

Expansion of Shek Wu Hui Sewage Treatment Works

First Quarterly EM&A Report (Dec 05 – Feb 06)

March 2006

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First Quarterly EM&A Report (Dec 05 – Feb 06)

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Certified by Environmental Team Leader Sharifah Or



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1 Executive Summary

The expansion of Shek Wu Hui Sewage Treatment Works (SWHSTW) aims to increase the treatment capacity of the existing SWHSTW to cope with the increasing wastewater flows and loads as a result of the population growth in the catchment area of Fanling/Sheung Shui and the committed extension of sewerage system to unsewered areas. It is considered as a project constituting a material change to an exempted designated project under Schedule 2 of EIAO. Thus, the procedures under the EIAO have been followed and an Environmental Monitoring and Audit (EM&A) Programme has to be carried out. The present report documents the outcomes of the EM&A Works undertaken between December 2005 and February 2006.

Breaches of Action and Limit Levels

Noise

No non-compliance of action/limit level was recorded at all monitoring stations for noise during the reporting period.

1-hr TSP

No non-compliance of action/limit level was recorded at all monitoring stations for 1-hr TSP during the reporting period.

24-hr TSP

No non-compliance of action/limit level was recorded at all monitoring stations for 24-hr TSP during the reporting period.

Complaints Log

During this reporting period, no environmental complaint was received.

Notifications of Any Summons and Successful Prosecutions

During the site preparation stage, EPD issued a yellow ticket to the Contractor due to the construction dust impact on 2 November 2005. Low humidity is considered as the main reason for the construction dust impact. Mitigation measures such as increasing the frequency of water spraying and provision of fencing along the site boundary were implemented on 3 November 2005. EPD inspected the site on 4 November 2005 and found the condition acceptable.

During the reporting period, no notification of summons or successful prosecution was recorded.

Reporting Changes

There was no reporting change during the reporting period.

Future Key Issues

The construction activities for the coming three months will include the construction of permanent H-piles, the setup of loading tests for the piles, cable / utilities diversion, the relocation of FeCl₃ tank, sheet piling work, sub-structure and superstructure construction and excavation works.



2 Introduction

2.1 Basic Information

Shek Wu Hui Sewage Treatment Works (SWHSTW) provides treatment to the wastewater generated from Fanling/Sheung Shui areas before discharge it into Mai Po Inner Deep Bay Ramsar Site through River Indus and Shenzhen River, thus helps protecting the water quality of River Indus, Shenzhen River and Mai Po Inner Deep Bay Ramsar Site. The expansion of SWHSTW aims to expand the treatment capacity of the existing SWHSTW to cope with the increasing wastewater flows and loads as a result of the population growth in the catchment area of Fanling/Sheung Shui and the committed extension of sewerage system to unsewered areas.

In accordance with Section 9(2)(g) of the Environmental Impact Assessment Ordinance (EIAO), the SWHSTW is an exempted designated project as the existing SWHSTW has been in operation before the EIAO came into effect on 1 April 1998. However, since the proposed works involve physical expansion and alternation to the existing SWHSTW (hereafter called "the Project") and may cause adverse environmental impacts if mitigation measures are not in place, it shall be considered as a project constituting a material change to an exempted designated project under Schedule 2 of EIAO. Hence the procedures under the EIAO have been followed. A Project Profile (PP) for direct application of the EP (Application No.DIR-121/2005) was approved by Environmental Protection Department (EPD) in May 2005 and an environmental permit (EP-218/2005) was obtained prior to the commencement of the expansion works.

Drainage Services Department (DSD) awarded the civil contract of the expansion of SWHSTW to Maeda Corporation (Maeda) in September 2005. Maeda appointed Hyder Consulting Limited (HCL) as the Contractor's Environmental Team (ET) during the construction period. CH2M-IDC Hong Kong Limited is the independent environmental checker (IEC). The construction contract commenced in September 2005 and the total construction period is approximately 36 months. The notified commencement date of work to the Director of EPD is 14 December 2005.

2.2 Management Structure and Project Organisation

The Engineer (DSD) is responsible for overseeing the construction works and ensuring that they are undertaken by the Contractor (Maeda) in accordance with the specification and contractual requirements. The Contractor shall report to the Engineer. The ET is employed by the Contractor and is responsible for conducting the EM&A programme. The IEC shall advise the Engineer on the environmental issues related to the Project.

The key personnel contact names and telephone number are summarised in Table 2-1. The project organisation is shown in Appendix 1.



Party	Position	Name	Telephone number
Project Proponent – DSD	Project Manager	Raymond Lee	2594 7457
	Engineer's Representative	Tim Tsoi	2594 7460
Contractor – Maeda	Site Agent	George Cheung	9268 1918
ET - Hyder	ET Leader	Sharifah Or	2911 2730
IEC – CH2M-IDC	IEC	David Yeung	2872 2934

Table 2-1 Key Personnel Contact Names and Telephone Number for the Project

2.3 Construction Programme

Construction programme of the Project is attached in Appendix 2.

2.4 Works Undertaken during the Reporting Quarter

Works undertaken during the reporting period included:

- fencing erection;
- ground investigation work;
- setting up of engineer's site office;
- construction of preliminary pile;
- construction of permanent pile;
- cable / utilities division;
- set up of loading tests for the piles; and
- excavation work.

2.5 Status of Environmental Permit/ Licence

The status of the Environmental Permit/Licence for the Project is shown below.

Permit/Licence	Application Date	Date of issue	Ref. No.	Valid Until
Environmental Permit	21 May 2005	16 June 2005	EP-218/2005	N/A
Notification was made to EPD pursuant to Section 3(1) of the Air Pollution Control (Construction Dust) Regulation (Form NA was submitted)	22 Sep 2005	-	-	-
Registration as a chemical waste producer	26 Sep 2005	14 NOV 2005	WPN: 5213- 624-M2446-06	-
Effluent Discharge Licence	11 Nov 2005	20 Dec 2005	Licence No.:	19 Dec 2010



Permit/Licence	Application Date	Date of issue	Ref. No.	Valid Until
			W5/1I287/1	
Application for Exemption Account for Disposal of Construction Waste		Approved by EPD on 31 Dec 05	Application No.: RN/00134	25 Sep 2008
CNP (For 2 Generators operating between 0700 and 2300 on General Holiday and between 1900 and 2300 on Any Day not being a General Holiday at Site Office)		12 Dec 2005	GW-RN0597-05	Cancelled with effect on 13 Feb 2006

Table 2-2 Status of Permit/Licence for the Project

3 Environmental Status

3.1 Project and Work Area, Environmental Sensitive Receivers and Monitoring Locations

The site is located at the existing Shek Wu Hui Sewage Treatment Plant, next to Chuk Wan Street. It has been subdivided into different Works Areas/Portions as illustrated in Appendix 3. Project area, environmental sensitive receivers and monitoring locations are shown in Appendix 4.

4 Brief Summary of EM&A Requirements

4.1 Monitoring Parameters

4.1.1 Air Quality

During the construction phase impact monitoring, 1-hour and 24-hour Total Suspended Particulates (TSP) levels should be measured at the selected air monitoring locations in accordance with the EM&A Manual. These two parameters are aimed to indicate the impacts of construction dust on air quality.

4.1.2 Noise

The construction noise level should be measured in terms of the A-weighted equivalent continuous sound pressure level (L_{eq}) for 30 minutes. $L_{eq(30 \text{ min})}$ is used as the monitoring parameter for the period between 0700 and 1900 hours on normal weekdays. For all other time periods, three consecutive $L_{eq(5\text{min})}$ are employed for comparison with the Noise Control Ordinance (NCO) criteria.

Page 4



Other noise parameters such as L_{10} and L_{90} should also be obtained for reference.

4.2 Action and Limit Levels

4.2.1 Air Quality

The baseline monitoring results documented in the Baseline Monitoring Report for the Project (our report ref.: EA01284R0012) form the basis for derivation of the Action and Limit Levels for air quality impact monitoring. Appendix 5 shows the derived Action and Limit Levels for the Project. If the air quality criteria are exceeded due to the Project, the Event/Action Plan summarised in Table 4-3 should be triggered immediately.

4.2.2 Noise

The Action and Limit Levels for construction noise are defined in Appendix 5. If valid non-compliance of the criteria occurs, actions in accordance with the Event and Action Plan in Table 4-4 should be implemented. If construction works are undertaken during the restricted hours, a construction noise permit under NCO shall be obtained by the Contractor.

4.3 Event and Action Plans

The Event and Action Plans for air quality and noise monitoring are shown in Tables 4-3 and 4-4, respectively.

EVENT	ACTION				
EVENT	ET	IEC	ER	CONTRACTOR	
ACTION LEVEL					
Exceedance for one sample	Identify source, investigate the causes of exceedance and propose remedial measures; Inform IEC and ER; Repeat measurement to confirm finding.	Check monitoring data submitted by ET; Check Contractor's working method.	Notify Contractor.	Rectify any unacceptable practice; Amend working methods if appropriate.	
Exceedance for two or more consecutive samples	Identify source, investigate the cause of exceedance and propose remedial measures; Inform IEC and ER; Advise ER on the effectiveness of the proposed remedial measures;	Check monitoring data submitted by ET; Check Contractor's working method; Discuss with ET and Contractor on possible remedial measures; Advise the ET on the	Confirm receipt of notification of exceedance in writing; Notify Contractor; Ensure remedial measures properly implemented.	 Submit proposals for remedial to ER within 3 working days of notification; Implement the agreed proposals; Amend proposal if appropriate. 	



	ACTION					
EVENT	ET	IEC	ER	CONTRACTOR		
	 Repeat measurements to confirm findings; Increase monitoring frequency to daily; Discuss with IEC and Contractor on remedial actions required; If exceedance continues, arrange meeting with IEC and ER; If exceedance stops, cease additional monitoring. 	effectiveness of the proposed remedial measures; • Supervise Implementation of remedial measures.				
LIMIT LEVEL						
Exceedance for one sample	Identify source, investigate the causes of exceedance and propose remedial measures; Inform IEC, ER, Contractor and EPD; Repeat measurement to confirm finding; Increase monitoring frequency to daily; Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results. If exceedance stops, cease additional monitoring.	Check monitoring data submitted by ET; Check Contractor's working method; Discuss with ET and Contractor on possible remedial measures; Advise ER on the effectiveness of the proposed remedial measures; Supervise implementation of remedial measures.	Confirm receipt of notification of exceedance in writing; Notify Contractor; Ensure remedial measures properly implemented.	Take immediate action to avoid further exceedance; Submit proposals for remedial actions to IEC within 3 working days of notification; Implement the agreed proposals; Amend proposal if appropriate.		
Exceedance for two or more consecutive samples	Notify IEC, ER, Contractor and EPD; Identify source, investigate the cause of exceedance and propose remedial measures; Repeat measurement to confirm findings; Increase monitoring frequency to daily; Carry out analysis of Contractor's working procedures to determine possible mitigation to be	Discuss amongst ER, ET, and Contractor on the potential remedial actions; Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise ER accordingly; Supervise the implementation of remedial measures.	Confirm receipt of notification of exceedance in writing; Notify Contractor; In consultation with the IEC, agree with the Contractor on the remedial measures to be implemented; Ensure remedial measures properly implemented; If exceedance continues, consider what portion of the work is responsible	Take immediate action to avoid further exceedance; Submit proposals for remedial actions to IEC within 3 working days of notification; Implement the agreed proposals; Resubmit proposals if problem still not under control; Stop the relevant portion of works as determined by ER until the exceedance is abated.		



FMENT	ACTION					
EVENT	ET	IEC	ER	CONTRACTOR		
	implemented; Arrange meeting with IEC and ER to discuss the remedial actions to be taken; Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; If exceedance stops, cease additional monitoring.		and instruct the Contractor to stop that portion of work until the exceedance is abated.			

Table 4-3 Event/ Action Plan for Air Quality Monitoring

EVENT	Action					
	ET	IEC	ER	CONTRACTOR		
Action Level	Notify IEC and ER; Carry out investigation; Report the results of investigation to the IEC, ER and Contractors; Discuss with the Contractor and formulate remedial measures; Increase monitoring requrency to check mitigation effectiveness.	Review the analysed results submitted by the ET; Review the proposed remedial measures by the Contractor and advise the ER accordingly; Supervise the implementation of remedial measure.	Confirm receipt of notification of failure in writing; Notify Contractor; Require Contractor to propose remedial measures for the analysed noise problem; Ensure remedial measures are properly implemented.	Submit noise mitigation proposal to IEC; Implement noise mitigation proposals.		
Limit Level	Identify source; Inform IEC, ER, EPD and Contractor; Repeat measurements to confirm findings; Increase monitoring frequency to check mitigation effectiveness; Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; Inform IEC, ER and EPD the causes and actions taken for the exceedances;	Discuss amongst ER, ET, and Contractor on the potential remedial actions; Review Contractors remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; Supervise the implementation of remedial measures.	Confirm receipt of notification of failure in writing; Notify Contractor; Require Contractor to propose remedial measures for the analysed noise problem; Ensure remedial measures properly implemented; If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is	Take immediate action to avoid further exceedance; Submit proposals for remedial actions to IEC within 3 working days of notification; Implement the agreed proposals; Resubmit proposals if problem still not under control; Stop the relevant portion of works as determined by th ER until the exceedance is abated.		



EVENT	Action					
	ET	CONTRACTOR				
	Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; If exceedance stops, cease additional monitoring.		abated.			

Table 4-4 Event/ Action Plan for Noise Monitoring

4.4 Environmental Mitigation Measures and Requirements

The recommended measures for mitigating air quality, water quality, noise, waste and all other possible environmental impacts due to the construction works have been stated clearly in the EM&A Manual. The details of the measures implemented by the Contractor are shown in Appendix 6.

5 Implementation Status of Environmental Protection and Pollution Control/ Mitigation Measures

The status of the mitigation measures implemented by the Contractor is listed in Appendix 6.

6 Monitoring Results

6.1 Graphical Plots of Monitoring Parameters

Graphical plots of the monitoring results are summarized in Appendix 7.

6.2 Factors Which Might Affect the Monitoring Results

Dust from other sources such as roads with the movement of heavy vehicles in the vicinity of the monitoring stations would affect the air quality monitoring results.



7 Non-compliance, Complaints, Notifications of Summons and Successful Prosecutions

7.1 Non-compliance of Action and Limit Levels

No non-compliance of Action or Limit Level was recorded for air quality and noise monitoring.

7.2 Complaints Received

In case of an environmental complaint received, all related parties should follow the complaints response procedures specified in the EM&A Manual.

During this reporting quarter, no environmental complaint was received. Cumulative number of environmental complaint is shown in Appendix 8.

7.3 Notifications of Summons and Successful Prosecutions

No notification of summons or successful prosecution was recorded during the reporting period. However, during the site preparation stage, EPD issued a yellow ticket to the Contractor due to the construction dust impact on 2 November 2005. Low humidity is considered the main reason for the construction dust impact. Mitigation measures such as increasing the frequency of water spraying and the erection of site hoarding along the site boundary were implemented on 3 November 2005. EPD inspected the site on 4 November 2005 and found the condition acceptable. The cumulative number of notifications of summons and successful prosecutions are shown in Appendix 8.

7.4 Review of the Reasons and Implications of Non-compliance, Complaints, Summons and Prosecutions

7.4.1 Non-compliance of Acton/Limit Level

No non-compliance was recorded during the reporting period.

7.4.2 Complaints, Summons and Prosecutions

No complaints, summons and prosecutions were recorded during the reporting period.



7.5 Site Inspections

Weekly site inspections have been carried out during the reporting period. The findings of the site inspections and appropriate mitigation measures were recorded in the site inspection checklists. The observations raised during the site inspections, corresponding recommendations and rectification status are summarised in Table 7-5.

Inspection Date	Deficiencies	Recommendation	Status	Note / Reminder
14-Dec-05	Cement works to seal the bottom of hoarding was being undertaken during the site inspection. Some cement was deposited on public area. Bare ground was dry. Concrete waste was found near the trees. Muddy trails on DSD access road were identified.	1. It is reminded that any cement deposited on public area outside the hoarding should be avoided and cleaned up as necessary. 2. Frequent water spraying is needed. 3. The trees retained on site should be properly maintained and no construction material or waste should be placed under the trees. 4. Wheel washing should be performed within the site to avoid bringing any dirt or mud outside the site.	 The condition was rectified on 21 Dec 2005. 	1. Stockpiles of waste were observed on site. As advised by the Contractor, waste could be removed on 16 Dec 05. 2. Rubbish bins/ skips were not found. The provision of bins/ skips is needed in the future.
21-Dec-05	1. No observation.	1. N.A.	1. N.A.	1. Cement powder should be covered with impervious sheet when cement works were not undertaken. 2. Surface channel should be maintained and inspected to avoid any blockage. 3. Segregation of waste should be carried out. All workers should be reminded to perform this at all sites. 4. Sedimentation tanks and wastewater treatment plants for piling works at Portion 2 were available on site. Soakaway and reuse of wastewater were adopted during the site inspection as the



Inspection Date	Deficiencies	Recommendation	Status	Note / Reminder
				quantity of wastewater generated from piling was not much.
28-Dec-05	General refuse was accumulated in the surface channel at the site office area.	Prompt cleaning-up is needed.	The Contractor reported that the condition was rectified on 29 Dec 2005. The condition would be checked again in the next site inspection.	Chemical waste store should be available on site as soon as possible. Rubbish bins and skips for segregation of waste should be provided on
4-Jan-06	It was observed that silty wheel wash water drained into the existing manhole.	Sandbags or bund should be prepared to block the silty water.	The manhole was sealed as observed on 11 Jan 06.	site. 1. Sand bags should be put along the surface channels next to the works area to prevent washing away of sand into the channel.
				A small pile was stored on site for drying prior to disposal. The Contractor was reminded to remove this pile as soon as possible after drying.
11-Jan-06	Oil drum without drip tray was observed at Portion 2.	The provision of drip tray was recommended	The oil drum was removed as observed on 18 Jan 06.	The Contractor was reminded to carry out water spraying more frequently during the dry season.
18-Jan-06	The gully opposite to Portion 3 was not properly sheltered.	The gully should be sheltered by sand bag to avoid silty water entering into the drainage system.	The gully opposite to Portion 3 was sheltered 21 January 2006.	In order to avoid accumulation of rainwater inside the refuse bin, the hole on the lid should be covered. Condition of sandbags
				surrounding the manhole should be closely monitored. The Contractor was reminded to replace broken sandbags.
25-Jan-06	Broken sandbags were observed along the existing U-channel at Portion 2 to prevent sand and silt entering into the drains. Removal of broken sand bag is required.	It was recommended to provide proper protection to the existing U channel.	The Contractor reported that appropriate actions would be implemented to rectify the situation.	Piling works will commence soon. The Contractor was reminded to provide adequate wastewater treatment system.
3-Feb-06	Oil leakage from	Proper maintenance	The plant was checked	Equipment oil and



Inspection Date	Deficiencies	Recommendation	Status	Note / Reminder
	drilling rig was observed on site. 2. The cap of water barrier on site was missing.	works should be carried out. 2. Provision of cap is required to avoid mosquito breeding.	and was filled before operation. 2. The inlet of water barrier was sealed.	lubricant replacement should be performed in a bunded area only. After that, all oil drum and lubricant should be placed in a bunded storage area.
6-Feb-06	Broken gravel bags were found in the U channels close to manhole which is near the slaughter house. It was observed that there was oil stain next to the diesel cap of the air compressor.	1. The Contractor was recommended to remove the gravel in the U channels and replace the broken gravel bags with new one. 2. The Contractor was recommended to remove the contaminated soil and provide a drip tray to prevent oil spillage.	The gravel bag in the U-channels was removed and the gravel bag along the U-channel was grouted by cement. The oil stain and contaminated soil were removed.	1. There was no wastewater discharge. However, the Contractor was recommended to provide adequate treatment facilities to cater the surface runoff during the wet season. 2. No fugitive dust emission was observed during the site inspection. However, the Contractor was reminded to water the bare ground frequently during dry days.
15-Feb-06	1. No observation.	1. N.A.	1. N.A.	Unloading of cement bag was observed during the inspection. The Contractor was reminded to cover the cement bags after unloading.
				2. No proper enclosure was provided for cement mixing works. The Contractor was reminded to shelter the cement mixing machine by tarpaulin sheet completely. (Action was done immediately.)
24-Feb-06	Accumulated water was	Removal of stagnant	Larvicide was applied to	1. Nil
	observed in drip tray at	water or larvicide	the water in drip tray	
	Portion 2.	application should be	properly.	
	Wetsep and	conducted to prevent	Mud and silt in	
	sedimentation tanks at	mosquito breeding.	sedimentation tank and	
	Portion 2 were full of	2. The Contractor was	Wetsep were removed.	
	mud.	reminded to remove		
		the mud more		



Inspection Date	Deficiencies	Recommendation	Status	Note / Reminder
		frequently.		

Table 7-5 Summaries of Site Inspections and Recommendations

8 Waste Management Status

According to the information provided by the Contractor, Table 8-5 shows waste materials were generated during the reporting period.

Type of Waste	Dec 05	Jan 06	Feb 06
Inert C&D material (m³)	299	19.5	104
General Refuse (m³)	78	19.5	32.5

Table 8-6 The Quantity of Waste Generation

Inert C&D materials were disposed of at Tuen Mun Area 38 public fill. General refuse was collected and disposed of at NENT Landfill. No chemical waste was produced during the reporting period. Trip ticket system was implemented and disposal records were in order on site. The Waste Management Plan was followed.

9 Comments, Recommendations and Conclusions

EM&A works have been undertaken between December 2005 and February 2006 for the Project based on the requirements set in the EM&A Manual.

All monitoring equipments have been calibrated and all monitoring protocols have been carried out properly according to the EM&A Manual.

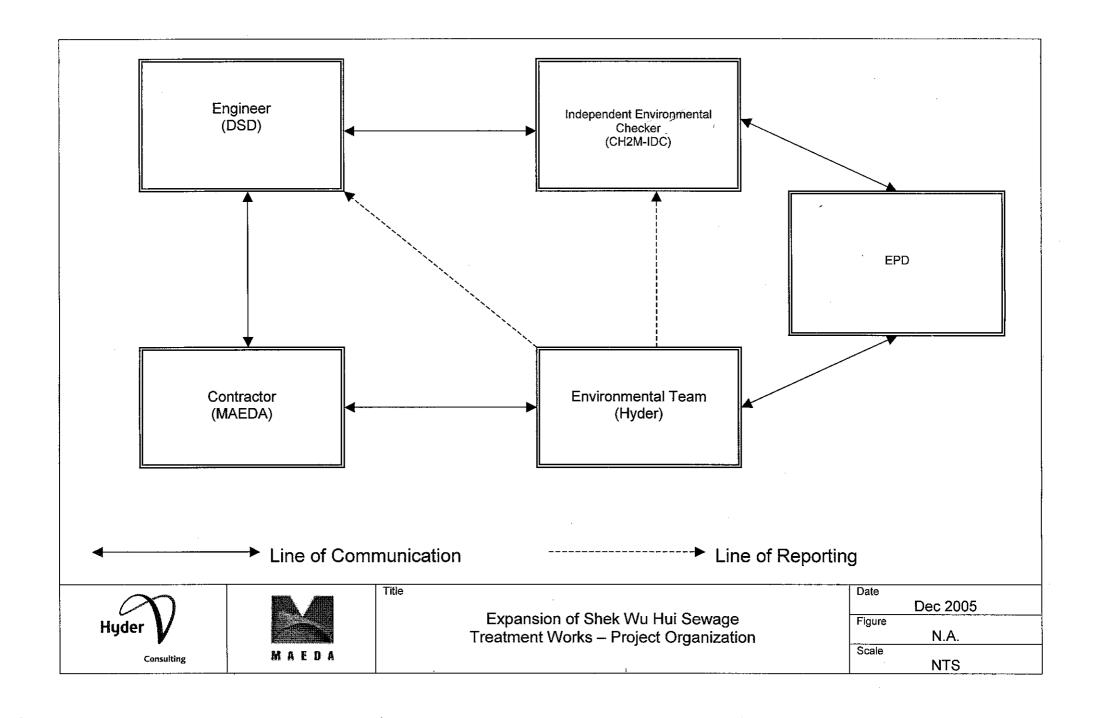
No valid exceedance of Action/Limit Level was recorded during the reporting period.

No compliant, notification of summons or successful prosecution was recorded during the reporting period.

The overall EM&A programme is considered efficient during the reporting period and no material and technical changes are considered necessary.



Project Organization





Construction Programme

Start Date	26/09/05		Easty Des	D5DA			Sheet	1 of 5								-		\neg
Finish Date	24/09/08		Progress Bar		Contract No. DC/200 EXPANSION OF SHEK			-	Date		•	Revisi	on		Ch	ecked	Approv	red_
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DC0112 Area A, B	Contractor's office erection & C	i Laiki a skesikskatik	11 18/10/05	29/10/	05 D004*													H
DC0122 Portion 2	Hoarding erection		12 24/10/05	i 05/11/i	05 D004*											-		\dashv
	Taut		8 07/10/05	Lieusa	NE DOOM	l _n												
DC0132 DC0134	Site clearance Fending erection				05 DC0132*	8												
	ction 1 of Works																	
Air Blowe Foundatio	r House No.2 n																	
DC0202	GI works (Predrilling & rep		40 25/10/05 40 10/12/05		05 DC0132 06 DC0202*													
DC0204 DC0206	Preliminary H-pites (1nos.) Permament H-pites (21nos		90 13/12/05	28/03/	06 DC0204*] =												
DC0208 DC0210	Proof Load Test (1nos.) Utility Detecton and Divers	ion	30 29/03/06 100 27/09/05		06 DC0206*													
Earthwork	S							ı								_		П
DC0216 DC0218	Excavation, Grid 1 - 6/K-L Excavation Grid A-K (5.3m				06 DC0208*, DC0210 08 DC0212*, DC0216*			8										Ш
Substruct DC0222	rre Pilecaps, 6nos. Grid 1-3/K	L + Ground Repris	6 12/05/06	18/05/	06 DC0216*													
DC0224	Pilecaps, 6nos. Grid 4-6/K	L + Ground Beams	6 19/05/06	25/05/	06 DC0222*			I B										
DC0226 DC0228	Pilecaps, 6nos, Grid 4-6/F- Pilecaps, 6nos, Grid 4-6/A		9 02/06/06	13/06/0	06 DC0224* 06 DC0226*			8										
DC0232 DC0234	Base slabs, Grid K-L Base slabs, Grid 4-6/A-K		21 28/05/06		06 DC0224* 06 DC0232*	-			3									\dashv
DC0236	Structural works up to grou	ınd level	30 21/06/06	26/07/	06 DC0232*				- _									
DC0238 Superstru	Ground floor slab		20 28/07/06	19/08/	06 DC0220*, DC0236*				-									\forall
DC0242 DC0244	Structural framing & slab a Concrete structure up to re		35 21/08/06 24 02/10/06			1			M									
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DC0248	Pipework & drainage/ducts		92 27/07/06	13/11/	06 DC0236*				PERFE						•			Ш
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DC0260 DC0262	Covered Walkway		120 15/02/07								1888		•					
Key Date																		
DC02K1	Completion of the Section	1	0	07/07/	07 D004*, DC0262*								>				<u> </u>	Щ
	ction 2 of Works																1	
Foundatio	n																	
DC0360 DC0364	Utilities Diversion Permanent Mini-pile (4nos		91 27/09/05 24 01/02/06															
Earthworl	\$			rideki dap			-											\prod
DC0368 DC0370	Install temporary retaining Demolition of existing pipe		1 07/03/06	07/03/	06 DC0334, DC0360, DC0364* 06 DC0368*	1	1	_										
DC0372	Excavation & temp. suppo		12 07/04/06	20/04/	06 DC0366*, DC0368*	 		<u> </u>										\dashv
Structure DC0376	Pilecaps	<u> </u>			06 DC0372*													
DC0378 External V	Concrete works & pipewor Vorks	k Composition	30 27/05/06	5 D3/07/	06 DC0376*	-											-	+
DC0382	Backfilling, remove temp. (06 DC0378* 06 DC0380*, DC0382*													
DC0384 Flow Divi	Installation, handrail/plate/ sion Pit Nos. 2	iauUSi	1 23 21101/00	, Educi	50 D-0300 D-0302"													+-1
Foundatio	'n		24 01/03/04	יטטופט (*	06 DC0330*													
DC0334 Earthworl						1												$\forall \exists$
DC0342 DC0344	Installation of temp. retaini Demolition of existing pipe				06 DC0382* 06 DC0342*, DC0368				1									i
DC0346	Excavation & temp, suppo				06 DC0340*, DC0342*,									ļ <u>.</u>				
Structure DC0386	Pilecaps				06 DC0346*													
DC0388	Concrete work & pipework	t Production page tapagament			D5 DC0348*	33			ļ <u>.</u>					<u> </u>				┼
External V	Backfill to Pit 2, remove te				D5 DC0388*	622										-		
DC0392	Installation, handrail/plate/	ladder	30 26/11/0	31/12/	05 DC0390*]		L			L	<u> </u>	<u> </u>	<u> </u>	\perp

	Activity ID	Activity Description	Dur	Early Start	Early Finish	Predecessors		JEMA www.					AMU						O
Execution Processing State	DC0396 P	Pipelaying & connection, Pit 1 to 2	40 0	2/01/06	16/02/06	DC0394*													
Description Control									iliani.										├
Second Content	DC0402 B	Backfill & reinstate trench	57 1	2/05/06	19/07/06	DC0400*			Elizabeth .					<u> </u>			-		L
	elektrik aratan grani masa di	No.5 Structure																	
						. 	J 18	<u> </u>					-						
Comment Comm	DC0306 P	Permanent H -piles (21nos)	90 0	2/12/05	17/03/06	DC0304*	E131												
DOCATE Docate Annual Registering Doc 10 10 10 10 10 10 10 1	the state of the state of	Proof Load Test (1 nos.)	30 1	8/03/06	22/04/06	DC0306*		10000	-								;		H
December	DC0312 Ir							1 1	2003										
			_																
Section Control Cont	DC0318 E	xcavation & temp. supporting, 1/2 depth, south							100										
DODGES Process Come, Buyled 93 93 93 93 93 93 93 9		The state of the s	30 2	3/06/06	21108100	DC0310, DC0342	-	 		7									H
CODIST Content No. 97 a. 1																			
Cooperation	DC0326 B	Base slab, Bay 1 & 3	40 2	3/10/06	07/12/06	DC0322, DC0324*,	ľ			Ī									
Special Content Special Co											-								
DODASS Wate Nature DOSAS	Superstructu	ure				<u> Augustos (jousies)</u>													Г
EAST Instructions Spework, Bill, Items** Sp. 68/1009 19/007 10/0079 10/007	DC0356 V	Vall, Bay 163	30 3	1/03/07	05/05/07	DC0354*						ļ							
										\dashv									H
	DC0374 P	Plumbing & plpework, incl. testing																	
CODIEST Content believe 14 Content C	External Wor	rks								+				<u> </u>					-
COCCUST Prints Approved, Supply provided by death of 1,000007 1,000007													_						
December Please multi-partifipressed around Final Section Facilitation (Flamber 1877	DC0414 C	Concrete butterfly pit & flowmeter chamber 5&6	30 0	4/05/07	09/06/07	DC0410*					}								
Final Sedimentation Tank (Post Fourious) Clarambe (Sed Miretation) (Internation platform etc.) 23 (2000/07 (160707) (200305) (200202) (200														Г					
	Section recognition in the Pro-	trautikon, ekstekotekotabuka birketuri ilikee ilikairi ere eli esi. 1																	Г
			23 2	0/06/07	16/07/07	DC0358*								SE			-		
COS420 Completion of the Section 2	DC0426 P	Place alum. flooring & install handrailing	20 1	7/07/07	08/08/07	DC0422*													
COCINCE Completion of the Section 2 0 25/00/07 DOA418, DOCA50*																			
Sinch Section Software Sof	Key Date																		
Sinch Section Software Sof	DC03K2 IC	Completion of the Section 2	[o		25/09/07	DC0418, DC0430*									•				
Code				spille keis	rr, tiggin														
Cock43		entation Tank Nos. 9			1127710777														
DOCH430 Permanent H-piles, 21 nos. 1.02 24/12/05 12/05/05 DOCH444* DOCH445*		Bl Works (predrilling & reporting)	50 2	1/10/05	17/12/05	DC0302*													
DODGS Proof Laud Test (Inox) 30 1305/06 17/06/08 DODGS DODGS								2200											
DCO442 Install temp. relatining wall (sheetpile) 50 13/05/06 DC0449		Proof Load Test (1nos)																	L
Stockers			50 1	3/05/06	12/07/06	DC0436*													
CoCH43	DC0444 E	xcavation																	L
DC0433 PilecapsBase slab, cast in pipe 50 15f11/16 1301/17 DC0431*			45 2	2/09/06	14/11/06	DC0444*													
DC0437 Internal finishing 40 28/03/07 1205/07 DC4435* DC4435* DC4538 Water retaining test 40 14/18/07 20/06/07 DC4435* DC4538* DC4538 DC4538*	DC0433 P	Pilecaps/Base slab, cast in pipe									BARRE .								
DC0441 Backfill & remove temp. retaining wall 40 3006007 1508007 DC0459*			40 2	6/03/07	12/05/07	DC0435*											 		
Final Sedimentation Tank Nos. 10 Foundation CDC0456 Preliminary H-piles (1nos) DC0458 Preliminary H-piles (1nos) DC0458 Preliminary H-piles (1nos) DC0458 Permanent H-piles (4nos.) DC0458 Permanent H-piles (4nos.) DC0458 Permanent H-piles (4nos.) DC0468 Proof Load Tres (1nos) 45 0410/06 25/11/06 DC0458* DC0462 Install temp. retaining wall (sheetpile) DC0464 Exavarition GC0256 Pipelaying, surrounding GC0464 Pipelaying, surrounding GC0464 Pipelaying, surrounding GC0465 Pipelaying, surrounding GC0466 Pipelaying, surrounding GC0467 Vival concrete DC0468 Pipelaying, surrounding GC0468 Pipelaying, surrounding GC0470 Vival concrete GC0470										-	-		ERES			<u> </u>			\vdash
DC0456 Perlittinary H-piles (11nos)	e in a reconstruction of	A CONTRACTOR OF THE PROPERTY O																	Г
DC0458 Permanent H-piles (41 nos.) 120 1305/06 03/1006 DC0458* DC0458 DC0458 DC0458 DC0458 DC0458 DC0458* DC0458* DC0462* DC04			4011	9/12/05	03/02/08	IDC0432*	0												
Earthworks	DC0458 P	Permanent H-piles (41nos.)	120 1	3/05/06	03/10/08	DC0436*, DC0456	 												
DC0462	and the second second second	and the contract of the contra	45 0	4/10/06	25/11/06	DC0458*	1			6 3	100 E								\vdash
Substructure	DC0462 Is	nstall temp. retaining wail (sheetpile)																	
DC0466 Pipelaying, surrounding 60 04/10/05 13/12/06 DC0464* DC0468 Pipelaying, surrounding 60 04/10/05 23/02/07 DC0466* DC0470 Wall concrete 60 24/02/07 05/05/07 DC0466* DC0472 Internal finishing 40 07/05/07 23/06/07 DC0470* DC0474 Water retaining test 40 25/06/07 26/06/07 DC0470* DC0476 Backill & remove temp. retaining wall 40 10/08/07 26/06/07 DC0470* DN05/Section 3 of Works RAS/SAS Pumping Station - Main Station/Switch Rm Foundation DC0502 Gl works (predrilling & reporting) 26 14/11/05* 13/12/05 DC0504 Permanent H-pile (6nos.) 70 29/03/06 21/06/06 DC0206*, DC0502 Earthworks DC0506 Install temp. retaining wall (sheetpile) 30 22/06/06 27/07/06 DC0506* DC0508 Excavation 60 28/07/06 DC0506* DC0508 Excavation 60 28/07/06 DC0506* DC0518 Concrete structure up to Lev. 7.4mPD 30 16/11/08 20/12/06 DC0516* DC0520 Concrete structure up to Lev. 7.4mPD 30 21/12/08 26/01/07 DC0516* DC0520 Concrete structure up to roof 30 21/12/08 28/01/07 DC0516*	en com este con la	THE REPORT OF THE PARTY OF THE	60 2	5/07/08	D3/10/06	1DC0462*	 		_										\vdash
DC0470 Wall concrete 50 24/02/07 05/05/07 DC0468* DC0472 Internal finishing 40 07/05/07 25/05/07 DC0470* DC0474* Water retaining test 40 25/05/07 DC0470* DC0472* DC0474* Backfill & remove temp, retaining wall 40 10/08/07 26/09/07 DC0470* DC0474* DC0558* DC0558* DC0558* DC0559*	DC0466 P	Pipelaying, surrounding								ř	المناجة	الالوزور					1		
DC0472			60 2	4/02/07	05/05/07	DC0468*													
DC0474 IVater letaining test	DC0472 Ir	ntemal finishing																	
RASISAS Pumping Station - Main Station/Switch Rim Foundation																			L
Foundation	harrier between the		300000000	000000	programisada openymeisada		ļ l												
DC0502 Gl works (predrilling & reporting) 26 14/11/05* 13/12/05	THE PROPERTY OF THE PARTY OF TH		0													ŀ			
Concrete structure Concrete structure up to roof 30 21/12/08 25/01/07 DC0516* DC0520 Concrete structure up to roof 30 21/12/08 25/01/07 DC0516* DC0518* DC0520 Concrete structure up to roof 30 21/12/08 25/01/07 DC0516* DC0518* DC0520 Concrete structure up to roof 30 21/12/08 25/01/07 DC0516* DC0518* DC0518* DC0520	DC0502 G	GI works (predrilling & reporting)					-										l		
DC0506 Install temp. retaining wall (sheetpile) 30 22/05/06 27/07/06 DC0504*			70 2	9/03/06	21/06/06	DC0206", DC0502	-	-										-	+
Substructure DC0518 Pilecaps/lie beams 30 12/10/05 15/11/06 DC0508* DC0518 Concrete structure up to Lev. 7.4mPD 30 16/11/08 20/12/06 DC0516* DC0520 Concrete structure up to roof 30 21/12/08 26/01/07 DC0516, DC0518* DC0520	DC0506 II	nstall temp, retaining wall (sheetpile)																	
DC0516 Pilecaps/kie beams 30 12/10/06 15/11/06 DC0508*		the control of the co	60 2	8/07/06	U//10/06	DC0506-													+
Superstructure	DC0516 F	Pilecaps/tie beams								ļ									
DC0520 Concrete structure up to roof 30 21/12/08 26/01/07 DC0516, DC0518*			^{30 1}	ਰ/11/08	20/12/06	DC0916"		++	_		p militi					-			+
E-CM (INSTALLATION - 1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-	DC0520 C	Concrete structure up to roof	30 2	1/12/08	26/01/07	DC0516, DC0518*	1				E			ļ	ļ	-	-		+
DC0522 Pipewort/plumbing & opening 30 21/12/06 26/01/07 DC0518*			30 2	1/12/06	26/01/07	DC0518*	1		_	_ 1	E			L					

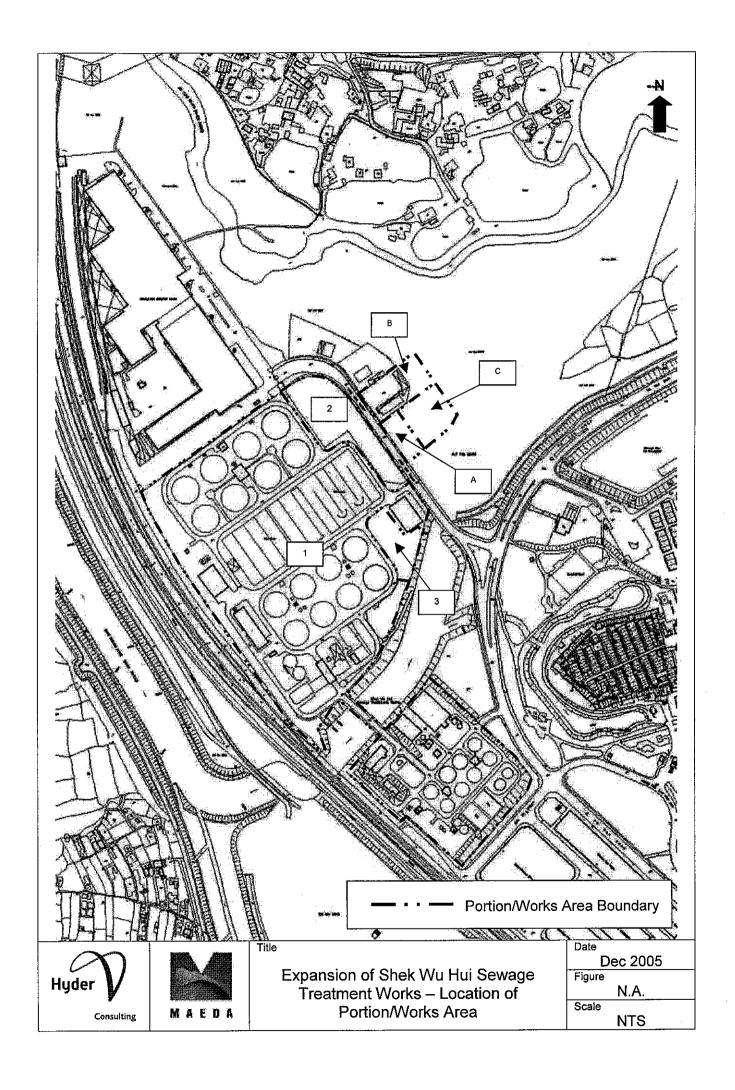
y · 1	Activity: Description: Internal/External finishes	Orig Early Dur Start 40 14/05/0		Predecessors	2005 EOND									2008 A M J ireneinn	JIAIS	O
DC0534 DC0536	Permanent Mini-pile (6nos.) Excavation, blinding, pilecaps Structural works	30 12/10/0 30 16/11/0	6 20/12/08	DC0508*, DC0532 DC0534*		E									l	
External Wo	Internat/External finishing Orks External manholes/pits construction Pipelaying, surround & connection	60 10/08/0	7 22/10/07	DC0472*, DC0536 DC0538*								 -				
Key Date	Backfill & reinstatement			DC0476, DC054200*	1 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7											-
BN06: Sed Sludge Pre	Completion of the Section 3 tion 4 of Works ss House Extension		24/11/0/	DC0441, DC056200*	99											T
DC0612 I	GI works (pre-drilling & reporting) Preliminary mini piling (1nos) Permanent Mini-pilas (17nos.)	30 31/12/0 100 03/01/0		DC0610* DC0612*												
DC0518 External Wo	Proof load test Utility Diversion priks (FeCI3 tank relocation) Construction new FeCI3 storage tank	30 01/05/0 150 14/11/0 20 13/07/0	5 09/05/06	DC0610*				•••								_
Earthworks DC0630	Relocate the FeCl3 storage tank Demolition of existing FeCl Storage tank Demolition of existing wall, Sludge Press House	30 22/09/0	6 21/09/06 6 27/10/06 6 01/12/06	DC0624*												_
DC0634 DC0636 Superstruct	Excavation & pilecaps, 10 nos. Backfill & compaction ture	30 02/12/0 30 09/01/0	6 08/01/07 7 12/02/07	DC0632* DC0634*						_						-
DC0840 Internal Fini	Structre up to 1st floor Structre up to mod Ishes Internal finishes works & openings	50 13/04/0 30 13/06/0	7 17/07/07	DC0640*						· · · · · · · · · · · · · · · · · · ·						
E&M Installa	Pipework & ducting	100 13/02/0		DC0644, DC0648, DC0650*												_
DC0650 I	External finishes works additioning Tank No.3		7 28/07/07							En.						
DC0670	Gl works (pre-drilling & reporting) Permanent Mini-piles (6nos.) Proof (oad test (1/2Nos.)	60 14/12/0	5 13/12/05 5 22/02/06 8 05/06/06	DC0666*		1000 E	1880		-							
DC0676 DC0678	Install temp. retaining walls (sheetpile) Excavation Backfill & rockfill underneath pit	30 13/06/0	6 12/07/06 7 17/07/07 7 06/02/08	DC0640*, DC0676							•	6				
DC0682 DC0684 External Wo		0 15/09/0	7 14/09/07													_
DC0658 DC0660	Pipelaying of pipeline No.11 & 12 Connection to existing systems Sump pit construction nditioning: Tank: No.4:		7 02/11/07 7 19/12/07 8 28/03/08	DC0656*			·					0.2	27.27			-
Foundation DC0702 DC0704		60 14/12/0	5 13/12/05 5 22/02/06 6 05/06/06	DC0702*				:							l	
Eartinworks DC0710 DC0712	Install temp. retaining walls (sheetpile) Excavation	30 07/08/0 30 13/06/0	6 12/07/06 7 17/07/07	DC0706* DC0640*, DC0710												T
Structure DC0716	Backfill & rockfill underneath pit Concrete works Installation: handrailing/ladders/mesh etc.	50 18/07/0	7 06/02/08 7 14/09/07 7 02/11/07	DC0712*												
	Sump pit construction Goods (cat.5) Storeroom	44 07/02/0	8 28/03/08	DC0714*		:						•	1783			l
DC0732 Superstruct DC0734	Excavation, rockfill & blinding ture Structures		7 31/07/07 7 28/09/07													ļ
	internal & external finishing Vaste storeroom No:1 & 2	45 29/09/0	7 22/11/07	DC0538, DC0734*							[
DC0742 Superstruc DC0744	Excavation, rockfill & blinding)7 31/07/07)7 28/09/07			1										+
Finishing DC0746 Key Date	Internal & external finishing	45 29/09/0	07 22/11/07	DC0744*								######################################				+
BN07: Sec	Completion of the Section 4 tion 5 of Works nelter to Existing Structure	D	28/03/08	3 D004*, DC0560*, DC0724*,									•			
DC0754	Shelter for UV channel Cover for Inlet Pumping Station Cover for Flume channels	24 13/06/0	07 29/09/07 07 10/07/07 07 11/08/07							-						

Activity ID	Activity Description	Orig Early Dur Start	Finish	Predecessors	DOMID	J FM	20 A M J I	JAS	ON D	J F M	AMJ minimum	promina	OND			JAS
C0758 C0760	Cover for Grit channels Cover for Sedimentation tank No. 1-8	28 11/07/0 50 02/10/0	7 11/08/07 7 29/11/07	7 DC0754* 7 DC0752*									MAKE A			
0762	Cover for Studge Hoarding Tank No. 1-4		7 30/01/08										_			
adwork																
0764	Portion 1		8 28/03/08													
0766 ft Lands	Portion 2&3 scaping Works	86 29/03/	8 10/07/08	3 DC0764*	 -											
																_
0770 0772	Planting works (Portion 2) Hydroseeding		08 12/08/08 08 19/08/08													
and the second	ment Works															
079200	General establishment works	30 20/08/	8 24/09/08	B DC0772*		i										
y Date		1 20 200														
:07K5	Completion of the Section 5	<u> </u>	24/00/05	B 1004*, 100772,									İ			
	g of Ting Kok Road Pumping Static	on No.5	24/04/0													
	ction 6 of Works															
mping S	Station		**************************************	14.7 (1.7 (1.7 (1.7 (1.7 (1.7 (1.7 (1.7 (1		İ				}						
0806	Initial Survey	22 27/09/0	5 24/10/05	5 D004*	-											
0808 0810	Site Clearance + Tree Felling		5 31/10/05 5 07/11/05													
0812	Hoarding Erection Demolition of Existing Boundary Wall (partial)	7 08/11/0	5 15/11/05	DC0810*	0											
0814 0818	G.I./Pre-drilling Prelim Pile (1no) (Pile Installation+Setting up)		05/12/05 05/12/05 05/21/01/06													
0820	Mini Piling (66 nos.)	90 08/12/	15 23/03/06	DC0818*			_									
0822 0830	Pile Load Test (1 nos) (Selection of Piles) Sheetpiling + Wailing + Excavation (ELS)		6 28/04/06 28/06/06			Ī										
0840 0842	Substructure Backfilling	125 29/06/0	6 24/11/06 6 20/11/06				İ									
0844	Superstructure (inc). roof)	75 25/11/0	6 22/02/07	DC0840*, DC0842												
0848 Instorm	Internal Finishes (Plumbing, Cat tadder, etc)	J 26 23/02/0	7 24/03/07	/ DC0844*							-					
0852 0854	Site Clearance+Tree Felling+Tree Transplanting G.I./Pre-drilling		5 05/12/05 5 05/12/05													
0856	Prelim Pile (1no) (Pile Installation+Setting up)	40 06/12/0	5 21/01/06	DC0852*, DC0854*						}					_	
0858 0860	Mini Piling (10 nos.) Pile Load Test (1 nos) (Selection of Piles)		05 23/03/06 06 28/04/06			ļ										
0862	Excavation (Open excavation) (2,05m depth)	26 29/04/0		DC0860*												
0864 0866	Substructure Backfilling	11 03/07/0	6 14/07/08	DC0864*				•_ <u> </u>								
:0868 :0870	Superstructure (incl. roof)		6 11/09/08 6 26/09/08													
	minimal i manos		_0,00,00		4									1		
y Date							- 1		Į.			;	1			
			6.15-5	/D0044 D000/04						_						
y Date :08K6 09: Sec	Completion of the Section 6	0	24/03/07	7 D004*, DC0848*, DC0870						•	•					
:08K6 09: Sec	Completion of the Section 6 ction 7 of Works Rising Mains (by Open Excavation)		24/03/07	7 D004*, DC0848*, DC0870						•						
08K6 09: Sec wers, R	ction 7 of Works Rising Mains (by Open Excavation)	0								•	•					
09: Sec wers, R 09922	ction 7 of Works Rising Mains (by Open Excavation) Initial Survey Documents Submission (eg. Pipeline Schedule)	0 0 24 25/10/4 120 02/11/4	05 21/11/05 05 22/03/06	DC0808*	V.					•	•					
08K6 09: Sec wers, R 0922 0924	ction 7 of Works Rising Mains (by Open Excavation) Initial Survey Documents Submission (eg. Pipeline Schedule) Laying Sewer MH8 - MH8 (7m)	24 25/10/4 120 02/11/4 10 28/04/4	05 21/11/05 05 22/03/06 06 09/05/06	5 DC0806* 5 DC0922* 5 DC0926*, DC0924	N/C		8			•	•					
09: Sec wers, R 09:22 09:24 09:26 09:28 09:28	ction 7 of Works Rising Mains: (by Open Excavation) Initial Survey Documents Submission (eg. Pipeline Schedule) Laying Sewer MH8 - MH5 (7m) Construct MH5 Construct MH6	24 25/10/ 120 02/11/ 10 02/14/ 30 10/05/ 30 10/05/	55 21/11/05 55 22/03/06 66 09/05/06 66 15/06/06 66 15/06/06	3 DC0806* 3 DC0922* 5 DC0905*, DC0924 5 DC0926*						•	•					
09: Sec wers, R 09:22 09:24 09:26 09:28 09:30	ction 7 of Works Rising Mains: (by Open Excavation) Initial Survey Documents Submission (eg. Pipeline Schedule) Laying Sewer MH8 - MH5 (7m) Construct MH5 Construct MH6 Laying Sewer MH5 - MH4 (32m)	24 25/10/4 120 02/11/4 10 28/04/4 30 10/05/4 30 10/05/4 20 16/06/6	55 21/11/05 55 22/03/06 66 09/05/06 66 15/06/06 66 15/06/06 66 10/07/06	3 DC0806* 3 DC0922* 5 DC0906*, DC0924 5 DC0926* 3 DC0926* 3 DC0928*			833			•	•					
08K6 09: Sec wers. R 0922 0924 0926 0928 0930 0932 0936 0938	ction 7 of Works Rising Mains: (by Open Excavation) Initial Survey Documents Submission (eg. Pipeline Schedule) Laying Sewer MH6 - MH5 (7m) Construct MH6 Construct MH6 Laying Sewer MH5 - MH4 (32m) Construct MH4 Laying Sewer MH4 - MH2 (8m)	24 25/10// 120 02/11// 10 02/11// 30 10/05// 30 10/05// 20 16/06// 17 11/07// 9 31/07//	05 21/11/05 05 22/03/06 06 09/05/06 06 15/06/06 06 15/06/06 06 10/07/06 06 09/08/06	5 DC0806* 5 DC0906* 5 DC0906*, DC0924 5 DC0926* 5 DC0926* 5 DC0926* 5 DC0928* 5 DC0932* 5 DC0938*			833	8		•						
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Activity	Activity	Orig	Earty	Early	Predecessors	2005 EOND	J FIM /	20 M J	06 JAS	OND	JEM	A M J	07 JJAS	OND	JEM	2008	JIA	sic
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Sewers, R	Rising Mains (by Trenchless)					âl l												
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DC0902	Working pits construction for TL1	20	23/03/06	15/04/08	DC0812, DC0924*	1	🛉	ı j							}		1	-
DC0906	Laying Sewer MH6 - MH5 (underteath box culvert)	10	17/04/06	27/04/06	DC0902*	1		•									ļ	
DC0908	Dismantling & Removal of Equipments (TL1)	15	28/04/06	16/05/06	DC0906*												l	-
DC0910	Working pits construction for TL2		17/05/06			7											i	
DC0912	Laying Rising Mains CH.0+30 - CH.0+25	20	10/06/06	04/07/06	DC0910*			82	١.									- 1
DC0914	Dismanting & Removal of Equipments (TL2)	15	05/07/06	21/07/06	DC0912*													\neg
DC0916	Working pits construction for TL3	12	22/07/08	04/08/06	DC0914*		i		23									- [
DC0918	Laying Rising Mains CH.2+19 - CH.2+14		05/08/06				i		100								İ	- 1
DC0920	Dismantling & Removal of Equipments (TL3)	8	18/08/06	26/08/06	DC0918*				Ø									
Remainin	g works of P/S & T/H						1											
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DC0952	Civil Works for E&M Installation (cable duct)	117	23/02/07	12/07/07	DC0844*	1					1500		4					
DC0954	External Finishes		26/03/07															
DC0956	Roofing Finishes		26/03/07			1					Į E	23		ĺ				
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External V			T	07/07/07	D004*, DC0952, DC0954,	41							•			-		
DC09K7	Completion of the Section 7	0		21101101	D004", DC0952, DC0954,	4	-						-	├				+
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All remair	ning works (Tai Po)					25								!				
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DC1012	E&M Installation (Pumping Station) (by others)	180	25/03/07	20/09/07	DC0848*	1							3.51					
DC1014	Testing & commissioning of Pumping Station	0	21/09/07		DC1012, DC1012*	1							4	×				
DC1016	E&M installation (Transformer House) (by others)	181	27/09/06	26/03/07	DC0870*													
DC1018	Testing & commissioning of Transformer House	0	27/03/07		DC1016*		i				4	•		i				
DC1020	Collection to existing F2	10	22/09/07	04/10/07	DC1014*, DC1032	71							1	ė .				ı
DC1022	Collection of existing sewer to MH1	10	22/09/07	04/10/07	DC1014*	1				i .				•	1			\top
DC1024	Demolition of existing pump pit	10	05/10/07	17/10/07	DC1020*, DC1022*	1								Œ				
DC1026	Grouting existing sewer/raising mains	33	18/10/07	24/11/07	DC1024*													
DC1028	Demolition of existing boundary wall	10	18/10/07	29/10/07	DC1024"	70								129				
DC1030	Boundary Wall construction	70	27/03/07	19/06/07	DC0848, DC1016*	1						:**.	1					
DC1032	External Cable duct & Drainage, Catchpit	67	20/06/07	05/09/07	DC1030*	TÍ.												寸
DC1034	Pavement works	60	20/06/07	28/08/07	DC1030*	7						1	ļumus —					
DC1036	Soft Landscaping works	35	06/09/07	19/10/07	DC1032*, DC1034	1							1	488		1		
DC1038	Establishment works	30	20/10/07	23/11/07	DC1036*	7										1		- [
DC1040	Completion of the Section 8	0		24/11/07	D004*, DC1016, DC1026*.	7 (1 1			1			l	•		1		- 1

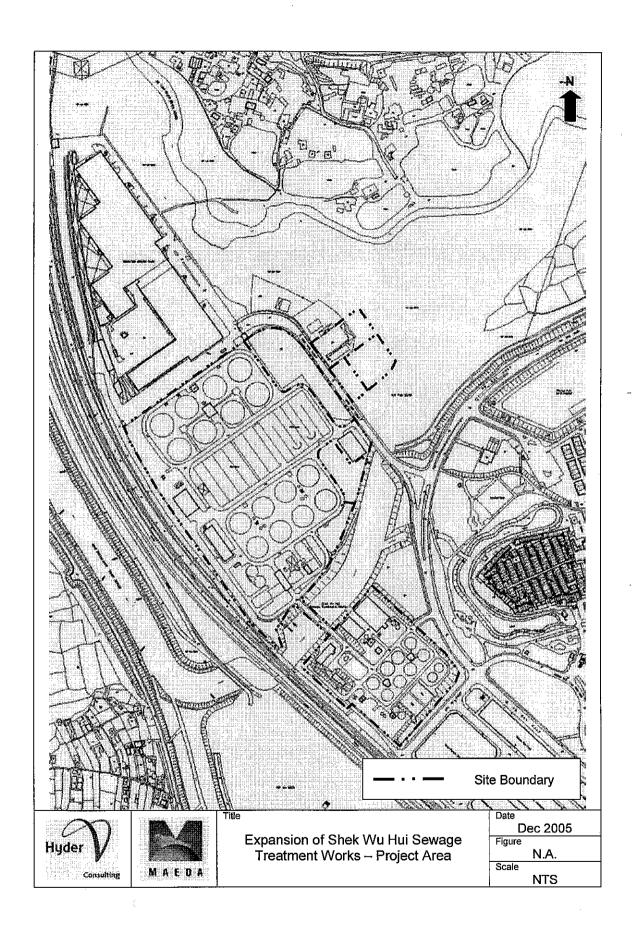


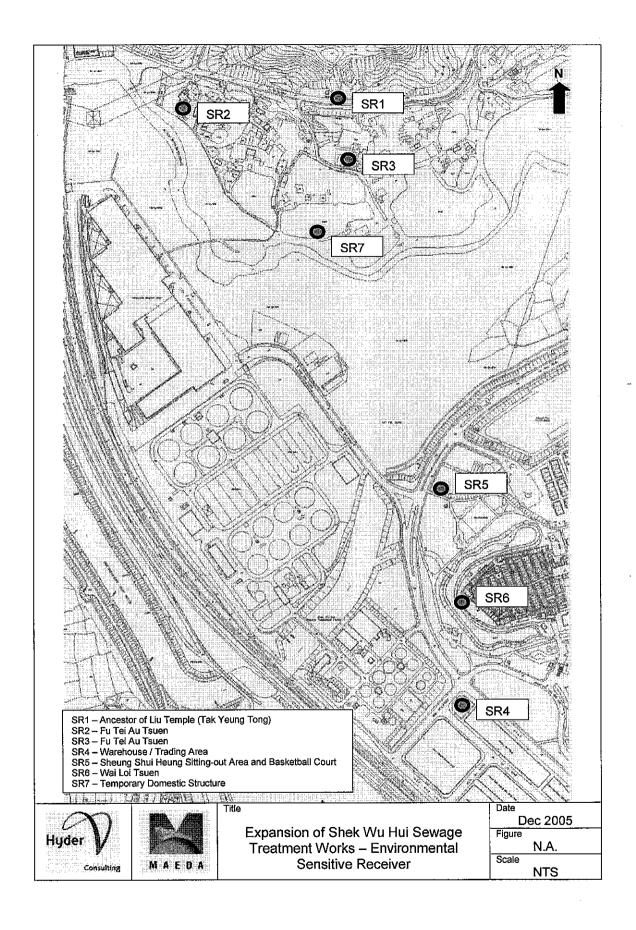
Works Area

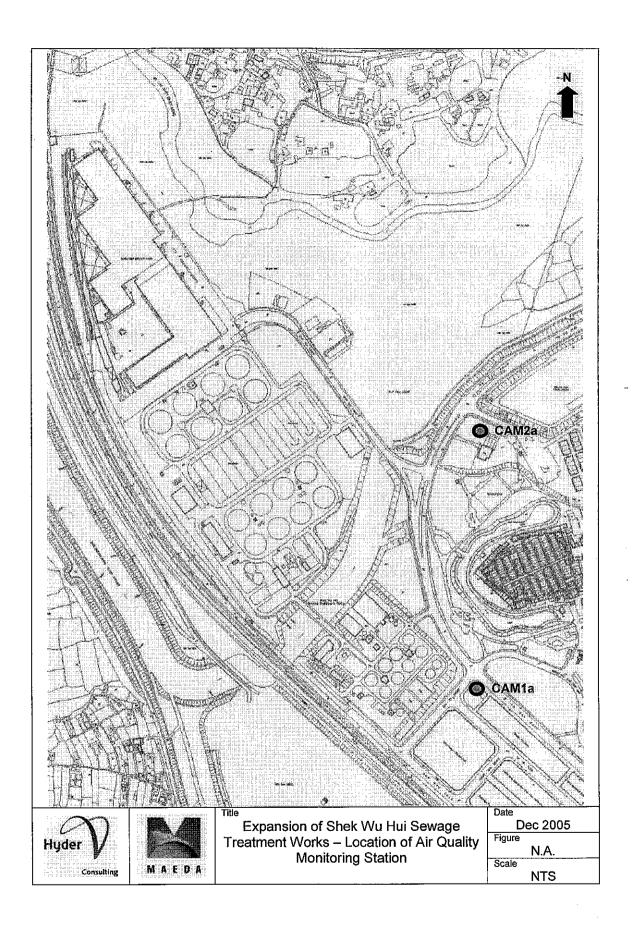


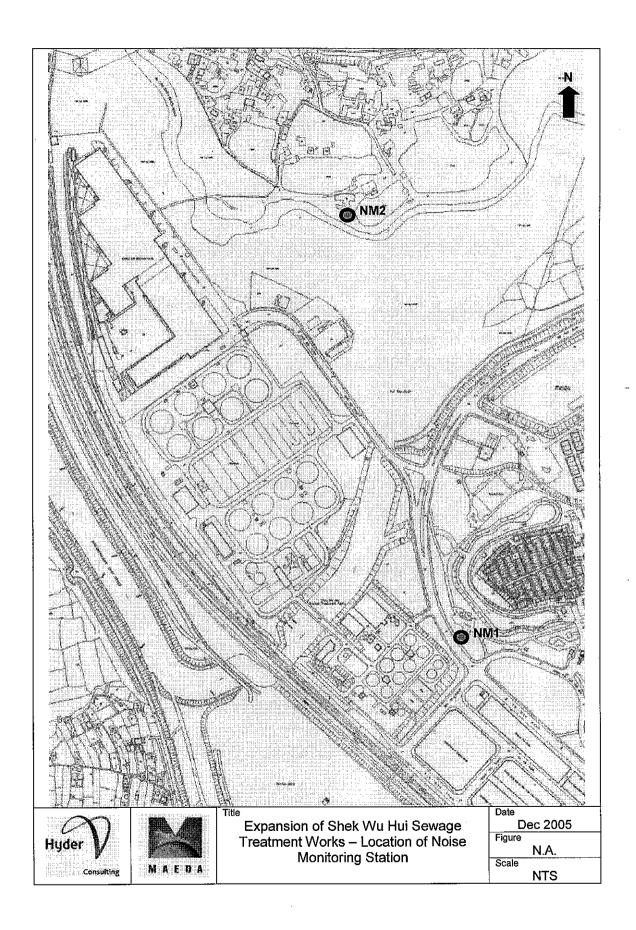


Project Area, Environmental Sensitive Receiver and Monitoring Location











Action and Limit Levels

Monitoring Station ID	1-hour TSP Le	vel in (µg/m³)	24-hour TSP Level in (μg/m³)						
	Action Level	Limit Level	Action Level	Limit Level					
CAM1a	342. 7	500	203.3	260					
CAM2a	340.2	300	201.6	200					

Action and Limit Levels for Air Quality

Time Period	Action Level	Limit Level
0700 – 1900 hours on normal weekdays	When one documented complaint is received	75 dB(A)

Action and Limit Levels for Noise



Environmental Requirements and Implementation Status

IMPLEMENTATIONS STATUS OF MITIGATION MEASURES

Implementation Status for Air Quality Control

PP Ref#	Environmental Protection Measures	Location / Timing	Implementation Agent	Implementation Status	Follow-up Action and Final Outcome
Annex I S1.7.1	Dust mitigation measures stipulated in the Air Pollution Control (construction Dust) Regulation shall be incorporated to control dust emission from the Site. Notice shall be given to the authority prior to commencement of works.	Works sites / during construction period	Contractor	Bare ground was found dry on 14 Dec 05.	The condition was rectified on 21 Dec 05.

[#] The section number in the Project Profile for Expansion of Shek Wu Hui Sewage Treatment works (Application No. DIR-121/2005)

Implementation Status for Water Quality Control

PP Ref#	Environmental Protection Measures	Location / Timing	Implementation Agent	Implementation Status	Follow-up Action and Final Outcome
Annex 2 S2.4.4	The practice outlined in Practice Note for Professional Persons on Construction Site Drainage, Professional Person Environmental Protection Department, 1994 (ProPECC PN 1/94) including the use of sediment traps, wheel washing facilities for vehicles leaving the site, adequate maintenance of drainage systems to prevent flooding and overflow, sewage collection and treatment, and comprehensive waste management (collection, handling, transportation, disposal) procedures should be adopted to minimize the potential water quality impact from construction site runoff and various construction activities.	Works sites / During the construction period	Contractor	Properly Implemented	N/A
Annex 2 S2.4.4	 At the start of site establishment, perimeter cut-off drains to direct off-site water around the site should be constructed and internal drainage works and erosion and sedimentation control facilities implemented. Channels, earth bunds or sand bag barriers should be provided on site to direct stormwater to silt removal facilities. The design of the temporary on-site drainage system will be undertaken by the contractor prior to the commencement of construction. The design of efficient silt removal facilities should be based on the guidelines in Appendix A1 of ProPECC PN 1/94, which states that the retention time for silt/sand traps should be 5 minutes under maximum flow conditions. Sizes may vary depending upon the flow rate, but for a flow rate of 0.1m³s⁻¹ a sedimentation basin of 30m³ would be required and for a flow rate of 0.5m³s⁻¹ the basin would be 150m³. The detailed design of the sand/silt traps will be undertaken by the contractor prior to the commencement of construction. Ideally, construction works should be programmed to minimize surface excavation works during the rainy season (April to September). All exposed earth areas should be compacted and vegetated as soon as possible after earthworks have been completed, or alternatively, within 14 days of cessation of earthworks where practicable. If excavation of soil cannot be avoided during the rainy season, or at any time of year when rainstorms are likely, exposed slope surfaces should be covered by tarpaulin or other means. 	Works sites / During the construction period	Contractor	Properly implemented as appropriate	N/A

PP Ref#	Environmental Protection Measures	Location / Timing	Implementation Agent	Implementation Status	Follow-up Action and Final Outcome
Annex 2 S2.4.4	 Construction Runoff and Drainage (Cont'd) The overall slope of the site should be kept to a minimum to reduce the erosive potential of surface water flows, and all trafficked areas and access roads protected by coarse stone ballast. An additional advantage accruing from the use of crushed stone is the positive traction gained during prolonged periods of inclement weather and the reduction of surface sheet flows. All drainage facilities and erosion and sediment control structures should be regularly inspected and maintained to ensure proper and efficient operation at all times and particularly following rainstorms. Deposited silt and grit should be removed regularly and disposed of by spreading evenly over stable, vegetated areas. Measures should be taken to minimize the ingress of site drainage into excavations. If the excavation of trenches in wet periods is necessary, they should be dug and backfilled in short sections wherever practicable. Water pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities. Open stockpiles of construction materials (for example, aggregates, sand and fill material) of more than 50m³ should be covered with tarpaulin or similar fabric during rainstorms. Measures should be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system. Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system and storm runoff being directed into foul sewers. Precautions to be taken at any time of year when rainstorms are likely, actions to be taken at any time of year when rainstorms are summarized in Appendix A2 of ProPECC PN 1/94. Particular attention should be paid to the control of silty surface runoff during storms events, especially for areas located near steep slop	Works sites / During the construction period	Contractor	 It was observed that silty wheel wash water drained into the existing manhole on 4 Jan 06. The gully opposite to Portion 3 was not properly sheltered on 18 Jan 06. Broken sandbags were observed along the existing U-channel at Portion 2 on 25 Jan 06. The cap of water barrier on site was found missing on 3 Feb 06. Broken gravel bags were found in the U channels close to manhole which was close to the slaughter house on 6 Feb 06. Wetsep and sedimentation tanks at Portion 2 were full of mud on 24 Feb 06. 	 The manhole was sealed as observed on 11 Jan 06. The gully opposite to Portion 3 was sheltered 21 January 2006. The Contractor reported that appropriate actions would be implemented to rectify the situation. The inlet of water barrier was sealed. The gravel bag in the U-channels was removed and the gravel bag along the U-channel was grouted by cement. Mud and silt in sedimentation tank and wetsep has been removed.

PP Ref#	Environmental Protection Measures	Location / Timing	Implementation Agent	Implementation Status	Follow-up Action and Final Outcome
Annex 2 S2.4.4	 Construction Runoff and Drainage All vehicles and plant should be cleaned before leaving a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. An adequately designed and sited wheel washing bay should be provided at every site exits and washwater should have sand and silt settled out and removed at least on a weekly basis to ensure the continued efficiency of the process. The section of access road leading to, and exiting from, the wheelwash bay to the public road should be paved with sufficient backfill toward the wheel-wash bay to prevent vehicle tracking of soil and silty water to public roads and drains. On-site drainage system should be equipped with oil interceptors to separate oil/fuel from contaminated storm water. 	Works site / During the construction period	Contractor	Muddy trails on DSD access road were identified on 14 Dec 05.	The condition was rectified on 21 Dec 05.
Annex 2 S2.4.4	 General Construction Activities Construction solid waste, debris and rubbish on site should be collected, handled and disposed of properly to avoid water quality impacts. All fuel tanks and storage areas should be provided with locks and sited on sealed areas, within bunds of a capacity equal to 100% of the storage capacity of the largest tank to prevent spilled fuel oils from reaching water sensitive receivers nearly. 	Works site / During the construction period	Contractor	Properly Implemented as appropriate	N/A
Annex 2 S2.4.4	Sewage from Construction Workforce Sewage from construction workforce should be handled by portable chemical toilets or sewage holding tanks with the sewage regularly collected by a reputable sewage collector for disposal at, for example, SWHSTW. Sewage from on-site toilets should be diverted to and stored within sewage holding tanks for later disposal.	Works site / During the construction period	Contractor	Properly implemented	N/A

[#] The section number in the Project Profile for Expansion of Shek Wu Hui Sewage Treatment works (Application No. DIR-121/2005)

Implementation Status for Waste Management

PP Ref#	Environmental Protection Measures	Location / Timing	Implementation Agent	Implementation Status	Follow-up Action and Final Outcome
S3.5.1	 Waste Reduction Measures of Construction Stage Measures recommended in the ETWB TCW No. 15/2003 should be followed to require the contractor to prepare and implement an enhanced Waste Management Plan (WMP) to encourage on-site sorting of C&D materials and to minimize their generation during the course of construction. For the demolition works, the contractor shall submit a method statement for the works as part of the WMP. The Contractor shall include in the method statement the sequence of demolition and the work programme to facilitate effective recovery of reusable and/or recyclable portions of the C&D materials at the earliest stage, so as to minimise the need for subsequent sorting. Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal. Separate labelled bins shall be provided to segregate aluminium cans from other general refuse generated by the work force, and to encourage collection of by individual collectors. Any unused chemicals or those with remaining functional capacity shall be recycled. Maximising the use of reusable steel formwork to reduce the amount of C&D material. Prior to disposal of C&D waste, it is recommended that wood, steel and other metals shall be separated for re-use and / or recycling to minimise the quality of waste to be disposed of to landfill. Proper storage and site practices to minimise the potential for damage or contamination of construction materials. Plan and stock construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste. Minimize over ordering of concrete, mortars and cement grout by 	Work site / During the construction period	Contractor	Properly implemented as appropriate	N/A

PP Ref#	Environmental Protection Measures	Location / Timing	Implementation Agent	Implementation Status	Follow-up Action and Final Outcome
Annex 3 S3.5.2 – S3.5.5	 Good Site Practices Nomination of approved personnel, such as a site manager, to be responsible for good site practices, ad making arrangements for collection of all wastes generated at the site and effective disposal to an appropriate facility. Training of site personnel in proper waste management and chemical waste handling procedures; Provision of sufficient waste disposal points and regular collection for disposal; Appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers; Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors; A Waste Management Plan should be prepare and should be submitted to the engineer for approval; and A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be proposed. In order to monitor the disposal of C&D material at landfills and public filling facilities, as appropriate, and to control fly tipping, a tripticket system should be included as one of the contractual requirements to be implemented by an Environmental Team undertaking the Environmental Monitoring and Audit work. The measures recommended in ETWB TCW No. 31/2004 should be followed. 	Work site / During the construction period	Contractor	 Cement works to seal the bottom of hoarding was being undertaken during the site inspection on 14 Dec 05. Some cement was deposited on public area. Oil drum without drip tray was observed at Portion 2 on 11 Jan 06 Oil leakage from drilling rig was observed on site on 3 Feb 06. It was observed that there was oil stain next to the diesel cap of the air compressor on 6 Feb 06. Accumulated water was observed in drip tray at Portion 2 on 24 Feb 06. 	The condition was rectified on 21 Dec 05. The oil drum was removed as observed on 18 Jan 06. The plant was checked and was filled before operation. The oil stain and contaminated soil were removed. Larvicide has been applied to the water in drip tray properly.
Annex 3 S3.5.6	 General Refuse General refuse should be stored in enclosed bins or compaction units separate from C&D material. A reputable waste collector should be employed by the contractor to remove general refuse from the site, separately from C&D material. An enclosed and covered area is preferred to reduce the occurrence of 'wind blown' light material; 	Work site / During the construction period	Contractor	General refuse was accumulated in the surface channel at the site office area on 28 Dec 05.	The condition was found rectified in Jan 06.

PP Ref#	Environmental Protection Measures	Location / Timing	Implementation Agent	Implementation Status	Follow-up Action and Final Outcome
Annex 3 S3.5.7	The C&D material generated from the site formation and demolition works should be sorted on-site into inert C&D material (that is, public fill) and C&D waste. In order to minimise the impact resulting from collection and transportation of C&D material for off-site disposal, the excavated material comprising fill material should be reused onsite as backfilling material as far as practicable. C&D waste, such as wood, plastic, steel and other metals should be reused or recycled and, as a last resort, disposed of to landfill. A suitable area should be designated within the site for temporary stockpiling of C&D material and to facilitate the sorting process.	Work site / During the construction period	Contractor	Concrete waste was found near the trees on 14 Dec 05.	The condition was rectified on 21 Dec 05.
Annex 3 S3.5.8	Chemical Wastes When chemical wastes are produced at the construction site, the Contractor would be required to register with the EPD as a Chemical Waste Producer and to follow the requirements stated in the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. Good quality containers computable with the chemical wastes should be used. Appropriate labels should be securely attached on each chemical waste container indicating the chemical characteristics of the chemical waste, such as explosives, flammable, oxidizing, irritant, toxic, harmful, corrosive, etc. The Contractor shall use a license wast collector to transport and dispose of the chemical wastes in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.	Work site / During the construction period	Contractor	Implemented in Feb06	N/A

[#] The section number in the Project Profile for Expansion of Shek Wu Hui Sewage Treatment works (Application No. DIR-121/2005)

Implementation Status for Noise Control

PP Ref#	Environmental Protection Measures	Location / Timing	Implementation Agent	Implementation Status	Follow-up Action and Final Outcome
Annex 4 S4.7.1	Use of quiet PME	Work sites / During the construction period	Contractor	Properly Implemented	N/A
Annex 4 S4.7.3	 Good Site Practice Only well-maintained plant should be operated on-site and plant should be services regularly during the construction phase; Silencers or mufflers on construction equipment should be utilised, if found necessary, to further reduce noise, and should be properly maintained during the construction phase; Mobile plant should be sited as far away from NSRs as possible; Machines and plant (such as trucks) that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum; Plant known to emit noise strongly in one direction, should, where possible, be orientated so that the noise is directed away from nearby NSRs; and Material stockpiles and other structures should be effectively utilised, wherever practicable, in screening noise from on-site construction activities. 	Work sites / During the construction period	Contractor	Properly Implemented	N/A

[#] The section number in the Project Profile for Expansion of Shek Wu Hui Sewage Treatment works (Application No. DIR-121/2005)



Appendix 7

Monitoring Results and Graphical Plots

Air Quality Impact Monitoring Results (1-Hour TSP) Dec 2005

Location	Monitoring Date	Weather Conditions	Wind Speed (m/s)	Wind Direction	Temp (oC)	Time (mins)	Flow-l (m3/min)		Flow-avg (m3/min)		Weight (g)	1-hr TSP (ug/m3)	Average 1-Hr TSP (ug/m3)	Action/Limit Levels (ug/m3)	Remark
San Po Street		Cloudy	2.1	S	15.5	64.2	1,550895	1.519145		98.55	0.0253	256.7		<u> </u>	
Pumping Station	14-Dec-05	Cloudy	2.5	S	15.5	68.4	1.582645			106.08	0.0266	250.8	252.1		1
CAM1a		Cloudy	2	S	15.5	78,0	1.550895	1.519145	1.53502	119.73	0.0298	248.9	<u> </u>		
		-	-	-	-	-	<u> </u>	-	•	-	_	-			
	20-Dec-05	•	-	-			-	-	-		-	•			HVS was out of order
		٠	-	-	-	-	-	. •	-	-	-	-		342.7/500	
		Cloudy	- 4	NE	13.6	60.6		1.456105		88.24	0.0214	242.5	1		
	22-Dec-05	Cloudy	2	NE	13.6	59.4		1.456105		87.39	0.0202	231.1	222.7		
l l		Cloudy	3.5	NE	13.6	59.4	1.486426	1.456105	1.471265	87.39	0.0170	194,5			
		Rainy	1.1	S	19.8	60.0	1.334823	1.304503	1.319663	79.18	0.0231	291.7			
	28-Dec-05	Rainy	2.7	S	19,8	58.8		1.304503		76.70	0.0222	289.4	280.6		
		Rainy	3.2	S	19.8	56.4		1.243862		71.01	0.0185	260.5			
Sheung Shui Heung		Cloudy	3	S	17	66.6	1.777714	1.718238		116.42	0.0237	203.6			
Floodwater	14-Dec-05	Cloudy	3.2	S	17	69.0		1.599286		109,32	0.0219	200.3	195.3		
Pumping Station		Cloudy	2.7	S	17	67,8	1.896666	1.747976		123.55	0.0225	182.1			
CAM2a		Fine	3,7	E	18.7	61.8	1.6885	1.658762		103.43	0.0186	179,8			
	20-Dec-05	Fine	3.6	E	18.7	60.0	1.53981	1.53981	1.53981	92.39	0.0146	158.0	162.7	340.2/500	
		Fine	3.5	E	18.7	61.8	1.420858	1.420858	1.420858	87.81	0.0132	150.3]	
		Rainy	0.4	S	19.3	58.2	1.658762	1.629024	1.643893	95.67	0.0220	229.9			
	28-Dec-05	Rainy	0.3	S	19.3	58,8	1.599286	1.569548	1.584417	93.16	0.0196	210.4	219.1		
,	1	Rainy	0.5	S	19.3	57.0	1.510072	1.480334	1.495203	85.23	0.0185	217.1			l

[&]quot;Shading" indicates an exceedance of Action Level. "Bold and shading" indicates an exceedance of Limit Level.

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Air Quality Impact Monitoring Results (1-Hour TSP) Jan 06

Location	Monitoring Date	Weather Conditions	Wind Speed with Direction (m/s)	Temp (oC)	Timer4	Timer-F	Time (mins)	Flow-l (CFM/ i Inches)		Flow-l (m³/mln)	Flow-F (m³/mia)	Flow-avg (m³/min)	(m³)	Weight-I (g)	Weight-f (g)	Weight-diff. (g)	1-hr TSP (µg/m³)	Average 1-Hr TS (ug/m3)	Action/Limit Levels (ug/m3)	Remark
San Po Street	1	Sunny	1,4NE	15	357805	357900	57.0	36	35	1,1832206	1,15290015	1.1680604	66.58	2.8782	2.8894	0.0112	168.2	J I		
Pumping Station	03-Jan-06	Sunny	1.4NE	15	357900	357997	58.2	37	36	1.2135411	1.18322064	1.19838089	69.75	2.8668	2.8772	0.0104	149,1	145.3		
CAM1A		Sunny	1.4NE	15	357997	358098	60.6	37	36	1.2135411	1.18322064	1.19838089	72.62	2.8515	2,8601	0,0086	118.4	1		
		Cloudy	0.5NE	14	360497	360595	58.8	37	37		1.21354113		71.36	3.5609	3.5786	0.0177	248.1			
	09-Jan-06	Cloudy	0,5NE	14	360595	360691	57.6	37	37		1.21354113		59.90	3,5574	3.5732	0.0158	226.0	234.5		
		Cloudy	0.5NE	14	360691	360785	56.4	38	37	1,2438616	1,21354113	1.22870137		3.5547	3,5706	0.0159	229,4			
		Fine	0.7N	14	413620	413721	60.6	32	32		1.11063888	1.11063888	67,30	2.8721	2.8838	0.0117	173.8	J I		
	14-Jan-06	Fine	0.7N	14	413721	413818	58.2	33	32	1.1412368	1.11063888		65,53	2.8590	2.8676	0.0086	131.2	140,2	342.7/500	
	1	Fine	0.7N	14	413818	413918	60.0	33	32	1.1412368	1.11063888	1.12593783	67,56	2.8482	2.8580	0.0078	115.5			
		Cloudy	1.0NE	20	416312	416407	57.0	34	33	1.1718346	1.14123677	1.15653571	65.92	2.843	2.8528	0.0098	148.7	I		
	20-Jan-06	Cloudy	1.0NE	20	416407	415511	62.4	33	32	1,1412368	1.11063888	1.12593783	70.26	2.8525	2.8601	0,0076	108,2	125.6		
		Cloudy	1.0NE	20	416511	416605	56.4	33	31	1.1412368	1.080041	1.11063888	62,64	2.8527	2.8604	0.0077	122.9			
		Cloudy	0.8N	16	418999	419098	59,4	32	31	1.1106389	1.080041	1.09533994	65,08	2.8768	2.8903	0.0135	207.5	I		
	26-Jan-06	Cloudy	0.8N	16	419098	419195	58.2	32	·32	1.1106389	1.11063888	1.11063888	64.64	2.8487	2,8598	0.0111	171.7	171.6		
		Cloudy	0.8N	16	419195	419288	55,8	32	32	1.1106389	1.11063888	1.11063888	61.97	2.8735	2.8819	0.0084	135.5			
heung Shui Heung		Sunny	1.8NE	15	493118	493216	58.8	41	40	1.4803343	1.45059625	1.46546525	86.17	2.8306	2,8415	0.0109	126.5	J I		
loodwater	03-Jan-05	Sunny	1.6NE	15	493216	493330	68.4	41	40	1.4803343		1.46546525	100.24	2.8680	2.8787	0.0107	106.7	111.9		
umping Station		Sunny	1.8NE	15	493330	493432	61,2	41	4	1.4803343	1.45059625	1.46546525	89.69	2,8657	2.8749	0.0092	102.6			
AM2a		Cloudy	1.5NE	14	495834	495929	57.0	40	40		1.45059625	1.45059625	82.68	3.5451	3,5599	0.0148	179.0	1 1		
	09-Jan-06	Cloudy	1.5NE	14	495929	496027	58.8	4	4		1.45059625	1.45059625	85.30	3.5667	3.5817	0.0150	175.9	173.6		
		Cloudy	1.5NE	14	496027	496124	58,2	4D	40	1.4505962	1.45059625	1.45059625	84.42	3,5536	3.5676	0.0140	165.6			
		Fine	1.8NE	14	498519	498618	59.4	40	4		1,45059625	1.45059625	86.17	2.8544	2.8634	0.0090	104.5	4 l	0.40/200	
	14-Jan-06	Fine	1,8NE	14	49861B	498717	59.4	40	40	1.4505962		1.45059625	86,17	2.8372	2.8440	9.0068	78.9	86.7	340/500	
		Fine	1.8NE	14	498717	498816	59.4	40	40	1.4505962		1.45059625	56.17	2.8548	2.8614	0.0066	76.6			
		Cloudy	0.5NE	.20	500083	500178	57.0	31	31		1,18295417	1.18295417	67.43	2.8699	2.6779	D,008D	118.6			
	20-Jan-06	Cloudy	0.5NE	20	500178	500276	58.6	33	32		1.21259218	1.22756119	72.18	2.8606	2,8661	0.0055	76.2	95.4		1
		Cloudy	0.5NE	20	500276	500375	59,4	32	31		1.18295417	1.19782316	71.15	2.8552	2.8617	0.0065	91.4			
		Cloudy	1.5N	17	502771	502868	58.2	34	34	1.2721682	1.2721682	1.2721682	74.04	2.8448	2.8536	0.0088	118.9			
	26-Jan-06	Cloudy	1.5N	17	502868	502968	60,0	34	34	1.2721682		1.2721682	76.33	2.8897	2.8978	0.00B1	106,1	111.2		1
	1	Cloudy	1,5N	17	502968	503062	56.4	34	33	1.2721682	1.24243019	1.25729919	70.91	2.8602	2.8679	0.0077	108.6			

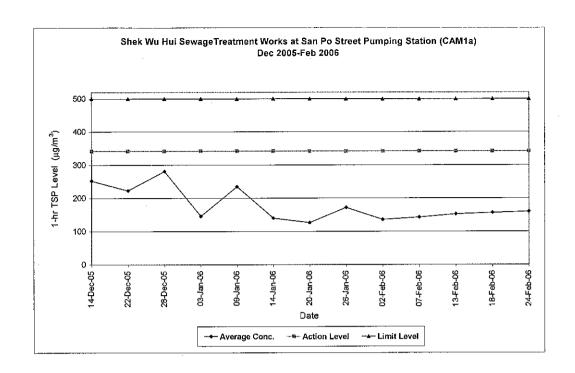
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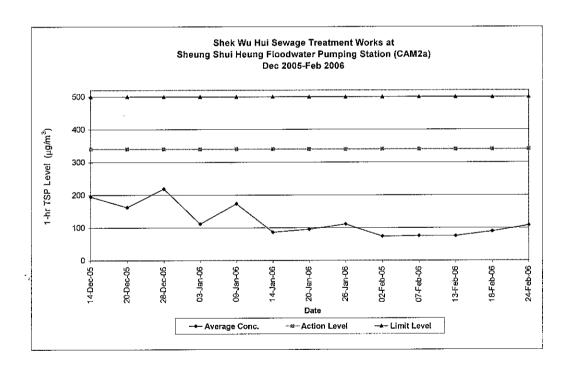
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Air Quality Impact Monitoring Results (1-Hour TSP) Feb 06

Location	Monitoring Date	Weather Conditions	Wind Speed with Direction (m/s)	Temp (oC)	Timer-I	Timer-F	Time (mins)	Flow-I (CFM/ Inches)	Flow-F (CFM/ Inches)	Flow-l (m ³ /min)	Flow-F (m ³ /min)	Flow-avg (m³/mln)	Volume (m³l	Weight-I (g)	Weight-f (g)	Weight-diff. (g)	1-hr TSP (ug/m³)	Average 1-Hr TSP (ug/m³)	Action/Limit Levels (ug/m²)	Remark
San Po Street Pumping Station CAMIA	02-Feb-06	Fine Fine Fine	0.1N 0.1N 0.1N	21 21 21	421581 421778 421878	421778 421878 421972	58.2 60.0 56.4	32 33 33	32 33 32	1.11 1.14	1.11 1.14	1.11 1.14 1.13	64.67 68.48 63.52	2.8611 2.8632 2.8465	2,8694 2,8731 2,8550	0.0083 0.0099 0.0085	128.4 144.6 133.8	135.6		
GWIR	07-Feb-06	Fine Fine	0.1NE 0.1NE 0.1NE	21.5 21.5 21.5	424365 424466 424568	424466 424568 424667	60,6 61,2 59,4	30 31 30	30 30 30	1.05 1.08	1.05 1.05	1.05 1.07	63.68 65.23 62.41	2.8717 2.8555 2.8779	2.8816 2.8656 2.8852	0.0099 0.0101 0.0073	155.5 154.8 117.0	142.4		
	13-Feb-06	Sunny Sunny Sunny	0.5NE 0.5NE 0.5NE	20.5 20.5 20.5	427060 427154 427250	427154 427250 427351	58.4 57.6 60.6	32 32 32	32 32 31	1.11	1.11	1,11 1.11 1.10	62.67 64.00 66.42	3.6164 3.6072 3.6348	3.6287 3.6166 3.6424	0.0123 0.0094 0.0076	196,3 146,9 114,4	152.5	342.7 <i>f</i> 500	
	18-Feb-05	Rainy Rainy Rainy	0.3N 0.3N 0.3N	19.5 19.5 19.5	429747 429847 429940	429847 429940 430045	60.0 55.8 63.0	33 32 32	32 32 32	1.14 1.11 1.11	1.11 1.11 1.11	1.13 1,11 1.11	67,57 62.00 70.06	2,8756 2,8644 2,8539	2.8963 2.8698 2.8592	0.0207 0.0054 0.0053	306.3 87.1 75.7	156,4		
	24-Feb-06	Cloudy Cloudy Cloudy	0.8N 0.8N	23.4 23.4 23.4	432440 432540 432640	432540 432640 432740	60.0 60.0	32 32 32	32 32 32	1.11 1.51 1.11	1.11 1.11 1.11	1,11	66.67 66.67	2,8701 2,8616 2,8612	2.8836 2.8709 2,8703	0.0135 0.0093 0.0091	202.5 139.5 136.5	159.5	e .	
Sheung Shui Heung Floodwater Pumping Station	02-Feb-06	Fine Fine Fine	0.2N 0.2N 0.2N	21 21 21	505455 505550 505650	505550 505650 505745	57.0 60.0 57.0	32 33 33	32 33 32	1.21 1.24 1.24	1.21 1.24 1.21	1.21 1.24 1.23	69.07 74.47 69.91	2.8583 2.8449 2.8640	2.8635 2.8498 2,8597	0.0052 0.0049 0.0057	75.3 65.8 81.5	74.2		
CAM2a	07-Feb-06	Sunny Sunny Sunny	0.5NE 0.5NE	21 21 21	508139 508235 508338	508235 508338 508442	57.6 61.8 62.4	32 32 32	32 32 32	1.21 1.21 1.21	1.21 1.21 1.21	1.21 1.21 1.21	69,80 74.89 75.62	2.8653 2.8455 2.8451	2,8714 2,8519 2,8492	0.0061 0.0064 0.0041	87.4 85.5 54.2	75.7		
	13-Feb-06	Sunny Sunny Sunny	1.0NE 1.0NE 1.0NE	20,1 20,1 20,1	510836 510929 511028	510929 511028 511127	55.8 59.4 59.4	32 32 32	32 32 30	1.21 1.21 1.21	1.21 1.21 1.15	1.21 1.21 1.18	71,98 70.24	3.5599 3.5969 3.6039	3.5654 3.6025 3.6086	0.0056 0.0056 0.0047	81.3 77.6 66.9	75.4	340/500	
	18-Feb-06	Rainy Rainy Rainy	0.8N 0.8N 0.8N	19.5 19.5	513521 513623 513718	513623 513718 513824	61.2 57.0 63.6	32 32 32	32 32 32	1.21 1,21 1.21	1,21 1,21 1,21	1.21 1.21 1.21	74.16 69.07 77.07	2.8412 2.8574 2.8703	2.8544 2.8597 2.8747	0.0132 0.0023 0.0044	178.0 33.3 57.1	69.5	!	
<u> </u>	24-Feb-06	Cloudy Cloudy Cloudy	0.1N 0.1N 0.1N	23.4 23.4 23.4	516220 516320 516420	516320 516420 516520	60.0 60.0 60.0	32 32 32	32 32 32	1.21 1.21 1.21	1.21 1.21 1.21	1.21 1.21 1.21	72.71 72.71 72.71	2.8554 2.8682 2.8656	2.8676 2.8748 2.8703	0.0122 0.0066 0.0047	167,8 90.8 64,6	107.7		

[&]quot;Shading" indicates an exceedance of Action Level. "Bold and shading" indicates an exceedance of Limit Level.





Air Quality Impact Monitoring Results (24-Hour TSP) Dec 05

Location	Monitoring Date	Weather	Wind	Wind	Temp	Timer-I	Timer-F	Time (mins	Flow-l	Flow-F	Volume	Weight-I (g)	Weight-f (g)	Weight. (g)	24-hr TSP	Action/Limit	Remark
		Conditions	Speed (m/s)	Direction	(oC)				(m³/min)	(m³/min)	(m³)				(ug/m³)	Levels (ug/m³)	
San Po Street	14-Dec-05	Cloudy	2	S	15.5	450429	452824	1437	1,55	1.55	2228.64	2.8834	2.956	0.0726	32.6		
Pumping Station	20-Dec-05	-	-	-	-	-	-	-	-	-		-	-	-	-	203.3/260	HVS was out of order
CAM1a	22-Dec-05	Cloudy	5.2	NE	13.6	352720	355116	1437.6	1.49	1.49	2136.89	2.8767	3,0838	0.2071	96.9	203.3/200	
	28-Dec-05	Rainy	1.2	·s	19.8	355410	357805	1437	1.18	1.06	1613.15	2,8686	2.9483	0.0797	49.4		
Sheung Shui Heung	14-Dec-05	Cloudy	2.5	S	17	481275	483671	1437.6	1.78	1.75	2534,27	2.8644	3.3454	0.481	189.8		
Floodwater	20-Dec-05	Fine	3.5	E:	18.7	483978	486373	1437	1.78	1.78	2554.58	2.8839	3.1779	0.294	115,1	201.6/260	
Pumping Station CAM2a	28-Dec-05	Rainy	0.2	S	19.3	488693	491090	1438,2	1.68	1.68	2413.15	2.8689	3,0698	0.2009	83.3		

[&]quot;Shading" indicates an exceedance of Action Level, "Bold and shading" indicates an exceedance of Limit Level.

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Air Quality Impact Monitoring Results (24-Hour TSP) Jan 06

Location	Monitoring Date	Weather	Wind Speed	. Temp	Pressure	Timer-I	Timer-F	Time (mins)	Flow-l	Flow-F	Flow-I	Flow-F	Flow-avg	Volume	Weight-I (g)	Weight-f (g)	Weight-diff. (g)	24-hr TSP	Action/Limit	Remark
		Conditions	with Direction	(oC)	(mmHg)				(CFM/	(CFM/	(m³/min)	(m³/min)	(m³/min)	(m³)	1 .			(ug/m³)	Levels	
			(m/s)						Inches)	Inches)							i		(ug/m³)	
San Po Street	03-Jan-06	Sunny	1.4NE	15	762.9	358098	360497	1439,4	36	. 36	1.18	1.18	1.18	1703.13	2.8743	2,9386	0,0643	37,8		
Pumping Station [09-Jan-06	Cloudy	0.5NE	14	766.3	360785	363180	1437	37	37	1.21	1.21	1.21	1743.86	3,5608	3.6674	0.1066	61.1		
CAM1a [14-Jan-06	Fine	0.7N	14	762.1	413918	416312	1436.4	33	32	1.14	1.11	1.13	1617.30	2.8557	3.0697	0.214	132.3	203/260	
[20-Jan-06	Cloudy	1.0NE	20	760	416605	418998	1435.8	34	33	1.17	1.14	1.16	1660.55	2.842	2.9437	0,1017	61,2		***
*	26-Jan-06	Cloudy	D.BN	16	767.1	419288	421681	1435.8	32	32	1.11	1.11	1.11	1594.66	2.8562	3.0469	0.1907	119.6		The second of the second of
Sheung Shui Heung	03-Jan-06	Sunny	1.8NE	15	762.9	493432	495832	1440	41	41	1.48	1.48	1.48	2131.68	2.8894	3.0481	0.1587	74.4		
Floodwater	09-Jan-06	Cloudy	1.5NE	14	766.3	496124	498518	1436.4	41	40	1.48	1.45	1.47	2104.99	3.5612	3.9599	0.3987	189.4		7
Pumping Station	14-Jan-06	Fine	1.8NE	14	762.1	498816	500081	759	40	40	1.45	1.45	1.45	1101.00	2.8415	2.9274	0.0859	78.0	201/260	
CAM2a	20-Jan-06	Cloudy	0.5NE	20	760	500375	502770	1437	33	32	1.24	1,21	1.23	1764.01	2.8543	2.91	0.0557	31.6		
	26-Jan-06	Cloudy	1.5NE	17	767.1	503062	- 505455	1435.8	34	33 -	1.27	1.24	1.26	1805.23	2.8614	3.006	0.1446	80.1		And the state of t

"Shading" indicates an exceedance of Action Level. "Bold and shading" indicates an exceedance of Limit Level

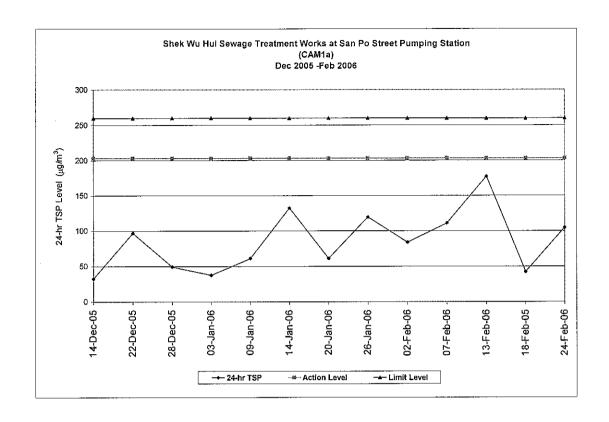
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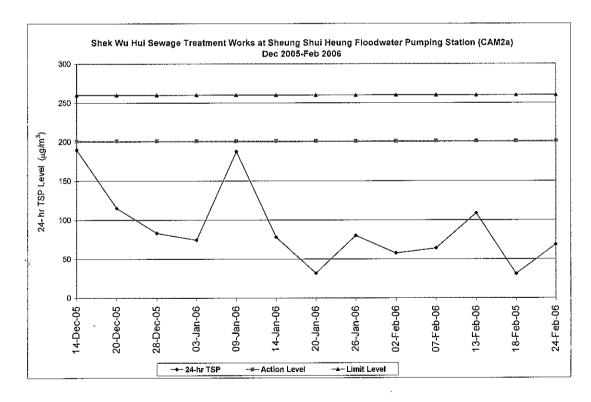
Air Quality Impact Monitoring Results (24-Hour TSP) Feb 06

Location	Monitoring Date	Weather	Wind Speed	Тетр	Pressure	Timer-1	Timer-F	Time (mins)	Flow-l	Flow-F	Flow-I	Flow-F	Flow-avg	Volume	Weight-I (g)	Weight-f (g)	Weight-diff. (g)	24-hr TSP	Action/Limit	Remark			
		Conditions	with Direction	(oC)	(mmHg)				(CFM/	(CFM/	(m³/min)	(m³/min)	(m³/min)	(m³)				(ug/m³)	Levels				
			(m/s)						inches)	inches)							·		(ug/m³)				
San Po Street .	02-Feb-06	Fine	0.1N	21	766.7	421972 -	424367	1437	33	33	1.14	1.14	1.14	1640.03	2.8729	3.0104	0.1375	83.8					
Pumping Station	07-Feb-06	Fine	0.1N	21,5	766,3	424667	427060	1435.8	30	30	1.05	1.05	1.05	1508.68	2.8505	3.018	0.1675	111.0	203/260	i	i	ı	
CAM1a	13-Feb-06	Sunny	0.5NE	20.5	764.2	427351	429427	1245.6	32	32	1,11	1.11	1.11	1384.00	3.584	3.8292	0.2452	177.2					
	18-Feb-05	Rainy	0.3N	19,5	765,7	430045	432440	1437	32	33	1.11	1.14	1.13	1618.35	2.8603	2.9286	0,0683	42.2		L			
	24-Feb-06	Claudy	0.8N	23.4	759.6	432740	435133	1435,8	32	32	1.11	1.11	1.11	1595.33	2.8261	2.9931	0.167	104,7					
Sheung Shui Heung	02-Feb-06	Fine	0.2N	21	766,7	505745	508141	1437.6	33	32	1.24	1.21	1.23	1763.17	2.8588	2,9604	0,1016	57.6					
Floodwater	07-Feb-06	Sunny	0.5NE	21	766.3	508442	510835	1435.8	32	32	1.21	1.21	1.21	1739.91	2.8319	2.9429	0.111	63,8	•				
Pumping Station	13-Feb-06	Sunny	1.0NE	20.1	764.2	511127	513522	1437	32	31	1.21	1,18	1,20	1720,29	3,6152	3.8027	0.1875	109.0	201/260				
CAM2a	18-Feb-05	Rainy	0.8N	19.5	765.7	513824	516220	1437,6	32	31	1.21	1.18	1.20	1721.01	2.8516	2.9046	0,053	30.8					
	24-Feb-06	Cloudy	0.1N	23.4	759.6	516520	518917	1438,2	32	32	1.21	1.21	1.21	1742.82	2.8556	2.9751	0,1195	68.6					

"Shading" indicates an exceedance of Action Level. "Bold and shading" indicates an exceedance of Limit Level.

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Noise Impact Monitoring Results (Dec 05)

Monitoring Locations	Date	Weather	Temperature	Wind Speed	Wind	Start Time	End Time	Limit Levels	L _{eq(30min)}	L _{10(30min)}	L _{90(30min)}	Remark
		Conditions	(°C)	(m/s)	Direction			dB(A)	dB(A)	dB(A)	dB(A)	
Wai Loi Tsuen	14-Dec-05	Cloudy	14.7	0.9	S	10:00	10:30	75	65.8	67.5	58.5	
NM1	20-Dec-05	Sunny	18.7	2.4	E	10:10	10:40		60.6	63.0	56.5	
	28-Dec-05	Cloudy	18.7	5	S	09:45	10:15		61.1	63.0	56.0	
Temporary Domestic	14-Dec-05	Cloudy	14.7	1 .	S	11:20	11:50	75	54.4	56.2	50.8	
Structure	20-Dec-05	Sunny	18.7	2.9	E	11:20	11:50		52.1	54.0	47.3	
NM2	28-Dec-05	Cloudy	18.7	5	S	10:45	11:15		52.9	54.0	47.3	

A façade correction of 3 dB(A) was applied to each measurement result. "Shading" indicates an Limit Level exceedance.

Noise Impact Monitoring Results (Jan 06)

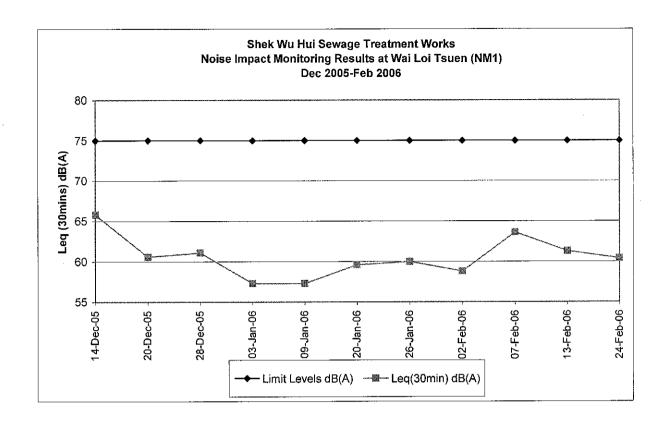
Monitoring Locations	Date	Weather	Temperature	Wind Speed	Wind	Start Time	End Time	Limit Levels	L _{eq(30min)}	L _{10(30min)}	L _{90(30min)}	Remark
ļ		Conditions	(°C)	(m/s)	Direction			dB(A)	dB(A)	dB(A)	dB(A)	
Wai Loi Tsuen	03-Jan-06	Sunny	21.4	1.4	NE	12:10	12:40	75	57.3	59.4	53.2	
NM1	09-Jan-06	Cloudy	14	0.5	NE	09:35	10:05	75	57.3	59.4	53.8	
	20-Jan-06	Cloudy	20	1	N	11:35	12:05	75	59.6	61.4	55.9	
	26-Jan-06	Cloudy	16	0.8	N	10:45	11:15	75	60.0	62.1	54.5	
Temporary Domestic	03-Jan-06	Sunny	21.1	1.8	NE	11:02	11:32	75	53.9	55,4	52.2	
Structure	09-Jan-06	Cloudy	14	1.5	NE	10:35	11:05	75	50.2	52.1	46.7	
NM2	20-Jan-06	Cloudy	20	0.5	N	10:30	11:00	75	61.6	65.1	50.0	
	26-Jan-06	Cloudy	17	1.5	N	09:50	10:20	75	50.5	52.3	47.3	

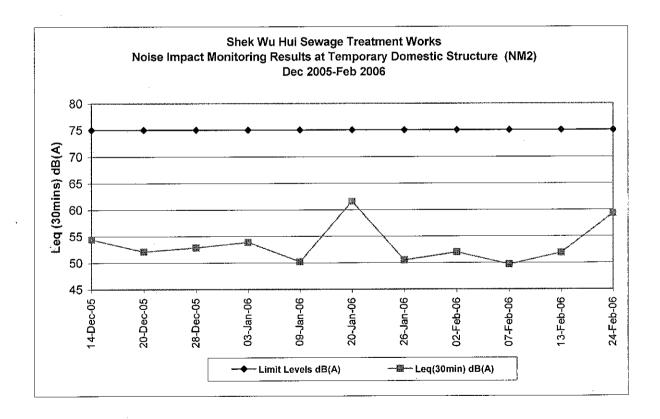
A façade correction of 3 dB(A) was applied to each measurement result. "Shading" indicates an Limit Level exceedance.

Noise Impact Monitoring Results (Feb 06)

Monitoring Locations	Date	Weather	Temperature	Wind Speed	Wind	Start Time	End Time	Limit Levels	L _{eq(30min)}	L _{10(30min)}	L _{90(30min)}	Remark
		Conditions	(°C)	(m/s)	Direction			dB(A)	dB(A)	dB(A)	dB(A)	
Wai Loi Tsuen	02-Feb-06	Fine	21	0.1	NE	10:00	10:30	75	58.8	61.4	54.4	
NM1	07-Feb-06	Fine	21	0.1	NE	09:45	10:15	75	63.6	65.1	61.6	
	13-Feb-06	Sunny	20.5	0.5	N	10:30	11:00	75	61.3	63.4	56.7	
	24-Feb-06	Cloudy	22.1	0.1	N	13:00	13:30	75	60.4	62.4	55.9	
Temporary Domestic	02-Feb-06	Fine	21	0.2	NE	11:00	11:30	75	52.0	53.6	49.4	
Structure	07-Feb-06	Fine	21	0.1	NE	10:45	11:15	75	49.7	50.9	47.5	
NM2	13-Feb-06	Sunny	20.1	1	N	11:25	11:55	75	51.9	53.7	49.1	
	24-Feb-06	Cloudy	21.3	0.8	N	14:50	15:20	75	59.3	61.9	52.7	

A façade correction of 3 dB(A) was applied to each measurement result. "Shading" indicates an Limit Level exceedance.







Appendix 8

Cumulative Statistics of Complaint, Notification of Summons and Successful Prosecution

Cumulative Number of Environmental Complaint

Reporting	Numb	er Received in	the Reporting	Month	Cumulative Number						
Month	Complaint	Notification of Summon	Successful Prosecution	EPD Site Inspection Record	Complaint	Notification of Summon	Successful Prosecution	EPD Site Inspection Record			
December 2005	0	0	0	0				1 (Yellow			
January 2006	0	0	0	0	0	0	0	Ticket issued in			
February 2006	0	0	0	0				Nov 05) ⁽¹⁾			

⁽¹⁾ During the site preparation stage, EPD issued a yellow ticket to the Contractor due to the construction dust impact on 2 November 2005. Low humidity is considered as the main reason for the construction dust impact. Mitigation measures such as increasing the frequency of water spraying and the erection of site hoarding along the site boundary were implemented on 3 November 2005. EPD inspected the site on 4 November 2005 and found the condition acceptable.