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TEST REPORT

Kaden Construction Limited

CONTRACT NO. DC/2007/18

YUNG SHUE WAN AND SOK KWU WAN VILLAGE SEWERAGE, STAGE 1 WORKS

MONTHLY IMPACT MONITORING REPORT NO.25

(JUNE 2010)

Prepared by: _____
LAW, Sau Yee
Senior Environmental Officer

Checked by: _____
LAU, Chi Leung
Environmental Team Leader

Issue Date: 13 July 2010 *Report No.: ENA00606*

Scott Wilson CDM Joint Venture

Chief Engineer/Harbour Area Treatment Scheme
Drainage Services Department
5/F Western Magistracy
2A Pok Fu Lam Road
Hong Kong

Your reference:

Our reference: 05117/6/16/339364

Date: 14 July 2010

Attention: Mr. C K Au

BY FAX ONLY

Dear Sir

Contract No. DC/2007/18
Yung Shue Wan and Sok Kwu Wan Village Sewerage, Stage 1 Works
Monthly Impact Monitoring Report No. 25 (June 2010)

We refer to the revised Monthly Impact Monitoring Report No. 25 for June 2010 received under cover of the email from the Environmental Team, ETS-Testconsult Limited, dated on 13 July 2010. We confirm that we have no further comment on report, and confirm that we have verified its content.

Yours faithfully
SCOTT WILSON LTD

pp Rodney Ip

ICWR/ecwc

cc Kaden Construction Ltd (Attn: Mr Stephen Leung) By Email
ETS-Testconsult (Attn: Ms Linda Law) By Email
ER/LAMMA (Attn: Mr Toby Ng) By Email

TABLE OF CONTENTS

APPENDIX

Figures

Tables

EXECUTIVE SUMMARY

The Contractor, Kaden Construction Limited (Kaden), appointed Environmental Team of ETS-Testconsult Limited (ET) to undertake the environmental impact monitoring for "Contract No. DC/2007/18 Yung Shue Wan and Sok Kwu Wan Village Sewerage, Stage 1 Works" (the Project) under the requirements and specifications of "the amended Environmental Permit (Application No. EP-281/2007/A)" (the amended EP) and "the Final EM&A Manual – Outlying Islands Sewerage Stage 1 Phase 2 Package J – Sok Kwu Wan Sewage Collection, Treatment and Disposal Facilities" (the EM&A Manual).

This Monthly Impact Monitoring Report No.25 has been prepared by the ET of ETS-Testconsult Limited to document the impact monitoring works conducted for the Project in June 2010.

The Environmental Permit of this Project have been amended as EP-281/2007/A and issued on 23 September 2009. Condition 1.7 and 3.7 in Part C and Figure 4 of the amended EP have been changed. Refer to the change, the amended EP present that the uncommon tree species, Celtis Timorensis, as shown in Figure 4 of the amended EP shall be labeled, fenced and protected in order to avoid any disturbance during the construction of the Project. The letter of Variation Environmental Permit (VEP-299/2009) is shown in Appendix J.

Construction Progress

The major construction works in this monitoring period were as below:
- *Sewer laying; and*
- *Manhole construction.*

Environmental Monitoring Progress

The summary of the monitoring activities in this monitoring period is listed below:
- *Noise Monitoring (Day-time): 5 Occasions at 4 designated locations;*
- *24-hour TSP Monitoring: 6 Occasions at 3 designated locations;*
- *1-hour TSP Monitoring: 18 Occasions at 3 designated locations.*

Impact Air Quality Monitoring

No exceedances of Action and Limit levels were recorded for 24-hr and 1-hr TSP monitoring in the reporting period.

Impact Noise Monitoring

No exceedances of Action and Limit Levels were recorded in this reporting month.

Waste Management

According to weekly site inspection, ET found that the Contractor followed the recommended procedures stipulated in the Waste Management Plan (WMP) on handling and disposal of wastes. In this reporting month, 7.4 m^3 Public Fill and 7.4 m^3 hard rock and large broken concrete were generated and disposed to Sok Kwu Wan Refuse Transfer Station (SKWRTS) properly. Besides, 1.0 m^3 inert C&D materials reused in the Contract was recorded in this reporting month.

Site Inspection

Environmental site inspections conducted in this reporting month are presented as follows:

Concerned Parties	*Dates of Audit / Inspection*
ET	*01, 07, 17, 23 and 29 June 2010*
RE / IEC / Kaden / ET	*29 June 2010*

According to the summary of the weekly site inspections carried out in this month, it indicated that site practices of the Kaden were generally undertaken in an environmentally acceptable manner and the overall site environmental performance was satisfactory. However, some minor environmental issues remained outstanding for quite long time and hence Kaden was reminded to take more effort on environmental improvement and enhancement.

Summary of the site inspection findings in this reporting month is shown as below:

Item	*Aspect*	*Finding*	*Action(s) to be taken by the Contractor*	*ET Verification*
1	*Water*	*Follow up action to the outstanding item in the previous month, sedimentation tank at S64 was found modified to treat the site runoff properly during the weekly site inspection on 01/06/10.*	*Since the finding was improved, no further action was required to be taken by the Contractor.*	*Since the finding was improved, no ET verification was required to be taken.*
2	*Water*	*Water was noted leaked from a broken sedimentation tank during the weekly site inspection on 01/06/10.*	*The Contractor replaced the broken sedimentation tank by a new once during the same weekly inspection day.*	*Since the finding was improved, no ET verification was required to be taken.*
3	*Chemical*	*An oil drum and few chemical bottles at storage area were found on the ground without drip tray during the weekly site inspection on 29/06/10.*	*The Contractor was reminded to store all chemicals in chemical storage area or provide appropriated drip tray for short-time storage.*	*Since the finding was noted at the last weekly site inspection in this reporting month, it will be verified in the coming month.*

Environmental Complaints, Notifications of Summons and Successful Prosecutions

No complaints, notifications of summons and successful prosecutions were received in this reporting period.

Conclusion and Recommendations

The monitored environmental data indicated that no unacceptable environmental impacts arising from the Project had been caused to the surrounding sensitive receivers. The environmental mitigation measures had been effective in controlling potential impacts to within acceptable sensitive receivers. Besides, the Contractor was recommended to maintain good site practice in order to minimize the environmental impacts at the site.

Construction Programme for Coming Month

The Construction programme for the Project is shown in Appendix E.

As informed by the Contractor, the activities to be conducted by them in coming month included:

- *Sewer laying;*
- *Manhole construction; and*
- *Protection of uncommon species.*

Future Key Issues

Based on the forecast of engineering works in the coming month, key issues to be considered are as follows:

- *Noise and air quality impact due to construction works; and*
- *Maintain good site practice to minimize environmental impacts at the site.*

Internet Website

The monthly EM&A report can be accessed on the web at http://www.skwsewer.com.

1.0 INTRODUCTION

The Customer, Kaden Construction Limited (Kaden), appointed Environmental Team of ETS-Testconsult Limited to undertake the environmental impact monitoring for "Contract No. DC/2007/18 Yung Shue Wan and Sok Kwu Wan Village Sewerage, Stage 1 Works" (the Project) under the requirements and specifications of "the Environmental Permit (Application No. EP-281/2007/A)" (the amended EP) and "the Final EM&A Manual – Outlying Islands Sewerage Stage 1 Phase 2 Package J – Sok Kwu Wan Sewage Collection, Treatment and Disposal Facilities" (the EM&A Manual).

The Environmental Permit of this Project was amended as EP-281/2007/A and issued on 23 September 2009. Condition 1.7 and 3.7 in Part C and Figure 4 of the amended EP have been changed. Refer to the change, the amended EP present that the uncommon tree species, Celtis Timorensis, as shown in Figure 4 of the amended EP shall be labeled, fenced and protected in order to avoid any disturbance during the construction of the Project. The letter of Variation Environmental Permit (VEP-299/2009) is shown in Appendix J.

In accordance with the Section 5 of the EP, EM&A programme as set out in the EM&A Manual is required to be implemented. In accordance with the EM&A manual, environmental monitoring of air quality and noise is required for the Project. The EM&A requirement for each parameter are described in details in subsequent sections, including:

- *All monitoring parameters;*
- *Action and Limit levels for all environmental parameters;*
- *Event-Action Plans;*
- *Environmental mitigation measures, as recommended in the project EIA study report;*
- *Environmental requirements in contract documents.*

This monthly EM&A report summarizes the impact monitoring in June 2010. This monthly EM&A report can be accessed on the web at http://www.skwsewer.com.

2.0 PROJECT INFORMATION

2.1 Background

Under this Project, Kaden is required to construct village sewerage in Yung Shue Wan and Sok Kwu Wan, Lamma Island.

Village sewage works will undertake in this Project. These will comprise laying approximately 1.4km of sewerage pipes from 220mm to 350mm diameter in Sok Kwu Wan Village.

As the main Contractor of the captioned project contracted by, Kaden will follow the environmental monitoring recommendation stated in the EM&A Manual that was prepared with reference to the EIA Report (Register No.: AEIAR-075/2003).

According to the EP and the EM&A Manual, the environmental programme is mainly focused on the construction activities of this Project in Sok Kwu Wan. At the same time, all air quality and noise monitoring stations proposed in the EM&A Manual are located in Sok Kwu Wan. The baseline report is prepared in accordance with EP (No. EP-281/2007) for the Designated Project "Outlying Islands Sewerage Stage 1 Phase 2 – Sok Kwu Wan Sewage Collection, Treatment and Disposal Facilities" and the EM&A Manual.

2.2 Site Description

The general layout plan of the project in Sok Kwu Wan is shown in Drawing No. 2005/C1/2004, 2005/C1/2005 and 2005/C1/2006.

Surrounding the construction site, there are air and noise sensitive receivers at Chung Mei Village, Sok Kwu Wan and Ta Shui Wan.

2.3 Construction Programme

The construction programme is shown in Appendix E.

2.4 Project Organization and Management Structure

The organization chart with respect to the on-site environmental management and monitoring program are shown in Appendix A.

2.5 Contact Details of Key Personnel

The key personnel contact names and telephone numbers, and construction programme are shown in table 2.1.

Table 2.1 Contact Details of Key Personnel

Organization	*Project Role*	*Key Staff*	*Tel. No.*	*Fax No.*
Scott Wilson CDM JV	*Engineer Representative*	*Mr. Alfred Cheung*	*2982 0240*	*2982 4129*
Scott Wilson CDM JV	*Independent Environmental Checker*	*Mr. Rodney Ip*	*2410 3750*	*2428 9922*
Kaden Construction Ltd	*Contractor*	*Ir Stephen Leung*	*2454 9102*	*2465 1207*
ETS-Testconsult Ltd	*Environmental Team*	*Mr. C L Lau*	*2946 7791*	*2695 3944*

2.6 Construction Progress in this reporting month

A summary of the major construction activities undertaken in this monitoring month were:

- *Sewer laying; and*
- *Manhole construction.*

3.0 IMPACT AIR QUALITY MONITORING

3.1 Monitoring Requirement

Both 1-hr and 24-hr TSP monitoring is required to be conducted in order to monitor the air quality of the environment during the construction period. For regular monitoring, a sampling frequency of at least one in every six days should be carried out at all designated monitoring stations.

3.2 Monitoring Equipment

24-hour TSP Monitoring

High volume sampler, as HVS, (Greasby GMWS2310) complete with appropriate sampling inlets are employed for 24-hour TSP. The sampler is composed of a motor, a filter holder, a flow controller and a sampling inlet and its performance specification complies with that required by USEPA standard Title 40, Code of Federation Regulations Chapter 1 (Part 50).

Installation
The installation of HVS refers to the requirement stated in EM&A Manual.

Operation/Analytical Procedures
Operating/analytical procedures for the operation of HVS are as below:

Prior to the commencement of the air sampling, the flow rate of the high volume sampler was properly set (between 0.6m^3/min and 1.7m^3/min.) in accordance with the manufacturer's instruction to within the range recommended in USEPA Standard Title 40, CFR Part 50.

- For TSP sampling, fiberglass filters (GA-55) were used.
- The power supply was checked to ensure the sampler worked properly.
- On sampling, the sampler was operated 5 minutes to establish thermal equilibrium before placing any filter media at designated air monitoring station.

- The filter holding frame was then removed by loosening the four nuts and carefully a weighted and conditioned filter was centered with the stamped number upwards, on a supporting screen.
- The filter was aligned on the screen so that the gasket formed an air-tight seal on the outer edges of the filter. Then the filter holder frame was tightened to the filter holder with swing bolts. The applied pressure should be sufficient to avoid air leakage at the edges.
- The programmable timer will be set for a sampling period of 24 hours. Information was recorded on the record sheet, which included the starting time, the weather condition and the filter number (the initial weight of the filter paper can be found out by using the filter number.).
- After sampling, the filter was transferred from the filter holder of the HVS to a sealed plastic bag and sent to the laboratory for weighting. The elapsed time was also recoded.
- Before weighting, all filters were equilibrated in a desiccator for 24 hour with the temperature of 25°C ± 3°C and the relative humidity (RH) <50% ±5%.

Maintenance & Calibration

- The HVS and their accessories were maintained in good working condition, such as replacing motor brushes routinely and checking electrical wiring to ensure a continuous power supply.
- The HVSs used were calibrated before the commencement of air quality monitoring, after maintenance and every two months. Five-point calibration by using calibration kit (e.g. Tisch TE-5025A) was performed to establish a relationship between the flow recorder meter reading in cfm (cubic feet per minute) and the standard flow rate, QStd, in m^3/min.

1-hour TSP Monitoring

1-hour TSP levels were measured by using 1-hour dust meter which are capable of producing comparable results as the by high volume sampling method, to indicate short event impacts.

Measuring Procedures

The measuring procedures of the 1-hr dust meter are in accordance with the Manufacturer's instruction Manual as follows:

- Set POWER to ON, check the battery indicator to ensure whether the power supply is enough to conduct the TSP monitoring;
- Calibrate the dust meter by zero check;
- Set the TIME CONSTANT of the dust meter;
- Press SAMPLE to start the TSP monitoring;
- Record the maximum, minimum and average reading directly from the dust meter by press STATISTICS when monitoring complete.

Maintenance & Calibration

- 1-hour dust meter should be checked at 6-month intervals throughout all stages of impact air quality monitoring. Through a five-point calibration by placing the dust meter and calibrated HVS under the same environmental condition, a relationship in TSP level ($\mu g/m^3$) between dust meter and HVS was established.

3.3 Laboratory Measurement / Analysis

Environmental Laboratory of ETS-Testconsult which is HOKLAS accredited, carried out the laboratory analysis.

A clean filter paper with no pinholes was used for each time of monitoring. Before sampling, the filter paper of size 8" x 10" was labelled and conditioned in a humidity controlled chamber for over 24 hours and pre-weighed before use for the sampling.

After sampling, the filter paper loaded with dust was kept in a clean and tightly sealed plastic bag. The filter paper then returned to the laboratory for reconditioning in the humidity controlled chamber following by accurate weighing by an electronic balance with readout down to 0.1mg. The balance was calibrated against a traceable standard.

All the analysis results and collected samples were kept in a good condition for 6 months after completion of the monitoring exercise before disposal.

3.4 Monitoring Parameters, Frequency and Duration

Table 3.1 summarizes the monitoring parameters, monitoring duration and frequencies of impact air quality monitoring.

Table 3.1 Monitoring parameters, duration and frequencies of impact air quality monitoring

Parameter	*Duration*	*Frequency*
24-hr TSP	*24 hr (0000-2400)*	*One in every six days*
1-hr TSP	*1 hr (0700-1900)*	*3 times per day in every six days*

3.5 Monitoring Locations

As the requirement in the EM&A Manual, three designated air monitoring stations were selected. Table 3.2 tabulates the air quality monitoring locations of this Project.

Table 3.2 Air monitoring stations

Air monitoring station	*Description of location*
AM1	*Squatter house in Chung Mei Village*
AM2	*Squatter house in Chung Mei Village*
AM3	*Football Court*

3.6 Action and Limit Levels

Action and Limit levels for 24-hr TSP and 1-hr TSP derived as illustrated in Table 3.3.

Table 3.3 Action and Limit levels for 24-hr TSP and 1-hr TSP

Monitoring Station	*24-hr TSP ($\mu g/m^3$)*		*1-hr TSP ($\mu g/m^3$)*	
	Action Level	*Limit Level*	*Action Level*	*Limit Level*
AM1	*173*	*260*	*343*	*500*
AM2	*175*	*260*	*331*	*500*
AM3	*191*	*260*	*353*	*500*

3.7 Event-Action Plans

Should the results of the monitoring parameters at any designated monitoring stations indicate that the air quality criteria are exceeded, the actions in accordance with the Event and Action Plan that summarized in Appendix D should be carried out.

3.8 Results

Totally 6 occasions of 24-hr TSP monitoring and 18 occasions of 1-hr TSP monitoring were carried out in this reporting period. All monitoring data of 1-hr and 24-hr TSP monitoring is provided in Appendix B2. Graphical presentation of both 1-hr and 24-hr TSP monitoring results for the reporting month is shown in Appendix B3.

No exceedances of Action and Limit Level of 1-hr and 24-hr TSP monitoring results were recorded during the reporting month. Table 3.4 summaries the 1-hr and 24-hr TSP monitoring results.

Table 3.4 Summary of 1-hr and 24-hr TSP Monitoring Results

Parameter	1-hr TSP Monitoring								
Station	AM1			AM2			AM3		
Date	Time	Result	Exceed*	Time	Result	Exceed*	Time	Result	Exceed*
01/06/10	08:44	135	X	08:38	133	X	13:00	138	X
01/06/10	09:44	131	X	09:38	109	X	14:00	100	X
01/06/10	10:44	122	X	10:38	113	X	15:00	107	X
07/06/10	08:50	110	X	08:37	112	X	13:00	94	X
07/06/10	09:50	122	X	09:37	124	X	14:00	115	X
07/06/10	10:50	112	X	10:37	100	X	15:00	109	X
11/06/10	09:30	102	X	09:35	119	X	14:00	113	X
11/06/10	10:30	127	X	10:35	126	X	15:00	109	X
11/06/10	11:30	131	X	11:35	144	X	16:00	127	X
17/06/10	08:45	110	X	09:00	115	X	13:00	100	X
17/06/10	09:45	95	X	10:00	103	X	14:00	112	X
17/06/10	10:45	82	X	11:00	94	X	15:00	89	X
23/06/10	08:54	95	X	08:47	97	X	13:00	71	X
23/06/10	09:54	90	X	09:47	89	X	14:00	80	X
23/06/10	10:54	84	X	10:47	86	X	15:00	65	X
29/06/10	08:45	76	X	08:40	79	X	13:00	76	X
29/06/10	09:45	72	X	09:40	69	X	14:00	86	X
29/06/10	10:45	63	X	10:40	62	X	15:00	79	X

Parameter	24-hr TSP Monitoring					
Station	AM1		AM2		AM3	
Date	Result	Exceed*	Result	Exceed*	Result	Exceed*
01/06/10	36	X	32	X	37	X
07/06/10	57	X	54	X	57	X
11/06/10	100	X	73	X	89	X
17/06/10	111	X	31	X	31	X
23/06/10	62	X	47	X	45	X
29/06/10	105	X	34	X	65	X

Remark (*): L=Limit Level exceedance, A=Action Level exceedance and X=not an exceedance

4.0 IMPACT NOISE MONITORING

4.1 Monitoring Requirements

As the requirement in the EM&A Manual, impact noise monitoring was conducted for a weekly basis at designated monitoring locations.

4.2 Monitoring Equipment

Integrating Sound Level Meters used for impact noise monitoring were Type 1 sound level meters capable of giving a continuous readout of the noise level reading including equivalent continuous sound pressure level (L_{eq}) and percentile sound pressure level (Lx). They complied with International Electro technical Commission Publications 651:1979 (Type1) and speed in m/s was used to monitor the wind speed. Table 4.1 summarized the noise monitoring equipment model used during the impact monitoring. Copies of calibration certificates and Calibration Summary for noise meters and calibrators used are attached in Appendix C1.

Table 4.1 Noise Monitoring Equipment

Equipment	Model
Integrating Sound Level Meter	Rion NL-31 Sound Level Meter
Calibrator	Rion NC-73 Sound Level Meter
Portable Wind Speed Indicator	TSI Model 8340-M Air Velocity Meter

4.3 Monitoring Parameters, duration and Frequency

Impact noise monitoring for the A-weighted levels L_{eq}, L_{10} and L_{90} were recorded once per week. Data obtained from impact noise monitoring was processed and presented as below:

- *Daytime: three sets of 30-minute noise level monitored between 0700-1900 hrs on normal weekdays;*
- *Evening-time*: three sets of 5-minute noise level monitored between 1900-2300 hrs ;*
- *Night-time*: three sets of 5-minute noise level monitored between 2300-0700 hrs of next day; and*
- *Holiday*: three sets of 5-minute noise level monitored between 0700-1900 hrs on holiday.*

(*): Noise monitoring to be conducted only when there is construction work.

Duration, frequencies and parameters of noise measurement are presented in Table 4.2.

Table 4.2 Duration, Frequencies and Parameters of Noise Monitoring

Time period	*Duration/min*	*Parameters*
Day-time: 0700-1900 hrs on normal weekday	*30*	L_{eq}, L_{10}, L_{90}
Evening-time: 1900-2300 hrs	*5*	L_{eq}, L_{10}, L_{90}
Night-time: 2300-0700 hrs of next day	*5*	L_{eq}, L_{10}, L_{90}
Holiday: 0700-1900 hrs	*5*	L_{eq}, L_{10}, L_{90}

4.4 Monitoring Locations

Since the owner of 1B Sok Kwu Wan objected to set up the noise monitoring station NM3 at 1B Sok Kwu Wan (Eastern Façade), an alternative position, Sok Kwu Wan Sitting-out Area RNM3, which is just a 3m width footpath away from house 1B for the free field noise measurement, was proposed by ET. Under the approval from ER and agreement from the IEC and EPD, both baseline and impact noise monitoring was carried out at RNM3.

Hence, there were four noise monitoring locations NM1, NM2, RNM3 and NM4 required to carry out impact noise monitoring.

The details of noise monitoring stations are summarized in Table 4.3.

Table 4.3 Noise Monitoring Stations

Noise monitoring station	*Description of location*	*Type of Measurement*
NM1	*1, Chung Mei Village*	*Façade*
NM2	*20, Sok Kwu Wan*	*Façade*
RNM3	*Sok Kwu Wan Sitting-out Area*	*Free Field*
NM4	*2-storey village house at Ta Shui Wan*	*Façade*

4.5 Monitoring Methodology

Instrumentation

Integrating Sound Level Meters were employed for noise monitoring.

Operation/Analysis Procedures

- Sound Level Meter was set on a tripod at a height of 1.2m above the ground;
- For free field measurement, the meter was positioned away from any nearby reflective surfaces.
- The battery condition was checked to ensure the correct functioning of the meter:
- Parameters such as frequency weighting, the time weighting and the measurement time were set as follows:
  - Frequency weighting : A
  - Time weighting : Fast
  - Time measurement : 5 mins

- Prior to and after each noise measurement, the meter was calibrated using a Calibrator for 94 dB at 1000HZ. If the difference in the calibration level before and after measurement was more than 1.0 dB(A), the measurement would be considered invalid and repeat measurement would be required after re-calibration or repair of the equipment;
- During the monitoring period, the L_{eq}, L_{10} and L_{90} were recorded. In addition, site conditions and noise sources were recorded on a standard record sheet;
- Noise measurement may be paused during periods of high intrusive noise (e.g. dog baking directly towards the receiver of noise level meter). If noise measurement was paused during high intrusive noise, the noise level meter would be resumed and continued the noise measurement and the observations would also be recorded. Any pause intervals were not included in the measurement time; and
- Noise monitoring would be cancelled in the presence of fog, rain, storm, wind with a steady speed exceeding 5m/s, or wind gusts exceeding 10m/s.

Maintenance and Calibration

- The microphone head of the sound level meter and calibrator are cleaned with soft cloth at quarterly intervals; and
- The meters are sent to supplier or HOKLAS laboratory to check and calibrated at yearly intervals.

4.6 Actions and Limit Levels

The Action and Limit Levels (AL Levels) were established in accordance to the Clause 3.6.4 of the EM&A Manual. Table 4.4 presents the AL levels for noise monitoring.

Table 4.4 Action and Limit Levels for Noise Monitoring

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

4.7 Event-Action Plans

Should the results of the monitoring parameters at any designated monitoring stations indicate that the noise level criteria are exceeded, the actions in accordance with the Event and Action Plan that summarized in Appendix D should be carried out.

4.8 Results

Totally 5 occasions of Day-time noise monitoring were carried out at monitoring stations in this reporting month. No Evening-time, Night-time and Holiday noise monitoring were required since no construction works were processed during the night-time period. All monitoring data of Day-time noise monitoring is provided in Appendix C2. Graphical presentation of Day-time noise monitoring results for this reporting month is shown in Appendix C3.

No exceedances of Action Level of noise monitoring were recorded in this reporting month since no complaint on noise issue was received. Besides, no exceedances in Limit Level were recorded according to the results from Day-time noise monitoring. Table 4.5 summaries the noise daytime monitoring results in the reporting period.

Table 4.5 Summary of Noise Daytime Monitoring Results

Monitoring Parameter	*Date*	*NM1*		*NM2*		*RNM3#*		*NM4*	
		Result	*Exceedance**	*Result*	*Exceedance**	*Result*	*Exceedance**	*Result*	*Exceedance**
Noise Daytime Monitoring	*01/06/10*	*69.8*	*X*	*62.2*	*X*	*67.4*	*X*	*66.1*	*X*
	07/06/10	*69.8*	*X*	*59.3*	*X*	*64.4*	*X*	*63.4*	*X*
	17/06/10	*64.4*	*X*	*59.6*	*X*	*63.3*	*X*	*62.5*	*X*
	23/06/10	*73.5*	*X*	*61.2*	*X*	*59.8*	*X*	*60.6*	*X*
	29/06/10	*60.7*	*X*	*66.2*	*X*	*62.1*	*X*	*55.3*	*X*

Remark (*): L = Limit Level exceedance, A = Action Level exceedance and X = not an Exceedance
(#): 3dB(A) correction had been added to the results since noise measurements at RNM3 were free-field.

5.0 SITE INSPECTION

During this reporting month, weekly site inspections were undertaken on 01, 07, 17, 23 and 29 June 2010 by ET. Monthly joint site inspection at 29 June 2010 was carried out by Engineer's Representative, IEC, Kaden and ET. A summary of implementation status of mitigation measures on site inspections is presented in Appendix F.

5.1 Summary of the site inspection findings and Action(s) taken by Kaden and ET

According to the summary of the weekly site inspections carried out in this month, it indicated that site practices of the Kaden were generally undertaken in an environmentally acceptable manner and the overall site environmental performance was satisfactory. Summary of the site inspection findings in this reporting month is shown in Table 5.1.

Table 5.1 Summary of Site Inspection Findings and Action(s) taken by Kaden and ET

Item	*Aspect*	*Finding*	*Action(s) to be taken by the Contractor*	*ET Verification*
1	*Water*	*Follow up action to the outstanding item in the previous month, sedimentation tank at S64 was found modified to treat the site runoff properly during the weekly site inspection on 01/06/10.*	*Since the finding was improved, no further action was required to be taken by the Contractor.*	*Since the finding was improved, no ET verification was required to be taken.*
2	*Water*	*Water was noted leaked from a broken sedimentation tank during the weekly site inspection on 01/06/10.*	*The Contractor replaced the broken sedimentation tank by a new once during the same weekly inspection day.*	*Since the finding was improved, no ET verification was required to be taken.*
3	*Chemical*	*An oil drum and few chemical bottles at storage area were found on the ground without drip tray during the weekly site inspection on 29/06/10.*	*The Contractor was reminded to store all chemicals in chemical storage area or provide appropriated drip tray for short-time storage.*	*Since the finding was noted at the last weekly site inspection in this reporting month, it will be verified in the coming month.*

5.2 Recommendations on site inspection findings in Site Inspections of this month

Based on the site inspection findings, the recommendations are as below:

- *Providing dust suppression measures (such as water spraying) during the construction works especially excavation and earth moving operation;*
- *Checking and maintaining all the site machines to prevent black smoke emission;*
- *Providing briefing to the concerned site staff on remedial actions, such as handling method of chemicals and chemical waste;*
- *Maintain good waste management at the site; and*
- *Remove all stagnant water and applied proper treatment facilities to wastewater before discharge.*

6.0 Status of Environmental Permits

All permits/licenses obtained in this reporting month are summarized in Table 6.1.

Table 6.1 Summary of Environmental Licensing and Permit Status

Description	*Permit No.*	*Valid Period*		*Section*
		From	*To*	
Environmental Permit	*EP-281/2007/A*	*23/09/09*	*End of Project*	*Valid*
Water Discharge Licence	*EP890/W2/XD 026*	*23/05/08*	*31/03/12*	*Valid*
Notification under APCO	*Application had been submitted to EPD on 15 April 2008*			

7.0 WASTE MANAGEMENT

The quantities of waste for disposal from Sok Kwu Wan in this month are summarized in Table 7.1.

Table 7.1 Summary of Quantities of Waste for Disposal in this reporting month

Type of Waste		Quantity	Disposal Location	Cumulative Quantity
Inert C&D Materials	Total Quantity Generated (in '000m^3)	0.0086		1.4278
	Broken Concrete (in '000m^3)	0.0074	SKWRTS	0.1381
	Reused in the Contract (in '000m^3)	0.001	For Stockpile / Reuse	0.5599
	Reused in other Projects (in '000m^3)	0.0000	N/A	0.208
	Disposal as Public Fill (in '000m^3)	0.0074	SKWRTS	0.5888
C&D Waste	Metals (in '000kg)	0.0000	N/A	0.0000
	Paper/Cardboard Packaging (in '000kg)	0.0000	N/A	0.0000
	Plastics (in '000kg)	0.0000	N/A	0.0000
	Chemical Waste (in '000kg)	0.0000	N/A	0.0000
	Other, e.g. General Refuse (tonne)	0.00	SKWRTS	14.24

8.0 ECOLOGY

A comprehensive tree survey was carried out by Kaden in mid 2008. The two uncommon tree species (Celtis timorensis and Celtis biondii) could not be identified on site as per the Figure 4 of the EP.

A joint visit amongst EPD. AFCD, Kaden, DSD and RE was subsequently held on 24 March 2009 and some immature Celtic timorensis plants were identified at certain locations at Chung Mei. It was agreed that a full vegetation survey (in addition to the previous tree survey) should be conducted to identify the immature uncommon species.

Kaden then employed a landscape subcontractor "Bluet" and carried out a vegetation survey on 17 April 2009. Some immature uncommon trees species of Celtis timorensis were identified at twelve locations near the Works Area.

Subsequently, the Environmental Permit of this Project was amended as EP-281/2007/A and issued on 23 September 2009. Condition 1.7 and 3.7 in Part C and Figure 4 of the amended EP have been changed. Refer to the change, the amended EP present that the uncommon tree species, Celtis Timorensis, as shown in Figure 4 of the amended EP shall be labelled, fenced and protected in order to avoid any disturbance during the construction of the Project. The letter of Variation Environmental Permit (VEP-299/2009) is shown in Appendix J.

In the previous weekly site inspections in September and October 2009, some uncommon plants were suspected to be missing. This was reported in the last Monthly Report. Letters were also received from AFCD and EPD (see Appendix K and L) regarding this issue and the mis-identification of some uncommon plants. Another vegetation survey was subsequently carried out by the landscaping subcontractor "Bluet" on 18 November 2009 for verification (see attached updated survey report in Appendix G). It was reported that all uncommon plants (CT 1 to 12) are still existing and all the mislabeling has been rectified.

Three more tree species "Celtis Timorensis" from CT13 to CT15 were found within the project area as advised by AFCD and EPD (Letter Ref (12) in EP771/E1/083 on 08 December 2009 attached in Appendix L), and confirmed by landscaping subcontractor "Bluet" (Letter Ref K0801/03.09.00.00/2816/L on 17 December 2009 attached in Appendix G).

All uncommon tree species, CT1 to CT15 have been labelled and fenced off with safety net and notices have been posted for warning the site personnel of the presence of the uncommon tree species in this reporting month. Photos attached in Appendix I present the fencing and protection provided for those uncommon species in this reporting month.

9.0 ARCHAEOLOGY AND CULTURAL HERITAGE

Refer to the Section 9 of EM&A Manual, watching brief works were conducted in Chung Mei, Sok Kwu Wan by Archaeological Assessments Limited on 01 September 2008 and 12 June 2009.

The watching brief works took place along approximately 50m long alignment in two segments, MHS52 to MHS54 on 1st September 2008 and MHS50 to MHS52 on 12th June 2009. In overview, the steep lower hill slope area traversed by the MHS50 and MHS54 has seen little or no human activity prior to the 20th century and in contrast to the valley to the west, can be considered to have no archaeological potential. Details of the watching brief works present in Appendix H.

10.0 ENVIRONMENTAL NON-CONFORMANCE

10.1 Summary of Air Quality and Noise monitoring

No exceedances of Action and Limit Level of 24-hour and 1-hour TSP monitoring results were recorded during the reporting period.

No exceedances of Action Level of noise monitoring were recorded in this reporting month since no complaint on noise issue was received. Besides, no exceedances in Limit Level were recorded according to the results from Day-time noise monitoring.

No evening-time, night-time and holiday noise monitoring were required since no construction works were processed during these periods.

10.2 Summary of Environmental Complaints, Notifications of Summons and Successful Prosecutions

No complaints, notifications of summons and successful prosecutions were received in this reporting month. A summary of environmental complaints, notifications of summons and successful prosecutions was given Table 10.1.

Table 10.1 Statistical Summary of Environmental Complaint-log

Reporting Period	*Complaint logged*		*Summons served*		*Successful Prosecution*	
	Frequency	*Cumulative*	*Frequency*	*Cumulative*	*Frequency*	*Cumulative*
June 2008	*0*	*0*	*0*	*0*	*0*	*0*
July 2008	*0*	*0*	*0*	*0*	*0*	*0*
August 2008	*0*	*0*	*0*	*0*	*0*	*0*
September 2008	*0*	*0*	*0*	*0*	*0*	*0*
October 2008	*1*	*1*	*0*	*0*	*0*	*0*
November 2008	*0*	*1*	*0*	*0*	*0*	*0*
December 2008	*0*	*1*	*0*	*0*	*0*	*0*
January 2009	*0*	*1*	*0*	*0*	*0*	*0*
February 2009	*0*	*1*	*0*	*0*	*0*	*0*
March 2009	*0*	*1*	*0*	*0*	*0*	*0*
April 2009	*0*	*1*	*0*	*0*	*0*	*0*
May 2009	*0*	*1*	*0*	*0*	*0*	*0*
June 2009	*0*	*1*	*0*	*0*	*0*	*0*
July 2009	*0*	*1*	*0*	*0*	*0*	*0*
August 2009	*0*	*1*	*0*	*0*	*0*	*0*
September 2009	*0*	*1*	*0*	*0*	*0*	*0*
October 2009	*0*	*1*	*0*	*0*	*0*	*0*
November 2009	*0*	*1*	*0*	*0*	*0*	*0*
December 2009	*0*	*1*	*0*	*0*	*0*	*0*
January 2010	*0*	*1*	*0*	*0*	*0*	*0*
February 2010	*0*	*1*	*0*	*0*	*0*	*0*
March 2010	*0*	*1*	*0*	*0*	*0*	*0*
April 2010	*0*	*1*	*0*	*0*	*0*	*0*
May 2010	*0*	*1*	*0*	*0*	*0*	*0*
June 2010	*0*	*1*	*0*	*0*	*0*	*0*

11.0 IMPLEMENTATION STATUS

11.1 Implementation Status of Environmental Mitigation Measures

Kaden has been implementing the required environmental mitigation measures indicating in Appendix A of the EM&A manual. A summary of the implementation status of the mitigation measures is presented in Appendix F.

11.2 Implementation Status of Event and Action Plan

No exceedances of Action and limit Levels of noise air quality monitoring were recorded in this reporting month and hence no further actions were required to be taken.

11.3 Implementation Status of Environmental Complaint Handling

No complaints were received in this reporting month and hence no further actions were required to be handled.

11.4 Implementation Status of Notification of Summons and Prosecution

There were no notifications of summons respect to environmental issues registered in this reporting month.

12.0 CONCLUSION AND DISCUSSION

According to the summary of noise and air quality monitoring results, no exceedances of Action and Limit Level were recorded during the reporting period.

No complaints, notifications of summons and successful prosecutions were received in this reporting period.

According to the ET weekly site inspections carried out in this reporting month, it indicated that site practices of the Kaden were generally undertaken in an environmentally acceptable manner and the overall site environmental performance was satisfactory.

The monitored environmental results indicated that no unacceptable environmental impacts arising from the Project had been caused to the surrounding sensitive receivers. The environmental measures had been effective in controlling potential impacts to within acceptable sensitive receivers.

13.0 FUTURE KEY ISSUES

13.1 Upcoming Environmental Monitoring Schedule in coming monitoring month

Proposed Environmental Monitoring program in coming month is presented as following table:

Table 13.1 Proposed Environmental Monitoring Schedule in coming month

July 2010						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1 Holiday	2	3
4	5 1-hr TSP x 3 24-hr TSP NM Weekly SI	6	7	8	9 1-hr TSP x 3 24-hr TSP	10
11	12	13	14	15 1-hr TSP x 3 24-hr TSP NM Weekly SI	16	17
18	19	20	21 1-hr TSP x 3 24-hr TSP NM Weekly SI	22	23	24
25	26	27 1-hr TSP x 3 24-hr TSP NM Weekly SI	28	29	30	31

13.2 Upcoming Construction Works Schedule in coming month

Major construction works planned to be carried out in coming month are shown as below:

- *Sewer laying;*
- *Manhole construction; and*
- *Protection of uncommon species.*

13.3 Environmental Issues for the Coming Month

Key issues to be considered in the coming month include:

- *Protection of uncommon tree species;*
- *Dust generated from the construction activities; and*
- *Noise generated from the noisy activities.*

Mitigation measures to be required in the coming month:

Air Quality Impact

- *To provide adequate water spraying on roads and working platform;*
- *To ensure implementation of the dust mitigation measures for the construction activities; and*
- *To provide proper maintenance for vehicles and machines on site.*

Noise

- *To switch off equipment if not in use;*
- *To operate silent equipment;*
- *To identify the noise sources inside and outside of the site; and*
- *To re-schedule the work activities in the event of valid noise exceedance.*

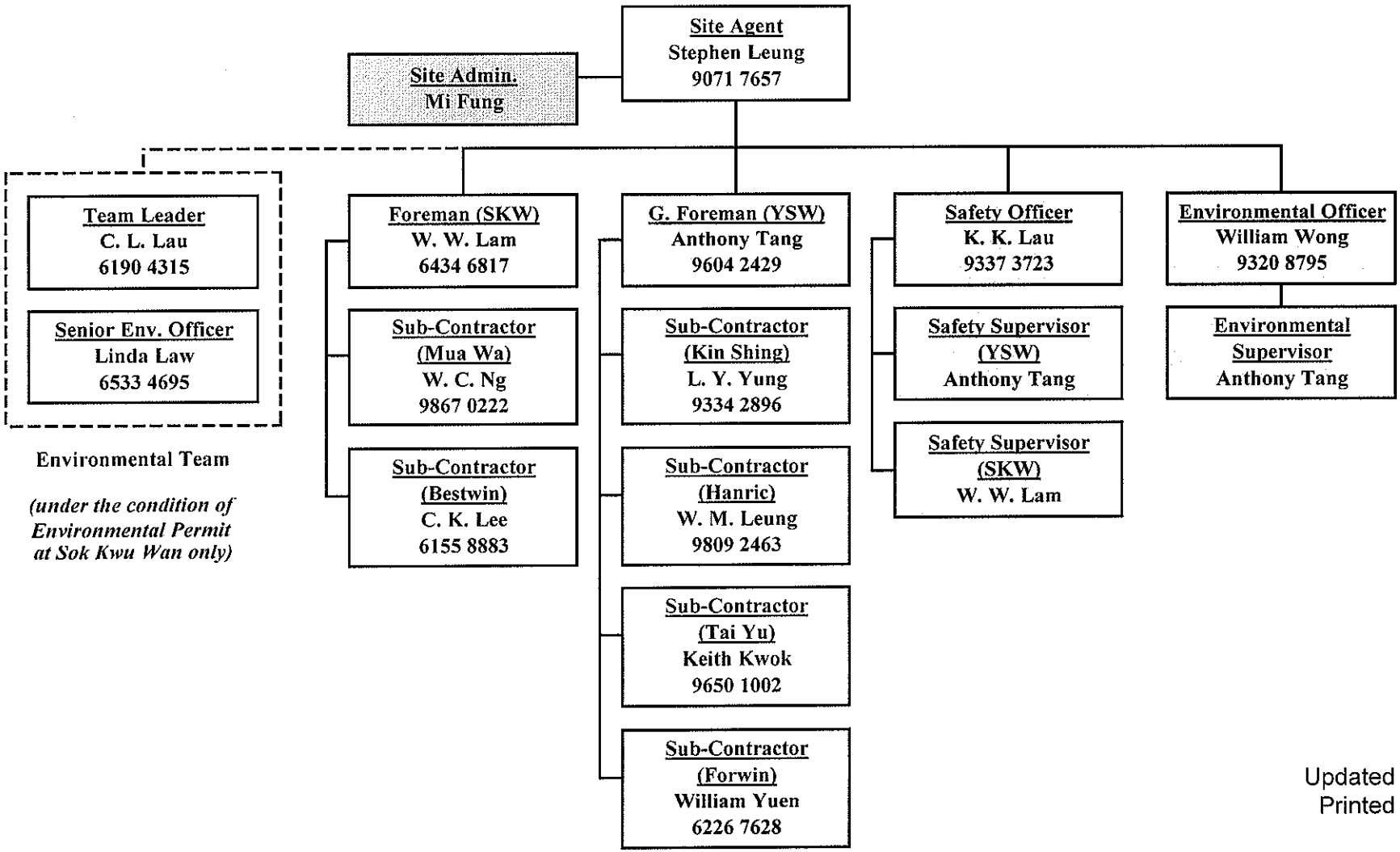
Appendix A

Organization Chart and Lines of Communication

Kaden Construction Limited

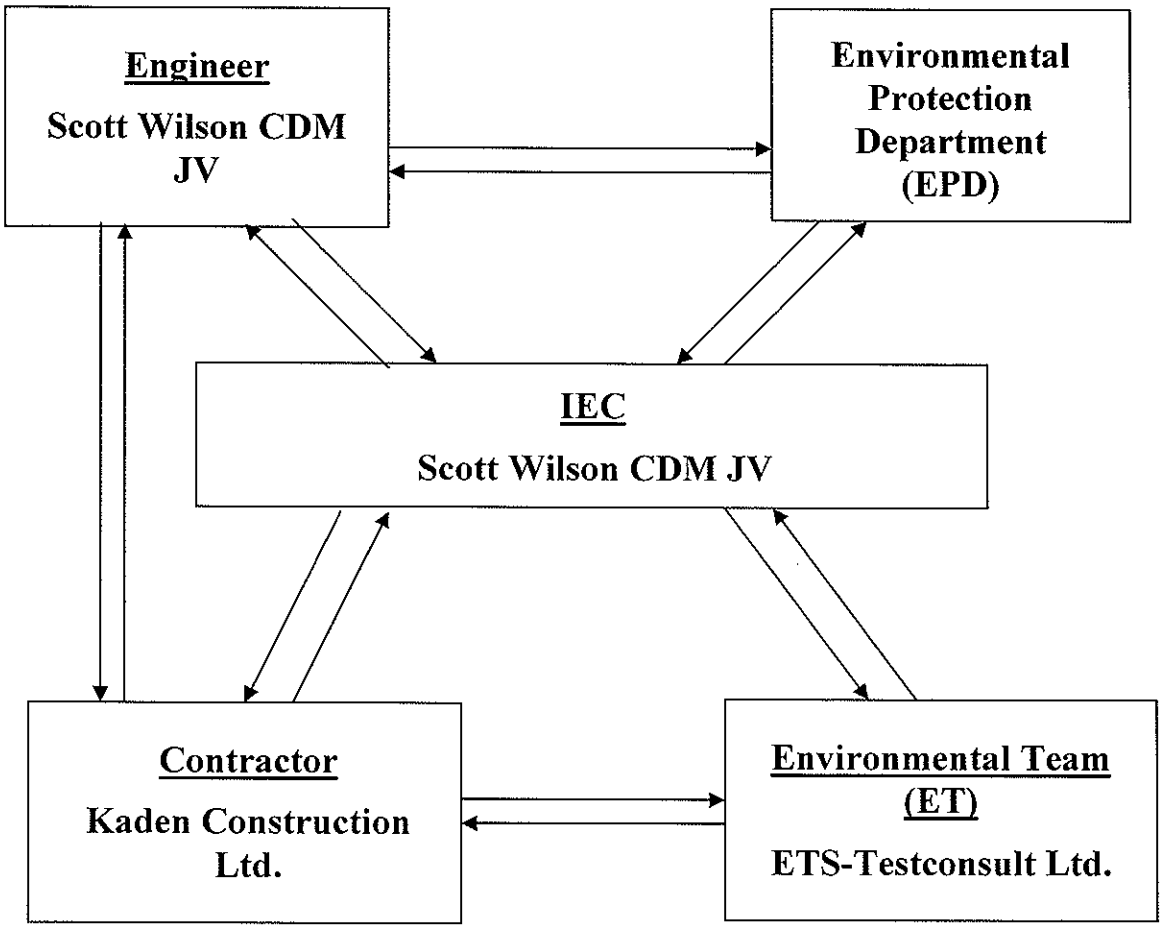
DSD Contract No. DC/2007/18
Yung Shue Wan and Sok Kwu Wan Village Sewerage, Stage 1 Works

Organization Structure for Environmental Management (EMP Rev. 26.00)



Updated on 01/03/2010
Printed on 13/07/2010

Lines of Communication



Appendix B1

Calibration Certificates for

Impact Air Quality Monitoring Equipments

東業德勤測試顧問有限公司
ETS-TESTCONSULT LIMITED
8/F., Block B, Veristrong Industrial Centre, 34-36 Au Pui Wan Street, Fotan, Hong Kong
Tel : 2695 8318 E-mail : ett@ets-testconsult.com
Fax : 2695 3944 Web site : www.ets-testconsult.com

TEST REPORT

Calibration Report of High Volume Air Sampler

Manufacturer : Graseby GMW

Date of Calibration : 13 April 2010

Serial No. : 1173 (ET / EA / 003 / 17)

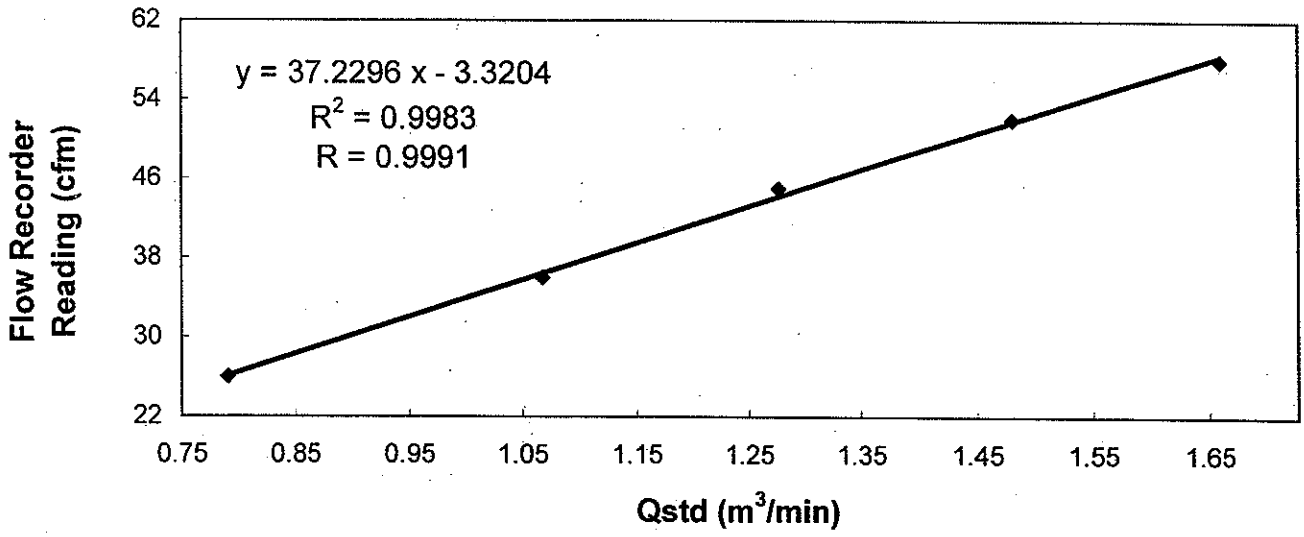
Calibration Due Date : 12 June 2010

Method : Five-point calibration by using standard calibration kit Tisch TE-5025A refer to the Operations Manual

Results :

Flow recorder reading (cfm)	58	52	45	36	26
Qstd (Actual flow rate, m^3/min)	1.66	1.48	1.28	1.07	0.79
Pressure : 751.56 mmHg		Temp. : 301 K			

Sampler 1173 Calibration Curve
Site: Sok Kwu Wan (AM-1)



Acceptance Criteria : Correlation coefficient (r) of the calibration curve greater than 0.990 after 5-point calibration

The high volume sampler complies* / ~~does not comply~~* with the specified requirements and is deemed acceptable*/ ~~unacceptable~~* for use.

Calibrated by : _____
LI, Chi Kwan
(Site Technician)

Checked by : _____
LAW, Sau Yee
(Senior Environmental Officer)

東業德勤測試顧問有限公司
ETS-TESTCONSULT LIMITED
8/F., Block B, Veristrong Industrial Centre, 34-36 Au Pui Wan Street, Fotan, Hong Kong
Tel : 2695 8318 E-mail : etl@ets-testconsult.com
Fax : 2695 3944 Web site : www.ets-testconsult.com

TEST REPORT

Calibration Report of High Volume Air Sampler

Manufacturer : Graseby GMW Date of Calibration : 11 June 2010

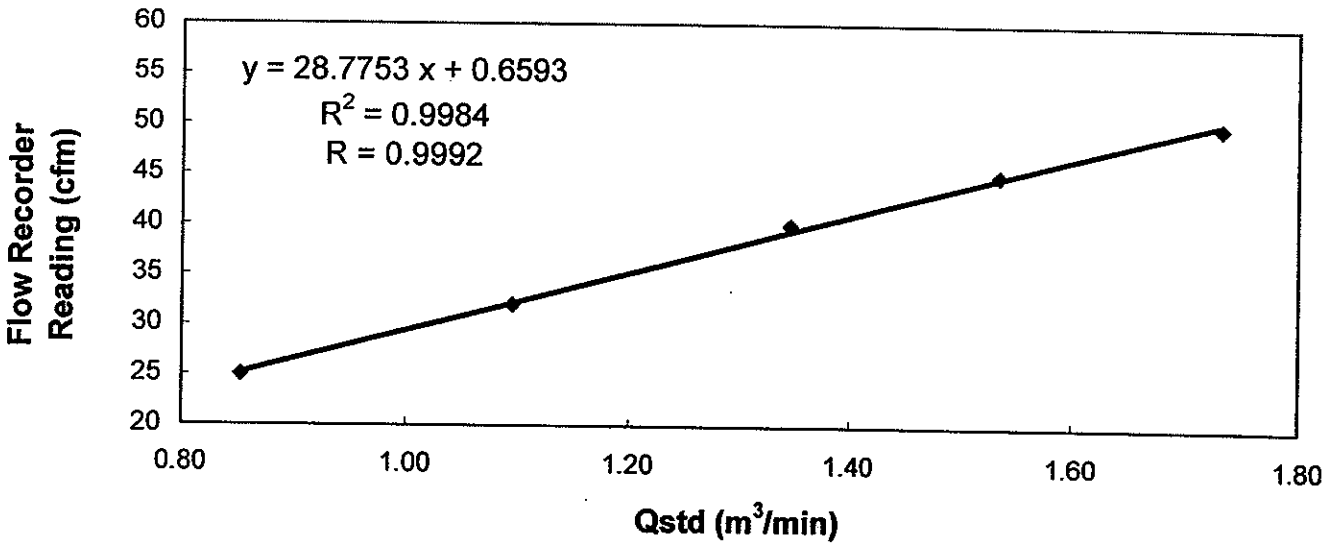
Serial No. : 9912 (ET / EA / 003 / 15) Calibration Due Date : 10 August 2010

Method : Five-point calibration by using standard calibration kit Tisch TE-5025A refer to the Operations Manual

Results :

Flow recorder reading (cfm)	50	45	40	32	25
Qstd (Actual flow rate, m^3/min)	1.73	1.53	1.35	1.09	0.85
Pressure : 759.06 mm Hg		Temp. : 302 K			

Sampler 9912 Calibration Curve
Site: Sok Kwu Wan (AM-3)



Acceptance Criteria : Correlation coefficient (r) of the calibration curve greater than 0.990 after a 5-point calibration

The high volume sampler complies* / ~~does not comply~~* with the specified requirements and is deemed acceptable*/ ~~unacceptable~~* for use.

Calibrated by : _____
LI, Chi Kwun
(Site Technician)

Checked by : _____
LAW, Sau Yee
(Senior Environmental Officer)

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Fax : 2695 3944 Web site : www.ets-testconsult.com

TEST REPORT

Calibration Report of High Volume Air Sampler

Manufacturer : Graseby GMW

Date of Calibration : 13 April 2010

Serial No. : 9865 (ET / EA / 003 / 14)

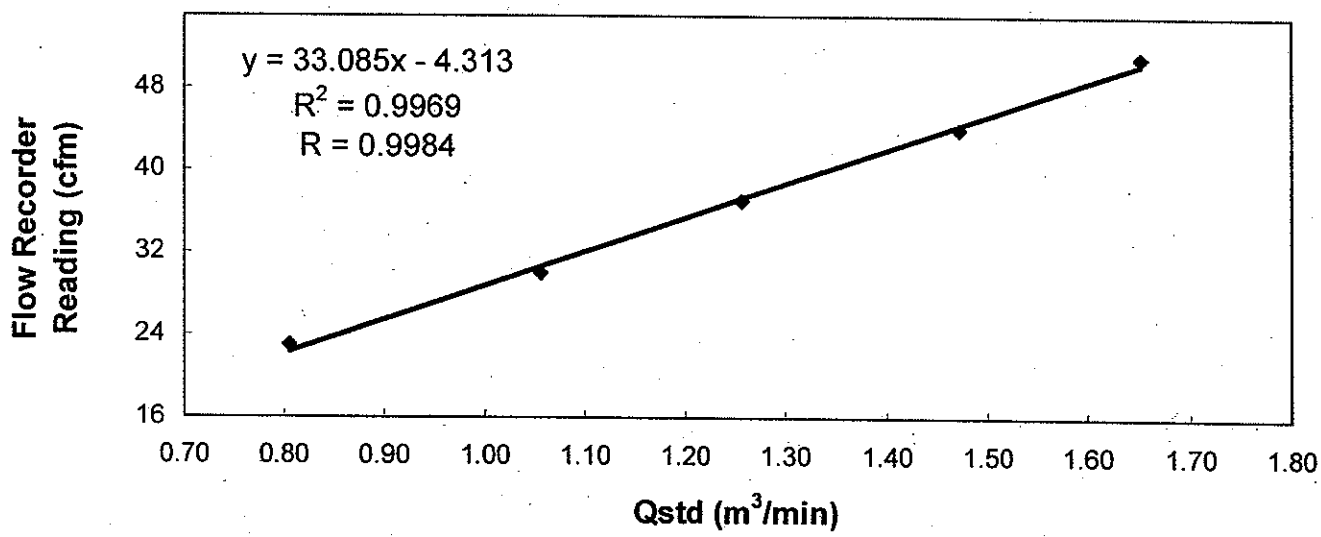
Calibration Due Date : 12 June 2010

Method : Five-point calibration by using standard calibration kit Tisch TE-5025A refer to the Operations Manual

Results :

Flow recorder reading (cfm)	51	44	37	30	23
Qstd (Actual flow rate, m^3/min)	1.65	1.47	1.26	1.06	0.81
Pressure : 751.56 mm Hg		Temp. : 301 K			

Sampler 9865 Calibration Curve
Site: Sok Kwu Wan (AM-2)



Acceptance Criteria : Correlation coefficient (r) of the calibration curve greater than 0.990 after a 5-point calibration

The high volume sampler complies* / ~~does not comply~~* with the specified requirements and is deemed acceptable*/ ~~unacceptable~~* for use.

Calibrated by : _____
LI, Chi Kwan
(Site Technician)

Checked by : _____
LAW, Sau Yee
(Senior Environmental Officer)

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Fax : 2695 3944 Web site : www.ets-testconsult.com

TEST REPORT

Calibration Report of High Volume Air Sampler

Manufacturer : Graseby GMW

Date of Calibration : 11 June 2010

Serial No. : 1173 (ET / EA / 003 / 17)

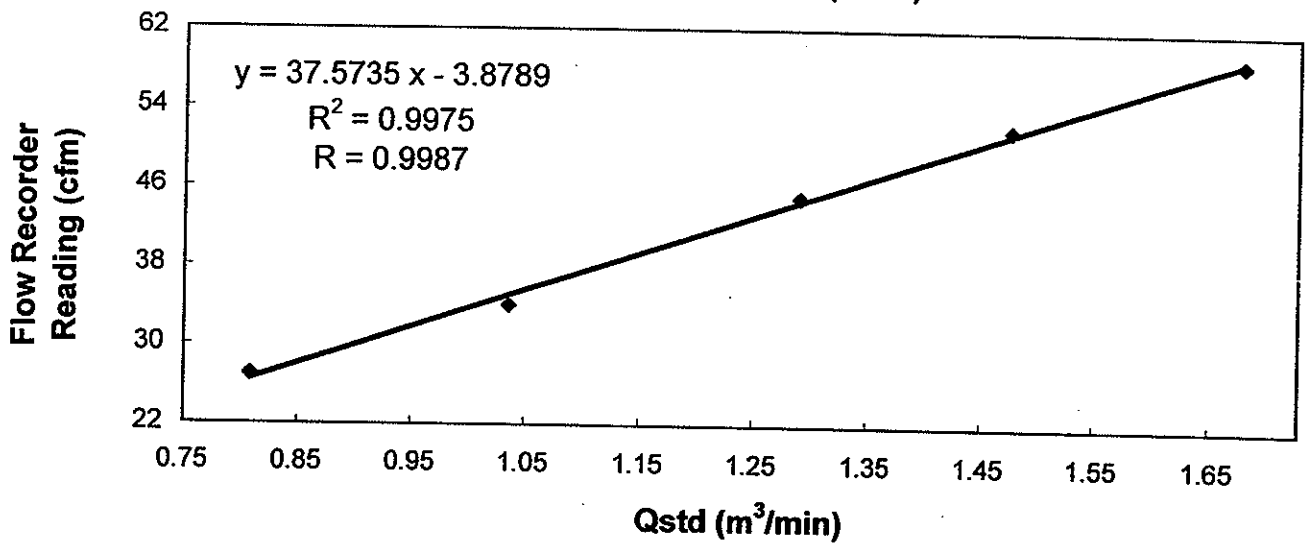
Calibration Due Date : 10 August 2010

Method : Five-point calibration by using standard calibration kit Tisch TE-5025A refer to the Operations Manual

Results :

Flow recorder reading (cfm)	59	52	45	34	27
Qstd (Actual flow rate, m^3/min)	1.68	1.48	1.29	1.04	0.81
Pressure : 759.06 mmHg		Temp. : 302 K			

Sampler 1173 Calibration Curve
Site: Sok Kwu Wan (AM-1)



Acceptance Criteria : Correlation coefficient (r) of the calibration curve greater than 0.990 after 5-point calibration

The high volume sampler complies* / ~~does not comply~~* with the specified requirements and is deemed acceptable*/ ~~unacceptable~~* for use.

Calibrated by : LI, Chi Kwun (Site Technician)

Checked by : LAW, Sau Yee (Senior Environmental Officer)

東業德勤測試顧問有限公司
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8/F., Block B, Veristrong Industrial Centre, 34-36 Au Pui Wan Street, Fotan, Hong Kong
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Fax : 2695 3944 Web site : www.ets-testconsult.com

TEST REPORT

Calibration Report of High Volume Air Sampler

Manufacturer : Graseby GMW

Date of Calibration : 13 April 2010

Serial No. : 9912 (ET / EA / 003 / 15)

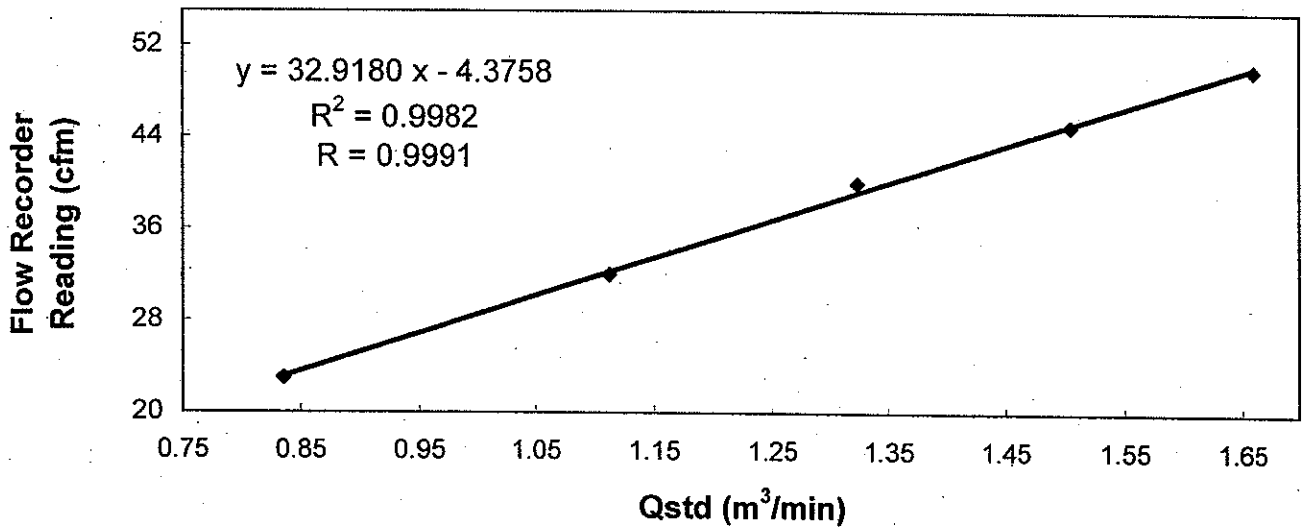
Calibration Due Date : 12 June 2010

Method : Five-point calibration by using standard calibration kit Tisch TE-5025A refer to the Operations Manual

Results :

Flow recorder reading (cfm)	50	45	40	32	23
Qstd (Actual flow rate, m^3/min)	1.66	1.51	1.32	1.11	0.84
Pressure : 751.56 mm Hg		Temp. : 301 K			

Sampler 9912 Calibration Curve
Site: Sok Kwu Wan (AM-3)



Acceptance Criteria : Correlation coefficient (r) of the calibration curve greater than 0.990 after a 5-point calibration

The high volume sampler complies* / ~~does not comply~~* with the specified requirements and is deemed acceptable*/ ~~unacceptable~~* for use.

Calibrated by : _____
LI, Chi Kwan
(Site Technician)

Checked by : _____
LAW, Sau Yee
(Senior Environmental Officer)

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Fax : 2695 3944 Web site : www.ets-testconsult.com

TEST REPORT

Calibration Report of High Volume Air Sampler

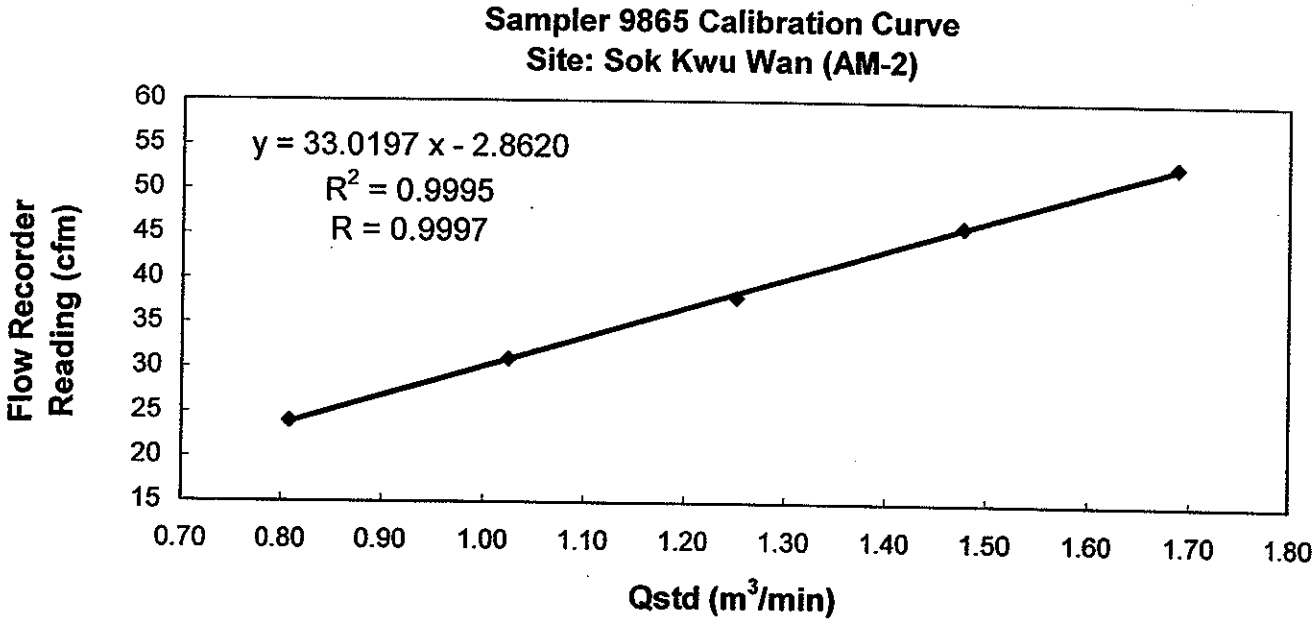
Manufacturer : Graseby GMW Date of Calibration : 11 June 2010

Serial No. : 9865 (ET / EA / 003 / 14) Calibration Due Date : 10 August 2010

Method : Five-point calibration by using standard calibration kit Tisch TE-5025A refer to the Operations Manual

Results :

Flow recorder reading (cfm)	53	46	38	31	24
Qstd (Actual flow rate, m^3/min)	1.69	1.48	1.25	1.02	0.81
Pressure : 759.06 mm Hg		Temp. : 302 K			



Acceptance Criteria : Correlation coefficient (r) of the calibration curve greater than 0.990 after a 5-point calibration

The high volume sampler complies* / ~~does not comply~~* with the specified requirements and is deemed acceptable*/ ~~unacceptable~~* for use.

Calibrated by : _____
LI, Chi Kwun
(Site Technician)

Checked by : _____
LAW, Sau Yee
(Senior Environmental Officer)

TISCH ENVIROMENTAL, INC.
145 SOUTH MIAMI AVE.
VILLAGE OF CLEVES, OH 45002
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513.467.9009 FAX
WWW.TISCH-ENV.COM

AIR POLLUTION MONITORING EQUIPMENT

ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5025A

Date - May 10, 2010 Rootsmeter S/N 9833620 Ta (K) - 296
Operator Tisch Orifice I.D. - 1784 Pa (mm) - 750.57

PLATE OR Run #	VOLUME START (m3)	VOLUME STOP (m3)	DIFF VOLUME (m3)	DIFF TIME (min)	METER DIFF Hg (mm)	ORFICE DIFF H2O (in.)
1	NA	NA	1.00	1.3900	3.2	2.00
2	NA	NA	1.00	0.9800	6.4	4.00
3	NA	NA	1.00	0.8740	7.9	5.00
4	NA	NA	1.00	0.8320	8.7	5.50
5	NA	NA	1.00	0.6880	12.8	8.00

DATA TABULATION

Vstd	(x axis) Qstd	(y axis)		Va	(x axis) Qa	(y axis)
0.9900	0.7122	1.4102		0.9957	0.7163	0.8881
0.9858	1.0059	1.9943		0.9915	1.0117	1.2560
0.9837	1.1255	2.2296		0.9894	1.1320	1.4042
0.9827	1.1812	2.3385		0.9884	1.1880	1.4728
0.9773	1.4205	2.8203		0.9829	1.4287	1.7762
Qstd slope (m) =		1.98896		Qa slope (m) =		1.24545
intercept (b) =		-0.00762		intercept (b) =		-0.00480
coefficient (r) =		0.99998		coefficient (r) =		0.99998
y axis = SQRT[H2O(Pa/760)(298/Ta)]				y axis = SQRT[H2O(Ta/Pa)]		

CALCULATIONS

Vstd = Diff. Vol[(Pa-Diff. Hg)/760](298/Ta)
Qstd = Vstd/Time

Va = Diff Vol [(Pa-Diff Hg)/Pa]
Qa = Va/Time

For subsequent flow rate calculations:

Qstd = 1/m{[SQRT(H2O(Pa/760)(298/Ta))]- b}
Qa = 1/m{[SQRT H2O(Ta/Pa)]- b}

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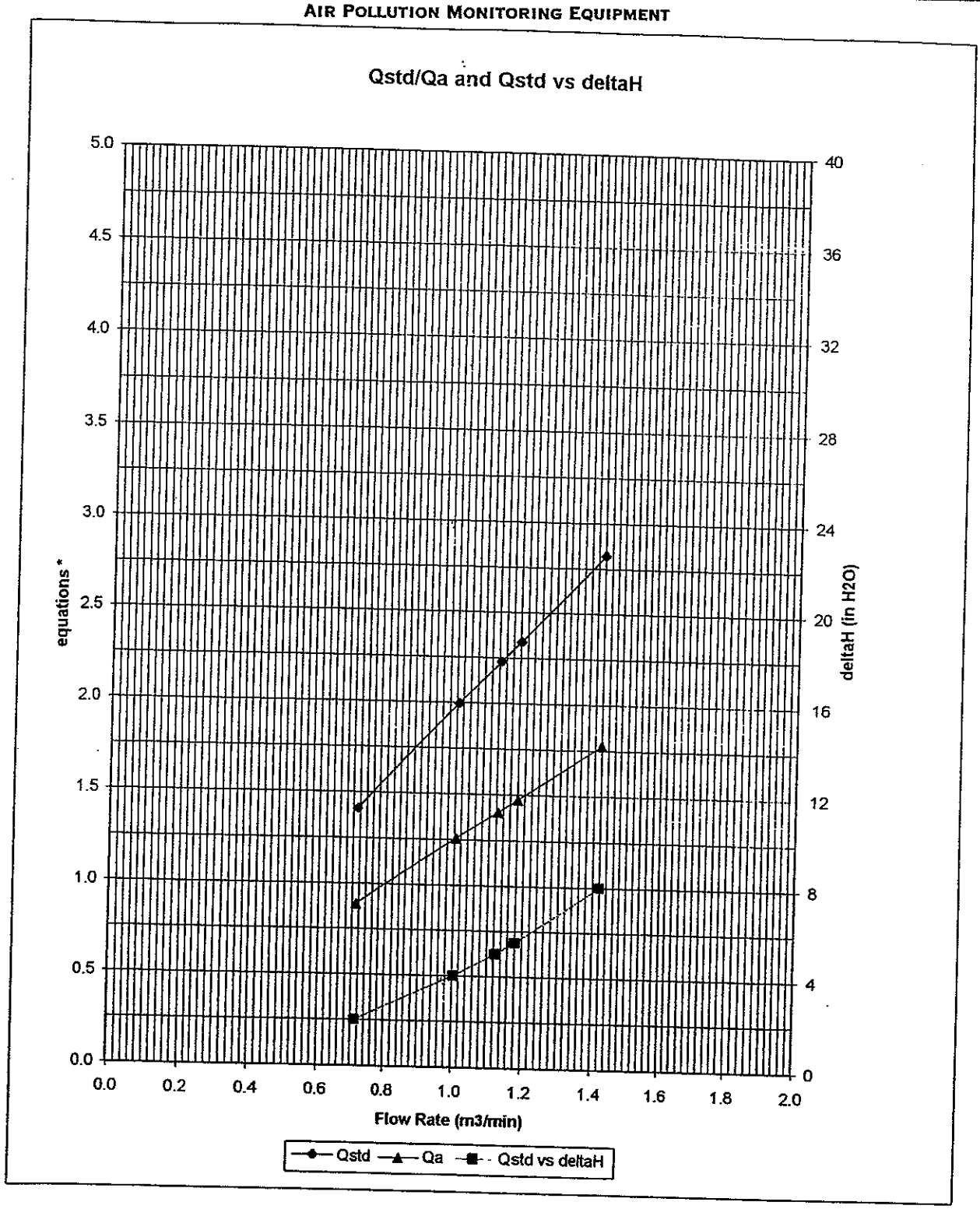
WWW.TISCH-ENV.COM

AIR POLLUTION MONITORING EQUIPMENT



* y-axis equations:

Qstd series: $\sqrt{\Delta H \left(\frac{Pa}{Pstd}\right)\left(\frac{T std}{Ta}\right)}$

Qa series: $\sqrt{(\Delta H\ (Ta\ /\ Pa))}$

#1784

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Fax : 2695 3944 Web site : www.ets-testconsult.com

TEST REPORT

Internal Calibration Report of Dust Trak Monitor

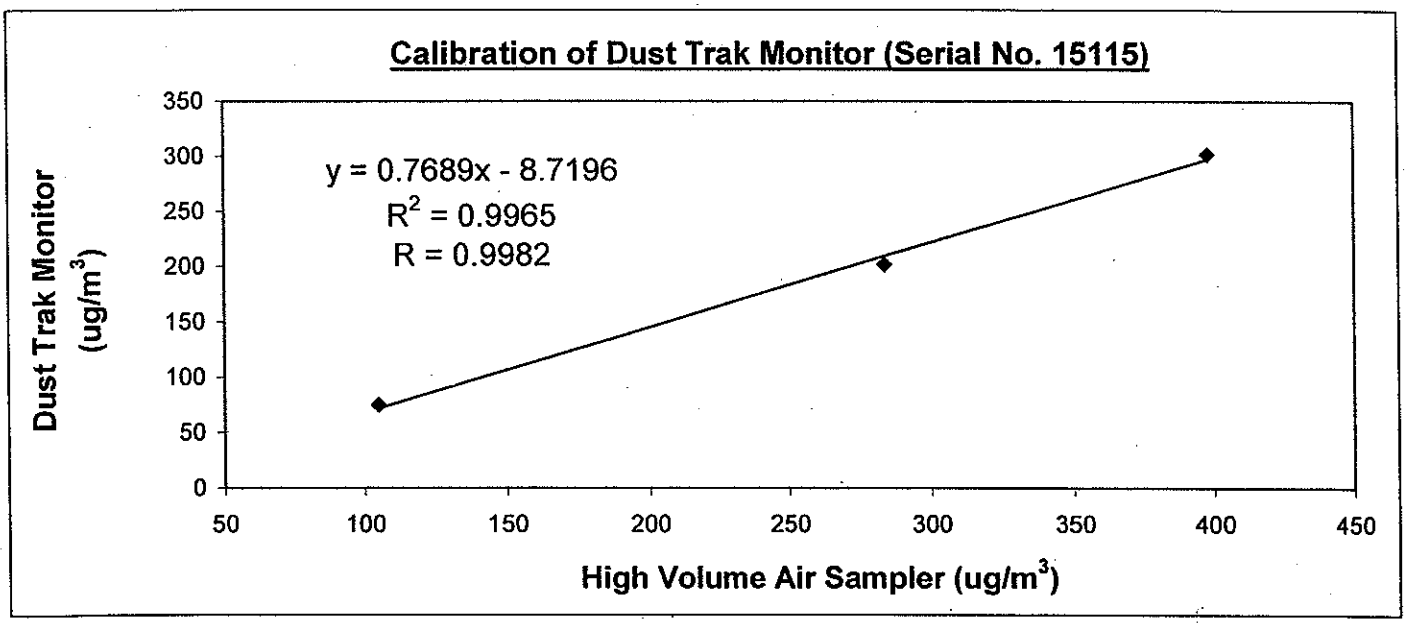
Manufacturer : TSI - 8520 Dust Trak Date of Calibration : 09 January 2010

Serial No. : 15115 (ET/EA/001/02) Calibration Due Date : 08 July 2010

Method : Parallel measurement (~~five~~ Three-point calibration) by placing the Dust Trak Monitor and High Volume Air Samper together under the same environmental condition

Results :

Dust Trak Monitor (ug/m^3)	75	202	302
High Volume Air Sampler (ug/m^3)	105	284	398
High Volume Air Sampler Serail No.: 9864		Calibration Due Date: 04 February 2010	



Acceptance Criteria : Correlation coefficient (r) of the calibration curve greater than 0.990 after a five point calibration

The Dust Trak Monitor complies * / ~~does not comply~~ * with the internal calibration procedures and is deemed acceptable */ ~~unacceptable~~ * for use.

Calibrated by : Mak Kei Wai
MAK, Kei Wai
(Senior Technician)

Approved by : Lide Law
LAW, Sau Yee
(Senior Environmental Officer)

東業德勤測試顧問有限公司
ETS-TESTCONSULT LIMITED
8/F., Block B, Veristrong Industrial Centre, 34-36 Au Pui Wan Street, Fotan, Hong Kong
Tel : 2695 8318 E-mail : etl@ets-testconsult.com
Fax : 2695 3944 Web site : www.ets-testconsult.com

TEST REPORT

Internal Calibration Report of Dust Monitor

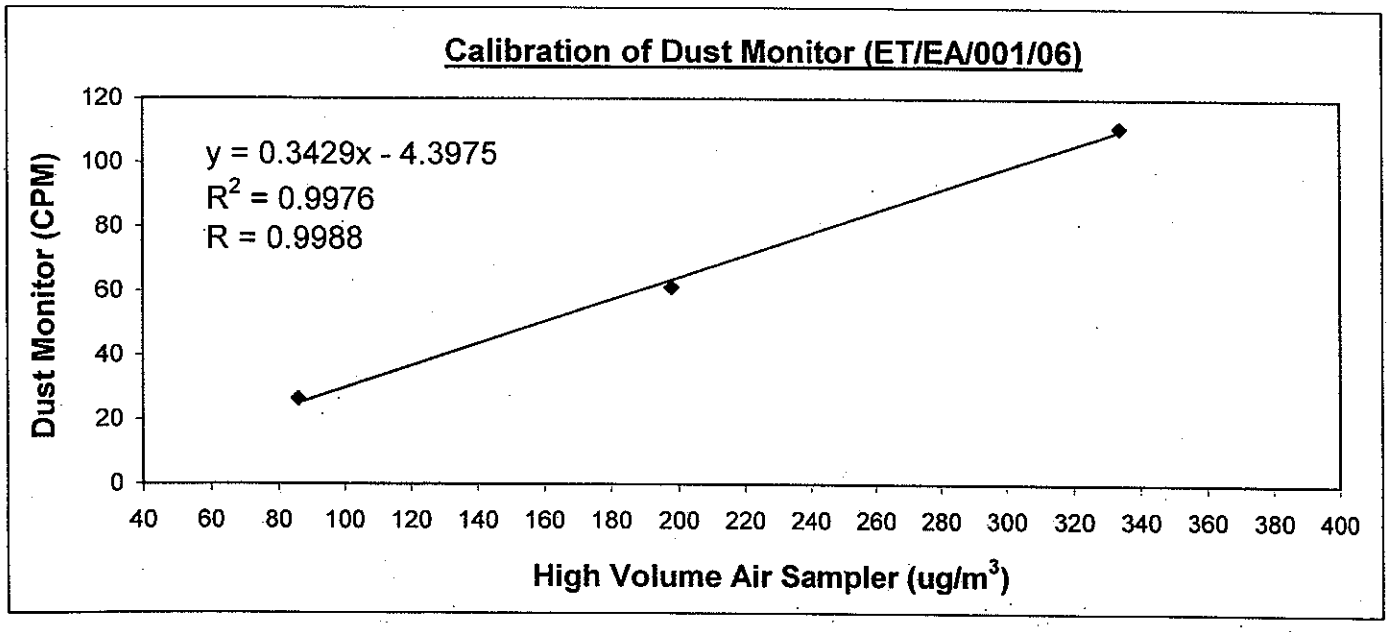
Manufacturer : SIBATA Date of Calibration : 09 February 2010

Serial No. : 014746 (ET/EA/001/06) Calibration Due Date : 08 August 2010

Method : Parallel measurement (~~five~~ three -point calibration) by placing the Dust Monitor and High Volume Air Samper together under the same environmental condition

Results :

Dust Monitor (CPM)	26.4	61.1	111.2
High Volume Air Sampler (ug/m^3)	86	198	334
High Volume Air Sampler Serail No.: 1934		Calibration Due Date: 05 March 2010	



Acceptance Criteria : Correlation coefficient (r) of the calibration curve greater than 0.990 after a five point calibration

The Dust Trak Monitor complies * / ~~does not comply~~ * with the internal calibration procedures and is deemed acceptable */ ~~unacceptable~~ * for use.

Calibrated by : Mak Kei Wai
MAK, Kei Wai
(Senior Technician)

Approved by : Law Sau Yee
LAW, Sau Yee
(Senior Environmental Officer)

Appendix B2

Impact Air Quality Monitoring Results

Summary of 24-hr TSP Monitoring Results

Monitoring Station : AM1

Start		Finish		Elapse Time		Sampling Time (hrs)	Flow Rate (m^3/min.)		Average (m^3/min.)	Filter Weight (g)		Conc. ($\mu g/m^3$)	Weather Condition
Date	Time	Date	Time	Initial	Final		Initial	Final		Initial	Final		
01/06/10	14:00	02/06/10	14:01	15767.37	15791.38	24.01	1.1905	1.1905	1.1905	2.8407	2.9032	36	Cloudy
07/06/10	13:00	08/06/10	13:00	15791.38	17815.38	24.00	1.0024	1.0024	1.0024	2.8499	2.9316	57	Fine
11/06/10	13:00	12/06/10	13:00	15815.38	15839.38	24.00	1.1678	1.1678	1.1678	2.8316	2.9991	100	Cloudy
17/06/10	13:00	18/06/10	13:00	15839.38	15863.38	24.01	1.0347	1.0347	1.0347	2.8149	2.9797	111	Fine
23/06/10	13:00	24/06/10	13:00	15863.38	15887.38	24.00	1.1678	1.1678	1.1678	2.8661	2.9710	62	Sunny
29/06/10	13:00	30/06/10	13:00	15887.38	15911.38	24.00	1.0347	1.0347	1.0347	2.8361	2.9923	105	Fine

Monitoring Station : AM2

Start		Finish		Elapse Time		Sampling Time (hrs)	Flow Rate (m^3/min.)		Average (m^3/min.)	Filter Weight (g)		Conc. ($\mu g/m^3$)	Weather Condition
Date	Time	Date	Time	Initial	Final		Initial	Final		Initial	Final		
01/06/10	13:00	02/06/10	13:00	19803.35	19827.35	24.00	1.0976	1.0976	1.0976	2.8374	2.8886	32	Cloudy
07/06/10	13:00	08/06/10	13:02	19827.35	19851.37	24.02	1.0371	1.0371	1.0371	2.8393	2.9198	54	Fine
11/06/10	13:00	12/06/10	13:00	19851.37	19875.37	24.00	1.0558	1.0558	1.0558	2.7858	2.8968	73	Cloudy
17/06/10	13:00	18/06/10	13:00	19875.37	19899.37	24.01	0.9952	0.9952	0.9952	2.8378	2.8825	31	Fine
23/06/10	13:00	24/06/10	13:00	19899.37	19923.37	24.00	1.0255	1.0255	1.0255	2.8438	2.9130	47	Sunny
29/06/10	13:00	30/06/10	13:00	19923.37	19947.37	24.00	1.0558	1.0558	1.0558	2.7966	2.8477	34	Fine

Monitoring Station : AM3

Start		Finish		Elapse Time		Sampling Time (hrs)	Flow Rate (m^3/min.)		Average (m^3/min.)	Filter Weight (g)		Conc. ($\mu g/m^3$)	Weather Condition
Date	Time	Date	Time	Initial	Final		Initial	Final		Initial	Final		
01/06/10	13:00	02/06/10	13:00	3863.55	3887.55	24.00	1.1050	1.1050	1.1050	2.8293	2.8882	37	Cloudy
07/06/10	13:00	08/06/10	13:00	3887.55	3911.55	24.00	1.1050	1.1050	1.1050	2.8438	2.9350	57	Fine
11/06/10	13:00	12/06/10	13:00	3911.55	3935.55	24.00	1.1239	1.1239	1.1239	2.8296	2.9744	89	Cloudy
17/06/10	13:00	18/06/10	13:00	3935.55	3959.55	24.01	1.0544	1.0544	1.0544	2.8056	2.8520	31	Fine
23/06/10	13:00	24/06/10	13:00	3959.55	3983.55	24.00	1.0544	1.0544	1.0544	2.8806	2.9482	45	Sunny
29/06/10	13:00	30/06/10	13:00	3983.55	4007.55	24.00	1.1239	1.1239	1.1239	2.7857	2.8910	65	Fine

Summary of 1-hr TSP Monitoring Results

Monitoring Station : AM1

Date	Monitoring Period		1-hr TSP (μg/m³)	Weather
	Start	Finish		
01/06/10	08:44	09:44	135	Cloudy
01/06/10	09:44	10:44	131	Cloudy
01/06/10	10:44	11:44	122	Cloudy
07/06/10	08:50	09:50	110	Fine
07/06/10	09:50	10:50	122	Fine
07/06/10	10:50	11:50	112	Fine
11/06/10	09:30	10:30	102	Fine
11/06/10	10:30	11:30	127	Fine
11/06/10	11:30	12:30	131	Fine
17/06/10	08:45	09:45	110	Cloudy
17/06/10	09:45	10:45	95	Cloudy
17/06/10	10:45	11:45	82	Cloudy
23/06/10	08:54	09:54	95	Cloudy
23/06/10	09:54	10:54	90	Cloudy
23/06/10	10:54	11:54	84	Cloudy
29/06/10	08:45	09:45	76	Fine
29/06/10	09:45	10:45	72	Fine
29/06/10	10:45	11:45	63	Fine

Monitoring Station : AM2

Date	Monitoring Period		1-hr TSP (μg/m³)	Weather
	Start	Finish		
01/06/10	08:38	09:38	133	Cloudy
01/06/10	09:38	10:38	109	Cloudy
01/06/10	10:38	11:38	113	Cloudy
07/06/10	08:37	09:37	112	Fine
07/06/10	09:37	10:37	124	Fine
07/06/10	10:37	11:37	100	Fine
11/06/10	09:35	10:35	119	Fine
11/06/10	10:35	11:35	126	Fine
11/06/10	11:35	12:35	144	Fine
17/06/10	09:00	10:00	115	Cloudy
17/06/10	10:00	11:00	103	Cloudy
17/06/10	11:00	15:00	94	Cloudy
23/06/10	08:47	09:47	97	Cloudy
23/06/10	09:47	10:47	89	Cloudy
23/06/10	10:47	11:47	86	Cloudy
29/06/10	08:40	09:40	79	Fine
29/06/10	09:40	10:40	69	Fine
29/06/10	10:40	11:40	62	Fine

Summary of 1-hr TSP Monitoring Results

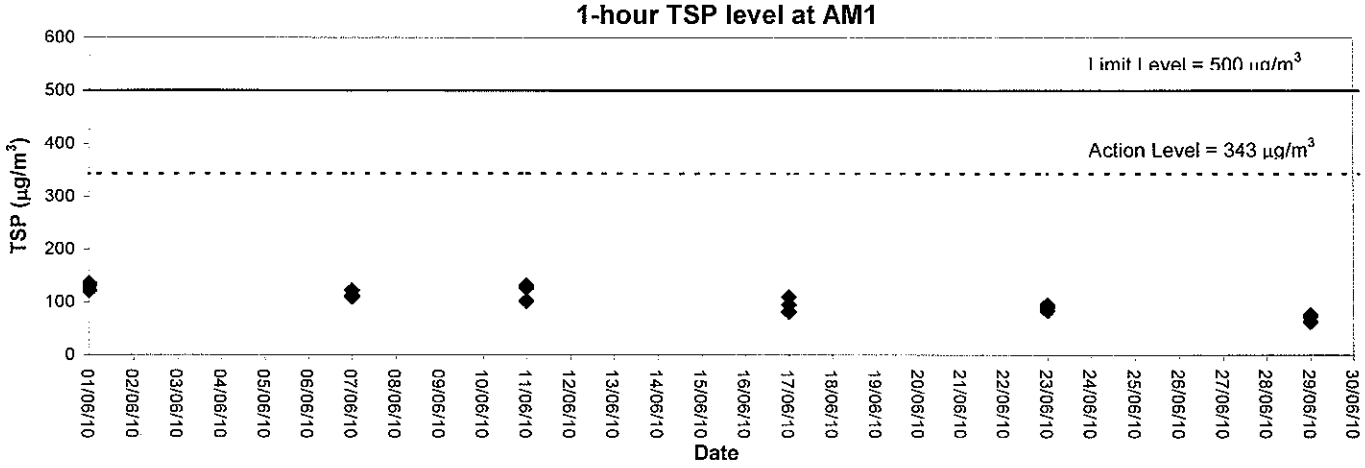
Monitoring Station : AM3

Date	Monitoring Period		1-hr TSP (μg/m^3)	Weather
	Start	Finish		
01/06/10	13:00	14:00	138	Cloudy
01/06/10	14:00	15:00	100	Cloudy
01/06/10	15:00	16:00	107	Cloudy
07/06/10	13:00	14:00	94	Fine
07/06/10	14:00	15:00	115	Fine
07/06/10	15:00	16:00	109	Fine
11/06/10	14:00	15:00	113	Fine
11/06/10	15:00	16:00	109	Fine
11/06/10	16:00	17:00	127	Fine
17/06/10	13:00	14:00	100	Cloudy
17/06/10	14:00	15:00	112	Cloudy
17/06/10	15:00	16:00	89	Cloudy
23/06/10	13:00	14:00	71	Cloudy
23/06/10	14:00	15:00	80	Cloudy
23/06/10	15:00	16:00	65	Cloudy
29/06/10	13:00	14:00	76	Fine
29/06/10	14:00	15:00	86	Fine
29/06/10	15:00	16:00	79	Fine

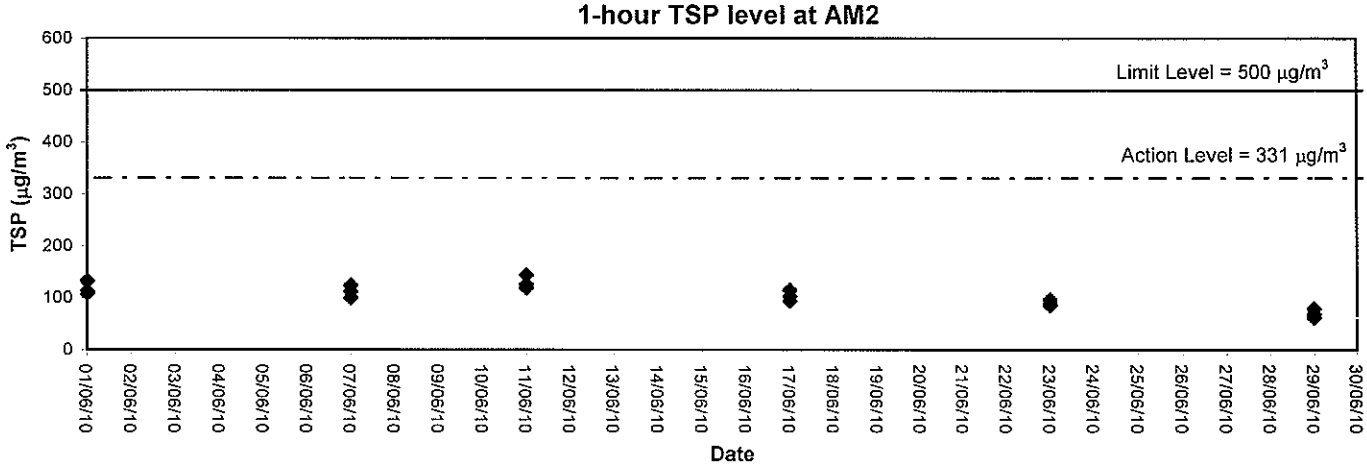
Appendix B3

Graphical Plots of Impact Air Quality Monitoring Data

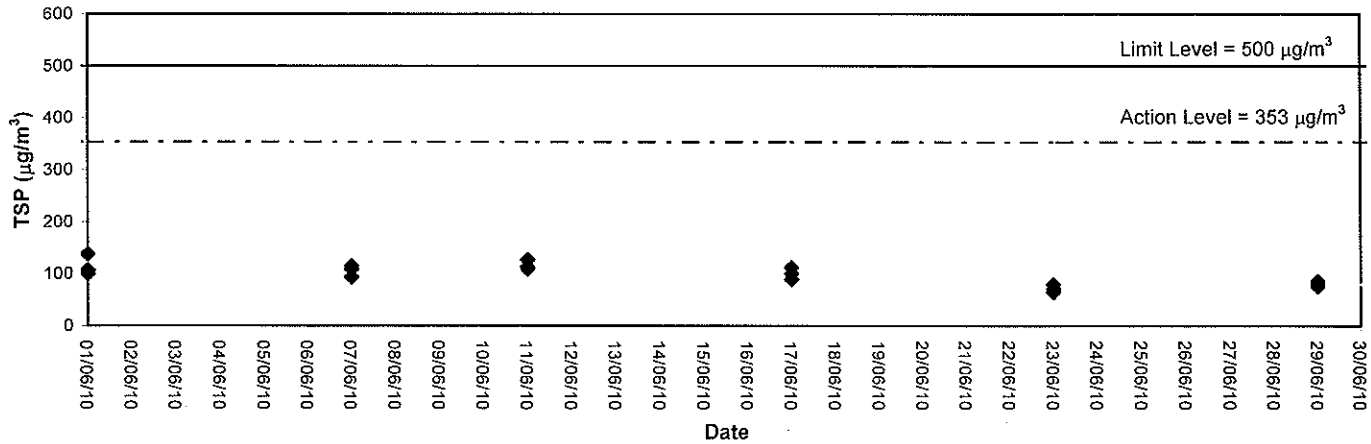
1-hour TSP level at AM1

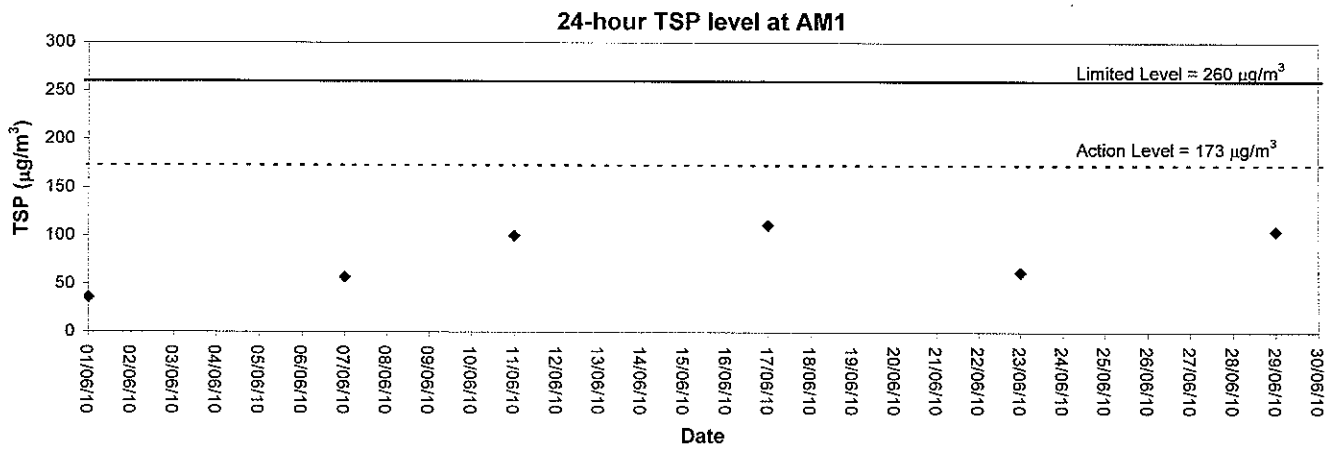


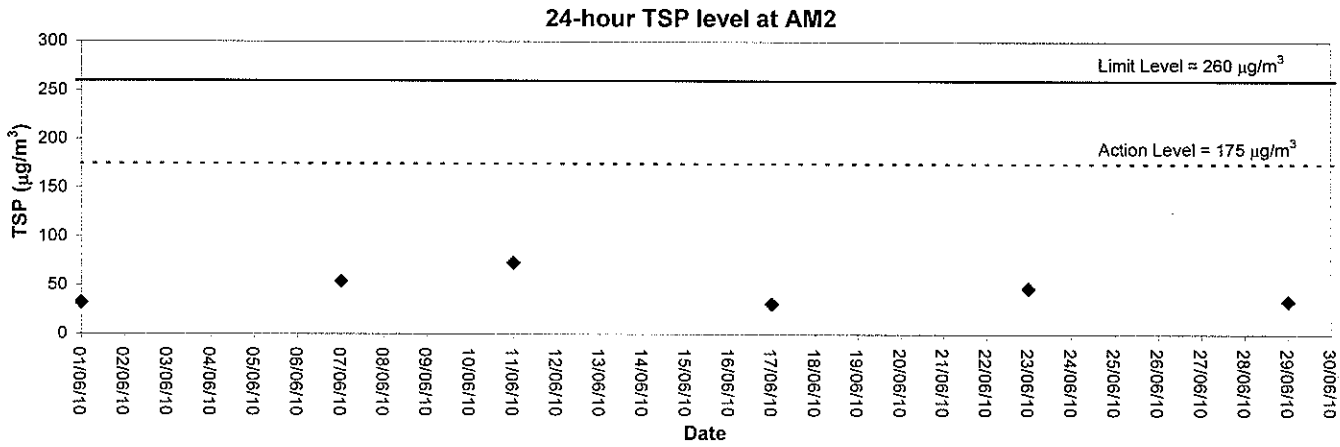
1-hour TSP level at AM2

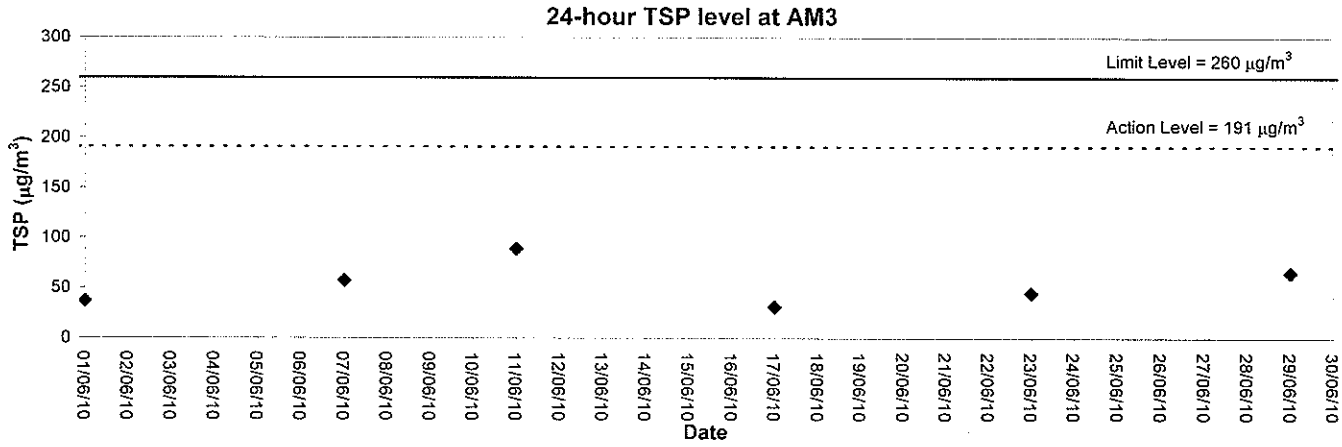


1-hour TSP level at AM3




24-hour TSP level at AM1
Limited Level = 260 μg/m3
Action Level = 173 μg/m3
TSP (μg/m3)
Date


24-hour TSP level at AM2
Limit Level = 260 μg/m3
Action Level = 175 μg/m3
TSP (μg/m3)
Date


24-hour TSP level at AM3
Limit Level = 260 μg/m3
Action Level = 191 μg/m3
TSP (μg/m3)
Date

Appendix C1

Calibration Certificates for

Impact Noise Monitoring Equipments

Hong Kong Calibration Ltd.
香港校正有限公司

Calibration Certificate

Certificate No. 95693 Page 1 of 2 Pages

Customer : ETS-Testconsult Limited

Address : 8/F., Block B, Veristrong Industrial Centre, 34-36 Au Pui Wan St., Fotan, Hong Kong.

Order No. : Q92297 **Date of receipt :** 5-Nov-09

Item Tested

Description : Sound Level Calibrator (ET/ EN/ 002/ 01)

Manufacturer : Rion

Model : NC-73 **Serial No. :** 10196943

Test Conditions

Date of Test : 11-Nov-09 **Supply Voltage :** --

Ambient Temperature : (23 ± 3)°C **Relative Humidity :** (50 ± 25) %

Test Specifications

Calibration check.

Ref. Document/Procedure : F21, Z02.

Test Results

All results were within the manufacturer's specification.

The results are shown in the attached page(s).

Main Test equipment used:

Equipment No.	Description	Cert. No.	Due Date	Traceable to
S014	Spectrum Analyzer	93091	18-Jun-10	NIM-PRC & SCL-HKSAR
S024	Sound Level Calibrator	93758	16-Jul-10	NIM-PRC & SCL-HKSAR
S041	Universal Counter	94005	6-Aug-10	SCL-HKSAR
S206	Sound Level Meter	93966	5-Aug-10	SCL-HKSAR

The values given in this Calibration Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Hong Kong Calibration Ltd. shall not be liable for any loss or damage resulting from the use of the equipment.

The test equipment used for calibration are traceable to International System of Units (SI).
The test results apply to the above Unit-Under-Test only

Calibrated by : P.F. Wong

Approved by : Dorothy Cheuk

Date: 16-Nov-09

This Certificate is issued by:
Hong Kong Calibration Ltd.
Unit 8B, 24/F., Well Fung Industrial Centre, No. 58-76, Ta Chuen Ping Street,Kwai Chung, NT,Hong Kong.
Tel: 2425 6801 Fax: 2425 8646

Calibration Certificate

Results :

1. Level Accuracy (at 1 kHz)

UUT Nominal Value	Measured Value	Mfr's Spec.
94 dB	93.72 dB	± 1 dB

Uncertainty : ± 0.1 dB

2. Frequency Accuracy

UUT Nominal Value	Measured Value	Mfr's Spec.
1 kHz	0.991 kHz	± 2 %

Uncertainty : ± 0.0 %

3. Level Stability : 0.0 dB
Uncertainty : ± 0.01 dB

4. Total Harmonic Distortion : < 0.8 %
Mfr's Spec. : < 3 %
Uncertainty : ± 2.3 % of reading

Remark : 1. UUT : Unit-Under-Test
2. The uncertainty claimed is for a confidence probability of not less than 95%.
3. The above measured values were the mean of 3 measurements.
4. Atmospheric Pressure : 1 002 hPa

---------- END ----------

Hong Kong Calibration Ltd.
香 港 校 正 有限公司

Calibration Certificate

Certificate No. 96150

Customer : ETS-Testconsult Limited

Address : 8/F., Block B, Veristrong Industrial Centre, 34-36 Au Pui Wan St., Fotan, Hong Kong.

Order No. : Q92457 **Date of receipt :** 24-Nov-09

Item Tested

Description : Precision Integrating Sound Level Meter (ET/ EN/ 003/ 12)

Manufacturer : Rion

Model : NL-31 **Serial No. :** 00773032

Test Conditions

Date of Test : 25-Nov-09 **Supply Voltage :** --

Ambient Temperature : (23 ± 3)°C **Relative Humidity :** (50 ± 25) %

Test Specifications

Calibration check.

Ref. Document/Procedure : Z01.

Test Results

All results were within the IEC 651 Type 1 & IEC 804 Type 1 specification.

The results are shown in the attached page(s).

Main Test equipment used:

Equipment No.	Description	Cert. No.	Due Date	Traceable to
S017	Multi-Function Generator	C081456	18-Mar-10	SCL-HKSAR
S024	Sound Level Calibrator	93758	16-Jul-10	NIM-PRC & SCL-HKSAR

The values given in this Calibration Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Hong Kong Calibration Ltd. shall not be liable for any loss or damage resulting from the use of the equipment.

The test equipment used for calibration are traceable to International System of Units (SI).
The test results apply to the above Unit-Under-Test only

Calibrated by : P.F. Wong

Approved by : Dorothy Cheuk

Date: 27-Nov-09

This Certificate is issued by:
Hong Kong Calibration Ltd.
Unit 8B, 24/F., Well Fung Industrial Centre, No. 58-76, Ta Chuen Ping Street,Kwai Chung, NT,Hong Kong.
Tel: 2425 8801 Fax: 2425 8646

Calibration Certificate

Results :

1. SPL Accuracy

UUT Setting			Applied Value (dB)	UUT Reading (dB)
Level Range (dB)	Weight	Response		
20 – 100	L_A	Fast	94.03	94.0
		Slow		94.0
	L_C	Fast		94.0
	Lp	Fast		94.1
30 – 120	L_A	Fast	94.03	93.8
		Slow		93.8
	L_C	Fast		94.0
	Lp	Fast		94.0
30 – 120	L_A	Fast	113.97	113.8
		Slow		113.8
	L_C	Fast		113.9
	Lp	Fast		113.9

IEC Type 1 Spec. : ± 0.7 dB
Uncertainty : ± 0.1 dB

2. **Level Stability** : 0.0 dB
IEC 651 Type 1 Spec. : ± 0.3 dB
Uncertainty : ± 0.01 dB

Calibration Certificate

3. Linearity

3.1 Level Linearity

UUT Range (dB)	Applied Value (dB)	UUT Reading (dB)	Variation (dB)	IEC 651 Type 1 Spec. (Primary Indicator Range)
130	114.0	113.8	0.0	± 0.7 dB
130	104.0	103.8	0.0	
120	94.0	93.8 (Ref.)	- -	
110	84.0	83.7	-0.1	
100	74.0	73.7	-0.1	
90	64.0	63.7	-0.1	
80	54.0	53.8	0.0	

Uncertainty : ± 0.1 dB

3.2 Differential level linearity

UUT Range (dB)	Applied Value (dB)	UUT Reading (dB)	Variation (dB)	IEC 651 Type 1 Spec.
120	84.0	83.9	+0.1	± 0.4 dB
	94.0	93.8 (Ref.)	- -	
	95.0	94.8	0.0	± 0.2 dB
	104.0	103.8	0.0	± 0.3 dB
	105.0	104.8	0.0	± 1.0 dB

Uncertainty : ± 0.1 dB

4. Frequency Weighting

A weighting

Frequency	Attenuation (dB)	IEC 651 Type 1 Spec.
31.5 Hz	-39.7	- 39.4 dB, ± 1.5 dB
63 Hz	-26.4	- 26.2 dB, ± 1.5 dB
125 Hz	-16.3	- 16.1 dB, ± 1 dB
250 Hz	-8.7	- 8.6 dB, ± 1 dB
500 Hz	-3.3	- 3.2 dB, ± 1 dB
1 kHz	0.0 (Ref.)	0 dB, ± 1 dB
2 kHz	+1.2	+ 1.2 dB, ± 1 dB
4 kHz	+1.1	+ 1.0 dB ,± 1 dB
8 kHz	-1.1	- 1.1 dB, + 1.5 dB ~ - 3 dB
16 kHz	-6.8	- 6.6 dB, + 3 dB ~ ∞

Uncertainty : ± 0.1 dB

Calibration Certificate

4. Time Averaging

Applied Burst duty Factor	Applied Leq Value (dB)	UUT Reading (dB)	IEC 804 Type 1 Spec.
continuous	40.0	40.0	--
1/10	40.0	39.6	± 0.5 dB
$1/10^2$	40.0	40.0	
$1/10^3$	40.0	40.1	± 1.0 dB
$1/10^4$	40.0	40.1	

Uncertainty : ± 0.1 dB

Remark : 1. UUT : Unit-Under-Test
2. The uncertainty claimed is for a confidence probability of not less than 95%.
3. Atmospheric Pressure : 1 010 hPa.

---------- END ----------

Appendix C2

Impact Noise Monitoring Results

Day-time Noise Monitoring

Monitoring Station: NM1

Date	Weather Condition	Start Time (hh:mm)	End Time (hh:mm)	Noise Level at the monitoring point, dB (A)			Wind Speed (m/s)
				Leq (30min)	L10	L90	
01/06/10	Cloudy	08:54	09:24	69.8	70.6	68.6	0.4
07/06/10	Fine	08:58	09:28	69.8	72.2	66.3	0.3
17/06/10	Cloudy	09:10	09:40	64.4	69.4	47.2	0.2
23/06/10	Cloudy	10:50	11:20	73.5	75.1	68.2	0.2
29/06/10	Fine	14:10	14:40	60.7	62.1	56.4	0.5

Monitoring Station: NM2

Date	Weather Condition	Start Time (hh:mm)	End Time (hh:mm)	Noise Level at the monitoring point, dB (A)			Wind Speed (m/s)
				Leq (30min)	L10	L90	
01/06/10	Cloudy	09:43	10:13	62.2	63.9	56.3	<0.1
07/06/10	Fine	10:01	10:31	59.3	61.2	54.8	0.3
17/06/10	Cloudy	09:44	10:14	59.6	61.7	53.8	0.7
23/06/10	Cloudy	09:00	09:30	61.2	63.0	51.9	0.2
29/06/10	Fine	13:30	14:00	66.2	68.1	59.4	0.2

Monitoring Station: RNM3

Date	Weather Condition	Start Time (hh:mm)	End Time (hh:mm)	Noise Level at the monitoring point, dB (A)			Wind Speed (m/s)
				Leq (30min)	L10	L90	
01/06/10	Cloudy	10:31	11:01	67.4	72.4	58.9	0.3
07/06/10	Fine	10:34	11:04	64.4	65.8	61.4	0.7
17/06/10	Cloudy	10:18	10:48	63.3	65.0	59.7	0.4
23/06/10	Cloudy	09:33	10:03	59.8	61.7	54.2	0.2
29/06/10	Fine	11:10	11:40	62.1	64.6	57.0	0.2

Remark: 3dB(A) correction had been added to the results since noise measurements at RNM3 were free-field.

Monitoring Station: NM4

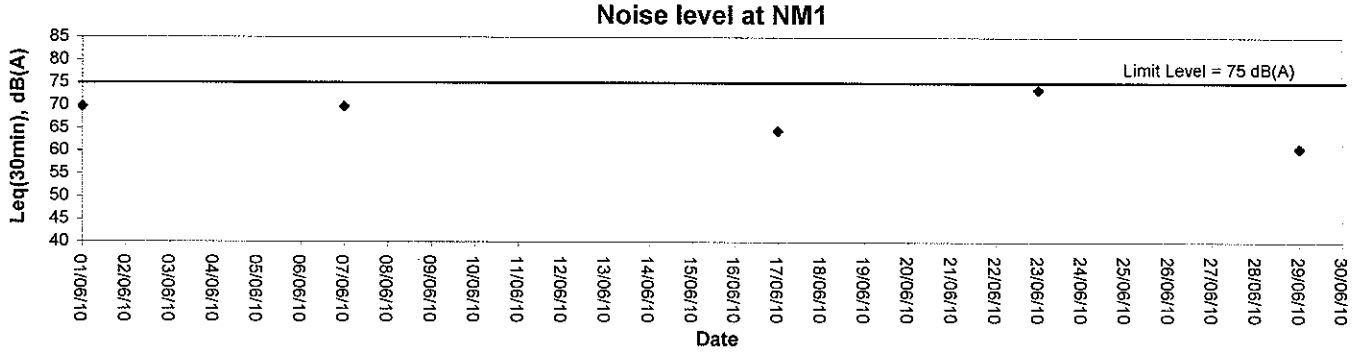
Date	Weather Condition	Start Time (hh:mm)	End Time (hh:mm)	Noise Level at the monitoring point, dB (A)			Wind Speed (m/s)
				Leq (30min)	L10	L90	
01/06/10	Cloudy	11:04	11:34	66.1	69.2	46.6	0.5
07/06/10	Fine	11:07	11:37	63.4	67.7	49.1	0.4
17/06/10	Cloudy	10:52	11:22	62.5	65.4	57.0	0.3
23/06/10	Cloudy	10:06	10:36	60.6	62.5	57.8	0.2
29/06/10	Fine	08:55	09:25	55.3	58.4	47.7	0.6

Appendix C3

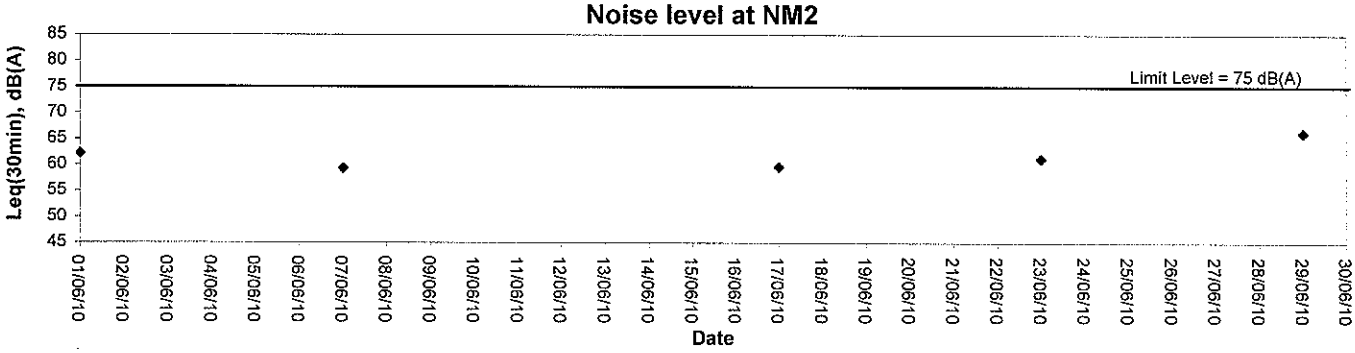
Graphical Plots of Impact Noise Monitoring Data

Noise Monitoring (Day-time)

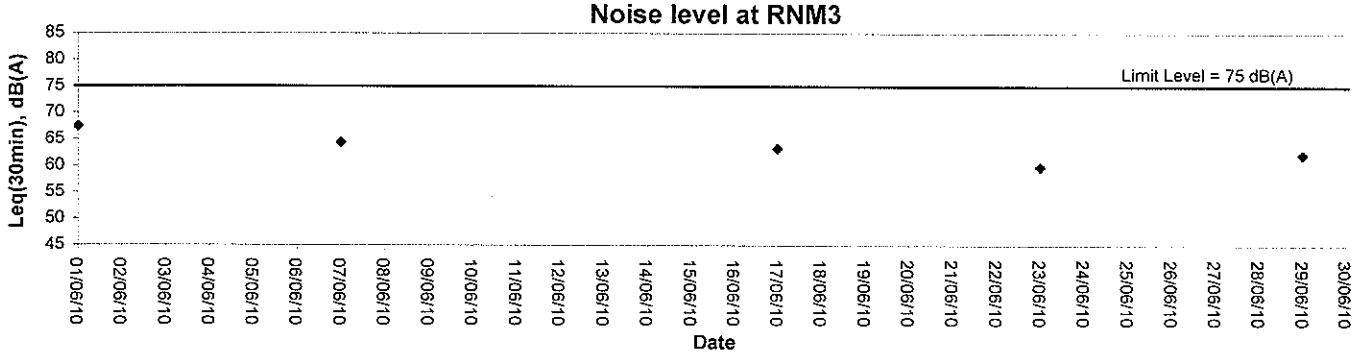
Noise level at NM1



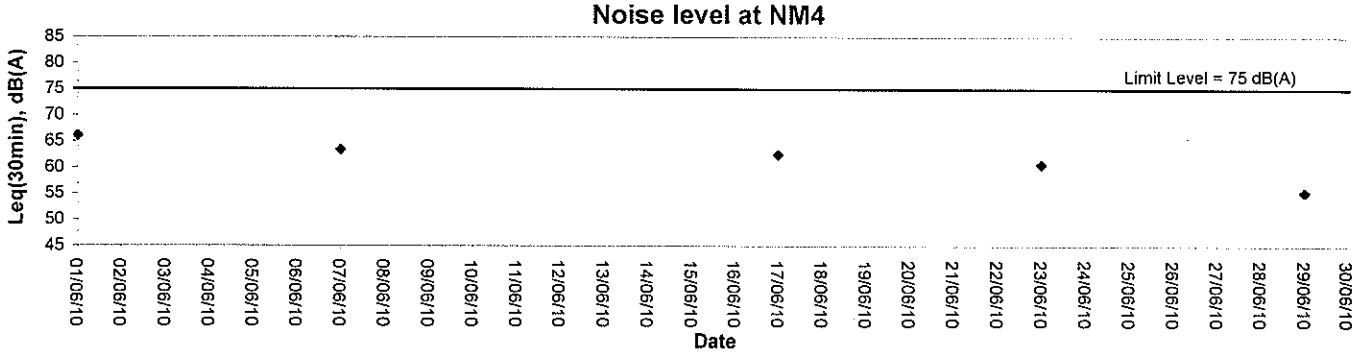
Noise level at NM2



Noise level at RNM3



Noise level at NM4



Appendix D

Event-Action Plans

Event / Action Plan for Air Quality

EVENT	ACTION			
	ET	IC(E)	ER	CONTRACTOR
Action Level				
Action Level being exceeded for one sample	1. Identify source, investigate the causes of Exceedance and propose remedial measures; 2. Inform IC(E) and ER; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily	1. Check monitoring data submitted by ET; 2. Check Contractor's working method.	1. Notify Contractor.	1. Rectify any unacceptable practice; 2. Amend working methods if appropriate.
Action Level being exceeded for two or more consecutive samples	1. Same as the above; 2. Advise the ER on the effectiveness of te proposed remedial measures; 3. Discuss with IC(E) and Contractor on remedial actions required; 4. If exceedance continues, arrange meeting with IC(E) and ER; 5. If exceedance stops, cease additional monitoring.	1. Sane as the above; 2. Discuss with ET and Contractor on possible remedial measures; 3. Advise the ET on the effectiveness of the proposed remedial measures; 4. Supervise implementation of remedial measures.	1. Same as the above; 2. Confirm receipt of notification of failure in writing; 3. Ensure remedial measures properly implemented.	1. Submit proposals for remedial actions to ER within 3 working days of notification; 2. Implement the agreed proposals; 3. Amend proposal if appropriate.
Limit Level				
Limit Level being exceeded for one sample	1. Identify source; 2. Inform ER, Contractor and EPD; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily; 5. Assess effectiveness of Contractor's remedial actions and keep IC(E), EPD and ER informed of the results.	1. Checking monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on the possible remedial measures; 4. Advise the ER on the effectiveness of the proposed remedial measures; 5. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Ensure remedial actions properly implemented.	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IC(E) within 3 working days of notification; 3. Implement the agreed proposals; 4. Amend proposal if appropriate.
Limit Level being exceeded for two or more consecutive samples	1. Same as the above; 2. Carry our analysis of Contractor's working procedures to determine possible mitigation to be implemented; 3. Arrange meeting with IC(E) and ER to discuss the remedial actions to be taken; 4. If exceedance stops, cease additional monitoring.	1. Discuss with ER, ET and Contractor on the potential remedial actions; 2. Review Contractor's remedial actions whenever necessary to assume their effectiveness and advise the ER accordingly; 3. Supervise the implementation of remedial measures.	1. Same as the above; 2. In consolidation with the IC(E), agree with the Contractor on the remedial measures to be implemented; 3. 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.	1. Same as the above; 2. Resubmit proposals if problem still not under control; 3. Stop the relevant portion of works as determined by the ER until the exceedance is abated.

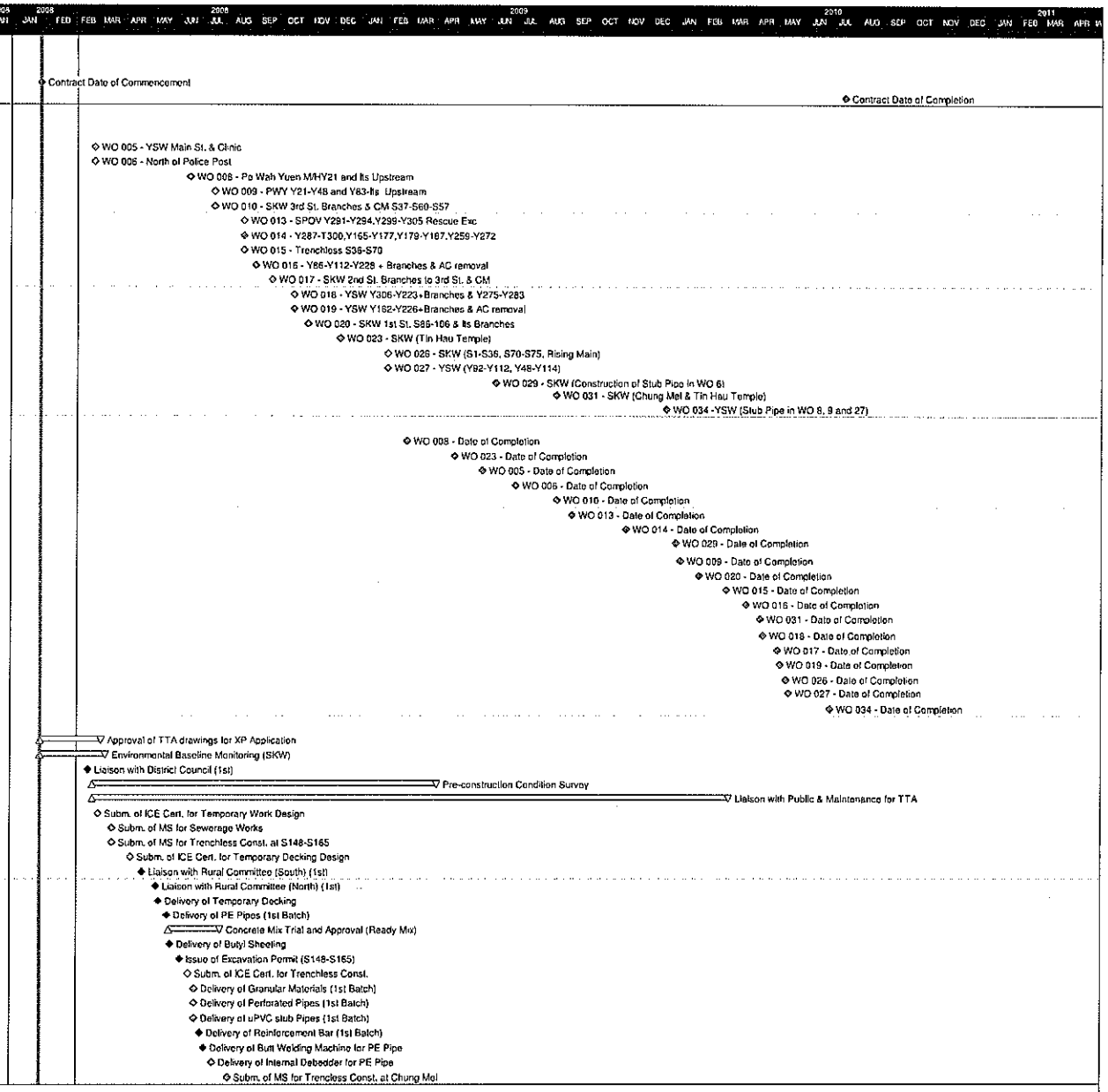
Event / Action Plan for Construction Noise

EVENT	ACTION			
	ET	IC(E)	ER	CONTRACTOR
Action level	1. Notify IC(E) and Contractor; 2. Carry out investigation; 3. Report the results of investigation to the IC(E), ER and Contractor; 4. Discuss with the Contractor and formulate remedial measures ; 5. Increase monitoring frequency to check mitigation effectiveness.	1. Review and investigation results submitted by the ET; 2. Review the proposed remedial measures by the Contractor and advise the ER accordingly; 3. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Require Contractor to propose remedial measures for the analysed noise problem; 4. Ensure proper implementation of remedial measures.	1. Submit noise mitigation proposal to IC(E); 2. Implement noise mitigation proposals.
Limit level	1. Identify source; 2. Inform IC(E), ER, EPD and Contractor; 3. Repeat measurement to confirm findings; 4. Increase monitoring frequency; 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; 6. Inform IC(E), ER and EPD the causes and actions taken for the exceedances; 7. Assess the effectiveness of Contractor's remedial actions and keep IC(E), EPD and ER informed of the results; 8. If exceedance stops, cease additional monitoring.	1. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 2. Review Contractor's remedial actions to ensure their effectiveness and advise the ER accordingly; 3. Supervise the implementation of remedial measures.	1. Same as above; 2. If exceedances continue, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IC(E); 3. Implement the agreed proposals; 4. Resubmit proposals if problem still out of control; 5. Stop the relevant portion of works as determined by ER, until the exceedance is abated.

Appendix E

Construction Programme

Act ID	Activity Description	Rem Dura	Early Start	Late Start	Early Finish	Late Finish	Total Float
Preliminary							
Project Key Date							
KD1000	Contract Date of Commencement	0	31 JAN 08 A	31 JAN 08 A			
KD1040	Contract Date of Completion	0			16 JUL 10 *	16 JUL 10	0
Works Order							
Commencement of Works Order							
KD1050	WO 005 - YSW Main St. & Clinic	0	26 FEB 08 *	16 AUG 08			172d
KD1060	WO 006 - North of Police Post	0	26 FEB 08 *	19 AUG 08			175d
KD1070	WO 008 - Po Wah Yuen M/HY21 and Its Upstream	0	16 JUN 08 *	04 AUG 08			28d
KD1080	WO 009 - PWY Y21-Y48 and Y83-Its Upstream	0	15 JUL 08 *	19 AUG 08			25d
KD1090	WO 010 - SKW 3rd St. Branches & CM S37-S60-S57	0	15 JUL 08 *	15 AUG 08			22d
KD1100	WO 013 - SPOV Y291-Y294,Y299-Y305 Rescue Exc	0	18 AUG 08 *	05 APR 09			184d
KD1110	WO 014 -	0	18 AUG 08 *	18 AUG 08			0
KD1120	WO 015 - Trenchless S36-S70	0	18 AUG 08 *	16 SEP 08			21d
KD1130	WO 016 - Y86-Y112-Y228 + Branches & AC removal	0	01 SEP 08 *	01 SEP 08			0
KD1140	WO 017 - SKW 2nd St. Branches to 3rd St. & CM	0	20 SEP 08 *	04 DEC 08			62d
KD1150	WO 018 - YSW Y306-Y223+Branches & Y275-Y283	0	16 OCT 08 *	28 OCT 08			10d
KD1160	WO 019 - YSW Y162-Y226+Branches & AC removal	0	16 OCT 08 *	16 OCT 08			0
KD1170	WO 020 - SKW 1st St. S86-106 & Its Branches	0	01 NOV 08 *	31 DEC 08			51d
KD1180	WO 023 - SKW (Tin Hau Temple)	0	08 DEC 08 *	17 DEC 08			8d
KD1190	WO 026 - SKW (S1-S36, S70-S75, Rising Main)	0	02 FEB 09 *	17 JUL 10			408d
KD1200	WO 027 - YSW (Y92-Y112, Y48-Y114)	0	02 FEB 09 *	17 JUL 10			408d
KD1210	WO 029 - SKW (Construction of Stub Pipe in WO 6)	0	08 JUN 09 *	08 JUN 09			0
KD1220	WO 031 - SKW (Chung Mei & Tin Hau Temple)	0	17 AUG 09 *	17 AUG 09			0
KD1230	WO 034 -YSW (Stub Pipe in WO 8, 9 and 27)	0	23 DEC 09 *	23 DEC 09			0
Completion of Works Order							
KD1071	WO 008 - Date of Completion	0			23 FEB 09	23 FEB 09 *	0
KD1181	WO 023 - Date of Completion	0			20 APR 09	20 APR 09 *	0
KD1051	WO 005 - Date of Completion	0			22 MAY 09	22 MAY 09 *	0
KD1061	WO 006 - Date of Completion	0			30 JUN 09	30 JUN 09 *	0
KD1091	WO 010 - Date of Completion	0			17 AUG 09	17 AUG 09 *	0
KD1101	WO 013 - Date of Completion	0			03 SEP 09	03 SEP 09 *	0
KD1111	WO 014 - Date of Completion	0			05 NOV 09	05 NOV 09 *	0
KD1211	WO 029 - Date of Completion	0			02 JAN 10	02 JAN 10 *	0
KD1081	WO 009 - Date of Completion	0			07 JAN 10	07 JAN 10 *	0
KD1171	WO 020 - Date of Completion	0			29 JAN 10	29 JAN 10 *	0
KD1121	WO 015 - Date of Completion	0			02 MAR 10	02 MAR 10 *	0
KD1131	WO 016 - Date of Completion	0			25 MAR 10	25 MAR 10 *	0
KD1221	WO 031 - Date of Completion	0			10 APR 10	10 APR 10 *	0
KD1151	WO 018 - Date of Completion	0			13 APR 10	13 APR 10 *	0
KD1141	WO 017 - Date of Completion	0			30 APR 10	30 APR 10 *	0
KD1161	WO 019 - Date of Completion	0			03 MAY 10	03 MAY 10 *	0
KD1191	WO 026 - Date of Completion	0			10 MAY 10	10 MAY 10 *	0
KD1201	WO 027 - Date of Completion	0			13 MAY 10	13 MAY 10 *	0
KD1231	WO 034 - Date of Completion	0			30 JUN 10	30 JUN 10 *	0
General and Preparation							
G1010	Approval of TTA drawings for XP Application	30	31 JAN 08	30 AUG 08	05 MAR 08	13 OCT 08	150d
G1200	Environmental Baseline Monitoring (SKW)	34	31 JAN 08	15 APR 08	10 MAR 08	26 MAY 08 *	64d
G1090	Liaison with District Council (1st)	0	20 FEB 08 A	20 FEB 08			
G1210	Pre-construction Condition Survey	300	25 FEB 08 *	06 OCT 08	31 MAR 09	02 NOV 09 *	153d
G1350	Liaison with Public & Maintenance for TTA	550	25 FEB 08 *	29 JUL 08	05 MAR 10	16 JUL 10	109d
G1030	Subm. of ICE Cert. for Temporary Work Design	0	03 MAR 08 *	06 OCT 08			147d
G1020	Subm. of MS for Sewerage Works	0	19 MAR 08 *	06 OCT 08			133d
G1040	Subm. of MS for Trenchless Const. at S148-S165	0	19 MAR 08 *	13 OCT 08			139d
G1060	Subm. of ICE Cert. for Temporary Decking Design	0	10 APR 08 *	06 OCT 08			114d
G1100	Liaison with Rural Committee (South) (1st)	0	23 APR 08 A	23 APR 08			
G1110	Liaison with Rural Committee (North) (1st)	0	09 MAY 08 A	09 MAY 08			
G1410	Delivery of Temporary Decking	0	12 MAY 08 A	12 MAY 08			
G1240	Delivery of PE Pipes (1st Batch)	0			21 MAY 08	21 MAY 08 A	
G1320	Concrete Mix Trial and Approval (Ready Mix)	28	24 MAY 08 *	26 AUG 08	22 JUL 08	04 OCT 08	50d
G1380	Delivery of Butyl Sheeting	0	26 MAY 08 A	26 MAY 08			
G1280	Issue of Excavation Permit (S148-S165)	0	06 JUN 08 A	06 JUN 08			
G1050	Subm. of ICE Cert. for Trenchless Const.	0	16 JUN 08 *	13 OCT 08			74d
G1250	Delivery of Granular Materials (1st Batch)	0	23 JUN 08 *	06 OCT 08			64d
G1260	Delivery of Perforated Pipes (1st Batch)	0	23 JUN 08 *	15 AUG 08			29d
G1270	Delivery of uPVC stub Pipes (1st Batch)	0	23 JUN 08 *	06 OCT 08			64d
G1370	Delivery of Reinforcement Bar (1st Batch)	0	30 JUN 08 A	30 JUN 08			
G1300	Delivery of Butt Welding Machine for PE Pipe	0	04 JUL 08 A	04 JUL 08 A			
G1310	Delivery of Internal Debedder for PE Pipe	0	14 JUL 08 *	06 OCT 08			57d
G1070	Subm. of MS for Trenchless Const. at Chung Mei	0	01 AUG 08 *	16 SEP 08			30d



Start Date 31 JAN 08
Finish Date 30 JUN 10

Page : 1A

△ Early start point
▽ Early finish point
Early bar
Progress bar
Critical bar
Summary bar
▲ Progress point
◬ Critical point
▽ Summary point
◇ Start milestone point
◇ Finish milestone point

DC/2007/18
Yung Shue Wan and Sok Kwu Wan Village Sewerage, Stage 1 Works
Project Programme Rev. 8

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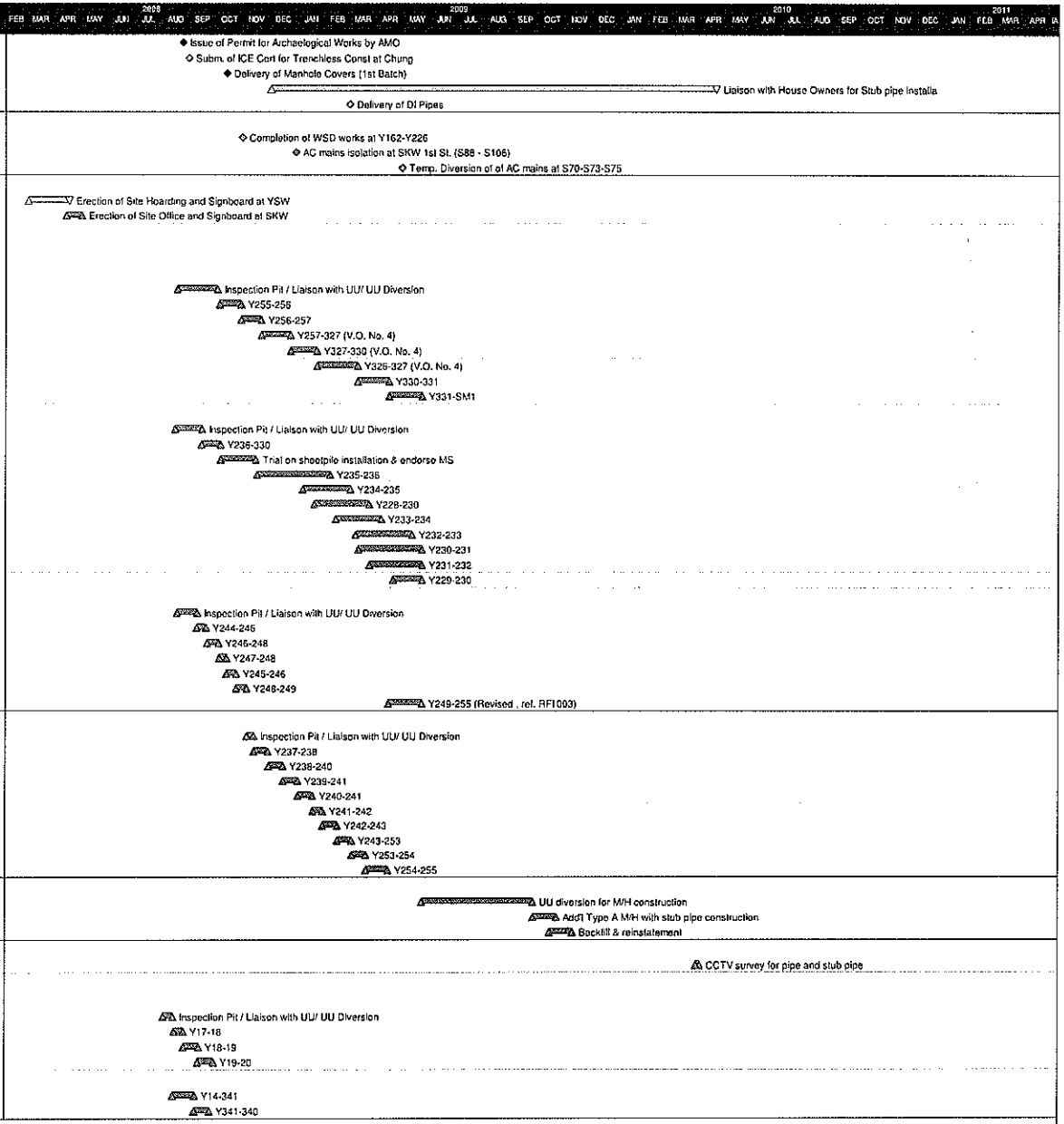
24 DEC 08	Revision 5	SIL	KYS
06 JUN 09	Revision 6	SIL	WTH
07 NOV 09	Revision 7	SIL	WTH
20 MAR 10	Revision 8	SIL	WS

Act ID	Activity Description	Rem Dura	Early Start	Late Start	Early Finish	Late Finish	Total Float
G1340	Issue of Permit for Archaeological Works by AMO	0	25 AUG 08 A	25 AUG 08			
G1080	Subm. of ICE Cert for Trenchless Const at Chung	0	01 SEP 08 *	16 SEP 08			11d
G1360	Delivery of Manhole Covers (1st Batch)	0	14 OCT 08 A	14 OCT 08			
G1120	Liaison with House Owners for Stub pipe installa	380	03 DEC 08	15 JAN 09 *	19 APR 10 *	31 MAY 10	36d
G1330	Delivery of DI Pipes	0	02 MAR 09 *	01 JAN 10			227d
Works by Utilities Undertakers							
G1420	Completion of WSD works at Y162-Y226	0	31 OCT 08 *	26 DEC 08			48d
G1290	AC mains isolation at SKW 1st St. (S88 - S106)	0	31 DEC 08 *	31 DEC 08			0
G1430	Temp. Diversion of of AC mains at S70-S73-S75	0	30 APR 09 *	20 OCT 09			120d
Site Works at Works Area W1A/W1B/W2A/W2B							
G1390	Erection of Site Hoarding and Signboard at YSW	40	03 MAR 08 *	17 MAR 09	17 APR 08	01 MAY 08 *	12d
G1400	Erection of Site Office and Signboard at SKW	15	15 APR 08 *	15 APR 08	01 MAY 08	01 MAY 08 *	0
YUNG SHUE WAN							
WO 005 (Yung Shue Wan Main Street & Clinic)							
Y255-Y258-Y327-Y331-Existing MH							
MS1119	Inspection Pit / Liaison with UU/ UU Diversion	30	19 AUG 08 *	19 AUG 08	02 OCT 08	02 OCT 08	0
MS1120	Y255-256	21	06 OCT 08 *	06 OCT 08	29 OCT 08	29 OCT 08	0
MS1130	Y256-257	20	30 OCT 08	30 OCT 08	21 NOV 08	21 NOV 08	0
MS1140	Y257-327 (V.O. No. 4)	28	22 NOV 08	22 NOV 08	24 DEC 08	24 DEC 08	0
MS1150	Y327-330 (V.O. No. 4)	25	25 DEC 08	25 DEC 08	23 JAN 09	23 JAN 09	0
MS1160	Y326-327 (V.O. No. 4)	36	24 JAN 09	24 JAN 09	10 MAR 09	10 MAR 09	0
MS1190	Y330-331	27	11 MAR 09	11 MAR 09	15 APR 09	15 APR 09	0
MS1220	Y331-SM1	24	16 APR 09	16 APR 09	22 MAY 09	22 MAY 09	0
Y228-Y236-Y330							
MS1229	Inspection Pit / Liaison with UU/ UU Diversion	21	16 AUG 08 *	16 AUG 08	15 SEP 08	15 SEP 08	0
MS1230	Y236-330	14	15 SEP 08	15 SEP 08	06 OCT 08	06 OCT 08	0
MS1231	Trial on sheetpile installation & endorse MS	35	07 OCT 08	07 OCT 08	15 NOV 08	15 NOV 08	0
MS1240	Y235-236	68	17 NOV 08	17 NOV 08	07 FEB 09	07 FEB 09	0
MS1250	Y234-235	43	08 JAN 09	08 JAN 09	02 MAR 09	02 MAR 09	0
MS1300	Y228-230	50	21 JAN 09 *	21 JAN 09	23 MAR 09	23 MAR 09	0
MS1260	Y233-234	43	14 FEB 09	14 FEB 09	06 APR 09	06 APR 09	0
MS1270	Y232-233	43	09 MAR 09	09 MAR 09	11 MAY 09	11 MAY 09	0
MS1290	Y230-231	50	12 MAR 09	12 MAR 09	22 MAY 09	22 MAY 09	0
MS1280	Y231-232	40	24 MAR 09	24 MAR 09	22 MAY 09	22 MAY 09	0
MS1310	Y229-230	21	20 APR 09 *	20 APR 09	22 MAY 09	22 MAY 09	0
Y244-Y255							
MS1319	Inspection Pit / Liaison with UU/ UU Diversion	15	19 AUG 08 *	19 AUG 08	10 SEP 08	10 SEP 08	0
MS1320	Y244-246	7	10 SEP 08	10 SEP 08	20 SEP 08	20 SEP 08	0
MS1330	Y246-248	10	22 SEP 08	22 SEP 08	04 OCT 08	04 OCT 08	0
MS1340	Y247-248	7	06 OCT 08	06 OCT 08	13 OCT 08	13 OCT 08	0
MS1350	Y245-246	10	14 OCT 08	14 OCT 08	24 OCT 08	24 OCT 08	0
MS1360	Y248-249	10	25 OCT 08	25 OCT 08	05 NOV 08	05 NOV 08	0
MS1370	Y249-255 (Revised , ref. RFI 003)	25	15 APR 09 *	15 APR 09	22 MAY 09	22 MAY 09	0
Y237-Y240; Y239-Y255							
SO3169	Inspection Pit / Liaison with UU/ UU Diversion	7	06 NOV 08 *	06 NOV 08	13 NOV 08	13 NOV 08	0
SO3170	Y237-238	14	14 NOV 08	14 NOV 08	29 NOV 08	29 NOV 08	0
SO3180	Y238-240	14	01 DEC 08	01 DEC 08	16 DEC 08	16 DEC 08	0
SO3330	Y239-241	14	17 DEC 08	17 DEC 08	02 JAN 09	02 JAN 09	0
SO3340	Y240-241	14	03 JAN 09	03 JAN 09	19 JAN 09	19 JAN 09	0
SO3350	Y241-242	7	20 JAN 09 *	20 JAN 09	30 JAN 09	30 JAN 09	0
SO3360	Y242-243	14	31 JAN 09	31 JAN 09	16 FEB 09	16 FEB 09	0
SO3370	Y243-253	14	17 FEB 09	17 FEB 09	04 MAR 09	04 MAR 09	0
SO3380	Y253-254	14	05 MAR 09	05 MAR 09	20 MAR 09	20 MAR 09	0
SO3390	Y254-255	17	21 MAR 09	21 MAR 09	14 APR 09	14 APR 09	0
Stub Pipe Construction							
SO3420	UU diversion for M/H construction	90	23 MAY 09	23 MAY 09	25 SEP 09	25 SEP 09	0
SO3400	Add'l Type A M/H with stub pipe construction	21	26 SEP 09	26 SEP 09	22 OCT 09	22 OCT 09	0
SO3410	Backfill & reinstatement	21	15 OCT 09	15 OCT 09	09 NOV 09	09 NOV 09	0
CCTV Survey for pipe and stub pipe							
SO3440	CCTV survey for pipe and stub pipe	4	29 MAR 10 *	29 MAR 10	01 APR 10	01 APR 10 *	0
WO 008 (PWY M/H Y21&Its Upstream)							
Y1-Y21							
PW2159	Inspection Pit / Liaison with UU/ UU Diversion	5	04 AUG 08 *	04 AUG 08	14 AUG 08	14 AUG 08	0
PW2280	Y17-18	7	16 AUG 08 *	16 AUG 08	26 AUG 08	26 AUG 08	0
PW2290	Y18-19	12	27 AUG 08	27 AUG 08	12 SEP 08	12 SEP 08	0
PW2300	Y19-20	10	12 SEP 08	12 SEP 08	29 SEP 08	29 SEP 08	0
Y14-Y1							
PW2160	Y14-341	16	15 AUG 08 *	15 AUG 08	08 SEP 08	08 SEP 08	0
PW2170	Y341-340	11	08 SEP 08	08 SEP 08	25 SEP 08	25 SEP 08	0



Start Date 31 JAN 08
Finish Date 30 JUN 10

Page : 2A

△ Early start point
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Early bar
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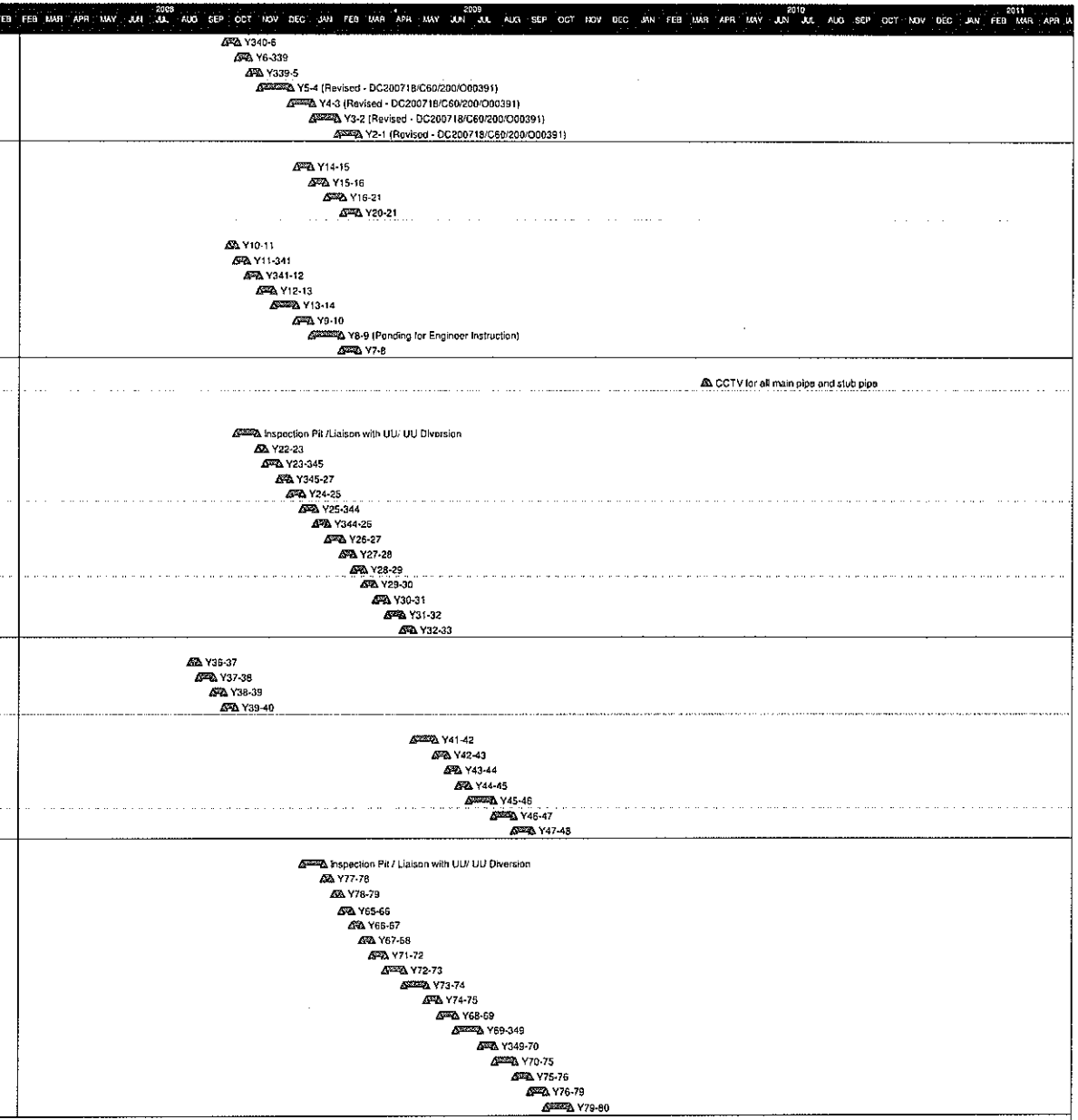
Act ID	Activity Description	Rem Dura	Early Start	Late Start	Early Finish	Late Finish	Total Float
PW2180	Y340-6	12	26 SEP 08	26 SEP 08	09 OCT 08	09 OCT 08	0
PW2190	Y6-339	11	10 OCT 08	10 OCT 08	22 OCT 08	22 OCT 08	0
PW2200	Y339-5	10	23 OCT 08	23 OCT 08	03 NOV 08	03 NOV 08	0
PW2210	Y5-4 (Revised - DC200718/C60/200/C00391)	30	04 NOV 08 *	04 NOV 08	08 DEC 08	08 DEC 08	0
PW2220	Y4-3 (Revised - DC200718/C60/200/C00391)	21	09 DEC 08	09 DEC 08	02 JAN 09	02 JAN 09	0
PW2230	Y3-2 (Revised - DC200718/C60/200/C00391)	21	03 JAN 09	03 JAN 09	30 JAN 09	30 JAN 09	0
PW2240	Y2-1 (Revised - DC200718/C60/200/C00391)	20	31 JAN 09 *	31 JAN 09	23 FEB 09	23 FEB 09	0
Y14-Y21							
PW2250	Y14-15	14	16 DEC 08	16 DEC 08	31 DEC 08	31 DEC 08	0
PW2260	Y15-16	14	02 JAN 09	02 JAN 09	17 JAN 09	17 JAN 09	0
PW2270	Y16-21	14	19 JAN 09	19 JAN 09	06 FEB 09	06 FEB 09	0
PW2390	Y20-21	14	07 FEB 09	07 FEB 09	23 FEB 09	23 FEB 09	0
Y11-Y14 / Y11-Y7							
PW2310	Y10-11	7	30 SEP 08	30 SEP 08	07 OCT 08	07 OCT 08	0
PW2320	Y11-341	11	08 OCT 08	08 OCT 08	20 OCT 08	20 OCT 08	0
PW2330	Y341-12	12	21 OCT 08	21 OCT 08	03 NOV 08	03 NOV 08	0
PW2340	Y12-13	14	04 NOV 08	04 NOV 08	19 NOV 08	19 NOV 08	0
PW2350	Y13-14	22	20 NOV 08	20 NOV 08	15 DEC 08	15 DEC 08	0
PW2380	Y9-10	14	16 DEC 08	16 DEC 08	31 DEC 08	31 DEC 08	0
PW2370	Y8-9 (Pending for Engineer Instruction)	26	02 JAN 09	02 JAN 09	04 FEB 09	04 FEB 09	0
PW2360	Y7-8	16	05 FEB 09	05 FEB 09	23 FEB 09	23 FEB 09	0
CCTV Survey							
PW3120	CCTV for all main pipe and stub pipe	5	22 MAR 10 *	22 MAR 10	26 MAR 10 *	26 MAR 10 *	0
WO 009 (PWY Y21-Y48 & Y83&Its Upstream)							
Y22-Y33							
PW2409	Inspection Pit /Liaison with UU/ UU Diversion	21	09 OCT 08 *	09 OCT 08	01 NOV 08	01 NOV 08	0
PW2410	Y22-23	7	03 NOV 08	03 NOV 08	10 NOV 08	10 NOV 08	0
PW2420	Y23-345	14	11 NOV 08	11 NOV 08	26 NOV 08	26 NOV 08	0
PW2430	Y345-27	10	27 NOV 08	27 NOV 08	08 DEC 08	08 DEC 08	0
PW2440	Y24-25	12	09 DEC 08	09 DEC 08	22 DEC 08	22 DEC 08	0
PW2450	Y25-344	12	23 DEC 08	23 DEC 08	06 JAN 09	06 JAN 09	0
PW2460	Y344-26	12	07 JAN 09	07 JAN 09	20 JAN 09	20 JAN 09	0
PW2470	Y26-27	12	21 JAN 09	21 JAN 09	06 FEB 09	06 FEB 09	0
PW2480	Y27-28	10	07 FEB 09	07 FEB 09	18 FEB 09	18 FEB 09	0
PW2490	Y28-29	10	19 FEB 09	19 FEB 09	02 MAR 09	02 MAR 09	0
PW2500	Y29-30	11	03 MAR 09	03 MAR 09	14 MAR 09	14 MAR 09	0
PW2510	Y30-31	12	16 MAR 09	16 MAR 09	28 MAR 09	28 MAR 09	0
PW2520	Y31-32	11	30 MAR 09	30 MAR 09	15 APR 09	15 APR 09	0
PW2530	Y32-33	10	16 APR 09	16 APR 09	27 APR 09	27 APR 09	0
Y36-Y40							
PW2540	Y36-37	6	19 AUG 08 *	19 AUG 08	27 AUG 08	27 AUG 08	0
PW2550	Y37-38	12	28 AUG 08	28 AUG 08	13 SEP 08	13 SEP 08	0
PW2560	Y38-39	6	13 SEP 08 *	13 SEP 08	25 SEP 08	25 SEP 08	0
PW2570	Y39-40	11	26 SEP 08	26 SEP 08	08 OCT 08	08 OCT 08	0
Y41-Y48							
PW2580	Y41-42	14	28 APR 09	28 APR 09	22 MAY 09	22 MAY 09	0
PW2590	Y42-43	10	23 MAY 09	23 MAY 09	05 JUN 09	05 JUN 09	0
PW2600	Y43-44	10	06 JUN 09	06 JUN 09	17 JUN 09	17 JUN 09	0
PW2610	Y44-45	10	18 JUN 09	18 JUN 09	29 JUN 09	29 JUN 09	0
PW2620	Y45-46	14	30 JUN 09	30 JUN 09	27 JUL 09	27 JUL 09	0
PW2630	Y46-47	14	28 JUL 09	28 JUL 09	19 AUG 09	19 AUG 09	0
PW2640	Y47-48	18	20 AUG 09	20 AUG 09	09 SEP 09	09 SEP 09 *	0
Y65-Y83							
PW2921	Inspection Pit / Liaison with UU/ UU Diversion	20	24 DEC 08 *	24 DEC 08	16 JAN 09	16 JAN 09	0
PW2922	Y77-78	7	17 JAN 09	17 JAN 09	24 JAN 09	24 JAN 09	0
PW2923	Y78-79	7	29 JAN 09	29 JAN 09	05 FEB 09	05 FEB 09	0
PW2930	Y65-66	10	06 FEB 09	06 FEB 09	17 FEB 09	17 FEB 09	0
PW2940	Y66-67	10	18 FEB 09	18 FEB 09	28 FEB 09	28 FEB 09	0
PW2950	Y67-68	10	02 MAR 09	02 MAR 09	12 MAR 09	12 MAR 09	0
PW2951	Y71-72	13	13 MAR 09 *	13 MAR 09	27 MAR 09	27 MAR 09	0
PW2952	Y72-73	14	28 MAR 09	28 MAR 09	17 APR 09	17 APR 09	0
PW2953	Y73-74	14	18 APR 09	18 APR 09	13 MAY 09	13 MAY 09	0
PW2954	Y74-75	12	14 MAY 09	14 MAY 09	27 MAY 09	27 MAY 09	0
PW2960	Y68-69	14	28 MAY 09	29 MAY 09	15 JUN 09	15 JUN 09	0
PW3040	Y69-349	14	16 JUN 09	16 JUN 09	13 JUL 09	13 JUL 09	0
PW3050	Y349-70	14	14 JUL 09	14 JUL 09	29 JUL 09	29 JUL 09	0
PW3060	Y70-75	14	30 JUL 09	30 JUL 09	21 AUG 09	21 AUG 09	0
PW3061	Y75-76	14	22 AUG 09	22 AUG 09	07 SEP 09	07 SEP 09	0
PW3070	Y76-79	16	08 SEP 09	08 SEP 09	25 SEP 09	25 SEP 09	0
PW3080	Y79-80	22	26 SEP 09	26 SEP 09	23 OCT 09	23 OCT 09	0



Start Date 31 JAN 08
Finish Date 30 JUN 10

Page : 3A

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Early bar
Progress bar
Critical bar
Summary bar

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Finish milestone point

DC/2007/18
Yung Shue Wan and Sok Kwu Wan Village Sewerage, Stage 1 Works
Project Programme Rev. 8

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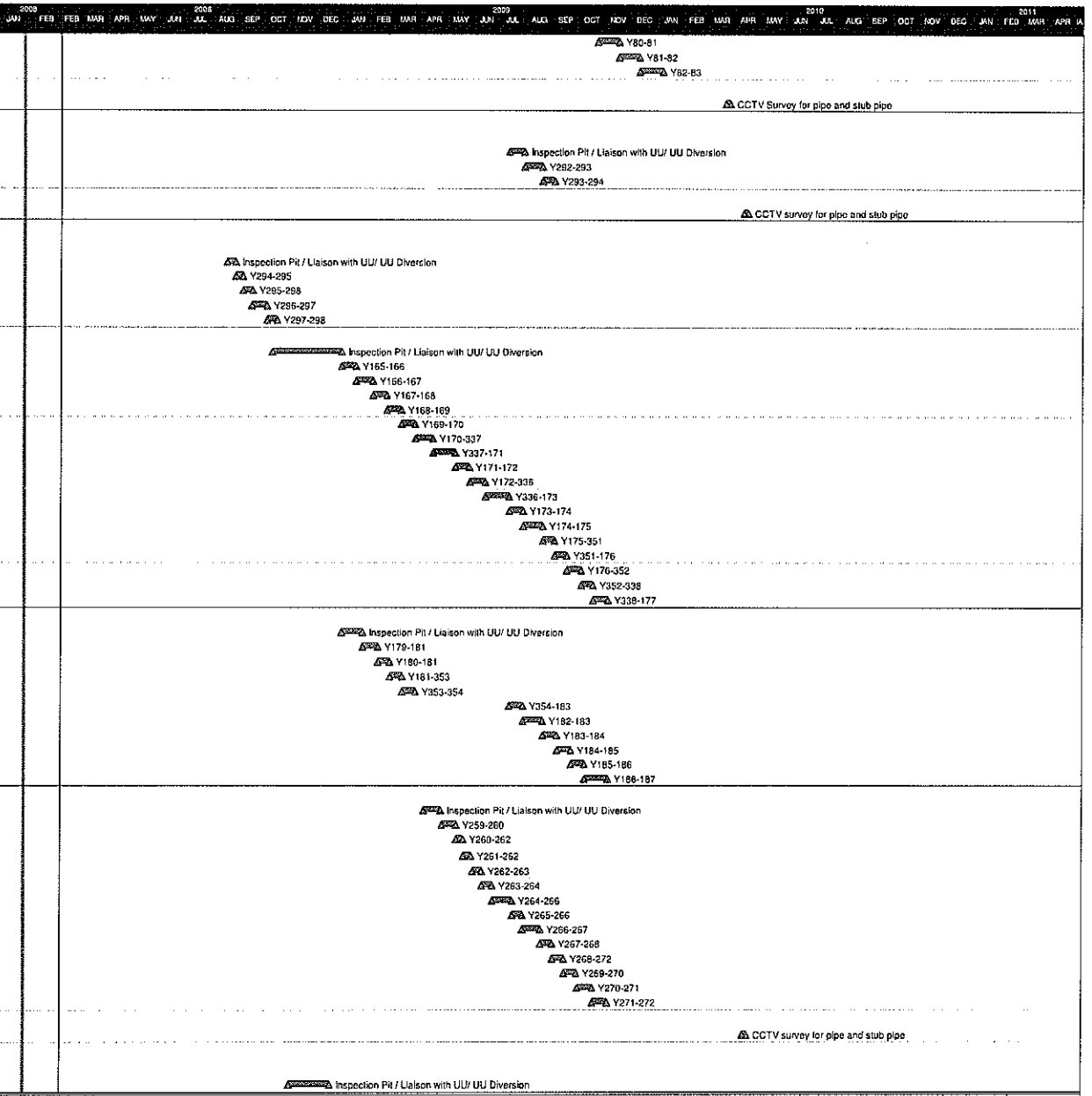
Act ID	Activity Description	Rem Dura	Early Start	Late Start	Early Finish	Late Finish	Total Float
PW3090	Y80-81	20	24 OCT 09	24 OCT 09	17 NOV 09	17 NOV 09	0
PW3100	Y81-82	21	18 NOV 09	18 NOV 09	11 DEC 09	11 DEC 09	0
PW3110	Y82-83	21	12 DEC 09	12 DEC 09	07 JAN 10	07 JAN 10	0
CCTV Survey							
PW3160	CCTV Survey for pipe and stub pipe	5	22 MAR 10 *	22 MAR 10	26 MAR 10	26 MAR 10 *	0
WO 013 (SPOV Y292-Y294)							
Y291-Y294							
RE4559	Inspection Pit / Liaison with UU/ UU Diversion	16	13 JUL 09 *	13 JUL 09	30 JUL 09	30 JUL 09	0
RE4590	Y292-293	12	31 JUL 09	31 JUL 09	20 AUG 09	20 AUG 09	0
RE4600	Y293-294	12	21 AUG 09	21 AUG 09	03 SEP 09	03 SEP 09	0
CCTV survey for pipe and tub pipe							
RE4610	CCTV survey for pipe and stub pipe	5	12 APR 10 *	12 APR 10	16 APR 10	16 APR 10 *	0
WO 014 (SPOV,SPNV & KL)							
Y287 - Y301							
SO3189	Inspection Pit / Liaison with UU/ UU Diversion	7	18 AUG 08 *	18 AUG 08	27 AUG 08	27 AUG 08	0
SO3260	Y294-295	6	28 AUG 08	28 AUG 08	05 SEP 08	05 SEP 08	0
SO3270	Y295-298	8	06 SEP 08	06 SEP 08	16 SEP 08	16 SEP 08	0
SO3280	Y296-297	11	16 SEP 08	16 SEP 08	03 OCT 08	03 OCT 08	0
SO3290	Y297-298	10	04 OCT 08	04 OCT 08	15 OCT 08	15 OCT 08 *	0
Y165 - Y177							
SN3499	Inspection Pit / Liaison with UU/ UU Diversion	69	10 OCT 08 *	10 OCT 08	29 DEC 08	29 DEC 08	0
SN3500	Y165-166	14	30 DEC 08 *	30 DEC 08	15 JAN 09	15 JAN 09	0
SN3510	Y166-167	14	16 JAN 09	16 JAN 09	04 FEB 09	04 FEB 09	0
SN3520	Y167-168	14	05 FEB 09	05 FEB 09	20 FEB 09	20 FEB 09	0
SN3530	Y168-169	14	21 FEB 09	21 FEB 09	09 MAR 09	09 MAR 09	0
SN3540	Y169-170	14	10 MAR 09	10 MAR 09	25 MAR 09	25 MAR 09	0
SN3550	Y170-337	14	26 MAR 09	26 MAR 09	15 APR 09	15 APR 09	0
SN3560	Y337-171	14	16 APR 09	16 APR 09	11 MAY 09	11 MAY 09	0
SN3570	Y171-172	14	12 MAY 09	12 MAY 09	27 MAY 09	27 MAY 09	0
SN3580	Y172-336	14	29 MAY 09	29 MAY 09	15 JUN 09	15 JUN 09	0
SN3590	Y336-173	14	16 JUN 09	16 JUN 09	13 JUL 09	13 JUL 09	0
SN3600	Y173-174	14	14 JUL 09	14 JUL 09	29 JUL 09	29 JUL 09	0
SN3610	Y174-175	14	30 JUL 09	30 JUL 09	21 AUG 09	21 AUG 09	0
SN3620	Y175-351	12	22 AUG 09	22 AUG 09	04 SEP 09	04 SEP 09	0
SN3630	Y351-176	12	05 SEP 09	05 SEP 09	18 SEP 09	18 SEP 09	0
SN3640	Y176-352	12	19 SEP 09	19 SEP 09	05 OCT 09	05 OCT 09	0
SN3650	Y352-338	12	06 OCT 09	06 OCT 09	19 OCT 09	19 OCT 09	0
SN3660	Y338-177	14	20 OCT 09	20 OCT 09	05 NOV 09	05 NOV 09	0
Y179 - Y187							
SN3669	Inspection Pit / Liaison with UU/ UU Diversion	21	30 DEC 08	30 DEC 08	23 JAN 09	23 JAN 09	0
SN3670	Y179-181	12	24 JAN 09	24 JAN 09	10 FEB 09	10 FEB 09	0
SN3680	Y180-181	12	11 FEB 09	11 FEB 09	24 FEB 09	24 FEB 09	0
SN3690	Y181-353	12	25 FEB 09	25 FEB 09	10 MAR 09	10 MAR 09	0
SN3700	Y353-354	14	11 MAR 09	11 MAR 09	26 MAR 09	26 MAR 09 *	0
SN3710	Y354-183	14	14 JUL 09 *	14 JUL 09	29 JUL 09	29 JUL 09	0
SN3720	Y182-183	14	30 JUL 09	30 JUL 09	21 AUG 09	21 AUG 09	0
SN3730	Y183-184	14	22 AUG 09	22 AUG 09	07 SEP 09	07 SEP 09	0
SN3740	Y184-185	14	08 SEP 09	08 SEP 09	23 SEP 09	23 SEP 09	0
SN3750	Y185-186	12	24 SEP 09	24 SEP 09	09 OCT 09	09 OCT 09	0
SN3760	Y186-187	22	10 OCT 09	10 OCT 09	05 NOV 09	05 NOV 09	0
Y259 - Y272							
KL3849	Inspection Pit / Liaison with UU/ UU Diversion	15	06 APR 09 *	06 APR 09	25 APR 09	25 APR 09	0
KL3850	Y259-260	7	27 APR 09	27 APR 09	13 MAY 09	13 MAY 09	0
KL3860	Y260-262	7	14 MAY 09	14 MAY 09	21 MAY 09	21 MAY 09	0
KL3870	Y261-262	7	22 MAY 09	22 MAY 09	30 MAY 09	30 MAY 09	0
KL3880	Y262-263	10	02 JUN 09	02 JUN 09	12 JUN 09	12 JUN 09	0
KL3890	Y263-264	10	13 JUN 09	13 JUN 09	24 JUN 09	24 JUN 09	0
KL3900	Y264-266	10	25 JUN 09	25 JUN 09	17 JUL 09	17 JUL 09	0
KL3910	Y265-266	10	18 JUL 09	18 JUL 09	29 JUL 09	29 JUL 09	0
KL3920	Y266-267	12	30 JUL 09	30 JUL 09	19 AUG 09	19 AUG 09	0
KL3930	Y267-268	12	20 AUG 09	20 AUG 09	02 SEP 09	02 SEP 09	0
KL3940	Y268-272	12	03 SEP 09	03 SEP 09	16 SEP 09	16 SEP 09	0
KL3950	Y269-270	12	17 SEP 09	17 SEP 09	30 SEP 09	30 SEP 09	0
KL3960	Y270-271	14	02 OCT 09	02 OCT 09	19 OCT 09	19 OCT 09	0
KL3970	Y271-272	14	20 OCT 09	20 OCT 09	05 NOV 09	05 NOV 09	0
CCTV Survey for pipe and stub pipe							
KL4100	CCTV survey for pipe and stub pipe	5	12 APR 10 *	12 APR 10	16 APR 10	16 APR 10 *	0
WO 016 (YSWMSt. Y86-Y112-Y228)							
Y86-Y90-Y114-Y113, Y112-Y113-Y120							
MS1589	Inspection Pit / Liaison with UU/ UU Diversion	41	31 OCT 08 *	31 OCT 08	17 DEC 08	17 DEC 08	0



Start Date 31 JAN 08
Finish Date 30 JUN 10

Page : 4A

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Yung Shue Wan and Sok Kwu Wan Village Sewerage, Stage 1 Works
Project Programme Rev. 8

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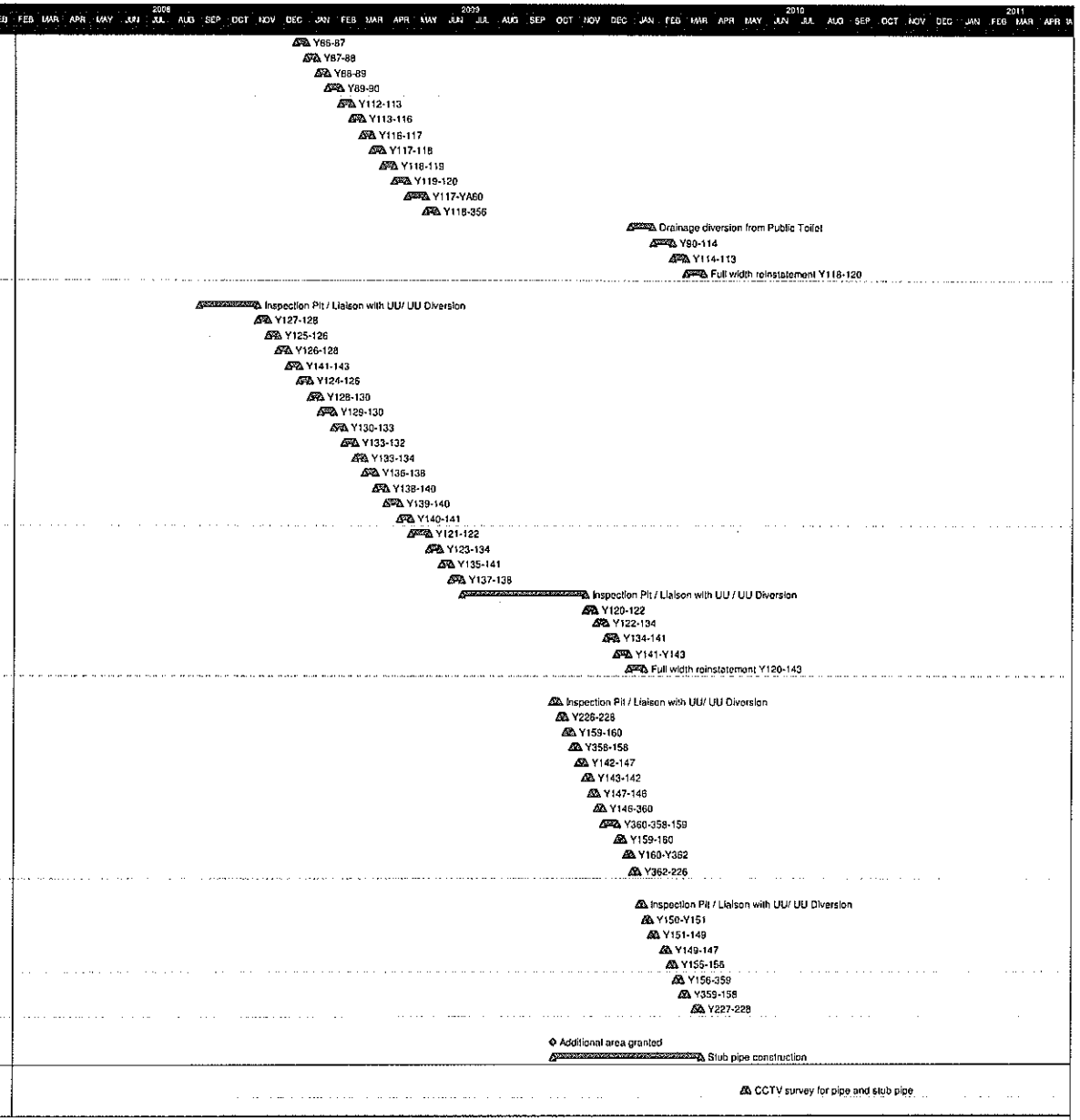
MS1590	Y86-87	10	18 DEC 08	18 DEC 08	29 DEC 08	29 DEC 08	0
MS1600	Y87-88	10	30 DEC 08	30 DEC 08	10 JAN 09	10 JAN 09	0
MS1610	Y88-89	10	12 JAN 09	12 JAN 09	22 JAN 09	22 JAN 09	0
MS1620	Y89-90	10	23 JAN 09	23 JAN 09	06 FEB 09	06 FEB 09	0
MS1630	Y112-113	10	07 FEB 09	07 FEB 09	18 FEB 09	18 FEB 09	0
MS1640	Y113-116	10	19 FEB 09	19 FEB 09	02 MAR 09	02 MAR 09	0
MS1650	Y116-117	10	03 MAR 09	03 MAR 09	13 MAR 09	13 MAR 09	0
MS1660	Y117-118	10	14 MAR 09	14 MAR 09	25 MAR 09	25 MAR 09	0
MS1670	Y118-119	10	26 MAR 09	26 MAR 09	07 APR 09	07 APR 09	0
MS1680	Y119-120	10	08 APR 09	08 APR 09	22 APR 09	22 APR 09	0
MS1690	Y117-YA60	10	23 APR 09	23 APR 09	13 MAY 09	13 MAY 09	0
MS1700	Y118-356	10	14 MAY 09	14 MAY 09	25 MAY 09	25 MAY 09	0
MS1710	Drainage diversion from Public Toilet	22	30 DEC 09	30 DEC 09	23 JAN 10	23 JAN 10	0
MS1720	Y90-114	13	25 JAN 10	25 JAN 10	15 FEB 10	15 FEB 10	0
MS1780	Y114-113	13	16 FEB 10	16 FEB 10	02 MAR 10	02 MAR 10	0
MS2020	Full width reinstatement Y118-120	11	03 MAR 10	03 MAR 10	22 MAR 10	22 MAR 10 *	0
Y120-Y143							
MS1739	Inspection Pit / Liaison with UU/ UU Diversion	50	01 SEP 08	01 SEP 08	05 NOV 08	05 NOV 08	0
MS1740	Y127-128	10	06 NOV 08 *	06 NOV 08	17 NOV 08	17 NOV 08	0
MS1750	Y125-126	10	18 NOV 08	18 NOV 08	28 NOV 08	28 NOV 08	0
MS1760	Y126-128	10	29 NOV 08	29 NOV 08	10 DEC 08	10 DEC 08	0
MS1770	Y141-143	10	11 DEC 08	11 DEC 08	22 DEC 08	22 DEC 08	0
MS1790	Y124-126	10	23 DEC 08	23 DEC 08	03 JAN 09	03 JAN 09	0
MS1800	Y128-130	10	05 JAN 09	05 JAN 09	15 JAN 09	15 JAN 09	0
MS2070	Y129-130	10	16 JAN 09	16 JAN 09	30 JAN 09	30 JAN 09	0
MS2080	Y130-133	10	31 JAN 09	31 JAN 09	11 FEB 09	11 FEB 09	0
MS2130	Y133-132	10	12 FEB 09	12 FEB 09	23 FEB 09	23 FEB 09	0
MS2200	Y133-134	10	24 FEB 09	24 FEB 09	06 MAR 09	06 MAR 09	0
MS2210	Y136-138	10	07 MAR 09	07 MAR 09	18 MAR 09	18 MAR 09	0
MS2220	Y138-140	10	19 MAR 09	19 MAR 09	30 MAR 09	30 MAR 09	0
MS2230	Y139-140	10	31 MAR 09	31 MAR 09	15 APR 09	15 APR 09	0
MS2240	Y140-141	10	16 APR 09	16 APR 09	27 APR 09	27 APR 09	0
MS2250	Y121-122	10	28 APR 09	28 APR 09	18 MAY 09	18 MAY 09	0
MS2260	Y123-134	10	19 MAY 09	19 MAY 09	30 MAY 09	30 MAY 09	0
MS2270	Y135-141	10	02 JUN 09	02 JUN 09	12 JUN 09	12 JUN 09	0
MS2280	Y137-138	10	13 JUN 09	13 JUN 09	24 JUN 09	24 JUN 09	0
MS2290	Inspection Pit / Liaison with UU / UU Diversion	100	25 JUN 09	25 JUN 09	10 NOV 09	10 NOV 09	0
MS2300	Y120-122	10	11 NOV 09	11 NOV 09	21 NOV 09	21 NOV 09	0
MS2310	Y122-134	10	23 NOV 09	23 NOV 09	03 DEC 09	03 DEC 09	0
MS2320	Y134-141	10	04 DEC 09	04 DEC 09	15 DEC 09	15 DEC 09	0
MS2330	Y141-Y143	10	16 DEC 09	16 DEC 09	29 DEC 09	29 DEC 09	0
MS2340	Full width reinstatement Y120-143	15	30 DEC 09	30 DEC 09	15 JAN 10	15 JAN 10 *	0
Y143-Y228 (Seaside) (VO41)							
MS1809	Inspection Pit / Liaison with UU/ UU Diversion	7	05 OCT 09 *	05 OCT 09	12 OCT 09	12 OCT 09	0
MS1810	Y226-228	6	13 OCT 09	13 OCT 09	19 OCT 09	19 OCT 09	0
MS1820	Y159-160	6	20 OCT 09	20 OCT 09	27 OCT 09	27 OCT 09	0
MS1830	Y358-158	6	28 OCT 09	28 OCT 09	03 NOV 09	03 NOV 09	0
MS1840	Y142-147	6	04 NOV 09	04 NOV 09	10 NOV 09	10 NOV 09	0
MS1850	Y143-142	6	11 NOV 09	11 NOV 09	17 NOV 09	17 NOV 09	0
MS1860	Y147-146	6	18 NOV 09	18 NOV 09	24 NOV 09	24 NOV 09	0
MS1870	Y146-360	6	25 NOV 09	25 NOV 09	01 DEC 09	01 DEC 09	0
MS1880	Y360-358-159	14	02 DEC 09	02 DEC 09	17 DEC 09	17 DEC 09	0
MS2030	Y159-160	6	18 DEC 09	18 DEC 09	24 DEC 09	24 DEC 09	0
MS2190	Y160-Y362	6	28 DEC 09 *	28 DEC 09	02 JAN 10	02 JAN 10	0
MS2350	Y362-226	6	04 JAN 10	04 JAN 10	09 JAN 10	09 JAN 10	0
Branches of Y143-Y228 (VO41)							
MS1889	Inspection Pit / Liaison with UU/ UU Diversion	6	11 JAN 10	11 JAN 10	16 JAN 10	16 JAN 10	0
MS1890	Y150-Y151	6	18 JAN 10	18 JAN 10	23 JAN 10	23 JAN 10	0
MS1900	Y151-149	6	25 JAN 10	25 JAN 10	30 JAN 10	30 JAN 10	0
MS1910	Y149-147	6	08 FEB 10	08 FEB 10	13 FEB 10	13 FEB 10	0
MS1920	Y155-156	6	15 FEB 10	15 FEB 10	20 FEB 10	20 FEB 10	0
MS1930	Y156-359	6	22 FEB 10	22 FEB 10	27 FEB 10	27 FEB 10	0
MS1940	Y359-158	6	01 MAR 10	01 MAR 10	06 MAR 10	06 MAR 10	0
MS1950	Y227-228	7	15 MAR 10	15 MAR 10	22 MAR 10	22 MAR 10 *	0
Stub Pipe Construction							
MS2170	Additional area granted	0	07 OCT 09 *	07 OCT 09			0
MS2180	Stub pipe construction	128	07 OCT 09	07 OCT 09	22 MAR 10	22 MAR 10 *	0
CCTV Survey for pipe and stub pipe							
MS2360	CCTV survey for pipe and stub pipe	5	10 MAY 10 *	10 MAY 10	14 MAY 10	14 MAY 10 *	0
WO 018 (SPOV Y305-Y223 Ylts Branches)							



Start Date 31 JAN 08
Finish Date 30 JUN 10

Page : 5A

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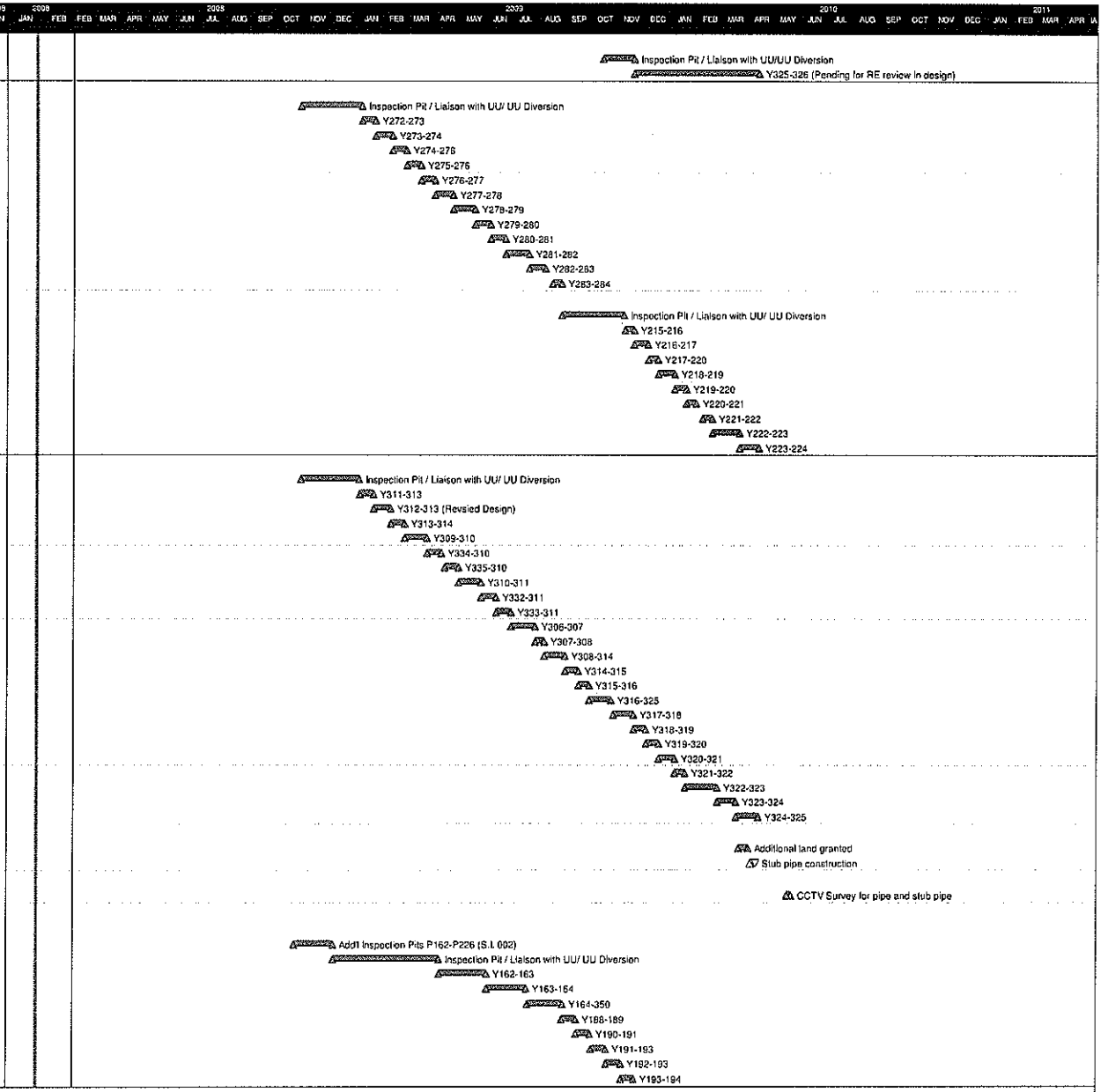
Act ID	Activity Description	Rem Dura	Early Start	Late Start	Early Finish	Late Finish	Total Float
Y325 - Y326							
BS3159	Inspection Pit / Liaison with UU/UU Diversion	30	15 OCT 09 *	15 OCT 09	19 NOV 09	19 NOV 09	0
BS3160	Y325-326 (Pending for RE review in design)	110	20 NOV 09	20 NOV 09	13 APR 10	13 APR 10	0
Y272 - Y284							
KL3979	Inspection Pit / Liaison with UU/ UU Diversion	60	28 OCT 08 *	28 OCT 08	06 JAN 09	06 JAN 09	0
KL3980	Y272-273	14	07 JAN 09	07 JAN 09	22 JAN 09	22 JAN 09	0
KL3990	Y273-274	14	23 JAN 09	23 JAN 09	11 FEB 09	11 FEB 09	0
KL4000	Y274-276	14	12 FEB 09	12 FEB 09	27 FEB 09	27 FEB 09	0
KL4010	Y275-276	14	28 FEB 09	28 FEB 09	16 MAR 09	16 MAR 09	0
KL4020	Y276-277	14	17 MAR 09	17 MAR 09	01 APR 09	01 APR 09	0
KL4030	Y277-278	14	02 APR 09	02 APR 09	22 APR 09	22 APR 09	0
KL4040	Y278-279	14	23 APR 09	23 APR 09	18 MAY 09	18 MAY 09	0
KL4050	Y279-280	14	19 MAY 09	19 MAY 09	05 JUN 09	05 JUN 09	0
KL4060	Y280-281	14	06 JUN 09	06 JUN 09	22 JUN 09	22 JUN 09	0
KL4070	Y281-282	14	23 JUN 09	23 JUN 09	20 JUL 09	20 JUL 09	0
KL4080	Y282-283	17	21 JUL 09	21 JUL 09	08 AUG 09	08 AUG 09	0
KL4090	Y283-284	10	17 AUG 09	17 AUG 09	27 AUG 09	27 AUG 09	0
Y215-Y224							
AW4139	Inspection Pit / Liaison with UU/ UU Diversion	59	28 AUG 09 *	28 AUG 09	07 NOV 09	07 NOV 09	0
AW4220	Y215-216	10	09 NOV 09	09 NOV 09	19 NOV 09	19 NOV 09	0
AW4230	Y216-217	14	20 NOV 09	20 NOV 09	05 DEC 09	05 DEC 09	0
AW4240	Y217-220	10	07 DEC 09	07 DEC 09	17 DEC 09	17 DEC 09	0
AW4250	Y218-219	14	18 DEC 09	18 DEC 09	05 JAN 10	05 JAN 10	0
AW4260	Y219-220	12	06 JAN 10	06 JAN 10	19 JAN 10	19 JAN 10	0
AW4270	Y220-221	10	20 JAN 10	20 JAN 10	30 JAN 10	30 JAN 10	0
AW4280	Y221-222	10	08 FEB 10	08 FEB 10	18 FEB 10	18 FEB 10	0
AW4290	Y222-223	21	19 FEB 10	19 FEB 10	22 MAR 10	22 MAR 10	0
AW4300	Y223-224	19	23 MAR 10	23 MAR 10	13 APR 10	13 APR 10	0
Y306-Y325							
AW4329	Inspection Pit / Liaison with UU/ UU Diversion	58	28 OCT 08 *	28 OCT 08	03 JAN 09	03 JAN 09	0
AW4330	Y311-313	14	05 JAN 09	05 JAN 09	20 JAN 09	20 JAN 09	0
AW4340	Y312-313 (Revsied Design)	14	21 JAN 09	21 JAN 09	09 FEB 09	09 FEB 09	0
AW4350	Y313-314	14	10 FEB 09	10 FEB 09	25 FEB 09	25 FEB 09	0
AW4360	Y309-310	22	26 FEB 09	26 FEB 09	23 MAR 09	23 MAR 09	0
AW4370	Y334-310	14	24 MAR 09	24 MAR 09	09 APR 09	09 APR 09	0
AW4380	Y335-310	14	14 APR 09	14 APR 09	29 APR 09	29 APR 09	0
AW4390	Y310-311	14	30 APR 09	30 APR 09	25 MAY 09	25 MAY 09	0
AW4400	Y332-311	14	26 MAY 09	26 MAY 09	12 JUN 09	12 JUN 09	0
AW4410	Y333-311	14	13 JUN 09	13 JUN 09	29 JUN 09	29 JUN 09	0
AW4420	Y306-307	14	30 JUN 09	30 JUN 09	27 JUL 09	27 JUL 09	0
AW4430	Y307-308	10	28 JUL 09	28 JUL 09	07 AUG 09	07 AUG 09	0
AW4440	Y308-314	14	08 AUG 09	08 AUG 09	31 AUG 09	31 AUG 09	0
AW4450	Y314-315	14	01 SEP 09	01 SEP 09	16 SEP 09	16 SEP 09	0
AW4460	Y315-316	10	17 SEP 09	17 SEP 09	28 SEP 09	28 SEP 09	0
AW4470	Y316-325	21	29 SEP 09	29 SEP 09	24 OCT 09	24 OCT 09	0
AW4480	Y317-318	21	27 OCT 09	27 OCT 09	19 NOV 09	19 NOV 09	0
AW4490	Y318-319	12	20 NOV 09	20 NOV 09	03 DEC 09	03 DEC 09	0
AW4500	Y319-320	13	04 DEC 09	04 DEC 09	18 DEC 09	18 DEC 09	0
AW4510	Y320-321	14	19 DEC 09	19 DEC 09	05 JAN 10	06 JAN 10	0
AW4520	Y321-322	10	07 JAN 10	07 JAN 10	18 JAN 10	18 JAN 10	0
AW4530	Y322-323	26	19 JAN 10	19 JAN 10	24 FEB 10	24 FEB 10	0
AW4540	Y323-324	13	25 FEB 10	25 FEB 10	18 MAR 10	18 MAR 10	0
AW4550	Y324-325	22	19 MAR 10	19 MAR 10	13 APR 10	13 APR 10	0
Y309-Y314							
AW4560	Additional land granted	10	22 MAR 10 *	22 MAR 10	01 APR 10	01 APR 10 *	0
AW4570	Stub pipe construction	6	05 APR 10 *	07 APR 10	10 APR 10	13 APR 10	2d
CCTV Survey for pipe and stub pipe							
AW4580	CCTV Survey for pipe and stub pipe	5	17 MAY 10 *	17 MAY 10	21 MAY 10	21 MAY 10 *	0
WO 019 (SPNV Y162-Y226 & Its Branches)							
Y162-Y177-Y187-Y197-Y203 incl removal of AC Pipe							
SN3328	Add'l Inspection Pits P162-P226 (S.I. 002)	40	21 OCT 08 *	21 OCT 08	05 DEC 08	05 DEC 08	0
SN3329	Inspection Pit / Liaison with UU/ UU Diversion	100	06 DEC 08 *	06 DEC 08	07 APR 09	07 APR 09	0
SN3330	Y162-163	35	08 APR 09	08 APR 09	02 JUN 09	02 JUN 09	0
SN3340	Y163-164	30	03 JUN 09	03 JUN 09	18 JUL 09	18 JUL 09	0
SN3350	Y164-350	30	20 JUL 09	20 JUL 09	29 AUG 09	29 AUG 09 *	0
SN3400	Y188-189	14	29 AUG 09 *	29 AUG 09	14 SEP 09	14 SEP 09	0
SN3420	Y190-191	14	15 SEP 09	15 SEP 09	30 SEP 09	30 SEP 09	0
SN3430	Y191-193	14	02 OCT 09	02 OCT 09	19 OCT 09	19 OCT 09	0
SN3440	Y192-193	14	20 OCT 09	20 OCT 09	05 NOV 09	05 NOV 09	0
SN3450	Y193-194	13	06 NOV 09	06 NOV 09	20 NOV 09	20 NOV 09	0



Start Date 31 JAN 08
Finish Date 30 JUN 10

Page : 6A

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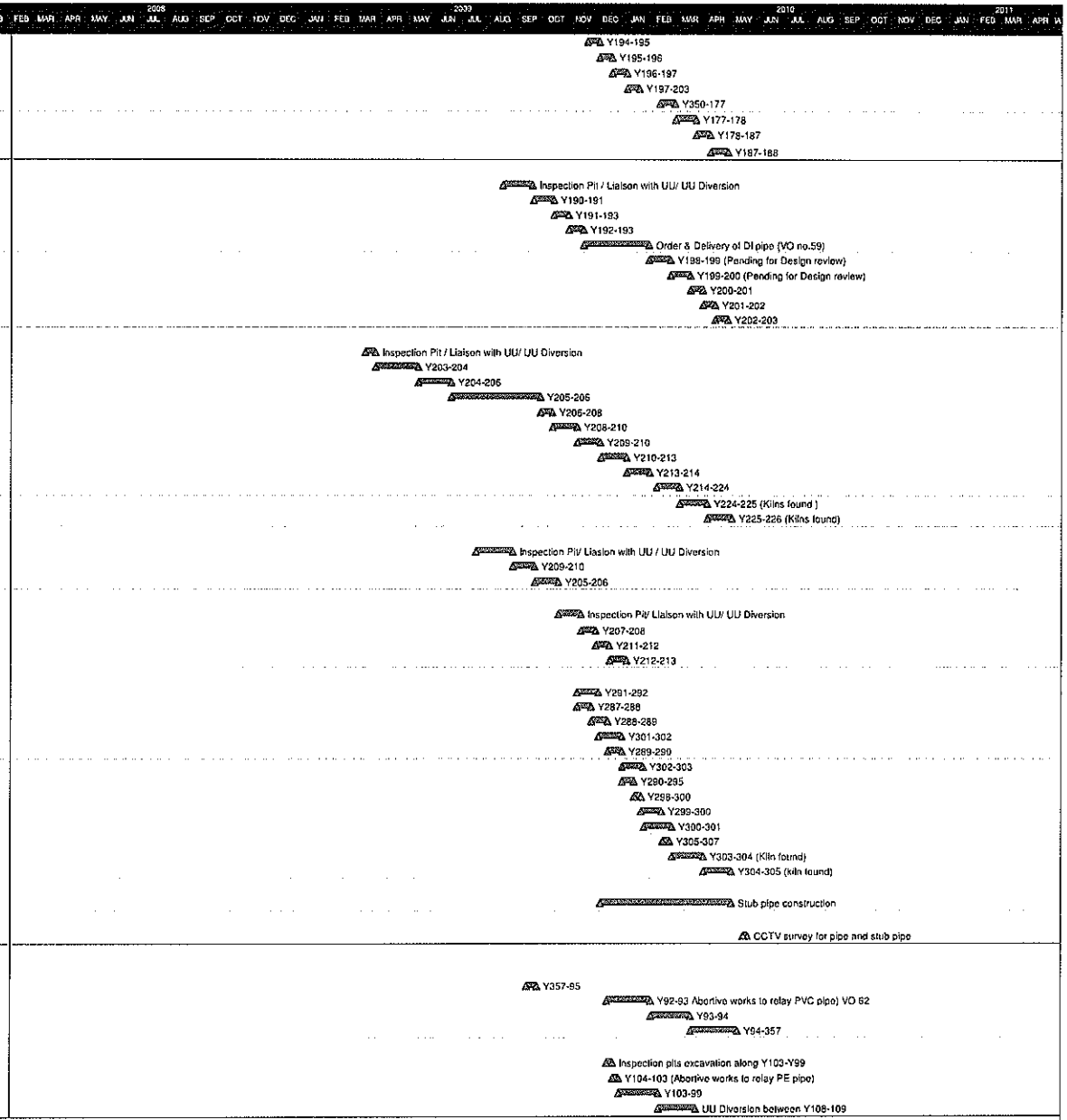
Act ID	Activity Description	Rem Dura	Early Start	Late Start	Early Finish	Late Finish	Total Float
SN3460	Y194-195	12	21 NOV 09	21 NOV 09	04 DEC 09	04 DEC 09	0
SN3470	Y195-196	12	05 DEC 09	05 DEC 09	18 DEC 09	18 DEC 09	0
SN3480	Y196-197	12	19 DEC 09	19 DEC 09	04 JAN 10	04 JAN 10	0
SN3490	Y197-203	12	05 JAN 10	05 JAN 10	18 JAN 10	18 JAN 10 *	0
SN3360	Y350-177	15	11 FEB 10 *	11 FEB 10	27 FEB 10	27 FEB 10	0
SN3370	Y177-178	14	01 MAR 10	01 MAR 10	23 MAR 10	23 MAR 10	0
SN3380	Y178-187	14	24 MAR 10	24 MAR 10	08 APR 10	08 APR 10	0
SN3390	Y187-188	17	09 APR 10	09 APR 10	28 APR 10	28 APR 10 *	0
Y190 - Y191; Y192 - Y193; Y198 - Y203							
SN3769	Inspection Pit / Liaison with UU/ UU Diversion	30	17 AUG 09 *	17 AUG 09	19 SEP 09	19 SEP 09	0
SN3770	Y190-191	18	21 SEP 09	21 SEP 09	13 OCT 09	13 OCT 09	0
SN3780	Y191-193	14	14 OCT 09	14 OCT 09	30 OCT 09	30 OCT 09	0
SN3790	Y192-193	14	31 OCT 09	31 OCT 09	16 NOV 09	16 NOV 09 *	0
SN3850	Order & Delivery of DI pipe (VO no.59)	62	17 NOV 09	17 NOV 09	29 JAN 10	29 JAN 10	0
SN3800	Y198-199 (Pending for Design review)	14	30 JAN 10 *	30 JAN 10	22 FEB 10	22 FEB 10	0
SN3810	Y199-200 (Pending for Design revww)	14	23 FEB 10	23 FEB 10	17 MAR 10	17 MAR 10	0
SN3820	Y200-201	12	18 MAR 10	18 MAR 10	31 MAR 10	31 MAR 10	0
SN3830	Y201-202	12	01 APR 10	01 APR 10	14 APR 10	14 APR 10	0
SN3840	Y202-203	12	15 APR 10	15 APR 10	28 APR 10	28 APR 10 *	0
Y203-Y226 Incl. removal of AC Pipes							
AW4090	Inspection Pit / Liaison with UU/ UU Diversion	10	14 MAR 09 *	14 MAR 09	25 MAR 09	25 MAR 09	0
AW4100	Y203-204	30	26 MAR 09	26 MAR 09	13 MAY 09	13 MAY 09	0
AW4110	Y204-205	30	14 MAY 09	14 MAY 09	19 JUN 09	19 JUN 09	0
AW4120	Y205-206	70	20 JUN 09	20 JUN 09	28 SEP 09	28 SEP 09	0
AW4130	Y206-208	10	29 SEP 09	29 SEP 09	12 OCT 09	12 OCT 09	0
AW4150	Y208-210	23	13 OCT 09	13 OCT 09	09 NOV 09	09 NOV 09	0
AW4160	Y209-210	23	19 NOV 09	10 NOV 09	05 DEC 09	05 DEC 09	0
AW4170	Y210-213	23	07 DEC 09	07 DEC 09	04 JAN 10	04 JAN 10	0
AW4200	Y213-214	23	05 JAN 10 *	05 JAN 10	30 JAN 10	30 JAN 10	0
AW4210	Y214-224	23	08 FEB 10	08 FEB 10	05 MAR 10	05 MAR 10	0
AW4310	Y224-225 (Kilns found)	20	06 MAR 10	06 MAR 10	05 APR 10	05 APR 10	0
AW4320	Y225-226 (Kilns found)	24	06 APR 10	06 APR 10	03 MAY 10	03 MAY 10	0
Y205-Y208 , Y209-Y210 Rescue Excavation							
RE4558	Inspection Pit/ Liaison with UU / UU Diversion	30	18 JUL 09 *	18 JUL 09	28 AUG 09	28 AUG 09	0
RE4560	Y209-210	21	29 AUG 09	29 AUG 09	22 SEP 09	22 SEP 09	0
RE4570	Y205-206	21	23 SEP 09	23 SEP 09	19 OCT 09	19 OCT 09	0
Y207-Y208,Y211-Y213							
AW4138	Inspection Pit/ Liaison with UU/ UU Diversion	21	20 OCT 09	20 OCT 09	13 NOV 09	13 NOV 09	0
AW4140	Y207-208	14	14 NOV 09 *	14 NOV 09	30 NOV 09	30 NOV 09	0
AW4180	Y211-212	14	01 DEC 09	01 DEC 09	16 DEC 09	16 DEC 09	0
AW4190	Y212-213	14	17 DEC 09	17 DEC 09	04 JAN 10	04 JAN 10	0
VO 031							
RE4580	Y291-292	21	10 NOV 09	10 NOV 09	03 DEC 09	03 DEC 09	0
SO3190	Y287-288	14	10 NOV 09 *	10 NOV 09	25 NOV 09	25 NOV 09	0
SO3200	Y288-289	16	26 NOV 09	26 NOV 09	14 DEC 09	14 DEC 09	0
RE4650	Y301-302	21	04 DEC 09 *	04 DEC 09	30 DEC 09	30 DEC 09	0
SO3210	Y289-290	12	15 DEC 09	15 DEC 09	30 DEC 09	30 DEC 09	0
RE4660	Y302-303	21	31 DEC 09	31 DEC 09	23 JAN 10	23 JAN 10	0
SO3220	Y290-295	12	31 DEC 09	31 DEC 09	13 JAN 10	13 JAN 10	0
SO3300	Y298-300	7	14 JAN 10	14 JAN 10	21 JAN 10	21 JAN 10	0
SO3310	Y299-300	14	22 JAN 10	22 JAN 10	13 FEB 10	13 FEB 10	0
RE4670	Y300-301	22	25 JAN 10	25 JAN 10	25 FEB 10	25 FEB 10	0
SO3320	Y305-307	7	15 FEB 10	15 FEB 10	22 FEB 10	22 FEB 10 *	0
RE4680	Y303-304 (Kiln found)	24	26 FEB 10	26 FEB 10	01 APR 10	01 APR 10	0
RE4700	Y304-305 (kiln found)	27	02 APR 10 *	02 APR 10	03 MAY 10	03 MAY 10	0
Stub Pipe Construction							
SO3430	Stub pipe construction	113	07 DEC 09 *	07 DEC 09	03 MAY 10	03 MAY 10	0
CCTV survey for pipe and stub pipe							
SO3450	CCTV survey for pipe and stub pipe	5	17 MAY 10 *	17 MAY 10	21 MAY 10	21 MAY 10 *	0
WO 027 (Y92-Y112, Y48-Y114)							
Y92-Y93-Y94-Y357-Y95							
MS1490	Y357-95	11	14 SEP 09 *	14 SEP 09	25 SEP 09	25 SEP 09 *	0
MS1450	Y92-93 Abortive works to relay PVC pipe) VO 62	50	14 DEC 09 *	14 DEC 09	01 FEB 10	01 FEB 10	0
MS1470	Y93-94	45	02 FEB 10	02 FEB 10	18 MAR 10	18 MAR 10	0
MS1480	Y94-357	45	19 MAR 10	19 MAR 10	10 MAY 10	10 MAY 10 *	0
Y104-Y103-Y99 & Y108-Y109-Y110							
MS1549	Inspection pits excavation along Y103-Y99	7	14 DEC 09 *	14 DEC 09	20 DEC 09	20 DEC 09	0
MS1550	Y104-103 (Abortive works to relay PE pipe)	7	21 DEC 09	21 DEC 09	27 DEC 09	27 DEC 09	0
MS1560	Y103-99	45	28 DEC 09	28 DEC 09	10 FEB 10	10 FEB 10	0
MS1570	UU Diversion between Y108-109	30	11 FEB 10	11 FEB 10	24 MAR 10	24 MAR 10	0



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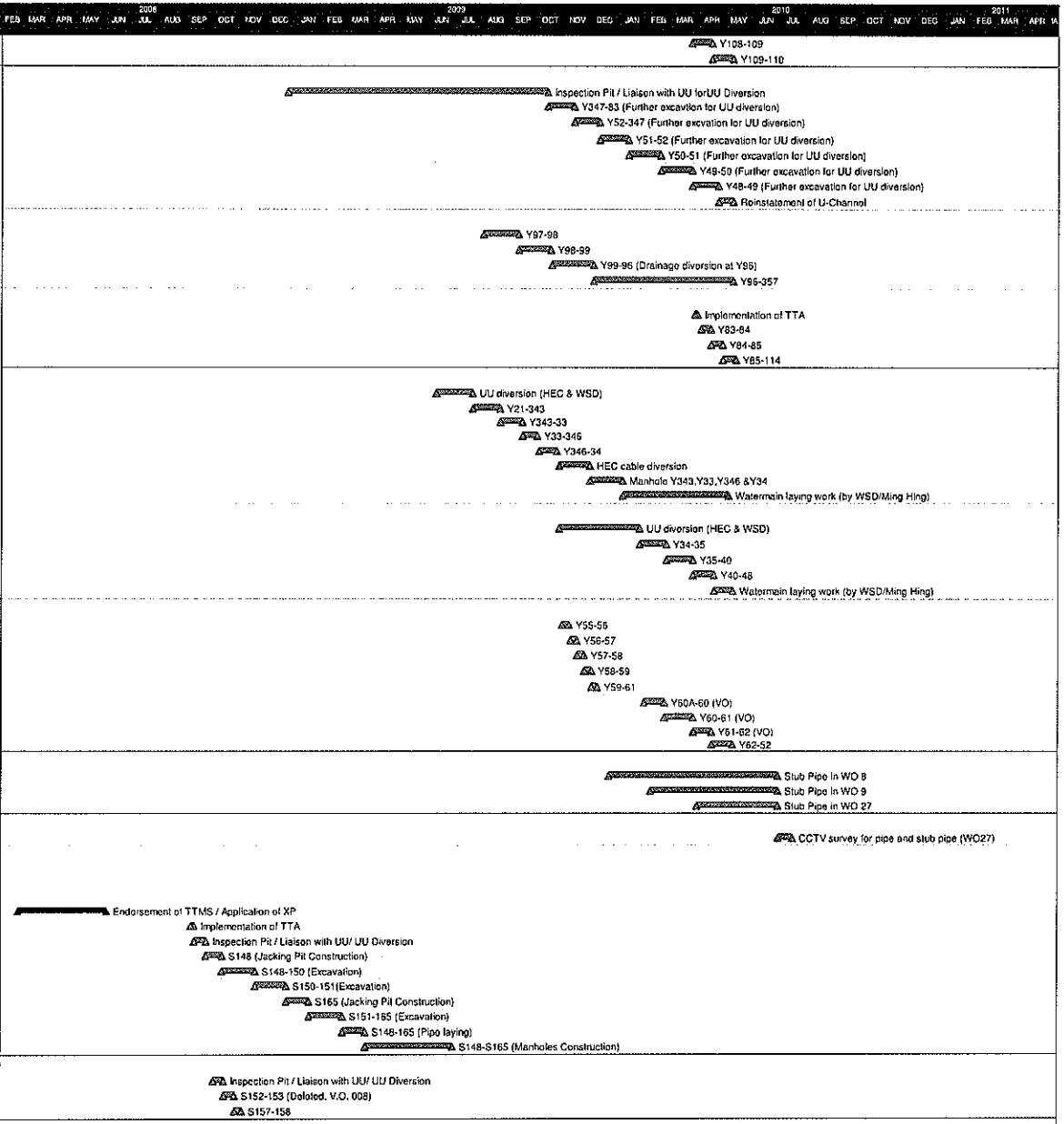
MS1580	Y108-109	20	25 MAR 10	25 MAR 10	16 APR 10	16 APR 10	0
MS1730	Y109-110	20	17 APR 10	17 APR 10	10 MAY 10	10 MAY 10 *	0
Y48-Y49-Y50-Y51-Y52-Y347-Y83							
PW2649	Inspection Pit / Liaison with UU forUU Diversion	215	25 DEC 08 *	25 DEC 08	13 OCT 09	13 OCT 09	0
PW2650	Y347-83 (Further excavtion for UU diversion)	25	14 OCT 09	14 OCT 09	12 NOV 09	12 NOV 09	0
PW2720	Y52-347 (Further excvation for UU diversion)	25	13 NOV 09	13 NOV 09	11 DEC 09	11 DEC 09	0
PW2730	Y51-52 (Further excavation for UU diversion)	25	12 DEC 09	12 DEC 09	12 JAN 10	12 JAN 10	0
PW2740	Y50-51 (Further excavation for UU diversion)	25	13 JAN 10	13 JAN 10	17 FEB 10	17 FEB 10	0
PW2750	Y49-50 (Further excavation for UU diversion)	25	18 FEB 10	18 FEB 10	25 MAR 10	25 MAR 10	0
PW2760	Y48-49 (Further excavation for UU diversion)	25	26 MAR 10	26 MAR 10	23 APR 10	23 APR 10	0
PW3230	Reinstatement of U-Channel	14	24 APR 10	24 APR 10	10 MAY 10	10 MAY 10 *	0
Y97 - Y99 - Y96 - Y357							
PW3130	Y97-98	29	03 AUG 09 *	03 AUG 09	11 SEP 09	11 SEP 09	0
PW3140	Y98-99	29	12 SEP 09	12 SEP 09	17 OCT 09	17 OCT 09	0
PW3150	Y99-96 (Drainage diversion at Y96)	40	19 OCT 09	19 OCT 09	04 DEC 09	04 DEC 09	0
PW3210	Y96-357	120	05 DEC 09	05 DEC 09	10 MAY 10	10 MAY 10 *	0
Y83-Y84-Y85-Y114							
PW1499	Implementation of TTA	3	29 MAR 10 *	29 MAR 10	31 MAR 10	31 MAR 10 *	0
PW1510	Y83-84	10	05 APR 10 *	05 APR 10	15 APR 10	15 APR 10	0
PW1520	Y84-85	11	16 APR 10	16 APR 10	28 APR 10	28 APR 10	0
PW1530	Y85-114	13	29 APR 10 *	29 APR 10	13 MAY 10	13 MAY 10	0
Y21-Y343-Y33-Y346-Y34							
PW2339	UU diversion (HEC & WSD)	25	11 JUN 09 *	11 JUN 09	21 JUL 09	21 JUL 09	0
PW2400	Y21-343	21	22 JUL 09	22 JUL 09	21 AUG 09	21 AUG 09	0
PW2660	Y343-33	21	22 AUG 09	22 AUG 09	15 SEP 09	15 SEP 09	0
PW2670	Y33-346	14	16 SEP 09	16 SEP 09	02 OCT 09	02 OCT 09	0
PW3190	Y346-34	18	05 OCT 09	05 OCT 09	24 OCT 09	24 OCT 09	0
PW3200	HEC cable diversion	30	27 OCT 09	27 OCT 09	30 NOV 09	30 NOV 09 *	0
PW2349	Manhole Y343,Y33,Y346 &Y34	30	01 DEC 09	01 DEC 09	06 JAN 10	06 JAN 10 *	0
PW2359	Watermain laying work (by WSD/Ming Hing)	90	07 JAN 10	07 JAN 10	05 MAY 10	05 MAY 10 *	0
Y34-Y35-Y40-Y48							
PW2690	UU diversion (HEC & WSD)	76	27 OCT 09	27 OCT 09	25 JAN 10	25 JAN 10	0
PW2700	Y34-35	20	26 JAN 10	26 JAN 10	24 FEB 10	24 FEB 10	0
PW2710	Y35-40	20	25 FEB 10	25 FEB 10	26 MAR 10	26 MAR 10	0
PW2770	Y40-48	20	27 MAR 10	27 MAR 10	19 APR 10	19 APR 10	0
PW3020	Watermain laying work (by WSD/Ming Hing)	18	20 APR 10	20 APR 10	10 MAY 10	10 MAY 10 *	0
Y55-Y59, Y60-Y52, Y75,Y76 & Y79							
PW2850	Y55-56	7	31 OCT 09 *	31 OCT 09	07 NOV 09	07 NOV 09	0
PW2860	Y56-57	7	09 NOV 09	09 NOV 09	16 NOV 09	16 NOV 09	0
PW2870	Y57-58	7	17 NOV 09	17 NOV 09	24 NOV 09	24 NOV 09	0
PW2880	Y58-59	7	25 NOV 09	25 NOV 09	02 DEC 09	02 DEC 09	0
PW2890	Y59-61	7	03 DEC 09	03 DEC 09	09 DEC 09	09 DEC 09 *	0
PW2900	Y60A-60 (VO)	23	31 JAN 10 *	31 JAN 10	22 FEB 10	22 FEB 10	0
PW2910	Y60-61 (VO)	23	23 FEB 10	23 FEB 10	27 MAR 10	27 MAR 10 *	0
PW2920	Y61-62 (VO)	20	28 MAR 10	28 MAR 10	16 APR 10	16 APR 10	0
PW2930	Y62-52	20	17 APR 10	17 APR 10	10 MAY 10	10 MAY 10 *	0
WO 34 - YSW (Stub Pipe in WO8, 9 and 27)							
PW1570	Stub Pipe in WO 8	149	23 DEC 09	23 DEC 09	30 JUN 10	30 JUN 10 *	0
PW1580	Stub Pipe in WO 9	117	08 FEB 10 *	08 FEB 10	30 JUN 10	30 JUN 10 *	0
PW1590	Stub Pipe in WO 27	78	01 APR 10 *	01 APR 10	30 JUN 10	30 JUN 10	0
CCTV Survey for pipe and stub pipe (WO27)							
PW1600	CCTV survey for pipe and stub pipe (WO27)	14	01 JUL 10 *	01 JUL 10	16 JUL 10	16 JUL 10 *	0
SOK KWU WAN							
WO 006 (S148-S165 Trenchless and SKW2nd St.)							
S148-S165 Trenchless							
MT4707	Endorsement of TTMS / Application of XP	0	26 FEB 08 A	26 FEB 08	04 JUN 08	04 JUN 08 A	
MT4708	Implementation of TTA	4	08 SEP 08 *	08 SEP 08	11 SEP 08	11 SEP 08	0
MT4709	Inspection Pit / Liaison with UU/ UU Diversion	7	12 SEP 08 *	12 SEP 08	25 SEP 08	25 SEP 08	0
MT4710	S148 (Jacking Pit Construction)	15	25 SEP 08 *	25 SEP 08	13 OCT 08	13 OCT 08	0
MT4711	S148-150 (Excavation)	33	13 OCT 08	13 OCT 08	19 NOV 08	19 NOV 08	0
MT4721	S150-151(Excavation)	30	20 NOV 08	20 NOV 08	24 DEC 08	24 DEC 08	0
MT4730	S165 (Jacking Pit Construction)	21	25 DEC 08	25 DEC 08	19 JAN 09	19 JAN 09	0
MT4731	S151-165 (Excavation)	30	20 JAN 09	20 JAN 09	26 FEB 09	26 FEB 09	0
MT4820	S148-165 (Pipe laying)	21	27 FEB 09	27 FEB 09	23 MAR 09	23 MAR 09	0
MT4830	S148-S165 (Manholes Construction)	71	24 MAR 09	24 MAR 09	30 JUN 09	30 JUN 09	0
S157-S162- End, S152-S153-End							
MT4739	Inspection Pit / Liaison with UU/ UU Diversion	10	04 OCT 08 *	04 OCT 08	15 OCT 08	15 OCT 08	0
MT4740	S152-153 (Deleted, V.O. 008)	10	16 OCT 08	16 OCT 08	27 OCT 08	27 OCT 08	0
MT4750	S157-158	7	28 OCT 08	28 OCT 08	04 NOV 08	04 NOV 08	0



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Finish Date 30 JUN 10

Page : 8A

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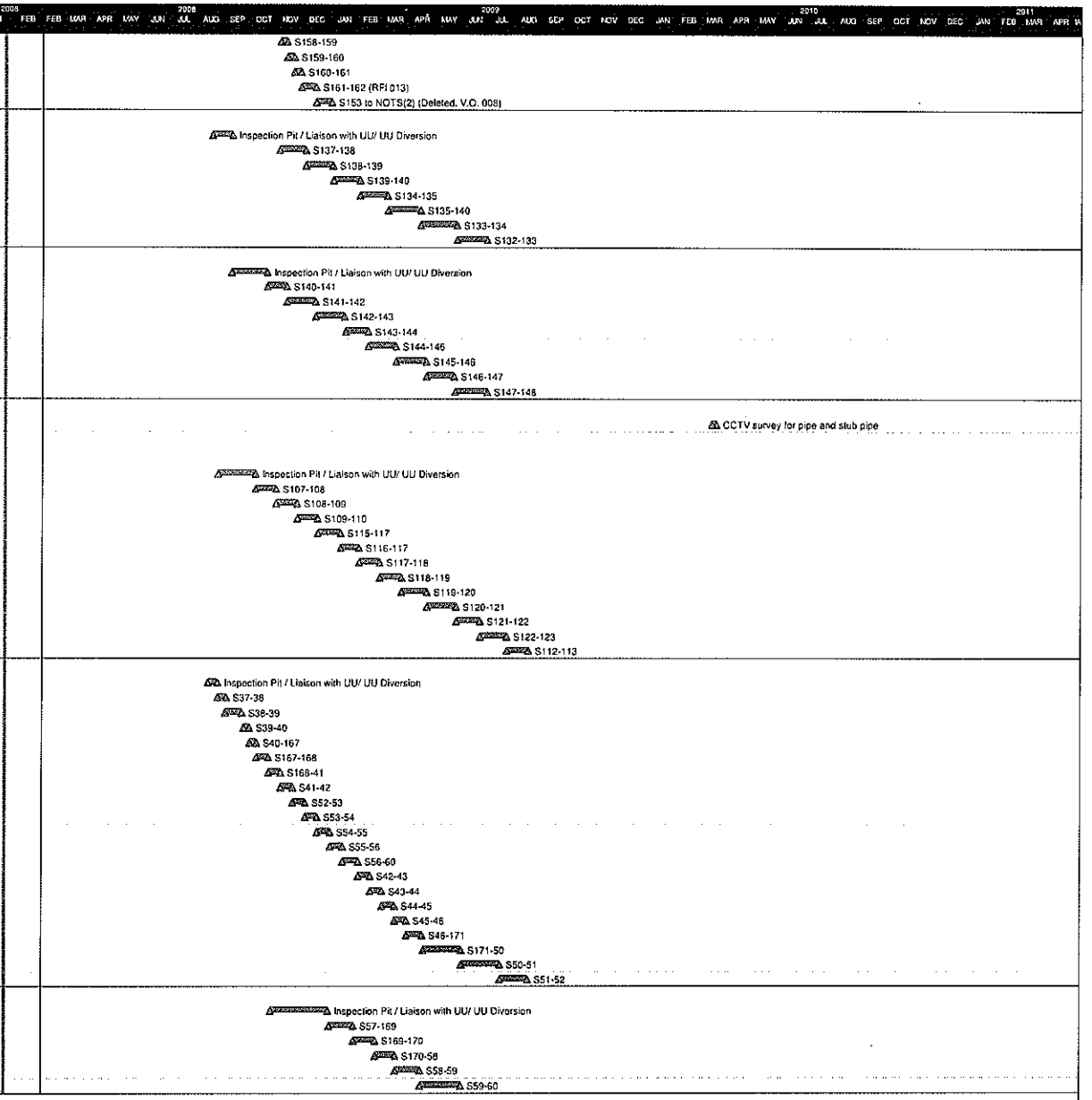
MT4760	S158-159	7	05 NOV 08 *	05 NOV 08	12 NOV 08	12 NOV 08	0
MT4770	S159-160	7	13 NOV 08 *	13 NOV 08	20 NOV 08	20 NOV 08	0
MT4780	S160-161	7	21 NOV 08 *	21 NOV 08	28 NOV 08	28 NOV 08	0
MT4790	S161-162 (RFI 013)	14	29 NOV 08	29 NOV 08	15 DEC 08	15 DEC 08	0
MT4810	S153 to NOTS(2) (Deleted, V.O. 008)	15	16 DEC 08	16 DEC 08	02 JAN 09	02 JAN 09 *	0
S132-S140							
SS4810	Inspection Pit / Liaison with UU/ UU Diversion	15	19 AUG 08 *	19 AUG 08	10 SEP 08	10 SEP 08	0
SS4870	S137-138	26	04 NOV 08 *	04 NOV 08	03 DEC 08	03 DEC 08	0
SS4880	S138-139	26	04 DEC 08	04 DEC 08	03 JAN 09	03 JAN 09	0
SS4890	S139-140	23	05 JAN 09	05 JAN 09	03 FEB 09	03 FEB 09	0
SS4840	S134-135	28	04 FEB 09	04 FEB 09	07 MAR 09	07 MAR 09	0
SS4850	S135-140	28	09 MAR 09	09 MAR 09	14 APR 09	14 APR 09	0
SS4830	S133-134	28	15 APR 09	15 APR 09	26 MAY 09	26 MAY 09	0
SS4820	S132-133	28	27 MAY 09	27 MAY 09	30 JUN 09	30 JUN 09	0
S140-S148							
SS4899	Inspection Pit / Liaison with UU/ UU Diversion	30	10 SEP 08 *	10 SEP 08	20 OCT 08	20 OCT 08	0
SS4900	S140-141	20	21 OCT 08	21 OCT 08	12 NOV 08	12 NOV 08	0
SS4910	S141-142	28	13 NOV 08	13 NOV 08	15 DEC 08	15 DEC 08	0
SS4920	S142-143	28	16 DEC 08	16 DEC 08	17 JAN 09	17 JAN 09	0
SS4930	S143-144	20	19 JAN 09	19 JAN 09	13 FEB 09	13 FEB 09	0
SS4940	S144-146	27	14 FEB 09	14 FEB 09	17 MAR 09	17 MAR 09	0
SS4950	S145-146	26	18 MAR 09	18 MAR 09	21 APR 09	21 APR 09	0
SS4960	S146-147	20	22 APR 09	22 APR 09	23 MAY 09	23 MAY 09	0
SS4970	S147-148	30	25 MAY 09	25 MAY 09	30 JUN 09	30 JUN 09	0
CCTV Survey for pipe and stub pipe							
SS5000	CCTV survey for pipe and stub pipe	5	15 MAR 10 *	15 MAR 10	19 MAR 10	19 MAR 10 *	0
WO 010 (SKW 3rd Branches & CM S37-S60-S57)							
S107-S110,S115-S123,S112-S113							
SS5110	Inspection Pit / Liaison with UU/ UU Diversion	30	26 AUG 08 *	26 AUG 08	07 OCT 08	07 OCT 08	0
SS5120	S107-108	21	09 OCT 08	08 OCT 08	31 OCT 08	31 OCT 08	0
SS5130	S108-109	20	01 NOV 08 *	01 NOV 08	24 NOV 08	24 NOV 08	0
SS5140	S109-110	21	25 NOV 08	25 NOV 08	18 DEC 08	18 DEC 08	0
SS5150	S115-117	21	19 DEC 08 *	19 DEC 08	13 JAN 09	13 JAN 09	0
SS5160	S116-117	15	14 JAN 09 *	14 JAN 09	03 FEB 09	03 FEB 09	0
SS5170	S117-118	21	04 FEB 09	04 FEB 09	27 FEB 09	27 FEB 09	0
SS5180	S118-119	21	28 FEB 09	28 FEB 09	24 MAR 09	24 MAR 09	0
SS5190	S119-120	21	25 MAR 09	25 MAR 09	22 APR 09	22 APR 09	0
SS5200	S120-121	21	23 APR 09	23 APR 09	26 MAY 09	26 MAY 09	0
SS5210	S121-122	21	27 MAY 09	27 MAY 09	22 JUN 09	22 JUN 09	0
SS5220	S122-123	17	23 JUN 09	23 JUN 09	23 JUL 09	23 JUL 09	0
SS5230	S112-113	15	24 JUL 09	24 JUL 09	17 AUG 09	17 AUG 09	0
S37-S60							
CM5859	Inspection Pit / Liaison with UU/ UU Diversion	7	15 AUG 08 *	15 AUG 08	25 AUG 08	25 AUG 08	0
CM5860	S37-38	7	26 AUG 08	26 AUG 08	04 SEP 08	04 SEP 08	0
CM5870	S38-39	12	04 SEP 08	04 SEP 08	22 SEP 08	22 SEP 08	0
CM5880	S39-40	6	25 SEP 08	25 SEP 08	01 OCT 08	01 OCT 08	0
CM5890	S40-167	7	02 OCT 08	02 OCT 08	09 OCT 08	09 OCT 08	0
CM5900	S167-168	12	10 OCT 08	10 OCT 08	23 OCT 08	23 OCT 08	0
CM5910	S168-41	12	24 OCT 08	24 OCT 08	06 NOV 08	06 NOV 08	0
CM5920	S41-42	12	07 NOV 08	07 NOV 08	20 NOV 08	20 NOV 08	0
CM5983	S52-53	12	21 NOV 08	21 NOV 08	04 DEC 08	04 DEC 08	0
CM5984	S53-54	12	05 DEC 08	05 DEC 08	18 DEC 08	18 DEC 08	0
CM5990	S54-55	12	19 DEC 08	19 DEC 08	02 JAN 09	02 JAN 09	0
CM6000	S55-56	12	03 JAN 09	03 JAN 09	16 JAN 09	16 JAN 09	0
CM6010	S56-60	12	17 JAN 09	17 JAN 09	03 FEB 09	03 FEB 09	0
CM5930	S42-43	12	04 FEB 09	04 FEB 09	17 FEB 09	17 FEB 09	0
CM5940	S43-44	12	18 FEB 09	18 FEB 09	03 MAR 09	03 MAR 09	0
CM5950	S44-45	12	04 MAR 09	04 MAR 09	17 MAR 09	17 MAR 09	0
CM5960	S45-46	12	18 MAR 09	18 MAR 09	31 MAR 09	31 MAR 09	0
CM5970	S46-171	12	01 APR 09	01 APR 09	18 APR 09	18 APR 09	0
CM5980	S171-50	28	20 APR 09	20 APR 09	02 JUN 09	02 JUN 09	0
CM5981	S50-51	28	03 JUN 09	03 JUN 09	16 JUL 09	16 JUL 09	0
CM5982	S51-52	21	17 JUL 09	17 JUL 09	17 AUG 09	17 AUG 09	0
S57-S60 & Clearance of Squattered Huts							
CM6069	Inspection Pit / Liaison with UU/ UU Diversion	57	27 OCT 08 *	27 OCT 08	31 DEC 08	31 DEC 08	0
CM6070	S57-169	21	02 JAN 09	02 JAN 09	29 JAN 09	29 JAN 09	0
CM6080	S169-170	21	30 JAN 09	30 JAN 09	23 FEB 09	23 FEB 09	0
CM6090	S170-58	20	24 FEB 09	24 FEB 09	18 MAR 09	18 MAR 09	0
CM6100	S58-59	21	19 MAR 09	19 MAR 09	16 APR 09	16 APR 09	0
CM6110	S59-60	30	17 APR 09	17 APR 09	02 JUN 09	02 JUN 09	0



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DC/2007/18
Yung Shue Wan and Sok Kwu Wan Village Sewerage, Stage 1 Works
Project Programme Rev. 8

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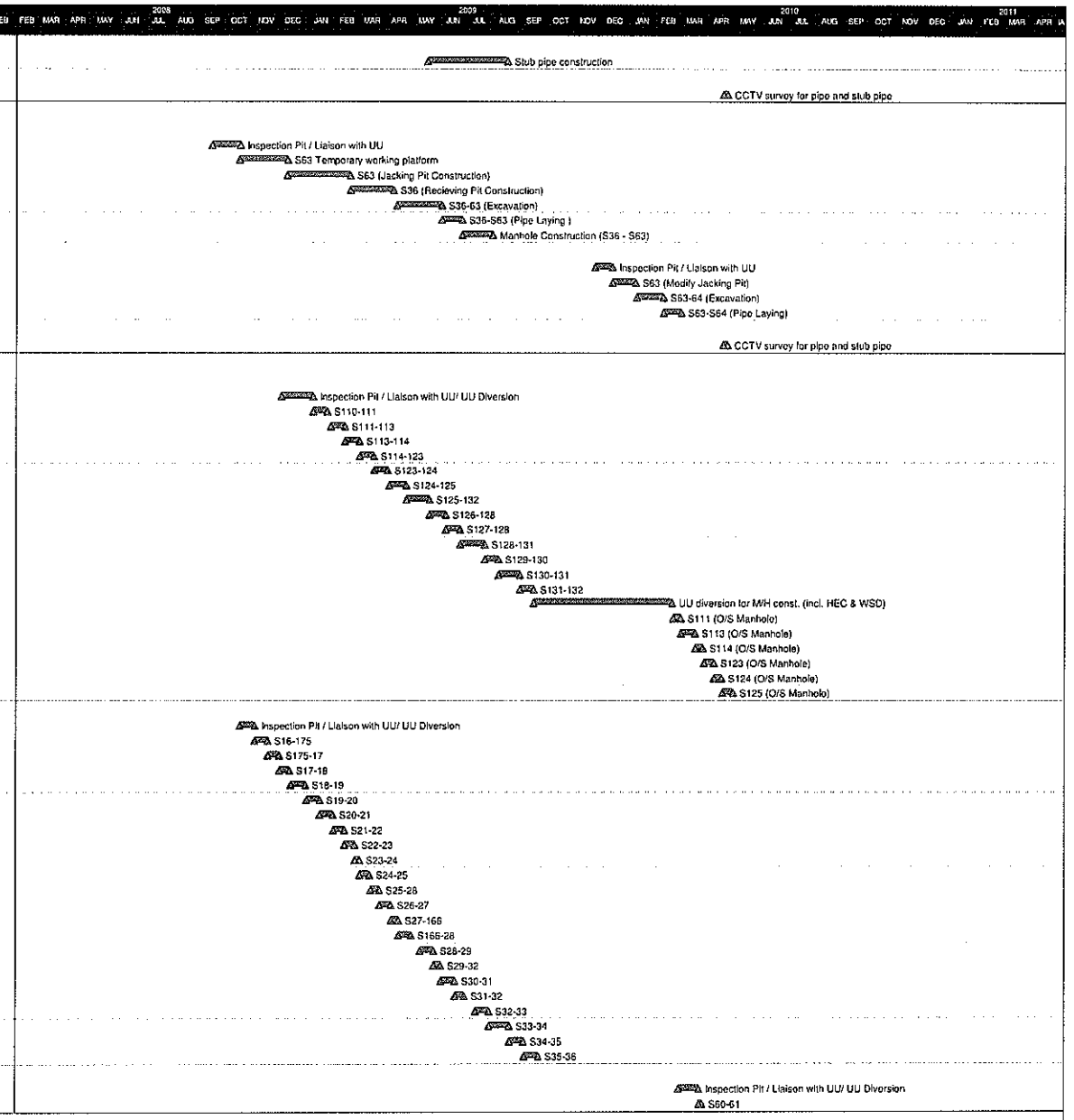
Act ID	Activity Description	Rem Dura	Early Start	Late Start	Early Finish	Late Finish	Total Float
Stub pipe construction							
CM6200	Stub pipe construction	60	19 MAY 09	19 MAY 09	17 AUG 09	17 AUG 09	0
CCTV survey for pipe and stub pipe							
CM6240	CCTV survey for pipe and stub pipe	5	19 APR 10 *	19 APR 10	23 APR 10	23 APR 10 *	0
WO 015 (Trenchless S36-S70)							
S36-S63 , S36A-S63A (Trenchless)							
CM6209	Inspection Pit / Liaison with UU	23	16 SEP 08 *	16 SEP 08	17 OCT 08	17 OCT 08	1d
CM6210	S63 Temporary working platform	46	17 OCT 08	18 OCT 08	10 DEC 08	10 DEC 08	1d
CM6212	S63 (Jacking Pit Construction)	70	10 DEC 08	11 DEC 08	19 FEB 09	19 FEB 09	1d
CM6213	S36 (Recieving Pit Construction)	41	20 FEB 09 *	20 FEB 09	09 APR 09	09 APR 09	0
CM6220	S36-63 (Excavation)	34	14 APR 09	14 APR 09	03 JUN 09	03 JUN 09	0
CM6270	S36-S63 (Pipe Laying)	20	04 JUN 09 *	04 JUN 09	26 JUN 09	26 JUN 09	0
CM6280	Manhole Construction (S36 - S63)	20	27 JUN 09 *	27 JUN 09	31 JUL 09	31 JUL 09 *	0
S36-S64 (Trenchless)							
CM6229	Inspection Pit / Liaison with UU	17	25 NOV 09 *	25 NOV 09	14 DEC 09	14 DEC 09	0
CM6231	S63 (Modify Jacking Pit)	21	15 DEC 09	15 DEC 09	09 JAN 10	09 JAN 10	0
CM6239	S63-64 (Excavation)	21	11 JAN 10	11 JAN 10	10 FEB 10	10 FEB 10	0
CM6290	S63-S64 (Pipe Laying)	17	11 FEB 10	11 FEB 10	02 MAR 10	02 MAR 10	0
CCTV survey for pipe and stub pipe							
CM6300	CCTV survey for pipe and stub pipe	5	19 APR 10 *	19 APR 10	23 APR 10	23 APR 10 *	0
WO 017 (SKW2nd to 3rd St & CM & S64-S70)							
S110-S132,S127-S132							
SS4979	Inspection Pit / Liaison with UU/ UU Diversion	30	04 DEC 08 *	04 DEC 08	08 JAN 09	08 JAN 09	0
SS4980	S110-111	14	09 JAN 09 *	09 JAN 09	24 JAN 09	24 JAN 09	0
SS4990	S111-113	14	29 JAN 09	29 JAN 09	13 FEB 09	13 FEB 09	0
SS5010	S113-114	14	14 FEB 09	14 FEB 09	02 MAR 09	02 MAR 09	0
SS5020	S114-123	14	03 MAR 09	03 MAR 09	18 MAR 09	18 MAR 09	0
SS5030	S123-124	14	19 MAR 09	19 MAR 09	03 APR 09	03 APR 09	0
SS5040	S124-125	14	06 APR 09	06 APR 09	24 APR 09	24 APR 09	0
SS5050	S125-132	14	25 APR 09	25 APR 09	20 MAY 09	20 MAY 09	0
SS5060	S126-128	14	21 MAY 09	21 MAY 09	08 JUN 09	08 JUN 09	0
SS5070	S127-128	14	09 JUN 09	09 JUN 09	24 JUN 09	24 JUN 09	0
SS5080	S128-131	14	25 JUN 09	25 JUN 09	22 JUL 09	22 JUL 09	0
SS5090	S129-130	14	23 JUL 09	23 JUL 09	07 AUG 09	07 AUG 09	0
SS5100	S130-131	14	08 AUG 09	08 AUG 09	31 AUG 09	31 AUG 09	0
SS5110	S131-132	14	01 SEP 09	01 SEP 09	16 SEP 09	16 SEP 09	0
SS5390	UU diversion for M/H const. (incl. HEC & WSD)	124	17 SEP 09	17 SEP 09	20 FEB 10	20 FEB 10	0
SS5410	S111 (O/S Manhole)	8	22 FEB 10 *	22 FEB 10	02 MAR 10	02 MAR 10	0
SS5420	S113 (O/S Manhole)	8	03 MAR 10	03 MAR 10	18 MAR 10	18 MAR 10	0
SS5430	S114 (O/S Manhole)	8	19 MAR 10 *	19 MAR 10	27 MAR 10	27 MAR 10	0
SS5440	S123 (O/S Manhole)	10	29 MAR 10	29 MAR 10	08 APR 10	08 APR 10	0
SS5450	S124 (O/S Manhole)	8	09 APR 10	09 APR 10	17 APR 10	17 APR 10	0
SS5460	S125 (O/S Manhole)	11	19 APR 10	19 APR 10	30 APR 10	30 APR 10	0
S16-S36							
CM5639	Inspection Pit / Liaison with UU/ UU Diversion	14	18 OCT 08 *	18 OCT 08	03 NOV 08	03 NOV 08	0
CM5640	S16-175	13	04 NOV 08	04 NOV 08	18 NOV 08	18 NOV 08	0
CM5650	S175-17	11	19 NOV 08	19 NOV 08	01 DEC 08	01 DEC 08	0
CM5660	S17-18	11	02 DEC 08	02 DEC 08	13 DEC 08	13 DEC 08	0
CM5670	S18-19	15	15 DEC 08	15 DEC 08	31 DEC 08	31 DEC 08	0
CM5680	S19-20	13	02 JAN 09	02 JAN 09	16 JAN 09	16 JAN 09	0
CM5690	S20-21	10	17 JAN 09	17 JAN 09	31 JAN 09	31 JAN 09	0
CM5700	S21-22	11	02 FEB 09	02 FEB 09	13 FEB 09	13 FEB 09	0
CM5710	S22-23	10	14 FEB 09	14 FEB 09	25 FEB 09	25 FEB 09	0
CM5720	S23-24	5	26 FEB 09	26 FEB 09	03 MAR 09	03 MAR 09	0
CM5730	S24-25	10	04 MAR 09	04 MAR 09	14 MAR 09	14 MAR 09	0
CM5740	S25-26	9	16 MAR 09	16 MAR 09	25 MAR 09	25 MAR 09	0
CM5750	S26-27	10	26 MAR 09	26 MAR 09	07 APR 09	07 APR 09	0
CM5760	S27-166	5	08 APR 09	08 APR 09	16 APR 09	16 APR 09	0
CM5770	S166-28	12	17 APR 09	17 APR 09	30 APR 09	30 APR 09	0
CM5780	S28-29	14	11 MAY 09 *	11 MAY 09	26 MAY 09	26 MAY 09	0
CM5790	S29-32	5	27 MAY 09	27 MAY 09	03 JUN 09	03 JUN 09	0
CM5800	S30-31	14	04 JUN 09	04 JUN 09	19 JUN 09	19 JUN 09	0
CM5810	S31-32	9	20 JUN 09	20 JUN 09	30 JUN 09	30 JUN 09	0
CM5820	S32-33	14	13 JUL 09	13 JUL 09	28 JUL 09	28 JUL 09	0
CM5830	S33-34	14	29 JUL 09	29 JUL 09	20 AUG 09	20 AUG 09	0
CM5840	S34-35	14	21 AUG 09	21 AUG 09	05 SEP 09	05 SEP 09	0
CM5850	S35-36	14	07 SEP 09	07 SEP 09	22 SEP 09	22 SEP 09 *	0
S60-S70, Incl remove AC at S67-S68							
CM6119	Inspection Pit / Liaison with UU/ UU Diversion	14	01 MAR 10 *	01 MAR 10	23 MAR 10	23 MAR 10	0
CM6120	S60-61	4	24 MAR 10	24 MAR 10	27 MAR 10	27 MAR 10	0



Start Date 31 JAN 08
Finish Date 30 JUN 10

Page : 10A

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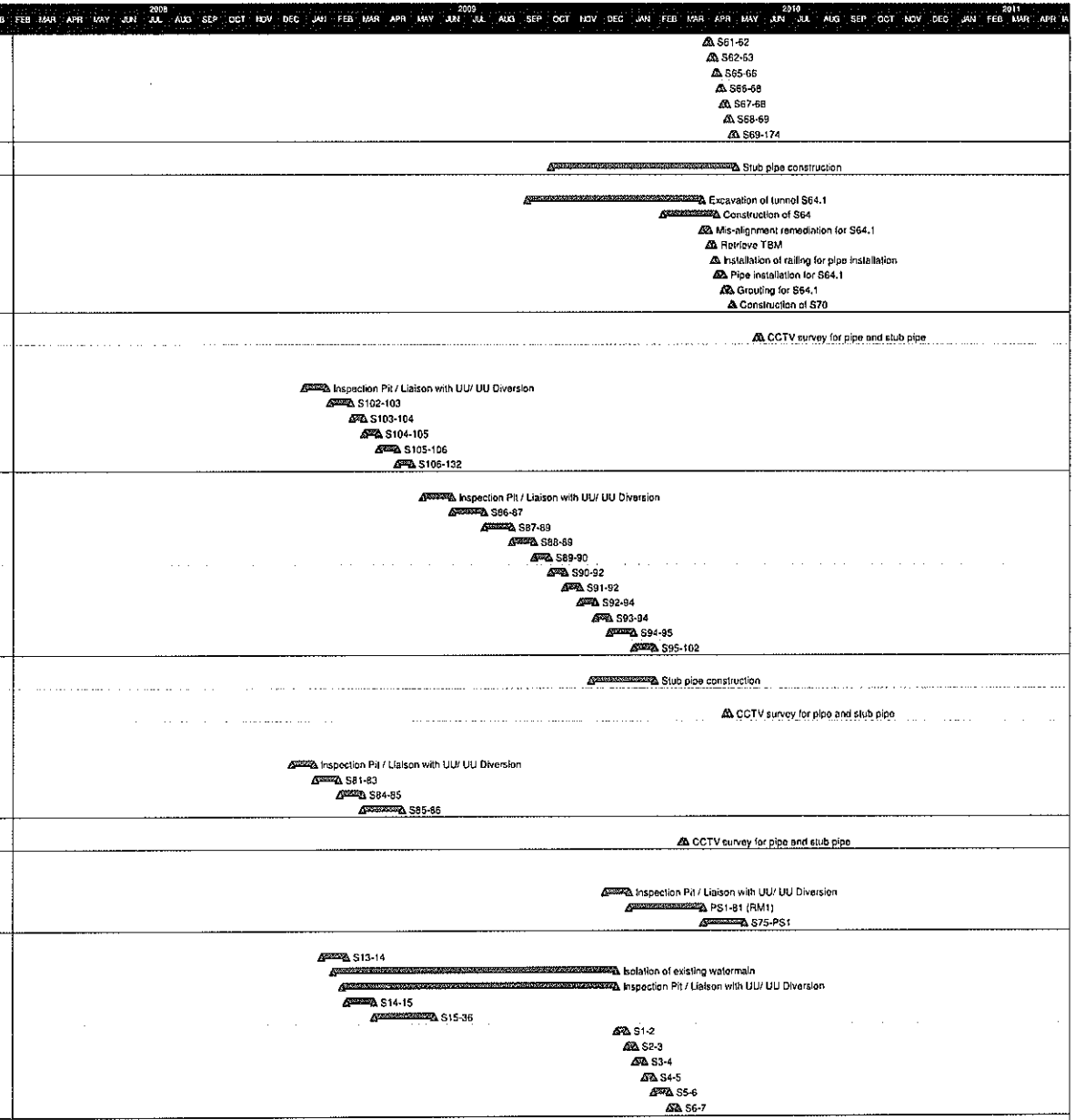
CM6130	S61-62	4	29 MAR 10	29 MAR 10	01 APR 10	01 APR 10	0
CM6140	S62-63	4	02 APR 10	02 APR 10	06 APR 10	06 APR 10	0
CM6150	S65-66	4	07 APR 10	07 APR 10	10 APR 10	10 APR 10	0
CM6160	S66-68	4	12 APR 10	12 APR 10	15 APR 10	15 APR 10	0
CM6170	S67-68	4	16 APR 10	16 APR 10	20 APR 10	20 APR 10	0
CM6180	S68-69	4	21 APR 10	21 APR 10	24 APR 10	24 APR 10	0
CM6190	S69-174	5	26 APR 10	26 APR 10	30 APR 10	30 APR 10	0
Stub pipe construction							
CM6230	Stub pipe construction	164	05 OCT 09 *	05 OCT 09	30 APR 10	30 APR 10	0
S64, S64.1 & S70 (Original in WO15)							
CM6380	Excavation of tunnel S64.1	152	08 SEP 09 *	08 SEP 09	23 MAR 10	23 MAR 10	0
CM6370	Construction of S64	46	08 FEB 10 *	08 FEB 10	08 APR 10	08 APR 10	0
CM6390	Mis-alignment remediation for S64.1	7	24 MAR 10	24 MAR 10	31 MAR 10	31 MAR 10	0
CM6400	Retrieve TBM	4	01 APR 10	01 APR 10	05 APR 10	05 APR 10	0
CM6410	Installation of railing for pipe installation	3	06 APR 10	06 APR 10	08 APR 10	08 APR 10	0
CM6420	Pipe installation for S64.1	7	09 APR 10	09 APR 10	16 APR 10	16 APR 10	0
CM6430	Grouting for S64.1	7	17 APR 10	17 APR 10	24 APR 10	24 APR 10	0
CM6440	Construction of S70	2	26 APR 10	26 APR 10	27 APR 10	27 APR 10 *	0
CCTV survey for pipe and stub pipe							
CM6450	CCTV survey for pipe and stub pipe	5	24 MAY 10 *	24 MAY 10	28 MAY 10	28 MAY 10 *	0
WO 20							
S102-S106-S132 Incl remove AC							
SS5139	Inspection Pit / Liaison with UU/ UU Diversion	21	31 DEC 08	31 DEC 08	24 JAN 09	24 JAN 09	0
SS5240	S102-103	21	29 JAN 09	29 JAN 09	21 FEB 09	21 FEB 09	0
SS5250	S103-104	12	23 FEB 09	23 FEB 09	07 MAR 09	07 MAR 09	0
SS5260	S104-105	14	09 MAR 09	09 MAR 09	24 MAR 09	24 MAR 09	0
SS5270	S105-106	14	25 MAR 09	25 MAR 09	14 APR 09	14 APR 09	0
SS5280	S106-132	14	15 APR 09	15 APR 09	30 APR 09	30 APR 09 *	0
S86-S102, S96-S102 Incl remove AC							
SS5289	Inspection Pit / Liaison with UU/ UU Diversion	26	14 MAY 09 *	14 MAY 09	15 JUN 09	15 JUN 09	0
SS5290	S96-87	21	16 JUN 09	16 JUN 09	21 JUL 09	21 JUL 09	0
SS5300	S87-89	21	22 JUL 09	22 JUL 09	21 AUG 09	21 AUG 09	0
SS5310	S88-89	21	22 AUG 09	22 AUG 09	15 SEP 09	15 SEP 09	0
SS5320	S89-90	14	16 SEP 09	16 SEP 09	02 OCT 09	02 OCT 09	0
SS5330	S90-92	14	05 OCT 09	05 OCT 09	20 OCT 09	20 OCT 09	0
SS5340	S91-92	14	21 OCT 09	21 OCT 09	06 NOV 09	06 NOV 09	0
SS5350	S92-94	14	07 NOV 09	07 NOV 09	23 NOV 09	23 NOV 09	0
SS5360	S93-94	14	24 NOV 09	24 NOV 09	09 DEC 09	09 DEC 09	0
SS5370	S94-95	21	10 DEC 09	10 DEC 09	05 JAN 10	05 JAN 10	0
SS5380	S95-102	21	06 JAN 10	06 JAN 10	29 JAN 10	29 JAN 10	0
Stub pipe construction							
CM5390	Stub pipe construction	60	19 NOV 09	19 NOV 09	29 JAN 10	29 JAN 10	0
CCTV survey for pipe and stub pipe							
CM5400	CCTV survey for pipe and stub pipe	5	19 APR 10 *	19 APR 10	23 APR 10	23 APR 10 *	0
WO 023 SKW Tin Hau Temple							
S81-S86 Incl removal of AC Pipe							
TH5419	Inspection Pit / Liaison with UU/ UU Diversion	21	17 DEC 08 *	17 DEC 08	10 JAN 09	10 JAN 09	0
TH5420	S81-83	21	12 JAN 09	12 JAN 09	07 FEB 09	07 FEB 09	0
TH5450	S84-85	23	09 FEB 09	09 FEB 09	06 MAR 09	06 MAR 09	0
TH5460	S85-86	34	07 MAR 09	07 MAR 09	20 APR 09	20 APR 09	0
CCTV survey for pipe and stub pipe							
TH5490	CCTV survey for pipe and stub pipe	5	01 MAR 10 *	01 MAR 10	05 MAR 10	05 MAR 10 *	0
WO 026 (CM S1-S36, S70-S75, S78-S81, Rising Main							
Twin DN150 Rising Main							
TH5469	Inspection Pit / Liaison with UU/ UU Diversion	21	05 DEC 09 *	05 DEC 09	31 DEC 09	31 DEC 09	0
TH5470	PS1-81 (RM1)	60	01 JAN 10 *	01 JAN 10	25 MAR 10	25 MAR 10	0
TH5480	S75-PS1	39	26 MAR 10	26 MAR 10	10 MAY 10	10 MAY 10	0
S1-S15-S36 Incl removal of AC Pipe							
CM5610	S13-14	21	20 JAN 09 *	20 JAN 09	16 FEB 09	16 FEB 09	0
CM6020	Isolation of existing watermain	241	02 FEB 09 *	02 FEB 09	17 DEC 09	17 DEC 09	0
CM5489	Inspection Pit / Liaison with UU/ UU Diversion	232	12 FEB 09 *	12 FEB 09	17 DEC 09	17 DEC 09	0
CM5620	S14-15	27	17 FEB 09	17 FEB 09	19 MAR 09	19 MAR 09	0
CM5630	S15-36	46	20 MAR 09	20 MAR 09	26 MAY 09	26 MAY 09 *	0
CM5490	S1-2	8	18 DEC 09 *	18 DEC 09	29 DEC 09	29 DEC 09	0
CM5500	S2-3	8	30 DEC 09	30 DEC 09	07 JAN 10	07 JAN 10	0
CM5510	S3-4	9	08 JAN 10	08 JAN 10	18 JAN 10	18 JAN 10	0
CM5520	S4-5	9	19 JAN 10	19 JAN 10	28 JAN 10	28 JAN 10	0
CM5530	S5-6	9	29 JAN 10	29 JAN 10	15 FEB 10	15 FEB 10	0
CM5540	S6-7	9	16 FEB 10	16 FEB 10	25 FEB 10	25 FEB 10	0



Start Date 31 JAN 08
Finish Date 30 JUN 10

Page : 11A

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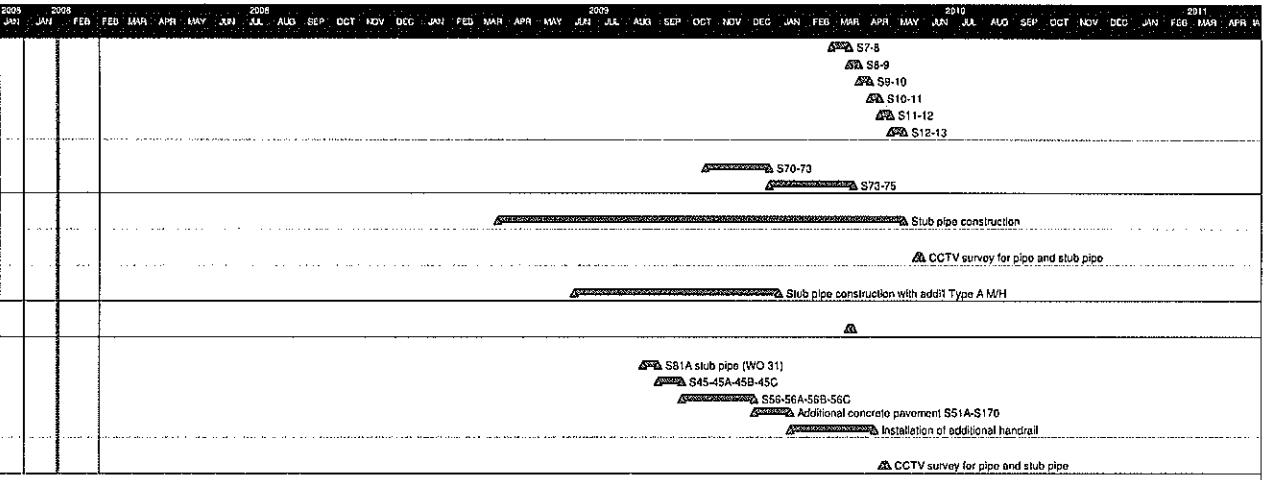
Act ID	Activity Description	Rem Dura	Early Start	Late Start	Early Finish	Late Finish	Total Float
CM5550	S7-8	9	26 FEB 10	26 FEB 10	15 MAR 10	15 MAR 10	0
CM5560	S8-9	9	16 MAR 10	16 MAR 10	25 MAR 10	25 MAR 10	0
CM5570	S9-10	9	26 MAR 10	26 MAR 10	05 APR 10	05 APR 10	0
CM5580	S10-11	9	06 APR 10	06 APR 10	15 APR 10	15 APR 10	0
CM5590	S11-12	9	16 APR 10	16 APR 10	26 APR 10	26 APR 10	0
CM5600	S12-13	12	27 APR 10	27 APR 10	10 MAY 10	10 MAY 10	0
S70-S75 (Trenchless)							
CM6250	S70-73	55	20 OCT 09 *	20 OCT 09	23 DEC 09	23 DEC 09	0
CM6260	S73-75	60	24 DEC 09	24 DEC 09	19 MAR 10	19 MAR 10 *	0
Stub pipe construction							
CM6360	Stub pipe construction	309	21 MAR 09	21 MAR 09	10 MAY 10	10 MAY 10	0
CCTV survey for pipe and stub pipe							
CM6460	CCTV survey for pipe and stub pipe	5	24 MAY 10 *	24 MAY 10	28 MAY 10	28 MAY 10 *	0
WO 029 Stub Pipe Construction (Original in WO 6)							
CM6310	Stub pipe construction with addit Type A M/H	159	08 JUN 09	08 JUN 09	02 JAN 10	02 JAN 10	0
CCTV survey for pipe and stub pipe							
CM6470		5	15 MAR 10 *	15 MAR 10	19 MAR 10	19 MAR 10 *	0
WO 031 Chung Mei & Tin Hau Temple							
TH5440	S81A stub pipe (WO 31)	14	17 AUG 09	17 AUG 09	01 SEP 09	01 SEP 09	0
CM6320	S45-45A-45B-45C	21	02 SEP 09	02 SEP 09	25 SEP 09	25 SEP 09	0
CM6330	S56-56A-56B-56C	60	26 SEP 09	26 SEP 09	08 DEC 09	08 DEC 09	0
CM6350	Additional concrete pavement S51A-S170	30	09 DEC 09	09 DEC 09	14 JAN 10	14 JAN 10	0
CM6340	Installation of additional handrail	62	15 JAN 10	15 JAN 10	10 APR 10	10 APR 10	0
CCTV survey for pipe and stub pipe							
CM6480	CCTV survey for pipe and stub pipe	5	19 APR 10 *	19 APR 10	23 APR 10	23 APR 10 *	0



Start Date 31 JAN 08
Finish Date 30 JUN 10

Page : 12A

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Appendix F

Summary of Implementation Status

of

Mitigation Measures during Site Inspection

Environmental Mitigation Implementation Schedule

Environmental Protection Measures	Location	Implementation Status			
		Implemented	Partially implemented	Not implemented	Not Applicable
Air Quality					
▪ Stockpiles of imported material kept on site should be contained within hoarding, dampened and / or covered during dry and windy weather.	All areas	√			
▪ Material stockpiled alongside trenches should be covered with tarpaulins whenever works are close to village houses.	All areas	√			
▪ Water sprays should be used during the delivery and handling of cement, sands, aggregates and the like.	All areas	√			
▪ Any vehicle used for moving sands, aggregates and construction waste should have properly fitting side and tail boards. Materials should not be loaded to a level higher than the side and tail boards, and should be covered by a clean tarpaulin.	All areas	√			
▪ Unpaved areas should be watered regularly to avoid dust generation.	Site Egress	√			
▪ The enclosures should be around the main dust-generating activities.	All areas	√			
▪ All plant and equipment should be well maintained e.g. without black smoke emission.	All areas	√			
▪ Open burning should be prohibited.	All areas	√			
Noise Impact					
▪ Quite powered mechanical equipment (PME) or method should be used.	All areas	√			
▪ The number plant should be restricted (1 item for each type of plant).	All areas	√			
▪ Only well maintained plant should be operated on-site and plant should be serviced regularly during the construction works.	All areas	√			
▪ Mobile plant, if any, should be sited as far away from NSRs as possible.	All areas	√			
▪ Machines and plants that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum.	All areas	√			
▪ Plant known to emit noise strongly should be orientated so that the noise is directed away from nearby NSRs.	All areas	√			
▪ The constructions works should be scheduled to minimize noise nuisance.	All areas	√			
▪ Air compressors and hand held breakers should have noise labels.	All areas	√			
▪ Compressors and generators should operate with door closed.	All areas	√			
Water Quality					
General Construction Works					
▪ Debris and rubbish generated on-site should be collected, handled and disposed of properly to avoid entering the nearby coastal water and stormwater drains.	All areas	√			
▪ Open drainage channels and culverts near the works areas should be covered to block the entrance of large debris and refuse.	All areas	√			
▪ Unnecessary water retained in receptacles and standing water should be avoided to prevent mosquito breeding.	All areas	√			

Environmental Protection Measures	Location	Implementation Status			
		Implemented	Partially implemented	Not implemented	Not Applicable
Waste Management					
General Site Wastes					
• Appropriate measures, such as transporting wastes in enclosed containers, should be taken to minimize windblown litter and dust to nearby environment.	All areas	√			
• Sufficient waste disposal points and regular waste collection for disposal should be provided.	All areas	√			
• A collection area for construction site waste should be provided where waste can be stored prior to removal form site.	All areas	√			
• Good site practices should be adopted to clean the rubbish and litter on a regular basis so as to prevent the rubbish and litter from dropping into the nearby environment.	All areas	√			
• Records of the quantities of waste generated, recycled and disposed should be kept and maintained.	All areas	√			
• Different types of waste should be segregated and stored in different container, skips or stockpiles to enhance reuse or recycling of material and their proper disposal.	All areas	√			
Chemical Wastes					
• After use, chemical waste should be handled according to the Code of Practice on the Package, Labelling and Storage of Chemical Wastes.	All areas	√			
• Any unused chemicals or those with remaining functional capacity should be recycled.	All areas	√			
• Waste should be properly stored on site within suitably designed containers and should be collected by an approved licensed waste collectors for disposal at the Chemical Waste Treatment Facility or other licensed facility in accordance with the Waste Disposal (Chemical Waste) (General) Regulation under the Waste Disposal Ordnance.	All areas	√			
• Any service shop and minor maintenance facilities should be located on hard standing within a bunded area, and sumps and oil interceptors should be provided.	All areas	√			
• Maintenance of vehicles and equipment involving activities with potential for leakage and spillage should be undertaken within the designated areas equipped control these discharges.	All areas	√			
Construction and Demolition (C&D) Wastes					
• C&D waste should be separated on site before disposal.	All areas	√			
• Inert material, such as concrete and rubble, should be re-used on site.	All areas	√			
• Steel and other metals should be separated for re-use and / or recycling prior to disposal of C&D material.	All areas	√			
Ecological Impact					
• Labelling and fencing of the uncommon tree species.	All areas	√			
• Avoidance of use of woodland habitats as Works Area, in particular where trees located.	All areas	√			

Environmental Protection Measures	Location	Implementation Status			
		Implemented	Partially implemented	Not implemented	Not Applicable
Landscape and Visual Impact					
• Existing trees should be retained.	All areas	√			
• Damage to vegetation should be minimized by close coordination and on site alignment adjusted of rising main and gravity sewer pipelines.	All areas	√			
• Short excavation and immediate backfilling section upon completion of works should be performed to reduce active site area.	All areas	√			
Site Practice					
• The Contractor assigned worker is responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site.	All areas	√			
• Proper storage and site practices to minimise the potential for damage or contamination of construction materials.	All areas	√			
• All generators are within bundle areas.	All areas	√			
• Oil leakage from machinery, vehicle and plant should be prevented.	All areas	√			
• All fuel tanks and storage areas should be provided with locks and be sited on sealed area, within bunds of a capacity equal to 110% of the storage capacity of the largest tank.	All areas	√			
• The Environmental Permit should be displaced conspicuously on site.	All areas	√			

Appendix G

Updated Vegetation and Plant Species Survey Reports at Sok Kwu Wan

I03184

Kaden 基利

Your Ref.: DC200718/M45/800/O01571
Our Ref.: K0801/01.01.00.00/2710/L
Date: 20 November 2009

Scott Wilson CDM Joint Venture
38/F, Metroplaza Tower 1
223 Hing Fong Road
Kwai Fong, N.T.
Hong Kong

FAXED

Attn: Ir. Ian J. Jones

By Hand

Dear Sir,

Drainage Services Department
Contract No. DC/2007/18
Yung Shue Wan and Sok Kwu Wan Village Sewerage, Stage 1 Works
Impact Monitoring Report – Updated Vegetation and Plant Species Survey Report at SKW

We refer to your above referenced letter dated 17 November 09 the letters from AFCD as ref. (16) in AF EA 027/07 Pt.2 and from EPD as ref. (5) in EP771/E1/083 dated 13 & 16 November 09 respectively regarding the misidentification and mislabeling of uncommon species at Sok Kwu Wan as report in Impact Monitoring Report under Environmental Permit (EP-281/2009/A).

Please be informed that our landscape specialist sub-contractor "Bluet" has carried out further site investigation and vegetation survey on 18 November 09. We would like to clarify and confirm that uncommon tree species "Celtis Timorensis" from CT1 to CT12 were still existed in place. We then immediately rectified all mislabeling, fenced and protected.

Enclosed please find herewith the latest photographic records showing the plant with labels and figure with correct locations for your reference.

As a responsible contractor and permit holder of EP, we would strictly follow the permit condition and ensure the plants were properly labeled, fenced and protected in order to avoid any disturbance during construction in future.

Thank you for your kind attention.

Yours faithfully,
For and on behalf of
Kaden Construction Limited.

Stephen Leung
Site Agent

StL/JC/pys
Encl.

c.c.

AFCD	Attn: Dr. Joseph Cheung	(By Fax only: 2377 3327)
EPD	Attn: Mr. Matthew Chan	(By Fax only: 2591 0558)
DSD	Attn: Mr. C K Au	(By Fax only: 2833 9162)
IEC	Attn: Mr. Rodney Ip	(By Fax only: 2428 9922)
ETS	Attn: Mr. C. L. Lau	(By Fax only: 2695 3944)

Kaden – RP/WW/JC/AT/KKL/IS

Kaden Construction Limited
Units 1001 - 1015, 10/F Grand Central Plaza, Tower 1, 138 Shatin Rural Committee Road, Sha Tin, N.T., Hong Kong
Tel (852) 2272 3670 Fax (852) 2528 1751
A MEMBER OF BUILD KING HOLDINGS 利基控股集團成員

Kaden Construction Ltd.
Contract No. DC/2007/18
Yung Shue Wan and Sok Kwu Wan Village Sewerage, Stage 1 Works
Location of the Uncommon Tree Species, Celtis Timorensis in SKW

Kaden 基利

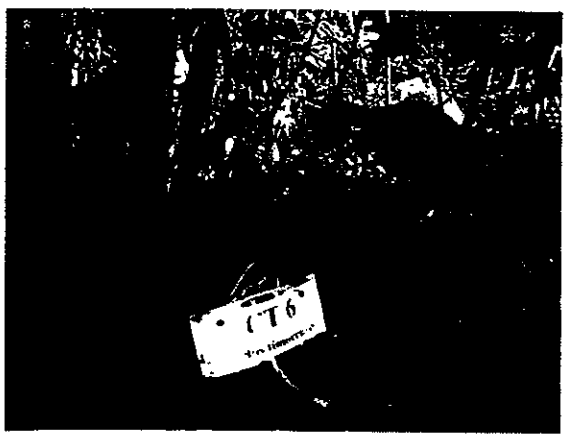
Date: 19 Nov 2009

CT 1 and CT 2

CT 3

CT 4

CT 5



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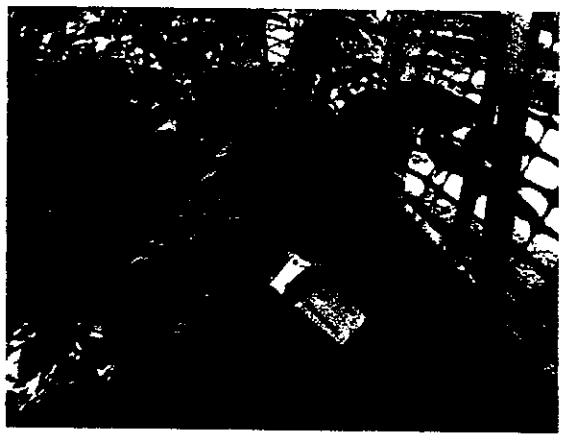
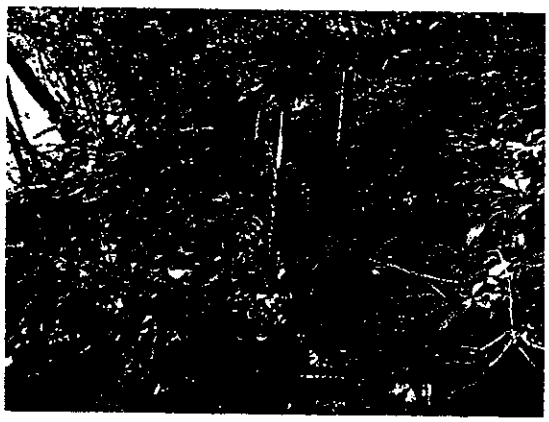


CT 7

CT 8

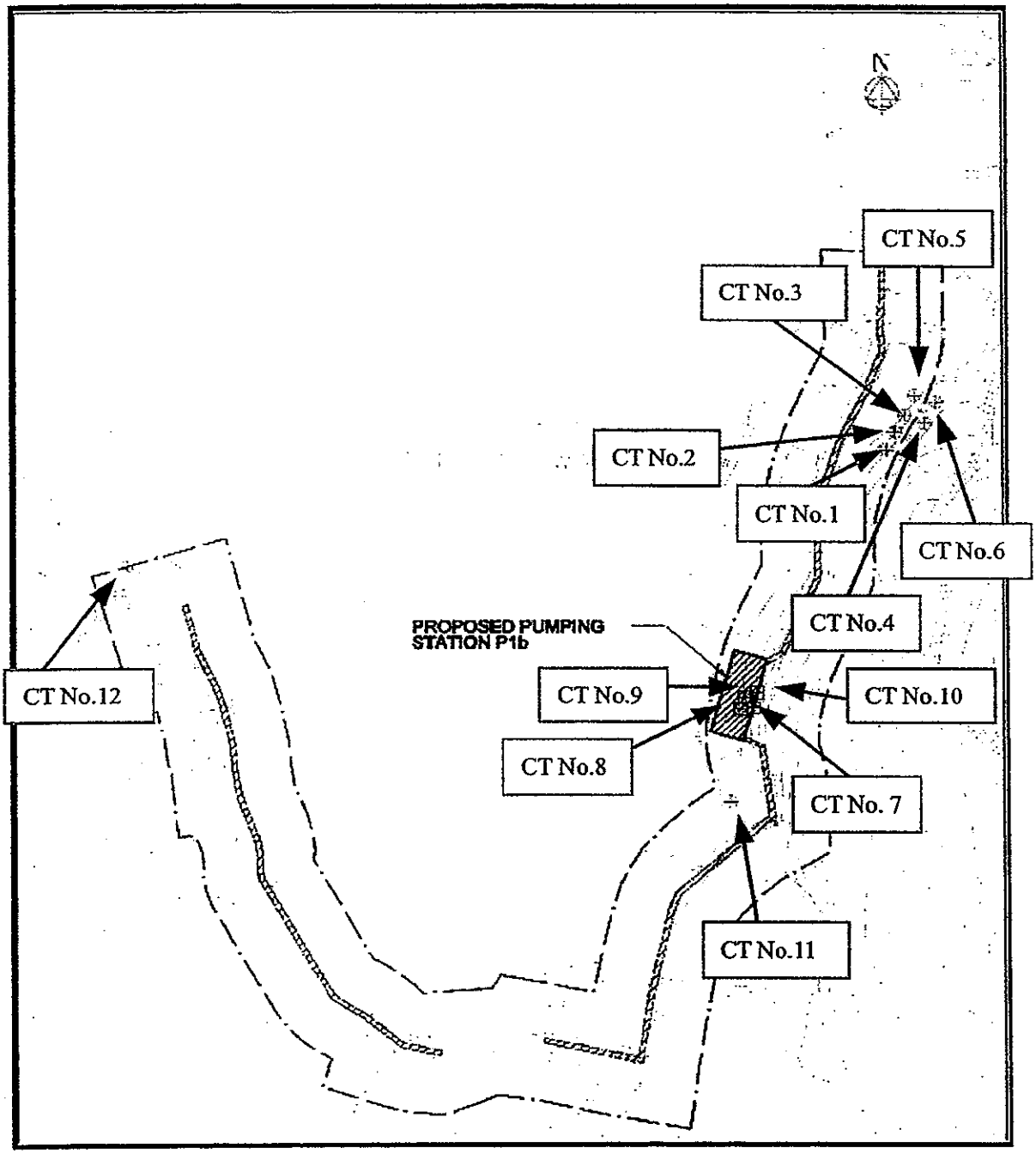
CT 9

CT 10



CT 11

CT 12



LEGEND

- CELTIS TIMORENSIS TO BE LABELLED, FENCED AND PROTECTED AND TO BE TRANSPLANTED IN ADVANCE OF PUMPING STATION CONSTRUCTION
- CELTIS TIMORENSIS TO BE LABELLED, FENCED AND PROTECTED
- VEGETATION SURVEY BOUNDARY (10m OFFSET FROM SEWERAGE ALIGNMENT)
- PROPOSED SEWERAGE ALIGNMENT AND PUMPING STATION AREAS

Your Ref.: (12) in EP771/E1/083
Our Ref.: K0801/03.09.00.00/2816/L
Date: 17 December 2009

Environmental Protection Department
Environmental Compliance Division
Regional Office (South)
2/F, Chinachem Exchange Square
1 Hoi Wan Street
Quarry Bay, Hong Kong

Attn: Mr. Chan Ho Sun

By Fax & By Post
(Fax No.: 2960 1760)

Dear Sir,

Drainage Services Department
Contract No. DC/2007/18
Yung Shue Wan and Sok Kwu Wan Village Sewerage, Stage 1 Works
Impact Monitoring Report at Sok Kwu Wan

Thank you for your above refcrenced letter dated 8 December 09 regarding the captioned.

Please be informed that our landscape specialist sub-contractor "Bluet" has carried out further site investigation and vegetation survey on 15 December 09. We would like to clarify and confirm that tree species "Celtis Timorensis" numbering from CT13 to CT15 were exist in place. We then immediately rectified all mislabeling, fenced and protected.

Enclosed please find herewith the latest photographic records and layout plan for above three species showing the plant with labels and figure with correct locations for your reference.

We would strictly follow the permit condition under the EIAO and ensure the plants were properly labeled, fenced and protected during construction in future.

Thank you for your kind attention.

Yours faithfully,
For and on behalf of
Kaden Construction Limited.

Stephen Leung
Site Agent

StL/RP/mf
Encl.

c.c.

AFCD	Attn: Dr. Joseph Cheung	(By Fax only: 2377 3327)
EPD	Attn: Mr. Matthew Chan	(By Fax only: 2591 0558)
DSD	Attn: Mr. C K Au	(By Fax only: 2833 9162)
IEC	Attn: Mr. Rodney Ip	(By Fax only: 2428 9922)
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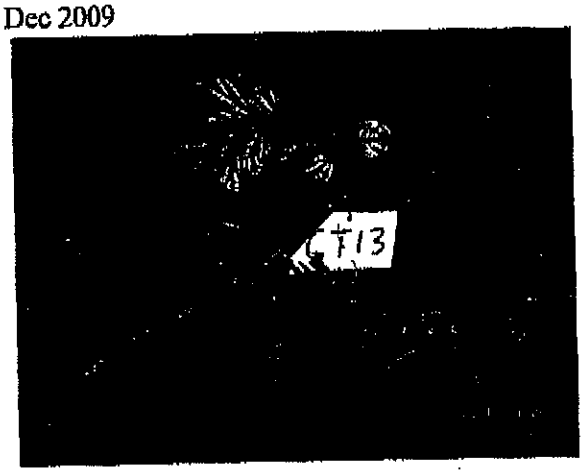
Kaden – RP/WW/JC/AT/KKL/IS		

Kaden Construction Limited
Units 1001 - 1015, 10/F Grand Central Plaza, Tower 1, 138 Shatin Rural Committee Road, Sha Tin, N.T., Hong Kong
Tel (852) 2272 3670 Fax (852) 2528 1751
A MEMBER OF BUILD KING HOLDINGS 利基控股集團成員

Kaden Construction Ltd
Contract No. DC/2007/18
Yung Shue Wan and Sok Kwu Wan Village Sewwerage, Stage 1 Works
Date : 17 Dec 2009



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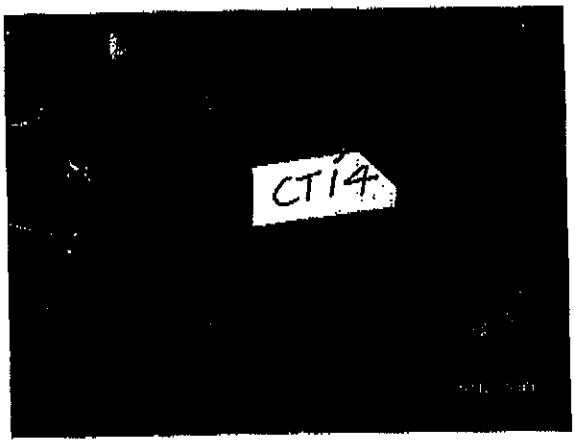
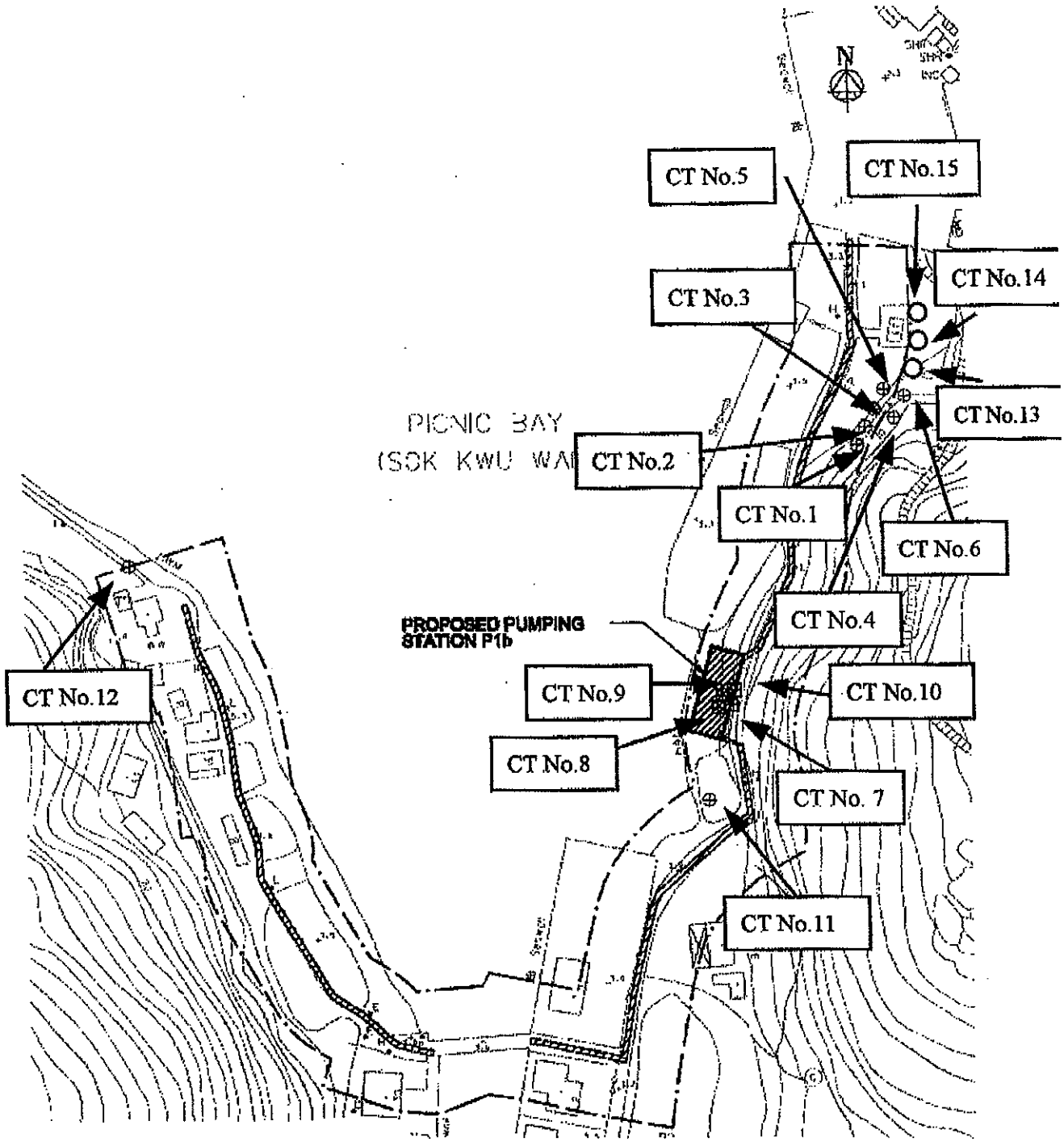


CT 14

CT 15



LEGEND

- ⊞ CELTIS TIMORENSIS TO BE LABELLED, FENCED AND PROTECTED AND TO BE TRANSPLANTED IN ADVANCE OF PUMPING STATION CONSTRUCTION
- ⊕ CELTIS TIMORENSIS TO BE LABELLED, FENCED AND PROTECTED
- — — VEGETATION SURVEY BOUNDARY (10m OFFSET FROM SEWERAGE ALIGNMENT)
- ▨ PROPOSED SEWERAGE ALIGNMENT AND PUMPING STATION AREAS

CT No.	Page
1,2	P.4
3,4,5,6,	P.5
7,8	P.6
9,10	P.7
11,12	P.8
13,14,15	see attachment

Appendix H

Revised Final Report of

Archaeological Watching Brief

at Chung Mei, Sok Kwu Wan

DSD Contract No. DC/2007/18
Yung Shue Wan & Sok Kwu Wan
Village Sewerage,
Stage 1 Works

Archaeological Watching Brief
at Chung Mei, Sok Kwu Wan

Revised Final Report

Prepared for Kaden Construction Ltd.
By Archaeological Assessments Ltd.

September 2009

List of Contents

List of Figures

List of Plates

1. Non-Technical Summary

As part of DSD Contract No. DC/2007/18, Yung Shue Wan & Sok Kwu Wan Village Sewerage, Stage 1 Works, archaeological watching briefs were conducted in Chung Mei, Sok Kwu Wan on 1st September 2008 and 12th June 2009 (Figure 1). The monitoring works were required as a result of previous findings of kiln-oven debris and Tang Dynasty pottery in the small valley to the west (AAL 2003).

The alignment in question ran across the west facing slope of a steep, wooded hillside – the southern half following an existing concrete-surfaced footpath, while the northern half crossed the natural slope. The contractor's groundworks consisted of a c.0.6m wide by c.1.2m deep machine-excavated pipe trench, which was monitored over a total length of approximately 50m.

No cultural layers were found and there was just one surface find of undiagnostic pottery.

為配合渠務署的榕樹灣及索罟灣第一階段鄉村污水處理及排放工程 (合約編號 DC/2007/18)，索罟灣涌尾的考古監察已分別在2008年9月1日及2009年6月12日完成。鑑於過往曾在工程範圍以西之谷地發現窯具及唐代陶片 (AAL 2003)，故此在上述污水管鋪設工程施工時必須進行考古監察。

是次涉及之污水管鋪設路線主要沿著一處向西、樹木茂盛之陡坡而建：南半部的污水管路線乃沿著現有之石屎小徑鋪設;而北半部的污水管路線則穿越一處自然山坡。是次考古監察範圍包括一條闊約0.6米、深約1.2米及長約50米，由承建商用機器挖掘之溝坑。

是次考古監察並未發現文化層，只有在其中一處地面採集到一片未能斷定年份之陶片。

2. Introduction

As part of the Drainage Services Department's Contract No. DC/2007/18 – Yung Shue Wan and Sok Kwu Wan Village Sewerage, Stage 1 Works – it was required that an archaeological watching brief be undertaken in the village of Chung Mei, which lies approximately 0.5km south of Sok Kwu Wan on the eastern side of Lamma Island (Figure 1). The archaeological monitoring works were required following findings of kiln-oven debris and Tang Dynasty pottery in an adjoining area during an earlier archaeological survey (AAL 2003). The watching brief works on the approximately 50m long alignment were conducted in two segments, the first on 1st September 2008 and the second on 12th June 2009 (Figure 2).

3. Project Aims

The aim of this project was to ensure that any archaeological remains encountered during construction works within the study area alignment were properly identified, recorded and recovered whilst, at the same time, minimising delays to the engineering schedule.

The objectives of the study were as follows:

- To implement a monitoring strategy designed to fulfil the above aim;
- To process and analyse the results in light of previous findings;
- To report on the results of the fieldwork; and
- If required, to recommend mitigation measures.

4. Topographical, Geological, Historical and Archaeological background

4.1 Topography

The Chung Mei area comprises a small flat valley surrounded by steep wooded hillsides to the west, south and east, the latter reaching up to the peak of Ling Kok Shan at 250m PD. To the north, the ground falls gradually away to the sandy shallows of Picnic Bay (Sok Kwu Wan). The sewer alignment in question traversed the lower west facing hill slope overlooking the small valley mentioned above. The c.50m long alignment ran downhill from manhole (MH) S50 (surface level 10.06mPD) at its southern end to manhole S54 (surface level 5.75mPD) at its northern end.

4.2 Geology

In the following short discussion, the codes in brackets are those used for the various rocks/sediments depicted on the geological map (Figure 3). The solid geology at Chung Mei consists of fine to medium grained granite (gfm) with east-west running feldsparphyric rhyolite (rf) dykes. In terms of drift geology, the small valley of Chung Mei, to the west of and below the study alignment, is filled with alluvium (Qa), while debris flow deposits (Qd) are recorded in a narrow valley to the northeast of the study area (Hong Kong Government 1987). The monitored alignment was located as shown on Figure 3, crossing the western edge of the granite bedrock close to where sank beneath the alluvial fill of the valley bottom.

4.3 History

According to Hase (2002, 7), although the sheltered anchorage at Sok Kwu Wan was used by generations of boat-people, there were just seven residents on land in 1911 and it was not until the 1950s and 1960s that the settlement expanded to the landward side. The few houses dotted across the hillside at Chung Mei appear to be later 20th century in date.

4.4 Archaeology

The one previous campaign of archaeological fieldwork in the Chung Mei area was centred on the aforementioned small alluvium-filled valley just below the present study area. Eight 2x2m test pits were excavated and two of their number (TP1 and TP2)

revealed evidence for historical kiln-oven debris and Tang Dynasty pottery, whilst a lower layer produced a single sherd of Bronze Age hard geometric pottery (AAL 2003).

5. Methodology

The watching brief was in general conducted following the specification as set out in Section 11.1, but further details of the field implementation are provided below. As previously mentioned, the watching brief on the c.50m long alignment was conducted in two segments to fit in with the contractor's work programme – the lower segment first spanning MH S54 and S52, followed by the uphill segment from MH S52 and up to and including MH S50 (see Figure 2). Between MH S54 and S52 the trench was machine excavated forming a c.0.60m wide square-sectioned slot down to between 1-1.2m below the modern surface when measured at the downhill side of the trench and 2m+ on the uphill side. A sketch profile in the environs of MH S53, where the trench was locally stepped to avoid a lighting cable, is shown in Figure 4. At the southern end of the downhill half of the alignment on the site of MH S52, a locally deeper area was excavated to approximately 2.4m below surface, which further confirmed the depth of the completely decomposed granite (CDG) beneath the alignment. Between MH S52 and S50 the trench followed the existing concrete raft-surfaced footpath, the construction of which had necessitated the terracing of the hillside. Here, the trench was machine excavated to form a c.0.60 wide slot with sides c.1.2m deep (when measured from the modern footpath surface). Given that the alignment between MH S54 and S52 was off the main footpath, it was possible to excavate that length as one continuous open cut. In contrast, the length between MH S52 and S50 effectively closed the footpath in that area for the duration of the works, and the client therefore requested that the trench be dug, monitored and recorded, and then backfilled. During the monitoring works a full written, video and photographic record was taken, which will form the core of the project archive.

6. Results

6.1 Introduction

The results of the watching brief are presented in two sub-sections: one for the length of trench excavated in September 2008 (MH S54 to S52), and the other for the length excavated in June 2009 (MH S52 to S50). For each length of alignment, the sequence of deposits is introduced and then the various layers are interpreted with reference to any finds recovered.

In the text below, the following conventions should have been used: the alphanumeric codes used in deposit descriptions are taken from the Munsell system of soil colour charts (Gretagmacbeth 2000) and deposit depths are maximum values. During the discussion below reference should be made to the following illustrations: Figures 2 and 4, which respectively show the overall alignment and sketch section; Figures 5 & 6 showing the surveyors' plans of the watching brief alignment; Plates 1 and 2 respectively offering pre-excavation overviews of the alignment between MH S54 and MH S52 and between MH S51A to MH S50; and Plate 3 showing a post-excavation overview of the MH S54 to S52

alignment. NB: no post-excavation overview of the MH S51A to S50 alignment is available as the trench was excavated, recorded and immediately backfilled (but see photographs recording this process below).

6.2 Alignment between MH S54 and S52

The excavation of the down-slope half of the sewer trench revealed a simple sequence of three naturally-formed deposits (see Plates 4-6), the lowest of which was a 0.20-0.30m thick band reddish yellow (7.5YR 6/8) clayey gravel (**103**), which extended beyond the 1.2m below surface general limit of excavation (l.o.e.) and, in the 2.4m deep sondage excavated at MH S52, was shown to be at least 1.5m thick and continuing beyond the sondage l.o.e. Over 103 there was a 0.70-0.80m thick layer of strong brown (7.5YR 5/6) gravelly clay (**102**), which was sealed by an approximately 0.1m thick greyish brown (10YR 5/2) slightly sandy, clayey silt (**101**).

A modern electricity cable trench was noted running along the eastern side of the sewer trench, and had clearly been cut from the modern surface through layers 101 and 102, which were already in place. Given that the cable slot was a localised modern intrusion it was not allocated a context number.

The lower two deposits were completely sterile and can be interpreted as *in situ* decaying granite (103), overlain by an associated clay-rich layer (102), which had all the appearances of mass-transported decayed granite (slope deposits). Sealing the above granite-derived layers was a naturally-accumulating forest soil (101). No cultural horizons/deposits were identified, but one undiagnostic sherd of village ware pottery was recovered from the surface of 101 (see Plate 7).

6.3 Alignment between MH S52 and S50

The excavation of the up-slope half of the sewer trench alignment also revealed a sequence of naturally-formed deposits, which exhibited some variation moving downhill from south to north.

Broadly between MHs S50 and S51, the sequence was as follows: a lower layer of c.0.40m thick (at l.o.e.) strong brown (7.5YR 5/6) slightly gravelly clay (**204**), overlain by a c.0.80m thick layer of reddish yellow (7.5YR 6/8) very gravelly clay (**203**), which was then sealed by a thin raft of concrete forming the temporary path surface (**201**) – see Plates 8-10.

Between MH S51 and S52 – in the environs of MH S51A, the sequence was as follows: c.0.60m thick (at l.o.e.) strong brown (7.5YR 5/6) slightly gravelly clay (**204**); overlain by a c.0.50m thick layer of reddish yellow (7.5YR 6/8) very gravelly clay (**203**); which was covered by an approximately 0.1m thick greyish brown (10YR 5/2) slightly sandy, clayey silt (**202**), which was in turn sealed by the concrete raft surfacing of the footpath (**201**) – see Plates 11 and 12.

A modern water pipe was noted running along the eastern side of the sewer trench and an electricity cable along the west – the narrow slots within which each service was located had clearly been cut from the modern surface with layers 202 and 203 already in place. Given that these narrow service trenches were localised modern intrusion, they were not allocated context numbers.

The lower two deposits (204 & 203) were completely sterile and can be interpreted as mass-transported decayed granite, with clay-rich layer 204 perhaps reflecting water-borne finer material and layer 203 a more gravelly debris flow-type component. Layer 202 can be interpreted as a thin forest soil equivalent to 101 above. On the upper portion of the alignment, between MH S50 and S51, Layer 202 had apparently been removed during levelling works for the path. No finds were recovered and no cultural horizons/deposits were therefore identified.

7. Conclusions

In summary, it can be concluded that the steep lower hill slope area traversed by the MH S50 to MH S54 sewer trench at Chung Mei has seen little or no human activity prior to the 20th century and, in contrast to the valley to the west, can be considered to have no archaeological potential.

8. References

AAL 2003 *Agreement No. CE 20/96 Outlying Islands Sewerage Stage 1 Phase II Package J – Sok Kwu Wan Sewage Collection, Treatment & Disposal Facilities, Archaeological Investigation*. Unpublished excavation report.

Gretagmacbeth 2000 *Munsell Soil Colour Charts*. Gretagmacbeth: New Windsor, NY.

Hase, P 2002 'Some notes on the history of Lamma Island, especially Yung Shue Wan', unpublished paper

Hong Kong Government (1987) *Hong Kong South & Lamma Island, Sheet 15, Solid and Superficial Geology*, Geotechnical Control Office: Hong Kong.

9. Supporting Illustrations

9.1 Figures

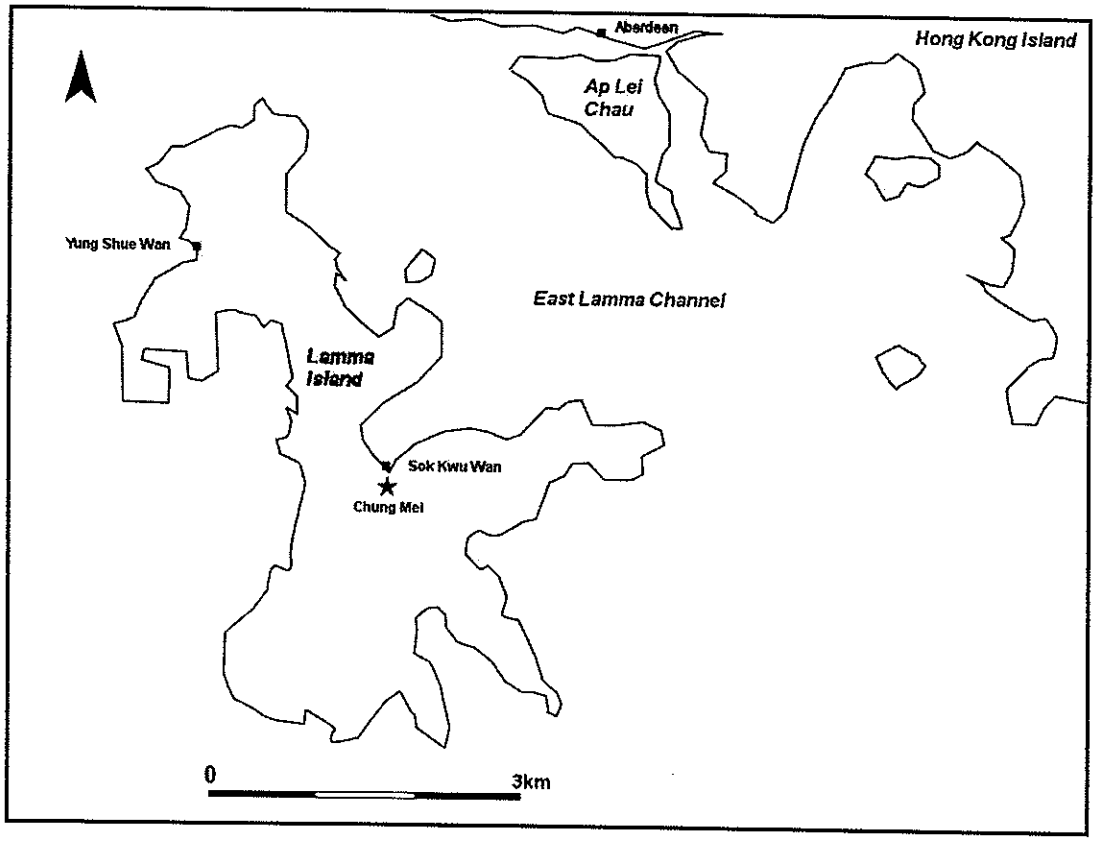


Figure 1: Study Area location – Chung Mei site marked with star

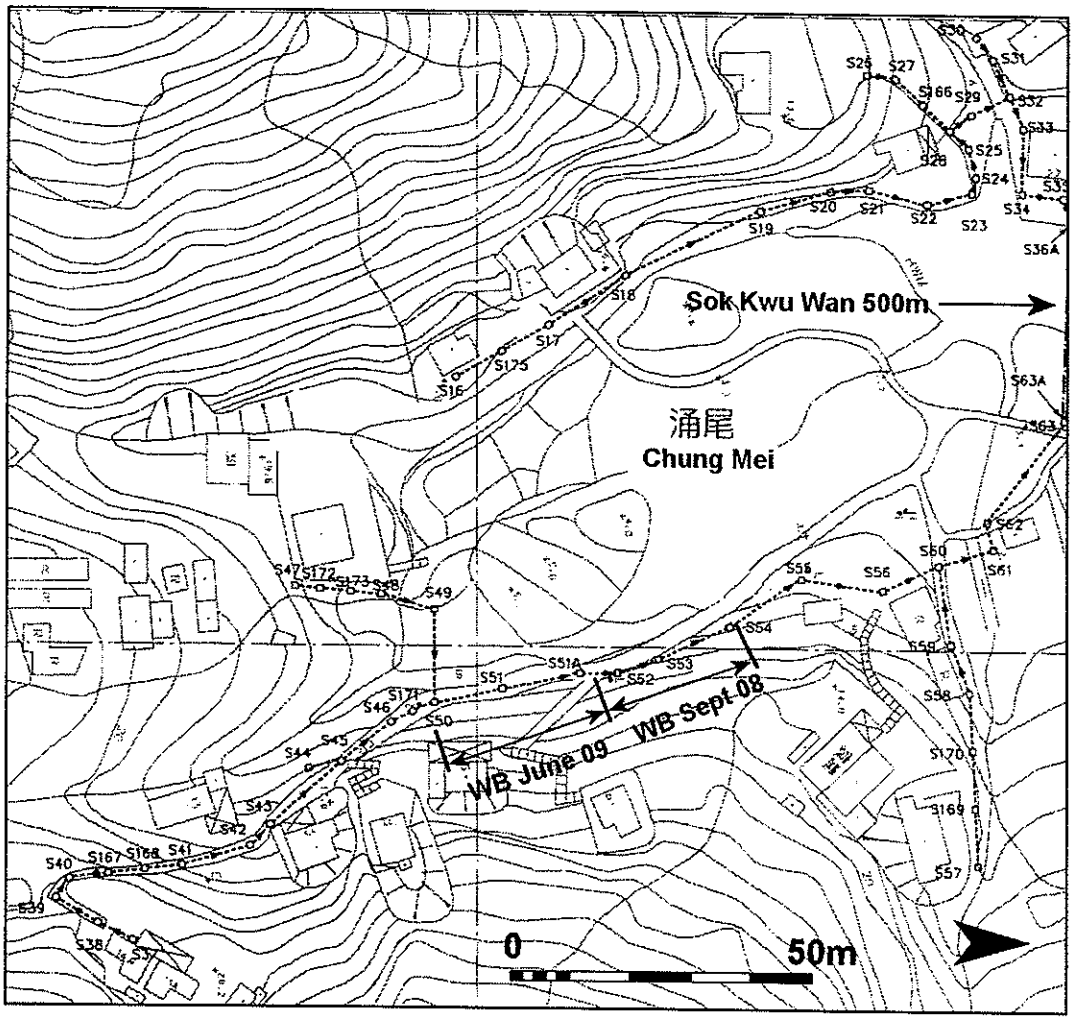


Figure 2: Plan showing location of sewer trench alignment at Chung Mei, with September 2008 and June 2009 watching brief areas highlighted. The corner coordinates for the above map are as follows: SW corner 831400E, 806825N; NW corner 831400E, 806990N; NE corner 831555E, 806990N; SE corner 831555E, 806825N.

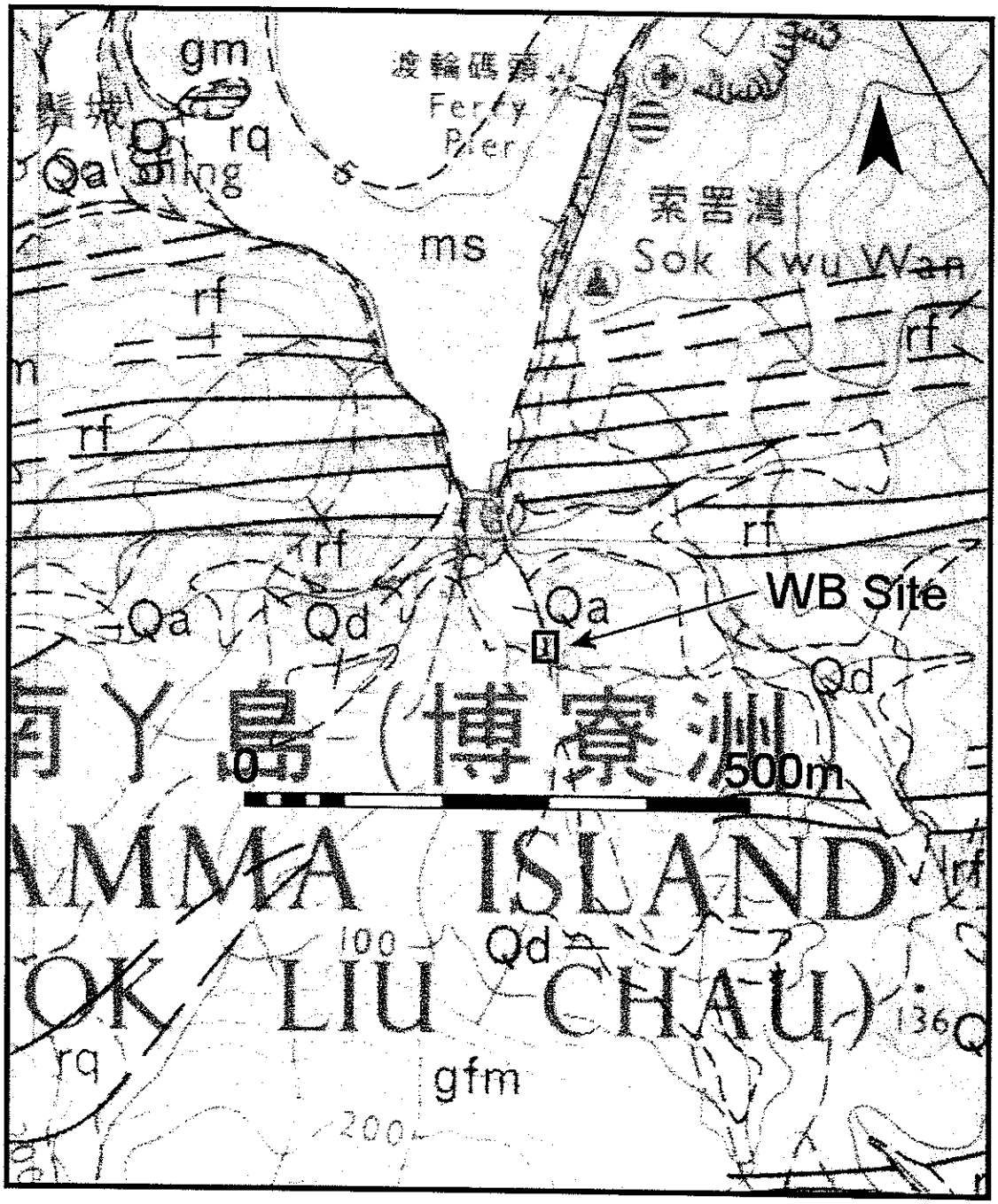


Figure 3: Geology of Study Area – alignment followed western edge of granite bedrock

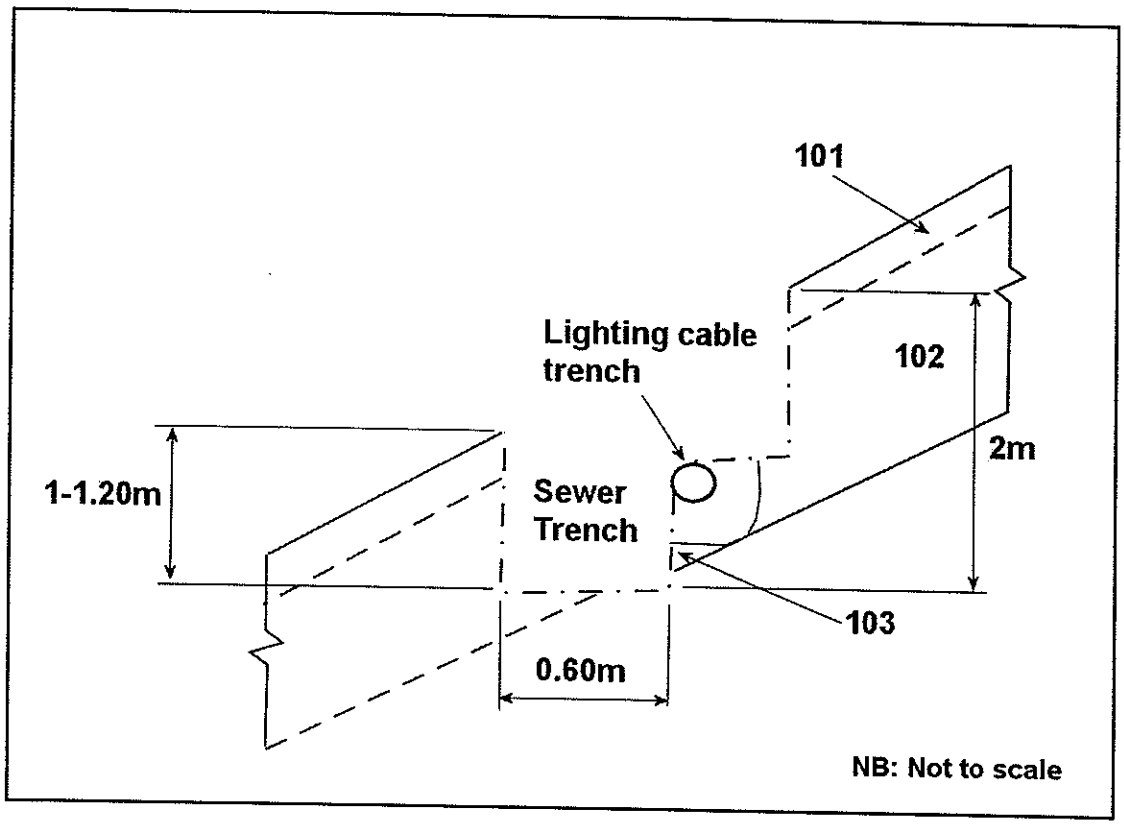


Figure 4: Transverse sketch section of sewer trench in environs of MH S53 – looking north

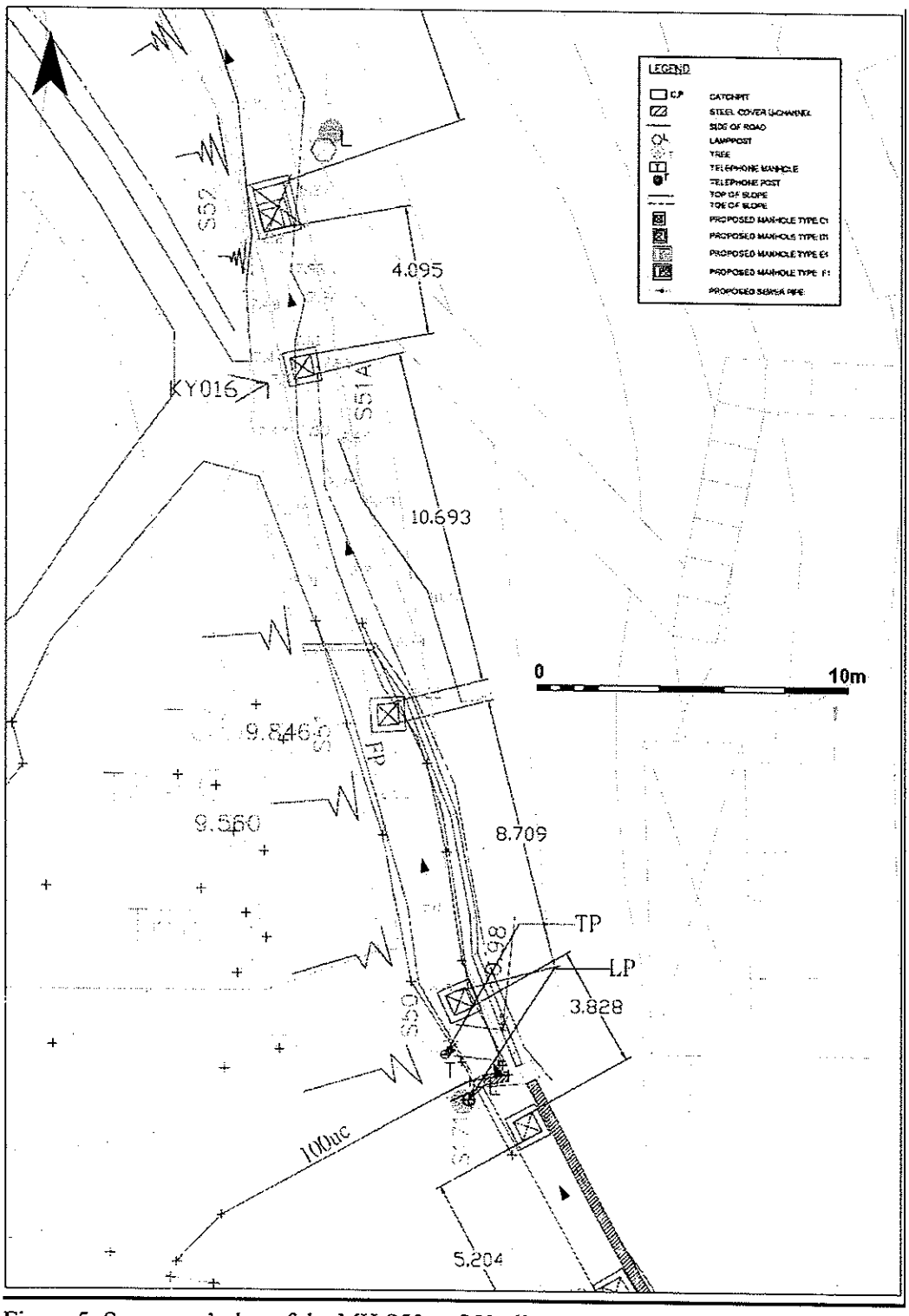


Figure 5: Surveyors' plan of the MH S50 to S52 alignment (kindly supplied by Kaden Engineering Ltd)

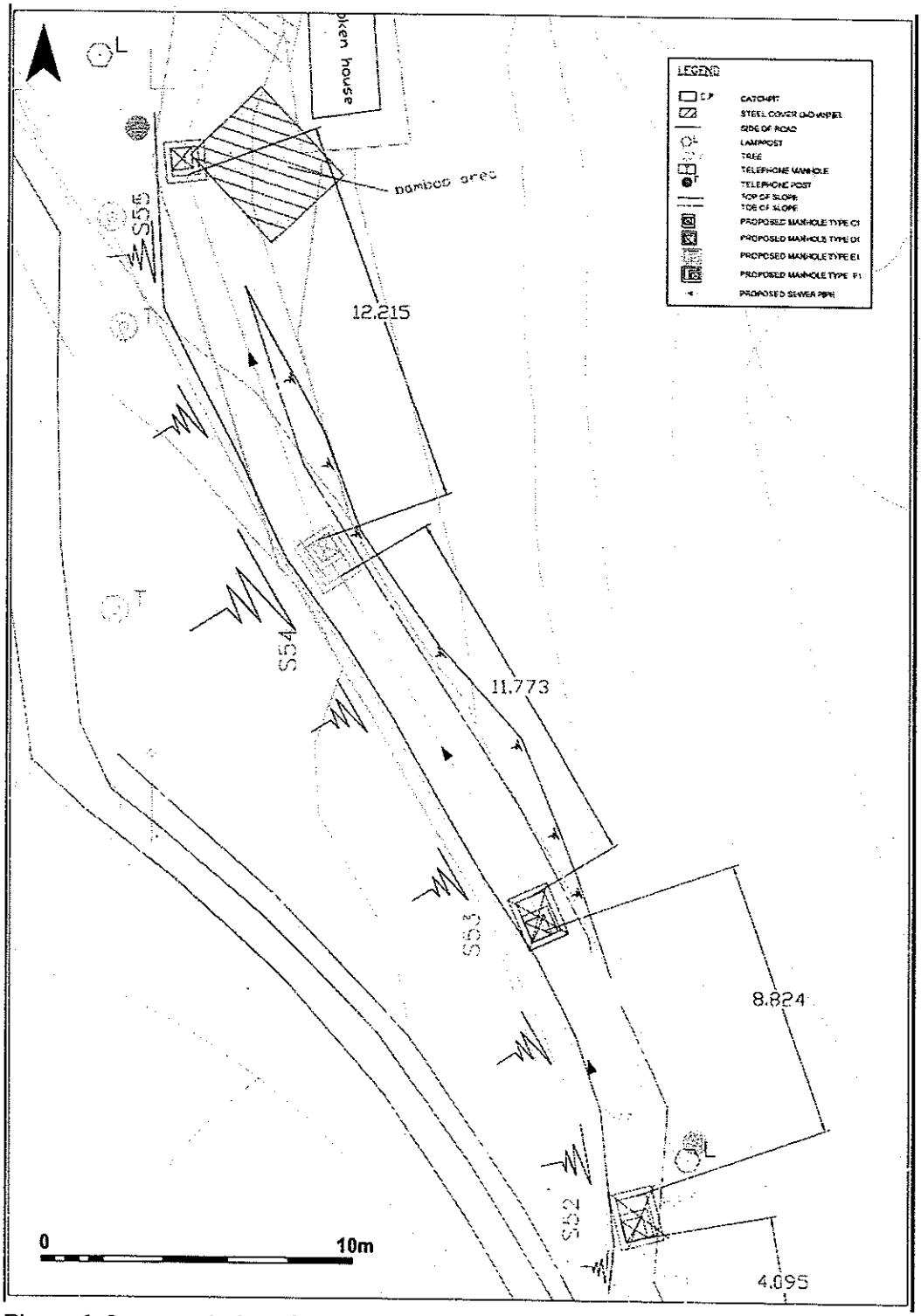


Figure 6: Surveyors' plan of the MH S52 to S54 alignment (kindly supplied by Kaden Engineering Ltd)

9.2 Plates

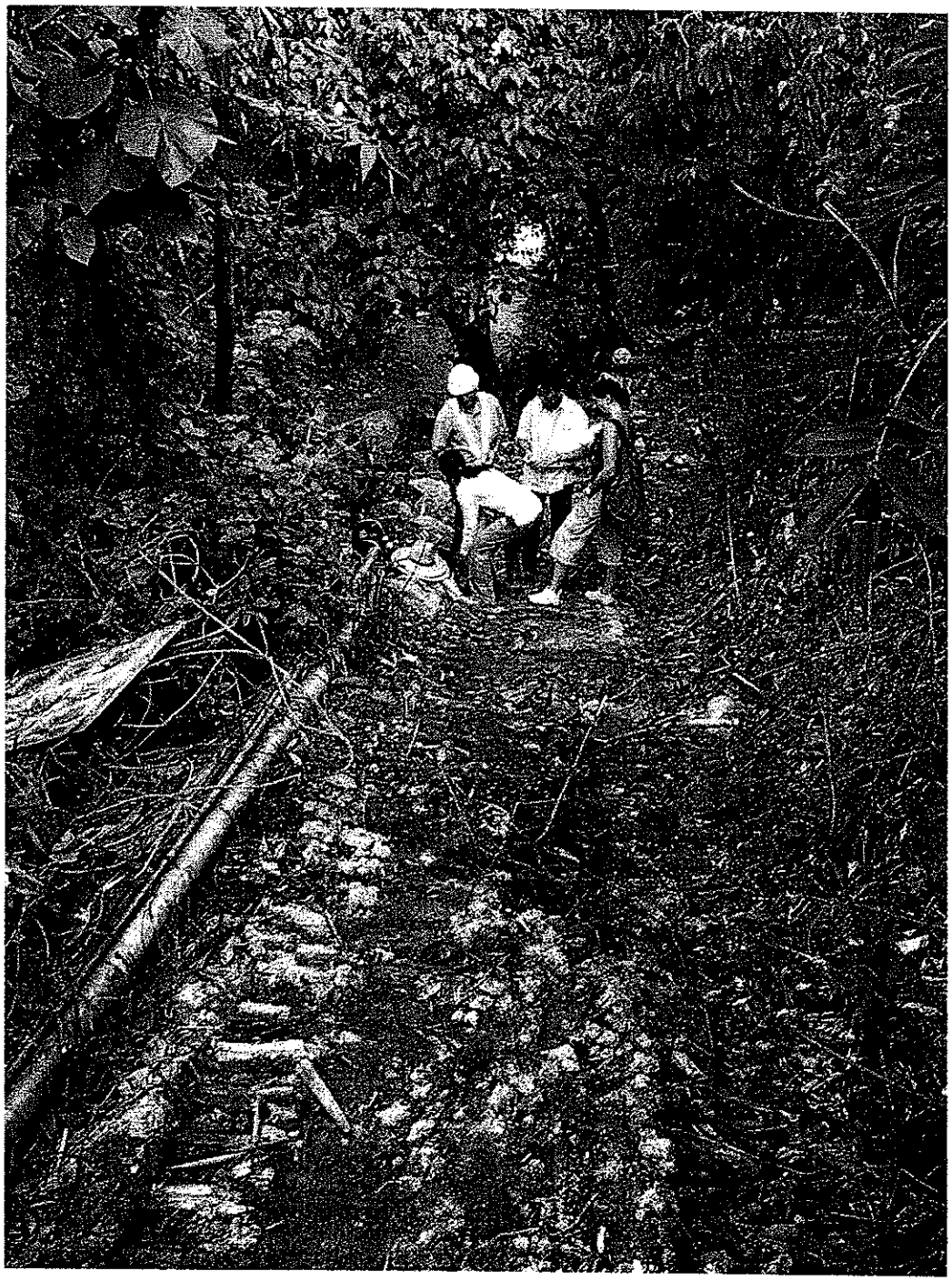


Plate 1: Pre-excavation view of the alignment between MHs S52 and S54 – looking north

Plate 2: Pre-excavation view of alignment between MHs S51A and S50 – looking south

Plate 3: Post-excavation view of the alignment between MHs S54 and S52 – looking south

Plate 4: Deeper sondage excavated at MH S52 – looking south

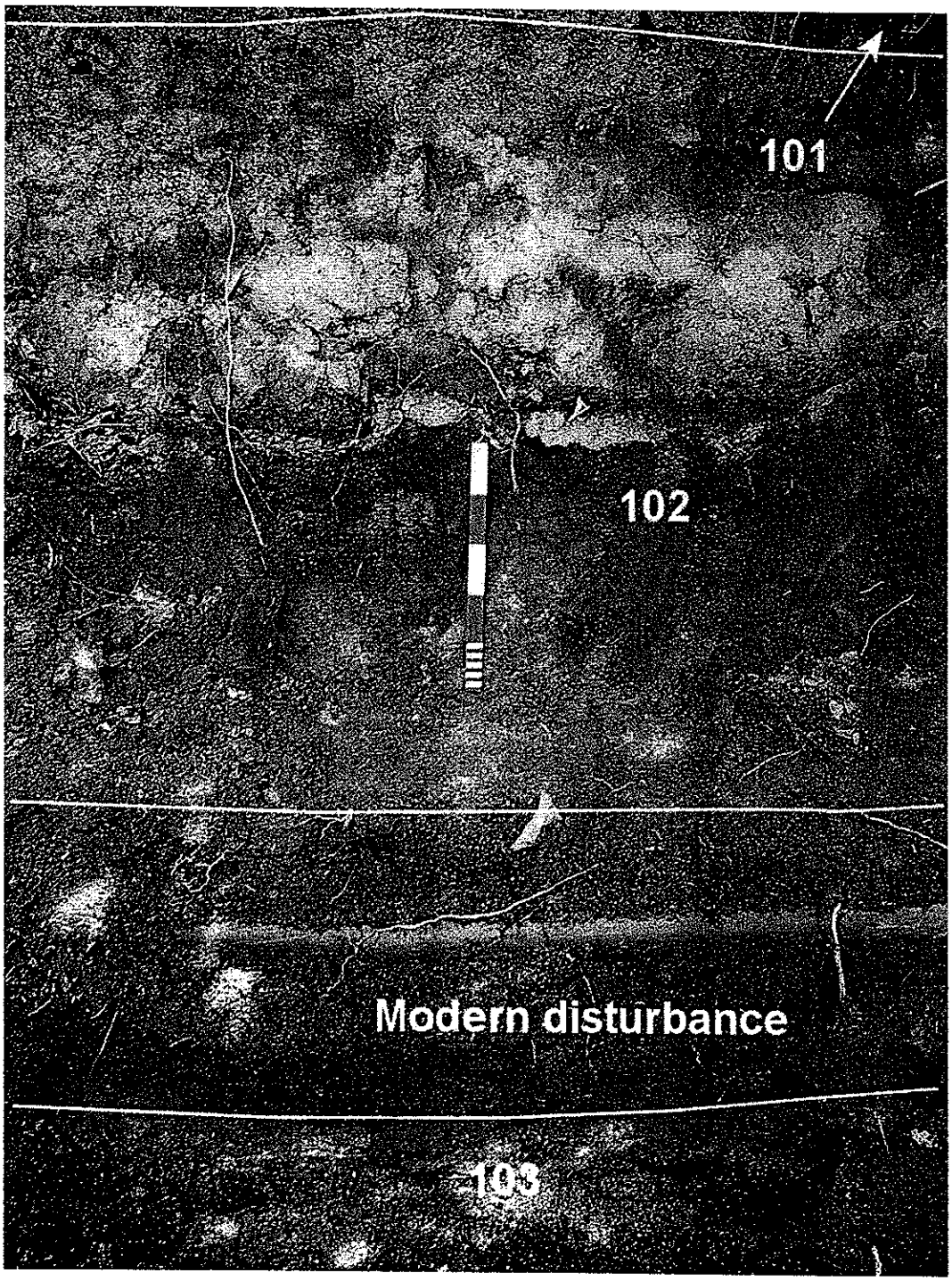


Plate 5: West facing section at MH S53 – trench stepped at base of 0.5m scale

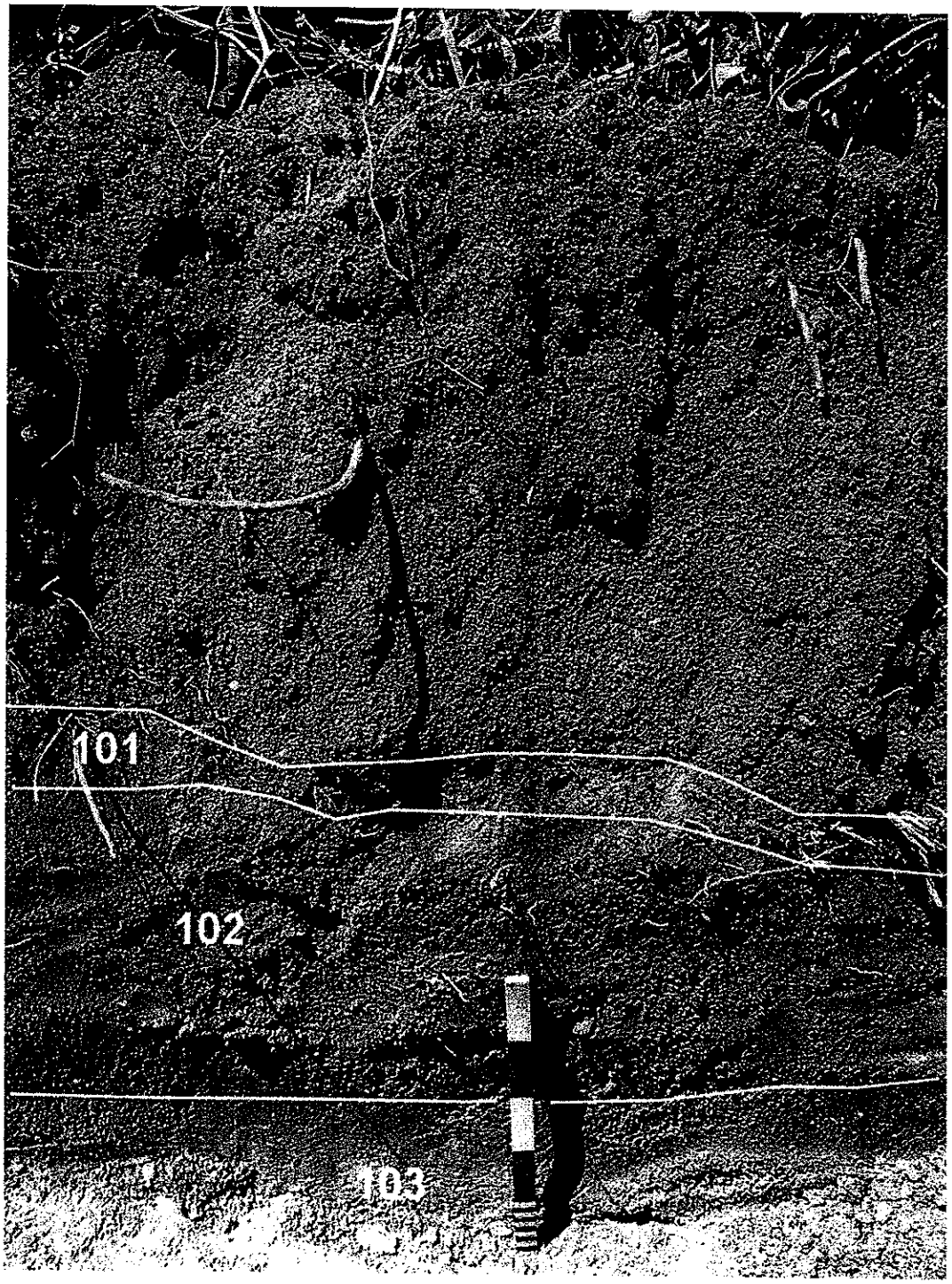


Plate 6: East facing section at MH S54

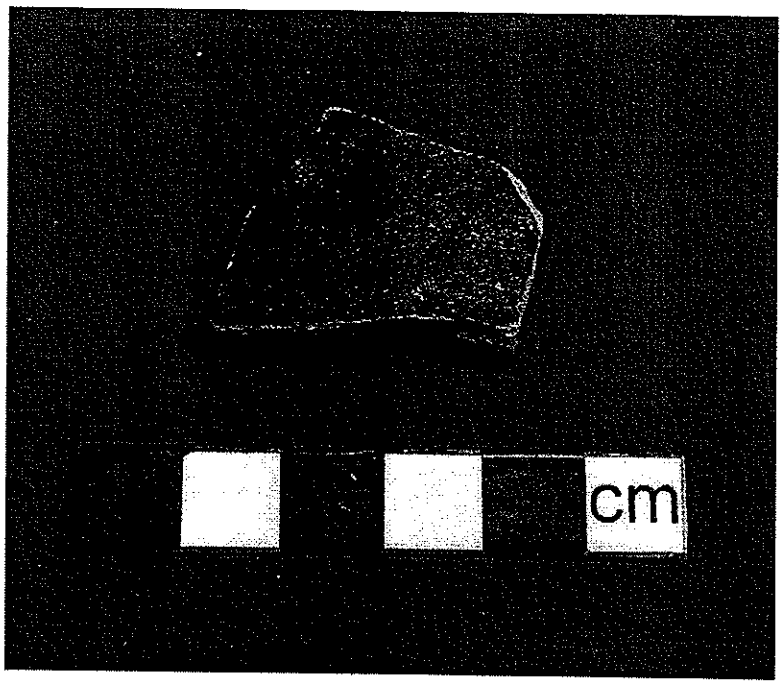


Plate 7: Undiagnostic village ware sherd found on surface of topsoil 101

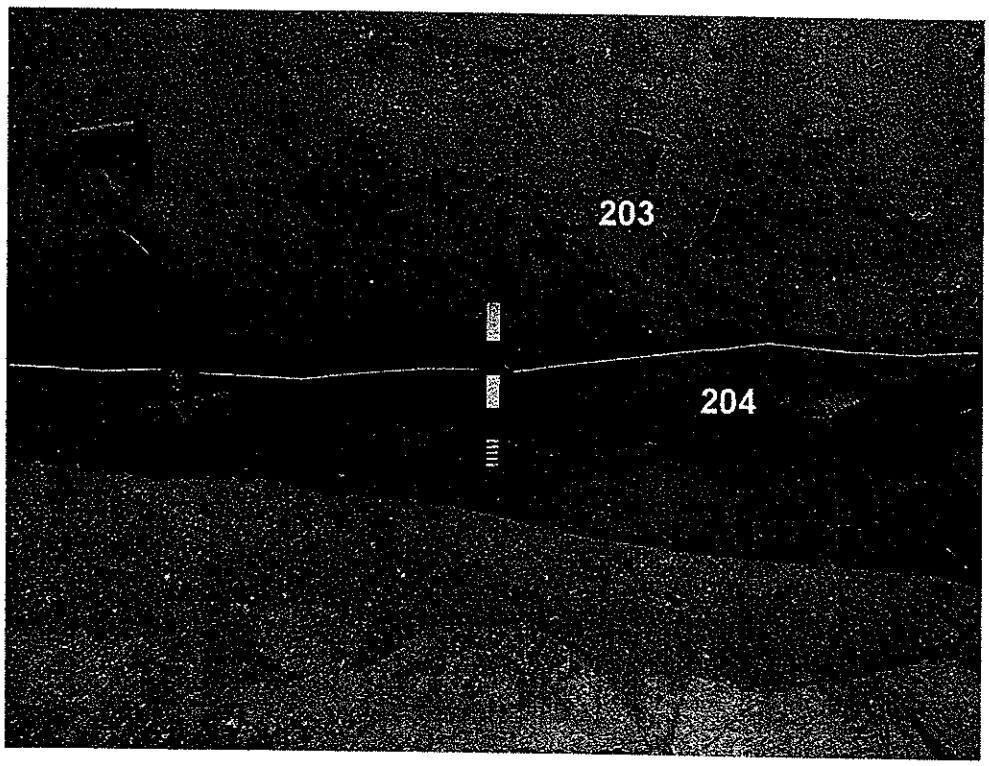


Plate 8: West facing section in environs of MH S50

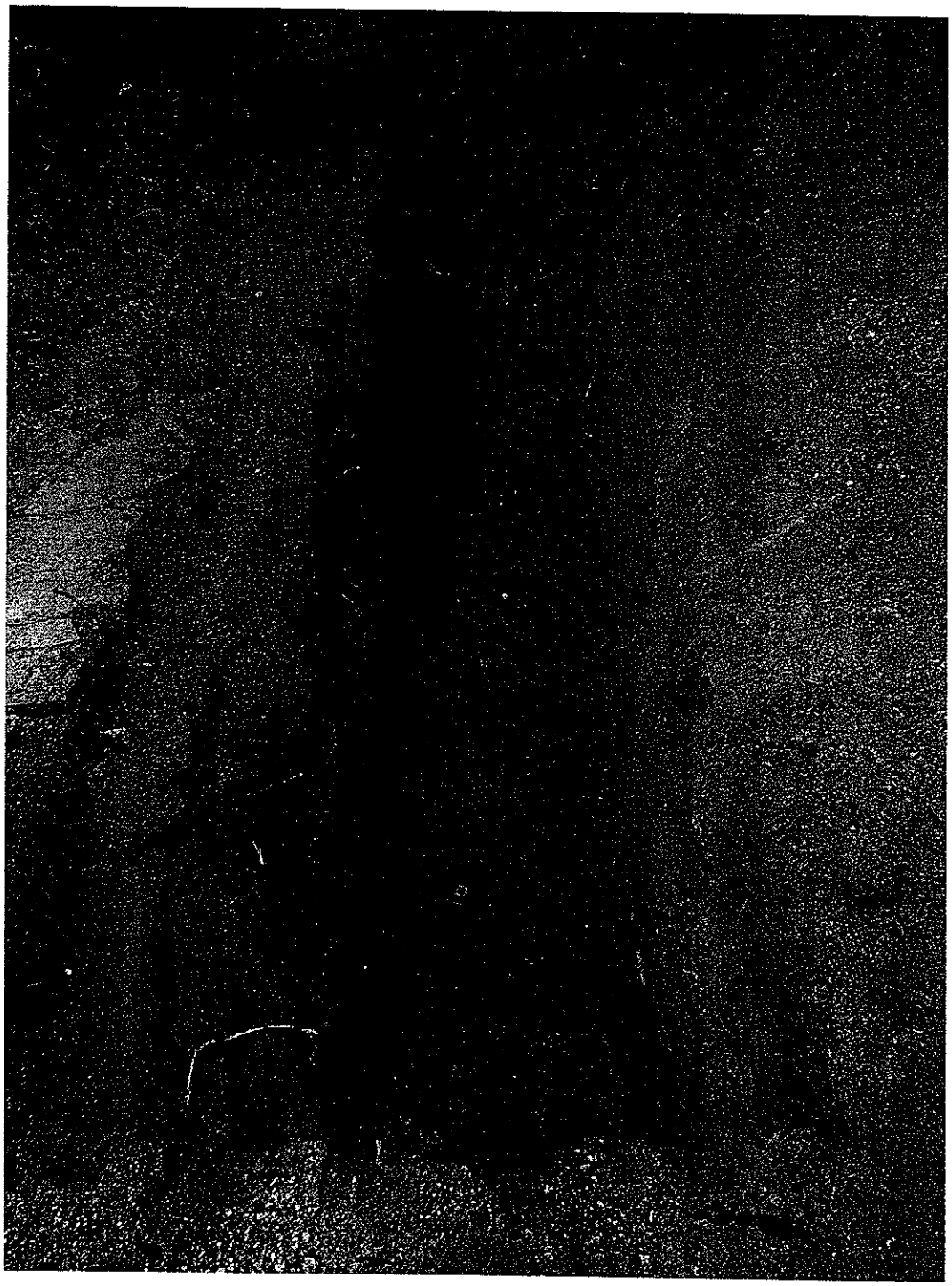


Plate 9: Post-excavation view in environs of MH S50 – looking north

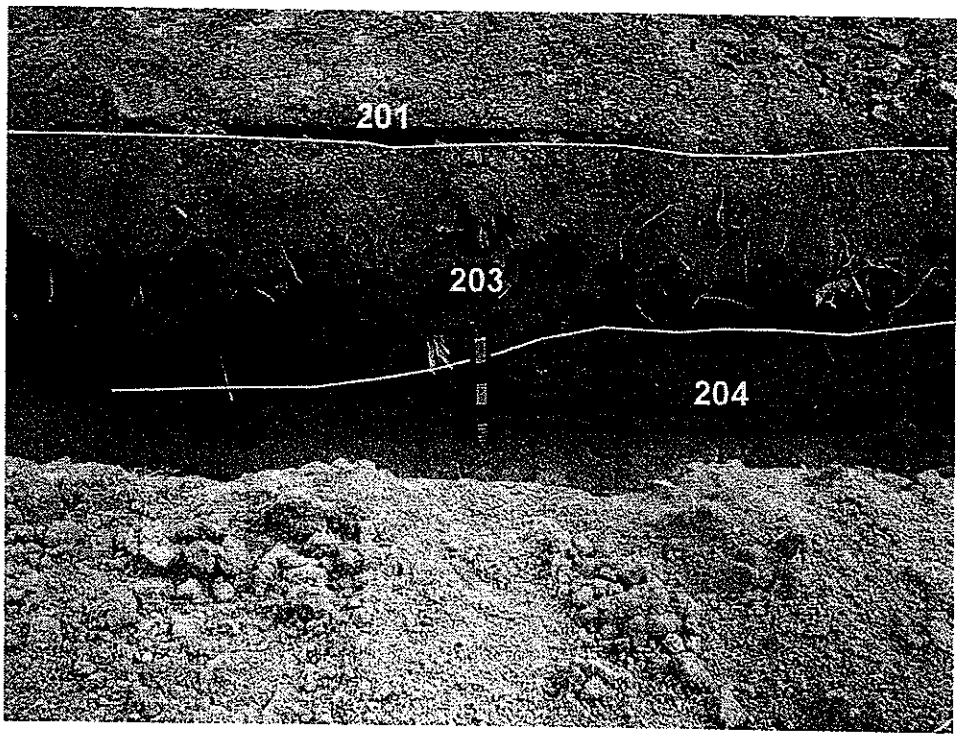


Plate 10: East facing section in environs of MH S51

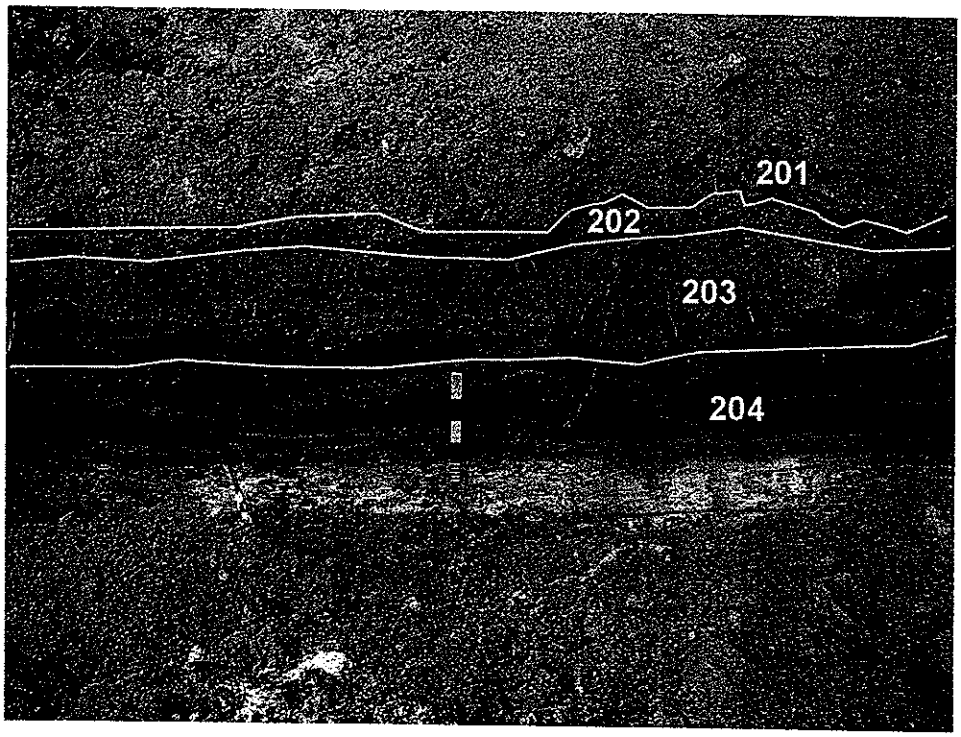


Plate 11: East facing section in environs of MH S51A

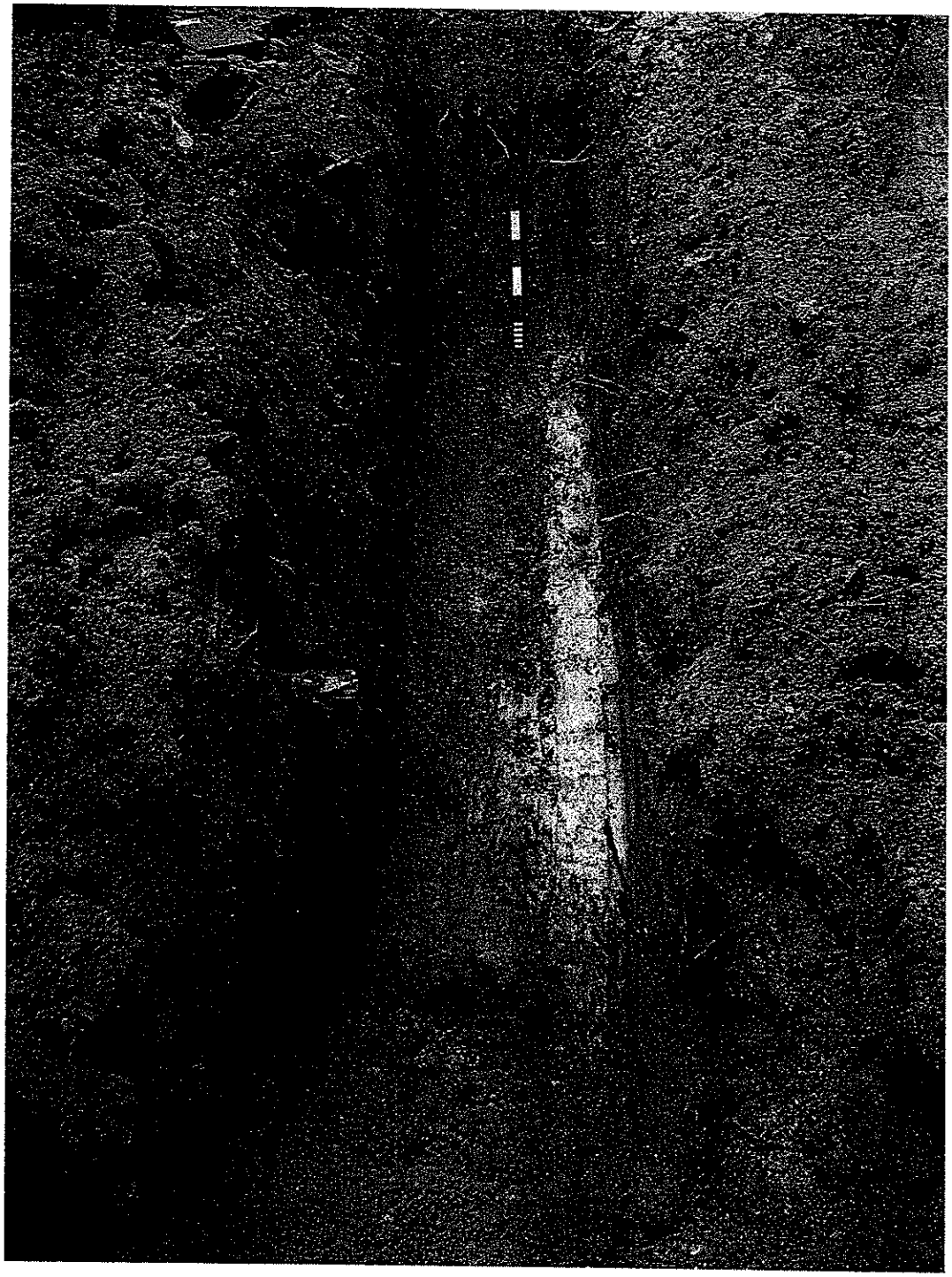


Plate 12: Post-excavation view in environs of MH S51A – looking south

10. Supporting Data

10.1 MHs S52 to S54: Tabulated stratigraphic, contextual and finds summary

Context	Description	Finds & Dating	Thickness
101	Topsoil: Greyish brown (10YR 5/2) slightly sandy, clayey SILT	1 sherd of undiagnostic VW: date unknown	0.10m max.
102	Slope Deposits: Strong brown (7.5YR 5/6) gravelly CLAY	None: date unknown	0.70-0.80m
103	CDG: Reddish Yellow (7.5YR 6/8) clayey GRAVEL	None: date unknown	1.5m at l.o.e

10.2 MHs S50 to S51A: Tabulated stratigraphic, contextual and finds summary

Context	Description	Finds & Dating	Thickness
201	Footpath Surfacing: Grey concrete	None: modern	0.03-0.05m
202	Topsoil: Greyish brown (10YR 5/2) slightly sandy, clayey SILT	None: date unknown	0.10 max
203	Slope Deposits: Reddish yellow (7.5YR 6/8) very gravelly CLAY	None: date unknown	0.50m max.
204	Slope deposits: Strong brown (7.5YR 5/6) slightly gravelly CLAY	None: date unknown	0.60m at l.o.e.

11. Supporting Documents

11.1 Requirements for Archaeological Watching Brief

11.1.1 Introduction

An archaeological watching brief is a programme involved observation and investigation which is required when engineering works impact on areas that have been assessed as having archaeological potential and where conventional testing methods are not possible due to inaccessibility, for examples, concrete coverage and housing settlement. The range of archaeological resources that require monitoring include both historical and prehistoric material and features.

The monitoring process entails the observation of the engineering works by qualified archaeologists in order to identify any archaeological material or features that revealed during the excavation phase of the works schedule. Upon identification of such material or features, the archaeologists will require immediate access to the excavation area for recording of the material/features in-situ location, artefact retrieval and sample collection.

These guidelines serve for two basic purposes, firstly, that the archaeological resources are adequately recorded and recovered and secondly, that appropriate measures are taken on site to create a minimum of delays to the engineering schedule.

11.1.2 Watching Brief Personnel

Watching brief should be undertaken by a qualified archaeologist, whose must apply for a licence under the Antiquities and Monuments Ordinance (Cap. 53) from the Authority before the monitoring works commence. All staff employed by the archaeologist must be suitably qualified and experience for their role.

11.1.3 Area to be Monitored

The Contractor shall carry out archaeological watching brief in Yung Shue Wan and Sok Kwu Wan except those areas at which rescue excavation are required as shown in Drawing No. 2005/C1/1004 to 1009.

11.1.4 Scale of Watching Brief

The sewer alignment identified for archaeological watching brief in Yung Shue Wan and Sok Kwu Wan as shown in Drawing No. 2005/C1/1004 to 1009 should be fully monitored by the archaeologist.

11.1.5 Site Access

Archaeologist should be allowed reasonable access to relevant areas of groundworks, so that deposits can be examined and recorded. Trenches may require temporary shoring and groundworks might need to be temporarily re-scheduled, to provide a safe environment for such works. Provision should be made, at the earliest of development programming, for specified blocks of time to be available for unrestricted archaeological access to areas of groundworks.

11.1.6 Schedule of Works

A construction programme should be provided by the Contractor to the archaeologist to arrange the monitoring schedule. The archaeologist should be notified no less than 2 working days prior to any change on the commencement of the excavation works so arrangement could be made to monitor the works. The Contractor should facilitate arrangement and liaison with the archaeologist.

11.1.7 Watching Brief and Retrieval Methodology

In Table 1 are the various categories of archaeological material and features that are most likely to occur in local contexts. Also listed are the recommended type and degree of recording and retrieval required for each category. Upon discovery of any archaeological relics, the qualified archaeologist will advise the Contractor who shall contact the AMO informing the discovery. Any archaeological relics recovered during the programme should be properly recorded and submitted to the AMO.

Table 1 – Categories of Archaeological Finds and Recommended Action

Categories of Archaeological Material	Retrieval Procedures
Human Burial • Skeletal remains • Item associated with Human Burial, i.e. grave goods.	**Full Recording and Recovery of Human Remains and Associated Features** • Complete recording by photography, drawing, written description. • Full measurement of burial and surrounding matrix. • Retrieval of human remains and associated items. • Retrieval of surrounding soil for further analysis.
Intact Features • Structural/ architectural remains. • Undisturbed contexts, e.g. hearth, midden, habitation area, assemblages of artefacts and/ or environmental material.	**Full Recording and Recovery of Archaeological Features** • Recording and measurement of salient features by photography, drawing and written description. • Retrieval of all archaeological material • Retrieval of samples from the surrounding matrix.
Intact Artefacts • Complete objects, e.g. pottery, metal objects, stone or bone tools. The objects are complete but isolated and are not part of assemblage or feature.	**Recovery of Artefacts** • Recovery of Objects • Sampling of surrounding matrix • Recording by written description and by photography.
Isolated Material • Sherds, non-human bone, artefact fragments (metal, pottery, glass). There are no compete objects, the material is isolated and fragmentary in nature.	**Recovery of Artefact Fragments/ Archaeological Material** • Recovery of material, e.g. artefact fragments, environmental material and sampling of surrounding matrix. • Recording by written description and by photography, if appropriate.
Deposits with Archaeological Potential • Soil deposits which exhibit characteristics associated with archaeological remains in Hong Kong.	**Sampling of Deposit** • Collection of soil samples from deposits displaying archaeological potential • Recording of soils by photography and written description.

11.1.8 Recording Forms for Watching Brief

A set of forms for the recording of any archaeological material identified during the watching brief process must be approved by the AMO. They should include the following:

- Registers to record finds, special finds, contexts, photographs, drawings, levels and samples

- Context descriptions forms

- A daily record form specifically designed for archaeological watching brief. This form must locate clearly the area of works monitored, the nature and extent of the works, summaries of the days findings and cross references to all register numbers used that day.

11.1.9 Safety Requirements

Archaeologists and staff employed in watching brief must follow the safety procedures enforced by the Contractor on site.

11.1.10 Watching Brief Report

The procedures and results of the watching brief programme should be presented in report form, following 'Guidelines for Archaeological Reports' set by the AMO. All data, material and records forming the site archive must be submitted to the AMO upon completion of the project.

11.1.11 Mitigation Measures

The Contractor should follow a flexibility to undertake the contingency arrangements. Should significant materials be discovered, appropriate mitigation measures will be designed and implemented.

12. Comments and Responses

12.1 Yung Shue Wan and Sok Kwu Wan Village Sewerage, Stage 1 Works, Draft Archaeological Watching Brief Report: Response to AMO Comments of 27/08/09

Item	AMO Comment	AAL Response
1	In the English Non-Technical Summary, please state the project name instead of "the above captioned project".	Text will be amended accordingly.
2	Please state the Chinese project name in the Chinese Non-technical Summary.	Text will be amended accordingly.
3	非技術性中文摘要(Chinese Non-technical Summary)內有錯別字、文法錯誤及行	Text will be amended accordingly.

	文不流暢等問題。請加以修改。	
4	It is noted that the alignment between MH S54 and S52 was carried out on a natural slope instead of running along the concrete footpath. Hence, the location of the said alignment in Figure 2 is not tally with the description. Please check and revise the figure accordingly.	Figure 2 will be checked and revised.
5	Given that a modern electricity cable was found under contexts 101 and 102, please explain why such layers are identified as naturally-formed deposits instead of disturbed layers.	The electricity cable was in a service trench which had been cut from the modern surface with layers 101-103 already in place. Therefore, the cable was not found under layers 101 & 102 but, rather, had been cut through them. Thus the only disturbed material was the backfill of the electricity cable trench which, as a modern intrusion, was not allocated a context number. Layers 101 and 102 are therefore correctly described as "naturally-formed deposits".
6	Given that a modern water pipe and an electricity cable were found under contexts 201, 202 and 203, please explain why such layers are identified as naturally-formed deposits instead of disturbed layers.	Context 201 is the concrete surface of the modern path, which was probably patched up after the utilities were inserted. The water pipe and electricity cable were in narrow utilities trenches which had been cut from the modern surface with layers 202-203 already in place. Therefore, the modern utilities were not found under layers 202-203 but, rather, had been locally cut through them. Thus the only disturbed material was the backfill of the utilities cuts which, as modern intrusions, were not allocated context numbers. Layers 202-203 are therefore correctly

		described as "naturally-formed deposits".
7	Please provide the coordinates of Figure 2.	The corner coordinates for Figure 2 are as follows: SW corner: 831400E, 806825N NW corner: 831400E, 806990N NE corner: 831555E, 806990N SE corner: 831555E, 806825N These coordinates will be added to the caption for Figure 2.
8	Please cite the relevant documents in Section 8 regarding the citations of "Hong Kong Government 1987" mentioned in Section 4.2 and "Hase (2002, 7)" mentioned in Section 4.3.	Cited documents will be added to References
9	Please provide the legend for Figures 5 and 6.	A legend will be provided for the two figures.
10	Please supplement the "Requirements for Archaeological Watching Brief" in Section 11.1.	The 'Requirements for Archaeological Watching Brief" text will be added to Section 11.1.

Appendix I

Photographic Records of the Uncommon Tree Species

Uncommon Trees Photos (Date of Weekly Inspection: 01-06-10)

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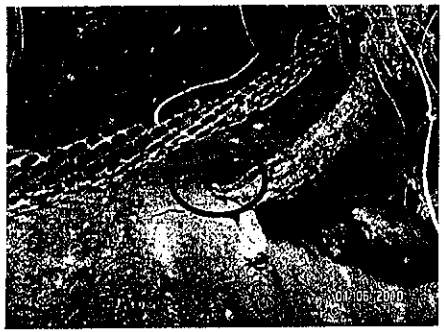

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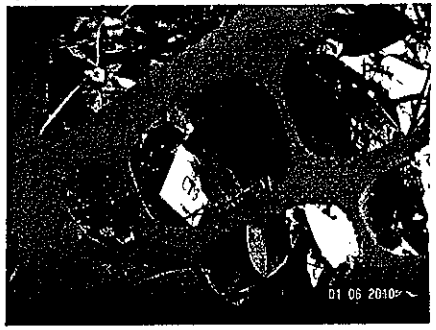

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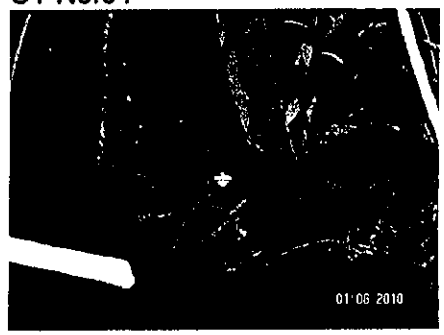

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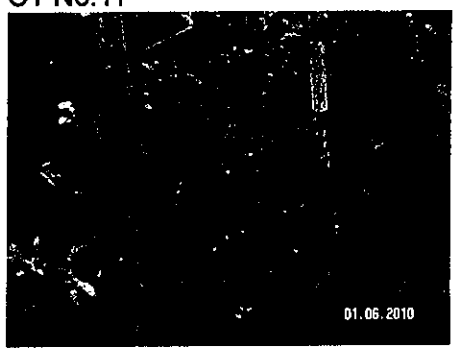
CT No.08

CT No.09

CT No.10

CT No.11



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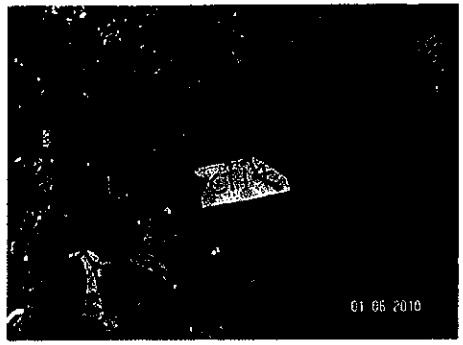

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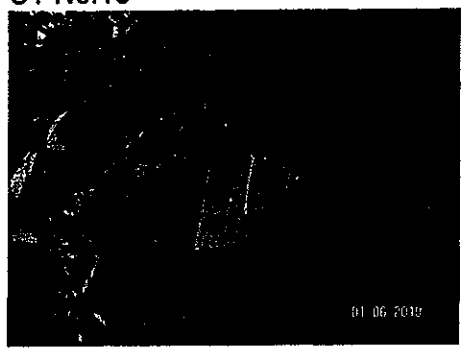

Photos of Uncommon Tree (Date of Inspection: 07-06-2010)

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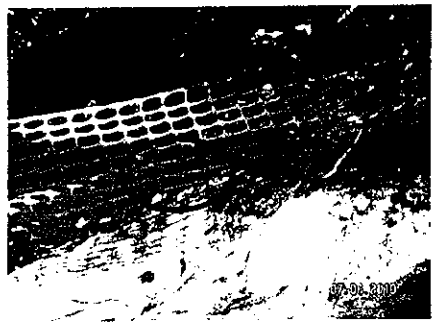

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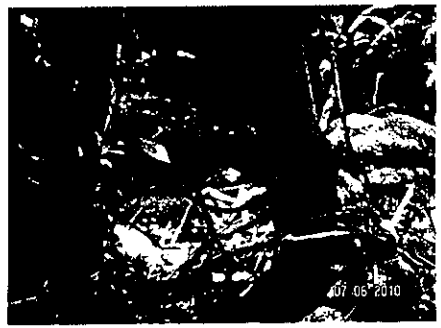

C.T. No. 5

C.T. No. 6

C.T. No. 7

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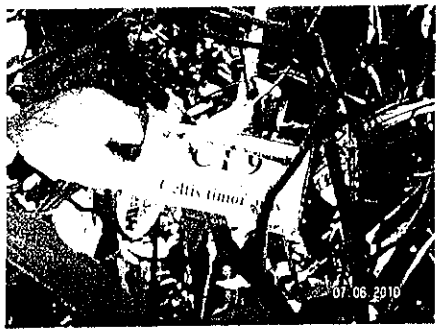

C.T. No. 10

C.T. No.

C.T. No. 12

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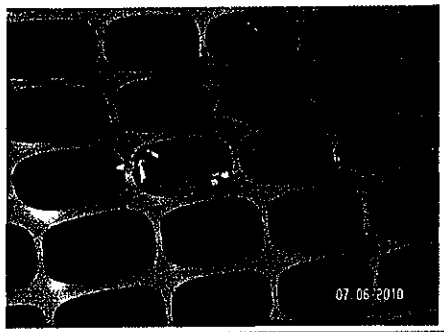	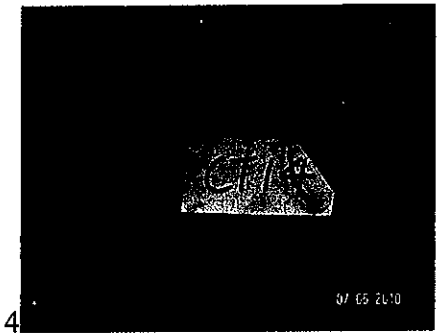	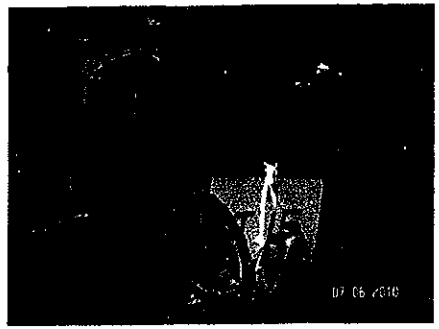

Uncommon Trees Photos (Date of Weekly Inspection: 17-06-10)

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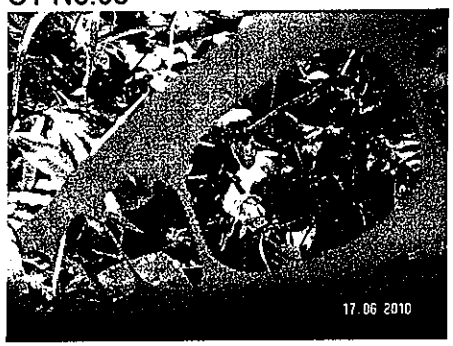

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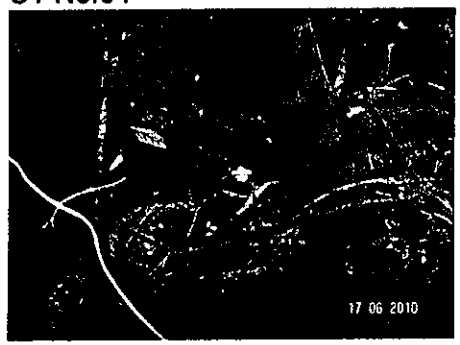

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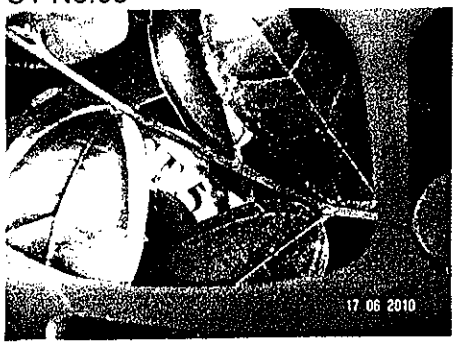

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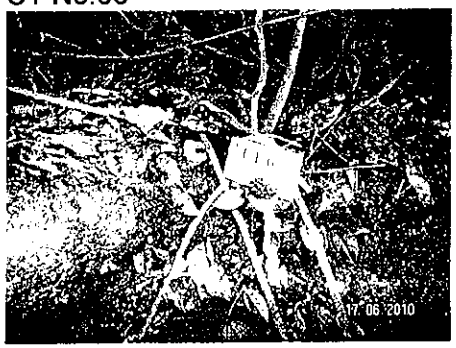

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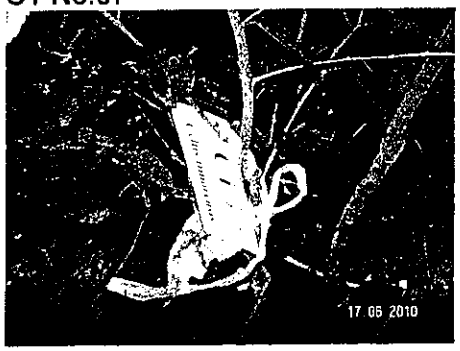

CT No.08

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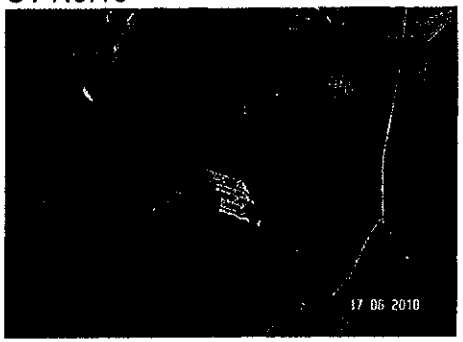
CT No.12

CT No.13



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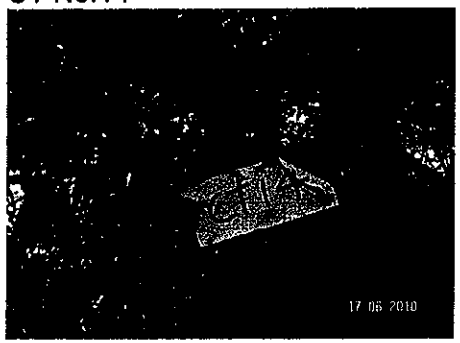

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Uncommon Trees Photos (Date of Weekly Inspection: 23-06-10)

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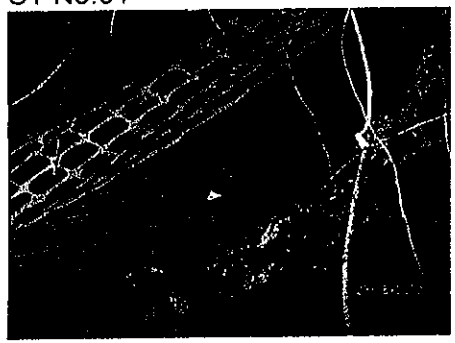

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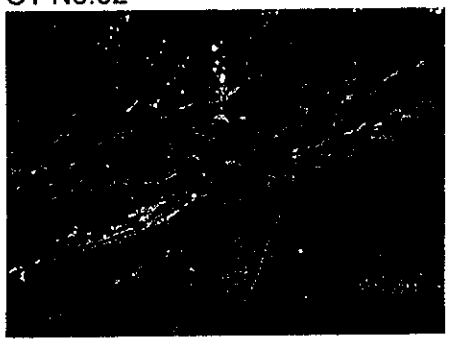

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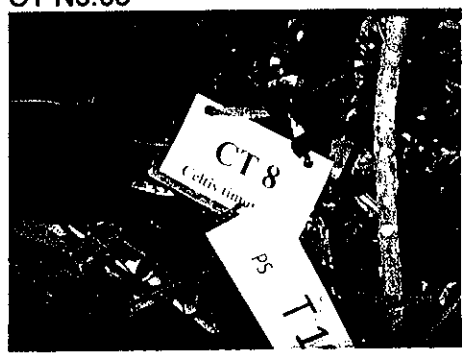

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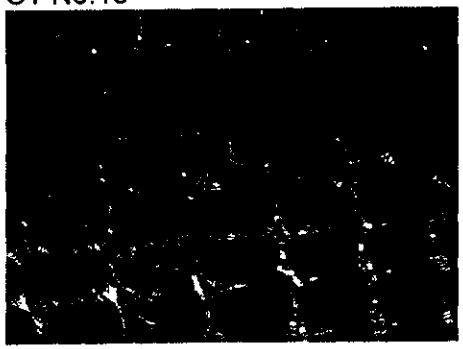

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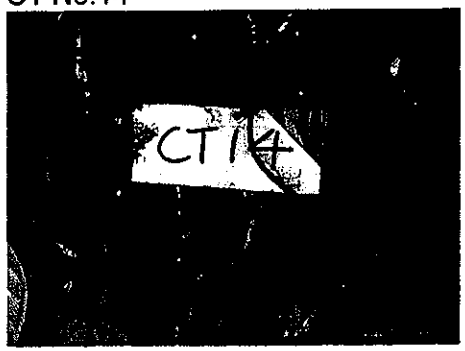

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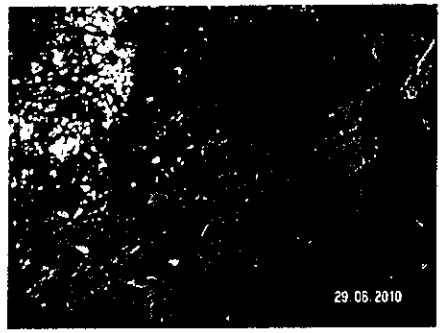

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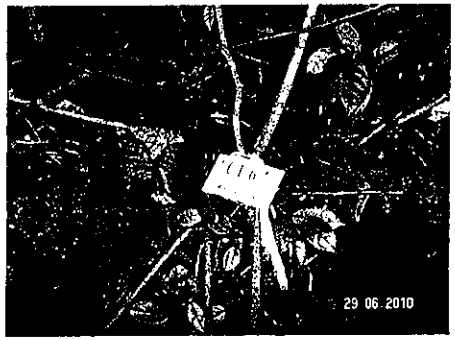

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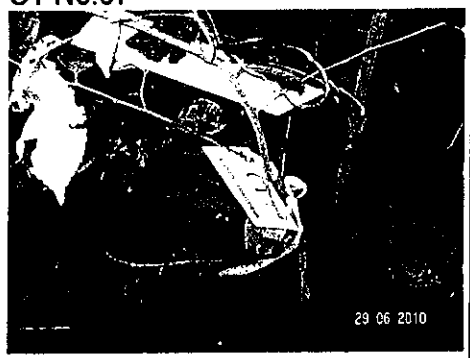

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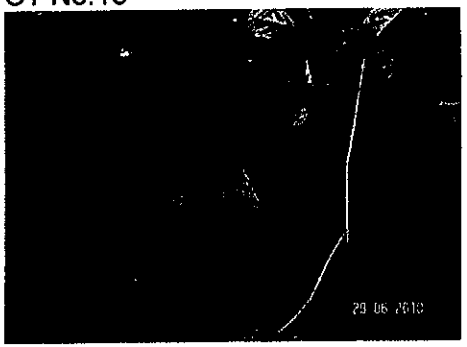

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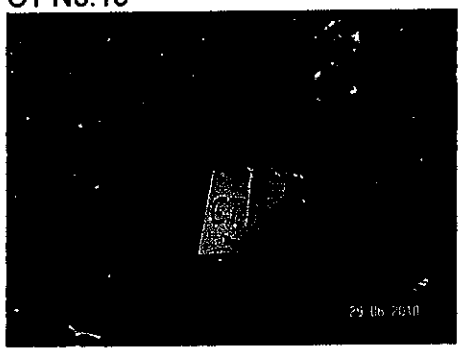


Appendix J

Letter of Variation Environmental Permit (VEP-299/2009)

本署檔號 OUR REF: Annex (10) to EP2/N9/F/50 IV
來函檔號 YOUR REF:
電話 TEL. NO.: 2835 1105
圖文傳真 FAX NO.: 2591 0558
電子郵件 E-MAIL:
網址 HOMEPAGE: http://www.epd.gov.hk

Environmental Protection Department
Branch Office
28th Floor, Southorn Centre,
130 Hennessy Road,
Wan Chai, Hong Kong.

環境保護署分處
香港灣仔
軒尼詩道
一百三十號
修頓中心廿八樓

23 September 2009

By Registered Post & Fax : 2833 9162
Drainage Services Department,
5th Floor, Western Magistracy,
2A Pok Fu Lam Road,
Hong Kong.

(Attn.: Mr. CHEUNG Kai Cheung)

Dear Sir,

Environmental Impact Assessment (EIA) Ordinance, Cap. 499
Application for Variation of an Environmental Permit
Project Title : Outlying Islands Sewerage Stage 1 Phase 2 – Sok Kwu Wan Sewage Collection, Treatment and Disposal Facilities
(Application No.: VEP-299/2009)

I refer to your application submitted on 28 August 2009 under Section 13(1) of the EIA Ordinance (the Ordinance).

Pursuant to Section 13(5) of the Ordinance, we have amended the Environmental Permit (EP-281/2007). We attach the Environmental Permit as amended (EP-281/2007/A) for your use.

Should you have any question, please contact our Mr. Colin Keung at Tel : 2835 1125.

Yours faithfully,

(Sam W.H. Wong)
Principal Environmental Protection Officer
for Director of Environmental Protection

Encl.

ENVIRONMENTAL IMPACT ASSESSMENT ORDINANCE
(CHAPTER 499)
SECTIONS 10 and 13

環境影響評估條例
(第499章)
第 10 及 13 條

ENVIRONMENTAL PERMIT TO CONSTRUCT AND OPERATE A DESIGNATED PROJECT

建造及營辦指定工程項目的環境許可證

PART A (MAIN PERMIT)
A部 (許可證主要部分)

Pursuant to Section 10 of the Environmental Impact Assessment Ordinance (EIAO), the Director of Environmental Protection (the Director) granted the environmental permit EP-281/2007 to the DRAINAGE SERVICES DEPARTMENT (hereinafter referred to as the "Permit Holder") on 29 June 2007. Pursuant to Section 13 of the Ordinance, the Director amends the Environmental Permit (No. EP-281/2007) based on the Application No. VEP-299/2009. The amendments, described below, are incorporated into this Environmental Permit (No. EP-281/2007/A). This Environmental Permit as amended is for the construction and operation of the designated project described in Part B subject to the conditions specified in Part C.
根據《環境影響評估條例》(環評條例)第10條的規定，環境保護署署長(署長)於2007年6月29日將環境許可證編號 EP-281/2007 批予渠務署 (下稱"許可證持有人")，根據條例第 13 條的規定，署長因應申請者編號 VEP-299/2009 修訂環境許可證編號 EP-281/2007，下文說明的修訂，已包含在本環境許可證內 (EP-281/2007/A)。本經修訂的環境許可證，適用於建造及營辦B部所說明的指定工程項目，但須遵守C部所列明的條件。

The issue of this Environmental Permit is based on the documents, approval or permissions described below:
本環境許可證乃依據下列的文件、批准或許可而簽發：

Application No. 申請者編號	VEP-299/2009
Document in the Register: 登記冊上的文件:	1. Outlying Islands Sewerage Stage 1 Phase 2 Package J – Sok Kwu Wan Sewage Collection, Treatment and Disposal Facilities - Final Environmental Impact Assessment Report - Final Environmental Impact Assessment Executive Summary - Final Environmental Monitoring and Audit Manual Hereinafter referred to as the "EIA Report" (Register No.: AEIAR-075/2003) 離島污水收集計劃第I階段第II期工程組件J - 索罟灣污水收集、處理及排放 - 環境影響評估報告 - 環境影響評估行政摘要 - 環境監察及審核手冊 下稱"環評報告" (登記冊編號 AEIAR-075/2003)

Application No. 申請書編號	VEP-299/2009
Document in the Register : 登記冊上的文件:	2. The Director's letter of approval of the EIA Report dated 25 October 2003 in Ax (10) to EP2/N9/F/50 II 環境保護署署長於二〇〇三年十月二十五日發出批准環評報告的信件，檔案編號 Ax (10) to EP2/N9/F/50 II 3. Application for Environmental Permit received on 5 June 2007 (Application No.: AEP-281/2007) 於二〇〇七年六月五日提交的環境許可証申請文件（申請書編號：AEP-281/2007） 4. Environmental Permit issued on 29 June 2007 (Permit No. EP-281/2007) 於二〇〇七年六月二十九日發出的環境許可證 (許可證編號 EP-281/2007) 5. Application for Variation of an Environmental Permit submitted by the Permit Holder on 28 August 2009 (Application No. VEP-299/2009) 許可證持有人於二〇〇九年八月二十八日提交的更改環境許可證申請文件(申請書編號 VEP-299/2009)

Application No. 申請編號	Date of Application 申請日期	List of Amendments Incorporated into Environmental Permit 已包含在環境許可證內的修訂項目	Date of Amendments 修訂日期
VEP-299/2009	28 August 2009 2009年8月28日	(1) Vary Conditions 1.7 and 3.7 in Part C (2) Vary Figure 4 (1) 更改 C 部條件第 1.7 及3.7 項 (2) 更改附圖 4	23 September 2009 2009年9月 23 日

23 September 2009
Date
日期

(Sam W H WONG)
Principal Environmental Protection Officer (Regional Assessment)
for Director of Environmental Protection
環境保護署署長
(首席環境保護主任(區域評估) 黃偉康代行)

PART B (DESCRIPTION OF DESIGNATED PROJECT)
B部 (指定工程項目的說明)

Hereunder is the description of the designated project mentioned in Part A of this environmental permit (hereinafter referred to as "the Permit");
下列爲本環境許可證(下稱"許可證")A部所提述的指定工程項目的說明:

Title of Designated Project 指定工程項目的名稱	Outlying Islands Sewerage Stage 1 Phase 2 – Sok Kwu Wan Sewage Collection, Treatment and Disposal Facilities. (This designated project is hereafter referred to as "the Project") 離島污水收集計劃第1階段第2期 - 索罟灣污水收集、處理及排放。 (本指定工程項目下稱"工程項目")
Nature of Designated Project 指定工程項目的性質	A submarine sewage outfall; and 海底污水渠口; 及 Sewers in a conservation area. 在自然保育區內的污水管道。
Location of Designated Project 指定工程項目的地點	Sok Kwu Wan, Lamma Island. 南丫島索罟灣。 The location of the Project is shown in Figure 1 and Figure 2 of this Permit. 工程項目的地點展示於本許可證圖1及圖2內。
Scale and Scope of Designated Project 指定工程項目的規模和範圍	The Project is mainly to construct and operate the following sewage infrastructures : - a sewage treatment works of capacity about 1,430m^3/day; - a submarine outfall of about 750m in length and 225mm in diameter; and - village sewage works including two pumping stations and underground sewerage pipes. 工程項目主要爲建造及營運下列的污水处理基礎設施: - 一所處理量達約每日 1,430 m^3 的污水處理設施; - 長約 750m 和直徑約 225mm 的海底排放渠; 及 - 鄉村污水收集系統, 其中包括二所污水泵房和地下污水管道。

PART C (PERMIT CONDITIONS)

1. General Conditions

1.1 The Permit Holder and any person working on the Project shall comply with all conditions set out in this Permit. Any non-compliance by any person may constitute a contravention of the Environmental Impact Assessment Ordinance (Cap.499) and may become the subject of appropriate action being taken under the Ordinance.

1.2 The Permit Holder shall ensure full compliance with all legislation from time to time in force including, without limitation to, the Noise Control Ordinance (Cap. 400), Air Pollution Control Ordinance (Cap. 311), Water Pollution Control Ordinance (Cap. 358), Dumping at Sea Ordinance (Cap. 466) and Waste Disposal Ordinance (Cap. 354). This Permit does not of itself constitute any ground of defense against any proceedings instituted under any legislation or imply any approval under any legislation.

1.3 The Permit Holder shall make copies of this Permit together with all documents referred to in this Permit and the documents referred to in Part A of the Permit readily available at all times for inspection by the Director or his authorized officers at all sites/offices covered by this Permit. Any reference to the Permit shall include all documents referred to in the Permit and also the relevant documents in the Register.

1.4 The Permit Holder shall give a copy of this Permit to the person(s) in charge of the site(s) and ensure that such person(s) fully understands all conditions and all requirements incorporated by the Permit. The site(s) refers to site(s) of construction and operation of the Project and shall mean the same hereafter.

1.5 The Permit Holder shall display conspicuously a copy of this Permit on the Project site(s) at all vehicular site entrances/exits or at a convenient location for public's information at all times. The Permit Holder shall ensure that the most updated information about the Permit, including any amended Permit, is displayed at such locations. If the Permit Holder surrenders a part or the whole of the Permit, the notice he sends to the Director shall also be displayed at the same locations as the original Permit. The suspended, varied or cancelled Permit shall be removed from display at the Project site(s).

1.6 The Permit Holder shall construct and operate the Project in accordance with the project description in Part B of this Permit.

1.7 The Permit Holder shall ensure that the Project is designed, constructed and operated in accordance with the information and recommendations described in the approved EIA Report (Register No. AEIAR-075/2003), the application documents for Environmental Permit (Application No. AEP-281/2007), the application documents for variation of an environmental permit (Application No. VEP-299/2009) and other relevant documents in the Register, the information and mitigation measures described in this Permit, mitigation measures to be recommended in submissions that shall be deposited with or approved by the Director as a result of permit conditions contained in this Permit, and mitigation measures to be recommended under on-going surveillance and monitoring activities during all stages of the Project. Where recommendations referred to in the documents of the Register are not expressly referred to in this Permit, such recommendations are nevertheless to be implemented unless expressly excluded or impliedly amended in this Permit.

1.8 All deposited submissions, as required under this Permit, shall be rectified and resubmitted in accordance with the comments, if any, made by the Director within one month of the receipt of the Director's comments or otherwise specified by the Director.

1.9 All submissions approved by the Director, all submissions deposited without comments by the Director, or all submissions rectified in accordance with comments by the Director under this Permit shall be construed as part of the permit conditions described in Part C of this Permit. Any variation of the submissions shall be approved by the Director in writing or as prescribed in the relevant permit conditions. Any non-compliance with the submissions may constitute a contravention of the Environmental Impact Assessment Ordinance (Cap.499). All submissions or any variation of the submissions shall be certified by the Environmental Team (ET) Leader and verified by the Independent Environmental Checker (IEC) referred to in Condition 2.1 and 2.2 below before submitting to the Director under this Permit.

1.10 The Permit Holder shall release all finalized submissions, as required under this Permit, to the public by depositing copies in the Environmental Impact Assessment Ordinance Register Office, or in any other places, or any internet websites as specified by the Director, or by any other means as specified by the Director for public inspection. For this purpose, the Permit Holder shall provide sufficient copies of the submissions.

1.11 All submissions to the Director required under this Permit shall be delivered either in person or by registered mail to the Environmental Impact Assessment Ordinance Register Office (currently at 27/F, Southorn Centre, 130 Hennessy Road, Wanchai, Hong Kong). Electronic copies of all finalized submissions required under this Permit shall be prepared in Hyper Text Markup Language (HTML) (version 4.0 or later) and in Portable Document Format (PDF version 4.0 or later), unless otherwise agreed by the Director and shall be submitted at the same time as the hard copies.

1.12 The Permit Holder shall notify the Director in writing the commencement dates of construction and operation of the Project no later than two weeks prior to the commencement of construction and operation of the Project. The Permit Holder shall notify the Director in writing immediately if there is any change of the commencement dates of the construction and operation.

1.13 For the purpose of this Permit, "commencement of construction" does not include works related to site clearance and preparation or other works as agreed by the Director.

2. Measures before Commencement of the Construction of the Project

2.1 An Environment Team (ET) shall be established by the Permit Holder no later than one month before commencement of construction of the Project. The ET shall not be in any way an associated body of the Contractor or the Independent Environmental Checker (IEC) for the Project. The ET shall be headed by an ET Leader. The ET Leader shall be a person who has at least 7 years of experience in environmental monitoring and auditing (EM&A) or environmental management. The ET and the ET Leader shall be responsible for the implementation of the EM&A programme in accordance with the requirements as contained in the EM&A Manual provided in the application documents for Environmental Permit (Application No. AEP-281/2007). The ET Leader shall keep a contemporaneous log-book of each and every instance or circumstance or change of circumstances which may affect the environmental impact assessment and each and every non-compliance with the recommendations of the approved EIA Report (Register No. AEIAR-075/2003), application documents for Environmental Permit (Application No. AEP-281/2007) and this Permit. The ET Leader shall notify the IEC within one working day of the occurrence of any such instance or circumstance or change of circumstances. The ET Leader's log-book shall be kept readily available for inspection by all persons assisting in supervision of the implementation of the recommendations of the approved EIA Report (Register No. AEIAR-075/2003), application documents for Environmental Permit (Application No. AEP-281/2007) and this Permit or by the Director or his authorized officers. Failure to maintain

records in the log-book, failure to discharge the duties of the ET Leader as defined in the EM&A Manual or failure to comply with this Condition would entitle the Director to require the Permit Holder by notice in writing to replace the ET Leader. Failure by the Permit Holder to make replacement, or further failure to keep contemporaneous records in the log-book despite the employment of a new ET Leader may render the Permit liable to suspension, cancellation or variation.

2.2 An Independent Environmental Checker (IEC) shall be employed by the Permit Holder no later than one month before commencement of construction of the Project. The IEC shall not be in any way an associated body of the Contractor or the ET for the Project. The IEC shall be a person who has at least 7 years of experience in EM&A or environmental management. The IEC shall be responsible for duties defined in the EM&A Manual provided in the application documents for Environmental Permit (Application No. AEP-281/2007) and shall audit the overall EM&A performance, including the implementation of all environmental mitigation measures, submissions required in the EM&A Manual, and any other submissions required under this Permit. In addition, the IEC shall be responsible for verifying the environmental acceptability of permanent and temporary works, relevant design plans and submissions under this Permit. The IEC shall verify the log-book(s) mentioned in above condition of this Permit. The IEC shall notify the Director by fax, within one working day of receipt of notification from the ET Leader of each and every occurrence, change of circumstances or non-compliance with the Approved EIA Report (Register No. AEIAR-075/2003), application documents for Environmental Permit (Application No. AEP-281/2007) and this Permit, which might affect the monitoring or control of adverse environmental impacts from the Project. In the case where the IEC fails to so notify the Director of the same, fails to discharge the duties of the IEC as defined in the EM&A Manual or fails to comply with this Condition, the Director may require the Permit Holder by notice in writing to replace the IEC. Failure to replace the IEC as directed or further failure to so notify the Director despite employment of a new IEC may render the Permit liable to suspension, cancellation or variation. Notification by the Permit Holder is the same as notification by the IEC for the purpose of this Condition.

3. Submissions or Measures during the Construction of the Project

Management Organization of Main Construction Companies

3.1 The Permit Holder shall, within one month after commencement of construction of the Project, inform the Director in writing the management organization of the main companies and/or any form of joint ventures associated with the construction of the Project. The submitted information shall include at least an organization chart, names of responsible persons and their contact details.

Measures to Mitigate Water Quality, Marine Ecological and Fisheries Impacts during Construction

3.2 No marine dredging works within 500m from the shore as shown in Figure 2 of this Permit shall be carried out for the construction of the submarine outfall of the Project. Only Horizontal Directional Drilling (HDD) technique shall be used for the construction of this inner part of the submarine outfall.

3.3 The Permit Holder shall, no later than one month before commencement of construction of the submarine outfall of the Project, deposit with the Director four hard copies and one electronic copy of the detailed arrangements of using HDD technique for the construction of the submarine outfall. The submission shall include the construction details, the length of submarine outfall using HDD technique for construction, the depth of submarine outfall below the seabed, the details of drilling fluid to be used in the HDD process and the disposal arrangements of the HDD

drilling fluid. Before submission to the Director, the proposal shall be certified by the ET Leader and verified by the IEC as conforming to the information and recommendations contained in the Approved EIA Report (Register No. AEIAR-075/2003) and the application documents for Environmental Permit (Application No. AEP-281/2007) to mitigate the water quality, marine ecological and fisheries impacts during construction.

3.4 The following mitigation measures shall be implemented when carrying out marine dredging works in areas further than 500m from the shore for the construction of the outer part of the submarine outfall as shown in Figure 2 of this Permit:

i) not more than one closed grab dredger, with dredging rate not more than 55m^3/hr, shall be used;

ii) two layers of silt curtain as shown in Figure 3 of this Permit shall be used, with the first layer enclosing the grab and the second layer deploying at around 50m from the dredging area;

iii) dredging shall only be carried out during ebb tide; and

iv) no dredged materials shall be allowed to overflow, splash or leak into the sea during loading or transportation.

Measures to Avoid, Minimize or Mitigate Terrestrial Ecological Impact during Construction

3.5 The sewage treatment works and the village sewerage works of the Project shall be constructed at the locations shown in Figure 1 of this Permit. No woodland and Romer's Tree Frog habitats shall be affected during construction of the Project.

3.6 All sewers shall be laid underground in the urbanized areas or existing footpaths.

3.7 The uncommon tree species, *Celtis Timorensis*, as shown in Figure 4 of this Permit shall be labeled, fenced and protected in order to avoid any disturbance during construction of the Project. Before commencement of construction of the pumping station P1b, the uncommon tree species, *Celtis Timorensis*, found in the pumping station P1b area as shown in Figure 4 of this Permit shall be properly transplanted to the area immediately south of the pumping station P1b in accordance with the information and recommendations described in the application documents for variation of an environmental permit (Application No. VEP-299/2009). The Permit Holder shall, no later than three weeks before commencement of the transplantation, deposit with the Director a transplantation proposal showing details of the location(s) of reception site(s), methodology, implementation programme, post-transplantation monitoring and personnel for supervising the transplantation. Before submission to the Director, the transplantation proposal shall be certified by the ET Leader and verified by the IEC as conforming to the information and recommendations contained in the application documents for variation of an environmental permit (Application No. VEP-299/2009) to effectively transplant the uncommon tree species, *Celtis Timorensis*.

3.8 All temporary works area shall be reinstated upon completion of works. Local native plant species shall be used as far as practicable.

4. Submissions or Measures for the Operation of the Project

Effluent from the Submarine Outfall

4.1 All influent shall be treated by Membrane Bioreactor (MBR) process, Sequencing Batching

Reactor (SBR) with ultra-violet disinfection process or other process as agreed with the Director in the sewage treatment works of the Project prior to discharge. Effluent shall only be discharged through the submarine outfall of the Project.

4.2 The Permit Holder shall, no later than three months before commencement of operation of the Project, deposit with the Director four hard copies and one electronic copy of the schematic design of the Project showing the treatment and discharge processes used in the Project. Before submission to the Director, the schematic design shall be certified by the ET Leader and verified by the IEC as conforming to the information and recommendations contained in the Approved EIA Report (Register No. AEIAR-075/2003) and the application documents for Environmental Permit (Application No. AEP-281/2007).

Design of the Submarine Outfall

4.3 Effluent shall only be discharged through the diffuser of the submarine outfall of the Project. The diffuser of the submarine outfall shall be located at a distance greater than 600m from the shore and at a water depth greater than 13m.

4.4 Except the outermost location of the submarine outfall for the diffuser, no protective backfill and rock armour for the submarine outfall shall be protruded above the seabed.

4.5 The Permit Holder shall, no later than one month after completion of construction of the Project, deposit with the Director four hard copies and one electronic copy of the as-built drawings showing the details of the submarine outfall and its diffuser. Before submission to the Director, the as-built drawings shall be certified by the ET Leader and verified by the IEC as conforming to the information and recommendations contained in the Approved EIA Report (Register No. AEIAR-075/2003) and the application documents for Environmental Permit (Application No. AEP-281/2007).

Emergency Discharge

4.6 No emergency discharge shall be made at the locations of the sewage treatment works and the pumping station P2. 24-hour temporary storage capacity shall be provided at the two pumping stations.

4.7 The Permit Holder shall, no later than three months before the commencement of operation of the Project, deposit with the Director a detailed response and action plan for the emergency discharge. Before submission to the Director, the plan shall be certified by the ET Leader and verified by the IEC as conforming to the information and recommendations contained in the Approved EIA Report (Register No. AEIAR-075/2003) and the application documents for Environmental Permit (Application No. AEP-281/2007).

5. Environmental Monitoring and Audit (EM&A) for the Project

5.1 The EM&A programme shall be implemented in accordance with the procedures and requirements in the EM&A Manual provided in the application documents for Environmental Permit (Application No. AEP-281/2007). Any changes to the EM&A programme shall be certified by the ET Leader and verified by the IEC as conforming to the requirements set out in the EM&A Manual and shall seek the prior approval from the Director before their implementation.

5.2 Samples, measurements and necessary remedial actions shall be taken in accordance with the requirements of the EM&A Manual provided in the application documents for Environmental

Permit (Application No. AEP-281/2007) by:

i) conducting baseline environmental monitoring;

ii) conducting impact monitoring; carrying out remedial actions described in the Event/Action Plans of the EM&A Manual in accordance with the time frames set out in the Event/Action Plans, or as agreed by the Director, in case where specified criteria in the EM&A Manual are exceeded; and logging and keeping records of details of all parameters within 3 working days of the collection of data or completion of remedial action(s), for the purpose of preparing and submitting the monthly EM&A Reports and to make available for inspection on site; and

iii) conducting post-construction and post-commissioning water quality monitoring.

5.3 Four hard copies and one electronic copy of the Baseline Monitoring Report shall be submitted to the Director at least 2 weeks before commencement of construction of the Project. The submissions shall be certified by the ET Leader and verified by the IEC before submission to the Director. Additional copies of the submission shall be provided upon request by the Director.

5.4 Four hard copies and one electronic copy of the monthly EM&A Report shall be submitted to the Director within 2 weeks after the end of the reporting month. The monthly EM&A Report shall include a summary of all non-compliance (exceedances) of the environmental quality performance limits (Action and Limit levels), the status of submission required under this Permit and the types, quantities and disposal locations of all surplus excavated materials and wastes arising from the Project. The submissions shall be certified by the ET Leader and verified by the IEC before submission to the Director. Additional copies of the submission shall be provided upon request by the Director.

5.5 All environmental monitoring and audit data submitted under this Permit shall be true, valid and correct.

5.6 To ensure a high degree of transparency regarding the monitoring data and results in view of the public concern about the Project, all environmental monitoring and audit data and results and all submissions and all performance test data and results required by this Permit shall be made available by the Permit Holder to the public through a dedicated web site to be set up by the Permit Holder under Condition 6.2 below, in the shortest practicable time and in no event later than 2 weeks after such information is available.

6. Electronic Reporting of EM&A Information

6.1 To facilitate public inspection of the Baseline Monitoring Report and the monthly EM&A Reports via the EIAO Internet Website and at the EIAO Register Office, electronic copies of these Reports shall be prepared in the Hyper Text Markup Language (HTML) (version 4.0 or later) and in Portable Document Format (PDF version 4.0 or later), unless otherwise agreed by the Director and shall be submitted at the same time as the hard copies as described in Conditions 5.3 and 5.4 of this Permit. For the HTML version, a content page capable of providing hyperlink to each section and sub-section of these Reports shall be included in the beginning of the document. Hyperlinks to all figures, drawings and tables in these Reports shall be provided in the main text from where the respective references are made. All graphics in these Reports shall be in interlaced GIF format unless otherwise agreed by the Director. The content of the electronic copies of these Reports must be the same as the hard copies.

6.2 The Permit Holder shall set up a dedicated web site and notify the Director in writing the internet

address where the environmental monitoring and project data is to be placed within six weeks after the commencement of construction of the Project. All environmental monitoring results described in Condition 6.1 above and all submissions required by this Permit shall be made available to the public via this dedicated web site to be set up by the Permit Holder in the shortest time practicable, and in no event later than 2 weeks after the relevant environmental monitoring data are collected or become available, unless otherwise agreed with the Director. The Permit Holder shall maintain the dedicated website throughout the entire construction stage and during the first operating year of the Project to facilitate public access to environmental monitoring data.

6.3 The internet website as described in Condition 6.2 above shall enable user-friendly public access to the monitoring data and project data including the EIA report, the environmental permit(s) and project profile of the Project. The internet website shall have features capable of:

i) providing access to all environmental monitoring data collected since the commencement of work and all submissions under this permit;

ii) searching by date;

iii) searching by types of monitoring data; and

iv) hyperlinks to relevant monitoring data after searching;

or otherwise as agreed by the Director.

Notes :

1. This Permit consists of three parts, namely, Part A (Main Permit), Part B (Description of Designated Project) and Part C (Permit Conditions). Any person relying on this permit should obtain independent legal advice on the legal implications under the Ordinance, and the following notes are for general information only.

2. If there is a breach of any conditions of this Permit, the Director or his authorized officer may, with the consent of the Secretary for the Environment, order the cessation of associated work until the remedial action is taken in respect of the resultant environmental damage, and in that case the Permit Holder shall not carry out any associated works without the permission of the Director or his authorized officer.

3. The Permit Holder may apply under Section 13 of the Environmental Impact Assessment Ordinance (the "Ordinance") to the Director for a variation of the conditions of this Permit. The Permit Holder shall replace the original permit displayed on the Project site by the amended permit.

4. A person who assumes the responsibility for the whole or a part of the Project may, before he assumes responsibility of the Project, apply under Section 12 of the Ordinance to the Director for a further environmental permit.

5. Under Section 14 of the Ordinance, the Director may with the consent of the Secretary for the Environment, suspend, vary or cancel this Permit. The suspended, varied or cancelled Permit shall be removed from display at the Project site.

6. If this Permit is cancelled or surrendered during construction or operation of the Project, another environmental permit must be obtained under the Ordinance before the Project could be

continued. It is an offence under Section 26 (1) of the Ordinance to construct or operate a designated project listed in Schedule 2 of the Ordinance without a valid environmental permit.

7. Any person who constructs or operates the Project contrary to the conditions in the Permit, and is convicted of an offence under the Ordinance, is liable:

(i) on a first conviction on indictment to a fine of $2 million and to imprisonment for 6 months;
(ii) on a second or subsequent conviction on indictment to a fine of $5 million and to imprisonment for 2 years;
(iii) on a first summary conviction to a fine at level 6 and to imprisonment for 6 months;
(iv) on a second or subsequent summary conviction to a fine of $1 million and to imprisonment for 1 year; and
(v) in any case where the offence is of a continuing nature, the court or magistrate may impose a fine of $10,000 for each day on which he is satisfied the offence continued.

8. The Permit Holder may appeal against any condition of this Permit under Section 17 of the Ordinance within 30 days of receipt of this Permit.

9. The Notes are for general reference only and that the Permit Holder should refer to the EIA Ordinance for details and seek independent legal advice.

Environmental Permit No. EP-281/2007/A
環境許可證編號 EP-281/2007/A

Environmental Permit No.: EP-281/2007/A
環境許可證編號：EP-281/2007/A

Figure 1: Location Plan of the Project (1 of 2)
圖 1：工程項目地點 (二之一)

Figure 2: Location Plan of the Project (2 of 2)
圖 2：工程項目地點 (二之二)

Figure 3: Arrangement of Silt Curtain during Construction
圖 3：施工期間淤泥屏障的安排

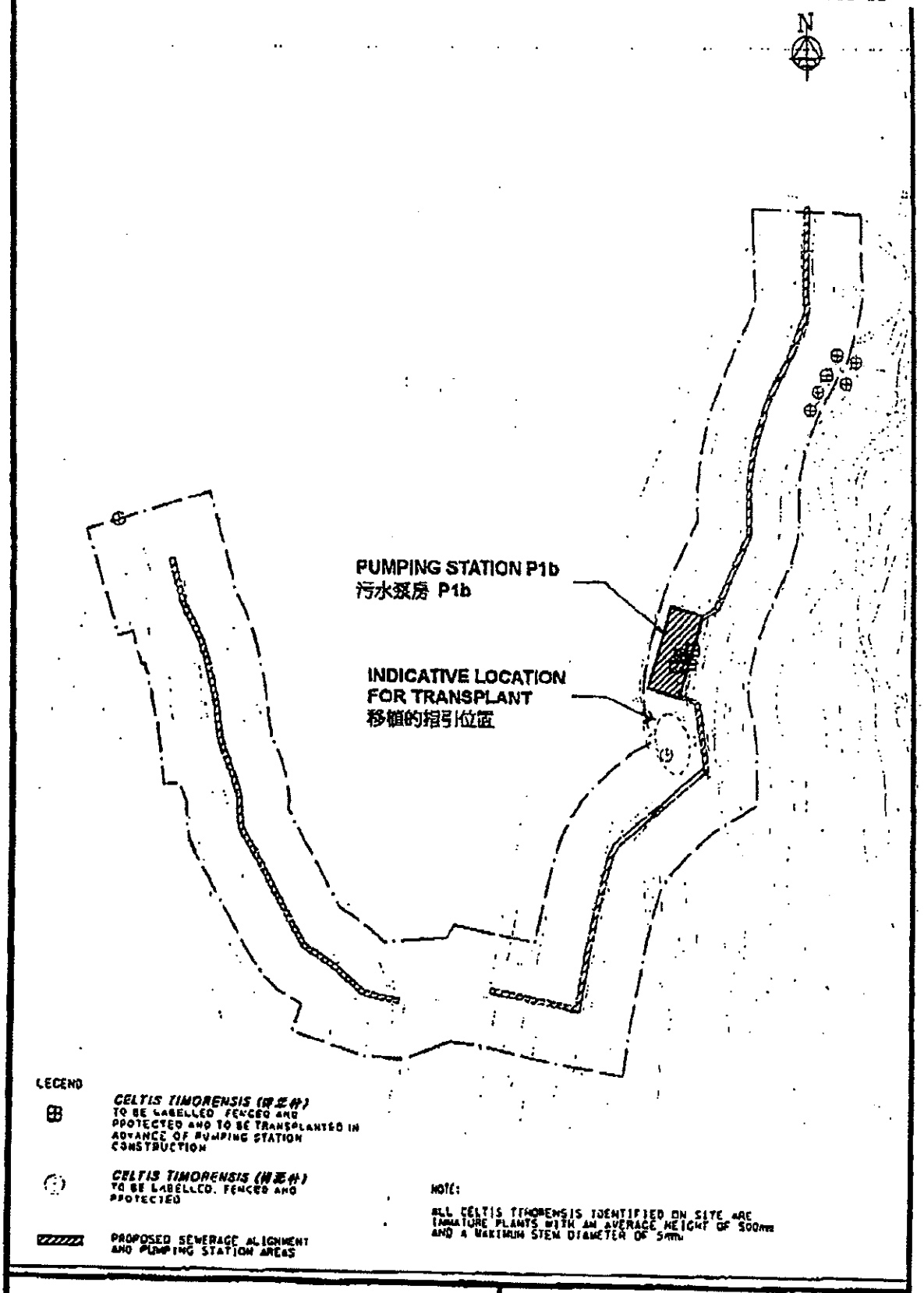


Figure 4: Location of the Uncommon Tree Species, *Celtis timorensis*
圖 4：不常見樹 *假玉仲*的位置

Environmental Permit No. EP-281/2007/A
環境許可證編號：EP-281/2007/A

Appendix K

AFCD Letters dated on 28 October 2009 and 13 November 2009

16-NOV-2009 12:02 FROM KADEN CONSTRUCTION LTD TO K0801 P.01/03

c.c. WWJ/KKC/S. John, pls. immediate take action

Z03155

漁農自然護理署
九龍長沙灣道 303 號
長沙灣政府合署七樓

AGRICULTURE, FISHERIES AND CONSERVATION DEPARTMENT
7/F, Cheung Sha Wan Government Offices
303 Cheung Sha Wan Road,
Kowloon, Hong Kong

本署檔號 Our Ref. : (16) in AF EA 027/07 Pt.2
來函檔號 Your Ref. : K0801/03.23.0.00/2633/L
電話 Tel No. : (852) 2150 6942
圖文傳真 Fax No. : (852) 2377 4427

By Fax
2528 1751

13 November 2009

Kaden Construction Limited
Units 1001-1015, 10/F Grand Central Plaza, Tower 1
138 Shatin Rural Committee Road
Sha Tin, N.T.
(Attn.: Mr. Stephen LEUNG)

Dear Mr. LEUNG,

Drainage Services Department
Contract No. DC/2007/18
Yung Shue Wan and Sok Kwu Wan Village Sewerage, Stage 1 Works
Impact Monitoring Report

I refer to your letter dated 4 November 2009 on the captioned.

Upon site visit, we found that 6 nos. of the labelled plants were misidentified as *Celtis timorensis*, including CT3, CT4, CT5, CT6, CT10 and CT12. On the other hand, 7 nos. of *C. timorensis*, possibly corresponding to CT1 to CT6 and CT10 in Figure 4 of EP-281/2007/A, were found not labelled or some even left unattended (see enclosed photos). No *C. timorensis* was found at the location of CT12 in the Figure. Please ensure that all *C. timorensis* shown in the Figure are accurately identified for labelling, fencing and protection in order to avoid any disturbance during construction of the captioned project.

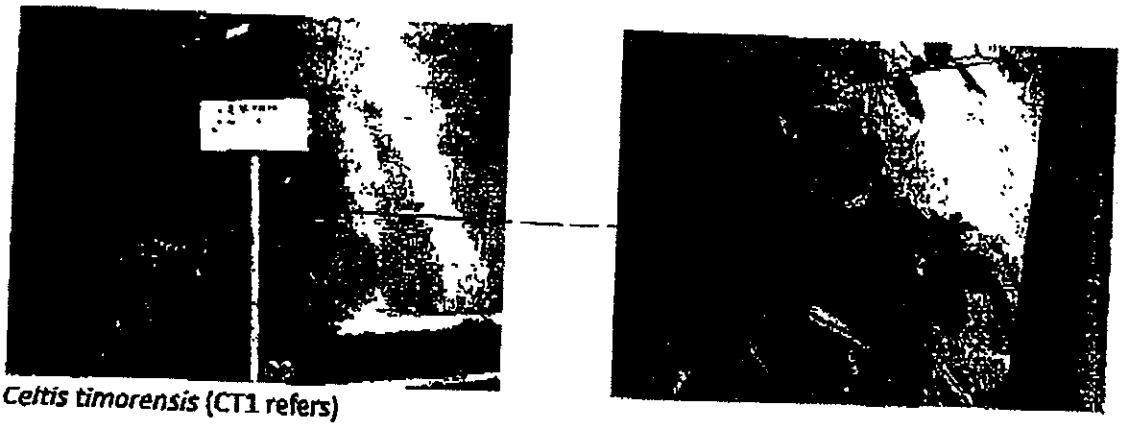
Yours sincerely,

(Dr. CHEUNG Ka-hong, Joseph)
for Director of Agriculture, Fisheries and Conservation

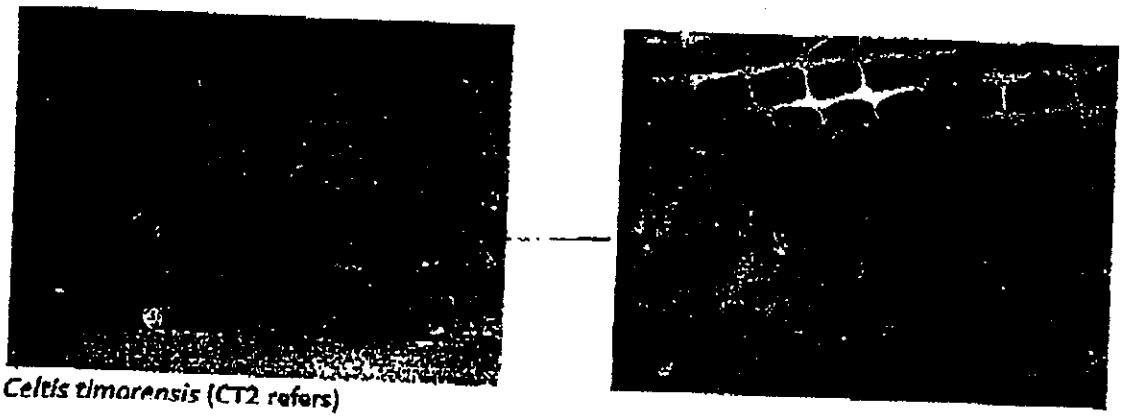
Encl.

c.c. Environmental Protection Department (Attn.: Mr. Matthew CHAN; Fax: 2591 0558)
Drainage Services Department (Attn.: Ir. Henry CHEUNG; Fax: 2833 9162)

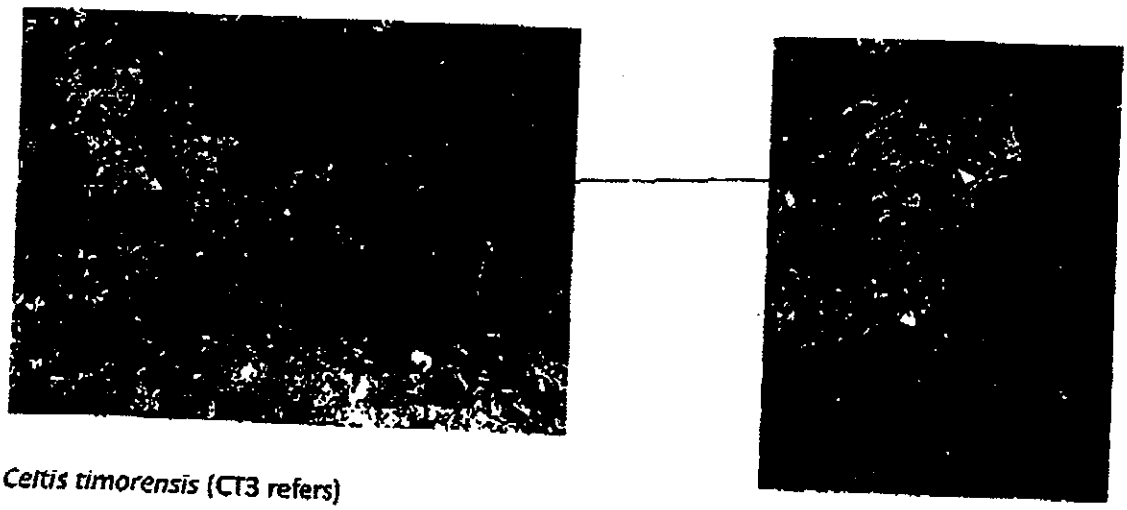
Drainage Services Department Contract No. DC/2007/18
Yung Shue Wan and Sok Kwu Wan Village Sewerage, Stage 1 Works
Impact Monitoring Report



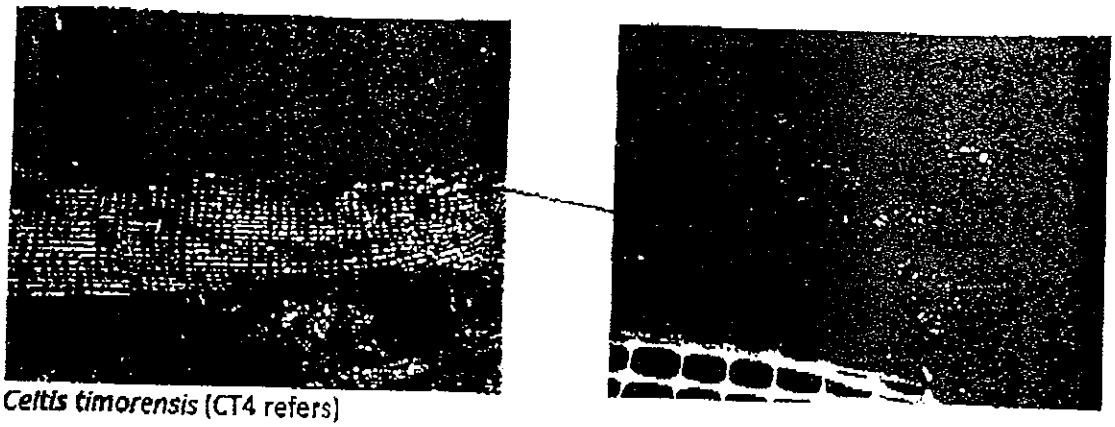
Celtis timorensis (CT1 refers)



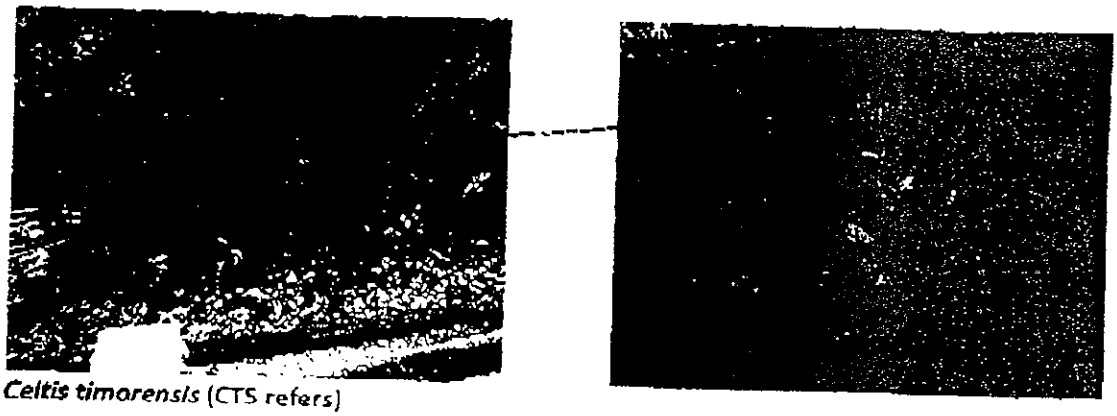
Celtis timorensis (CT2 refers)



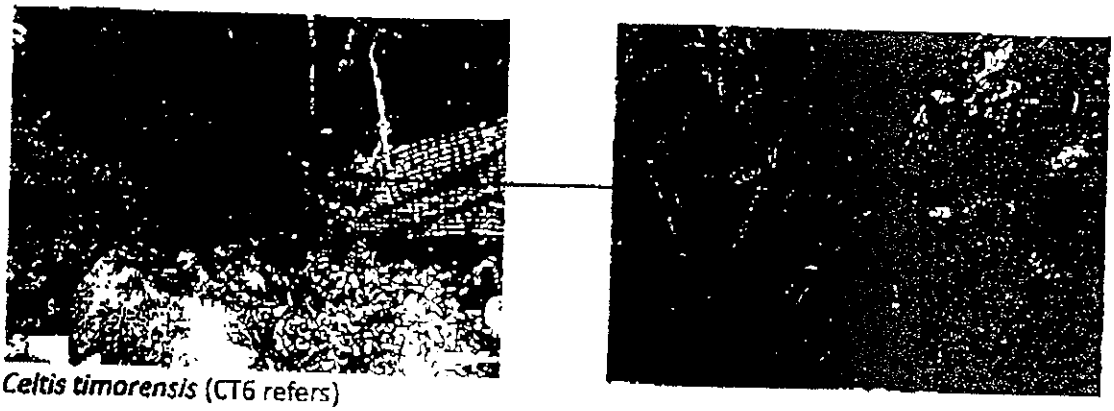
Celtis timorensis (CT3 refers)



Celtis timorensis (CT4 refers)



Celtis timorensis (CT5 refers)



Celtis timorensis (CT6 refers)

Celtis timorensis (CT10 refers)

漁農自然護理署
九龍長沙灣道 303 號
長沙灣政府合署七樓

AGRICULTURE, FISHERIES AND CONSERVATION DEPARTMENT
7/F, Cheung Sha Wan Government Offices
303 Cheung Sha Wan Road,
Kowloon, Hong Kong

本署檔號 Our Ref. : (13) in AF EA 027/07 Pt.2
來函檔號 Your Ref. : OC/906296/CLL
電 話 Tel No. : (852) 2150 6942
圖文傳真 Fax No. : (852) 2377 4427

By Fax
2695 3944

28 October 2009

ETS-TESTCONSULT LIMITED
8/F., Block B, Veristrong Industrial Centre
34-36 Au Pui Wan Street, Fotan
Hong Kong

(Attn.: Mr. C.L. LAU)

Dear Mr. LAU,

Contract No. DC/2007/18
Yung Shue Wan and Sok Kwu Wan Village Sewerage, Stage 1 Works
Impact Monitoring Report

I refer to your letter dated 23 October 2009 on the captioned.

Based on the information provided, I note that the uncommon plants CT Nos. 1, 2 and 12 were found missing during the Environmental Team site inspection on 10 September 2009. Please be reminded that all uncommon tree species, *Celtis timorensis*, as shown in Figure 4 of Environmental Permit No. EP-281/2007/A should be labelled, fenced and protected in order to avoid any disturbance during construction of the captioned Project.

Yours sincerely,

(Dr. CHEUNG Ka-hong, Joseph)
for Director of Agriculture, Fisheries and Conservation

c.c. Environmental Protection Department
(Attn.: Mr. Matthew CHAN; Fax: 2591 0558)

Drainage Services Department
(Attn.: Ir. Henry CHEUNG; Fax: 2833 9162)

Appendix L

EPD Letter dated on 16 November 2009 and 08 December 2009

本署檔案 OUR REF: (6) in EP771/E1/083
來函檔案 YOUR REF: 2516 1719
傳 話 TEL NO:
圖文傳真 FAX NO: 2960 1760
網 址 HOMEPAGE: http://www.epd.gov.hk/

Environmental Protection Department
Environmental Compliance Division
Regional Office (South)
2/F., Chinachem Exchange Square
1 Hoi Wan Street
Quarry Bay, Hong Kong

環境保護署
環保法規管理科
區域辦事處(南)
香港鰂魚涌
海灣街一號，
華懋交易廣場二樓

ETS-TESTCONSULT LIMITED
8/F, Block B, Veristrong Industrial Centre,
34-36 Au Pui Wan Street, Fotan, Hong Kong
(Attn: Ms. Law Sau Yee)

16 November 2009

Dear Ms. Law,

Drainage Services Department Contract No. DC/2007/18
Yung Shue Wan and Sok Kwu Wan Village Sewerage, Stage 1 Works
Impact Monitoring Report

Please find enclosed a copy of the letter to Kaden Construction Limited dated 16 November 2009 on the protection of *Celtis Timorensis* issue for the captioned project.

Best Regards,

CHAN Ho-sun
Assistant Environmental Protection Officer
Environmental Protection Department

本署檔案 OUR REF: (5) in EP771/E1/083
來函檔案 YOUR REF: 2516 1719
電話 TEL NO:
圖文傳真 FAX NO: 2960 1760
網址 HOMEPAGE: http://www.epd.gov.hk/

Environmental Protection Department
Environmental Compliance Division
Regional Office (South)
2/F., Chinachem Exchange Square
1 Hoi Wan Street
Quarry Bay, Hong Kong

環境保護署
環保法規管理科
區域辦事處(南)
香港鰂魚涌
海灣街一號
華懋交易廣場二樓

Kaden Construction Limited
Units 1001-1015, 10/F Grand Central Plaza, Tower 1
138 Shatin Rural Committee Road, Shatin, N.T.
(Attn: Mr. Stephen LEUNG)

By post and by fax (2528 1751)

16 November 2009

Dear Mr. Leung,

Drainage Services Department Contract No. DC/2007/18
Yung Shue Wan and Sok Kwu Wan Village Sewerage, Stage 1 Works
Impact Monitoring Report

Further to AFCD's letters dated 28 October 2009 and 13 November 2009.

Our staff inspected the project area on 5 November 2009, and noted that the *C. Timorensis* marked as CT-12 was still in place. However, CT-1 and CT-2 were removed due to accidental damages. Moreover, as advised by AFCD in their letter on 13 November, you may have either mislabeled or did not properly labeled the species as shown in Figure 4 of the Environmental Permit (EP-281/2009/A).

It was understood that as the holder of said environmental permit, the Permit Holder should strictly follow the permit conditions as issued by this department, particularly Section 3.7, i.e.

*"The uncommon tree species, Celtis Timorensis, as shown in Figure 4 of this Permit shall be **labeled, fenced and protected** in order to avoid any disturbance during construction of the Project....."*

To avoid further contravention to the Environmental Impact Assessment Ordinance (Cap. 499), please rectify the situations immediately and provide us with a copy of your proposed follow-up actions. Your advise upon the completion of the remediation works is much appreciated.

We will closely monitor the above situations. Should you have any queries, please feel free to contact me or Mr. Sit at 2516 1700.

Best regards,

CHAN Ho-sun
Assistant Environmental Protection Officer
Environmental Protection Department

c.c. by fax

Environmental Protection Department	(Attn: Mr. Matthew Chan	Fax: 2591 0558)
Drainage Services Department	(Attn: Mr. C K Au	Fax: 2833 9162)
Agriculture, Fisheries and Conservation Department	(Attn: Dr. Joseph Cheung	Fax: 2377 4427)

c.c. by post

ETS-Testconsult Limited (Attn: Law Sau Yee - Senior Environmental Officer)

本署檔案 OUR REF: (12) in EP771/E1/083
來函檔案 YOUR REF: 2516 1719
電話 TEL NO:
圖文傳真 FAX NO: 2960 1760
網址 HOMEPAGE: http://www.epd.gov.hk/

Environmental Protection Department
Environmental Compliance Division
Regional Office (South)
2/F., Chinachem Exchange Square
1 Hoi Wan Street
Quarry Bay, Hong Kong

環境保護署
環保法規管理科
區域辦事處(南)
香港鰂魚涌
海灣街一號
華懋交易廣場二樓

Kaden Construction Limited
Units 1001-1015, 10/F Grand Central Plaza, Tower 1
138 Shatin Rural Committee Road, Shatin, N.T.
(Attn: Mr. Stephen LEUNG)

By post and by fax (2528 1751)

8 December 2009

Dear Mr. Leung,

Drainage Services Department Contract No. DC/2007/18
Yung Shue Wan and Sok Kwu Wan Village Sewerage, Stage 1 Works
Impact Monitoring Report

I refer to your letter dated 20 November 2009.

Our staff has jointly inspected the project area with AFCD and further confirmed the locations of C. Timorensis with an on-site engineer from Kaden on 4 December 2009. However, as advised by AFCD, there are three more C. Timorensis found within the project area (i.e. adjacent to CT1 to CT6), which are not identified, numbered, fenced and protected by your landscape specialist contractor.

For your further information and immediate actions, enclosed please find a set of photos which records both the identified and unidentified C. Timorensis.

To avoid contravention to the Environmental Impact Assessment Ordinance (Cap. 499), please rectify the situations immediately and provide us with a copy of your proposed follow-up actions. Your advise by **18 December 2009** is very much appreciated.

Should you have any queries, please feel free to contact the undersigned.

Best regards,

CHAN Ho-sun
Assistant Environmental Protection Officer
Environmental Protection Department

Encl: Photos (8 pages)

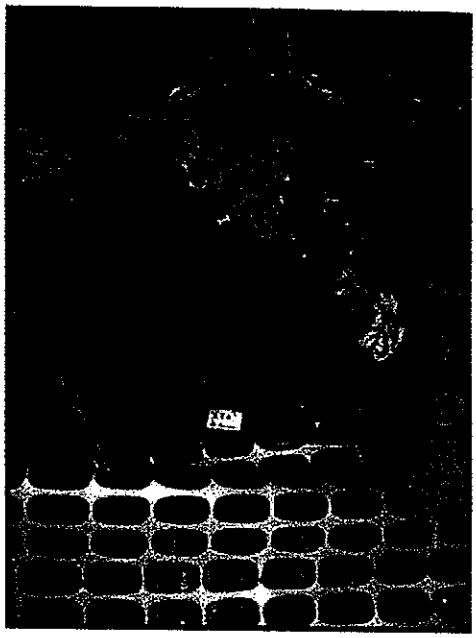
c.c. by email

Environmental Protection Department	(Attn: Mr. Matthew Chan)
Drainage Services Department	(Attn: Mr. C K Au)
Agriculture, Fisheries and Conservation Department	(Attn: Dr. Joseph Cheung)

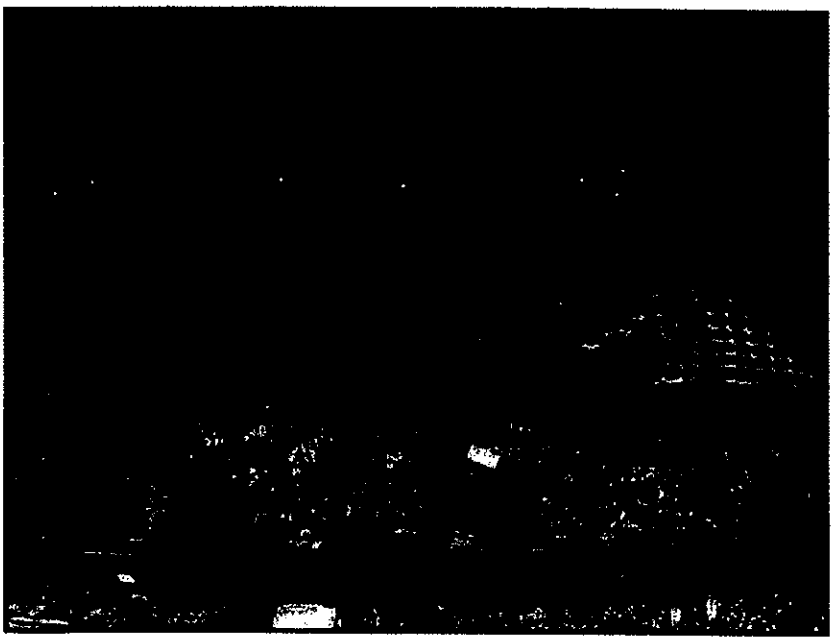
c.c. by fax

IEC – Mr. Rodney Ip	(Fax: 2428 9922)
ETS – Mr. C L Lau	(Fax: 2695 3944)

EP-281/2007A



Location of CT6 (Low Level)



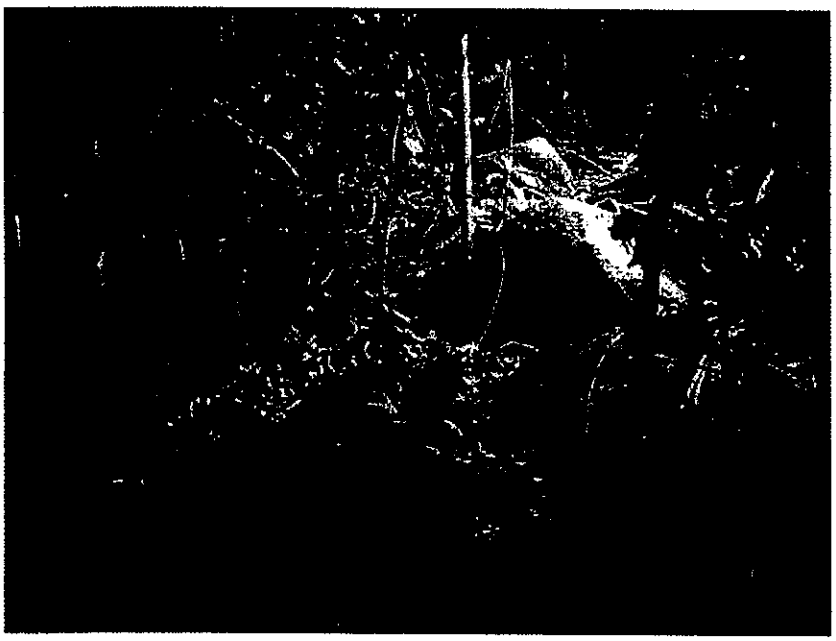
Location of CT5 (Low Level)

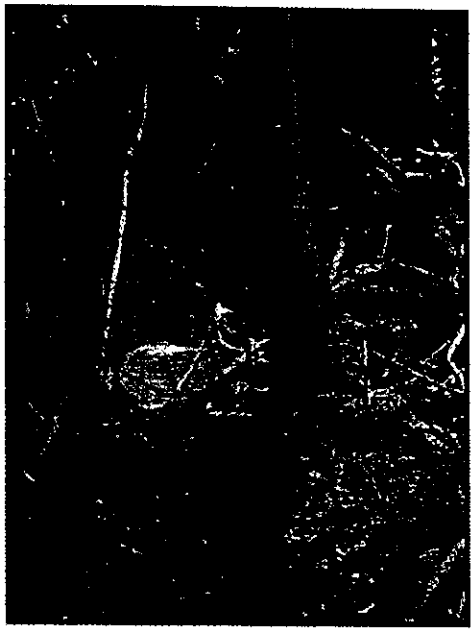
4-Dec-2009

EP-281/2007A

Location of CT3
(Low Level)

Location of CT4
(High Level)

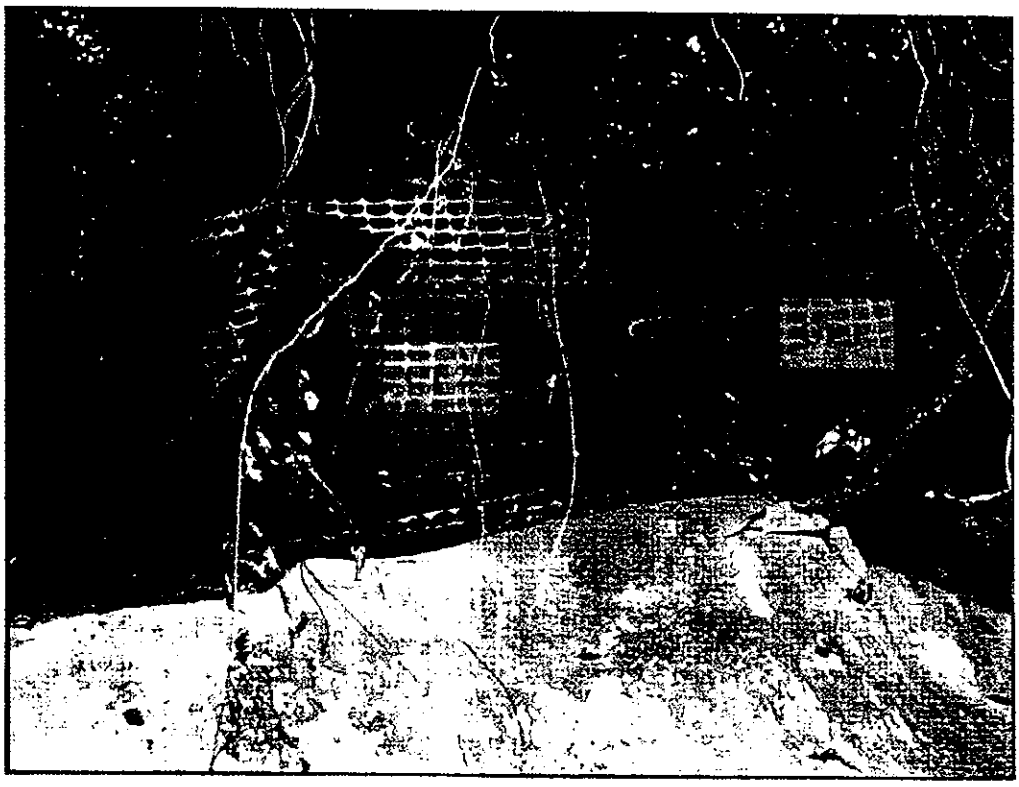




Location of CT4 (High Level)

4-Dec-2009

Location of CT 1 & 2 (High Level)



Location of CT 1 & 2 (High Level)

v

Location of CT 8

Location of CT 7

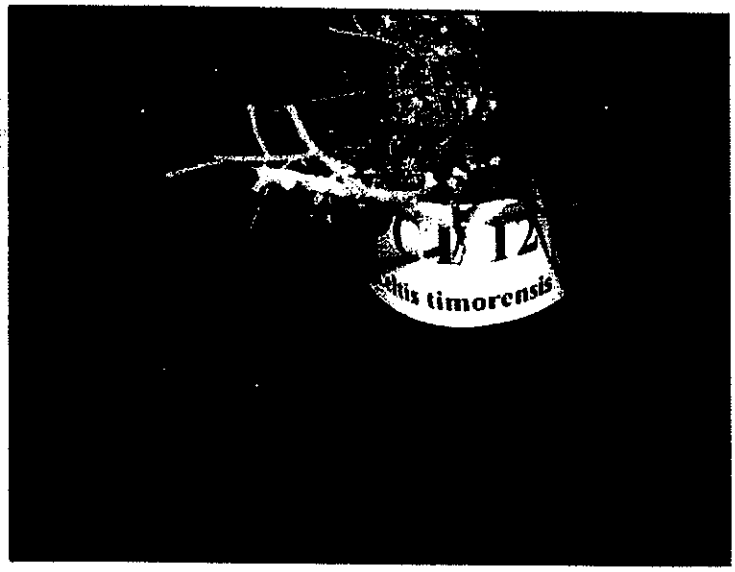
Location of CT9

Location of CT10

4-Dec-2009

EP-281/2007A

Location of CT 11



Location of CT 12

4-Dec-2009

EP-281/2007A

CT 12 was not in this area, fencing not required if C. Timorensis not existed

4-Dec-2009

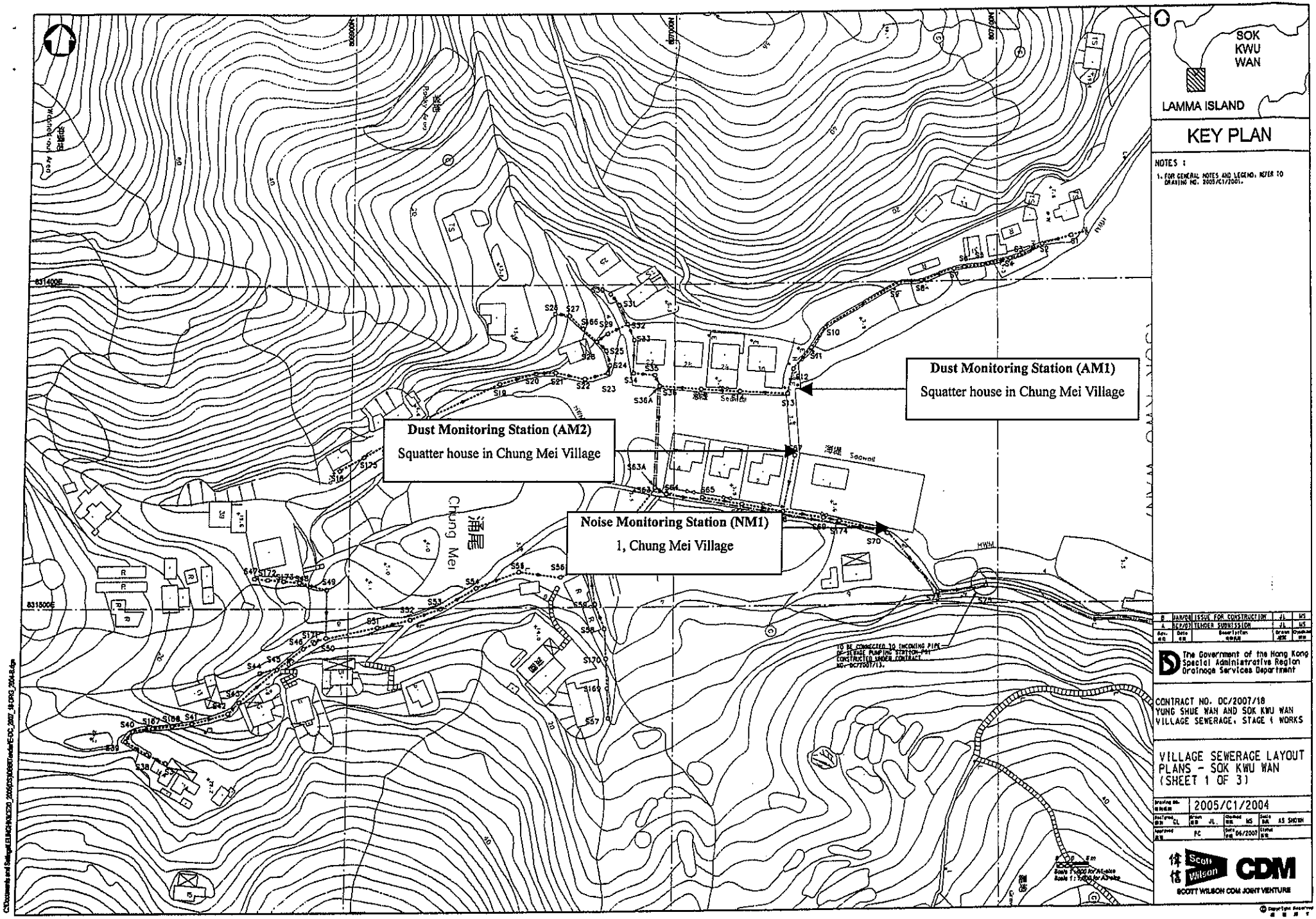
Location of New CT (1)

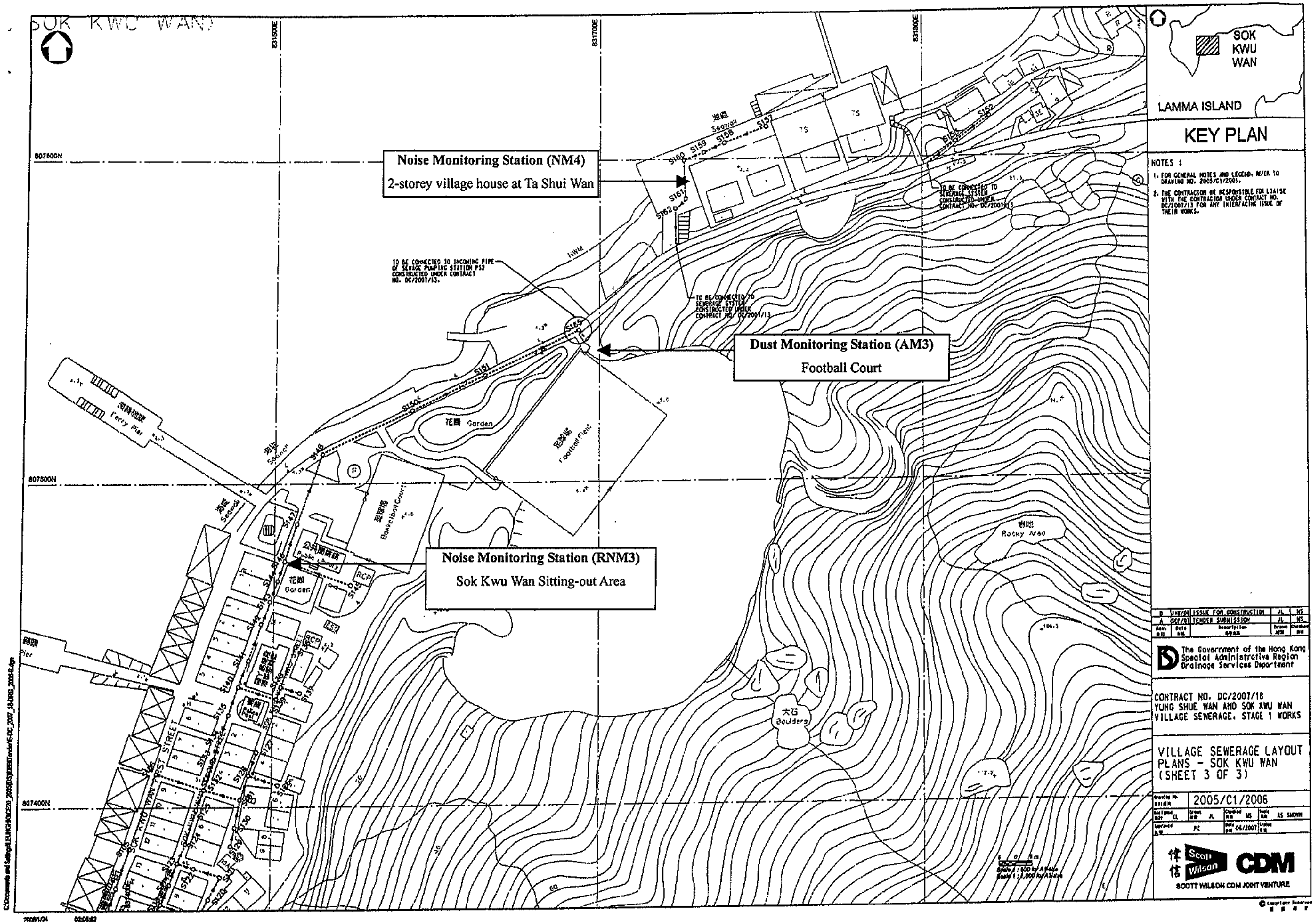
Location of New CT (B)

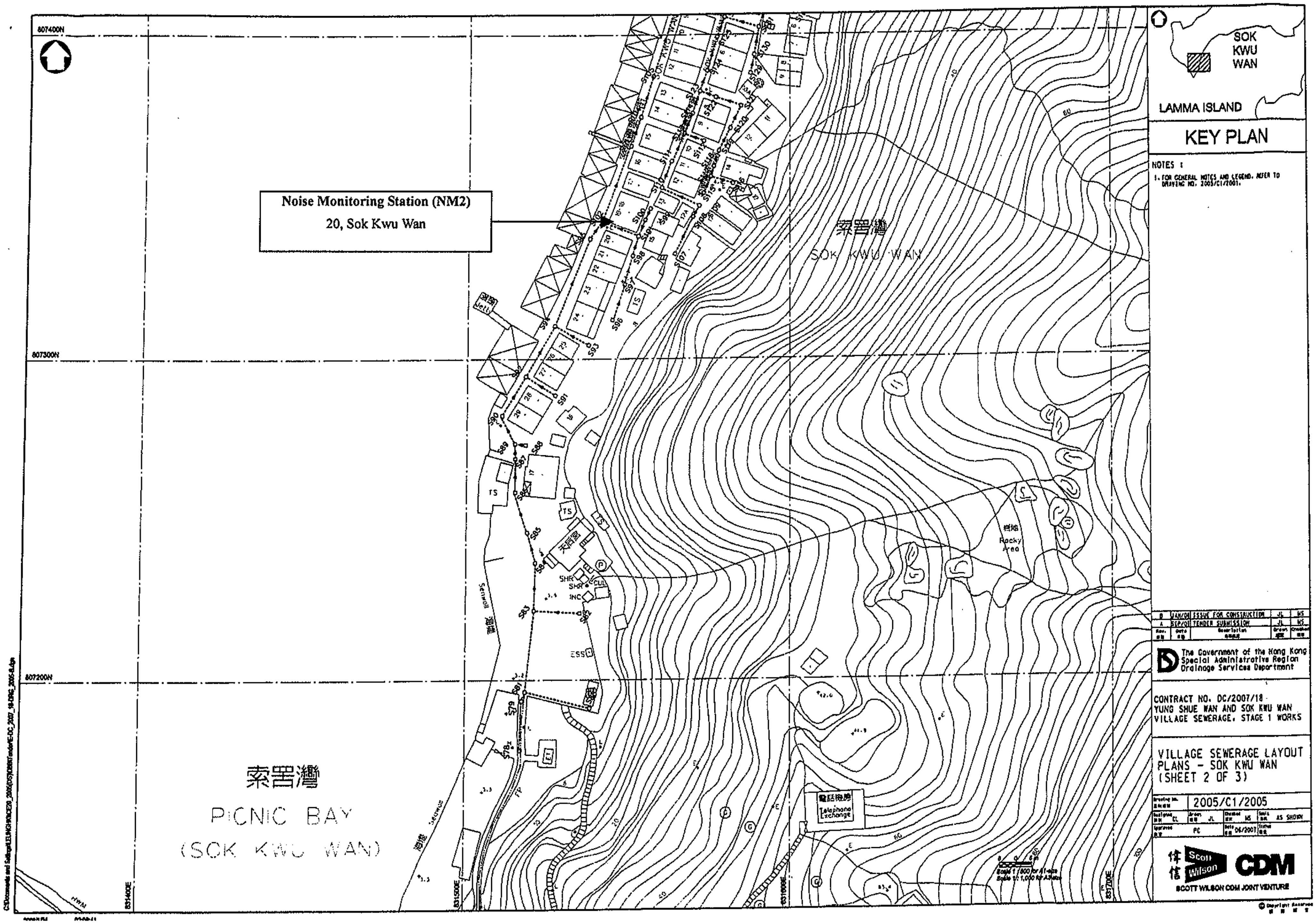
Location of New CT (C)

4-Dec-2009

Figures


Dust Monitoring Station (AM1)
Squatter house in Chung Mei Village
Dust Monitoring Station (AM2)
Squatter house in Chung Mei Village
Noise Monitoring Station (NM1)
1, Chung Mei Village
Chung Mei
涌尾
Seawall
HWM
TO BE CONNECTED TO INCOMING PIPE OF SEWAGE PUMPING STATION-PS1 CONSTRUCTED UNDER CONTRACT NO.: DC/2007/13.
SOK KWU WAN
LAMMA ISLAND
KEY PLAN
NOTES :
1. FOR GENERAL NOTES AND LEGEND, REFER TO DRAWING NO. 2005/C1/2001.
B DAM/06 ISSUE FOR CONSTRUCTION JL MS
A 06/07 TENDER SUBMISSION JL MS
The Government of the Hong Kong Special Administrative Region
Drainage Services Department
CONTRACT NO. DC/2007/18
YUNG SHUE WAN AND SOK KWU WAN VILLAGE SEWERAGE, STAGE 4 WORKS
VILLAGE SEWERAGE LAYOUT PLANS - SOK KWU WAN (SHEET 1 OF 3)
2005/C1/2004
AS SHOWN
06/2007
SCOTT WILSON CDM JOINT VENTURE


SOK KWU WAN
Noise Monitoring Station (NM4)
2-storey village house at Ta Shui Wan
Dust Monitoring Station (AM3)
Football Court
Noise Monitoring Station (RNM3)
Sok Kwu Wan Sitting-out Area
Ferry Pier
Garden
Football Field
Basketball Court
Rocky Area
Boulders
Seawall
FIRST STREET
HWM
TO BE CONNECTED TO INCOMING PIPE OF SEWAGE PUMPING STATION PS2 CONSTRUCTED UNDER CONTRACT NO. DC/2007/13.
TO BE CONNECTED TO SEWERAGE SYSTEM CONSTRUCTED UNDER CONTRACT NO. DC/2007/13
807500N
807600N
807400N
831600E
831700E
831800E
SOK KWU WAN
LAMMA ISLAND
KEY PLAN
NOTES :
1. FOR GENERAL NOTES AND LEGEND, REFER TO DRAWING NO. 2005/C1/2001.
2. THE CONTRACTOR BE RESPONSIBLE FOR LIAISE WITH THE CONTRACTOR UNDER CONTRACT NO. DC/2007/13 FOR ANY INTERFACING ISSUE OF THEIR WORKS.
B ISSUE FOR CONSTRUCTION
A TENDER SUBMISSION
The Government of the Hong Kong Special Administrative Region Drainage Services Department
CONTRACT NO. DC/2007/18
YUNG SHUE WAN AND SOK KWU WAN VILLAGE SEWERAGE, STAGE 1 WORKS
VILLAGE SEWERAGE LAYOUT PLANS - SOK KWU WAN (SHEET 3 OF 3)
2005/C1/2006
AS SHOWN
Scott Wilson
CDM
SCOTT WILSON CDM JOINT VENTURE



Noise Monitoring Station (NM2)
20, Sok Kwu Wan
索罟灣
SOK KWU WAN
索罟灣
PICNIC BAY
(SOK KWU WAN)
Rocky Area
Telephone Exchange
Seawall
Jetty
LAMMA ISLAND
SOK KWU WAN
KEY PLAN
NOTES :
1. FOR GENERAL NOTES AND LEGEND, REFER TO DRAWING NO. 2005/C1/2001.
B JAN/08 ISSUE FOR CONSTRUCTION JL MS
A SEP/07 TENDER SUBMISSION JL MS
The Government of the Hong Kong Special Administrative Region Drainage Services Department
CONTRACT NO. DC/2007/18
YUNG SHUE WAN AND SOK KWU WAN VILLAGE SEWERAGE, STAGE 1 WORKS
VILLAGE SEWERAGE LAYOUT PLANS - SOK KWU WAN (SHEET 2 OF 3)
2005/C1/2005
AS SHOWN
06/2007
Scott Wilson CDM
SCOTT WILSON CDM JOINT VENTURE
807400N
807300N
807200N
831400E
831500E
831600E
831700E