

Agreement No. SP 05/2012
Environmental Audit for Sewerage Works at
Pik Shui Sun Tsuen

Monthly Environmental Audit Report No. 10 – September 2014
Ref: 322036/ENL/02/10/A

October 2014
Drainage Services Department



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Drainage Services Department

44/F, Revenue Tower
5 Gloucester Road
Wan Chai
Hong Kong

**Pursuant to Condition 2.2 of Environmental Permit No. EP-435/ 2011,
this Monthly Environmental Audit Report has been reviewed and
certified by the Independent Checker (IC)**

Certified by:



Terence Kong
Independent Checker
Mott MacDonald Hong Kong Limited

Date 14 October 2014

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Executive Summary

On 3 May 2013, Mott MacDonald Hong Kong Limited (MMHK) was commissioned by the Drainage Services Department (DSD) under Agreement No. SP 05/2012 to undertake the Independent Checker (IC) services for the Sewerage Works at Pik Shui Sun Tsuen (The Project).

The Environmental Permit (EP) No. EP- 435/2011 for the “Sewerage Works at Pik Shui Sun Tsuen” was granted by the Environmental Protection Department (EPD) on 20 December 2011. The construction works was carried out Welcome Construction Co Ltd. (the Contractor), commenced on 26 August 2013.

In accordance with Section 5.1 and 5.3 of the Brief for the Project and Condition 2.2 of the EP, a Monthly Environmental Audit Report shall be prepared and submitted at monthly intervals to confirm in writing the full implementation of the mitigation measures recommended in the Project Profile (PP) (Register No. PP-454/ 2011) during and upon completion of the construction works.

When construction of the sewerage works at Pik Shui Sun Tsuen commenced, objections from the local residents were encountered. Therefore, the sewerage works were temporarily suspended. DSD arranged meetings with the local residents and tried to resolve the objections. However, there were still majority amongst the local residents showing their objections to the proposed works in a meeting held on 18 January 2014. In March 2014, DSD and the client office SIG of EPD decided to curtail the proposed sewerage works at Pik Shui Sun Tsuen from the construction contract.

Regarding the sewerage work on University Road, some sewer alignments were revised subject to actual condition. Therefore, DSD submitted the application for variation of environmental permit for the sewerage works at Pik Shui Sun Tsuen to EPD on 16 July 2014 and the amended Environmental Permit (No. EP-435/2011/A) was issued by EPD to DSD on 29 July 2014.

This is the 10th Monthly Environmental Audit Report covering the period from 1 September 2014 and 30 September 2014 (the reporting month).

1. Environmental Status during the reporting month

1.1 Construction Programme

Site preparation works was conducted in this reporting month. No construction work was conducted during this reporting month.

The construction works programme of the Project is provided in [Appendix A](#). A layout plan of the Project is provided in [Figure 1.1](#).

1.2 Key Issues for the reporting month

No construction work was conducted during this reporting month.

1.3 Project Organisation

The organisation chart and lines of communication with respect to the on-site environmental management structure together with the contact information of the key personnel are shown in [Appendix B](#).

1.4 Environmental Mitigation Measures - Implementation Status

No construction work was conducted during this reporting month. Therefore, no environmental site audit was conducted during this reporting month. The checklist of implementation status of the environmental mitigation measures is provided in [Appendix C](#).

2. Environmental Site Inspection

2.1 Site Inspection

No construction work was conducted during this reporting month. Therefore, no environmental site audit was conducted during this reporting month.

2.2 Advice on the Solid and Liquid Waste Management Status

The Contractor has been applied for a bill account for disposal. No waste was disposed of in this reporting month.

The waste flow table is present in [Appendix D](#).

2.3 Status of Environmental Licenses and Permits

The environmental permits, licenses, and/or notifications on environmental protection for this Project which were valid during the period is summarised in **Table 2-1**.

Table 2-1: Status of Environmental Submissions, Licenses and Permits

Statutory Reference	Description	Permit /Reference No.	Status
EIAO	Environmental Permit	EP- 435/2011	Valid
APCO	Notification of Construction Work under APCO	355015	Valid
WPCO	Discharge License	WT00016437-2013	Valid
	Discharge License	WT00016957-2013	Valid
WDO	Bill Account for disposal	7016760	Valid

Legend: EIAO – Environmental Impact Assessment Ordinance
APCO – Air Pollution Control Ordinance
WPCO – Water Pollution Control Ordinance
WDO – Waste Disposal Ordinance

3. Report on Complaints, Notifications of Summons and Successful Prosecutions

3.1 Record on Environmental Complaints Received

No environmental complaint was received this month. The cumulative statistics on complaints were provided in [Appendix E](#).

3.2 Record on Notifications of Summons and Successful Prosecution

No notifications of summons or successful prosecution were received this month. The cumulative statistics on notifications of summons and successful prosecutions were provided in [Appendix E](#).

3.3 Review of Reasons for and Implications of Non-compliance, Complaints, Summons and Prosecutions

Not applicable.

3.4 Follow-up Actions Taken

Not applicable.

4. Future Key Issues

4.1 Major Site Works for the Coming Month(s)

The major site works scheduled to be commissioned in the coming month include:

- Site preparation works

4.2 Key Issues for the Coming Month

Key issues to be considered in the coming month include:

- Generation of dust from construction and demolition works;
- Noise impact from operating equipment and machinery on-site;
- Generation of site surface runoffs and wastewater from activities on-site;
- Management of stockpiles and slopes, particularly on rainy days;
- Sorting, recycling, storage and disposal of general refuse and construction waste; and
- Management of chemicals and avoidance of oil spillage on-site.

5. Conclusion and Recommendation

5.1 Conclusion

No construction activity was conducted during the reporting month.

5.2 Recommendations

With consideration on the construction activities in the next reporting month, recommendations on mitigation measures for impacts on air quality, noise, water quality and waste were provided.

Appendices

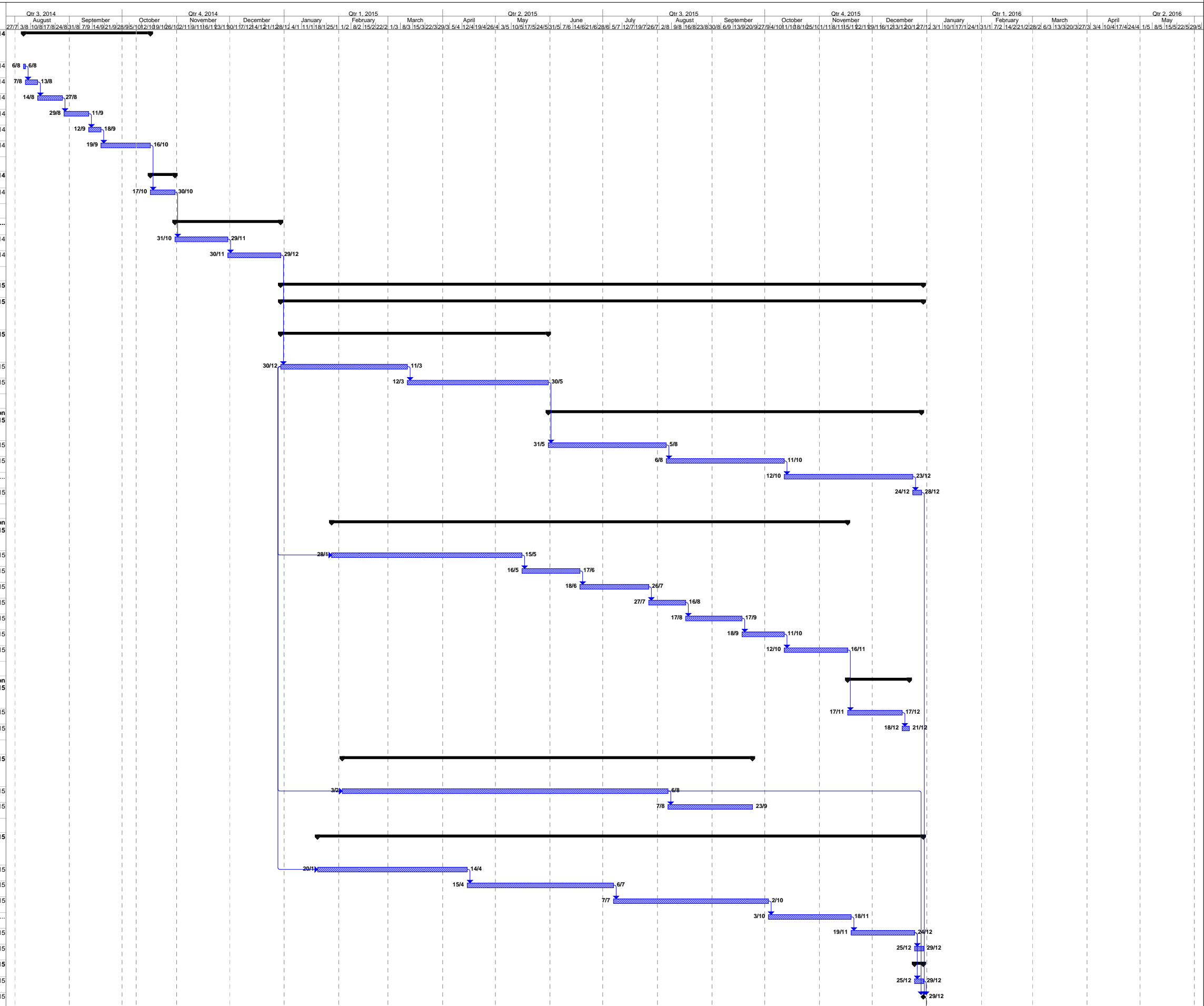
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Appendix A. Tentative Construction Programme

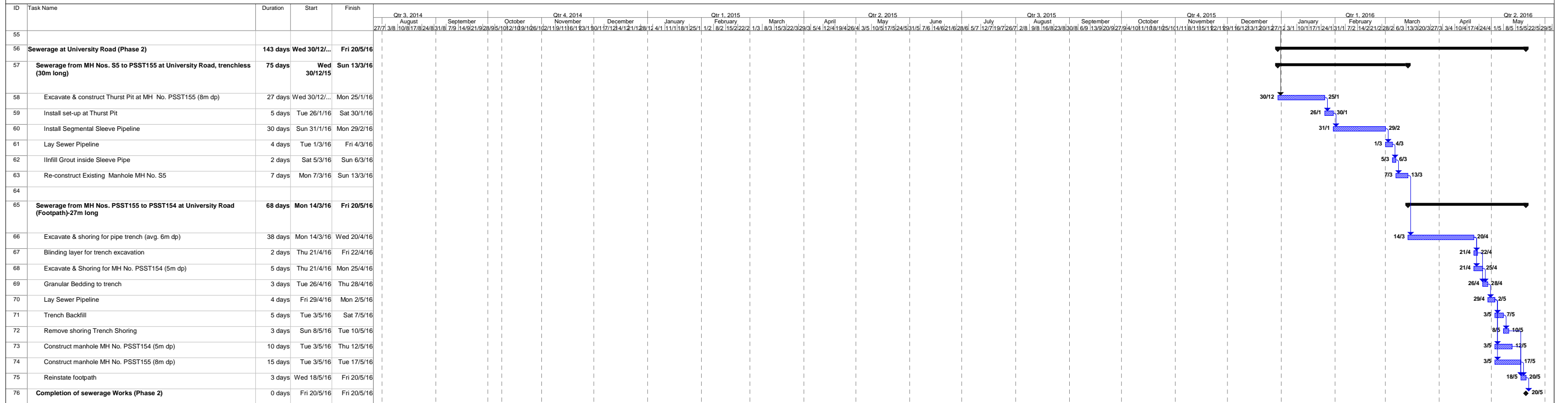
Agreement No. SP 05/2012
Environmental Audit for Sewerage Works at Pik Shui Sun Tsuen
Environmental Monthly Audit Report (September 2014)



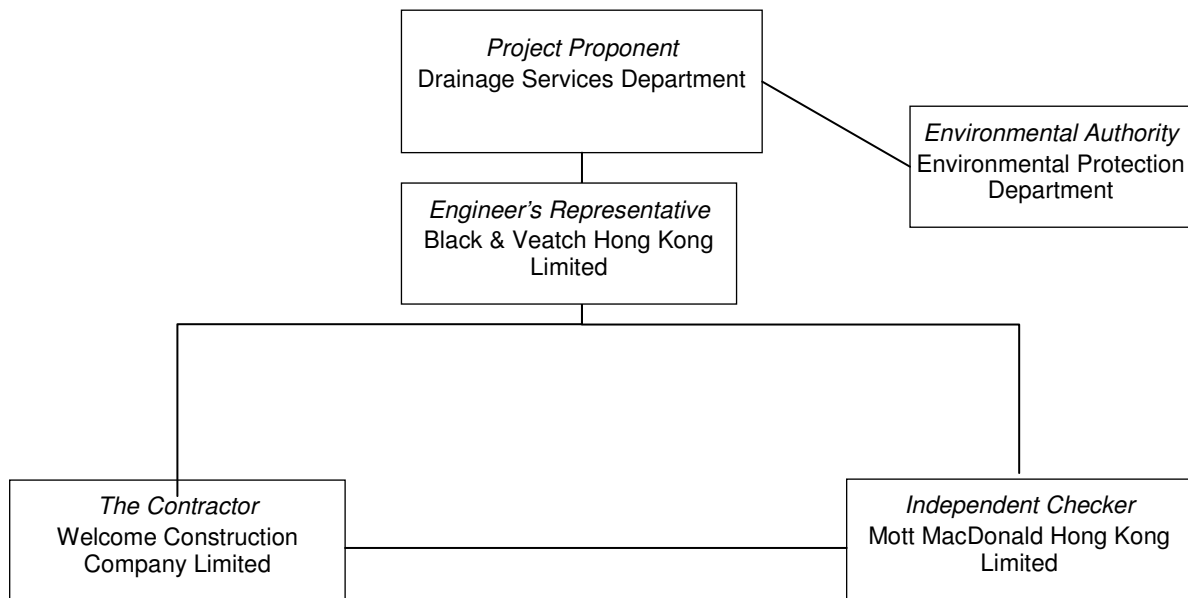
ID	Task Name	Duration	Start	Finish
1	Inspection Pits at Clear Water Bay Road & University Road (footpath) near HKUST (Staff Residence)	72 days	Wed 6/8/14	Thu 16/10/14
2	Approval of TTA during TMLG Meeting on 6/8/2014	1 day	Wed 6/8/14	Wed 6/8/14
3	Application to RMO for RA	7 days	Thu 7/8/14	Wed 13/8/14
4	Inspection Pit Nos. 1 & 2	14 days	Thu 14/8/14	Wed 27/8/14
5	Inspection Pit Nos.3 & 4	14 days	Fri 29/8/14	Thu 11/9/14
6	Inspection Pit No. 5	7 days	Fri 12/9/14	Thu 18/9/14
7	Clarification of UU & Determination of UU Diversion	28 days	Fri 19/9/14	Thu 16/10/14
9	Review of Method of Proposed Sewerage at University Road & Clear Water Bay Road	14 days	Fri 17/10/14	Thu 30/10/14
10	Review of Method of Proposed Sewerage at University Road & Clear Water Bay Road	14 days	Fri 17/10/14	Thu 30/10/14
12	Diversion of UU at University Road & Clear Water Bay Road	60 days	Fri 31/10/14	Mon 29/12/14
13	Planning & Mobilization	30 days	Fri 31/10/14	Sat 29/11/14
14	Diversion of UU	30 days	Sun 30/11/14	Mon 29/12/14
16	Sewerage at University Road & Chuk Kok Rd (Phase 1)	365 days	Tue 30/12/14	Tue 29/12/15
17	Sewerage from MH Nos. PSST154 to PSST149 at University Road & Clear Water Bay Road	365 days	Tue 30/12/14	Tue 29/12/15
18	Sewerage from MH Nos. PSST154 to PSST152 at University Road (Footpath)-76m long	152 days	Tue 30/12/14	Sat 30/5/15
19	MH Nos. PSST154 to PSST153	72 days	Tue 30/12/14	Wed 11/3/15
20	MH Nos. PSST153 to PSST152	80 days	Thu 12/3/15	Sat 30/5/15
22	Sewerage from MH No. PSST152 to MH No.PSST149 at Clear Water Bay Road (Footpath)-85m long	212 days	Sun 31/5/15	Mon 28/12/15
23	MH Nos. PSST152 to PSST151	67 days	Sun 31/5/15	Wed 5/8/15
24	MH Nos. PSST151 to PSST150	67 days	Thu 6/8/15	Sun 11/10/15
25	MH Nos. PSST150 to PSST149	73 days	Mon 12/10/15	Wed 23/12/15
26	CCTV Survey of Pipeline (Stage 1)	5 days	Thu 24/12/15	Mon 28/12/15
28	Sewerage from MH Nos. PSST147 to PSST134 at Chuk Kok Road (carrigeway)-257m long	293 days	Wed 28/1/15	Mon 16/11/15
29	MH Nos. PSST147 to PSST146	108 days	Wed 28/1/15	Fri 15/5/15
30	MH Nos. PSST146 to PSST140	33 days	Sat 16/5/15	Wed 17/6/15
31	MH Nos. PSST140 to PSST139	39 days	Thu 18/6/15	Sun 28/7/15
32	MH Nos. PSST139 to PSST138	21 days	Mon 27/7/15	Sun 16/8/15
33	MH Nos. PSST138 to PSST137	32 days	Mon 17/8/15	Thu 17/9/15
34	MH Nos. PSST137 to PSST136	24 days	Fri 18/9/15	Sun 11/10/15
35	MH Nos. PSST136 to PSST135	36 days	Mon 12/10/15	Mon 16/11/15
37	Sewerage from MH Nos. PSST135 to PSST134 at Chuk Kok Rd near Cheng Chek Chee Secondary School (36m)	35 days	Tue 17/11/15	Mon 21/12/15
38	MH Nos. PSST135 to PSST134	31 days	Tue 17/11/15	Thu 17/12/15
39	CCTV Survey of Pipeline (Stage 2)	4 days	Fri 18/12/15	Mon 21/12/15
41	Sewerage from MH Nos. PSST149 to PSST147 at Clear Water Bay Road (Carrigeway)-93m long	233 days	Tue 3/2/15	Wed 23/9/15
42	MH Nos. PSST148 to PSST147	185 days	Tue 3/2/15	Thu 6/8/15
43	MH Nos. PSST149 to PSST148	48 days	Fri 7/8/15	Wed 23/9/15
45	Sewerage from MH Nos. PSST146 to PSST141 at Hiram's Highway Slip Road (carrigeway) - 157m long	344 days	Tue 20/1/15	Tue 29/12/15
46	MH Nos. PSST146 to PSST145	85 days	Tue 20/1/15	Tue 14/4/15
47	MH Nos. PSST145 to PSST144	83 days	Wed 15/4/15	Mon 6/7/15
48	MH Nos. PSST144 to PSST145	88 days	Tue 7/7/15	Fri 2/10/15
49	MH Nos. PSST143 to PSST142	47 days	Sat 3/10/15	Wed 18/11/15
50	MH Nos. PSST142 to PSST141	36 days	Thu 19/11/15	Thu 24/12/15
51	CCTV Survey of Pipeline (Stage 3)	5 days	Fri 25/12/15	Tue 29/12/15
52	Sewerage from MH No. PSST141 to Hiram's Villas	5 days	Fri 25/12/15	Tue 29/12/15
53	Tapping Sewer to MH No. PSST141	5 days	Fri 25/12/15	Tue 29/12/15
54	Completion of Sewerage Works (Phase 1)	0 days	Tue 29/12/15	Tue 29/12/15



Welcome Constuction Co Ltd.
 Contract No. DC/2012/06
 Sewerage at Clear Water Bay Road, Pik Shui Sun Tsuen and West of Sai Kung Town
 Detailed Program for Sewerage Works at Clear Water Bay Road, University Road and Chuk Kok Road (Oct 14)



Appendix B. Project Organization



Company / Department	Position	Name	Telephone / Mobile
Drainage Services Department	Project Proponent	Mr Chow Sui Ping	2594 7453
Black & Veatch Hong Kong Limited	Engineer's Representative	Mr Eugene Chan	6075 8606
Mott MacDonald Hong Kong Ltd.	Independent Checker	Mr Terence Kong	2828 5919
Welcome Construction Company Limited	Project Director	Mr Sunny Ngan	6109 5569
Welcome Construction Company Limited	Site Agent	Mr Frankie Lui	6021 7973
Welcome Construction Company Limited	Environmental Officer	Mr W K Leung	6120 4085

Appendix C. Environmental Mitigation Measures- Implementation Status

Table C1: Construction Noise – Recommended Mitigation Measures

* PP / ^ EP ref:	Recommended measures	Implementation Status
*5.2.6	<ul style="list-style-type: none"> Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction works. 	N/A
	<ul style="list-style-type: none"> Machines and plant that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum. 	N/A
	<ul style="list-style-type: none"> Plant known to emit noise strongly in one direction, should, where possible, be orientated to direct noise away from nearby NSRs. 	N/A
	<ul style="list-style-type: none"> Silencers or mufflers on construction equipment should be utilised and should be properly maintained during the construction works. 	N/A
	<ul style="list-style-type: none"> Mobile plant should be sited as far away from NSRs as possible. 	N/A
*5.2.2, 5.2.6	<ul style="list-style-type: none"> Use of temporary noise barrier, mobile barrier 	N/A
*5.2.6	<ul style="list-style-type: none"> Material stockpiles and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities 	N/A
*5.2.6	<ul style="list-style-type: none"> Noisy construction activities such as road breaking, should be scheduled to less sensitive hours during the day 	N/A
*5.2.6	<ul style="list-style-type: none"> Liaise with the affected noise sensitive receivers on the anticipated construction activities, possible impacts, expected duration and communication channel with the project office. 	N/A
*5.2.1,*Table 6.1	<ul style="list-style-type: none"> Adoption of quiet powered mechanical equipment (QPME) during construction 	N/A
*5.2.4, ^2.3	<ul style="list-style-type: none"> For the sewer works located less than 15 m away from Cheng Chek Chee Secondary School, construction works can only be conducted after school hours or during school breaks. For the sewer works located between 15 m – 30 m away from the School, the contractor should liaise with the school and/or the Examination Authority to ascertain the exact dates and times of all examination periods and to avoid noisy construction activities during these periods. 	N/A

Table C2: Air Quality – Recommended Mitigation Measures

* PP / ^ EP ref:	Recommended measures	Implementation Status
*5.2.8, ^1.2	<ul style="list-style-type: none"> Comply with the control measures in the Air Pollution Control (Construction dust) Ordinance. 	N/A
*5.2.8	<ul style="list-style-type: none"> Excavated dusty materials should be covered by impervious sheeting or sprayed with water to keep the entire surface wet. 	N/A
*5.2.8	<ul style="list-style-type: none"> Use of regular watering, with complete coverage, to reduce dust emissions from exposed site surfaces and unpaved roads, particularly during dry weather. 	N/A

Table C3: Water Quality – Recommended Mitigation Measures

* PP / ^ EP ref:	Recommended measures	Implementation Status
*5.2.10, * Table 6.1	• Follow the guidelines in ProPECC PN 1/94 “Construction Site Drainage”.	N/A
	• Silt removal facilities should be provided according to the guidelines stipulated in EPD’s ProPECC PN 1/94.	N/A
	• Cover open stockpiles of construction materials with tarpaulin or similar fabric during rainstorms.	N/A

Table C4: Waste Management – Recommended Mitigation Measures

* PP / ^ EP ref:	Recommended measures	Implementation Status
*5.2.12, *Table 6.1	• Sort all C&D materials and waste into different categories for reuse on site, recycling and disposal at designated public fill reception facilities or landfills.	N/A
	• C&D material and excavated materials should be reused on-site as fill material as far as possible.	N/A
	• Disposal of C&D materials should be managed through the trip ticket system for disposal of C&D materials.	N/A
*5.2.12	• All Chemical waste should be handled, stored and disposed of in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.	N/A

Table C5: Landscape and Visual Impact – Recommended Mitigation Measures

* PP / ^ EP ref:	Recommended measures	Implementation Status
*5.2.14, *Table 6.2	• Retain and protect existing trees near works site.	N/A
	• Erect site hoarding compatible with the surrounding environment for the pumping station works area	N/A
	• Maintain site cleanliness and tidiness in accordance with the requirements stipulated in DEVB TCW No. 8/2010.	N/A
	• Properly manage construction waste in the works area.	N/A
	• Minimize the number and size of temporary works area.	N/A
	• Promptly reinstate each section of the trench upon completion of the sewer works.	N/A
	• Control of night-time security lightning to minimize night-time glare to nearby village.	N/A

Table C6: Others

* PP / ^ EP ref:	Recommended measures	Implementation Status
^1.5	<ul style="list-style-type: none"> A copy of the valid Environmental Permit shall be displayed conspicuously on the Project site(s) at all vehicular site entrances/exits or at a convenient location for public information at all times. The most updated information about the Permit, including any amended Permit, shall be displayed at such locations. If the Permit Holder surrenders a part or whole of the Permit, the notice he send 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). 	N/A
n/a	<ul style="list-style-type: none"> The required licenses should be obtained by the Contractor (including CNP (if any), WPCO license, etc.) 	✓

Legend:

- ✓ Implemented
- x Not implemented
- P Partially implemented
- N/A Not applicable
- N/O Not observed

Appendix D- Waste Flow Table

Appendix E- Cumulative statistics on complaints, notifications of summons and successful prosecutions

Cumulative statistics for complaints, notifications of summons and successful prosecutions for the Project account for period starting from the date of commencement of construction works (i.e. 26 August 2013) to the end of the reporting month and are summarized in the **Table E1** below.

Table E1: Statistics for complaints, notifications of summons and successful prosecutions

Reporting Period	Cumulative Statistics		
	Complaints	Notifications of summons	Successful prosecutions
This reporting month	0	0	0
From 26 August 2013 to end of the reporting month	0	0	0

Figures

Figure 1.1. Project Layout Plan

Figure 2.1. Locations of Representative Sensitive Receivers

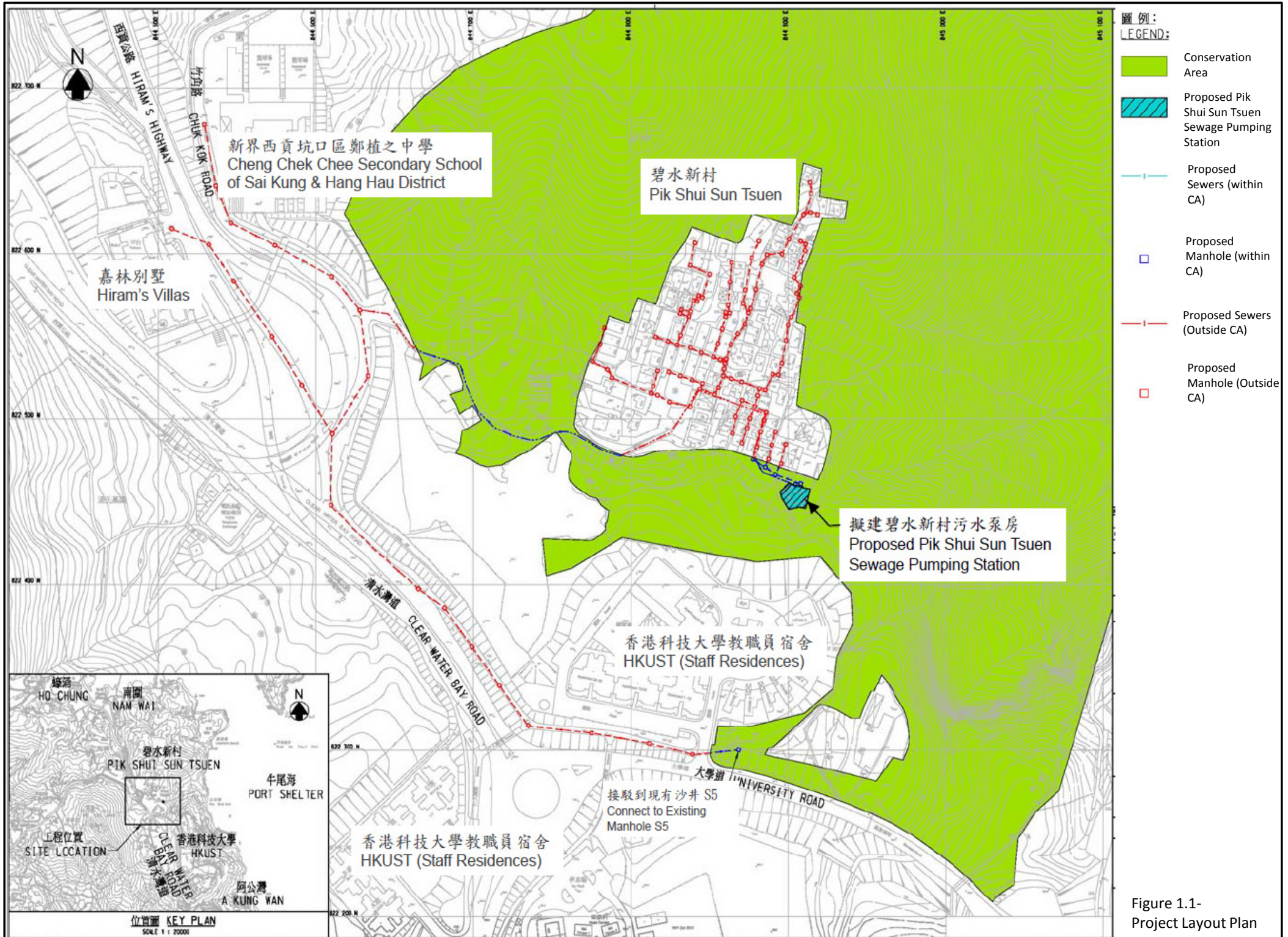


Figure 1.1-
Project Layout Plan

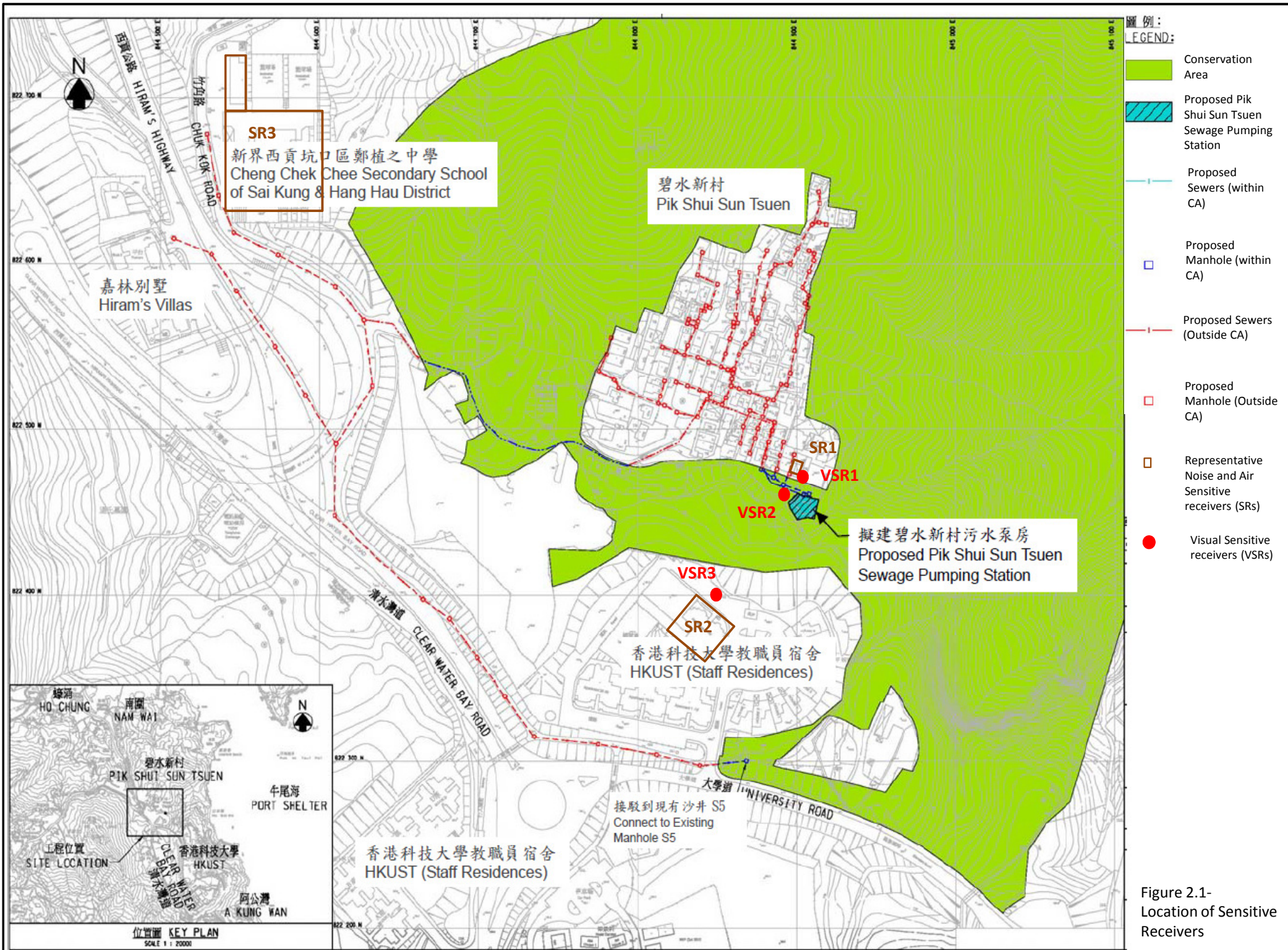


Figure 2.1- Location of Sensitive Receivers