Expansion of Shek Wu Hui Sewage Treatment Works

Eleventh Quarterly EM&A Report

(June 08 – August 08)

September 2008

Report no: 01284R0852

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MAEDA

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Eleventh Quarterly EM&A Report (June 08 – August 08)

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Report no: EA01284 R0852 **Date:** September 2008

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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 June 2008 and August 2008.

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 and 24-hr TSP

An action-level exceedance has been measured from the first of the three 1-hr TSP measurements on 13 June 2008. The scheduled consecutive monitoring from14.20-15.20 & 15.20-16.20 have no action level exceedance.

The repeat measurements stated in the EM&A Event/Action Plan were not applicable, as consecutive monitoring had already been carried out under the scheduled program. In addition the scheduled Air Quality monitoring from 19 June is also below the action level.

It is not considered that the action-level exceedance is project related for the following reasons:

- close to the monitoring station (within 6 to 8m distance), it was observed that construction activities by China Light Power (CLP) were ongoing at the same time as the exceedance was recorded. These works included cable laying with sporadic opening of a trench, which is a potential dust generating operation.

It is considered that the exceedance was caused by nearby offsite (non-project) construction activities and not by activities carried out under this contract.

Complaints Log

During this reporting period, no environmental complaint was received.

Notifications of Any Summons and Successful Prosecutions

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

Reporting Changes

Due to adverse weather conditions and a mechanical failure of the HVAS at monitoring station CAM 1a the monitoring in the month of June 2008 is not completely in line with original schedule. For Noise Monitoring, 24 hr air monitoring and 1 hr air monitoring the frequency of monitoring at the beginning of June is outside that stipulated in the EM&A Manual (Table 2.3 of section 2.6 and section 5.6).

Explanations for this and follow-up actions, which were undertaken, are detailed in section 6.5 and in the tables in Appendix 12.

Parameter	Monitoring location	Monitoring dates
1-hr TSP monitoring	San Po Street Pumping Station (CAM1a)	3 June, 7 June*, *12 June*, 13 June, 19 June, 25 June, 30 June
	Sheung Shui Heung Floodwater Pumping Station (CAM2a)	3 June, 7 June*, *12 June*, 13 June, 19 June, 25 June, 30 June
24-hr TSP monitoring	San Po Street Pumping Station (CAM1a)	3 June, 7 June*, *12 June****, 13 June****, *16 June*, 19 June, 25 June, 30 June
	Sheung Shui Heung Floodwater Pumping Station (CAM2a)	3 June, 7 June*, *12 June*, 13 June, 19 June, 25 June, 30 June
Noise monitoring	San Po Street Pumping Station (CAM1a)	3 June, 13 June**, 19 June, 25 June**, *27 June*, 30 June
	Sheung Shui Heung Floodwater Pumping Station (CAM2a)	3 June, 13 June**, 19 June, 25 June**, *27 June*, 30 June

Note: Dates in Italic refer to additional monitoring
*Black Rainstorm Warning Signal
**Heavy rainfall
***No Results due to power failure

Due to timer failure at monitoring station CAM 1a the monitoring in the month of August 2008 is not completely in line with original schedule. For 24 hr air monitoring the frequency of monitoring at the middle of August is outside that stipulated in the EM&A Manual (Table 2.3 of section 2.6 and section 5.6).

However, the total number of the monitoring events for this month were arranged to meet those specified in the original schedule in order to meet the requirements stipulated in the EM&A Manual.

Parameter	Monitoring location	Monitoring dates
24-hr TSP monitoring	San Po Street Pumping Station (CAM1a)	4 August, 9 August, 15 August*, *19 August*, 21 August, 27 August

Note: Dates in Italic refer to additional monitoring
*Timer Failure

Future Key Issues

The construction works are to be substantially completed in September 2008. As a consequence, no construction activities are expected in November 2008.
The construction activities for the coming two months will include pipe works, installation of cat ladders, roofing and finishing works, structural steelwork with FRP covers, roadwork, cable ducts and cable drawpits and landscaping work.

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 HILL Hong Kong Limited (formerly known as 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	Ben Yip	2594 7461
	Engineer's Representative	Freddie Tsang	2594 7459
Contractor - Maeda	Site Agent	George Cheung	9268 1918
ET - Hyder	ET Leader	Alexi Bhanja	2911 2916
IEC – CH2M HILL	IEC	Y.T. Tang (designated)	3105 8686

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:

- Excavation and backfilling
- Temporary work including installation of waling and struts
- Manhole/Chamber construction
- Pipe laying
- Installation of FRP covers
- Finishing work
- Road Works; and
- Cable Ducts and Cable Drawpits.

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	End of Project
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	N/A	N/A	End of Project
Registration as a chemical waste producer	26 Sep 2005	4 Nov 2005	WPN: 5213-624-M2446-06	End of Project

Permit/Licence	Application Date	Date of issue	Ref. No.	Valid Until
Effluent Discharge Licence	11 Nov 2005	20 Dec 2005	Licence No.: W5/1I287/1	19 Dec 2010
Application for Exemption Account for Disposal of Construction Waste	12 Dec 2005	Approved by EPD on 31 Dec 2005	Application No.: RN/00134	25 Sep 2008
Construction Noise Permit	15 Nov 2007	29 Nov 2007	GW-RN0507-07	31 May 2008

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. $L_{eq(30\ min)}$ is used as the monitoring parameter for the period between 0700 and 1900 hours on normal weekdays. For all other time periods, three consecutive $L_{eq(5min)}$ are employed for comparison with the Noise Control Ordinance (NCO) criteria.

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			
	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; • Repeat measurements to confirm findings;	• 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 effectiveness of the proposed remedial measures;	• 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.

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
	• 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.	• 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 implemented; • Arrange meeting with IEC and ER to	• 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 and instruct the Contractor to stop that portion of work	• 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.

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

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 noise monitoring.

An action-level exceedance has been measured from the first of the three 1-hr TSP measurements on 13 June 2008.It is considered that the exceedance was caused by nearby offsite (non-project) construction activities and not by activities carried out under this contract.

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. 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

An action-level exceedance has been measured from the first of the three 1-hr TSP measurements on 13 June 2008. The scheduled consecutive monitoring from14.20-15.20 & 15.20-16.20 have no action level exceedance.
The repeat measurements stated in the EM&A Event/Action Plan were not applicable, as consecutive monitoring had already been carried out under the scheduled program. In addition the scheduled Air Quality monitoring from 19 June is also below the action level.
It is not considered that the action-level exceedance is project related for the following reasons:

- close to the monitoring station (within 6 to 8m distance), it was observed that construction activities by China Light Power (CLP) were ongoing at the same time as the exceedance was recorded. These works included cable laying with sporadic opening of a trench, which is a potential dust generating operation.

It is considered that the exceedance was caused by nearby offsite (non-project) construction activities and not by activities carried out under this contract.

The Contactor, the IEC and the ER have been duly notified of the exceedance.

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
4 June 2008	1. No measures were implemented to prevent muddy water entering public drains.	1. The Contractor was reminded to seal the gullies to avoid such condition.	1. During site inspection on 11 June 2008, the gullies had been covered to prevent silty runoff / muddy water entering public drains. (Closed)	N/A
11 June 2008	1. Stagnant water was observed in a container near the site office. 2. Sand and silt deposit was found into drainage adjacent to Air Blower House.	1. The Contractor was reminded to remove it to prevent mosquitoes breeding. 2. The Contractor was reminded to remove it as soon as possible.	1. During site inspection on 18 June 2008, stagnant water has been removed. (Closed) 2. During site inspection on 18 June 2008, drainage near Air Blower House has been cleared. (Closed)	N/A
18 June2008	No additional deficiencies.	No recommendations.	N/A	N/A
25 June 2008	1. Stockpiles of soil were observed near site exit. 2. Stagnant water was observed adjacent to air blower house.	1. The Contractor was reminded to cover the stockpile with tarpaulin sheet to prevent wash away of soil to enter public road or public drainage. 2. The Contractor was reminded to remove it after rainstorm.	1. During site inspection on 3 July 2008, the stockpile near site exit was removed. (Closed) 2. During site inspection on 3 July 2008, the stagnant water adjacent to air blower house was cleaned. (Closed)	N/A
3 July 2008	1. Dust generation was observed after the trucks at site entrance.	1. The Contractor was reminded to provide water spraying more frequently.	1. During site inspection on 10 July 2008, Hual Road along the site was observed wet, no dust generation was	N/A

Inspection Date	Deficiencies	Recommendation	Status	Note / Reminder
	site entrance. 2. Accumulated water after rainstorm in recycle bin was observed.	frequently. 2. The Contractor was reminded to remove it after the rainstorm.	observed during the site inspection. (Closed) 2. During site inspection on 16 July 2008, larvicide has been applied to stagnant water to prevent mosquito breeding. (Closed)	
10 July 2008	1. Silt and mud were observed inside U-channel adjacent to final sedimentation tank and air blower house. 2. Wastewater discharge into public drains was observed during inspection.	1. The Contractor was requested to remove it promptly. 2. The Contractor was requested to implement proper measures to avoid illegal discharge.	1. During site inspection on 07 August 2008, silt and mud were still to be removed inside U-channel. The outstanding information will be followed up in next month inspection. 2. During site inspection on 16 July 2008, no more illegal discharge was observed during inspection. (Closed)	N/A
16 July2008	1. The cover to prevent debris entering gullies near SHT was broken.	1. The Contractor was reminded to replace it.	1. During site inspection on 30 July 2008, gullies were properly covered near SHT. (Closed)	N/A
23 July 2008	No additional deficiencies	No recommendations	N/A	N/A
30 July 2008	1. Stockpile of soil was observed near Air Blower House and SHT. 2. Accumulation of C&D waste was observed near Final sedimentation tank. 3. Oil stain on bare ground was observed near SHT.	1. The Contractor was requested to cover it with tarpaulin sheet. 2. The Contractor was requested to cover it promptly. 3. The Contractor was requested to clean it up and to carry out plant maintenance works at bounded maintenances area.	1. During site inspection on 07 August 2008, stockpile of soil had been removed from the site. (Closed) 2. During site inspection on 07 August 2008, C&D waste was removed. (Closed) 3. During site inspection on 07 August 2008, oil stain near SHT was removed. (Closed)	N/A
7 August 2008	1. Stagnant water was observed at various areas.	1. The Contractor was reminded to remove it after rainstorms.	1. The Contractor has taken note of the reminder and removed the stagnant water	N/A

Inspection Date	Deficiencies	Recommendation	Status	Note / Reminder
	various areas. 2. Muddy water was observed inside trench near final sedimentation tank.	it after rainstorms. 2. The Contractor was reminded to treat all wastewater prior to discharge.	immediately. (Closed) 2. The Contractor has taken not of the reminder and taken action immediately. (Closed)	
13 August 2008	1. Oil bucket was observed at site area adjacent to SHT. 2. Stagnant water was observed at the storage area adjacent to site office.	1. The Contractor was requested to store it in a proper place. 2. The Contractor was requested to remove it promptly.	1. During site inspection on 20 August 2008, the oil bucket had been removed from the site. (Closed) 2. During site inspection on 20 August 2008, stagnant water had been properly removed. (Closed)	N/A
20 August2008	1. Accumulation of general refuse was observed at refuse collection point adjacent to site office. 2. Silty trails were observed at site exit. 3. Dry haul road was observed near site exit. 4. Dry stockpile was observed near Air Blower House.	1. The Contractor was reminded to clear it more regularly. 2. The Contractor was requested to clean up immediately. 3. The Contractor was requested to provide water spraying more regularly. 4. The Contractor was requested to provide proper cover to all dusty materials.	1. During site inspection on 29 August 2008, accumulation of general refuse was cleaned. (Closed) 2. During site inspection on 29 August 2008, muddy trails were cleaned up. (Closed) 3. During site inspection on 29 August 2008, no dry haul was observed. (Closed) 4. During site inspection on 29 August 2008, the stockpiles were covered properly. (Closed)	1. N/A 2. The Contractor was reminded to provide water spraying more regularly.
29 August 2008	No environmental deficiency was observed	No recommendations	N/A	N/A

Table 7-5 Summaries of Site Inspections and Recommendations

EPD carried out a site inspection on 18 July 08 and the Contractor has undertaken appropriate actions in response to the EPD's findings.

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	June 08	July 08	August 08
Inert C&D material (m^3)	280.21	315.56	217.38
General Refuse (m^3)	52	117	19.5
Chemical waste (L)	0	0	0

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 June 2008 and August 2008 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.

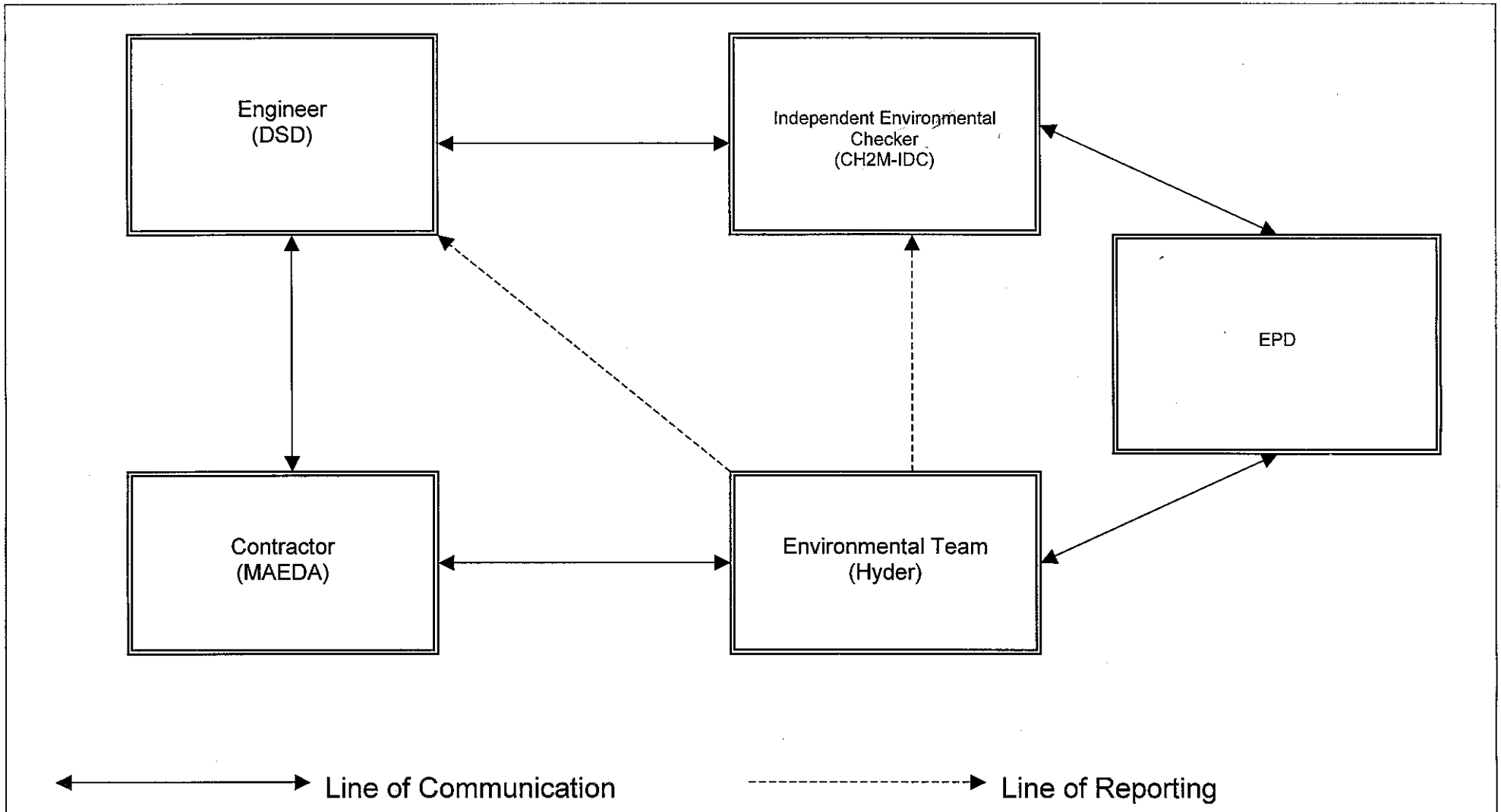
An action-level exceedance has been measured from the first of the three 1-hr TSP measurements on 13 June 2008.It is considered that the exceedance was caused by nearby offsite (non-project) construction activities and not by activities carried out under this contract.

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.

Appendix 1

Project Organization



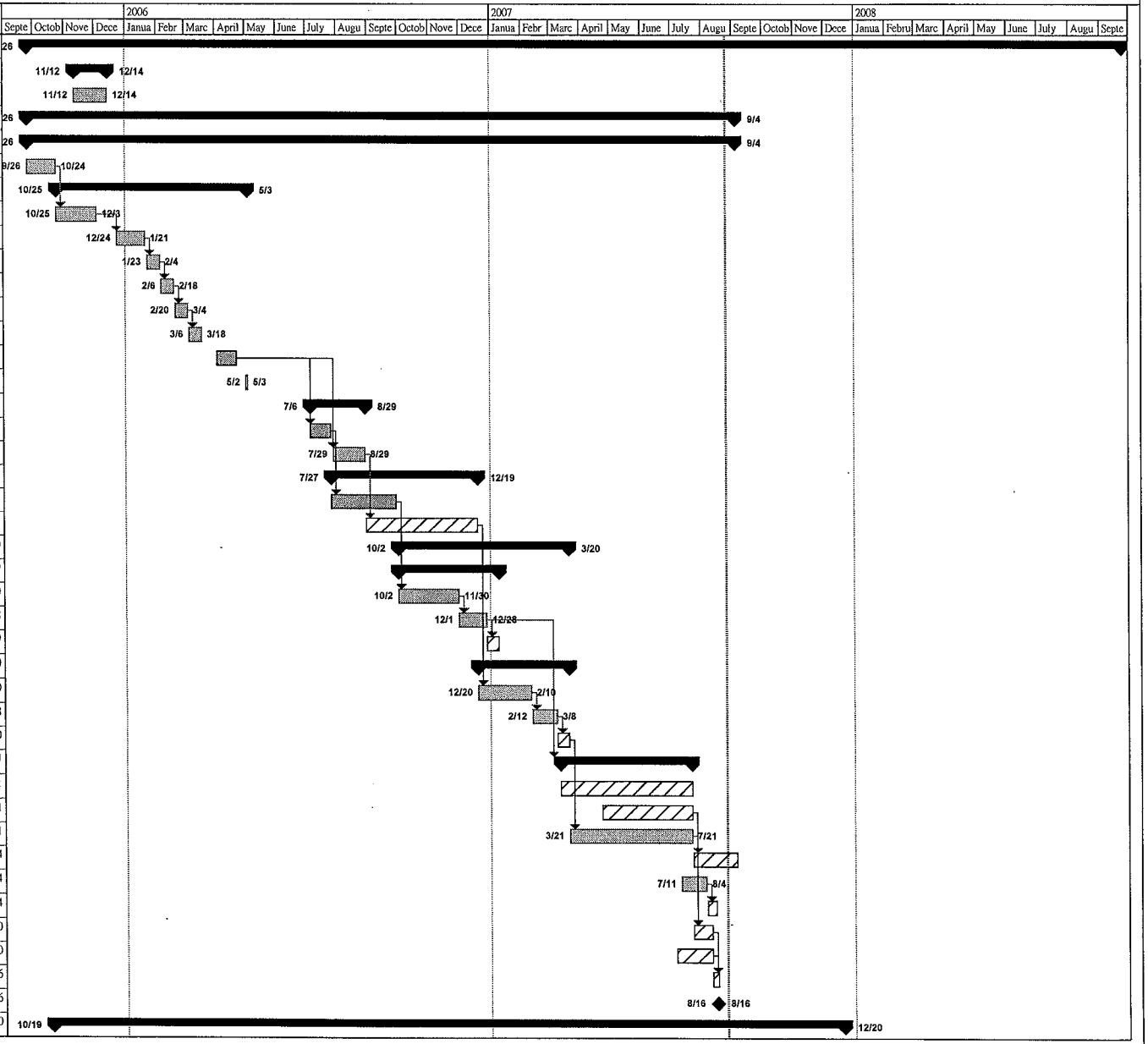
Hyder Consulting	MAEDA	Title: Expansion of Shek Wu Hui Sewage Treatment Works – Project Organization	Date: Dec 2005 Figure: N.A. Scale: NTS

Appendix 2

Construction Programme

Maeda Corporation
Contract No. DC/2005/01
Expansion of Shek Wu Hui Sewage Treatment Works and
Upgrading of Ting Kok Road Pumping Station No.5
Master Programme (Rev. 6A)

ID	Task Name	Duration	Start	Finish
1	Shek Wu Hui	942 days	Mon 05/9/26	Wed 08/9/24
2	Preliminary works	28 days	Sat 05/11/12	Wed 05/12/14
3	EM&A Baseline Monitoring	28 days	Sat 05/11/12	Wed 05/12/14
4	Section 1 of works	609 days	Mon 05/9/26	Tue 07/9/4
5	Air Blower House No.2	609 days	Mon 05/9/26	Tue 07/9/4
6	General Site Clearance & Fencing Construction	25 days	Mon 05/9/26	Mon 05/10/24
7	Foundation	164 days	Tue 05/10/25	Wed 06/5/3
8	GI works (pre-drilling & reporting)	35 days	Tue 05/10/25	Sat 05/12/3
9	Preliminary H-pile (1nos.)	24 days	Sat 05/12/24	Sat 06/1/21
10	Permanent H-pile (5nos.)	12 days	Mon 06/1/23	Sat 06/2/4
11	Permanent H-pile (5nos.)	12 days	Mon 06/2/6	Sat 06/2/18
12	Permanent H-pile (5nos.)	12 days	Mon 06/2/20	Sat 06/3/4
13	Permanent H-pile (6nos.)	12 days	Mon 06/3/6	Sat 06/3/18
14	Proof Load Test (1nos.)	18 days	Mon 06/4/3	Sat 06/4/22
15	Proof Drilling	2 days	Tue 06/5/2	Wed 06/5/3
16	Earthworks	47 days	Thu 06/7/6	Tue 06/8/29
17	Area 1	18 days	Thu 06/7/6	Wed 06/7/26
18	Area 2	27 days	Sat 06/7/29	Tue 06/8/29
19	Substructure	126 days	Thu 06/7/27	Tue 06/12/19
20	Area 1	56 days	Thu 06/7/27	Fri 06/9/29
21	Area 2	96 days	Thu 06/8/31	Tue 06/12/19
22	Superstructure	147 days	Mon 06/10/2	Tue 07/3/20
23	Area 1	87 days	Mon 06/10/2	Tue 07/1/9
24	Structural framing & slab at level +11.75mPD	52 days	Mon 06/10/2	Thu 06/11/30
25	Concrete Structure up to roof	25 days	Fri 06/12/1	Thu 06/12/28
26	Parapet Wall	10 days	Fri 06/12/29	Tue 07/1/9
27	Area 2	78 days	Wed 06/12/20	Tue 07/3/20
28	Structural framing & slab at level +11.75mPD	46 days	Wed 06/12/20	Sat 07/2/10
29	Concrete Structure up to roof	22 days	Mon 07/2/12	Thu 07/3/8
30	Parapet Wall	10 days	Fri 07/3/9	Tue 07/3/20
31	**Internal Finishes**	**114 days**	**Mon 07/3/12**	**Sat 07/7/21**
32	Area 1	114 days	Mon 07/3/12	Sat 07/7/21
33	Area 2	78 days	Mon 07/4/23	Sat 07/7/21
34	External Finishes	106 days	Wed 07/3/21	Sat 07/7/21
35	Miscellaneous (Plumbing, ABWF works)	38 days	Mon 07/7/23	Tue 07/9/4
36	Cable Ducts	22 days	Wed 07/7/11	Sat 07/8/4
37	Drainage	8 days	Mon 07/8/6	Tue 07/8/14
38	Pipeline 8	17 days	Mon 07/7/23	Fri 07/8/10
39	Pipeline 10	31 days	Fri 07/7/6	Fri 07/8/10
40	Pressure Test and CCTV	5 days	Sat 07/8/11	Thu 07/8/16
41	Key Date of the Section 1 Works	1 day	Thu 07/8/16	Thu 07/8/16
42	Section 2 of works	682 days	Wed 05/10/19	Thu 07/12/20



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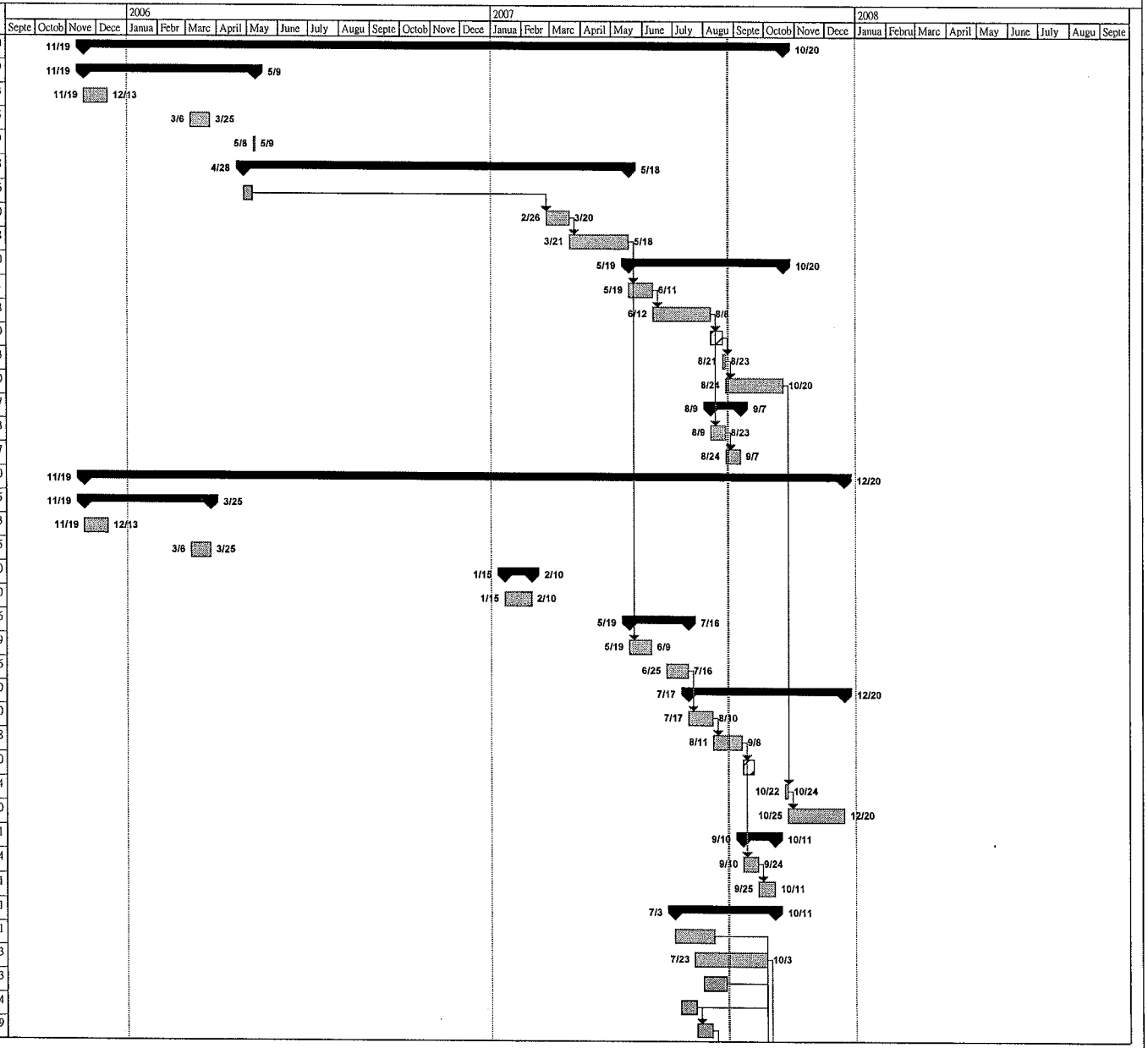
Task | Progress | Summary | Rolled Up Critical Task | Rolled Up Progress | External Tasks
Critical Task | Milestone | Rolled Up Task | Rolled Up Milestone | Split | Project Summary

Macda Corporation
Contract No. DC/2005/01
Expansion of Shek Wu Hui Sewage Treatment Works and
Upgrading of Ting Kok Road Pumping Station No.5
Master Programme (Rev. 6A)

ID	Task Name	Duration	Start	Finish
43	Flow Division Pump Pits No.1	602 days	Sat 05/11/19	Sat 07/10/20
44	Foundation	147 days	Sat 05/11/19	Tue 06/5/9
45	GI works (pre-drilling & reporting)	20 days	Sat 05/11/19	Tue 05/12/13
46	Permanent Mini-pile (4nos.)	18 days	Mon 06/3/6	Sat 06/3/25
47	Proof Drilling	2 days	Mon 06/5/8	Tue 06/5/9
48	Earthworks	332 days	Fri 06/4/28	Fri 07/5/18
49	Approval of Temporary Works	8 days	Fri 06/4/28	Sat 06/5/6
50	Install temporary retaining wall (steel pile)	20 days	Mon 07/2/26	Tue 07/3/20
51	Excavation & temp.supporting	51 days	Wed 07/3/21	Fri 07/5/18
52	Structure	133 days	Sat 07/5/19	Sat 07/10/20
53	Pilecaps	20 days	Sat 07/5/19	Mon 07/6/11
54	Concrete work	50 days	Tue 07/6/12	Wed 07/8/8
55	Water Tightness Test	10 days	Thu 07/8/9	Mon 07/8/20
56	Temporary Suspension and Demolition of Existing Pipe	3 days	Tue 07/8/21	Thu 07/8/23
57	Pumps & Pipe installation (by others)	50 days	Fri 07/8/24	Sat 07/10/20
58	External Works	26 days	Thu 07/8/9	Fri 07/9/7
59	Backfilling, remove temp. retaining wall	13 days	Thu 07/8/9	Thu 07/8/23
60	Installation, handrail/plate/ladder	13 days	Fri 07/8/24	Fri 07/9/7
61	Flow Division Pump Pits No.2	655 days	Sat 05/11/19	Thu 07/12/20
62	Foundation	109 days	Sat 05/11/19	Sat 06/3/25
63	GI works (pre-drilling & reporting)	20 days	Sat 05/11/19	Tue 05/12/13
64	Permanent Mini-pile (4nos.)	18 days	Mon 06/3/6	Sat 06/3/25
65	Air Main Diversion	24 days	Mon 07/1/15	Sat 07/2/10
66	Compressed Air pipe (by MAEDA)	24 days	Mon 07/1/15	Sat 07/2/10
67	Earthworks	50 days	Sat 07/5/19	Mon 07/7/16
68	Install temporary retaining wall (sheetpile)	19 days	Sat 07/5/19	Sat 07/6/9
69	Excavation & temp.supporting	19 days	Mon 07/6/25	Mon 07/7/16
70	Structure	136 days	Tue 07/7/17	Thu 07/12/20
71	Pilecaps	22 days	Tue 07/7/17	Fri 07/8/10
72	Concrete work	25 days	Sat 07/8/11	Sat 07/9/8
73	Water Tightness Test	10 days	Mon 07/9/10	Thu 07/9/20
74	Temporary Suspension and Demolition of Existing Pipe	3 days	Mon 07/10/22	Wed 07/10/24
75	Pumps & Pipe installation (by others)	50 days	Thu 07/10/25	Thu 07/12/20
76	External Works	28 days	Mon 07/9/10	Thu 07/10/11
77	Backfilling, remove temp. retaining wall	13 days	Mon 07/9/10	Mon 07/9/24
78	Installation, handrail/plate/ladder	15 days	Tue 07/9/25	Thu 07/10/11
79	Pipeworks	87 days	Tue 07/7/3	Thu 07/10/11
80	Pipeline No. 1	35 days	Tue 07/7/3	Sat 07/8/11
81	Pipeline No. 2	63 days	Mon 07/7/23	Wed 07/10/3
82	Pipeline No. 3	20 days	Wed 07/8/1	Thu 07/8/23
83	Pipeline No. 4	14 days	Mon 07/7/9	Tue 07/7/24
84	Pipeline No. 5	14 days	Wed 07/7/25	Thu 07/8/9



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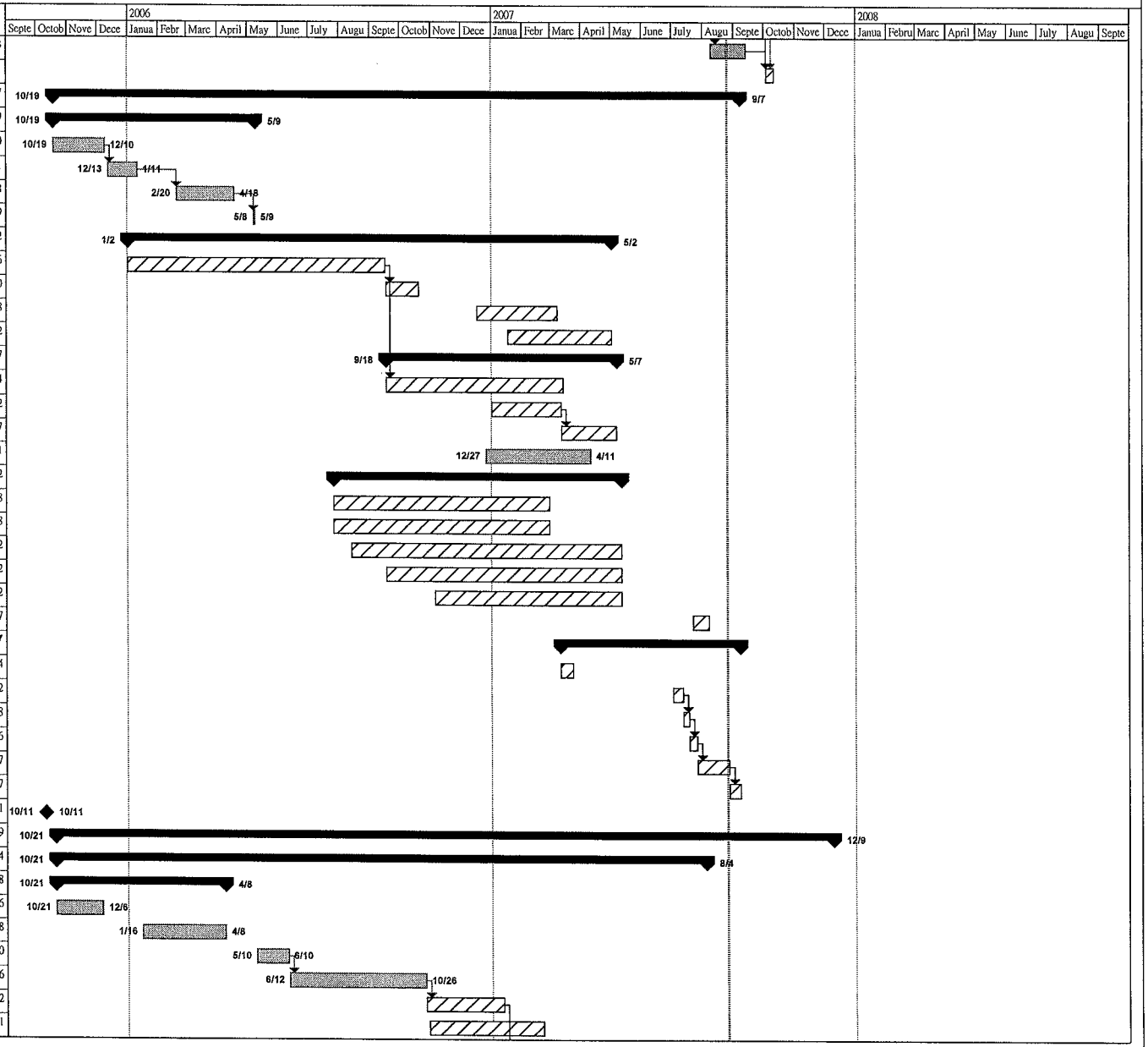
Critical Task | Milestone | Rolled Up Task | Rolled Up Milestone | Split | Project Summary

Maeda Corporation
Contract No. DC/2005/01
Expansion of Shek Wu Hui Sewage Treatment Works and
Upgrading of Ting Kok Road Pumping Station No.5
Master Programme (Rev. 6A)

ID	Task Name	Duration	Start	Finish
85	Pipeline 14, 15 & 16	30 days	Fri 07/8/10	Thu 07/9/13
86	Pressure Test & CCTV	7 days	Thu 07/10/4	Thu 07/10/11
87	Bioreactor No.5	592 days	Wed 05/10/19	Fri 07/9/7
88	Foundation	174 days	Wed 05/10/19	Tue 06/5/9
89	GI works (pre-drilling & reporting)	45 days	Wed 05/10/19	Sat 05/12/10
90	Preliminary H-pile (1nos.)	26 days	Tue 05/12/13	Wed 06/1/11
91	Permanent H-pile (55nos.)	50 days	Mon 06/2/20	Tue 06/4/18
92	Proof Load Test (1nos.)	2 days	Mon 06/5/8	Tue 06/5/9
93	Temporary Works	418 days	Mon 06/1/2	Wed 07/5/2
94	Erection - Phase 1 (Portion A - C)	222 days	Mon 06/1/2	Sat 06/9/16
95	Erection - Phase 2 (Portion D - E)	29 days	Mon 06/9/18	Fri 06/10/20
96	Removal - waling and strut	70 days	Mon 06/12/18	Thu 07/3/8
97	Removal - sheet pile	90 days	Thu 07/1/18	Wed 07/5/2
98	Earthworks	200 days	Mon 06/9/18	Mon 07/5/7
99	Excavation to formation	154 days	Mon 06/9/18	Wed 07/3/14
100	Backfilling to +2.92mPD	60 days	Tue 07/1/2	Mon 07/3/12
101	Backfilling to +5.30mPD	48 days	Tue 07/3/13	Mon 07/5/7
102	Backfilling to FGL	91 days	Wed 06/12/27	Wed 07/4/11
103	Structures	250 days	Thu 06/7/27	Sat 07/5/12
104	Portion A	187 days	Thu 06/7/27	Wed 07/2/28
105	Portion B	187 days	Thu 06/7/27	Wed 07/2/28
106	Portion C	235 days	Mon 06/8/14	Sat 07/5/12
107	Portion D	205 days	Mon 06/9/18	Sat 07/5/12
108	Portion E	163 days	Mon 06/11/6	Sat 07/5/12
109	Water Tightness Test (Portions A - E)	14 days	Mon 07/7/23	Tue 07/8/7
110	**Portion F (Final Sed Tank Dist Chamber)**	**155 days**	**Mon 07/3/12**	**Fri 07/9/7**
111	Sheet Pile Installation	12 days	Mon 07/3/12	Sat 07/3/24
112	Excavation + Temp Works	9 days	Tue 07/7/3	Thu 07/7/12
113	Pile Head	5 days	Fri 07/7/13	Wed 07/7/18
114	Base Slab	7 days	Thu 07/7/19	Thu 07/7/26
115	Wall	27 days	Fri 07/7/27	Mon 07/8/27
116	Water Tightness Test	10 days	Tue 07/8/28	Fri 07/9/7
117	Key Date of the Section 2 of the Works	1 day	Tue 05/10/11	Tue 05/10/11
118	Section 3 of works	670 days	Fri 05/10/21	Sun 07/12/9
119	Final Sedimentation Tank No.9	561 days	Fri 05/10/21	Sat 07/8/4
120	Foundation	146 days	Fri 05/10/21	Sat 06/4/8
121	GI works (pre-drilling & reporting)	40 days	Fri 05/10/21	Tue 05/12/6
122	Permanent H-pile (21nos.)	72 days	Mon 06/1/16	Sat 06/4/8
123	Sheetpiling works	28 days	Wed 06/5/10	Sat 06/6/10
124	Excavation	118 days	Mon 06/6/12	Thu 06/10/26
125	Pile head (inner ground beam) (6 nos)	68 days	Fri 06/10/27	Fri 07/1/12
126	DN800 DI pipe	100 days	Mon 06/10/30	Wed 07/2/21



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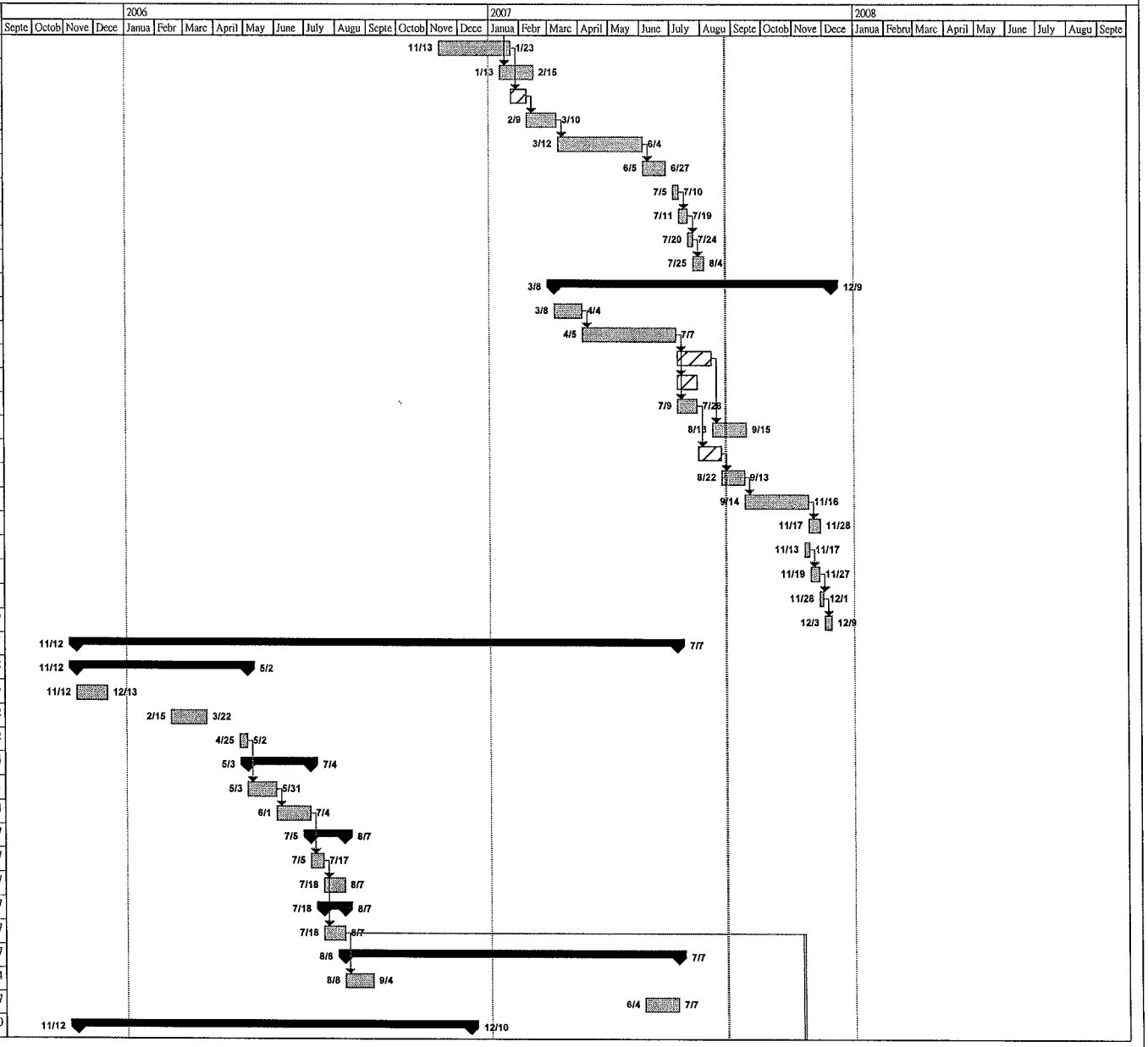
Macda Corporation
Contract No. DC/2005/01
Expansion of Shek Wu Hui Sewage Treatment Works and
Upgrading of Ting Kok Road Pumping Station No.5
Master Programme (Rev. 6A)

ID	Task Name	Duration	Start	Finish
127	DN450 DI pipe	63 days	Mon 06/11/13	Tue 07/1/23
128	Pile head (outer ground beam) (15 nos)	29 days	Sat 07/1/13	Thu 07/2/15
129	Outer ground beam	14 days	Wed 07/1/24	Thu 07/2/8
130	Base slab	26 days	Fri 07/2/9	Sat 07/3/10
131	Wall (2 panels)	73 days	Mon 07/3/12	Mon 07/6/4
132	Water Tightness Test and Pressure Test of Pipeline	20 days	Tue 07/6/5	Wed 07/6/27
133	backfilling to +4.20mPD	5 days	Thu 07/7/5	Tue 07/7/10
134	Break and remove Row 1 ring beam	8 days	Wed 07/7/11	Thu 07/7/19
135	backfilling to +5.51mPD	4 days	Fri 07/7/20	Tue 07/7/24
136	Extract sheetpiles	10 days	Wed 07/7/25	Sat 07/8/4
137	FINAL SEDIMENTION TANK NO. 10	238 days	Thu 07/3/8	Sun 07/12/9
138	Sheetpiling works	24 days	Thu 07/3/8	Wed 07/4/4
139	Excavation	81 days	Thu 07/4/5	Sat 07/7/7
140	Pile head (inner ground beam) (6 nos)	30 days	Mon 07/7/9	Sat 07/8/11
141	DN800 DI pipe	18 days	Mon 07/7/9	Sat 07/7/28
142	DN450 DI pipe	18 days	Mon 07/7/9	Sat 07/7/28
143	Pile head (outer ground beam) (15 nos)	30 days	Mon 07/8/13	Sat 07/9/15
144	Outer ground beam	20 days	Mon 07/7/30	Tue 07/8/21
145	Base slab	20 days	Wed 07/8/22	Thu 07/9/13
146	Wall (2 panels)	55 days	Fri 07/9/14	Fri 07/11/16
147	Water Tightness Test and Pressure Test of Pipeline	10 days	Sat 07/11/17	Wed 07/11/28
148	backfilling to +4.20mPD	5 days	Tue 07/11/13	Sat 07/11/17
149	Break and remove Row 1 ring beam	8 days	Mon 07/11/19	Tue 07/11/27
150	backfilling to +5.51mPD	4 days	Wed 07/11/28	Sat 07/12/1
151	Extraction of sheetpiles	7 days	Mon 07/12/3	Sun 07/12/9
152	RAS/SAS Switch Room	518 days	Sat 05/11/12	Sat 07/7/7
153	Foundation	147 days	Sat 05/11/12	Tue 06/5/2
154	GI works (pre-drilling & reporting)	26 days	Sat 05/11/12	Tue 05/12/13
155	Permanent H-pile (6nos.)	31 days	Wed 06/2/15	Wed 06/3/22
156	Proof Load Test	7 days	Tue 06/4/25	Tue 06/5/2
157	Earthworks	54 days	Wed 06/5/3	Tue 06/7/4
158	Install temporary retaining wall (sheetpile)	25 days	Wed 06/5/3	Wed 06/5/31
159	Excavation	29 days	Thu 06/6/1	Tue 06/7/4
160	Substructure	29 days	Wed 06/7/5	Mon 06/8/7
161	Pilecaps/tie beams	11 days	Wed 06/7/5	Mon 06/7/17
162	Concrete structure up to 7.40mPD	18 days	Tue 06/7/18	Mon 06/8/7
163	Superstructure	18 days	Tue 06/7/18	Mon 06/8/7
164	Concrete structure up to roof	18 days	Tue 06/7/18	Mon 06/8/7
165	Others	288 days	Tue 06/8/8	Sat 07/7/7
166	Pipeworks/plumbing& opening	24 days	Tue 06/8/8	Mon 06/9/4
167	Internal/External finishing	30 days	Mon 07/6/4	Sat 07/7/7
168	RAS/SAS Main Station	338 days	Sat 05/11/12	Sun 06/12/10



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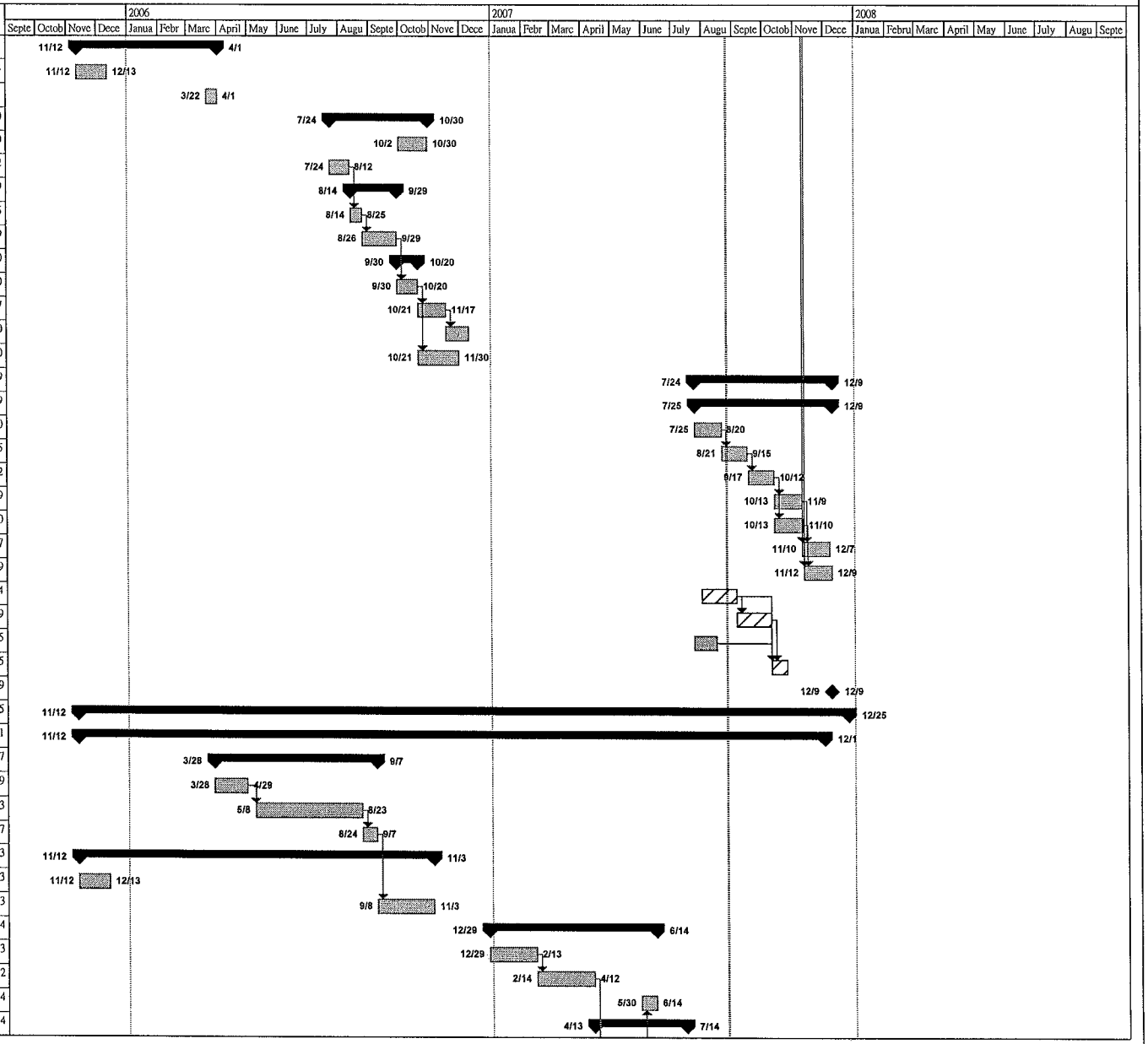
Maeda Corporation
Contract No. DC/2005/01
Expansion of Shek Wu Hui Sewage Treatment Works and
Upgrading of Ting Kok Road Pumping Station No.5
Master Programme (Rev. 6A)

ID	Task Name	Duration	Start	Finish
169	Foundation	121 days	Sat 05/11/12	Sat 06/4/1
170	GI works (pre-drilling & reporting)	26 days	Sat 05/11/12	Tue 05/12/13
171	Permanent H-pile (6nos.)	10 days	Wed 06/3/22	Sat 06/4/1
172	Earthworks	85 days	Mon 06/7/24	Mon 06/10/30
173	Install temporary retaining wall (sheetpile)	25 days	Mon 06/10/2	Mon 06/10/30
174	Excavation	18 days	Mon 06/7/24	Sat 06/8/12
175	Substructure	41 days	Mon 06/8/14	Fri 06/9/29
176	Pilecaps/tie beams	11 days	Mon 06/8/14	Fri 06/8/25
177	Concrete structure up to 7.40mPD	30 days	Sat 06/8/26	Fri 06/9/29
178	Superstructure	18 days	Sat 06/9/30	Fri 06/10/20
179	Concrete structure up to roof	18 days	Sat 06/9/30	Fri 06/10/20
180	Pipeworks/plumbing& opening	24 days	Sat 06/10/21	Fri 06/11/17
181	Water Tightness Test, Pressure Test of the Pipeline and CCTV ins	20 days	Sat 06/11/18	Sun 06/12/10
182	Internal/External finishing	35 days	Sat 06/10/21	Thu 06/11/30
183	External Works	120 days	Tue 07/7/24	Sun 07/12/9
184	External manholes/pits construction	119 days	Wed 07/7/25	Sun 07/12/9
185	E2A-E6A	23 days	Wed 07/7/25	Mon 07/8/20
186	E6A-E7	23 days	Tue 07/8/21	Sat 07/9/15
187	E7-E8	23 days	Mon 07/9/17	Fri 07/10/12
188	E8-E9	24 days	Sat 07/10/13	Fri 07/11/9
189	E8-E10	25 days	Sat 07/10/13	Sat 07/11/10
190	E9-E11	24 days	Sat 07/11/10	Fri 07/12/7
191	E10-E12	25 days	Mon 07/11/12	Sun 07/12/9
192	Pipeline 6	30 days	Wed 07/8/1	Tue 07/9/4
193	Pipeline 7	30 days	Wed 07/9/5	Tue 07/10/9
194	Pipeline 9	20 days	Tue 07/7/24	Wed 07/8/15
195	Pressure Test and CCTV Inspection	14 days	Wed 07/10/10	Thu 07/10/25
196	Key Date of the Section 3 of the Works	1 day	Sun 07/12/9	Sun 07/12/9
197	Section 4 of works	665 days	Sat 05/11/12	Tue 07/12/25
198	Sludge Press House Extension	644 days	Sat 05/11/12	Sat 07/12/1
199	Relocation of FeCl3 Tank	141 days	Tue 06/3/28	Thu 06/9/7
200	Construction of Bund Wall	29 days	Tue 06/3/28	Sat 06/4/29
201	Relocation of Tank	93 days	Mon 06/5/8	Wed 06/8/23
202	Demolish the Existing Wall	13 days	Thu 06/8/24	Thu 06/9/7
203	Foundation	306 days	Sat 05/11/12	Fri 06/11/3
204	GI works (pre-drilling & reporting)	26 days	Sat 05/11/12	Tue 05/12/13
205	Permanent Mini-pile (18 nos.)	49 days	Fri 06/9/8	Fri 06/11/3
206	Earthworks	144 days	Fri 06/12/29	Thu 07/6/14
207	Excavation	40 days	Fri 06/12/29	Tue 07/2/13
208	Pilecaps, 10nos.	50 days	Wed 07/2/14	Thu 07/4/12
209	Backfill & compaction	14 days	Wed 07/5/30	Thu 07/6/14
210	Superstructure	80 days	Fri 07/4/13	Sat 07/7/14



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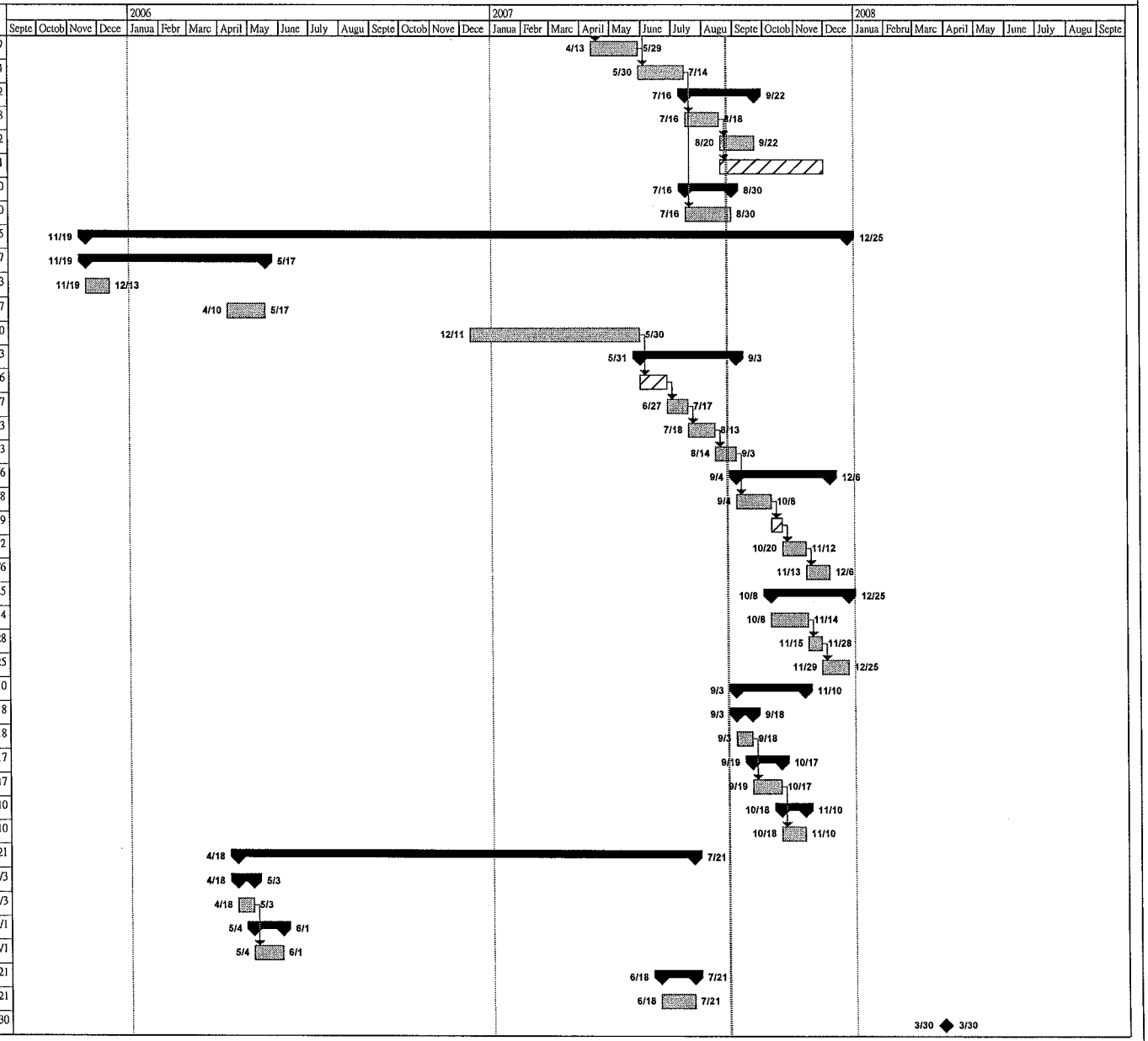
Expansion of Shek Wu Hui Sewage Treatment Works and
Upgrading of Ting Kok Road Pumping Station No.5
Master Programme (Rev. 6A)

ID	Task Name	Duration	Start	Finish
211	Structure up to 1st floor	40 days	Fri 07/4/13	Tue 07/5/29
212	Structure up to roof	40 days	Wed 07/5/30	Sat 07/7/14
213	Internal Finishes	60 days	Mon 07/7/16	Sat 07/9/22
214	Internal finishes works & opening	30 days	Mon 07/7/16	Sat 07/8/18
215	ABWF Works	30 days	Mon 07/8/20	Sat 07/9/22
216	pipeworks & ducting	90 days	Mon 07/8/20	Sat 07/12/1
217	External Finishes	40 days	Mon 07/7/16	Thu 07/8/30
218	External finishes works	40 days	Mon 07/7/16	Thu 07/8/30
219	Sludge Conditioning Tanks No.3 & No.4	659 days	Sat 05/11/19	Tue 07/12/25
220	Foundation	154 days	Sat 05/11/19	Wed 06/5/17
221	GI works (pre-drilling & reporting)	20 days	Sat 05/11/19	Tue 05/12/13
222	Permanent Mini-pile	33 days	Mon 06/4/10	Wed 06/5/17
223	Sewage Diversion Stage I of II	147 days	Mon 06/12/11	Wed 07/5/30
224	Earthworks	82 days	Thu 07/5/31	Mon 07/9/3
225	Trial Trench	23 days	Thu 07/5/31	Tue 07/6/26
226	Temporary Works (sheetpile for SCT3 & SCT4)	18 days	Wed 07/6/27	Tue 07/7/17
227	Excavation	23 days	Wed 07/7/18	Mon 07/8/13
228	Backfill & rockfill underneath pit	18 days	Tue 07/8/14	Mon 07/9/3
229	Structure	81 days	Tue 07/9/4	Thu 07/12/6
230	Concrete works	30 days	Tue 07/9/4	Mon 07/10/8
231	Water Tightness Test	10 days	Tue 07/10/9	Fri 07/10/19
232	Backfilling	20 days	Sat 07/10/20	Mon 07/11/12
233	Install handrailing/ladders/mesh etc.	21 days	Tue 07/11/13	Thu 07/12/6
234	External Works	69 days	Mon 07/10/8	Tue 07/12/25
235	Pipelaying of pipeline No.11, 12 & 13	33 days	Mon 07/10/8	Wed 07/11/14
236	Connection to existing system	12 days	Thu 07/11/15	Wed 07/11/28
237	Sump pit construction	24 days	Thu 07/11/29	Tue 07/12/25
238	Dangerous Goods (cat.5) Storeroom	60 days	Mon 07/9/3	Sat 07/11/10
239	Earthworks	14 days	Mon 07/9/3	Tue 07/9/18
240	Excavation, rockfill & Blinding	14 days	Mon 07/9/3	Tue 07/9/18
241	Superstructure	25 days	Wed 07/9/19	Wed 07/10/17
242	Structure	25 days	Wed 07/9/19	Wed 07/10/17
243	Finishing	21 days	Thu 07/10/18	Sat 07/11/10
244	Internal & external finishing	21 days	Thu 07/10/18	Sat 07/11/10
245	Chemical Waste storeroom No.1 & 2	396 days	Tue 06/4/18	Sat 07/7/21
246	Earthworks	14 days	Tue 06/4/18	Wed 06/5/3
247	Excavation, rockfill & Blinding	14 days	Tue 06/4/18	Wed 06/5/3
248	Superstructure	25 days	Thu 06/5/4	Thu 06/6/1
249	Structure	25 days	Thu 06/5/4	Thu 06/6/1
250	Finishing	30 days	Mon 07/6/18	Sat 07/7/21
251	Internal & external finishing	30 days	Mon 07/6/18	Sat 07/7/21
252	Key Date of the Section 4 of the Works	1 day	Sun 08/3/30	Sun 08/3/30



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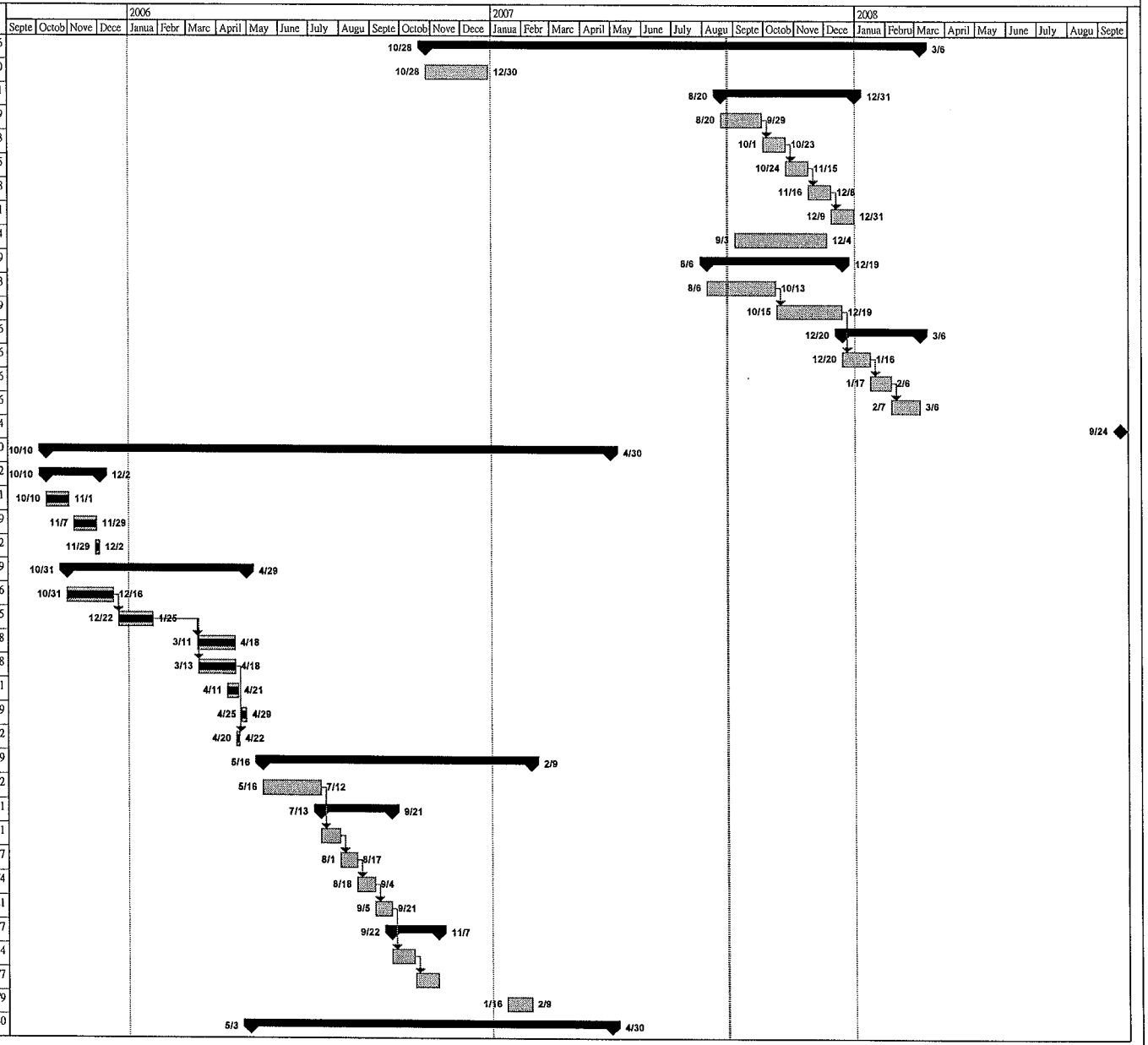
ID		Task Name	Duration	Start	Finish
253		Section 5 of works	427 days	Sat 06/10/28	Thu 08/3/6
254		Covered Walkway of Air Blower House No.2	55 days	Sat 06/10/28	Sat 06/12/30
255		Cover & Shelter to Existing Structure	116 days	Mon 07/8/20	Mon 07/12/31
256		Shelter for UV channel	36 days	Mon 07/8/20	Sat 07/9/29
257		Cover for Inlet Pumping Station	20 days	Mon 07/10/1	Tue 07/10/23
258		Cover for Flume channels	20 days	Wed 07/10/24	Thu 07/11/15
259		Cover for Grit channels	20 days	Fri 07/11/16	Sat 07/12/8
260		Cover for Sedimentation tank No.1-8	20 days	Sun 07/12/9	Mon 07/12/31
261		Cover for Sludge Hoarding Tank No.1-4	80 days	Mon 07/9/3	Tue 07/12/4
262		Roadworks	118 days	Mon 07/8/6	Wed 07/12/19
263		Portion 1	60 days	Mon 07/8/6	Sat 07/10/13
264		Portion 2&3	58 days	Mon 07/10/15	Wed 07/12/19
265		Landscaping Softworks	67 days	Thu 07/12/20	Thu 08/3/6
266		Planting works (Portion 2)	24 days	Thu 07/12/20	Wed 08/1/16
267		Hydroseeding	18 days	Thu 08/1/17	Wed 08/2/6
268		General Establishment Works	25 days	Thu 08/2/7	Thu 08/3/6
269		Key Date of the Section 5 of the Works	1 day	Wed 08/9/24	Wed 08/9/24
270		Section 6 of the Works	488 days	Mon 05/10/10	Mon 07/4/30
271	✓	General Site Clearance and Setting Up	47 days	Mon 05/10/10	Fri 05/12/2
272	✓	Site Clearance (Tree Felling)	20 days	Mon 05/10/10	Tue 05/11/1
273	✓	Hoarding, Chainlink Fence & Gate Erection	20 days	Mon 05/11/7	Tue 05/11/29
274	✓	Demolition of Existing Boundary Wall (Stage 1)	4 days	Tue 05/11/29	Fri 05/12/2
275	✓	Mini Piles	156 days	Mon 05/10/31	Sat 06/4/29
276	✓	G.I. - Pre-Drilling	41 days	Mon 05/10/31	Fri 05/12/16
277	✓	Preliminary Pile	30 days	Thu 05/12/22	Wed 06/1/25
278	✓	Installation of Re-bars	32 days	Sat 06/3/11	Tue 06/4/18
279	✓	Grouting	32 days	Mon 06/3/13	Tue 06/4/18
280	✓	Post Drilling	10 days	Tue 06/4/11	Fri 06/4/21
281	✓	Loading Test	5 days	Tue 06/4/25	Sat 06/4/29
282	✓	Site Clearance	3 days	Thu 06/4/20	Sat 06/4/22
283		Transformer House	233 days	Tue 06/5/16	Fri 07/2/9
284		Diversion of Existing Sewer	50 days	Tue 06/5/16	Wed 06/7/12
285		Construction of Substructure	61 days	Thu 06/7/13	Thu 06/9/21
286		Temporary Works (Sheet Pile + Open Cut)	16 days	Thu 06/7/13	Mon 06/7/31
287		Lift 1 (from +3.95 mPD to +4.95 mPD)	15 days	Tue 06/8/1	Thu 06/8/17
288		Lift 2 (from +4.95 mPD to +5.95 mPD)	15 days	Fri 06/8/18	Mon 06/9/4
289		Lift 3 (from +5.15 mPD to +6.15 mPD)	15 days	Tue 06/9/5	Thu 06/9/21
290		Construction of Superstructure	40 days	Fri 06/9/22	Tue 06/11/7
291		Lift 4 (from +6.15 mPD to +11.20 mPD)	20 days	Fri 06/9/22	Sat 06/10/14
292		Lift 5 (from +11.20 mPD to +12.30 mPD)	20 days	Mon 06/10/16	Tue 06/11/7
293		Internal Finishes (incl. Plumbing, cat ladder, etc.)	22 days	Tue 07/1/16	Fri 07/2/9
294		Ting Kok Road Pumping Station No.5	312 days	Wed 06/5/3	Mon 07/4/30

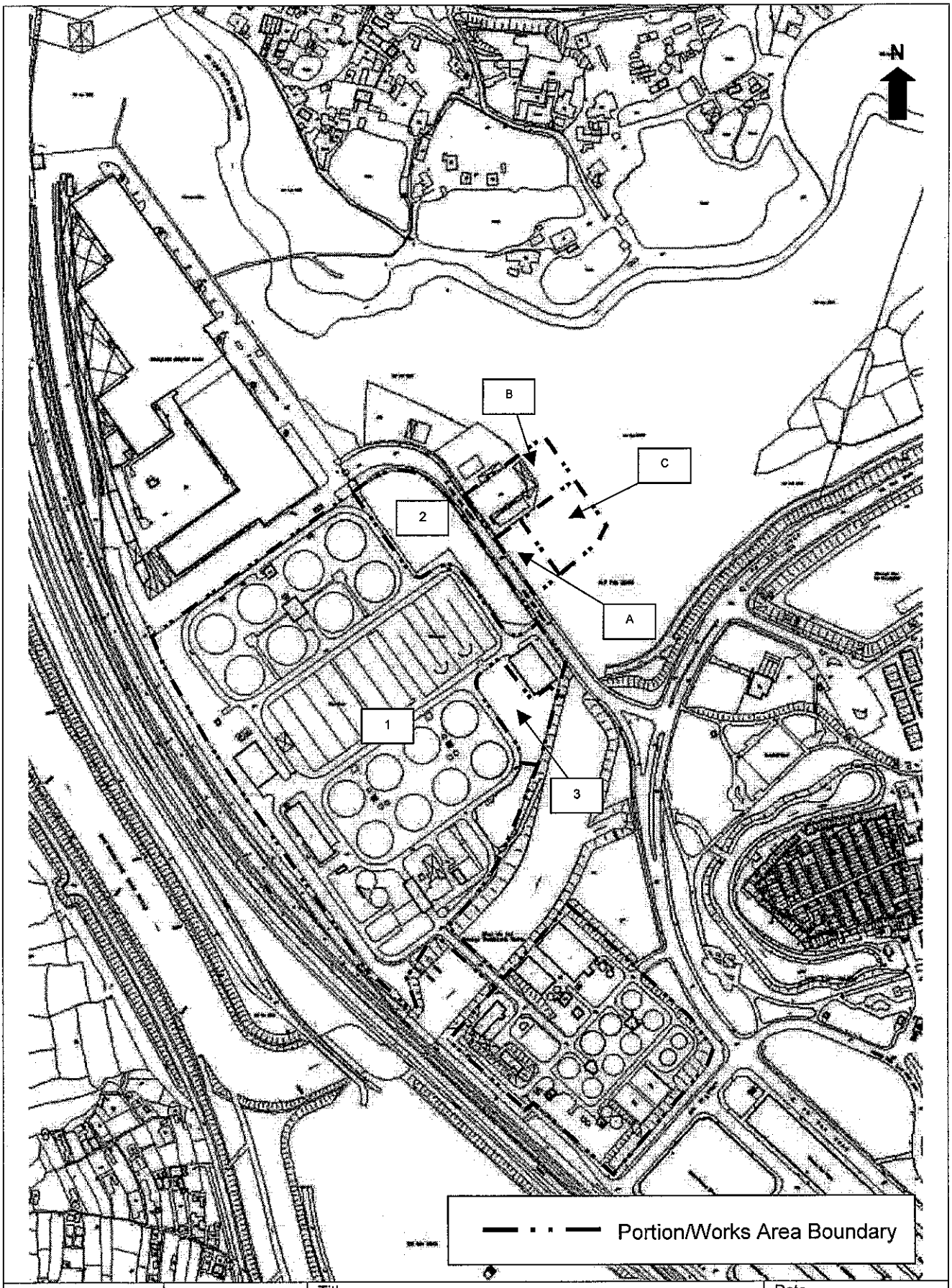


Date: Sat 07/8/25

Task | Progress | Summary | Rolled Up Critical Task | Rolled Up Progress | External Tasks
Critical Task | Milestone | Rolled Up Task | Rolled Up Milestone | Split | Project Summary

Appendix 3

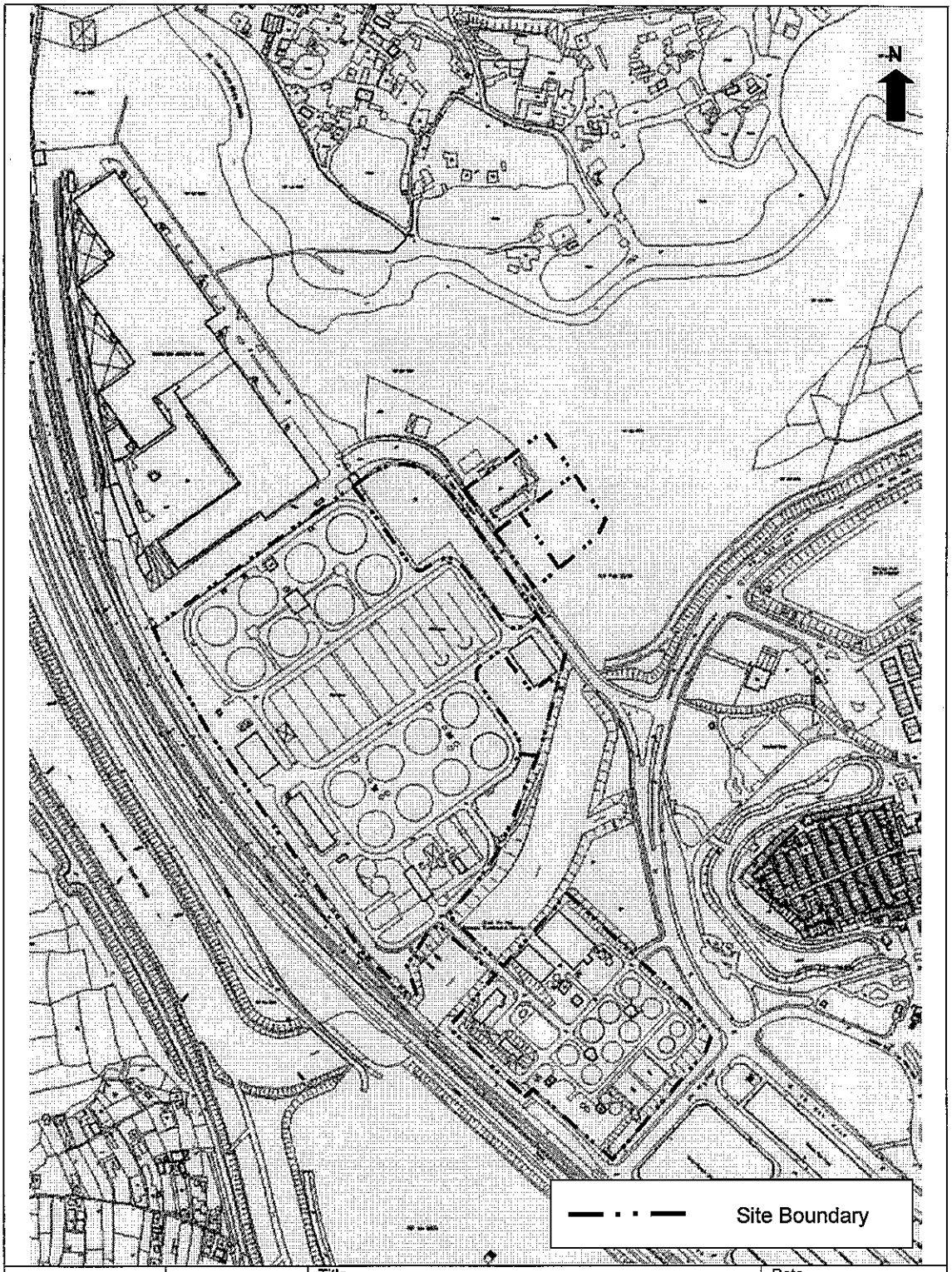
Works Area



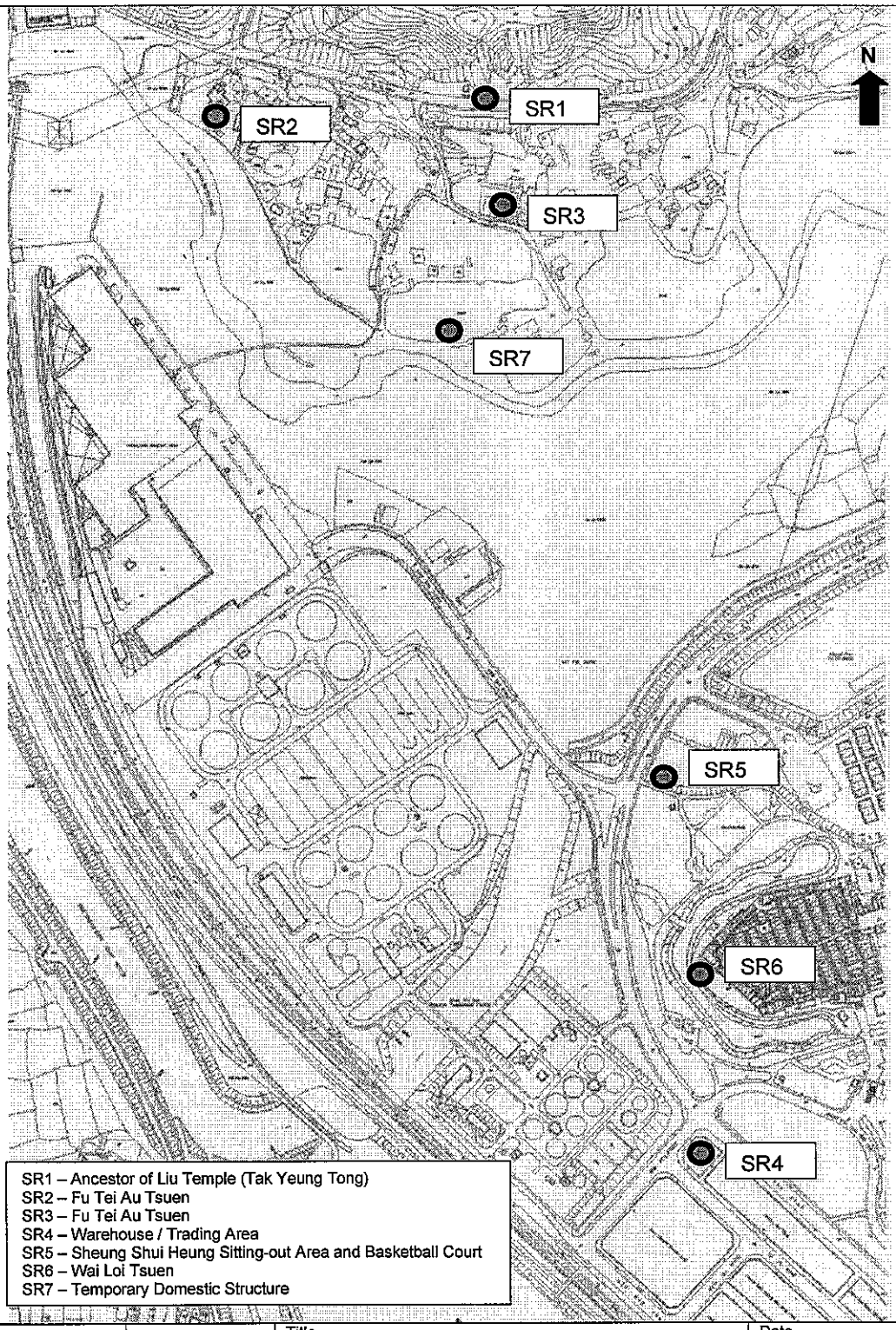
Hyder Consulting	MAEDA	Title: Expansion of Shek Wu Hui Sewage Treatment Works – Location of Portion/Works Area	Date: Dec 2005 Figure: N.A. Scale: NTS

Appendix 4

Project Area, Environmental Sensitive Receiver and Monitoring Location



Hyder Consulting	MAEDA	Title: Expansion of Shek Wu Hui Sewage Treatment Works – Project Area	Date: Dec 2005 Figure: N.A. Scale: NTS



Hyder Consulting

MAEDA

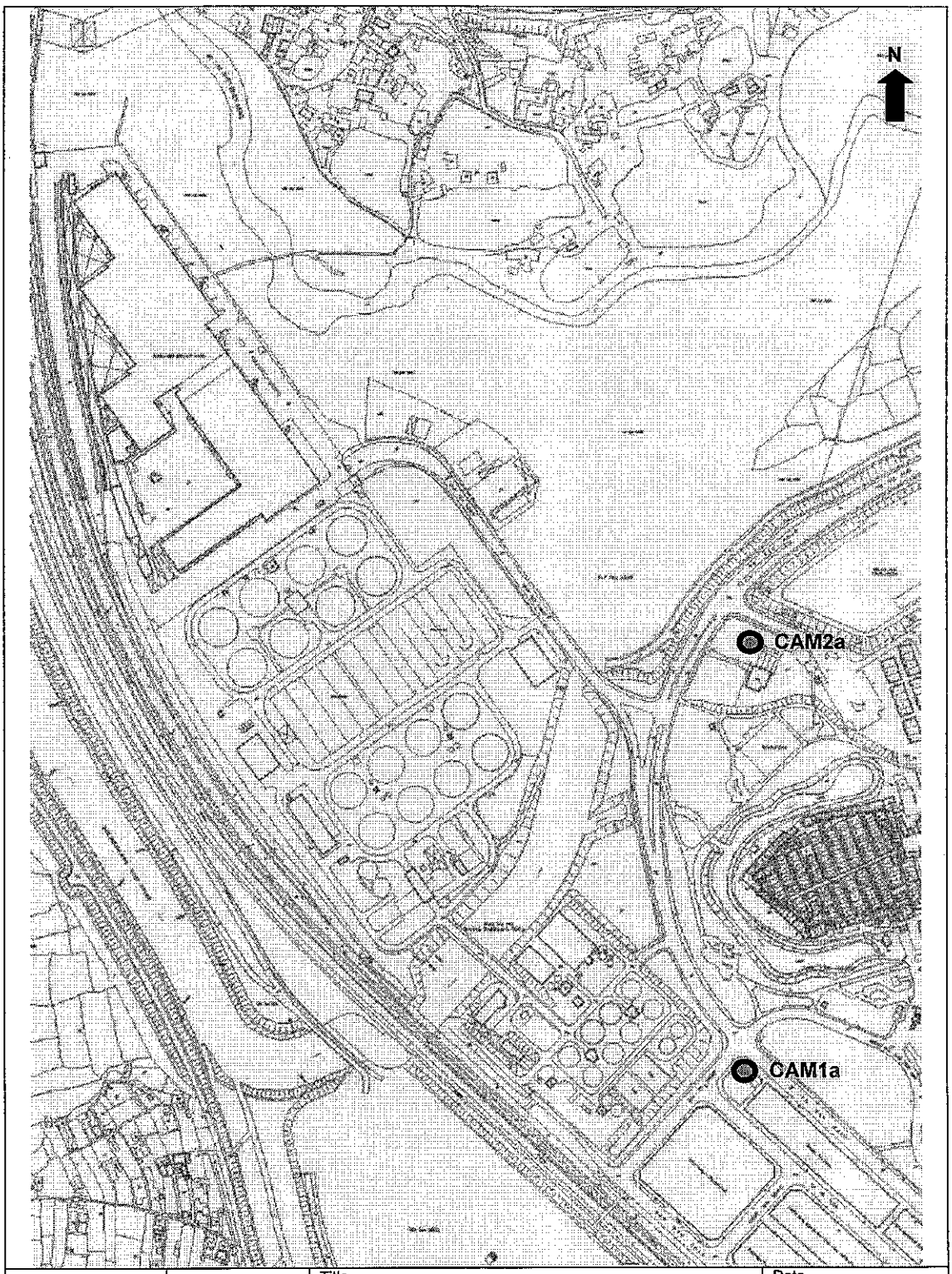
Title

Expansion of Shek Wu Hui Sewage Treatment Works – Environmental Sensitive Receiver

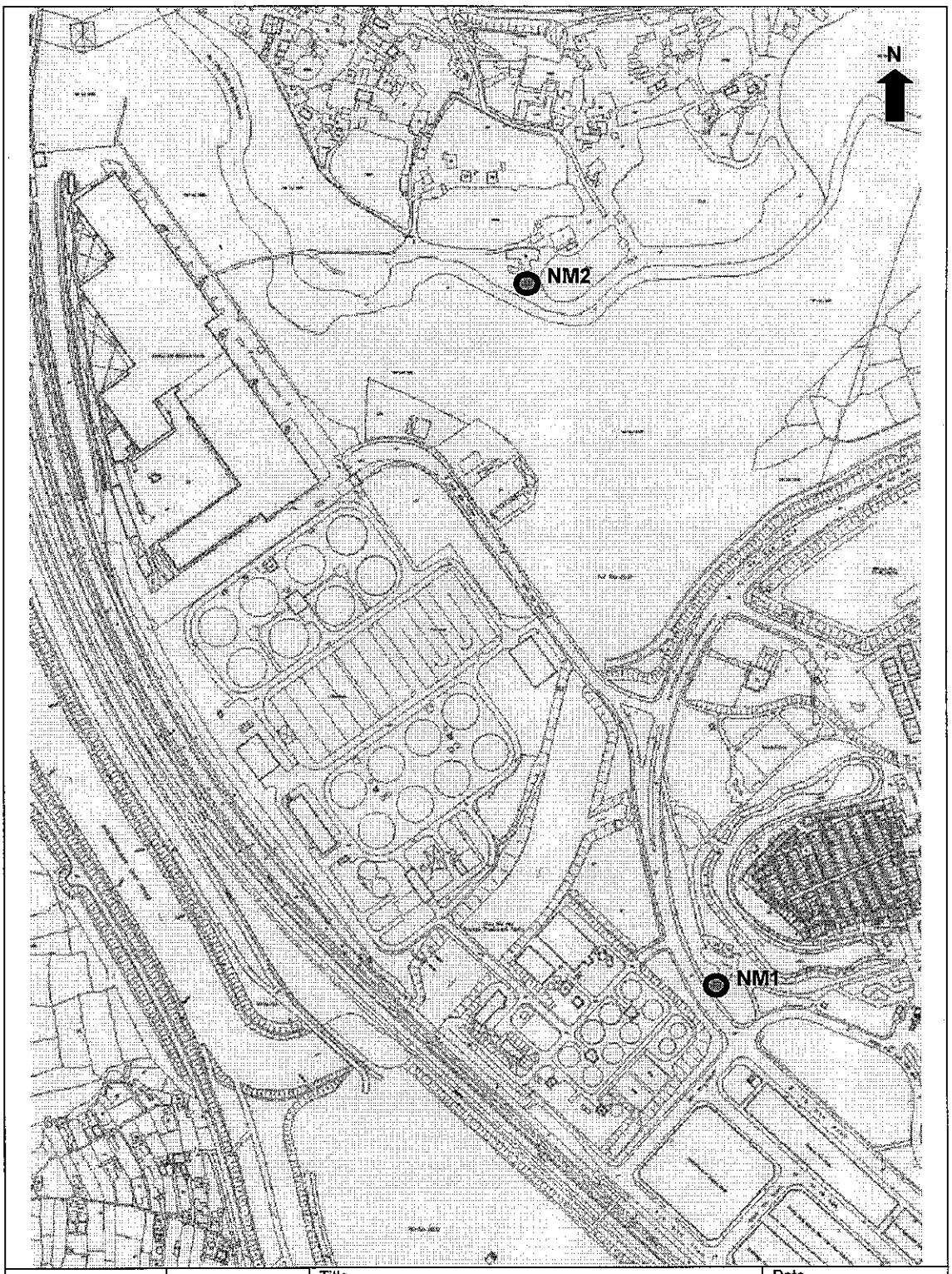
Date: Dec 2005

Figure: N.A.

Scale: NTS



Hyder Consulting	MAEDA	Title: Expansion of Shek Wu Hui Sewage Treatment Works – Location of Air Quality Monitoring Station	Date: Dec 2005 Figure: N.A. Scale: NTS



Hyder Consulting	MAEDA	Title: Expansion of Shek Wu Hui Sewage Treatment Works – Location of Noise Monitoring Station	Date: Dec 2005 Figure: N.A. Scale: NTS

Appendix 5

Action and Limit Levels

Monitoring Station ID	1-hour TSP Level 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		201.6	

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

Appendix 6

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	Properly implemented as appropriate	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 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 as appropriate	N/A
Annex 2 S2.4.4	*Construction Runoff and Drainage* • 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 facilitates. 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 $0.1m^3s^{-1}$ a sedimentation basin of $30m^3$ would be required and for a flow rate of $0.5m^3s^{-1}$ the basin would be $150m^3$. 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 $50m^3$ 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 when a rainstorm is imminent or forecasted, and actions to be taken during or after 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 slopes.	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* • 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 wash-water 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 wheel-wash 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	Properly implemented as appropriate	N/A
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 as appropriate	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
Annex 3 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 doing careful check before ordering.	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, and 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 wast 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 trip-ticket 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	Properly implemented as appropriate	N/A
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	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 S3.5.7	*Construction and Demolition Material* • 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 on-site 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	Properly implemented as appropriate	N/A
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	Properly implemented as appropriate	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 as appropriate	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 as appropriate	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

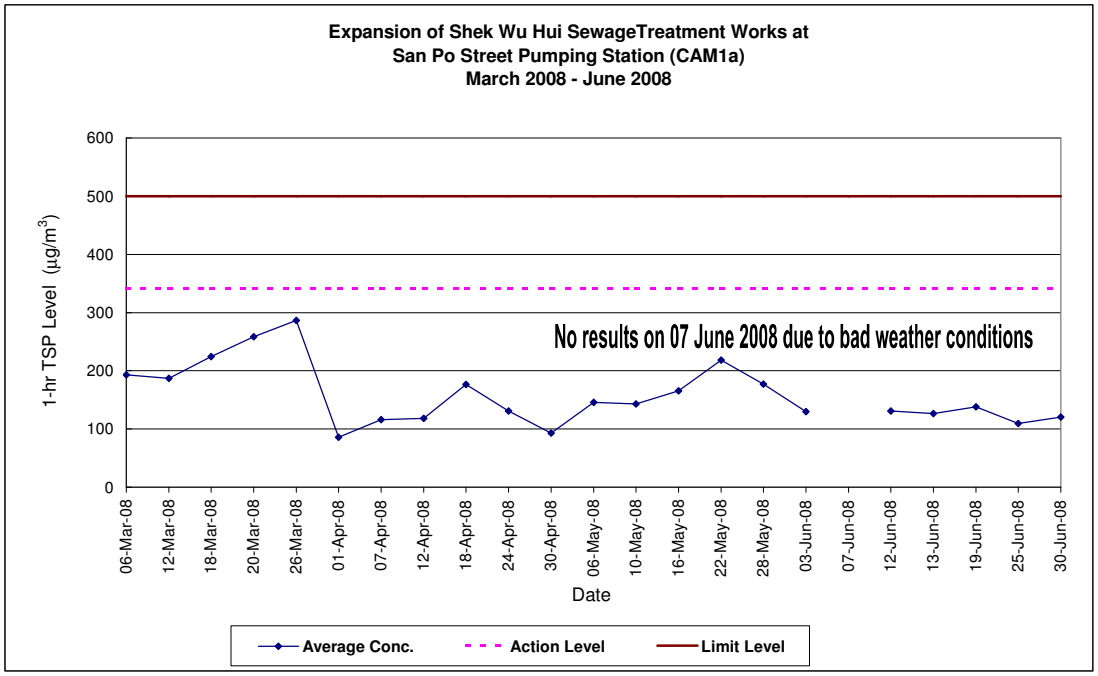
Expansion of Shek Wu Hui Sewage Treatment Works

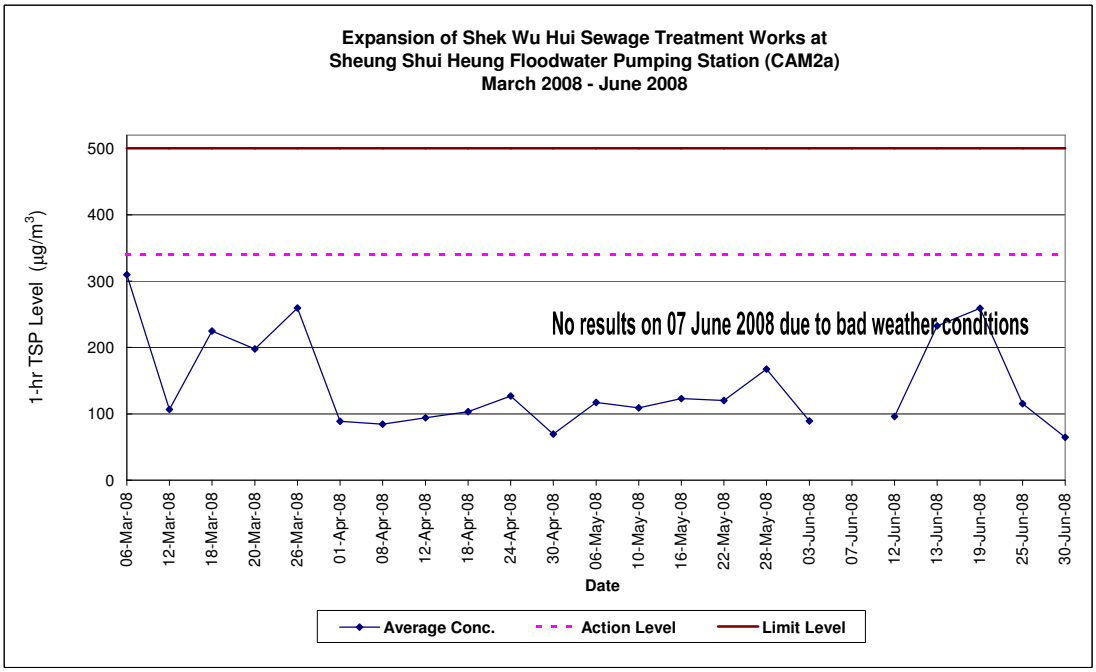
Air Quality Impact Monitoring Results (1-Hour TSP)

Location	Monitoring Date	Weather Conditions	Wind Speed with Direction (m/s)	Temp (°C)	Timer-I	Timer-F	Time (mins)	Flow-I (CFM/ Inches)	Flow-F (CFM/ Inches)	Flow-I (m^3/min)	Flow-F (m^3/min)	Flow-avg (m^3/min)	Volume (m^3)	Weight-I (g)	Weight-f (g)	Weight-diff. (g)	1-hr TSP (ug/m^3)	Average 1-Hr TSP (ug/m^3)	Action/Limit Levels (ug/m^3)	Remark
San Po Street Pumping Station CAM1a	03-Jun-08	Rainy	1.3 SE	21	630866	630962	57.6	40	39	1.09	1.08	1.08	62.42	2.7571	2.7671	0.0100	160.2	129.6	342.7/500	
		Rainy	1.3 SE	21	630962	631063	60.6	40	40	1.09	1.09	1.09	66.12	2.7446	2.7536	0.0090	136.1			
		Rainy	1.3 SE	21	631063	631160	58.2	39	39	1.08	1.08	1.08	62.63	2.7481	2.7539	0.0058	92.6			
	07-Jun-08*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	0.0		No results due to bad weather conditions
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0			
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0			
	12-Jun-08**	Cloudy	1.9 S	30	633537	633638	60.6	39	39	1.08	1.08	1.08	65.22	2.7232	2.7316	0.0084	128.8	130.9		
		Cloudy	1.9 S	30	633638	633735	58.2	39	38	1.08	1.06	1.07	62.20	2.7337	2.7414	0.0077	123.8			
		Cloudy	1.9 S	30	633735	633829	56.4	39	39	1.08	1.08	1.08	60.70	2.7286	2.7371	0.0085	140.0			
	13-Jun-08	Rainy	3.4 S	25	633940	634038	58.8	39	40	1.08	1.09	1.08	63.72	2.7955	2.8056	0.0101	158.5	126.7		
		Rainy	3.4 S	25	634038	634136	58.8	40	40	1.09	1.09	1.09	64.16	2.7889	2.7975	0.0086	134.0			
		Rainy	3.4 S	25	634136	634236	60.0	40	39	1.09	1.08	1.08	65.02	2.8064	2.8121	0.0057	87.7			
	19-Jun-08	Fine	1.5 S	28	636626	636724	58.8	40	40	1.09	1.09	1.09	64.16	2.8089	2.8187	0.0098	152.7	138.1		
		Fine	1.5 S	28	636724	636820	57.6	40	40	1.09	1.09	1.09	62.85	2.7912	2.8001	0.0089	141.6			
		Fine	1.5 S	28	636820	636926	63.6	39	39	1.08	1.08	1.08	68.44	2.7953	2.8035	0.0082	119.8			
	25-Jun-08	Rainy	4.4 SW	26	641702	641800	58.8	41	41	1.11	1.11	1.11	65.04	2.7836	2.7928	0.0092	141.5	109.2		
		Rainy	4.4 SW	26	641800	641907	64.2	41	41	1.11	1.11	1.11	71.01	2.8263	2.8319	0.0056	78.9			
		Rainy	4.4 SW	26	641907	642004	58.2	41	41	1.11	1.11	1.11	64.38	2.8005	2.8074	0.0069	107.2			
	30-Jun-08	Cloudy	0.5 SE	29	644402	644495	55.8	41	41	1.11	1.11	1.11	61.72	2.7733	2.7815	0.0082	132.9	120.7		
		Cloudy	0.5 SE	29	644495	644596	60.6	41	41	1.11	1.11	1.11	67.03	2.7558	2.7646	0.0088	131.3			
		Cloudy	0.5 SE	29	644596	644696	60.0	41	41	1.11	1.11	1.11	66.37	2.7274	2.7339	0.0065	97.9			
Sheung Shui Heung Floodwater Pumping Station CAM2a	03-Jun-08	Rainy	1.2 SE	21	744118	744215	58.2	41	41	1.05	1.05	1.05	60.92	2.7256	2.7330	0.0074	121.5	89.1	340.2/500	
		Rainy	1.2 SE	21	744215	744316	60.6	41	40	1.05	1.03	1.04	63.03	2.7600	2.7654	0.0054	85.7			
		Rainy	1.2 SE	21	744316	744414	58.8	41	41	1.05	1.05	1.05	61.54	2.7461	2.7498	0.0037	60.1			
	07-Jun-08*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	0.0		No results due to bad weather conditions
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0			
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0			
	12-Jun-08**	Cloudy	1.9 S	30	746801	746904	61.8	39	39	1.02	1.02	1.02	63.08	2.7549	2.7593	0.0044	69.8	95.9		
		Cloudy	1.9 S	30	746904	747001	58.2	39	39	1.02	1.02	1.02	59.40	2.7296	2.7357	0.0061	102.7			
		Cloudy	1.9 S	30	747001	747095	56.4	39	38	1.02	1.01	1.01	57.20	2.7604	2.7670	0.0066	115.4			
	13-Jun-08	Rainy	3.1 S	25	749586	749686	60.0	40	40	1.03	1.03	1.03	62.02	2.7623	2.7866	0.0243	391.8	232.3		
		Rainy	3.1 S	25	749686	749786	60.0	40	40	1.03	1.03	1.03	62.02	2.7911	2.7998	0.0087	140.3			
		Rainy	3.1 S	25	749786	749884	58.8	39	39	1.02	1.02	1.02	60.02	2.8119	2.8218	0.0099	165.0			
	19-Jun-08	Fine	1.4 S	28	752274	752374	60.0	38	38	1.01	1.01	1.01	60.46	2.8059	2.8237	0.0178	294.4	258.8		
		Fine	1.4 S	28	752374	752474	60.0	38	38	1.01	1.01	1.01	60.46	2.7784	2.7881	0.0097	160.4			
		Fine	1.4 S	28	752474	752574	60.0	39	39	1.02	1.02	1.02	61.24	2.8103	2.8300	0.0197	321.7			
	25-Jun-08	Rainy	4.1 SW	26	754959	755058	59.4	41	40	1.05	1.03	1.04	61.79	2.7979	2.8065	0.0086	139.2	115.2		
		Rainy	4.1 SW	26	755058	755162	62.4	41	42	1.05	1.06	1.05	65.72	2.7940	2.8003	0.0063	95.9			
		Rainy	4.1 SW	26	755162	755257	57.0	41	41	1.05	1.05	1.05	59.66	2.7591	2.7657	0.0066	110.6			
	30-Jun-08	Cloudy	0.7 SE	29	757683	757777	56.4	40	40	1.03	1.03	1.03	58.30	2.7618	2.7668	0.0050	85.8	64.4		
		Cloudy	0.7 SE	29	757777	757878	60.6	40	40	1.03	1.03	1.03	62.64	2.7685	2.7719	0.0034	54.3			
		Cloudy	0.7 SE	29	757878	757978	60.0	40	40	1.03	1.03	1.03	62.02	2.7444	2.7477	0.0033	53.2			

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

Note: * No results due to bad weather conditions


Expansion of Shek Wu Hui SewageTreatment Works at
San Po Street Pumping Station (CAM1a)
March 2008 - June 2008
1-hr TSP Level (µg/m3)
600
500
400
300
200
100
0
No results on 07 June 2008 due to bad weather conditions
06-Mar-08
12-Mar-08
18-Mar-08
20-Mar-08
26-Mar-08
01-Apr-08
07-Apr-08
12-Apr-08
18-Apr-08
24-Apr-08
30-Apr-08
06-May-08
10-May-08
16-May-08
22-May-08
28-May-08
03-Jun-08
07-Jun-08
12-Jun-08
13-Jun-08
19-Jun-08
25-Jun-08
30-Jun-08
Date
Average Conc.
Action Level
Limit Level

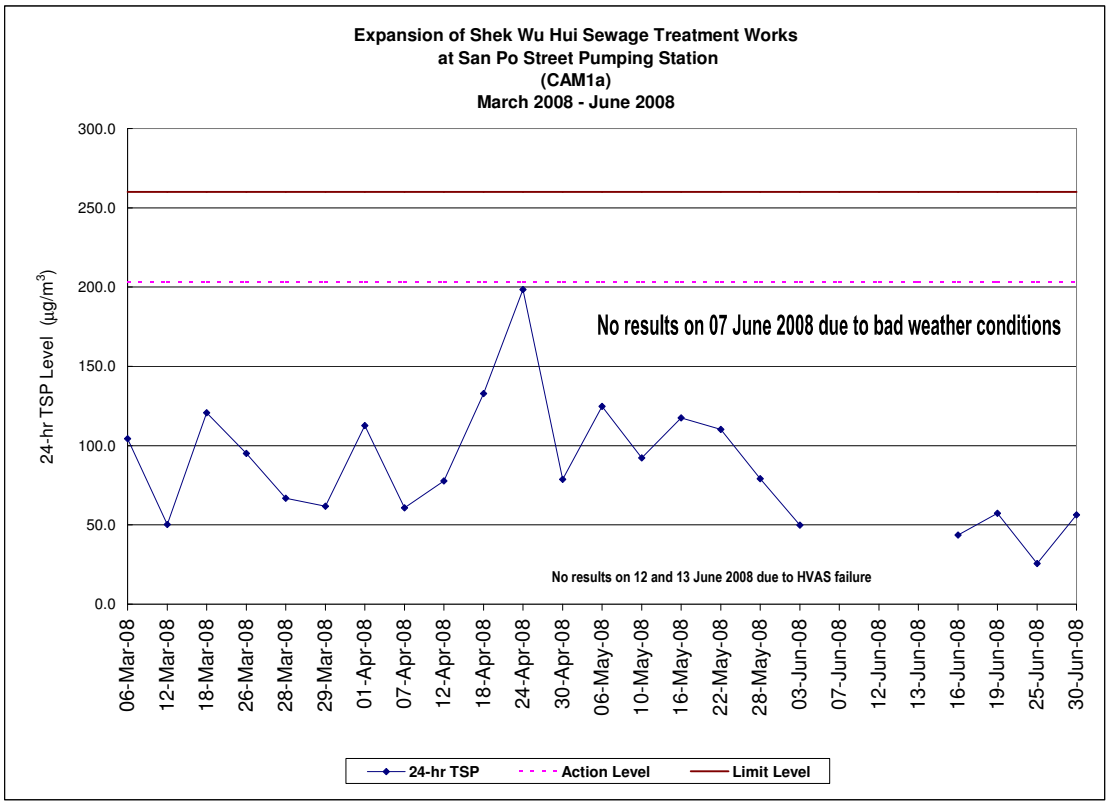

Expansion of Shek Wu Hui Sewage Treatment Works at
Sheung Shui Heung Floodwater Pumping Station (CAM2a)
March 2008 - June 2008
1-hr TSP Level (µg/m3)
500
400
300
200
100
0
No results on 07 June 2008 due to bad weather conditions
06-Mar-08
12-Mar-08
18-Mar-08
20-Mar-08
26-Mar-08
01-Apr-08
08-Apr-08
12-Apr-08
18-Apr-08
24-Apr-08
30-Apr-08
06-May-08
10-May-08
16-May-08
22-May-08
28-May-08
03-Jun-08
07-Jun-08
12-Jun-08
13-Jun-08
19-Jun-08
25-Jun-08
30-Jun-08
Date
Average Conc.
Action Level
Limit Level

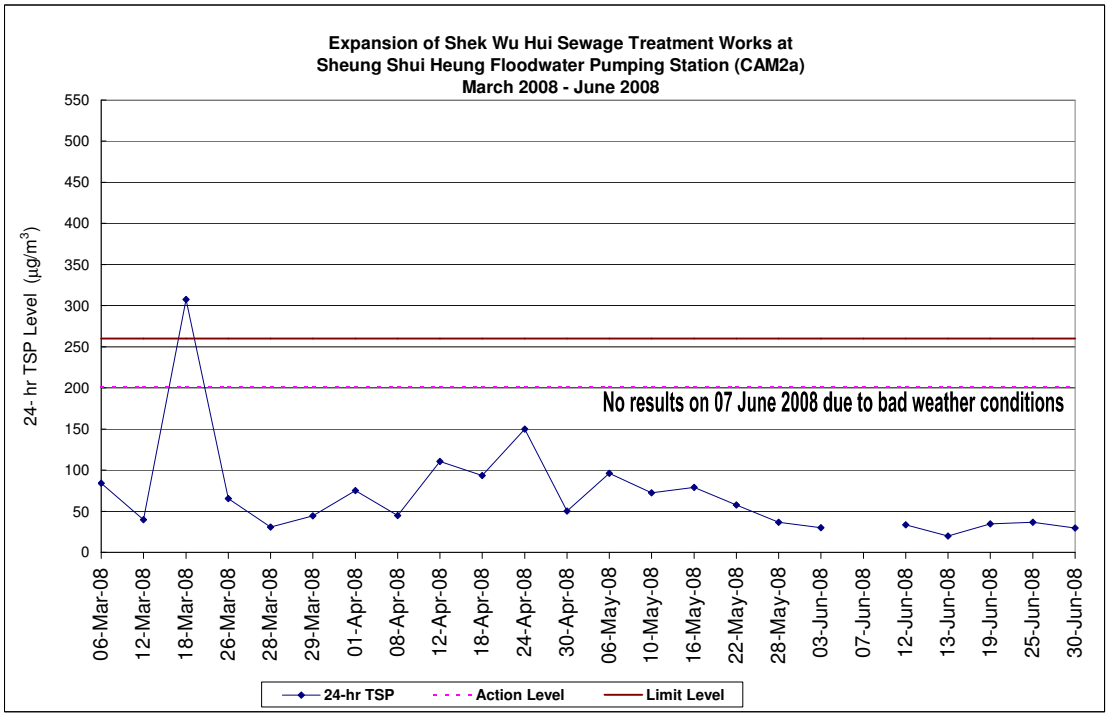
Expansion of Shek Wu Hui Sewage Treatment Works

Air Quality Impact Monitoring Results (24-Hour TSP)

Location	Monitoring Date	Weather Conditions	Wind Speed with Direction (m/s)	Temp (°C)	Pressure (mmHg)	Timer-I	Timer-F	Time (mins)	Flow-I (CFM/ Inches)	Flow-F (CFM/ Inches)	Flow-I (m^3/min)	Flow-F (m^3/min)	Flow-avg (m^3/min)	Volume (m^3)	Weight-I (g)	Weight-f (g)	Weight-diff. (g)	24-hr TSP (ug/m^3)	Action/Limit Levels (ug/m^3)	Remark
San Po Street Pumping Station CAM1a	03-Jun-08	Rainy	1.3 SE	21	1008.5	631160	633537	1426.2	40	39	1.09	1.08	1.08	1545.51	2.7320	2.8089	0.0769	49.8	203.3/260	
	07-Jun-08*	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	0.0		No results due to bad weather conditions
	12-Jun-08***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0		Power failure
	13-Jun-08***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0		HVAS failure, additional monitoring on 20 June 2008
	16-Jun-08**	Sunny	0.3 E	31	1004.0	634236	636626	1434	38	39	1.06	1.08	1.07	1532.50	2.7967	2.8635	0.0668	43.6		
	19-Jun-08	Fine	1.5 S	28	1009.4	636926	639302	1425.6	40	40	1.09	1.09	1.09	1555.53	2.7782	2.8675	0.0893	57.4		
	25-Jun-08	Rainy	4.4 SW	26	998.4	642004	644402	1438.8	40	40	1.09	1.09	1.09	1569.93	2.8109	2.8513	0.0404	25.7		
	30-Jun-08	Cloudy	0.5 SE	29	1009.0	644696	647090	1436.4	41	41	1.11	1.11	1.11	1588.81	2.7345	2.8240	0.0895	56.3		
Sheung Shui Heung Floodwater Pumping Station CAM2a	03-Jun-08	Rainy	1.2 SE	21	1008.5	744414	746801	1432.2	41	40	1.05	1.03	1.04	1489.73	2.7753	2.8201	0.0448	30.1	201.6/260	
	07-Jun-08*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0		No results due to bad weather conditions
	12-Jun-08**	Cloudy	1.9 S	30	1006.8	747095	749584	1493.4	39	38	1.02	1.01	1.01	1514.56	2.7384	2.7890	0.0506	33.4		Timer failure, manually stopped
	13-Jun-08	Rainy	3.1 S	25	1003.9	749886	752274	1432.8	37	40	0.99	1.03	1.01	1453.10	2.7819	2.8105	0.0286	19.7		Timer failure, manually stopped
	19-Jun-08	Fine	1.4 S	28	1009.4	752574	754959	1431	39	40	1.02	1.03	1.03	1469.88	2.7905	2.8413	0.0508	34.6		
	25-Jun-08	Rainy	4.1 SW	26	998.4	755257	757683	1455.6	40	40	1.03	1.03	1.03	1504.61	2.7819	2.8369	0.0550	36.6		
	30-Jun-08	Cloudy	0.7 SE	29	1009.0	757978	760390	1447.2	40	40	1.03	1.03	1.03	1495.93	2.7665	2.8108	0.0443	29.6		

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


Expansion of Shek Wu Hui Sewage Treatment Works
at San Po Street Pumping Station
(CAM1a)
March 2008 - June 2008
24-hr TSP Level (µg/m³)
300.0
250.0
200.0
150.0
100.0
50.0
0.0
No results on 07 June 2008 due to bad weather conditions
No results on 12 and 13 June 2008 due to HVAS failure
06-Mar-08
12-Mar-08
18-Mar-08
26-Mar-08
28-Mar-08
29-Mar-08
01-Apr-08
07-Apr-08
12-Apr-08
18-Apr-08
24-Apr-08
30-Apr-08
06-May-08
10-May-08
16-May-08
22-May-08
28-May-08
03-Jun-08
07-Jun-08
12-Jun-08
13-Jun-08
16-Jun-08
19-Jun-08
25-Jun-08
30-Jun-08
24-hr TSP
Action Level
Limit Level


Expansion of Shek Wu Hui Sewage Treatment Works at
Sheung Shui Heung Floodwater Pumping Station (CAM2a)
March 2008 - June 2008
24- hr TSP Level (µg/m³)
550
500
450
400
350
300
250
200
150
100
50
0
No results on 07 June 2008 due to bad weather conditions
06-Mar-08
12-Mar-08
18-Mar-08
26-Mar-08
28-Mar-08
29-Mar-08
01-Apr-08
08-Apr-08
12-Apr-08
18-Apr-08
24-Apr-08
30-Apr-08
06-May-08
10-May-08
16-May-08
22-May-08
28-May-08
03-Jun-08
07-Jun-08
12-Jun-08
13-Jun-08
19-Jun-08
25-Jun-08
30-Jun-08
24-hr TSP
Action Level
Limit Level

Expansion of Shek Wu Hui Sewage Treatment Works

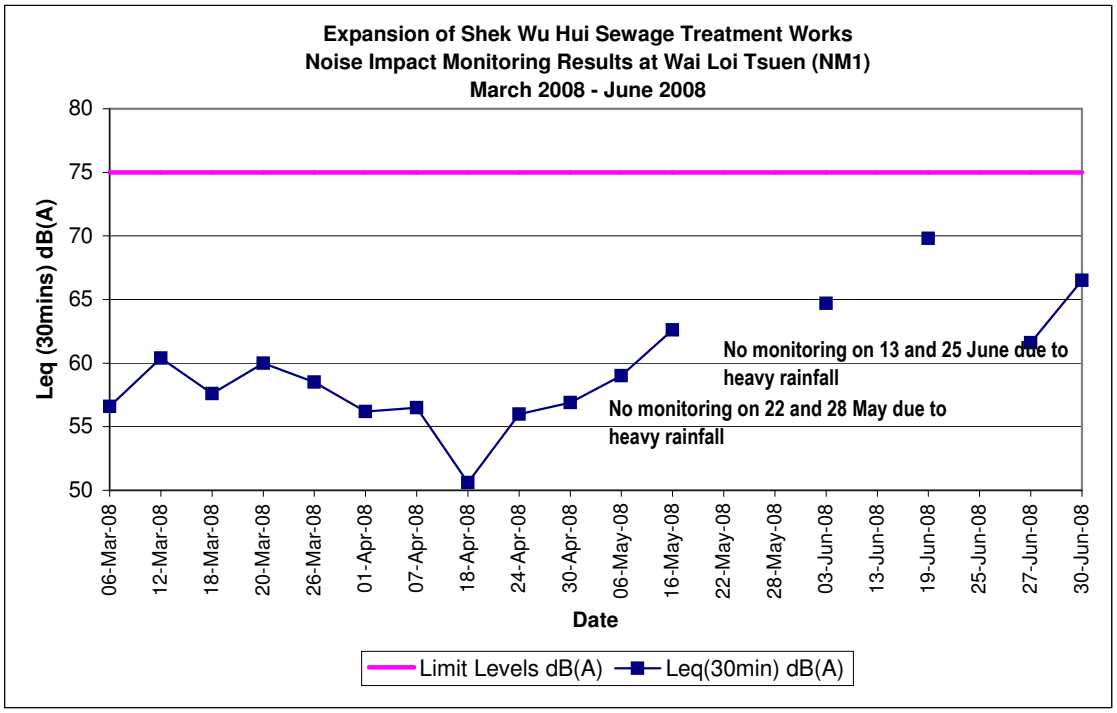
Noise Impact Monitoring Results

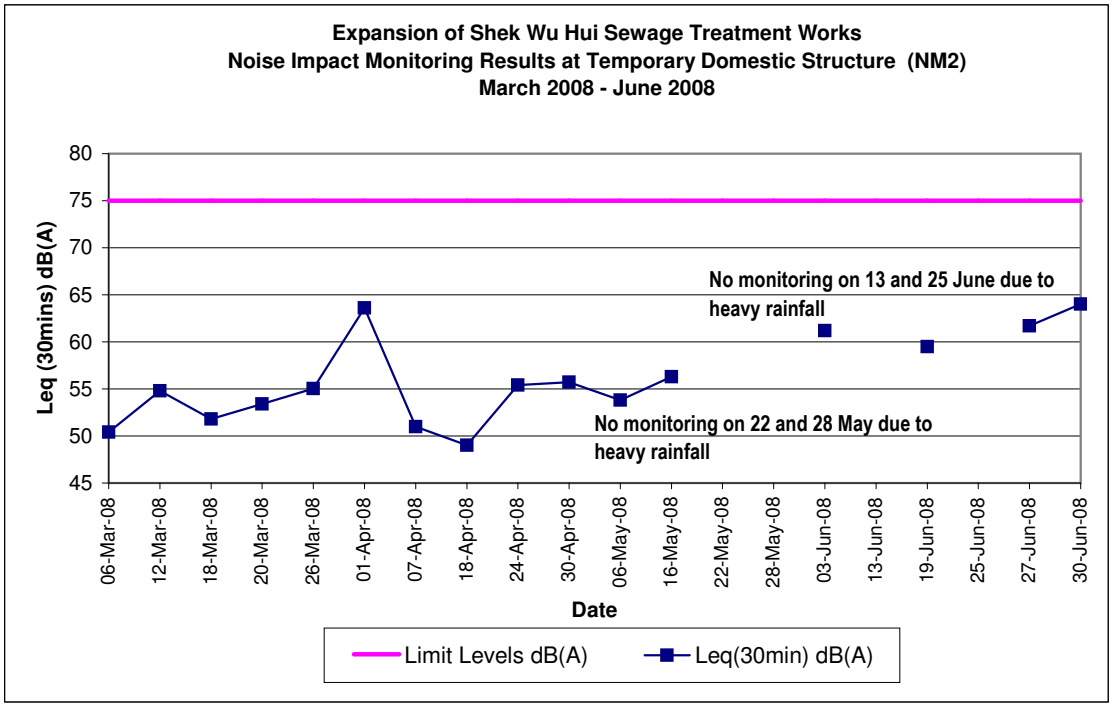
Monitoring Locations	Date	Weather Conditions	Temperature (°C)	Wind Speed (m/s)	Wind Direction	Start Time	End Time	Limit Levels dB(A)	$L_{eq(30min)}$ dB(A)	$L_{10(30min)}$ dB(A)	$L_{90(30min)}$ dB(A)	Remark
Wai Loi Tsuen NM1	03-Jun-08	Rainy	21	1.3	SE	10:35	11:05	75	64.7	66.6	61.4	Free Field
	13-Jun-08*	Rainy	-	-	-	-	-	-	-	-	-	
	19-Jun-08	Fine	28	1.5	S	09:15	09:45	75	69.8	72.8	65.4	Free Field
	25-Jun-08*	Rainy	-	-	-	-	-	-	-	-	-	
	27-Jun-08	Fine	30	0.7	E	16:00	16:30	75	61.6	65.2	58.2	Free Field
	30-Jun-08	Cloudy	29	0.5	SE	13:20	13:50	75	66.5	69.1	63.0	Façade
Temporary Domestic Structure NM2	03-Jun-08	Rainy	21	1.2	SE	11:45	12:15	75	61.2	63.8	58.6	Free Field
	13-Jun-08*	Rainy	-	-	-	-	-	-	-	-	-	
	19-Jun-08	Fine	28	1.4	S	10:20	10:50	75	59.5	63.6	55.3	Free Field
	25-Jun-08*	Rainy	-	-	-	-	-	-	-	-	-	
	27-Jun-08**	Fine	30	0.8	E	16:45	17:15	75	61.7	64.8	58.3	Free Field
	30-Jun-08	Cloudy	29	0.7	SE	14:25	14:55	75	64.0	63.7	57.9	Façade

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

Note: * No results due to heavy rainfall

**Additional Monitoring


Expansion of Shek Wu Hui Sewage Treatment Works
Noise Impact Monitoring Results at Wai Loi Tsuen (NM1)
March 2008 - June 2008
Leq (30mins) dB(A)
80
75
70
65
60
55
50
06-Mar-08
12-Mar-08
18-Mar-08
20-Mar-08
26-Mar-08
01-Apr-08
07-Apr-08
18-Apr-08
24-Apr-08
30-Apr-08
06-May-08
16-May-08
22-May-08
28-May-08
03-Jun-08
13-Jun-08
19-Jun-08
25-Jun-08
27-Jun-08
30-Jun-08
Date
No monitoring on 13 and 25 June due to heavy rainfall
No monitoring on 22 and 28 May due to heavy rainfall
Limit Levels dB(A)
Leq(30min) dB(A)

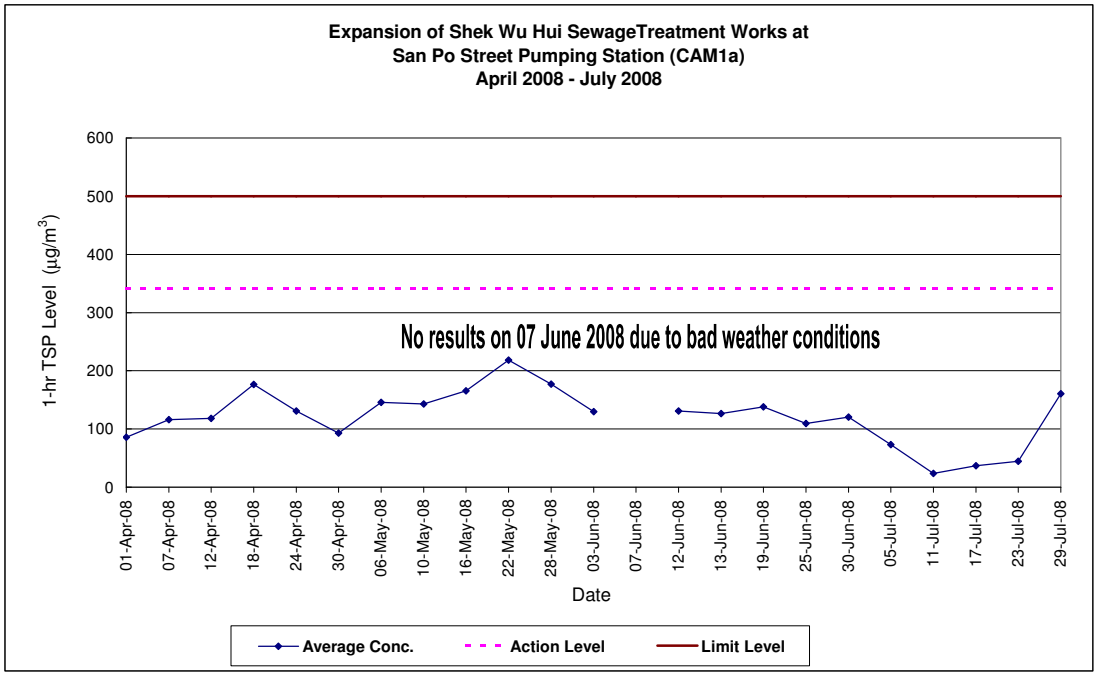

Expansion of Shek Wu Hui Sewage Treatment Works
Noise Impact Monitoring Results at Temporary Domestic Structure (NM2)
March 2008 - June 2008
Leq (30mins) dB(A)
80
75
70
65
60
55
50
45
06-Mar-08
12-Mar-08
18-Mar-08
20-Mar-08
26-Mar-08
01-Apr-08
07-Apr-08
18-Apr-08
24-Apr-08
30-Apr-08
06-May-08
16-May-08
22-May-08
28-May-08
03-Jun-08
13-Jun-08
19-Jun-08
25-Jun-08
27-Jun-08
30-Jun-08
Date
No monitoring on 13 and 25 June due to heavy rainfall
No monitoring on 22 and 28 May due to heavy rainfall
Limit Levels dB(A)
Leq(30min) dB(A)

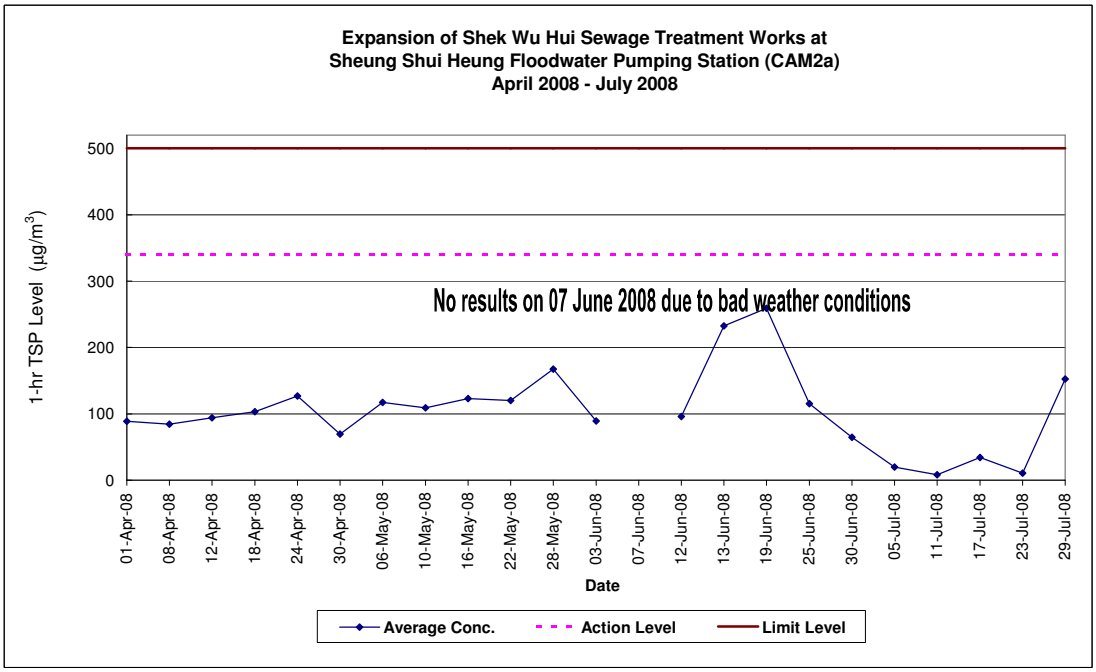
Expansion of Shek Wu Hui Sewage Treatment Works

Air Quality Impact Monitoring Results (1-Hour TSP)

Location	Monitoring Date	Weather Conditions	Wind Speed with Direction (m/s)	Temp (°C)	Timer-I	Timer-F	Time (mins)	Flow-I (CFM/ Inches)	Flow-F (CFM/ Inches)	Flow-I (m^3/min)	Flow-F (m^3/min)	Flow-avg (m^3/min)	Volume (m^3)	Weight-I (g)	Weight-f (g)	Weight-diff. (g)	1-hr TSP (ug/m^3)	Average 1-Hr TSP (ug/m^3)	Action/Limit Levels (ug/m^3)	Remark
San Po Street Pumping Station CAM1a	05-Jul-08	Sunny	0.3N	29	647090	647190	60.0	40	40	1.07	1.07	1.07	64.34	2.7474	2.7523	0.0049	76.2			
		Sunny	0.3N	30	647190	647290	60.0	40	40	1.07	1.07	1.07	64.34	2.7034	2.7091	0.0057	88.6	73.1		
		Sunny	0.3N	30	647290	647390	60.0	40	40	1.07	1.07	1.07	64.34	2.7525	2.7560	0.0035	54.4			
	11-Jul-08	Fine	0.5 S	30	649781	649876	57.0	42	42	1.10	1.10	1.10	62.94	2.7517	2.7537	0.0020	31.8			
		Fine	0.5 S	30	649876	649972	57.6	42	42	1.10	1.10	1.10	63.60	2.7742	2.7749	0.0007	11.0	23.7		
		Fine	0.5 S	30	649972	650073	60.6	42	42	1.10	1.10	1.10	66.91	2.7541	2.7560	0.0019	28.4			
	17-Jul-08	Sunny	0.5 SE	32	652472	652565	55.8	38	38	1.04	1.04	1.04	58.05	2.8144	2.8158	0.0014	24.1			
		Sunny	0.5 SE	32	652565	652666	60.6	38	37	1.04	1.02	1.03	62.56	2.7479	2.7494	0.0015	24.0	37.1	342.7/500	
		Sunny	0.5 SE	32	652666	652765	59.4	38	38	1.04	1.04	1.04	61.80	2.8002	2.8041	0.0039	63.1			
	23-Jul-08	Sunny	0.5 SE	33	655108	655208	60.0	43	43	1.12	1.12	1.12	67.20	2.7284	2.7326	0.0042	62.5			
		Sunny	0.5 SE	33	655208	655308	60.0	43	42	1.12	1.10	1.11	66.73	2.7427	2.7453	0.0026	39.0	44.6		
		Sunny	0.5 SE	33	655308	655409	60.6	43	43	1.12	1.12	1.12	67.88	2.7325	2.7347	0.0022	32.4			
	29-Jul-08	Fine	0.5 SW	30	657812	657907	57.0	41	41	1.09	1.09	1.09	62.03	2.7521	2.7624	0.0103	166.1			
		Fine	0.5 SW	30	657907	658002	57.0	40	40	1.07	1.07	1.07	61.12	2.7349	2.7453	0.0104	170.2	160.6		
		Fine	0.5 SW	30	658002	658104	61.2	41	41	1.09	1.09	1.09	66.60	2.7366	2.7463	0.0097	145.6			
Sheung Shui Heung Floodwater Pumping Station CAM2a	05-Jul-08	Sunny	0.5N	29	760390	760490	60.0	41	41	1.03	1.03	1.03	61.86	2.7410	2.7435	0.0025	40.4			
		Sunny	0.5N	30	760490	760590	60.0	41	41	1.03	1.03	1.03	61.86	2.7414	2.7417	0.0003	4.8	19.9		
		Sunny	0.5N	30	760590	760690	60.0	41	41	1.03	1.03	1.03	61.86	2.7109	2.7118	0.0009	14.5			
	11-Jul-08	Fine	0.6 S	30	763097	763192	57.0	40	40	1.07	1.07	1.07	61.12	2.7760	2.7765	0.0005	8.2			
		Fine	0.6 S	30	763192	763287	57.0	41	41	1.09	1.09	1.09	62.03	2.7853	2.7854	0.0001	1.6	8.3		
		Fine	0.6 S	30	763287	763388	60.6	41	40	1.09	1.07	0.98	59.60	2.7728	2.7737	0.0009	15.1			
	17-Jul-08	Sunny	0.7 SE	32	765782	765880	58.8	37	37	0.98	0.98	0.98	57.83	2.7930	2.7951	0.0021	36.3			
		Sunny	0.7 SE	32	765880	765976	57.6	37	37	0.98	0.98	0.98	56.65	2.7751	2.7782	0.0031	54.7	34.3	340.2/500	
		Sunny	0.7 SE	32	765976	766077	60.6	36	36	0.97	0.97	0.97	58.88	2.7990	2.7997	0.0007	11.9			
	23-Jul-08	Sunny	0.5 SE	33	768420	768522	61.2	40	39	1.02	1.01	1.01	62.01	2.7678	2.7682	0.0004	6.5			
		Sunny	0.5 SE	33	768522	768620	58.8	39	39	1.01	1.01	1.01	59.23	2.7266	2.7273	0.0007	11.8	10.5		
		Sunny	0.5 SE	33	768620	768721	60.6	39	39	1.01	1.01	1.01	61.04	2.7379	2.7387	0.0008	13.1			
	29-Jul-08	Fine	0.5 SW	30	771128	771222	56.4	39	39	1.01	1.01	1.01	56.81	2.7612	2.7708	0.0096	169.0			
		Fine	0.5 SW	30	771222	771323	60.6	40	39	1.02	1.01	1.01	61.40	2.7322	2.7407	0.0085	138.4	152.5		
		Fine	0.5 SW	30	771323	771420	58.2	40	40	1.02	1.02	1.02	59.31	2.7483	2.7572	0.0089	150.1			

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


Expansion of Shek Wu Hui SewageTreatment Works at
San Po Street Pumping Station (CAM1a)
April 2008 - July 2008
1-hr TSP Level (µg/m3)
600
500
400
300
200
100
0
No results on 07 June 2008 due to bad weather conditions
01-Apr-08
07-Apr-08
12-Apr-08
18-Apr-08
24-Apr-08
30-Apr-08
06-May-08
10-May-08
16-May-08
22-May-08
28-May-08
03-Jun-08
07-Jun-08
12-Jun-08
13-Jun-08
19-Jun-08
25-Jun-08
30-Jun-08
05-Jul-08
11-Jul-08
17-Jul-08
23-Jul-08
29-Jul-08
Date
Average Conc.
Action Level
Limit Level

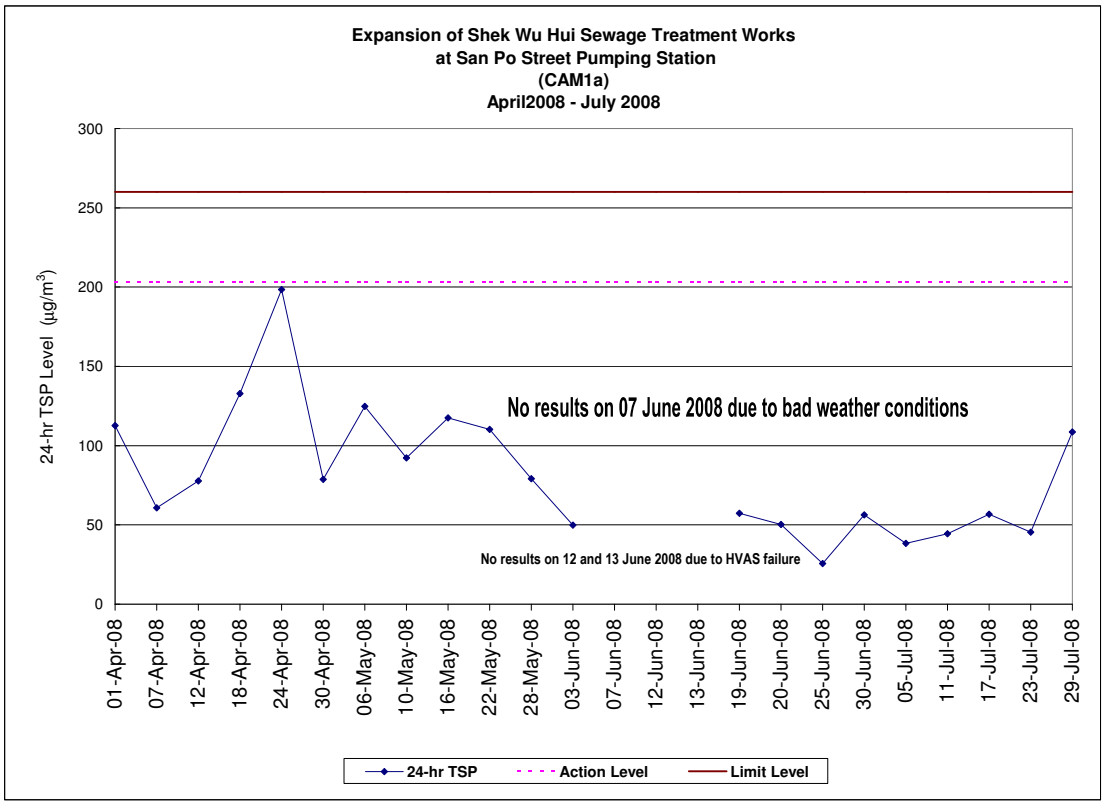

Expansion of Shek Wu Hui Sewage Treatment Works at
Sheung Shui Heung Floodwater Pumping Station (CAM2a)
April 2008 - July 2008
1-hr TSP Level (µg/m3)
500
400
300
200
100
0
No results on 07 June 2008 due to bad weather conditions
01-Apr-08
08-Apr-08
12-Apr-08
18-Apr-08
24-Apr-08
30-Apr-08
06-May-08
10-May-08
16-May-08
22-May-08
28-May-08
03-Jun-08
07-Jun-08
12-Jun-08
13-Jun-08
19-Jun-08
25-Jun-08
30-Jun-08
05-Jul-08
11-Jul-08
17-Jul-08
23-Jul-08
29-Jul-08
Date
Average Conc.
Action Level
Limit Level

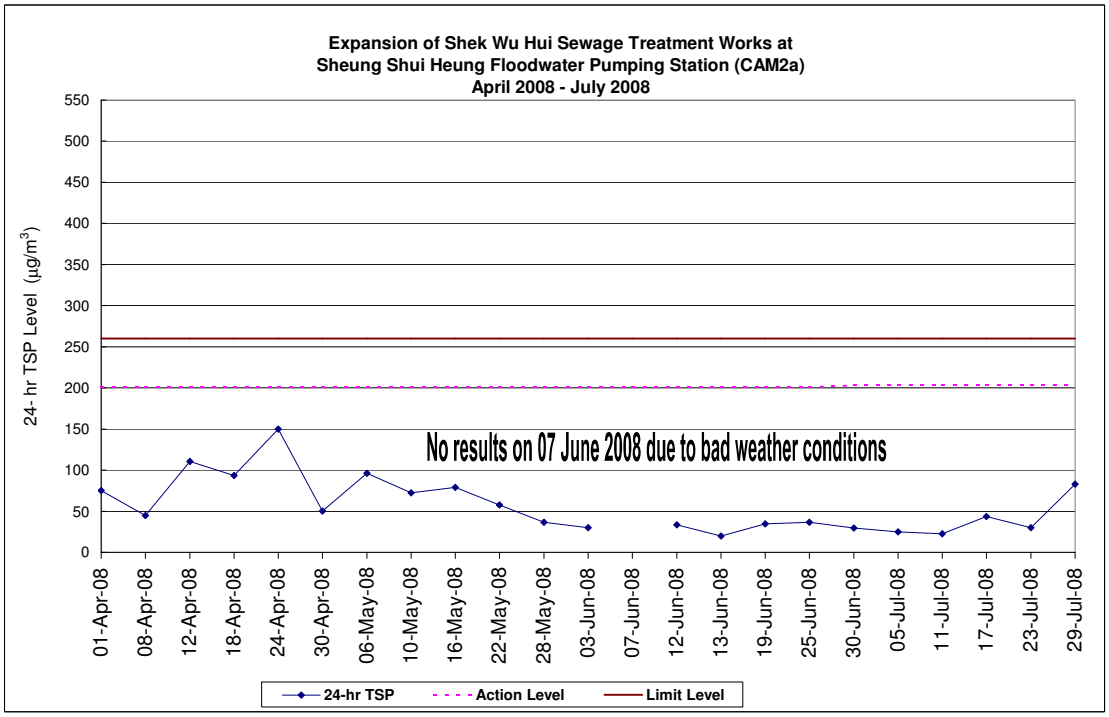
Expansion of Shek Wu Hui Sewage Treatment Works

Air Quality Impact Monitoring Results (24-Hour TSP)

Location	Monitoring Date	Weather Conditions	Wind Speed with Direction (m/s)	Temp (°C)	Pressure (mmHg)	Timer-I	Timer-F	Time (mins)	Flow-I (CFM/ Inches)	Flow-F (CFM/ Inches)	Flow-I (m^3/min)	Flow-F (m^3/min)	Flow-avg (m^3/min)	Volume (m^3)	Weight-I (g)	Weight-f (g)	Weight-diff. (g)	24-hr TSP (ug/m^3)	Action/Limit Levels (ug/m^3)	Remark
San Po Street Pumping Station CAM1a	05-Jul-08	Sunny	0.3E	31	1007.3	647390	649781	1434.6	41	42	1.09	1.10	1.10	1572.57	2.7437	2.8040	0.0603	38.3	203.3/260	
	11-Jul-08	Fine	0.5 S	30	1004.6	650073	652471	1438.8	43	42	1.12	1.10	1.11	1600.11	2.8140	2.8850	0.0710	44.4		
	17-Jul-08	Sunny	0.5 SE	32	1003.1	652765	655108	1405.8	38	37	1.04	1.02	1.03	1451.38	2.7681	2.8504	0.0823	56.7		
	23-Jul-08	Sunny	0.5 SE	33	1006.5	655409	657812	1441.8	37	40	1.02	1.07	1.05	1511.52	2.7440	2.8127	0.0687	45.5		
	29-Jul-08	Fine	0.5 SW	30	998.0	658104	660507	1441.8	41	41	1.09	1.09	1.09	1568.97	2.7621	2.9326	0.1705	108.7		
Sheung Shui Heung Floodwater Pumping Station CAM2a	05-Jul-08	Sunny	0.5N	31	1007.3	760670	763098	1456.8	41	41	1.03	1.03	1.03	1501.87	2.7008	2.7380	0.0372	24.8	201.6/260	
	11-Jul-08	Fine	0.6 S	30	1004.6	763388	765782	1436.4	41	41	1.03	1.03	1.03	1480.84	2.7618	2.7953	0.0335	22.6		
	17-Jul-08	Sunny	0.7 SE	32	1003.1	766077	768420	1405.8	37	37	0.98	0.98	0.98	1382.64	2.7475	2.8078	0.0603	43.6		
	23-Jul-08	Sunny	0.5 SE	33	1006.5	768721	771127	1443.6	39	40	1.01	1.02	1.01	1462.60	2.7401	2.7837	0.0436	29.8		
	29-Jul-08	Fine	0.5 SW	30	998.0	771420	773829	1445.4	40	40	1.02	1.02	1.02	1472.99	2.7800	2.9024	0.1224	83.1		

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


Expansion of Shek Wu Hui Sewage Treatment Works
at San Po Street Pumping Station
(CAM1a)
April2008 - July 2008
24-hr TSP Level (µg/m3)
300
250
200
150
100
50
0
No results on 07 June 2008 due to bad weather conditions
No results on 12 and 13 June 2008 due to HVAS failure
01-Apr-08
07-Apr-08
12-Apr-08
18-Apr-08
24-Apr-08
30-Apr-08
06-May-08
10-May-08
16-May-08
22-May-08
28-May-08
03-Jun-08
07-Jun-08
12-Jun-08
13-Jun-08
19-Jun-08
20-Jun-08
25-Jun-08
30-Jun-08
05-Jul-08
11-Jul-08
17-Jul-08
23-Jul-08
29-Jul-08
24-hr TSP
Action Level
Limit Level

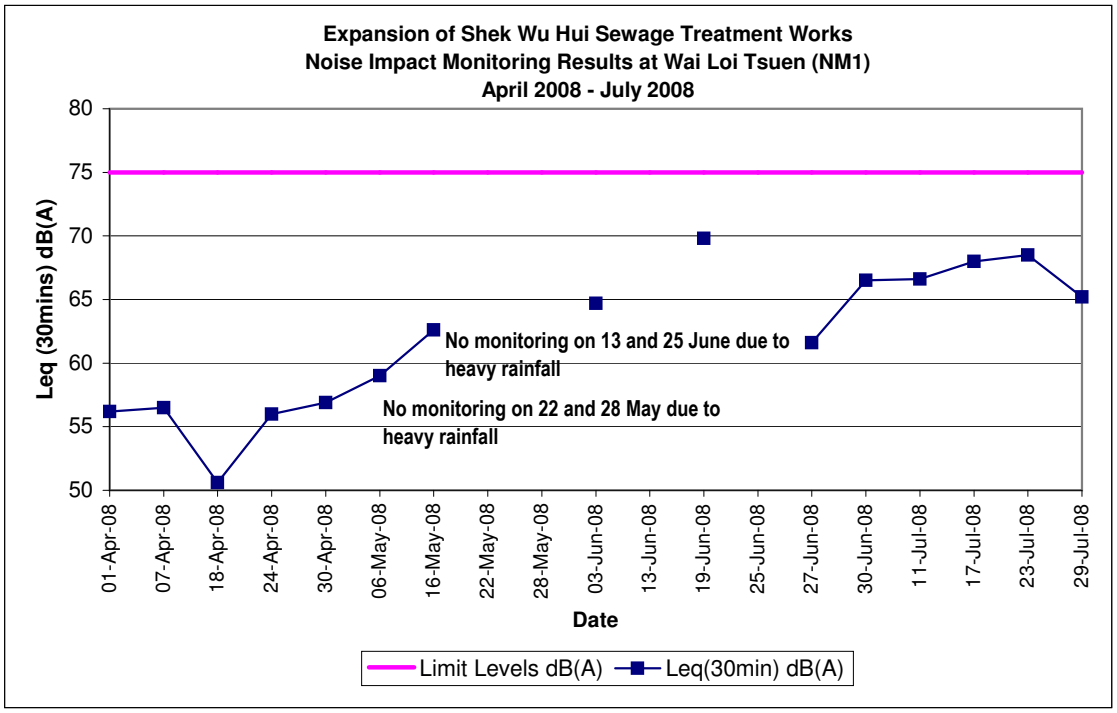

Expansion of Shek Wu Hui Sewage Treatment Works at
Sheung Shui Heung Floodwater Pumping Station (CAM2a)
April 2008 - July 2008
24- hr TSP Level (µg/m3)
550
500
450
400
350
300
250
200
150
100
50
0
No results on 07 June 2008 due to bad weather conditions
01-Apr-08
08-Apr-08
12-Apr-08
18-Apr-08
24-Apr-08
30-Apr-08
06-May-08
10-May-08
16-May-08
22-May-08
28-May-08
03-Jun-08
07-Jun-08
12-Jun-08
13-Jun-08
19-Jun-08
25-Jun-08
30-Jun-08
05-Jul-08
11-Jul-08
17-Jul-08
23-Jul-08
29-Jul-08
24-hr TSP
Action Level
Limit Level

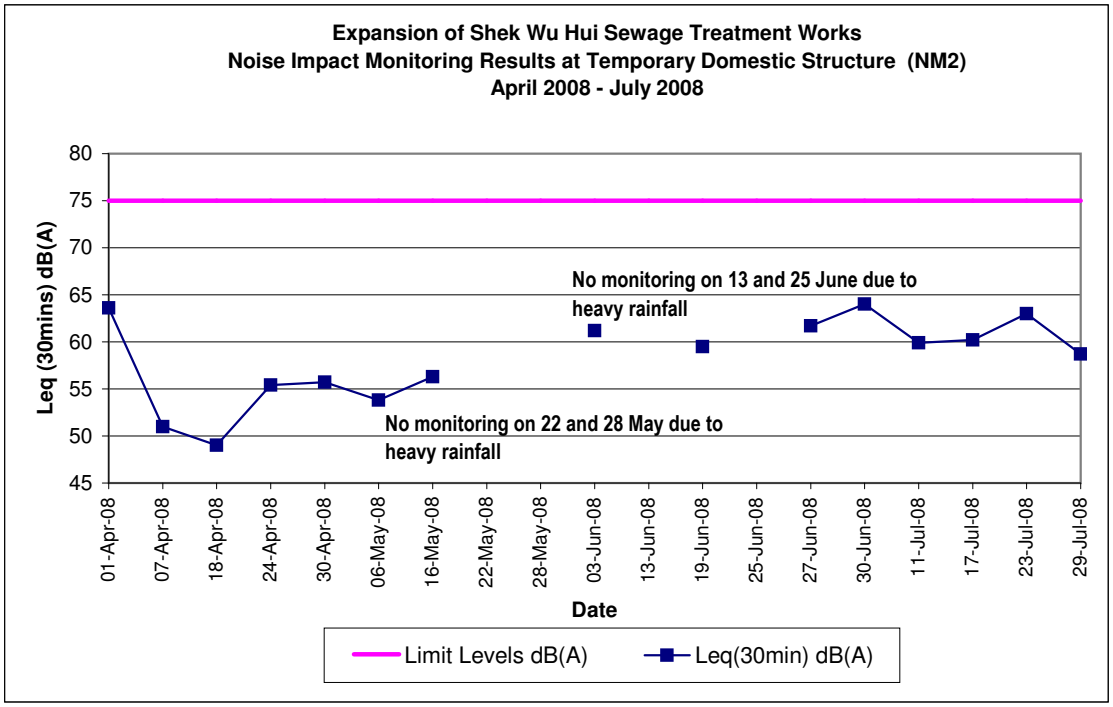
Expansion of Shek Wu Hui Sewage Treatment Works

Noise Impact Monitoring Results

Monitoring Locations	Date	Weather Conditions	Temperature (°C)	Wind Speed (m/s)	Wind Direction	Start Time	End Time	Limit Levels dB(A)	$L_{eq(30min)}$ dB(A)	$L_{10(30min)}$ dB(A)	$L_{90(30min)}$ dB(A)	Remark
Wai Loi Tsuen NM1	11-Jul-08	Fine	30	0.5	S	11:25	11:55	75	66.6	69.1	63.6	
	17-Jul-08	Sunny	32	0.5	SE	13:20	13:50	75	68.0	69.9	66.0	
	23-Jul-08	Sunny	33	0.5	SE	10:15	10:45	75	68.5	70.3	66.1	
	29-Jul-08	Fine	30	0.5	SW	10:15	10:45	75	65.2	66.8	62.8	
Temporary Domestic Structure NM2	11-Jul-08	Fine	30	0.6	S	9:30	10:00	75	59.9	63.0	57.5	
	17-Jul-08	Sunny	32	0.7	SE	14:20	14:50	75	60.2	62.1	57.7	
	23-Jul-08	Sunny	33	0.5	SE	11:20	11:50	75	63.0	65.6	61.0	
	29-Jul-08	Fine	30	0.5	SW	11:15	11:45	75	58.7	60.8	56.2	

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


Expansion of Shek Wu Hui Sewage Treatment Works
Noise Impact Monitoring Results at Wai Loi Tsuen (NM1)
April 2008 - July 2008
Leq (30mins) dB(A)
80
75
70
65
60
55
50
No monitoring on 13 and 25 June due to heavy rainfall
No monitoring on 22 and 28 May due to heavy rainfall
01-Apr-08
07-Apr-08
18-Apr-08
24-Apr-08
30-Apr-08
06-May-08
16-May-08
22-May-08
28-May-08
03-Jun-08
13-Jun-08
19-Jun-08
25-Jun-08
27-Jun-08
30-Jun-08
11-Jul-08
17-Jul-08
23-Jul-08
29-Jul-08
Date
Limit Levels dB(A)
Leq(30min) dB(A)

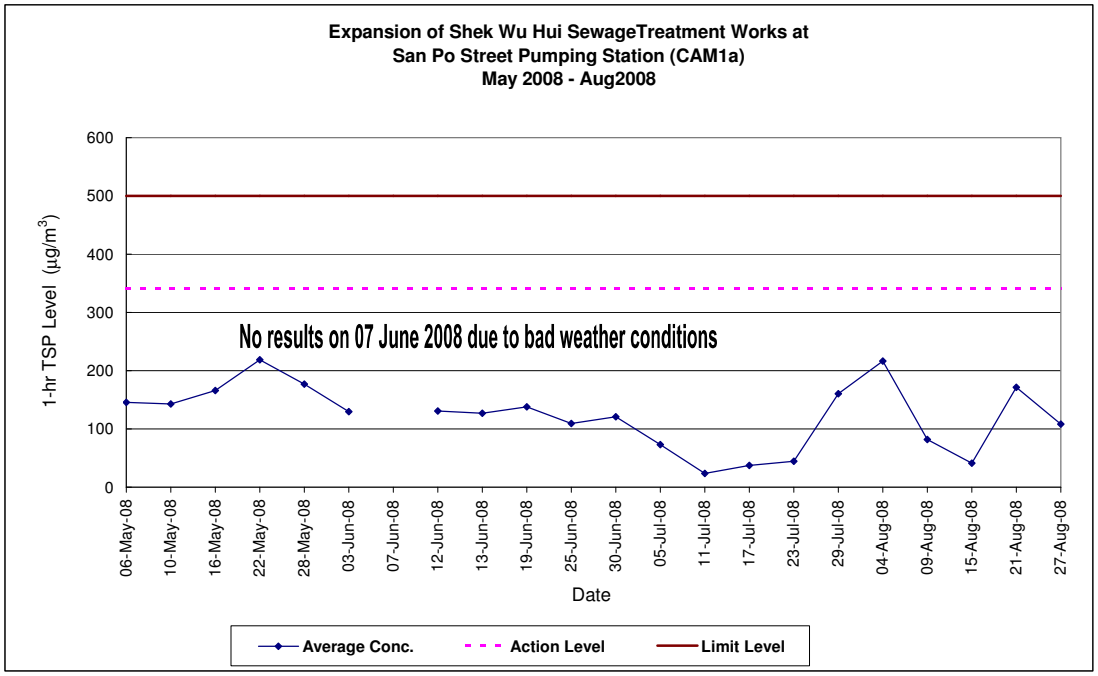

Expansion of Shek Wu Hui Sewage Treatment Works
Noise Impact Monitoring Results at Temporary Domestic Structure (NM2)
April 2008 - July 2008
Leq (30mins) dB(A)
80
75
70
65
60
55
50
45
No monitoring on 13 and 25 June due to heavy rainfall
No monitoring on 22 and 28 May due to heavy rainfall
01-Apr-08
07-Apr-08
18-Apr-08
24-Apr-08
30-Apr-08
06-May-08
16-May-08
22-May-08
28-May-08
03-Jun-08
13-Jun-08
19-Jun-08
25-Jun-08
27-Jun-08
30-Jun-08
11-Jul-08
17-Jul-08
23-Jul-08
29-Jul-08
Date
Limit Levels dB(A)
Leq(30min) dB(A)

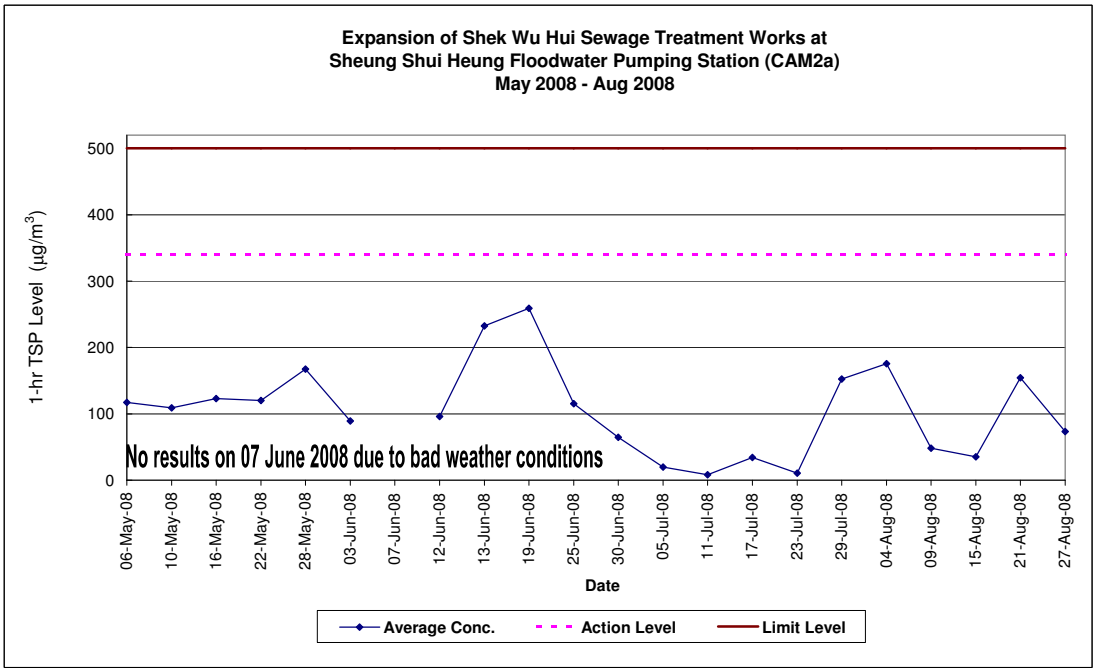
Expansion of Shek Wu Hui Sewage Treatment Works

Air Quality Impact Monitoring Results (1-Hour TSP)

Location	Monitoring Date	Weather Conditions	Wind Speed with Direction (m/s)	Temp (°C)	Timer-I	Timer-F	Time (mins)	Flow-I (CFM/ Inches)	Flow-F (CFM/ Inches)	Flow-I (m^3/min)	Flow-F (m^3/min)	Flow-avg (m^3/min)	Volume (m^3)	Weight-I (g)	Weight-f (g)	Weight-diff. (g)	1-hr TSP (ug/m^3)	Average 1-Hr TSP (ug/m^3)	Action/Limit Levels (ug/m^3)	Remark
San Po Street Pumping Station CAM1a	04-Aug-08	Sunny	0.3E	32	660507	660599	55.2	40	40	1.07	1.07	1.07	59.19	2.7357	2.7476	0.0119	201.1	216.4	342.7/500	
		Sunny	0.3E	32	660599	660699	60.0	40	40	1.07	1.07	1.07	64.34	2.7709	2.7873	0.0164	254.9			
		Sunny	0.3E	32	660699	660802	61.8	40	40	1.07	1.07	1.07	66.27	2.7768	2.7896	0.0128	193.2			
	09-Aug-08	Fine	0.3E	29	663157	663252	57.0	40	40	1.07	1.07	1.07	61.12	2.8322	2.8368	0.0046	75.3	81.7		
		Fine	0.3E	29	663252	663353	60.6	41	41	1.09	1.09	1.09	65.95	2.7582	2.7640	0.0058	88.0			
		Fine	0.3E	29	663353	663456	61.8	41	41	1.09	1.09	1.09	67.25	2.8440	2.8495	0.0055	81.8			
	15-Aug-08	Sunny	0.5 SE	32	665867	665962	57.0	40	40	1.07	1.07	1.07	61.12	2.8397	2.8424	0.0027	44.2	41.4		
		Sunny	0.5 SE	32	665962	666060	58.8	41	41	1.09	1.09	1.09	63.99	2.8595	2.8620	0.0025	39.1			
		Sunny	0.5 SE	32	666060	666161	60.6	41	41	1.09	1.09	1.09	65.95	2.8561	2.8588	0.0027	40.9			
	21-Aug-08	Fine	0.5 SE	30	673348	673450	61.2	40	40	1.07	1.07	1.07	65.62	2.7500	2.7587	0.0087	132.6	171.4		
		Fine	0.5 SE	30	673450	673551	60.6	41	41	1.09	1.09	1.09	65.95	2.7445	2.7552	0.0107	162.3			
		Fine	0.5 SE	30	673551	673653	61.2	41	41	1.09	1.09	1.09	66.60	2.7342	2.7488	0.0146	219.2			
	27-Aug-08	Sunny	0.5SE	33	676082	676181	59.4	41	41	1.09	1.09	1.09	64.64	2.7360	2.7423	0.0063	97.5	108.1		
		Sunny	0.5SE	33	676181	676283	61.2	40	40	1.07	1.07	1.07	65.62	2.7337	2.7379	0.0042	64.0			
		Sunny	0.5SE	33	676283	676386	61.8	40	40	1.07	1.07	1.07	66.27	2.7457	2.7565	0.0108	163.0			
Sheung Shui Heung Floodwater Pumping Station CAM2a	04-Aug-08	Sunny	0.4E	32	773829	773921	55.2	40	40	1.02	1.02	1.02	56.25	2.8549	2.8624	0.0075	133.3	175.8	340.2/500	
		Sunny	0.4E	32	773921	774027	63.6	40	40	1.02	1.02	1.02	64.81	2.7519	2.7657	0.0138	212.9			
		Sunny	0.4E	32	774027	774130	61.8	40	40	1.02	1.02	1.02	62.98	2.7758	2.7872	0.0114	181.0			
	09-Aug-08	Fine	0.3E	29	776479	776575	57.6	37	37	1.02	1.02	1.02	59.01	2.8236	2.8267	0.0031	52.5	48.0		
		Fine	0.3E	29	776575	776676	60.6	38	37	1.04	1.02	1.03	62.56	2.7920	2.7955	0.0035	55.9			
		Fine	0.3E	29	776676	776776	60.0	38	38	1.04	1.04	1.03	61.86	2.8320	2.8342	0.0022	35.6			
	15-Aug-08	Sunny	0.5 SE	32	779197	779292	57.0	41	41	1.03	1.03	1.03	58.76	2.8412	2.8434	0.0022	37.4	35.4		
		Sunny	0.5 SE	32	779292	779393	60.6	41	41	1.03	1.03	1.03	62.47	2.8591	2.8616	0.0025	40.0			
		Sunny	0.5 SE	32	779393	779490	58.2	40	40	1.02	1.02	1.02	59.31	2.8310	2.8327	0.0017	28.7			
	21-Aug-08	Fine	0.7 SE	30	781911	782014	61.8	39	39	1.01	1.01	1.01	62.25	2.7360	2.7438	0.0078	125.3	154.5		
		Fine	0.7 SE	30	782014	782117	61.8	38	38	1.00	1.00	1.00	61.51	2.7345	2.7428	0.0083	134.9			
		Fine	0.7 SE	30	782117	782220	61.8	38	38	1.00	1.00	1.00	61.51	2.7512	2.7637	0.0125	203.2			
	27-Aug-08	Sunny	0.7SE	33	784658	784757	59.4	38	38	1.00	1.00	1.00	59.13	2.7500	2.7533	0.0033	55.8	73.2		
		Sunny	0.7SE	33	784757	784855	58.8	37	37	0.98	0.98	0.98	57.83	2.7260	2.7300	0.0040	69.2			
		Sunny	0.7SE	33	784855	784957	61.2	37	37	0.98	0.98	0.98	60.19	2.7449	2.7506	0.0057	94.7			

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


Expansion of Shek Wu Hui SewageTreatment Works at
San Po Street Pumping Station (CAM1a)
May 2008 - Aug2008
1-hr TSP Level (µg/m3)
600
500
400
300
200
100
0
No results on 07 June 2008 due to bad weather conditions
06-May-08
10-May-08
16-May-08
22-May-08
28-May-08
03-Jun-08
07-Jun-08
12-Jun-08
13-Jun-08
19-Jun-08
25-Jun-08
30-Jun-08
05-Jul-08
11-Jul-08
17-Jul-08
23-Jul-08
29-Jul-08
04-Aug-08
09-Aug-08
15-Aug-08
21-Aug-08
27-Aug-08
Date
Average Conc.
Action Level
Limit Level

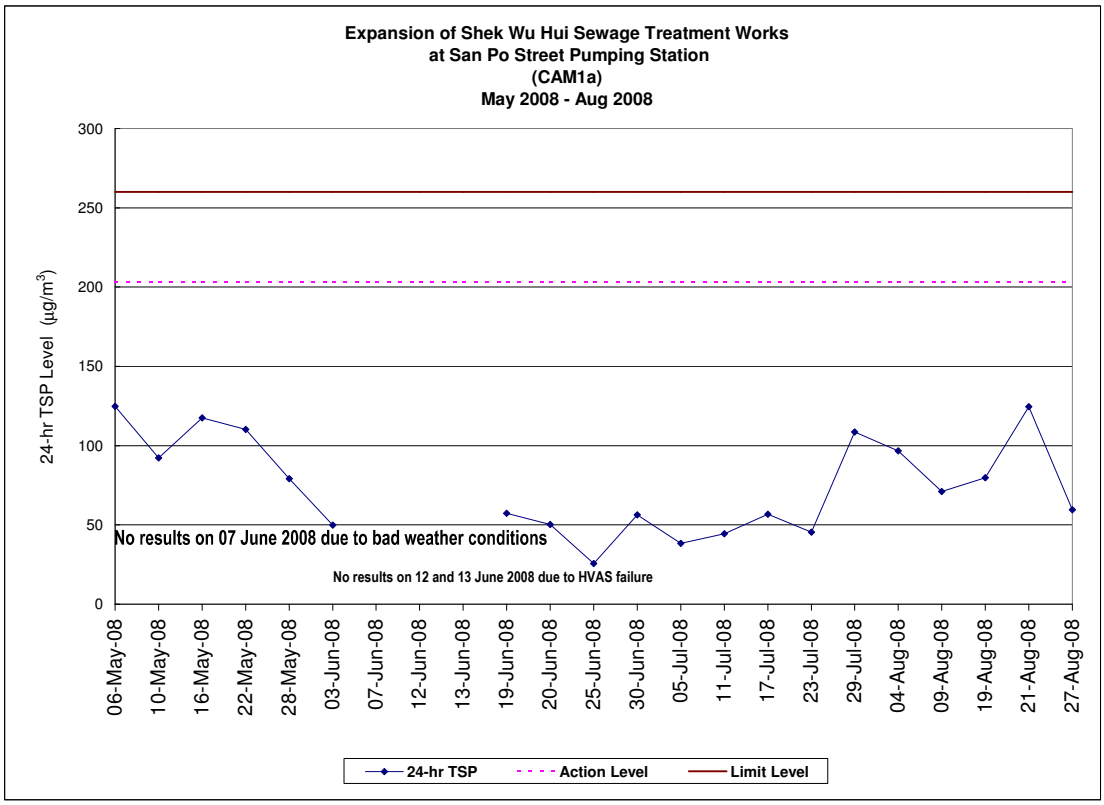

Expansion of Shek Wu Hui Sewage Treatment Works at
Sheung Shui Heung Floodwater Pumping Station (CAM2a)
May 2008 - Aug 2008
1-hr TSP Level (µg/m3)
500
400
300
200
100
0
No results on 07 June 2008 due to bad weather conditions
06-May-08
10-May-08
16-May-08
22-May-08
28-May-08
03-Jun-08
07-Jun-08
12-Jun-08
13-Jun-08
19-Jun-08
25-Jun-08
30-Jun-08
05-Jul-08
11-Jul-08
17-Jul-08
23-Jul-08
29-Jul-08
04-Aug-08
09-Aug-08
15-Aug-08
21-Aug-08
27-Aug-08
Date
Average Conc.
Action Level
Limit Level

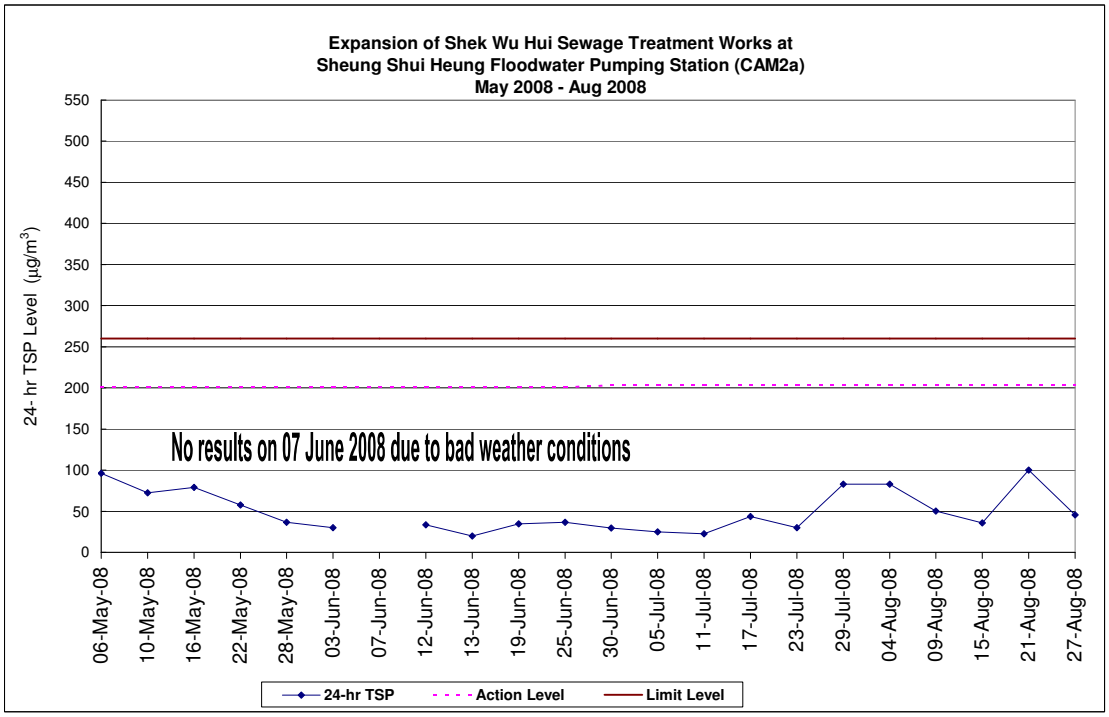
Expansion of Shek Wu Hui Sewage Treatment Works

Air Quality Impact Monitoring Results (24-Hour TSP)

Location	Monitoring Date	Weather Conditions	Wind Speed with Direction (m/s)	Temp (°C)	Pressure (mmHg)	Timer-I	Timer-F	Time (mins)	Flow-I (CFM/ Inches)	Flow-F (CFM/ Inches)	Flow-I (m^3/min)	Flow-F (m^3/min)	Flow-avg (m^3/min)	Volume (m^3)	Weight-I (g)	Weight-f (g)	Weight-diff. (g)	24-hr TSP (ug/m^3)	Action/Limit Levels (ug/m^3)	Remark
San Po Street Pumping Station CAM1a	04-Aug-08	Sunny	0.3E	32	753.0	660802	663157	1413	41	41	1.09	1.09	1.09	1537.63	2.7609	2.9107	0.1498	97.4	203.3/260	
	09-Aug-08	Fine	0.5E	29	752.6	663456	665867	1446.6	41	41	1.09	1.09	1.09	1574.20	2.8187	2.9330	0.1143	72.6		
	15-Aug-08	Sunny	0.5SE	32	752.6	666161	670933	2863.2	40	40	1.07	1.07	1.07	3070.11	2.8393	2.9786	0.1393	45.4		
	19-Aug-08	Sunny	0.6SE	33	757.5	670933	673348	1449	40	40	1.07	1.07	1.07	1553.71	2.7633	2.8872	0.1239	79.7		
	21-Aug-08	Sunny	0.5SE	30	752.3	673653	676082	1457.4	40	40	1.07	1.07	1.07	1562.72	2.7276	2.9222	0.1946	124.5		
	27-Aug-08	Sunny	0.5SE	33	757.3	676386	678769	1429.8	41	40	1.09	1.07	1.08	1544.52	2.7698	2.8619	0.0921	59.6		
Sheung Shui Heung Floodwater Pumping Station CAM2a	04-Aug-08	Sunny	0.4E	32	753.0	774130	776479	1409.4	40	41	1.02	1.03	1.03	1444.65	2.7748	2.8955	0.1207	83.5	201.6/260	
	09-Aug-08	Fine	0.6E	29	752.6	776776	779197	1452.6	38	38	1.00	1.00	1.00	1445.88	2.7791	2.8541	0.0750	51.9		
	15-Aug-08	Sunny	0.8SE	32	753.3	779490	781911	1452.6	41	41	1.03	1.03	1.03	1497.54	2.7947	2.8481	0.0534	35.7		
	21-Aug-08	Sunny	0.7SE	30	752.3	782220	784658	1462.8	39	39	1.01	1.01	1.01	1473.38	2.7309	2.8786	0.1477	100.2		
	27-Aug-08	Sunny	0.7SE	33	757.3	784957	787346	1433.4	38	38	1.00	1.00	1.00	1426.77	2.7372	2.8024	0.0652	45.7		

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


Expansion of Shek Wu Hui Sewage Treatment Works
at San Po Street Pumping Station
(CAM1a)
May 2008 - Aug 2008
24-hr TSP Level (µg/m3)
300
250
200
150
100
50
0
No results on 07 June 2008 due to bad weather conditions
No results on 12 and 13 June 2008 due to HVAS failure
06-May-08
10-May-08
16-May-08
22-May-08
28-May-08
03-Jun-08
07-Jun-08
12-Jun-08
13-Jun-08
19-Jun-08
20-Jun-08
25-Jun-08
30-Jun-08
05-Jul-08
11-Jul-08
17-Jul-08
23-Jul-08
29-Jul-08
04-Aug-08
09-Aug-08
19-Aug-08
21-Aug-08
27-Aug-08
24-hr TSP
Action Level
Limit Level

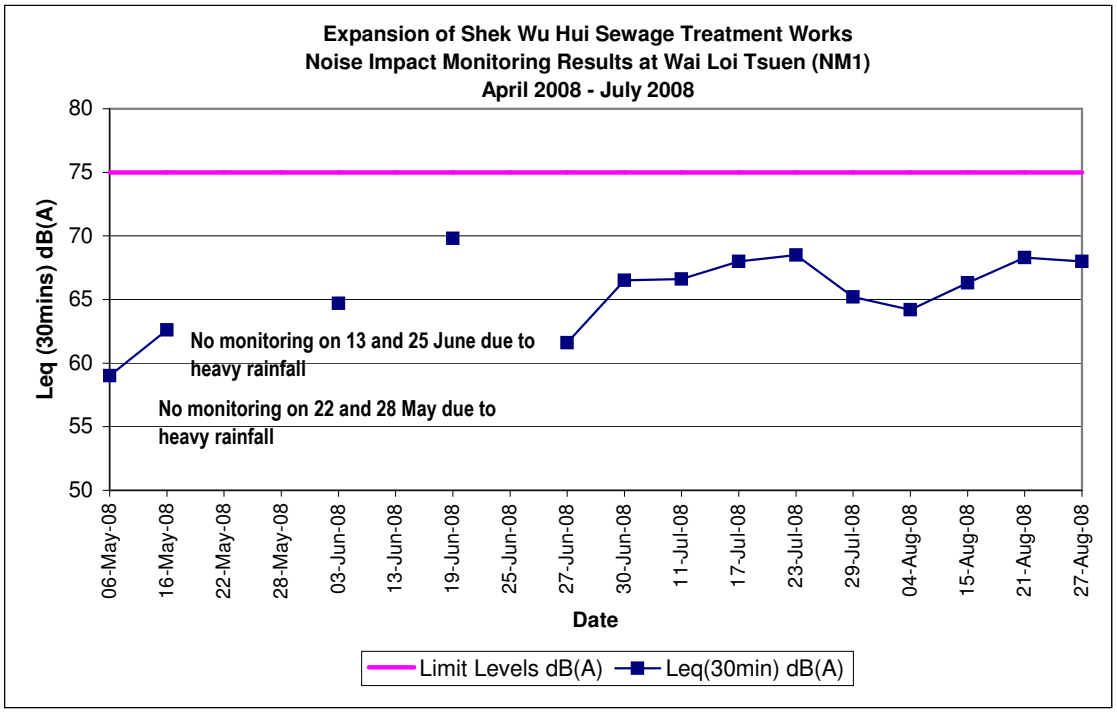

Expansion of Shek Wu Hui Sewage Treatment Works at
Sheung Shui Heung Floodwater Pumping Station (CAM2a)
May 2008 - Aug 2008
24- hr TSP Level (µg/m3)
550
500
450
400
350
300
250
200
150
100
50
0
No results on 07 June 2008 due to bad weather conditions
06-May-08
10-May-08
16-May-08
22-May-08
28-May-08
03-Jun-08
07-Jun-08
12-Jun-08
13-Jun-08
19-Jun-08
25-Jun-08
30-Jun-08
05-Jul-08
11-Jul-08
17-Jul-08
23-Jul-08
29-Jul-08
04-Aug-08
09-Aug-08
15-Aug-08
21-Aug-08
27-Aug-08
24-hr TSP
Action Level
Limit Level

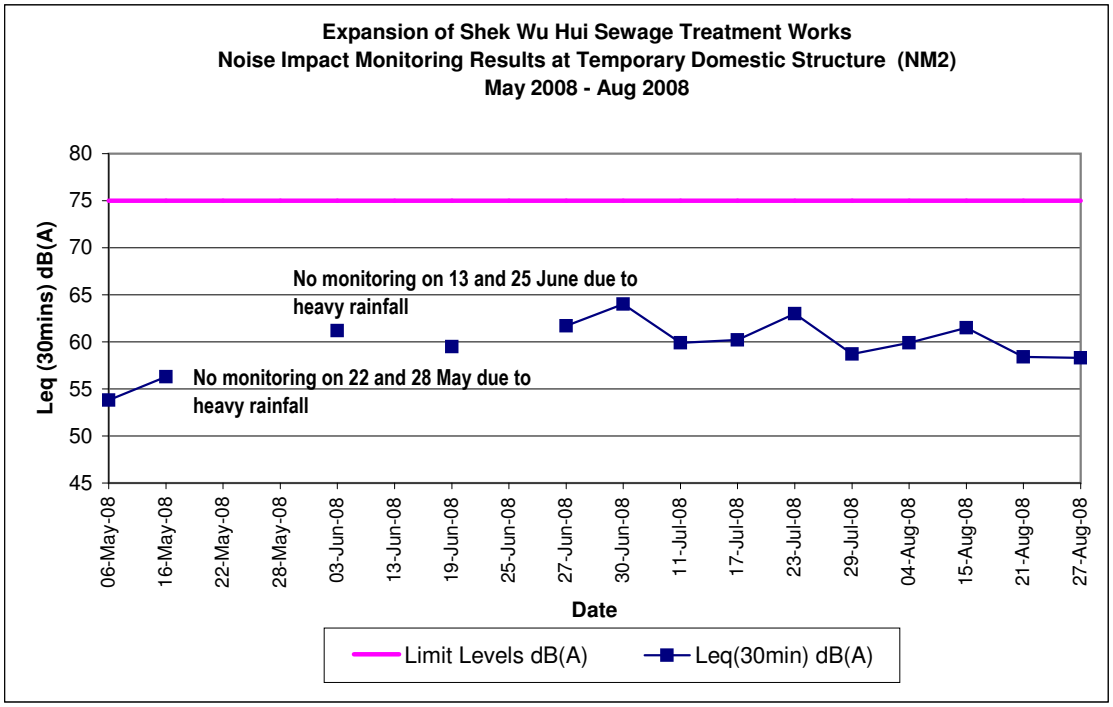
Expansion of Shek Wu Hui Sewage Treatment Works

Noise Impact Monitoring Results

Monitoring Locations	Date	Weather Conditions	Temperature (°C)	Wind Speed (m/s)	Wind Direction	Start Time	End Time	Limit Levels dB(A)	$L_{eq(30min)}$ dB(A)	$L_{10(30min)}$ dB(A)	$L_{90(30min)}$ dB(A)	Remark
Wai Loi Tsuen NM1	04-Aug-08	Sunny	32	0.3	E	10:25	11:55	75	64.2	65.8	62.2	
	15-Aug-08	Sunny	32	0.5	SE	9:35	10:05	75	66.3	67.8	63.3	
	21-Aug-08	Fine	30	0.5	SE	9:15	9:45	75	68.3	70.9	66.2	
	27-Aug-08	Sunny	33	0.5	SE	9:50	10:20	75	68.0	70.6	65.9	
Temporary Domestic Structure NM2	04-Aug-08	Sunny	32	0.4	E	14:40	15:10	75	59.9	62.0	57.4	
	15-Aug-08	Sunny	32	0.5	SE	10:35	11:05	75	61.5	64.0	59.3	
	21-Aug-08	Fine	30	0.7	SE	10:15	10:45	75	58.4	60.7	56.2	
	27-Aug-08	Sunny	33	0.7	SE	10:45	11:15	75	58.3	60.9	56.0	

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


Expansion of Shek Wu Hui Sewage Treatment Works
Noise Impact Monitoring Results at Wai Loi Tsuen (NM1)
April 2008 - July 2008
Leq (30mins) dB(A)
80
75
70
65
60
55
50
No monitoring on 13 and 25 June due to heavy rainfall
No monitoring on 22 and 28 May due to heavy rainfall
06-May-08
16-May-08
22-May-08
28-May-08
03-Jun-08
13-Jun-08
19-Jun-08
25-Jun-08
27-Jun-08
30-Jun-08
11-Jul-08
17-Jul-08
23-Jul-08
29-Jul-08
04-Aug-08
15-Aug-08
21-Aug-08
27-Aug-08
Date
Limit Levels dB(A)
Leq(30min) dB(A)


Expansion of Shek Wu Hui Sewage Treatment Works
Noise Impact Monitoring Results at Temporary Domestic Structure (NM2)
May 2008 - Aug 2008
Leq (30mins) dB(A)
80
75
70
65
60
55
50
45
No monitoring on 13 and 25 June due to heavy rainfall
No monitoring on 22 and 28 May due to heavy rainfall
06-May-08
16-May-08
22-May-08
28-May-08
03-Jun-08
13-Jun-08
19-Jun-08
25-Jun-08
27-Jun-08
30-Jun-08
11-Jul-08
17-Jul-08
23-Jul-08
29-Jul-08
04-Aug-08
15-Aug-08
21-Aug-08
27-Aug-08
Date
Limit Levels dB(A)
Leq(30min) dB(A)

Appendix 8

Cumulative Statistics of Complaint, Notification of Summons and Successful Prosecution

Reporting Month	Number Received in the Reporting Month				Cumulative Number			
	Complaint	Notification of Summon	Successful Prosecution	EPD Site Inspection Record	Complaint	Notification of Summon	Successful Prosecution	EPD Site Inspection Record
June 08 – August 08	0	0	0	0	0	0	0	0 (Last in Feb08)

Cumulative Number of Environmental Complaint