpile of dusty materials should not extend beyond the pedestrian barriers, fencing or traffic cones. 	^
	<ul style="list-style-type: none"> • Vehicle washing facilities should be provided at every exit point. 	^
	<ul style="list-style-type: none"> • The area where vehicle washing takes place and the section of the road between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores. 	^
	<ul style="list-style-type: none"> • Where a site boundary adjoins a road, street, service lane or other area accessible to the public, hoarding of not less than 2.4m high from ground level should be provided along the entire length of that portion of the site boundary except for a site entrance or exit. 	N/A
	<ul style="list-style-type: none"> • Every main haul road should be sprayed with water or a dust suppression chemical so as to maintain the entire road surface wet. 	^
	<ul style="list-style-type: none"> • The portion of any road leading only to a construction site that is within 30m of a discernible or designated vehicle entrance or exit should be kept clear of dusty materials. 	^
	<ul style="list-style-type: none"> • Any stockpile of dusty materials should be either covered entirely by impervious sheeting, placed in an area sheltered on the top and the 3 sides or sprayed with water or a dust suppression chemical so as to maintain the entire surface wet. 	^
	<ul style="list-style-type: none"> • During cement debagging or concrete batching operation in an area sheltered on top and 3 sides. 	^
	<ul style="list-style-type: none"> • All dusty materials should be sprayed with water or a dust suppression chemical immediately prior to any loading, unloading or transfer operation so as to maintain the dusty materials wet. 	^
	<ul style="list-style-type: none"> • Every vehicle should be washed to remove any dusty materials from its body and wheels immediately before leaving a construction site. 	^
	<ul style="list-style-type: none"> • The working area of any excavation should be sprayed with water or a dust suppression chemical immediately before, during and immediately after the operation so as to maintain the entire surface wet. 	^
	<ul style="list-style-type: none"> • Proper enclosures and water spraying should be implemented for the main dust-generating activities, such as soil nailing or piling works. 	^
	<ul style="list-style-type: none"> • Proper plant maintenance should be provided to avoid black smoke emission from plants/equipment. 	^

Types of Impacts	Mitigation Measures	Status	
<p align="center">Construction Noise</p>	<ul style="list-style-type: none"> • Only well-maintained plant should be operated on –site and plant should be serviced regularly during the construction works. • Machines and plant that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum. • Plant know to emit noise strongly in one direction, should where possible, be orientated to direct noise away from the NSRS. • Mobile plant should be sited as far away from NSRs as possible. • Material stockpiles and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities. • Use quite plant and Working Method • Reduce the number of plant operating in critical areas close NSRs. • Construct temporary and movable noise barriers 	<p align="center">^ ^ ^ ^ ^ ^ ^ N/A</p>	
	<i>Construction Runoff and Drainage</i>		
	<p align="center">Water Quality</p>	<ul style="list-style-type: none"> • Discharges to natural water courses shall only take place when the effluent can be shown to comply with the standards specified in the Technical Memorandum, Standards for Effluents Discharged in to Drainage and Sewerage Systems, Inland and Coastal Waters. Discharges in the water gathering grounds should meet Group A standard for inland waters. 	<p align="center">^</p>
		<ul style="list-style-type: none"> • Use of sediment traps and the adequate maintenance of drainage systems to prevent flooding and overflow. 	<p align="center">^</p>
		<ul style="list-style-type: none"> • Boundaries of critical areas of earthworks should be marked and surrounded by dykes or embankments for flood protection. Temporary ditches should be provided to facilities runoff discharge into the appropriate watercourses, via a silt retention pond. Permanent drainage channels should incorporate sediment basins or traps and baffles to enhance deposition rates. 	<p align="center">^</p>
		<ul style="list-style-type: none"> • All temporary and permanent drainage pipes and culverts provided to facilitate runoff discharge should be adequately designed for the controlled release of storm flows. All sediment traps should be regularly cleaned and maintained. The temporarily diverted drainage should be reinstated to its original condition when the construction works has finished or the temporary diversion is no longer required 	<p align="center">^</p>
		<ul style="list-style-type: none"> • Sand silt in the wash water from the wheel washing facilities, which ensure no earth, mud and debris is deposited on roads, should be settled out the removed before discharging into storm drains. A section of the road between the wheel washing bay and the public road should be paved with backfill to prevent wash water or other site runoff form entering public road drains. 	<p align="center">^</p>
		<ul style="list-style-type: none"> • Oil interceptors should be provided in the drainage system and regularly emptied to prevent the release of oils and grease into the storm water drainage system after accidental spillage. The interceptor should have a bypass to prevent flushing during periods of heavy rain. • Catchpits and perimeter channels shall be constructed in advance of site formation works and earthworks. • Silt removal facilities, channels and manholes shall be suitably maintained with the deposited silt and grit being removed at least once a week, and at the onset of and after each rainstorm to ensure that these facilities are functioning properly at all times. 	<p align="center">N/A ^ ^</p>

Types of Impacts	Mitigation Measures	Status
	<ul style="list-style-type: none"> Earthworks final surfaces shall be well compacted and the subsequent permanent work or surface protection shall be carried out immediately after the final surfaces are formed to prevent erosion caused by rainstorms. Appropriate intercepting channels shall be provided along the site boundary or at the locations agreed with the ET Leader. Rainwater pumped out from trenches or foundation excavations shall be discharged into silt removal facilities before discharge into storm drains. All generators, fuel and oil storage shall be within bunded areas. Drainage from the areas shall be connected to storm drains via a petrol interceptor. 	<p style="text-align: center;">^</p> <p style="text-align: center;">^</p>
	<p><i>Tunnelling Work</i></p> <ul style="list-style-type: none"> Temporary open storage of excavated materials should be covered with tarpaulin or similar fabric during rainstorms. Any washout of construction or excavated materials from the drill and blast tunnelling work should be diverted to the drainage system via appropriate sediment traps. Ground water pumped out of tunnels should be discharged into the drainage channels which incorporated sediment traps to enhance deposition rates and to remove silt. Spend grouts used in diaphragm wall construction should be collected in a separate slurry collection system, reconditioned and reused wherever practicable. The disposal of used grouting materials will only be permitted if it is treated to the TM standards before discharge to the storm drains or disposal to landfill. 	<p style="text-align: center;">N/A</p> <p style="text-align: center;">N/A</p> <p style="text-align: center;">N/A</p>
	<p><i>General Construction Activities</i></p>	
	<ul style="list-style-type: none"> Debris and rubbish on site should be collected, handled and disposed of properly to avoid entering the water column and cause water quality impacts. All fuel tanks and storage areas will be provided with locks and be located on sealed areas (within bunds of a capacity equal to 110% of the storage capacity of the largest tank or 20% by volume of the fuel stored in that areas, whichever in the greatest). 	<p style="text-align: center;">^</p> <p style="text-align: center;">^</p>
	<p><i>Sewage Effluent</i></p> <ul style="list-style-type: none"> Construction work force sewage discharges from fixed toilet facilities on-site should be connected to the nearby existing trunk sewer wherever feasible. However, for areas where existing trunk sewer is not available, it is recommended that appropriate and adequate on site portable chemical toilets should be provided by a licensed contractor who will be responsible for appropriate disposal and maintenance of these facilities. It is considered that sewage discharges could also be treated by on-site septic tanks and soakaway. Minimum clearance away from streams and catchments and other requirements for the proposed septic tank and soakaway should be referred to EPD's Practice Note for Professional Persons, Drainage Plans. 	<p style="text-align: center;">^</p> <p style="text-align: center;">N/A</p>

Types of Impacts	Mitigation Measures	Status
Waste / Chemical	<i>General</i>	
	<ul style="list-style-type: none"> • Training and instruction shall be given at a site to construction staff to increase awareness and draw attention to waste management issues and the need to minimise waste generation. The training requirement shall be included in the site waste management plan. 	^
	<i>Storage, Collection and Transportation of Waste</i>	
	<ul style="list-style-type: none"> • Wastes shall be handled and stored in a manner to ensure that they are held securely without loss or leakage. • Authorised or licensed waste hauliers shall be used and they shall only collect wastes prescribed by their permits. • Waste shall be removed on a daily basis. • Waste storage area shall be maintained and cleaned on a daily basis. • Windblown litter and dust during transportation shall be minimised by either covering trucks or transporting wastes in enclosed containers. • Obtain necessary waste disposal permits from the appropriate authorities if they are required. • Wastes shall be disposed of at licensed waste disposal facilities. • Develop procedure such as ticketing system to facilitate tracking of loads, particularly for chemical waste, and to ensure that illegal disposal of wastes does not occur. • Maintain records of the quantities of wastes generated, recycled and disposed. 	* ^ * * ^ ^ ^ ^
	<i>Surplus Excavated Materials</i>	
	<ul style="list-style-type: none"> • Due to the high risk of loose material being washed into the existing nullah, stockpile materials should be properly compacted and covered from water erosion and located at least 10m away from the nullah wall. 	^
	<i>Construction and Demolition (C&D) Waste</i>	
	<ul style="list-style-type: none"> • Careful design, planning and good site management shall be adopted to minimise over-ordering and generation of waste materials such as concrete grouts. • The handling and disposal of bentonite slurries shall be undertaken in accordance with Practice Note for Professional Persons – Construction Site Drainage (ProPECC PN 1/94) on construction site drainage. • Construction and demolition (C&D) material shall be segregated to inert and non-inert parts. The inert portion shall re-used at areas of reclamation or land formation, or to public filling area shall such allocation is deemed necessary. The non-inert portion shall be disposed of to landfill. 	^ N/A ^
	<i>Chemical Waste</i>	
	<ul style="list-style-type: none"> • Chemical waste that is produce during construction shall be handled in accordance with the Code of Practice on the Packaging, Handling and Storage of Chemical Wastes. 	^

Types of Impacts	Mitigation Measures	Status
	<ul style="list-style-type: none"> • Containers used for the storage of chemical wastes should: <ol style="list-style-type: none"> a. Be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed; b. Have a capacity of less than 450 litres unless the specifications have been approved by the EPD; c. Display a label in English and Chinese in accordance with instructions prescribed in Schedule 2 of the Chemical Waste Regulations. • The storage area for chemical wastes should: <ol style="list-style-type: none"> a. Be clearly labelled and used solely for the storage of chemical waste; b. Be enclosed on at least 3 sides; c. Have an impermeable floor and bunding of capacity to accommodate 110% of the volume of the largest container or 20% by volume of the chemical waste stored in the area, whichever is largest; d. Have adequate ventilation; e. Be covered to prevent rainfall entering (water collected within the bund must be tested and disposed as chemical waste if necessary); f. Be arranged so that incompatible materials are adequately separated. • Disposal of chemical waste shall be via a licensed waste collector; and to a facility licensed to receive chemical waste; or a re-user of the waste (under approval from EPD). 	<p style="text-align: center;">^</p> <p style="text-align: center;">^</p> <p style="text-align: center;">^</p>
	<i>General Refuse</i>	
	<ul style="list-style-type: none"> • General refuse generated on-site shall be stored in enclosed bins or compaction unit separate from C&D and chemical wastes. A reputable waste collector shall be employed by the contractor to remove general refuse from the site, separately from C&D and chemical wastes, on a daily for every second day basis to minimise odour, pest and litter impacts. The burning of refuse on construction sites is prohibited by law. • Reusable rather than disposable dishware shall be used if feasible. 	<p style="text-align: center;">*</p> <p style="text-align: center;">^</p>
	<i>Oil and Fuel</i>	
	<ul style="list-style-type: none"> • The storage area for chemical wastes should have an impermeable floor and bunding of capacity to accommodate 110% of the volume of the largest container; • No storage of oil or fuel should be stored within the Country Park or the water gathering ground. 	<p style="text-align: center;">^</p> <p style="text-align: center;">^</p>
Landscape and Visual Impact	<ul style="list-style-type: none"> • Refinement of the route alignment and design of associated structures to minimise loss of woodland and other landscape resources; • Minimising working areas as far as possible; • Protection and retention of existing vegetation where possible; • Transplanting of trees where appropriate • Protection and retention of existing natural rocky outcrops, slope profiles, vegetation, landscape features; • Advance planting and visual screening, where possible; 	<p style="text-align: center;">^</p> <p style="text-align: center;">^</p> <p style="text-align: center;">^</p> <p style="text-align: center;">^</p> <p style="text-align: center;">^</p> <p style="text-align: center;">^</p>

Types of Impacts	Mitigation Measures	Status
	<ul style="list-style-type: none"> • Compensatory planting; • Sensitively designed site hoarding, where possible (ie the sensitive design of site hoarding will be disrupted by hoarding panels showing the Highways Department logo, at regular intervals as per the approved engineering design);and • Grassing and woodland planting of soil slopes and disturbed areas 	<p style="text-align: center;">^</p> <p style="text-align: center;">^</p> <p style="text-align: center;">^</p>
Ecology	<ul style="list-style-type: none"> • Construction activities in the stream and other disturbances to it should be avoided. 	<p style="text-align: center;">^</p>

Remarks:

- | | | |
|--|--|--|
| <p>^ Compliance of mitigation measure;</p> <p>N/A Not Applicable;</p> <p>* Recommendation was made during site audit but improved/rectified by the contractor.</p> | <p>X Non-compliance of mitigation measure;</p> <p>• Non-compliance but rectified by the contractor;</p> <p># Non-compliance but rectified/improved by the contractor and awaiting IEC's further comment;</p> | |
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**APPENDIX C
COMPLAINT LOGS**

Appendix C - Complaint Log

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
S63	Tung Chung Road and Cheung Sha Stream	14 Sep 06	The complaint, which was lodged by Green Lantau Association on 13th September 2006, accused the failure of the site drainage system to check the discharge of silt-laden surface water from the site on that day.	ETL is of the view that the complaint is justifiable but the accusation is not substantiated by scientific data in that the rainstorm event was 1 in 25 years. It is therefore beyond the Contractor's terms of contract to design, operate and maintain the carrier pipe and the sedimentation tank to cater for this rainstorm. The Contractor has a defensible case under this increment weather condition.	Closed
S65-S69	Tung Chung Road Southern Section; Cheung Sha Stream;	19 Sep 06	Five complaints, which were lodged by Green Lantau Association on 15th September 2006, accused the failure of the drainage system for the Project on 13th September 2006. The subject of complaints are listed as below: (i) Failed Filtration System (ii) Contaminated Stream (iii) Polluted Cheung Sha Stream (iv) Polluted Cheung Sha Stream (v) Site Debris on Road	ETL is of the view that the complaints are justifiable but the accusation is not substantiated by scientific data in that the rainstorm event was 1 in 25 years. It is therefore beyond the Contractor's terms of contract to design, operate and maintain the carrier pipe and the sedimentation tank to cater for this rainstorm. The Contractor has a defensible case under this increment weather condition.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
S71	Northern Section, Tung Chung Road	3 Nov 06	<p>The complaint, which was referred by Resident Site Staff (RSS) to ET on 3rd November 2006, was raised by a resident living Lantau Island on 17th October 2006 concerning the Tung Chung Road condition on 16th October 2006.</p>	<p>Based on the meteorological data extracted from HKO, the total rainfall between 0:45 and 6:45 hours in Lantau was 196 mm with an average intensity of 32.67 mm/hr on 16th October.</p> <p>Based on the results derived from Table 2 “the Intensity-Duration-Frequency (IDF) for various return periods” and Table 4 “Depth-Duration-Frequency (DDF) for durations of than 4 hours” of the “Stormwater Drainage Manual”, the return period should be less than 1 in 10 years.</p> <p>Therefore, the complaint was considered justifiable since the EIA report has recommended the provision of site drainage system shall be 1 in 10 years. The Contractor has implemented remedial measures and preventive measures.</p>	Closed
S72	Lung Tseng Tau Village, Tung Chung	3 Nov 06	<p>The public complaint, which was referred by RSS to ET on 3rd November 2006, was received by the Integrated Complaint Centre (ICC) on 26th October 2006 regarding dust nuisance generated from the Project.</p>	<p>Based on the information collected and the monitoring results, the complaint was considered not justifiable due to the following since no exceedance of the air quality monitoring results was recorded in October 2006.</p> <p>During site inspections in the month, dust mitigation measures have been implemented by the Contractor; and no observation was recorded during the site inspections.</p> <p>According to the information provided by the Contractor and the RSS, the Contractor has implemented additional mitigation measures, including increased water spraying on the public road to more than once a day and covered the stockpiling materials.</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
S73	Southern Section of the Project	3 Nov 06	The complaint, which was referred by RSS to ET on 3 rd November 2006, was raised by a resident living at Cheung Sha on 24 th October 2006 concerning noise generated from rock breaking in Southern Section of the Project.	<p>According to the EM&A records, no exceedance of noise level and no non-compliance were recorded in the month.</p> <p>As advised by the Contractor and RSS, silent rock breaking equipment has been used and noise insulation materials have been used to minimize the noise impact generated from the rock breaking activity.</p> <p>Based on the provided information and the monitoring results, the complaints are considered not justifiable. The Contractor has implemented the mitigation measures to minimize the noise generation from construction activities and was still reminded to continuously implement their practice to prevent noise nuisance generation from the construction works.</p>	Closed
S74	Tung Chung Stream	24 Nov 06	Highways Department (HyD) of HKSAR received a complaint for Agriculture, Fisheries and Conservation (AFCD) regarding untreated site runoff discharged to Tung Chung Stream during the site visit on 21 st November 2006. The Resident Site Staff (RSS) subsequently referred the complaint to the Environmental Team (ET) Leader of the Project on 24 th November 2006.	The investigation revealed that, based on the meteorological data extracted from HKO, the highest rainfall recorded was between 13:45 and 15:45, with a total of 93mm in two hours. With the above rainfall intensities extracted from HKO, together with the Intensity-Duration-Frequency (IDF) for various return periods derived from Table 2 of the "Stormwater Drainage Manual", the return period should be less than 10 years. Therefore, the complaint was considered justifiable and the Contractor has implemented remedial measures and preventive measures.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
S75	West of the new Tung Chung Road Southern Section Discharge Point	21 Nov 06	Both Environmental Protection Department (EPD) and China Civil Engineering Construction Corporation and China Railway Wujia Joint Venture (the Contractor) received the same public complaint, regarding muddy water discharged to Chueng Sha on 21 st November 2006. The Contractor subsequently referred the complaint to the Environmental Team (ET) Leader of the Project on the same day.	The complainant considered that this stream was muddy and discharging muddy water into the sea. As stated in the above paragraph, the investigation revealed that the return period for the rainfall between 13:45 and 15:45 was 41 years. As the complaint was lodged at 14:58 on 21 st November 2006, it is reasonable to consider the rainfall recorded in the hour between 13:45 to 14:45 which was 57mm. According to "Stormwater Drainage Manual", the return period should be less than 10 years. Therefore, the complaint was considered justifiable and the Contractor has implemented remedial measures and preventive measures.	Closed
S76	Pui O Wan	27 Nov 06	China Civil Engineering Construction Corporation and China Railway Wujia Joint Venture (the Contractor) received the same public complaint, regarding muddy water discharged into Pui O Wan on 23 rd November 2006. According to the complainant, muddy water was discharged into Pui O Wan from the new Tung Chung Road Southern Section Discharge Point (near proposed round about on South Lantau Road) in the morning of 23 rd November 2006. The complainant suspected that the muddy water was being pumped off site through failed filtration systems into the sea as there had been no recent rainfall on that day.	The investigation revealed that the complaint was considered not justifiable since (1) no muddy water was generated due to the construction activities in the vicinity of the discharged point; and (2) no surface runoff as no rainfall was recorded on 23 rd November 2006.	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
S77	Sheung Ling Pei, Ha Ling Pei, Wong Ka Wai & Lung Tseng Tau Villages	18 Dec 06	<p>Highways Department (HyD) and the Resident Engineer received a complaint against Water Quality Supply (Muddy Water) at Sheung Ling Pei, Ha Ling Pei, Wong Ka Wai & Lung Tseng Tau Villages via District Office (Islands) on 29th November 2006.</p> <p>The complainants claimed that subject villages were suffering from muddy water supplied from the water main on the past few days before 29th November 2006.</p>	<p>Upon receipt of the complaint, the Contractor inspected all streams (above AFCD entrance) in the Northern Section. Muddy water was observed at Stream 13 which was believed the source of muddy water. However, no water flow was found at the stream. The muddy water was considered probably due to the seepage of underground water mixed with excavated soil to Stream 13. Furthermore, an ad-hoc meeting between DO/WSD/AFCD/MOTT/CCJV/IEC/ET was held on 14 December 2006 to discuss this issue.</p> <p>The complaint was considered due to the construction activities of the Project. Emergency remedial works had been taken by the Contractor to rectify the situation and preventive measures had also been implemented.</p>	Closed
S80	Tung Chung Road near Lung Tseng Tau Village	3 Jan 07	<p>The complaint was lodged by a resident at Lung Tseng Tau Village regarding dust nuisance at Tung Chung Road near Lung Tseng Tau Village. According to the complainant, the dust was generated by vehicle movements (about 5 to 7 per day). The complainant noticed that there was only once per day for water spraying on the road. She suggested that the frequency of water spraying should be increased to 1 to 2 per hour. In addition, she requested to provide more water-spraying practice for the concerned area.</p>	<p>According to the Contractor and the RSS, the main dust emission in the vicinity of Lung Tseng Tau Village was due to the vehicle movements on Tung Chung Road.</p> <p>Base on the information collected and the monitoring results, the complaint was considered not justifiable since (1) no exceedance of the air quality monitoring results was recorded in December 2006; (2) dust mitigation measures have been implemented by the Contractor; and (3) no observation was recorded during the site inspections.</p> <p>In response to the complaint, the Contractor had stepped up the dust suppression control immediately. A water truck was mobilized to spray water at Tung Chung Road within particular in the vicinity of the complainant's house from once per day to at least 3 times per day.</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
S81	Lung Tseng Tau	20 Dec 06	<p>The Contractor, CCECC and CRWJ Joint Venture (CCJV) and Highways Department (HyD) of HKSAR received a complaint regarding dust control at Lung Tseng Tau from the Office of Islands District Council, Wong Fuk-kan on 6th December 2006.</p> <p>According to the complainant, he had received a number of complaints from residents in South Lantau regarding the dust nuisance when their vehicles passing through Tung Chung Road near Lung Tseng Tau. The residents said their vehicles were full of dust whenever they had passed through Tung Chung Road.</p>	<p>Base on the site inspection records and information collected from the RSS and the Contractor, the complaint was considered due to due to the vehicle movements on Tung Chung Road. In response to the complaint, the RSS has conducted site inspection in the afternoon on 18th December 2006. The Contractor had immediately mobilized labors to clear the mud trail on Tung Chung Road between ch.3700-4000 using sweepers. In order to maintain the condition of Tung Chung Road, the Contractor has mobilized more staff to clear the mud deposits on the whole Northern Section of Tung Chung Road on 23rd December 2006.</p> <p>The Contractor has provision wheel washing facilities at each site exit/entrance. In order to maintain Tung Chung Road condition, the Contractor has mobilized a water truck solely for wheel washing purpose at the site entrance near RW37 between ch.3700-4000 since 23rd December 2006. The location is the most busy site exit/entrance for soil removal as wheel washing facilities. Wheels of each vehicle shall be washed before leaving the site. The wastewater after wheel washing at each site exit/entrance shall be collected and treated before discharge at designated location. also mobilized water trucks</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
S82	The nullah near the Yat Tung Estate	15 Jan 07	<p>The complaint was lodged by the Legislative Councillor Hon. Albert W.Y. Chan regarding frequent discharge of muddy water from the Tung Chung Road improvement project on 15th December 2006. According to Mr. Chan's letter, the complainant was a resident living in Tung Chung.</p> <p>The DSD letter pointed out that muddy water was being frequently discharged to the nullah near the Yat Tung Estate, and confirmed that the site of Tung Chung Road improvement project was the source of such discharge.</p>	<p>After investigation, the discharge of muddy water was largely due to the deposited silts caused by previous heavy rainstorms in November.</p> <p>The contractor has responded promptly in deploying a number of actions to remedy the matter. These include de-silting operation at Wong Lung Hang nullah on 23rd December 2006 to remove the accumulated soil and silt materials washed down by the discharges, of which photographs are provided.</p> <p>In addition, several intermediate sedimentation ponds along the temporary drainage system south of Shek Mun Kap to improve de-silting capacity have been installed, and that the site condition will be closely monitored so that advice on any practical measures in improving the quality of water discharge to Wong Lung Hang nullah can be given.</p> <p>In addition, the Contractor is also undergoing continual inspections and monitoring on the conditions of the concerned discharge of the construction site, and is in close liaison with the ET to cap exceeding levels of future discharge.</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
S86	Slope opposite to the AFCD's Office at Tung Chung Road near mileage M2.5	8 Feb 07	The complaint was lodged by a resident in Lantau Island regarding the construction noise generated from the road works at the slope opposite to the AFCD's Office at Tung Chung Road near mileage M2.5.	<p>The site of concern is most likely at the RW6 of the Project. According to the Contractor, soil nailing works was conducted at RW6 and the first stage of soil nailing works at RW6 has been completed before 8th February 2007.</p> <p>According to the noise monitoring results at monitoring station NM5, Tung Chung Au Country Parks Management Centre, which is located near the AFCD's Office, there was no exceedance recorded from 2nd January to 14th February 2007.</p> <p>As advised by the Contractor, the following mitigation measures will be implemented as far as possible to reduce the noise nuisance to the nearby residents when soil nailing works carry out in the future:</p> <ul style="list-style-type: none"> ● To cover the soil nailing works area with tarpaulin; ● To reduce the number of machines for soil nailing; ● To orientate the machines for soil nailing works so that the major noise generating part will not directly face the Noise Sensitive Receiver; and ● To scatter the plants so that the noise being generated will not be centralized in certain direction. 	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
S90	Northern and Southern Section of Tung Chung Road	20 May 07	<p>The complaint was lodged by the Green Lantau Association at on 20 May 2007 regarding failed drainage for the Project on that day.</p>	<p>According to the Contractor, the main concern in the Northern Section is that a large amount of seepage from the permanent slope near the Stream 18 and Stream 21 was observed. The permanent hinterland u-channel was not able to collect most of the hinterland water which ultimately collected by the carrier pipe and increased the loading of the treatment facilities at Shek Mun Kap.</p> <p>As advised by the Contractor, the main problem in Southern Section was due to the fact that the silt is too fine to be settled within a short time, i.e. 3 minutes, as stated in the EIA Report. Due to the large catchments of the site, muddy water could not be completely settled or treated before discharged or overflowed. No bigger sedimentation tank can be constructed due to the site constraint to retain all surface water in heavy rainy days.</p> <p>The complaint was considered justifiable. However, it is beyond the Contractor's capability to completely avoid muddy water discharging or overflowing to sea due to the site conditions and constraints under increment weather conditions.</p>	<p>The complaint investigation report was commented</p>

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
S91	Zone 4 (STR 14)	1 June 07	<p>The complaint was lodged by a resident in Butterfly Crest, Lantau Island regarding the construction noise generated from the Project on Sunday, which is likely to be 27th May 2007.</p>	<p>According to the Contractor, construction works were undertaken near STR 14 in the morning of 27th May 2007 and the Powered Mechanical Equipment (PME) used on that day included 2 excavators and 1 dump truck at STR 14. The concerned site was covered under the construction noise permit (CNP) no. GW-RS0281-07.</p> <p>As advised by the Contractor, the 2 excavators and 1 dump truck, which categorized separately as Group A and Group E of the abovementioned CNP, were utilized alternatively during the operation in order to comply with the conditions stipulated in the CNP.</p> <p>Base on the information collected, the complaint was considered not justifiable as the equipment used comply with the CNP conditions.</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
S93	Western Section of Pui O Bay	22 May 07	<p>The complaint was lodged by the Green Lantau Association at on 22 May 2007 regarding muddy water was observed at 50m west of the Tung Chung Road southern section around 11am on 22 May 2007.</p>	<p>As advised by the Contractor, the main problem in Southern Section was due to the fact that the silt is too fine to be settled within a short time, i.e. 3 minutes, as stated in the EIA Report. Due to the large catchments of the site, muddy water could not be completely settled or treated before discharged or overflowed. No bigger sedimentation tank can be constructed due to the site constraint to retain all surface water in heavy rainy days.</p> <p>In the site near Pui O Wan, the Contractor has exhausted their efforts including to pump the water from sedimentation tanks back to the stockpile area. Unfortunately, one of the pumps was out of order in the early days of that rainy period. However, the pump has been rectified on 22 May 2007.</p> <p>The complaint was considered justifiable. However, it is beyond the Contractor's capability to completely avoid muddy water discharging or overflowing to sea due to the site conditions and constraints under increment weather conditions.</p>	<p>The complaint investigation report was commented</p>

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
S100	Stream water behind WSD's weir	27 July 07	<p>The complaint was lodged by a resident living at Lung Tseng Tau area during the meeting between RSS and the representatives from the villages at Lung Tseng Tau area on 17th July 2007 regarding turbid water supply from DO main to the village houses at Lung Tseng Tau area.</p>	<p>The RSS and the Contractor had a site investigation with the complainant at his household water supply, the WSD weir and a work area immediately upstream of the weir (STR02 near the Stream 12) on the same day.</p> <p>It was observed that the water directly from the household supply was found with low degree of turbidity when comparing it with portable water supply.</p> <p>According to the visual inspection of the RSS and the Contractor, the stream water behind the WSD's weir, which is the source of water supply to the villagers via a DO main, was found clear and there was no sign of contamination.</p> <p>Inspection of the work site at STR02 upstream of the weir indicated no activities affecting the upstream water quality.</p> <p>By reviewing the water quality monitoring data at Tung Chung Stream during early of July 2007, the turbidity and SS values are considered to be low and the data revealed that the Tung Chung Stream and the WSD weir were not contaminated during the above mentioned period.</p> <p>Nevertheless, In order to minimize the water quality impacts, the Contractor has implemented following mitigation measures:</p> <ul style="list-style-type: none"> • To erect sand bag bund in the vicinity of STR02; • To shotcrete the soil surface near Stream 12. 	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
S104	Tung Chung Road and Tung Chung Au near AFCD's Office	6 August 07	<p>The complaint was lodged by Mr. Ho on 6th August 2007 regarding a suspected case of silty runoff and muddy water generated from construction site flowing on public road. Turbid water was observed behind the weir near the AFCD's office at Tung Chung Au.</p>	<p>No non-compliance or environmental deficiency related to or in the vicinity of the concerned area was identified during these site audits.</p> <p>According to Hong Kong Observatory, Hong Kong was under the effect of the tropical storm over the central part of the South China Sea which brought heavy showers with 100.4 millimeters of total rainfall recorded on 6 August. The amber rainstorm warning was hoisted between 15:55pm to 17:30pm.</p> <p>The Contractor has confirmed there was no construction activity in the concerned area on 6th August 2007 due to heavy rainfall. According to the Contractor, muddy water was the silty runoff from nearby work sites due to the heavy rainfall on the day.</p> <p>The Contractor has implemented following mitigation measures:</p> <ul style="list-style-type: none"> • To desilt temporary drainage channels and sedimentation tank. • To clear the silt and mud in the surface of haul road at RW06 ad RW07. • To cover exposed slope with tarpaulin at RW06 and RW07. <p>According to the RSS and the Contractor, no further report of silt and muddy water runoff from concerned area was received after implementation of the aforesaid mitigation measures.</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
S113	Upper and Lower Cheung Sha Village	12 December 2007	The complaint was lodged by Mr. Liu on 12 December 2007 regarding dust nuisance at Upper and Lower Cheung Sha Village.	<p>According to the Contractor, the main dust emission in the vicinity of Cheung Sha Village was due to the road works and associated vehicle movements on Tung Chung Road.</p> <p>The Contractor has implemented following mitigation measures:</p> <ul style="list-style-type: none"> • Cleared the silts on the haul road; • Applied watering on the road by water hose at San Shek Wan; • Increased the number of water browsers; and • Covered the exposed slope and stockpiles with tarpaulin sheets. <p>By reviewing the air quality monitoring data, there was no exceedance of air quality monitoring results on 8th and 14th December 2007 and dust mitigation measures have been implemented by the Contractor.</p> <p>According to the RSS and the Contractor, no further complaint regarding dust nuisance from concerned area was received after implementation of the aforesaid mitigation measures.</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
S147	Zone 1 Tung Chung Road	14 November 2008	<p>The complaint was referred to ETL from EPD by Mr. Peter Tang on 14 November 2008, regarding a suspected case about land- filling of non-inert construction waste in early 2008 and potential further land-filling of non- inert construction waste stockpiled at Zone 1 Tung Chung Road.</p>	<p>According to the Contractor, there are two major stockpile areas within the construction premise which are located at San Shek Wan and Tung Chung Road. The location specified in the complaint was the stockpile area at San Shek Wan. This location was used for stockpiling reusable materials.</p> <p>Base on the information collected, the complaint was considered not justifiable as San Shek Wan is one of the designated C&D materials sorting areas of the Project and no direct evidence shows there was land-filling activity by this project at the specified location.</p> <p>However, as a follow up of the complaint, the Contractor has implemented mitigation measures as follows:</p> <ul style="list-style-type: none"> • Preliminary segregation of waste was enhanced; and • Water was sprayed on the stockpiles more frequently to further suppress dust generation. • The Contractor was recommended to continue the following mitigation measures : • To provide dust suppression measures to the stockpiles at San Shek Wan, especially during dry season, to minimize dust generation; • To carry out continuous segregation of materials on site; • To avoid accumulation of stockpiles; and • To dispose of non-reusable material to designated outlets as soon as possible. 	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
S152 and S154	Zone 1 Tung Chung Road	3 rd and 8 th April 2009	EPD received a public complaint about suspected land- filling of non-inert construction waste in early 2009 at Zone 1 of Tung Chung Road for the Project and a similar verbal complaint regarding illegal land filling of construction waste on the same site (Zone 1) was received from Lands Department.	<p>Base on the information collected, the complaint was considered not justifiable as San Shek Wan is one of the designated C&D materials sorting areas of the Project and no direct evidence shows there was land-filling activity by this project at the specified location. Sorting and disposal of C&D materials were conducted in accordance with WMP.</p> <p>Nevertheless, the Contractor was recommended to continue the following mitigation measures in order to minimize the environmental impact on the nearby community and the amount of waste produced:</p> <ul style="list-style-type: none"> • Stockpiled material shall be covered by tarpaulins and/or watered as appropriate to prevent windblown dust and/or surface run-off. Storage of material on site shall be kept to a minimum to avoid nuisance to local residents; • excavated material in trucks shall be covered by tarpaulins to reduce the potential for spillage and dust generation; and • good site practice shall be implemented to avoid waste generation and promote waste minimization. 	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
S157	New Tung Chung Road and near-by soil erosion in Cheung Sha Catchwater	1 st June 2009	<p>The complaint was raised by the WSD on 1st June 2009. WSD concerned about the soiled water had been collected from New Tung Chung Road and soil erosion was found at Cheung Sha Catchwater. The ETL of the Project was informed of the complaint by CCJV through the e-mail on 5th June 2009 and initiated the complaint investigation procedures.</p>	<p>Base on the information collected, the complaint was considered justifiable as heavy downpour of rain had caused soil erosion on exposed slopes leading to Cheung Sha Catchwater.</p> <p>The Contractor was recommended to take sufficient mitigation measures to minimize the exposed areas to rain by covering the exposed area with tarpaulin or soil erosion control mat, as well as to carry out slope reinstatement works as soon as practicable.</p> <p>The environmental conditions of the site will be continuously reviewed by the Resident Site Staff, IEC and the Environmental Team through regular and ad hoc site inspections and monitoring exercises.</p>	Closed

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
S212	San Shek Wan	16 th October 2009	Highways Department (HyD) received a verbal complaint from a member of the public via telephone on 16 th October 2009 regarding unauthorized disposal of construction wastes at San Shek Wan.	<p>A joint site inspection among EPD/MMHK/CCJV was conducted on 20th October 2009 after receiving the captioned complaint.</p> <p>Upon advice, the Contractor has taken initiative to remove the C&D materials at near and into the excavated pit area. The C&D materials including concrete fragments and timber, rubbish and other decomposable materials were observed to be segregated and stored into separating stocking areas for subsequent removal in accordance with Waste Management Plan (WMP) for the Project.</p>	Investigation report is under revision

**APPENDIX D
SUMMARY OF WARNING / DIRECTION
ISSUED BY THE EPD AND
PROSECUTION**

Appendix D - Summary of Warnings / Direction Issued by the EPD and Prosecution

Summary of Warnings / Direction Issued by the EPD

Date of Letter	Warnings/Direction
3 February 2005	The Contractor was requested to construct catch pits and perimeter channels in advance of site formation and earth works
17 May 2005	The Contractor was requested to immediately re-provide the on-site wastewater management systems to adequately cater the rainwater runoff and to submit the detail proposal for runoff management and treatment systems.
4 October 2005	The Contractor was requested to rectify the situation in order to comply with EP Conditions 2.4 & 2.5 regarding the provision of drainage systems, EP Condition 3.16 regarding site runoff mitigation measures and EP Condition 3.6 regarding no works of the Project shall be carried out outside the “limit of works area”.
15 December 2005	The Contractor was requested to rectify the situation of Zone D where fuel oil was found spilled onto ground of the works area in contravention to Section 7.5.2.1 of the Waste Management Plan (WMP). The Section stipulates provisions against spillage of fuels to prevent contamination of the construction site.
24 March 2006	The Contractor was requested to rectify the situation in order to comply with EP Condition 3.9 regarding the stipulated span of temporary bridges used during construction to cross the stream.
13 April 2006	The Contractor was requested to rectify the situation of Zone E where fuel oil was stored within the Country Park in contravention to condition 3.14 of the EP.
29 June 2006	The Contractor was requested to rectify the situation that site runoff will not be discharged into Tung Chung Stream in order to comply with EP Condition 2.4.
26 September 2006	The Contractor was requested to rectify the situation that excessive dust emission occurred. Watering programme shall maintain to ensure that all exposed road surfaces and dust sources are wet in order to comply with EP Condition 1.7.
4 October 2006	<ul style="list-style-type: none"> -The Contractor was requested to rectify the situation that site runoff will not be discharged into Tung Chung Stream in order to comply with EP Condition 2.4. -The Contractor was requested to rectify the situation in order to comply with EP Condition 3.9 regarding the stipulated span of temporary bridges used during construction to cross the stream 28 -.The Contractor was requested to rectify the situation in order to comply with EP Condition 3.9 regarding the stipulated span of temporary bridges used during construction to cross the stream 32. - The Contractor was requested to rectify the situation in order to comply with EP Condition 3.9 regarding the stipulated span of temporary bridges used during construction to cross the stream 33.
13 February 2007	The Contractor was requested to rectify the situation that site runoff will not be discharged into Tung Chung Stream in order to comply with EP Condition 2.4.
19 February 2008	The Contractor was requested to take all necessary actions to rectify the situation that surface run-off from the construction site discharged into storm drain without treatment in order to comply with EP Condition 3.16.
14 April 2008	The Contractor was required to take all necessary actions to rectify the situation

Date of Letter	Warnings/Direction
	that a section of the site near Pak Kung Au was not provided with vehicle washing facilities including high pressure water jet at vehicular exit points so as not to contravene the statutory requirement.
8 December 2008	The Contractor was required to take all necessary actions to rectify the situation that a suspected chemical waste (mineral oil) was found improperly packed and stored at Zone 1 Tung Chung Road on 4 December 2008, so as not to contravene the statutory requirement of the Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354).

Summary of Notification of Summons

Date of Summons	Details of the Summons	Status
25 January 2007	Construction works at a slope next to Stream no. 28 along Tung Chung Road, Cheung Sha, Lantau Island which contrary to EP Condition 3.9 concerning works at Stream 28 on 26 July 2006	Withdrawn by EPD
16 February 2007	Construction works near Stream no. 8 along Tung Chung Road, Cheung Sha, Lantau Island which contrary to EP Condition 2.4 by discharging runoff during construction into Tung Chung Stream on 16 August 2006	The Contractor was fined \$7500 on 4 June 2007.
17 May 2007	Construction works near Stream no. 8 along Tung Chung Road, Cheung Sha, Lantau Island which contrary to EP Condition 2.4 by discharging runoff during construction into Tung Chung Stream on 21 November 2006	The Contractor was fined \$7500 on 4 June 2007.

Summary of Notification of Successful Prosecution

Date of Successful Prosecution	Details of the Successful Prosecution	Status
4 June 2007	Construction works near Stream no. 8 along Tung Chung Road, Cheung Sha, Lantau Island which contrary to EP Condition 2.4 by discharging runoff during construction into Tung Chung Stream on 16 August 2006	The Contractor was fined \$7500 on 4 June 2007
4 June 2007	Construction works near Stream no. 8 along Tung Chung Road, Cheung Sha, Lantau Island which contrary to EP Condition 2.4 by discharging runoff during construction into Tung Chung Stream on 21 November 2006	The Contractor was fined \$7500 on 4 June 2007

APPENDIX E
SITE AUDIT SCHEDULE

**Contract No. HY/2003/19 - Improvement to Tung chung Road between Lung Tseng Tau and Cheung Sha
Site Audit Schedule for November 2009**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1-Nov	2-Nov	3-Nov	4-Nov	5-Nov	6-Nov	7-Nov
				Bi-weekly Site Audit		
8-Nov	9-Nov	10-Nov	11-Nov	12-Nov	13-Nov	14-Nov
15-Nov	16-Nov	17-Nov	18-Nov	19-Nov	20-Nov	21-Nov
		Landscape and visual resources audit		Bi-weekly Site Audit		
22-Nov	23-Nov	24-Nov	25-Nov	26-Nov	27-Nov	28-Nov
						Ecological mitigation audit
29-Nov	30-Nov					

**Contract No. HY/2003/19 - Improvement to Tung chung Road between Lung Tseng Tau and Cheung Sha
Tentative Site Audit Schedule for December 2009**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1-Dec	2-Dec	3-Dec	4-Dec	5-Dec
				Bi-weekly Site Audit		
6-Dec	7-Dec	8-Dec	9-Dec	10-Dec	11-Dec	12-Dec
13-Dec	14-Dec	15-Dec	16-Dec	17-Dec	18-Dec	19-Dec
				Bi-weekly Site Audit		
20-Dec	21-Dec	22-Dec	23-Dec	24-Dec	25-Dec	26-Dec
27-Dec	28-Dec	29-Dec	30-Dec	31-Dec		
				Bi-weekly Site Audit		

The schedule may be changed due to unforeseen circumstances (adverse weather, etc)