香港青年協會
the hongkong federation of youth groups

Phase III Redevelopment of The Hong Kong Federation of Youth Groups Jockey Club Sai Kung Outdoor Training Camp

Quarterly EM&A Summary Report for 1 January – 31 March 2013







Ecosystems Limited
生態系統顧問有限公司
2/F, Kingsun Computer Building,
40 Shek Pai Wan Road,
Aberdeen, Hong Kong
香港香港仔石排灣道 40 號金山電腦大廈 2 樓
Tel. 電話: (852) 25530468
Fax 傳真: (852) 25529191
Email 電郵: ecosys@pacific.net.hk

	Name	Signature	Date
Prepared by	Mee-Ling Yau		23/4/2013
Checked by ET Leader	Vincent Lai		23/4/2013
Verified by IEC	Grace Kwok		2/5/2013

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Executive Summary

This is the seventh quarterly Environmental and Audit (EM&A) Summary Report for the project "Phase III Redevelopment of The Hong Kong Federation of Youth Groups Jockey Club Sai Kung Outdoor Training Camp" (Further Environmental Permit No. FEP-02/410/2010 and Variation of Environmental Permit No. EP-02/410/2010/A).

This report summarised the results and findings of impact monitoring for the activities undertaken during the period of 1 January to 31 March 2013.

Tree protection measures were implemented and some rectified. Transplantation of the Incense Trees was completed on March 2012. Monitoring results in February 2013 showed that the transplanted trees were in fair conditions. Monitoring will continue in May 2013 as scheduled.

The site activities in the reporting period mainly consisted of excavation, site formation, site clearance, carpentering, plastering, brick wall, and water pipe Installation, concreting glass wall and lift Installation, and installation of air-conditioning at the canteen section; site formation, site clearance, carpentering, plastering, brick wall, E&M, fencing and water pipe Installation, concreting, roof tile installation, dismantling of tower crane at the dormitory section; and pilling, grouting, preparation works of water drainage plan, pre-drilling, drilling and temporary works of water drainage plan at the platform deck. Weekly site inspections, landscape and visual and ecological monitoring were performed.

Monitoring results of off-site woodland compensatory planting in November 2012 at Lui Ta Shek ranged from fair to poor. According to the Event and Action Plan for Ecological Impact, actions due to non-compliance were taken in accordance with the action plan. IEC has been informed. A remedial action proposal including replacement planting, which will be re-scheduled in April 2013, was submitted to the Project Proponent. Monitoring will continue to monitor remedial actions until rectification has been completed.

There was no complaint, notification of any summons and successful prosecutions against the project received during the reporting period. One non-compliance event on water quality was recorded on 16 January 2013 where spillage and leakage of muddy water was observed from the works area of the Platform Deck to the nearby coastal waters. The pilling work was suspended immediately. The contractor implemented the remedial measures, including erecting a tarpaulin sheet of sufficient length and height to prevent the spillage, containing the drill area with sandbags and providing additional pumps and water tank to enhance the efficiency of the current waste water treatment system. Piling works resumed on 21 January 2013. The Contractor was reminded of implementing environmental pollution control measures to keep a good environmental management at site practice.

1. BASIC PROJECT INFORMATION

1.1 Project Background

1.1.1 The project "Phase III Redevelopment of The Hong Kong Federation of Youth Groups Jockey Club Sai Kung Outdoor Training Camp (hereinafter referred to as the "Project") is to redevelop the existing Jockey Club Sai Kung Outdoor Training Camp and increase the number of dormitories and canteen capacity in order to meet the increasing public demand. The Project Site is located at the southern extremity of Tai Mong Tsai, at the foothill of Cheung Shan and is accessed via Tai Mong Tsai Road. The Site Location Plan is shown in **Figure 1.1.** The Master Layout Plan is shown in **Figure 1.2**.

1.1.2 An Environmental Permit (EP-410/2010) (EP) for the Project was granted on 10 January 2011. Under the requirements of Condition 4 of the EP, an Environmental Monitoring and Audit (EM&A) programme as set out in the EM&A Manual is required to be implemented. A Further Environmental Permit (FEP-01/410/2010) (FEP) for the Project was granted on 5 January 2012 to the foundation contractor, Konwall Construction & Engineering Co., Ltd., who would take up the responsibility of the foundation and site formation works of the Project. Another Further Environmental Permit (FEP-02/410/2010) for the Project was granted on 19 July 2012 to the main contractor Fat Cheong (Hong Kong) Construction Co. Ltd., who would take up the responsibility of the remaining foundation and site formation works and superstructure works of the Project. Two Variation of Environmental Permits (EP/410/2010/A; EP-02/410/2010/A) (VEP) were granted to HKFYG and the main contractor respectively on 27 March 2013 to extend the construction period of Platform Deck A to 31 May 2013.

1.2 Project Organisation and Management

1.2.1 Due to technical issues, the foundation work will be extended to September 2012. Meanwhile, the superstructure contract for the Project was awarded to Fat Cheong Construction Co. Ltd. (Main Contractor) in June 2012. The Main Contractor will commence the work at the Dormitory Section first followed by Canteen Section after the hand-over of the site by the Foundation Contractor in September 2012. The revised tentative Construction Programme is shown in **Appendix A**.

1.2.2 The contact person and telephone number of key personnel for the Project are shown in **Appendix B**.

1.2.3 The project organisation for environmental management is shown in **Appendix C**.

1.3 Purpose of the Report

1.3.1 This is the seventh quarterly EM&A Report prepared for the Project, pursuant to the EM&A Manual issued for the Project. The report presents a summary of the EM&A works and lists of activities from 1January to 31 March 2013.

2. MONITORING AND AUDIT REQUIREMENT

2.1.1 The monitoring and audit requirement as described in the EM&A Manual for noise, air quality, water quality, landscape and visual, ecology and waste management are summarised in **Table 2.1** below.

2.1.2 The event and action plans for landscape and visual impacts and ecology are stated in **Appendix D** and **Appendix E** respectively. The Implementation Schedule of Mitigation Measures is attached in **Appendix F**. The monitoring schedule for the reporting quarter and the weather conditions recorded are shown in **Appendix G**.

Table 2.1 Summary of Monitoring and Audit Requirement

Monitoring Items	Monitoring Parameter	Monitoring Frequency
Noise, Air and Water Quality	Visual Inspection	Weekly during site inspections
Landscape and Visual	Visual Inspection - to check tree protection and transplanting works, and maintenance of newly planted vegetation	At least once every two weeks during site inspections
Ecology	Visual Inspection – survival and growth of transplanted Aquilaria sinensis	First three months after transplanting and quarterly thereafter for two years
	Measure height and percentage survival of planted mangrove	Monthly for the first three months and quarterly thereafter for one year
	Visual Inspection - on-site and off-site compensatory planting	Monthly for the first three month after planting and quarterly thereafter for two years
Waste Management	Visual Inspection and audit waste management issues and and Environmental Management Plan prepared by the main contractor	Weekly during site inspections
Site Inspection	Visual Inspection - to ensure appropriate environmental protection and pollution control mitigation measures are properly implemented	Weekly

3. SUMMARY OF WORK ACTIVITIES AND CONSTRUCTION STATUS

3.1 Works Undertaken during the Quarter

3.1.1 Works activities during the reporting quarter included excavation, site formation, site clearance, carpentering, plastering, brick wall, and water pipe Installation, concreting glass wall and lift Installation, and installation of air-conditioning at the canteen section; site formation, site clearance, carpentering, plastering, brick wall, E&M, fencing and water pipe Installation, concreting, roof tile installation, dismantling of tower crane at the dormitory section; and pilling, grouting, preparation works of water drainage plan, pre-drilling, drilling and temporary works of water drainage plan at the platform deck. A summary of works activities, locations and dates of occurrence in the quarter is provided by the Contractor, as shown in **Table 3.1**.

Table 3.1 Works Activities between 1 January to 31 March 2013

Item	Work Activities & Location	Date of Occurrence
	Canteen	
1	Excavation	1 January – 31 January 2013
2	Site Formation, Site Clearance, Carpentering, Plastering, Brick Wall, and Water Pipe Installation	1 January – 31 March 2013

	and Concreting	
3	Installation of Glass Wall and Lift	1 February – 31 March 2013
4	Installation of Air Conditioning	1 March – 31 March 2013
	Dormitory	
5	Installation of Brick Wall	1 January – 31 January 2013
6	Site Formation, Site Clearance, Carpentering, Plastering, E&M, Fencing and Water Pipe Installation and Concreting	1 January –31 March 2013
7	Roof Tile Installation	1 February – 28 February 2013
8	Dismantling of Tower Crane	1 March – 31 March 2013
	Platform Deck	
9	Pilling, Grouting and Preparation Works of Water Drainage Plan	1 January – 31 January 2013
10	Pre-drilling	1 January – 28 February 2013
11	Drilling	1 March – 31 March 2013
12	Temporary Works of Water Drainage Plan	1 February – 31 March 2013

4. LANDSCAPE AND VISUAL

4.1 Tree Protection and Transplanting

4.1.1 Tree felling at both the Canteen Block and Dormitory sections has been commenced. Tree protection measures including construction of chain link fence at the Canteen Block area are completed in August 2011. Hoarding and tree protection work in the Dormitory area were completed in March 2011. During site inspection, the contractor was also reminded of proper tree protection measures such as not encroaching tree protecting zones, repairing damaged fences, and carrying out remedial measures on retained trees with poor conditions. Inspection of the tree protection measures will continue. Photo records of the tree protection status are shown in **Figure 4.1**.

4.1.2 Transplantation of Incense Trees[1] was completed on 12 March 2012. Tree protection fence for the transplanted trees was installed after. The locations of the transplanted trees were fine-tuned in according to the site conditions and are shown in **Figure 4.2**. Photo records were attached in **Figure 4.3**.

4.1.3 No trespass by the Contractor outside the limit of the works, including any damage to existing trees, woodland and vegetation, was noted.

5. ECOLOGY

5.1 Monitoring of Transplanted Incense Trees

5.1.1 Monitoring of the 5 transplanted Trees was conducted on 20 February 2013. The transplanted trees were in fair conditions (**Figure 4.3**). The Incense Tree with Nos. TR775, TR766, TR644, and TR639 had fairly developed canopy, although a few bare branches were also observed. Leaves are in healthy condition. TR643 (Tree ID rectified as *Homalium cochinchinensis*) is deciduous and had few leaves during current inspection, but new leaf buds were also observed. No signs of

[1] After the transplantation exercise, TR643 was identified as Cochin-china Homalium *Homalium cochinchinensis* during the site inspection in April 2012. Therefore the transplantation record is rectified to include 4 no. of Incense Tree (TR775, TR766, TR639 and TR644) and one no. of Cochin-china Homalium (TR643).

disease or stress were observed. Monitoring will continue in May 2013.

5.2 Mangrove Monitoring

5.2.1 The Mangrove Planting Plan is shown in Figure 5.1. Mangrove monitoring was completed in August 2012 and planting will be implemented as a conservation education programme from time to time. The average height of mangrove seedlings is shown in **Appendix H**.

5.3 Off-Site Woodland Compensatory Planting

5.3.1 The Tree Whip Planting Plan for Off-Site Woodland Compensatory Planting at Lui Ta Shek is shown in **Figure 5.2**. Due to poor condition of the plantings, and according to the Event and Action Plan for Ecological Impact (**Appendix E**), actions due to non-compliance were taken in accordance with the action plan. Monitoring was increased to monthly in October and November 2011. IEC was informed. The landscape contractor was informed regarding the situation and reminded of the required remedial and maintenance work. It was reported with photo records by the landscape contractor that firming up for the seedlings was conducted in November 2011. A remedial action proposal including replacement planting in April 2012 was submitted to the Project Proponent. Due to similar conditions of plantings observed from August to November 2011, implementation of maintenance work in November 2011, monitoring frequency was resumed from monthly to quarterly after November 2011. Monitoring was conducted on 20 February 2013 to check the growing conditions of the plants and the replacement plantings. Photo records of the planting and monitoring were shown in **Figure 5.3**.

5.3.2 Similar to the observation in November 2012, individuals of the six planted species were in fair to poor conditions. Of the survived seedlings, *Schima superba* had the best performance so far. New healthy leaves developed during the past growing season formed more developed crowns, and little signs of stress or damage were observed. Other species including *Schefflera heptaphylla, Castanopsis fissa, Machilus* sp., *Sterculia lanceolata*, and *Litsea glutinosa* were in fair to poor conditions. Some of the individuals showed a few small resprouted leaves while herbivory were also observed. Monitoring will continue to audit the replacement planting to be conducted and check the growing conditions of the plants.

5.3.3 A remedial action proposal including replacement planting in April 2012 was submitted to the Project Proponent. Due to issues of sourcing, the planting exercise would tentatively be scheduled in April 2013.

6. ENVIRONMENTAL AUDITING

6.1 Site Inspections

6.1.1 The schedule of the weekly site inspections and the monthly Site Safety and Environmental Management Committee (SSEMC) site meeting and inspection audit with the Contractor, Project Proponent, Project Architect and IEC was summarised in **Appendix G**. A detailed checklist of each site inspection together with comments, relevant photos and maps have been filed and kept.

Air Quality, Noise and Water Quality

6.1.2 Overall, the air quality and the noise generated from the construction activities during weekly site audits were satisfactory. Housekeeping issues were mainly observed.

6.1.3 Spillage and leakage of muddy water was observed from the works area of the Platform Deck to the nearby coastal waters on 16 January 2013, which constituted a non-compliance event. The pilling work was suspended immediately. The contractor implemented the remedial measures, including erecting a tarpaulin sheet of sufficient length and height to prevent the spillage, containing the drill area with sandbags and providing additional pumps and water tank to enhance the efficiency of the current waste water treatment system. Piling works resumed on 21 January 2013. The Contractor was also reminded of implementing proper water quality control measures such as removal of excess sediment at the outlet of the waste water treatment system and maintenance and monitoring of the performance of the temporary drainage. Implementation status will be inspected continuously.

Waste Management

6.1.4 During the reporting quarter, accumulation of construction waste was constantly observed. Contractor was reminded to remove construction wastes as soon as possible and to implement good housekeeping practices. The contractor was also reminded that all collected general waste and construction waste materials should be segregated and stored temporarily and properly on-site and disposed in an appropriate manner.

6.1.5 It is the contractor's responsibility to ensure that all wastes produced during the construction phase for the Project are handled, stored and disposed of in accordance with good waste management practices and EPD's regulation and requirement. Waste materials generated during construction activities, such as construction and demolition (C&D) material and general refuse were inspected during weekly site audit by ET to ensure that proper storage, transportation and disposal practices are being implemented.

6.1.6 The waste generation and disposal in reporting quarter is summarized in **Appendix I**.

Landscape and Visual Environment

6.1.7 Generally, the Contractor had provided proper landscape and visual mitigation measures during inspection. Contractor was reminded to repair broken tree protection fences and take remedial actions on trees with poor conditions.

7. SUMMARY OF ENVIRONMENTAL PERMIT AND LICENSES

7.1.1 ET has checked with the Project Proponent for the status of all environmental permits and licenses for this project as of March 2013, which is summarized in **Appendix J**. An approval letter from AFCD is obtained on 30 January 2013 to extend the construction works within Sai Kung Country Park to August 2013. Two Variation of Environmental Permits (EP/410/2010/A; FEP-02/410/2010/A) (VEP) were granted to HKFYG and the main contractor respectively on 27 March 2013 to extend the construction period of Platform Deck A to 31 May 2013. ET will keep track of the application process of the outstanding permits/licenses to be applied by the Contractor(s) for the Project.

8. CUMULATIVE LOG OF COMPLAINTS AND REMEDIAL ACTION

8.1.1 There was no complaint received in association with installation activities in the reporting quarter. The cumulative log of complaints is referred in **Appendix K**.

9. CUMULATIVE LOG OF NOTIFICATION OF SUMMONS AND PROSECUTIONS

9.1.1 No notification of summons or prosecutions were received or made against the Project in the reporting quarter. The cumulative log of summons and prosecutions is referred in **Appendix K**.

10. CONCLUSIONS AND RECOMMENDATIONS

10.1.1 Tree protection measures, tree transplantation and hoarding are completed. Monitoring in February 2013 showed that the transplanted trees were in fair conditions. The contractor was also reminded of proper tree protection measures such as not encroaching tree protecting zones, repairing damaged fences, and carrying out remedial measures on retained trees with poor conditions.

10.1.2 Mangrove monitoring is completed in August 2012.

10.1.3 Survival and growth of the off-site woodland compensatory planting at Lui Ta Shek plantings was in fair to poor conditions during the reporting quarter. A remedial action proposal including replacement planting in April 2012 was submitted to the Project Proponent. A remedial action proposal including replacement planting in April 2012 was submitted to the Project Proponent. Due to issues of sourcing, the planting exercise would tentatively be scheduled in April 2013. The next monitoring session will be conducted in May 2013 to check the growing conditions of the plants and the replacement plantings, and remedial actions will be monitored until rectification has been completed.

10.1.4 One non-compliance event on water quality was recorded on 16 January 2013 where spillage and leakage of muddy water was observed from the works area of the Platform Deck to the nearby coastal waters. The pilling work was suspended immediately. The contractor implemented the remedial measures, including erecting a tarpaulin sheet of sufficient length and height to prevent the spillage, containing the drill area with sandbags and providing additional pumps and water tank to enhance the efficiency of the current waste water treatment system. Piling works resumed on 21 January 2013. The Contractor was reminded of implementing environmental pollution control measures to keep a good environmental management at site practice.

FIGURES

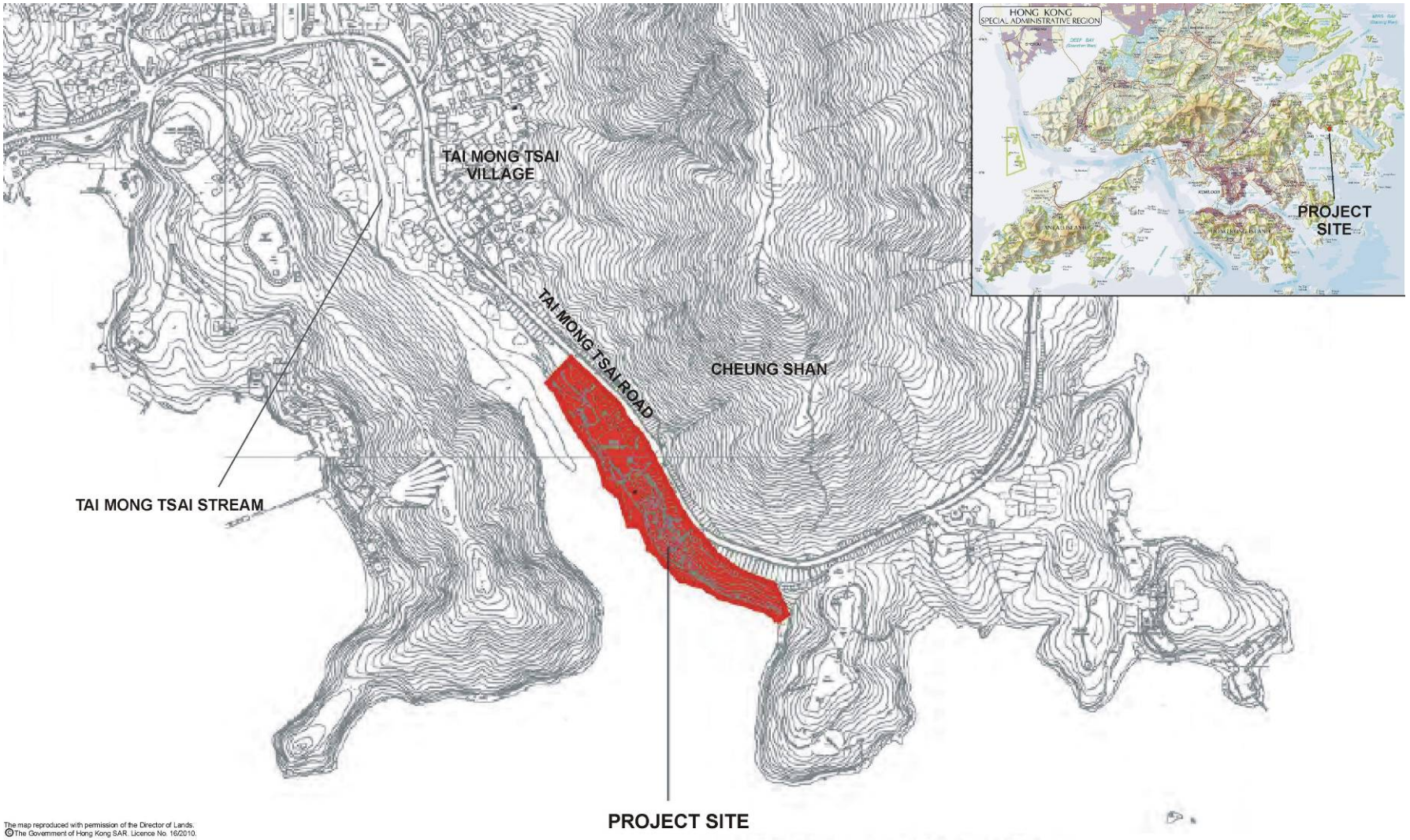
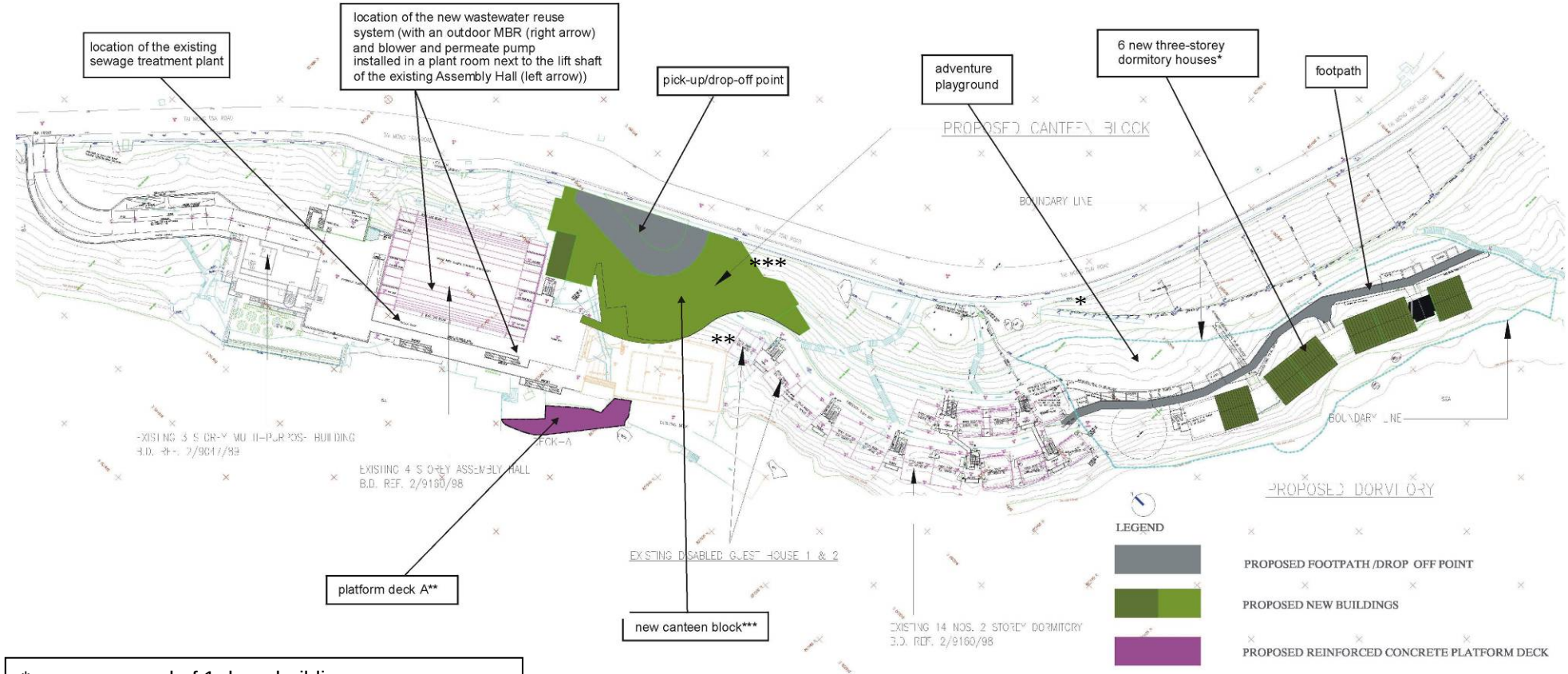


Figure 1.1 Site Location Plan



*	removal of 1 dorm building
**	removal of platform Deck B
***	reduction of size of canteen block

Figure 1.2 Master Layout Plan





Canteen Section





Dormitory Section

Figure 4.1 Photo Records of Tree Protection Status



Figure 4.2 Location Plan for the Transplanted *Aquilaria sinensis*



TR644	TR639	Overview

Figure 4.3 Photo Records of the Transplanted Trees, February 2013

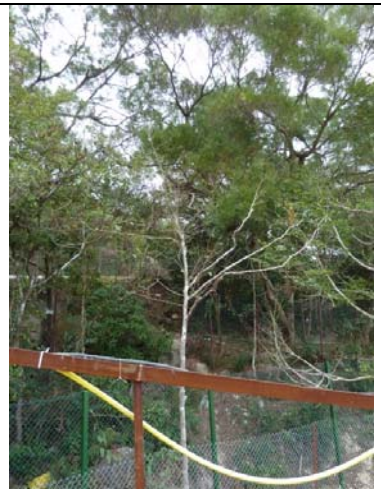
		
		
TR643	**TR775**	**TR766**

Figure 4.3 Photo Records of the Transplanted Trees, February 2013 (cont.)

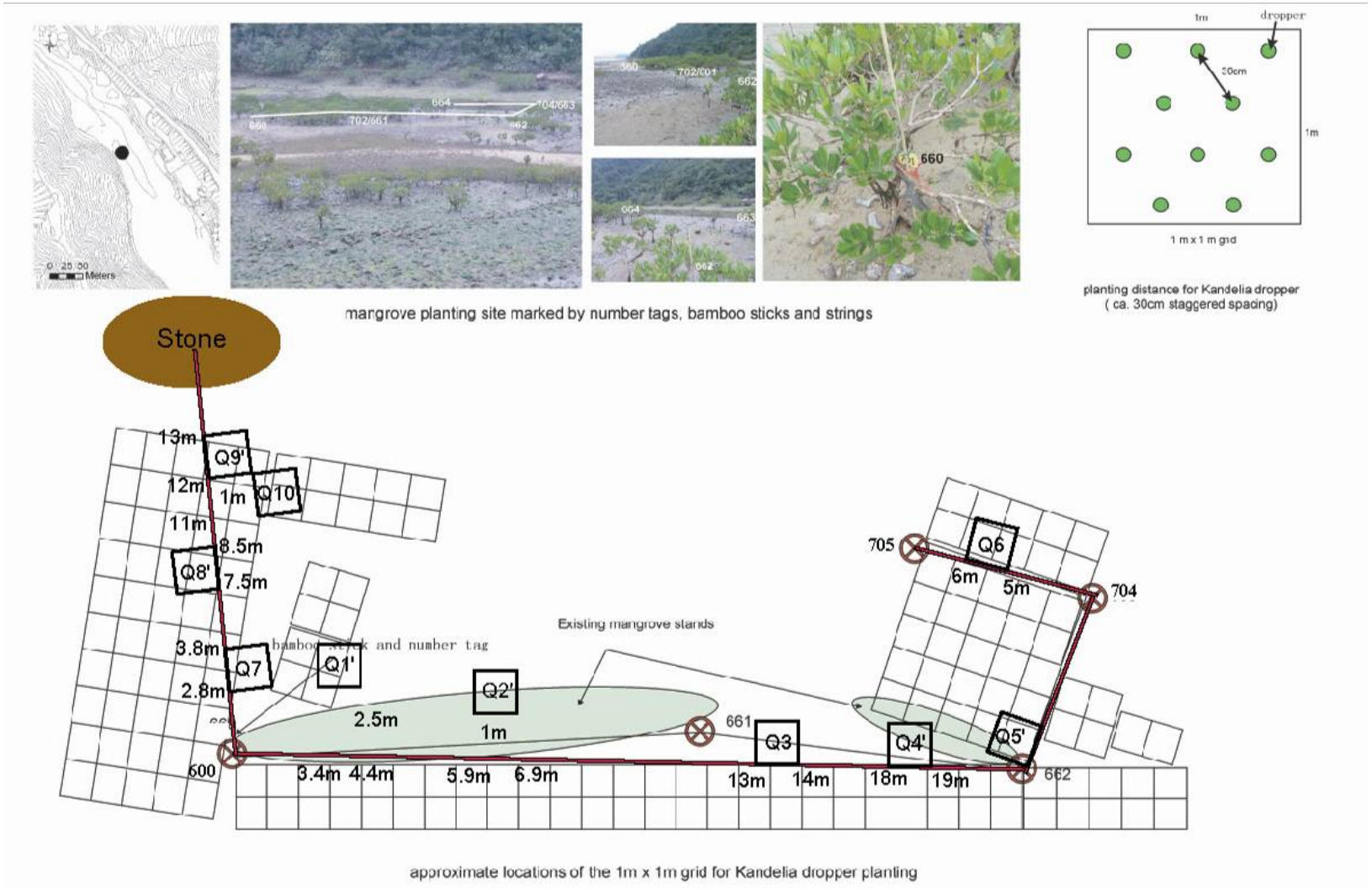
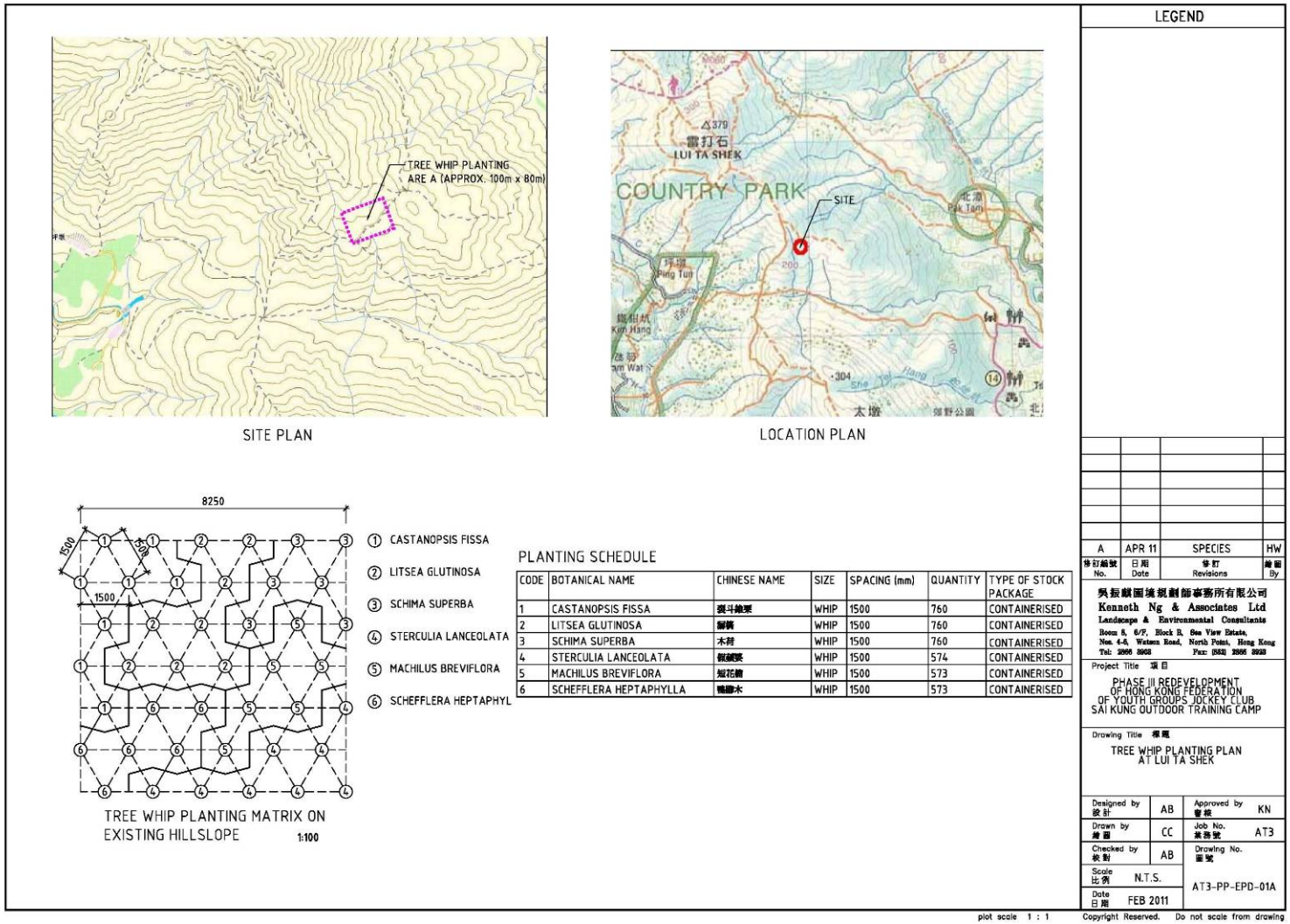
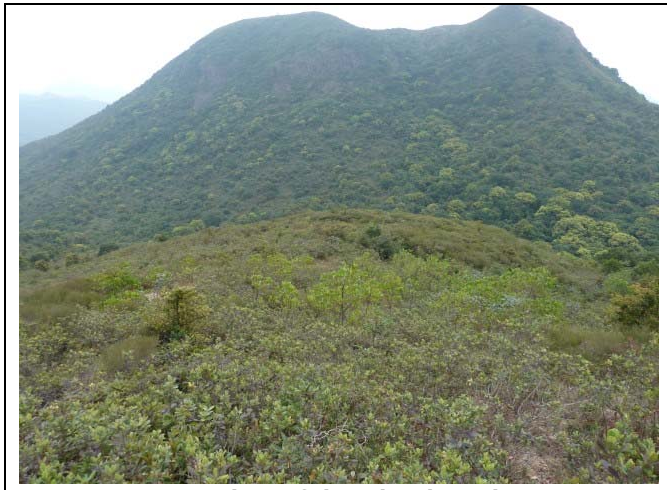


Figure 5.1 Mangrove Compensatory Planting Site and Sampling Locations



CODE	BOTANICAL NAME	CHINESE NAME	SIZE	SPACING (mm)	QUANTITY	TYPE OF STOCK PACKAGE
1	CASTANOPSIS FISSA	褐斗櫧	WHIP	1500	760	CONTAINERISED
2	LITSEA GLUTINOSA	潺槁	WHIP	1500	760	CONTAINERISED
3	SCHIMA SUPERBA	木荷	WHIP	1500	760	CONTAINERISED
4	STERCULIA LANCEOLATA	假蘇樂	WHIP	1500	574	CONTAINERISED
5	MACHILUS BREVIFLORA	短花楠	WHIP	1500	573	CONTAINERISED
6	SCHEFFLERA HEPTAPHYLLA	鴨腳木	WHIP	1500	573	CONTAINERISED

Figure 5.2 Tree Whip Planting Plan for Off-Site Woodland Compensatory Planting at Lui Ta Shek



Overview of the Planting Site



Schima superba



Litsea glutinosa



Castanopsis fissa



Schefflera heptaphylla

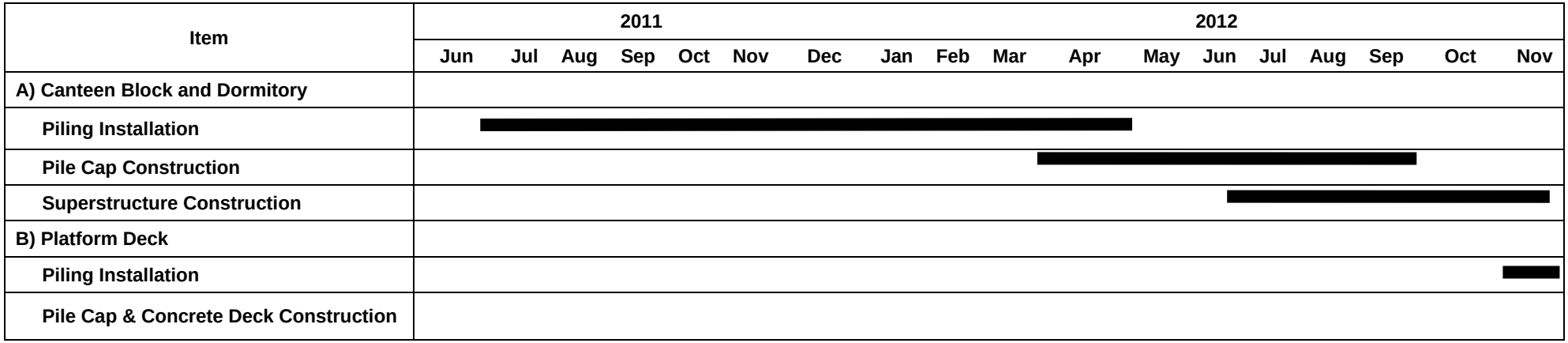


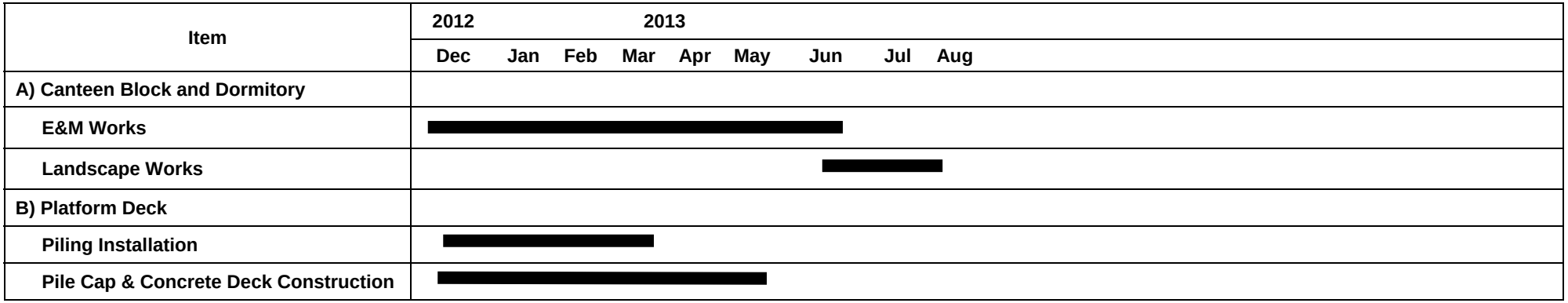
Sterculia lanceolata

Figure 5.3 Photo Records of Tree Whip Planting, February 2013

Appendices

Appendix A Tentative Construction Programme

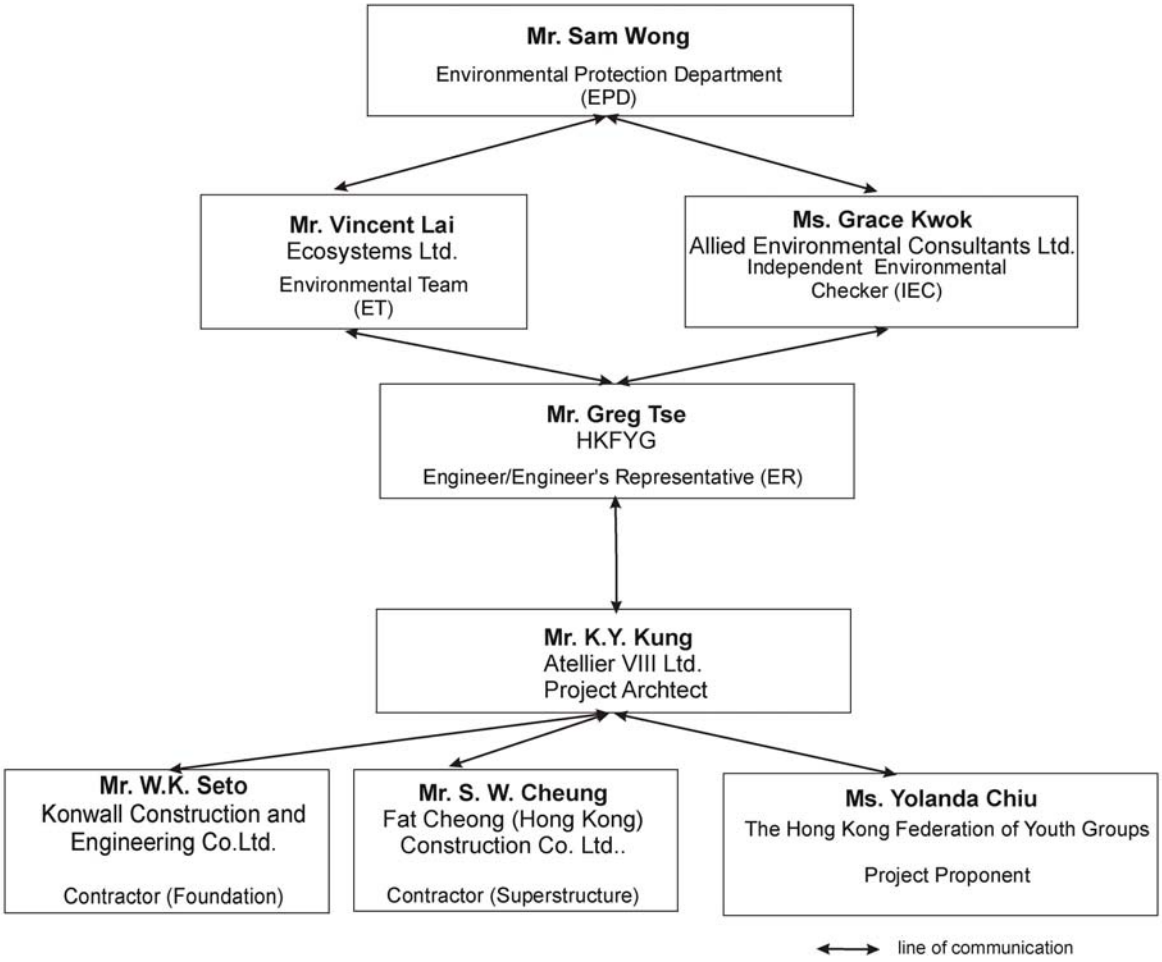




Appendix B The Key Contact Persons, Phone Numbers and Key Personnel

Party	Name	Telephone No.
Project Proponent		
The Hong Kong Federation of Youth Groups		
Deputy Executive Director	Ms. Yolanda CHIU	37557134
Engineer Representative	Mr. Greg TSE	97811411
Architect		
Atelier VIII Ltd.		
Project Architect	Mr. K.Y. KUNG	28914296
Project Architect	Ms. Stella LUK	28914296
Project Officer	Mr. Dennis LEUNG	28914296
Clerk of Works	Mr. Jovi Ha	28914296
Contractor (Foundation)		
Konwall Construction and Engineering Co. Ltd.		
Project Director	Mr. Eric KWOK	25631233
Project Manager	Mr. W. K. SETO	62020195
Site Agent	Mr. H.Y. Cheung	96348220
Environmental Officer	Mr. Joe LAM	63306705
Contractor (Superstructure)		
Project Director	Mr. S.W. Cheung	25272721
Site Agent	Mr. S.T. Kwok	91987112
Project Coordinator	Mr. Simon Lee	62747287
Environmental Officer	Mr. Gary Cheung	27912312
Independent Environmental Checker		
Allied Environmental Consultants Ltd.		
IEC Team Leader	Ms. Grace KWOK	28157028
IEC Team	Mr. Ronan CHAN	28157028
IEC Team	Ms. Viann LAU	28157028
Environmental Team		
Ecosystems Ltd.		
ET Leader	Mr. Vincent LAI	25530468
Deputy/Monitoring Team Leader	Ms. M. L. YAU	25530468
Environmental Pioneers and Solutions Ltd.		
Environmental Technician	Ms. Natalie Lai	36789749
Environmental Technician	Mr. Allen Chan	36789759
Environmental Technician	Mr. Lai Chi Hang	25587142

Appendix C Project Organisation



Appendix D
Event and Action Plan for Landscape and Visual Impact - Construction Phase

Action Level	Environmental Team (ET) Leader	Independent Environmental Checker (IEC)	Engineer's Representative (ER)	Contractor
Non-conformity on one occasion	1. Identify source 2. Inform the IEC and the ER 3. Discuss remedial actions with the IEC, the ER and the Contractor 4. Monitor remedial actions until rectification has been completed	1. Check report 2. Check the Contractor's working method 3. Discuss with the ER and the Contractor on possible remedial measures 4. Advise the ER on effectiveness of proposed remedial measures	1. Notify the Contractor 2. Ensure remedial measures are properly implemented	1. Amend working methods 2. Rectify damage and undertake remedial measures or any necessary replacement
Repeated Non-conformity	1. Identify source 2. Inform the IEC, the ER and EPD 3. Increase monitoring (site audit) frequency 4. Discuss remedial actions with the IEC, the ER and the Contractor 5. Monitor remedial actions until rectification has been completed 6. If exceedance stops, cease additional monitoring (site audit)	1. Check report 2. Check the Contractor's working method 3. Discuss with the ER and the Contractor on possible remedial measures 4. Advise the ER on effectiveness of proposed remedial measures 5. Supervise implementation of remedial measures	1. Notify the Contractor 2. Ensure remedial measures are properly implemented	1. Amend working methods 2. Rectify damage and undertake remedial measures or any necessary replacement

Appendix E
Event and Action Plan for Ecological Impact - Construction Phase

Action Level	Environmental Team (ET) Leader	Independent Environmental Checker (IEC)	Camp operator/ Landscape Contractor
Poor survival or health of mangrove planting	1. Identify source 2. Inform the IEC 3. Discuss remedial actions with the IEC and Camp operator 4. Monitor remedial actions until rectification has been completed	1. Check report 2. Discuss with the Camp operator on possible remedial measures 4. Advise the Camp operator on effectiveness of proposed remedial measures	1. Amend planting programme and replant as necessary
Poor survival or health of woodland planting	1. Identify source 2. Inform the IEC 3. Discuss remedial actions with the IEC and Landscape Contractor 4. Monitor remedial actions until rectification has been completed	1. Check report 2. Discuss with the Landscape Contractor on possible remedial measures 4. Advise the Landscape Contractor on effectiveness of proposed remedial measures	1. Amend maintenance programme and replant as necessary
Poor survival of transplanted trees	1. Identify source 2. Inform the IEC 3. Discuss remedial actions with the IEC and Landscape Contractor 4. Monitor remedial actions until rectification has been completed	1. Check report 2. Discuss with the Landscape Contractor on possible remedial measures 4. Advise the Landscape Contractor on effectiveness of proposed remedial measures	1. Amend maintenance programme and replant as necessary

Appendix F Implementation Schedules for Mitigation Measures

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Implementation Status of the Mitigation Measures*	Objectives of the Recommended Measure & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve
Noise								
3.6.1	2.3.1	• Contractor shall comply with and observe the Noise Control Ordinance (NCO) and its current subsidiary regulations; • Before the commencement of any work, the Contractor shall submit to the Engineer for approval the method of working, equipment and sound-reducing measures intended to be used at the Project Site; • Contractor shall devise and execute working methods that will minimise the noise impact on the surrounding environment, and shall provide experienced personnel with suitable training to ensure that these methods are implemented; • Only well-maintained plant and equipment should be operated on-site; • Plant/equipment should be serviced regularly during the construction programme; • Machines that may be in intermittent use should be shut down or throttled down to a minimum between work periods; • Silencers and/or mufflers on construction equipment should be utilised and should be properly maintained during the construction programme; • Noisy activities should be scheduled to minimise exposure of nearby NSRs to	Y Y Y Y Y Y Y Y	Good site practices to minimise construction Noise Impact	The Contractor	Construction Site	Construction Phase	EIAO and Environmental Permit; NCO and its regulations

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Implementation Status of the Mitigation Measures*	Objectives of the Recommended Measure & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve
		high levels of construction noise. For example, noisy activities should be scheduled for midday or at times coinciding with periods of high background noise (such as during peak traffic hours); • Noisy equipment such as emergency generators shall always be sited as far away as possible from noise sensitive receivers; • Mobile plant/equipment should be sited as far away from NSRs as possible; and • Material stockpiles and other structures should be effectively utilised as noise barriers, where practicable.	Y Y N/A					
Water								
4.7.2	3.3.1	• High loading of suspended solids (SS) in construction site runoff shall be prevented through proper site management by the contractor; • The boundary of critical work areas shall be surrounded by sandbags, ditches, or embankments. Accidental release of soil or refuse onto the adjoining land should be prevented by the provision of site hoarding or earth bunds at the site boundary. These facilities should be constructed in advance of site formation works and roadworks; • Consideration should be given to plan construction activities to allow the use of natural topography of the Project Site as a barrier to minimise uncontrolled non-point source discharge of construction	Y Y Y	Good site practices to minimise construction water quality Impact due to potential site runoff and chemical leakage	The Contractor	Construction Site	Construction Phase	EIAO and Environmental Permit; WPCO and its regulations

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Implementation Status of the Mitigation Measures*	Objectives of the Recommended Measure & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve
		site runoff; • Temporary ditches or earthen bunds should be provided to facilitate directed and controlled discharge of runoff into storm drains via sand/ silt removal facilities such as sand traps, silt traps and sediment retention basin. Oil and grease removal facilities should also be provided where appropriate, for example, in area near plant workshop/ maintenance areas;	Y					
		• Sand and silt removal facilities, channels and manholes should be maintained and the deposited silt and grit should be removed regularly by the contractor, and at the onset of and after each rainstorm to ensure that these facilities area functioning properly;	Y					
		• Slope exposure should be minimised where practicable especially during the wet season. Exposed soil surfaces should be protected from rainfall through covering temporarily exposed slope surfaces or stockpiles with tarpaulin or the like;	Y					
		• Haul roads should be hard paved by laying crushed rock, gravel or other granular materials to minimise discharge of contaminated runoff;	Y					
		• Plant workshop/ maintenance areas, if any, should be bunded and constructed on a hard standing. Sediment traps and oil interceptors should be provided at appropriate locations;	Y					
		• Manholes (including newly constructed ones), if any, should be adequately	N					

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Implementation Status of the Mitigation Measures*	Objectives of the Recommended Measure & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve
		covered or temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage system; • Construction works should be programmed to minimise soil excavation works where practicable during rainy conditions; • Chemical stores should be contained (bunded) to prevent any spills from contact with water bodies. All fuel tanks and/ or storage areas should provided with locks and be sited on hard surface; • Chemical waste arising from the construction of the Project Site should be properly stored, handled, treated and disposed of in compliance with the requirements stipulated under the Waste Disposal (Chemical Waste) (General) Regulation; • Drainage facilities must be adequate for the controlled release of storm flows.	Y Y Y Y					
4.7.2	3.3.1	• Sewage generated from the construction workforce should be contained in chemical toilets until connection to public foul sewer can be provided. Chemical toilets should be provided at a minimum rate of about 1 per 50 workers. The facility should be serviced and cleaned by a specialist contractor at regular intervals; • Vehicle wheel washing facilities should be provided at the site exit such that mud, debris, etc. deposited onto the vehicle wheels or body can be washed off before the vehicles leave the Project	Y Y	Good site practices to control the wastewater generated from the construction site	The Contractor	Construction Site	Construction Phase	

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Implementation Status of the Mitigation Measures*	Objectives of the Recommended Measure & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve
		site; • The section of the road between the wheel washing bay and the public road should be hard paved with backfill to reduce vehicle tracking of soil and to prevent site run-off from entering public road drains.	Y					
4.7.3	3.3.1	• Spillage of fuel oils or other polluting fluids should be prevented at source. It is recommended that all stocks should be stored inside proper containers and sited on sealed areas, preferably surrounded by bunds	Y	Good site practices to minimise construction water quality Impact due to avoid spillage of chemical				
4.7.6	3.3.2	• Apart from the online monitoring and control system for the wastewater quality, regular sampling programme will be devised to further safeguard and ensure that the quality of the treated effluent is suitable for reuse. Should the treated effluent not meet the required standards for irrigation and flushing or in case of breakdown of the wastewater system, a contingency plan would be triggered. The wastewater reuse system will be shut down. The canteen wastewater from Phase III will be held in the new holding tank for the MBR. The new holding tank has a capacity of 15m^3 and a minimum storage time of half day capacity. The canteen wastewater will then be diverted to the existing sewage treatment plant via the coarse screen chamber, and it will be held in the equalisation holding tank, with a	N/A	Contingency plan to further safeguard the water quality of the surrounding environment and ensure that the quality of the treated effluent is suitable for reuse	Proponent	Project Area	During design, construction and operation	EIAO and Environmental Permit; WPCO and its regulations

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Implementation Status of the Mitigation Measures*	Objectives of the Recommended Measure & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve
		capacity of 96m^3, for screening and treatment. The existing sewage treatment plant (with maximum treatment capacity of 152.7m^3/d) for Phase I & II has a daily flow of 35m^3 per day, so it has a spare capacity of more than 50%, which is adequate to treat the canteen wastewater. The treated effluent for direct discharge will not undergo any chlorination process. During this period, both irrigation system and flushing system will use the fresh water from city main as water source. The water reuse system would be fully inspected for problem fixing before re-operation.						
Air Quality								
5.7.2	4.3.1	• The designated haul road should be hard paved; • The site should be water sprayed four times a day during site formation work of the residential portion of the Project Site; • Dump truck beds for material transport should be totally enclosed using impervious sheeting; • any excavated dusty materials or stockpile of dusty materials should be covered entirely by impervious sheeting or sprayed with water so as to maintain the entire surface wet, and recovered or backfilled or reinstated within 24 hours of the excavation or unloading; • The stockpiled malodorous materials, if	Y Y Y Y N/A	Good site practice to minimise construction fugitive dust impact	The Contractor	Construction Site	Construction Phase	EIAO and Environmental Permit; APCO and its regulations

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Implementation Status of the Mitigation Measures*	Objectives of the Recommended Measure & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve
		any, should be placed as far as possible from any ASRs and removed from Project Site as soon as possible, and they should be covered entirely by plastic tarpaulin sheets;						
		• Dusty materials remaining after a stockpile is removed should be wetted with water;	Y					
		• The vehicle washing area and the section of the road between the washing facilities and the exit point should be paved with e.g. concrete, bituminous materials or hardcore or similar;	Y					
		• Stockpile of dusty materials to be either covered entirely by impervious sheeting, placed in an area sheltered on the top and the 3 sides; or sprayed with water so as to maintain the entire surface wet;	Y					
		• All dusty materials to be sprayed with water prior to any loading, unloading or transfer operation so as to maintain the dusty material wet;	Y					
		• Vehicle speed to be limited to 10 kph except on completed access roads;	Y					
		• The portion of road leading only to a construction site that is within 30 m of a designated vehicle entrance or exit should be kept clear of dusty materials;	Y					
		• Every vehicle should be washed to remove any dusty materials from its body and wheels before leaving the construction sites;	Y					
		• The load of dusty materials carried by vehicles leaving a construction site should be covered entirely by clean impervious sheeting to ensure that the	Y					

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Implementation Status of the Mitigation Measures*	Objectives of the Recommended Measure & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve
		dusty materials do not leak from the vehicle; • The working area of excavation should be sprayed with water immediately before, during and immediately after (as necessary) the operations so as to maintain the entire surface wet.	Y					
Ecology								
6.9.3	5.2.2	Preserve three no. and transplant five no. of *Aquilaria sinensis*	In progress	Minimise construction ecological impacts on species on protected species	Contractor	On Project Site	Construction Phase	ETWB(W) 3/2006: Tree Preservation. Agree on the maintenance requirement and programme
6.9.7	5.2.3	Compensatory mangrove planting (0.01 ha)	Y	Mitigate loss of 0.01 ha of mangrove	Proponent	Sandflat near Project Site	Construction Phase	Agree on the maintenance requirement and programme
6.9.8	5.2.4	Compensatory woodland planting (0.03 ha within Project Site and 0.8 ha in Sai Kung West Country Park)	N (within Project Site) Y (in Sai Kung West Country Park)	Mitigate loss of 0.31 ha of woodland	Contractor	On Project Site and Lui Ta Shek inside Sai Kung West Country Park	Construction Phase	Agree on the maintenance requirement and programme
6.9.4	5.2.6	Good site practices	Y	To minimise environmental impacts and therefore potential ecological impacts within and near the construction site	Contractor	Entire construction site	Construction Phase	N/A
Landscape and Visual								

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Implementation Status of the Mitigation Measures*	Objectives of the Recommended Measure & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve
Table 7.12	Table 6.2	LMM1 – Minimizing construction area and contractor's temporary works area to avoid unnecessary impacts to landscape resources and minimize visual intrusion.	Y	Preservation of landscape resources and minimize visual intrusion	Contractor	Project area	During design and construction	EIAO-TM Annex 10, 18
Table 7.12	Table 6.2	LMM2 – Sensitively designed site hoarding in both color and form to screen view to the construction works.	Y	Visual enhancement	Contractor	Project area	During design and construction	EIAO-TM Annex 10, 18
Table 7.12	Table 6.2	LMM3 – Preservation of existing tree to be retained on area not affected by the proposed development.	Y	Conservation of existing trees; Visual screen	Contractor	Project area	During construction	EIAO-TM Annex 10, 18 LAO PN No. 7/2007
Table 7.12	Table 6.2	LMM4 – Demarcation of the tree protection zone for retain trees.	Y	Preservation of existing trees	Contractor	Project area	During construction	EIAO-TM Annex 10, 18 Demarcation of temporary protective fencing shall be agreed and erected before other works commence
Table 7.12	Table 6.2	LMM5 – Operational time restrictions to limit after dark welding and lighting.	Y	Limit night time glare	Contractor	Project area	During construction	EIAO-TM Annex 10, 18
Table 7.12	Table 6.2	LMM6 – Selection of fast growing native trees and shrubs mix in compensation for the removal / disturbance area.	Y	Visual screen; Landscape compensation	Contractor for planting HKFYG for management and maintenance	Project area	During design, construction and operation	EIAO-TM Annex 10, 18 Selection and agree on the specified plant species
Table 7.12	Table 6.2	LMM7 – Landscape treatment such as green roof, vertical greening and screen planting including climber plants to screen and soften surface of built structures and mitigate the landscape and visual impact.	Y	Visual enhancement	Contractor during construction HKFYG for management	Project area	During design, construction and operation	EIAO-TM Annex 10, 18 Selection and agree on the specified plant

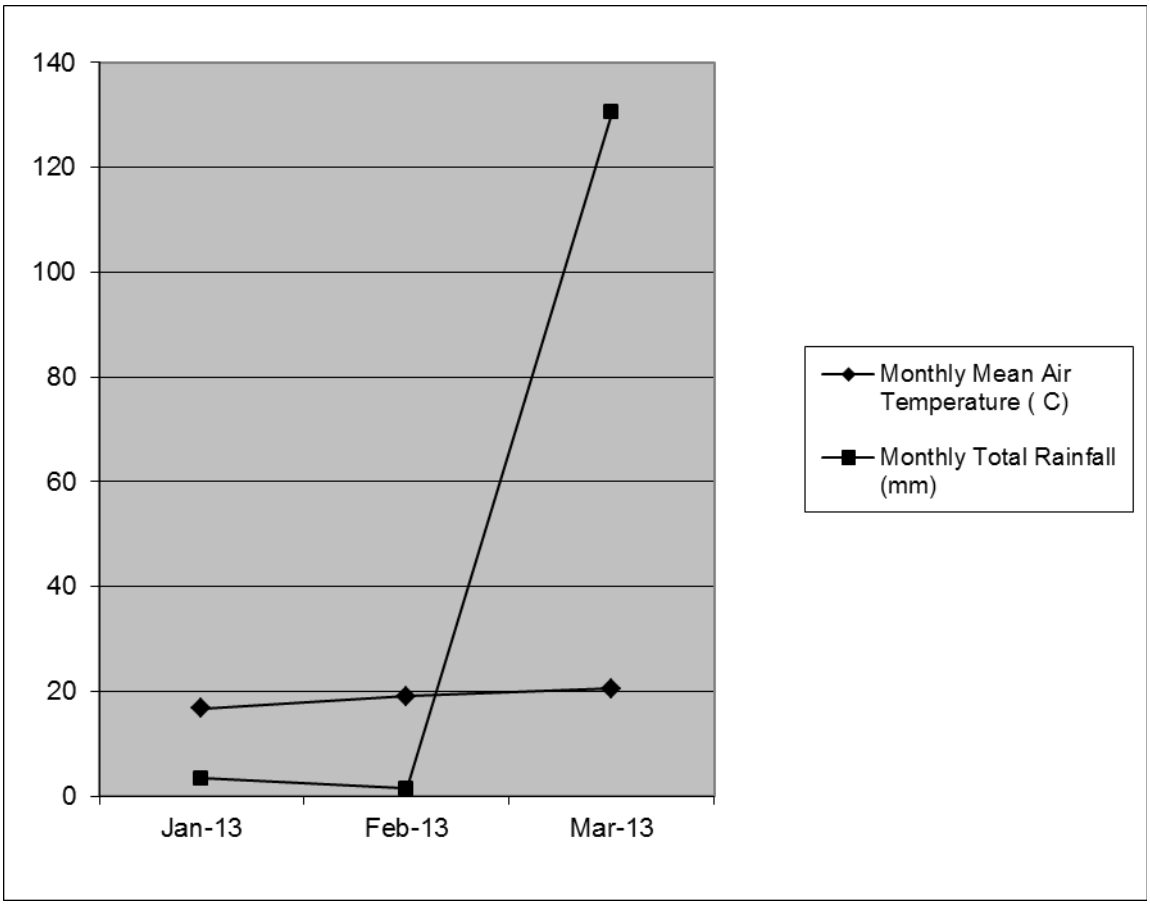
EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Implementation Status of the Mitigation Measures*	Objectives of the Recommended Measure & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve
					and maintenance			species
Table 7.12	Table 6.2	LMM8 – Staggered built form with building height corresponding to the natural sloping landform to enhance visual quality.	Y	To provide an interesting view on the visual receiver and to lower the overwhelming effect as may be created by the proposed building blocks	Contractor during construction HKFYG for management and maintenance	Project area	During design, construction and operation	EIAO-TM Annex 10, 18
Table 7.12	Table 6.2	LMM9 – Sensitive treatment and design to external finishes of the built structure to ensure element with colour, texture and tonal quality being compatible to the existing landscape context.	Y	Visual enhancement	Contractor during construction HKFYG for management and maintenance	Project area	During design, construction and operation	EIAO-TM Annex 10, 18
Table 7.12	Table 6.2	LMM10 – Maintenance of planting works upon completion.	In progress	Landscape compensation	Contractor for planting and maintenance during establishment HKFYG for management and maintenance	Project area	During operation	EIAO-TM Annex 10, 18 Agree on the maintenance requirement and programme
Waste Management								
8.4.6	7.2.5	• Storage of different waste types – different types of waste should be segregated and stored in different	Y	Waste management measures for	The Contractor	Construction Site	Construction Phase	EIAO and Environmental Permit;

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Implementation Status of the Mitigation Measures*	Objectives of the Recommended Measure & Main Concerns to address	Who to implement the measure?	Location of the measure	When to implement the measure?	What requirements or standards for the measure to achieve
		containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal. An on-site temporary storage area equipped with required control measures (e.g. dust) should be provided; • Trip-ticket system – in order to monitor the proper disposal of non-inert C&D waste to landfills and to control fly-tipping, a trip-ticket system should be included as one of the contractual requirements and audited by the Environmental Team; • Records of Wastes – a recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be proposed; • Training – The contractor should provide his workers with proper training of appropriate waste management procedure to achieve waste reduction as far as practicable and cost-effective through recovery, reuse and recycling and avoid contamination of reusable C&D materials; • Incorporate the "Recommended Pollution Control Clauses for Construction Contracts" in respect to removal of waste material from the construction site into the contract of the contractor.	Y Y Y Y	construction phase				Various guidelines stated in paragraph 8.2 of the EIA report

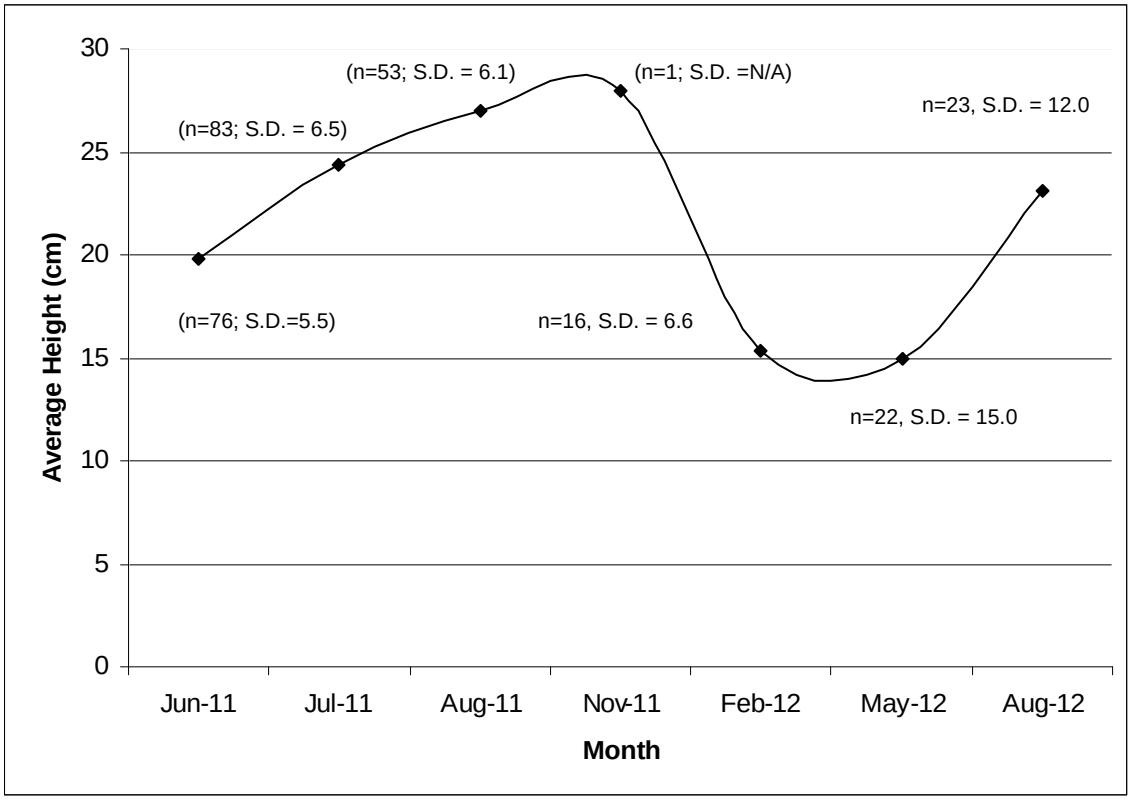
*Y = implemented, N = not yet implemented, N/A = not applicable

Appendix G Monitoring Schedule and Weather Conditions during the Reporting Quarter

Survey Date*	Weekly Site Inspection	Ecological Monitoring	SSEMC	Weather Condition	Monthly Mean Air temperature	Monthly Total Rainfall
2/1/2013	✓			Fine	16.7 C	3.4 mm
9/1/2013	✓			Fine		
16/1/2013	✓			Fine		
18/1/2013			✓			
23/1/2013	✓			Fine		
30/1/2013	✓			Fine		
2/6/2013	✓			Fine	19.1 C	1.5 mm
15/2/2013	✓			Fine		
20/2/2013	✓	✓	✓	Fine		
27/2/2013	✓			Fine		
8/3/2013	✓			Fine	20.5° C	130.5 mm
13/3/2013	✓			Fine		
20/3/2013	✓		✓	Fine		
28/3/2013	✓			Rainy		



Appendix H Average Height of Mangrove Seedlings



Appendix I Summary of Waste Disposal in the Reporting Quarter

Type of Waste	**Disposal Site**	**Disposed Quantity**	**Remark**
Non-Inert C&D Waste	SENT Landfill; TKO137 Sorting Facilities; NENT Landfill;TM38 Sorting Facilities	236.54 tonnes	Mixed Construction Waste; General Refuse
Inert C&D Waste	TKO137 Fill Bank;TM38 Fill Bank; CW Fill Bank	428.07 tonnes	Soil Broken Concrete, Broken Rock

Appendix J Summary of Status of Environmental Permits/Licenses

Description	License/Permit/ Acc. No. #/Letter Ref. No.	License/ Permit Holder*	Date of Issue	Date of Expiry	Status/ Remarks
Environmental Permit	Permit No. EP-410/2010	HKFYG	10 Jan 2011	-	Issued
AFCD Letter for Works Partly Within Sai Kung Country Park	(3) AF GR CPDA SKW/33/2005 (14) AF GR CPDA SKW/33/2005 Pt.5	HKFYG	7 Feb 2011	31 August 2013 (extended)	Issued
Tree Removal Applications	(18) in LM(3) to DLO/SK SX 1557(Pt. 5)	HKFYG	3 May 2011	-	Approved
Billing Account for Disposal of Construction Waste	7013108	KCE	30 Jun 2011	-	Issued
Registration of Chemical Waste Producer	WPN No. 5113-811-K2905-05	KCE	7 Jul 2011	-	Completed
WPCO Effluent Discharge License	WT00009985-2011	KCE	26 Oct 2011	31 Oct 2016	Issued
Further Environmental Permit	FEP-01/410/2010	KCE	5 Jan 2012	-	Issued
Billing Account for Disposal of Construction Waste	701548525	FC	3 July 2012	-	Issued
Registration of Chemical Waste Producer	346354	FC	10 July 2012	-	Issued
WPCO Effluent Discharge License	WT00013343-2012	FC	4 Oct 2012	31 Oct 2017	Expired
WPCO Effluent Discharge License	WT00014684-2012	FC	28 January 2013	31 Oct 2017	Issued
Further Environmental Permit	FEP-02/410/2010	FC	19 July 2012	-	Issued
Variation of Environmental Permit	EP-410/2010/A	HKFYG	27 March 2013	-	Issued
Variation of Environmental Permit	EP-02/410/2010/A	FC	27 March 2013	-	Issued

*HKFYG = The Hong Kong Federation of Youth Groups;
KCE = Konwall Construction and Engineering Co. Ltd.
FC = Fat Cheong (Hong Kong) Construction Co. Ltd.

Appendix K Cumulative Log of Complaints and Summons/Prosecutions

Reporting Month	No. of complaints in Reporting Month	No. of Summons/Prosecutions in Reporting Month
July 2011	0	0
August 2011	0	0
September 2011	0	0
October 2011	0	0
November 2011	0	0
December 2011	0	0
January 2012	0	0
February 2012	0	0
March 2012	0	0
April 2012	0	0
May 2012	0	0
June 2012	0	0
July 2012	0	0
August 2012	0	0
September 2012	0	0
October 2012	0	0
November 2012	0	0
December 2012	0	0
January 2013	0	0
February 2013	0	0
March 2013	0	0
Overall Total	0	0