



AUES JOB No.: TCS01137/20

**TUEN MUN - CHEK LAP KOK LINK
CONTRACT NO. HMWSD 2/2020 (HY) –
ESTABLISHMENT OF LANDSCAPE SOFTWORKS FOR
THE TUEN MUN - CHEK LAP KOK LINK**

**16TH MONTHLY ENVIRONMENTAL MONITORING AND
AUDIT (EM&A) REPORT – JULY 2022**

PREPARED FOR
HONG KONG LANDSCAPING CO., LTD.

Date	Reference No.	Prepared By	Certified By
15 August 2022	TCS01137/20/600/R0055v1	 Martin Li (Environmental Consultant)	 Ben Tam (Environmental Team Leader)

14 September 2022

By Fax (2293 6300) and By Post

AECOM Asia Co. Ltd.
Supervising Officer Representative's Office
No. 8 Mong Fat Street, Tuen Mun,
New Territories, Hong Kong

Attention: Mr. K P Wong

Dear Sir,

**Re: Agreement No. CE 48/2011 (EP)
Environmental Project Office for the
HZMB Hong Kong Link Road, HZMB Hong Kong Boundary Crossing Facilities, and
Tuen Mun-Chek Lap Kok Link – Investigation**

**Contract No. HMWSD 2/2020 (HY)
Establishment of Landscape Softworks for the Tuen Mun – Chek Lap Kok Link
Environmental Permit No.: EP-354/2009/D
16th Monthly EM&A Report for July 2022 (EP-354/2009/D)**

Reference is made to the Environmental Team's submission of the Monthly EM&A Report for July 2022 (ET's ref.: "TCS01137/20/600/R0055v1" dated 15 August 2022) certified by ET Leader and provided to us via e-mail on 15 August 2022.

Please be informed that we have no adverse comments on the captioned submission. We write to verify the captioned submission in accordance with Condition 4.4 of EP-354/2009/D.

Thank you very much for your attention and please feel free to contact the undersigned or the ENPO Leader, Mr. Y H Hui, should you require further information.

Yours faithfully,
For and on behalf of
Ramboll Hong Kong Limited



Brian Tam
Independent Environmental Checker
Tuen Mun – Chek Lap Kok Link

c.c.

HyD	Attn.: Mr. Eric Wong	(By Fax: 3188 6614)
HyD	Attn.: Mr. Stephen Wong	(By Fax: 3188 6614)
AUES	Attn.: Mr. Ben Tam	(By Fax: 2959 6079)
HKL	Attn.: Mr. S C Wong	(By Fax: 2385 7911)

EXECUTIVE SUMMARY

ES01 This is the 16th Monthly EM&A Report presenting the monitoring results and inspection findings under the Contract HMWSD 2/2020 (HY) for the period from 1 to 31 July 2022 (hereinafter ‘the Reporting Period’).

SUMMARY OF EM&A ACTIVITIES FOR THE REPORTING PERIOD

ES02 The EM&A activities conducted in the Reporting Period under this Contract are summary in below:-

- Landscape & Visual Monitoring (Establishment period) – **0 events**

ES03 The Establishment Period monitoring once per three months for planting works was commenced on 1 June 2020 for the planting area under the contract HY/2012/07 & HY/2013/12 and commenced on 1 February 2021 for the planting area under the contract HY/2017/10 according to the EM&A manual requirement. No establishment period inspection was conducted for this contract, but **one** establishment period inspection was conducted for the planting area HY/2017/10 (Zone 6) by other Contract’s ET during this reporting period.

ENVIRONMENTAL COMPLAINT

ES04 In the Reporting Period, no environmental complaint was received.

ES05 The statistical summary of environmental complaints is summarized in the following table.

Reporting Period	Environmental Complaint Statistics	
	Frequency	Cumulative
Since the Contract commencement	0	0
July 2022	0	0

NOTIFICATION OF SUMMONS AND SUCCESSFUL PROSECUTIONS

ES06 No environmental summons or successful prosecutions were recorded in the Reporting Period.

REPORTING CHANGE

ES07 No reporting changes were made in the Reporting Period.

FUTURE KEY ISSUES

ES08 The Project TM-CLKL had been commissioning at the end of 2020 and the major construction works under the Project had been completed at the end of March 2021. According to the Project EM&A Manual requirement, operational phase EM&A works will be undertaken for a period of two years after the commission of the project

ES09 According to the Project EM&A Manual requirement, monitoring for the planting works at a frequency of 3 months interval during the 24-month establishment period is required to make sure the establishment planting works is complied with EMIS requirement, and during the 12-month establishment period, the maintenance operations must be supervised by fully qualified Landscape Resident Site Staff (Registered Landscape Architect or Professional Member of the Hong Kong Institute of Landscape Architects). Subsequent to the 12-month establishment period supervised by the qualified Landscape Resident Site Staff, the supervision from the 13th to the 24th month would be continued by other members of the Project.

- ES10 According to the contract arrangement, the establishment planting area under the Contract HY/2012/07 Zone 1, 3 & 4, the Contract HY/2013/12 and the Contract HY/2017/10 Zone 1 to 5 were handover to this contract from December 2020, June 2021 and 27 May 2022. For the establishment planting area under the Contract HY/2012/07 Zone 2, it was handed over to the ET of Contact HY/2017/10 until 9 February 2022. Therefore, the establishment planting inspection and maintenance works for the establishment planting area under the Contract HY/2012/07 Zone 1, 3 & 4, the Contract HY/2013/12 and the Contract HY/2017/10 Zone 1 to 5 responded by this Contract was commenced from December 2020, June 2021 and 27 May 2022.
- ES11 After 10 February 2022, the maintenance for the planting areas HY/2012/07 (zone 2) and HY/2017/10 (Zone 6) was handed over to another contract HY/2021/13.
- ES12 The 24-month establishment period for the planting area under the Contract HY/2012/07 and the Contract HY/2013/12 were completed at the end of May 2022. The condition of the planted tree is satisfaction. Moreover, the species and quantity of tree planted in those areas are complied with the approved Landscape & Visual Plan.

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1 INTRODUCTION

1.1 PROJECT BACKGROUND

- 1.1.1 According to the findings of the Northwest New Territories (NWNT) Traffic and Infrastructure Review conducted by the Transport Department, Tuen Mun Road, Ting Kau Bridge, Lantau Link and North Lantau Highway would be operating beyond capacity after 2016. This forecast has been based on the estimated increase in cross boundary traffic, developments in the Northwest New Territories (NWNT), and possible developments in North Lantau, including the Airport developments, the Lantau Logistics Park (LLP) and the Hong Kong – Zhuhai – Macao Bridge (HZMB). In order to cope with the anticipated traffic demand, two new road sections between NWNT and North Lantau – Tuen Mun – Chek Lap Kok Link (TM-CLKL) and Tuen Mun Western Bypass (TMWB) are proposed.
- 1.1.2 Hong Kong Landscaping Co., Ltd. (hereafter “HKL”) is commissioned by the Highways Department (HyD) as the Main Contractor of the Contract No. HMWSD 2/2020 (HY) – Establishment of Landscape Softworks for the Tuen Mun - Chek Lap Kok Link ((hereafter “the Contract”) and this Contract is part of the Tuen Mun – Chek Lap Kok Link (TM-CLK Link Project). TM-CLK Link Project is a Designated Project under Environmental Permit number EP-354/2009/D issued on 13 March 2015. The layout Plan of the Project and the Contract are showed in [Appendix A and B](#) respectively.
- 1.1.3 The construction works of the Contract mainly include:-
a. Maintenance the approx. 33ha planting area of the Project during the establishment period.
- 1.1.4 The TM-CLKL had been commissioning at the end of 2020 and the major construction works under the Project had been completed at the end of March 2021. According to the Project EM&A Manual requirement, operational phase EM&A works will be undertaken for a period of two years after the commission of the project.
- 1.1.5 This is 16th monthly EM&A report under the Contract HMWSD 2/2020 (HY) presenting the monitoring results and inspection findings for period from **1 to 31 July 2022**.

1.2 REPORT STRUCTURE

- 1.2.1 The Monthly Environmental Monitoring and Audit (EM&A) Report is structured into the following sections:-
Section 1 Introduction
Section 2 Summary of Monitoring Requirements under the Contract
Section 3 Landscape and Visual
Section 4 Environmental Complaints and Non-Compliance
Section 5 Conclusions and Recommendations

1.3 CONTRACT ORGANIZATION

- 1.3.1 The Contract organization and contact details of key personnel are shown in [Appendix C](#).

2 SUMMARY OF MONITORING REQUIREMENTS UNDER THE CONTRACT

2.1 GENERAL

2.1.1 In accordance with the Project EM&A Manual requirements, the environmental aspects under the Project shall be included air quality, ecological, cultural heritage, landscape and visual, landfill gas and site inspection.

2.1.2 A summary of EM&A requirements under the contract are presented in the sub-sections below. Should non-compliance of the environmental quality criteria occurs, remedial actions will be triggered according to the Event and Action Plan which presented in [Appendix D](#).

2.2 ENVIRONMENTAL ASPECTS

Air

2.2.1 According to the Contract nature is maintenance the planting area of the Project during the establishment period in the operational phase. No specific EM&A requirement for air quality related to the establishment of landscape softworks was identify.

2.2.2 The scopes of works under this Contract do not involve any of works listed under Section 4.4.1.1 of the approved EIA Report. Vehicles travel under this contract was carried out in paved area. Therefore, fugitive dust emission from the contract would be limited and no unacceptable air quality impact would be expected. No specific mitigation measure and monitoring would be required.

Noise

2.2.3 According to the Contract nature is maintenance the planting area of the Project during the establishment period in the operational phase. No unacceptable noise impact would be expected from the contract. No mitigation measure would be required under the approved EIA Report. No specific EM&A requirement for noise impact related to the establishment of landscape softworks was identify.

2.2.4 Most of the works under this contract would be conducted manually, with limited use of PME for delivery material on site and watering the planting area along the road side. Therefore, no unacceptable noise impact would be expected. No specific mitigation measure and monitoring would be required.

Water Quality

2.2.5 According to the Contract nature is maintenance the planting area of the Project during the establishment period in the operational phase. No specific EM&A requirement for water quality related to the establishment of landscape softworks was identify.

2.2.6 All planting area under this contract area are land-based, no major discharge would be expected from the establishment planting maintenance works. Therefore, no direct or indirect impact on marine water quality would be expected. No specific mitigation measure and monitoring would be required.

Ecology

2.2.7 According to the Contract nature is maintenance the planting area of the Project during the establishment period in the operational phase. No specific EM&A requirement for ecology related to the establishment of landscape softworks was identify.

2.2.8 No site clearance and associated habitat loss would be required under this contract. Moreover, all planting area under this contract area are land-based, no direct or indirect impact on the marine ecology would be expected. Therefore, no specific mitigation measure and monitoring would be required.

Landscape and Visual

- 2.2.9 Monitoring of the planting works during the 24-month Establishment period after completion of the construction works should be carried out. Establishment Works Inspection should be carried out once every 3 months to make sure the establishment planting works is complied with EMIS requirement. For the planting area under the Contract HY/2012/07, the first 6-month establishment period inspection and maintenance will be taken by the original Contract's ET and the main Contractor under the contract. For another Contract HY/2013/12 and HY/2017/10, the first 12-month establishment period inspection and maintenance will be taken by the original Contract's ET and the main Contractor under the contract. After the first 6 month or year establishment period, the maintenance and inspection works will be handover to the contract HMWSD 2/2020 (HY) except the planting area under the Contract HY/2012/07 Zone 2 and the planting area under the Contract HY/2017/10 Zone 6. The summary of Establishment inspection for the Project is shown in [Table 2-1](#).

Table 2-1 Summary of Establishment inspection for the Project

Contract Area	Establishment Monitoring Commenced	Inspection taken under the contract HMWSD 2/2020 (HY)	Next Quarter of Establishment Monitoring
HY/2012/07 (Zone 1, 3 & 4)	June 2020	December 2020	Completed (Last quarter inspection was taken on 26 May 2022)
HY/2012/07 (Zone 2)	June 2020	Responded by Contract HY/2021/13 from 10 February 2022	Completed (Last quarter inspection was taken on 25 April 2022)
HY/2013/12	June 2020	June 2021	Completed (Last quarter inspection was taken on 31 May 2022)
HY/2017/10 (Zone 1-5)	February 2021	27 May 2022	August to October 2022 (7 th Quarter)
HY/2017/10 (Zone 6)	February 2021	Responded by Contract HY/2021/13 from 10 February 2022	August to October 2022 (7 th Quarter)

Cultural Heritage

- 2.2.10 According to the Contract nature is maintenance the planting area of the Project during the establishment period in the operational phase. No specific EM&A requirement for cultural heritage related to the establishment of landscape softworks was identify.
- 2.2.11 No major structural or civil work would be conducted under this contract. Moreover, all planting area are set back from the cultural heritage zone Grave G1 more than 10m. Therefore, no cultural heritage impact would be expected under this contract. No mitigation measure and monitoring would be required.

Landfill Gas

- 2.2.12 According to the Contract nature is maintenance the planting area of the Project during the establishment period in the operational phase. No specific EM&A requirement for landfill gas related to the establishment of landscape softworks was identify.
- 2.2.13 No major excavation work would be conducted under this contract. Only minor hand digging works will be conducted while tree replacement works. Therefore, no landfill gas hazard would be expected under this contract. No mitigation measure and monitoring would be

required.

Waste Management

- 2.2.14 According to the Contract nature is maintenance the planting area of the Project during the establishment period in the operational phase. No specific EM&A requirement for Waste Management related to the establishment of landscape softworks was identify.
- 2.2.15 All planting area under this contract area are land-based, no dredged sediment, excavated C&D material, C&D waste, chemical waste and sewage would be generated under this Contract. Only limited level of dead plant would be generated from works during maintenance of the planting area and would be easily controlled by standard waste management practice. No specific mitigation measure would be required.

Inspection and Audit

- 2.2.16 According to the Contract nature is maintenance the planting area of the Project during the establishment period in the operational phase. No construction works would be taken under this contract. Moreover, no potential environmental issue had been identified in the previous sections. No regular site inspections would be required.

2.3 MONITORING SCHEDULE

- 2.3.1 The monitoring schedule for landscape & visual for the present reporting period is presented in [Appendix E](#).

3 LANDSCAPE AND VISUAL

3.1 GENERAL

- 3.1.1 According to the Project EM&A Manual requirement, monitoring for the planting works at a frequency of 3 months interval during the 24-month establishment period is required to make sure the establishment planting works is complied with EMIS requirement, and during the 12-month establishment period, the maintenance operations must be supervised by fully qualified Landscape Resident Site Staff (Registered Landscape Architect or Professional Member of the Hong Kong Institute of Landscape Architects). Subsequent to the 12-month establishment period supervised by the qualified Landscape Resident Site Staff, the supervision from the 13th to the 24th month would be continued by other members of the Project. The updated EMIS for the Contract is shown in [Appendix G](#).
- 3.1.2 According to the contract arrangement, the establishment planting area under the Contract HY/2012/07 Zone 1, 3 & 4, the Contract HY/2013/12 and the Contract HY/2017/10 Zone 1 to 5 were handover to this contract from December 2020, June 2021 and 27 May 2022. For the establishment planting area under the Contract HY/2012/07 Zone 2, it was handed over to the ET of Contact HY/2017/10 until 9 February 2022. Therefore, the establishment planting inspection and maintenance works for the establishment planting area under the Contract HY/2012/07 Zone 1, 3 & 4, the Contract HY/2013/12 and the Contract HY/2017/10 Zone 1 to 5 responded by this Contract was commenced from December 2020, June 2021 and 27 May 2022.
- 3.1.3 After 10 February 2022, the maintenance for the planting areas HY/2012/07 (zone 2) and HY/2017/10 (Zone 6) was handed over to another contract HY/2021/13.
- 3.1.4 All the establishment inspection method including checklist and zoning plan under this Contract was follow the methodology prepared by original Contract's ET which approved by EPD
- 3.1.5 In the Reporting Period, no establishment period inspection was conducted for this contract, but **one** establishment period inspection was conducted for the planting area HY/2017/10 (Zone 6) by other Contract's ET. The details of Establishment inspection for the Project during the reporting period are shown in [Table 3-1](#) and the Establishment inspection checklist is shown in [Appendix F](#).

Table 3-1 Details of Establishment Inspection for the Project during the Reporting Period

Planting Area	Respond Party	Quarter of Establishment Monitoring	Inspection Date
HY/2012/07 (Zone 1, 3 & 4)	ET of the Contract HMWSD 2/2020 (HY)	Nil	NA
HY/2012/07 (Zone 2)	ET of the Contract HY/2021/13	Nil	NA
HY/2013/12	ET of the Contract HMWSD 2/2020 (HY)	Nil	NA
HY/2017/10 (Zone 1 to 5)	ET of the Contract HMWSD 2/2020 (HY)	Nil	NA
HY/2017/10 (Zone 6)	ET of the Contract HY/2021/13	May to July 2022 (6 th Quarter)	21 July 2022

- 3.1.6 The 24-month establishment period for the planting area under the Contract HY/2012/07 and the Contract HY/2013/12 were completed at the end of May 2022. The last quarter of joint establishment inspection were summarized in Table 2-1, during the inspection the condition of the planted tree is satisfaction. Moreover, the species and quantity of tree planted in those areas are complied with the approved Landscape & Visual Plan.

4 ENVIRONMENTAL COMPLAINT AND NON-COMPLIANCE

4.1 ENVIRONMENTAL COMPLAINT, SUMMONS AND PROSECUTION

4.1.1 In the Reporting Period, no environmental complaint, summons and prosecution under the EM&A Programme was lodged.

4.1.2 The statistical summary table of environmental complaint, summons and prosecution are presented in [Tables 4-1, 4-2 and 4-3](#).

Table 4-1 Statistical Summary of Environmental Complaints

Reporting Period	Environmental Complaint Statistics					
	Frequency	Cumulative	Complaint Nature			
			Air	Noise	Water	Others
July 2022	0	0	NA	NA	NA	NA

Table 4-2 Statistical Summary of Environmental Summons

Reporting Period	Environmental Summons Statistics				
	Frequency	Cumulative	Complaint Nature		
			Air	Noise	Water
July 2022	0	0	NA	NA	NA

Table 4-3 Statistical Summary of Environmental Prosecution

Reporting Period	Environmental Prosecution Statistics				
	Frequency	Cumulative	Complaint Nature		
			Air	Noise	Water
July 2022	0	0	NA	NA	NA

4.1.3 In the Reporting Period, no warning letter related to environmental issue was received from the EPD or HyD.

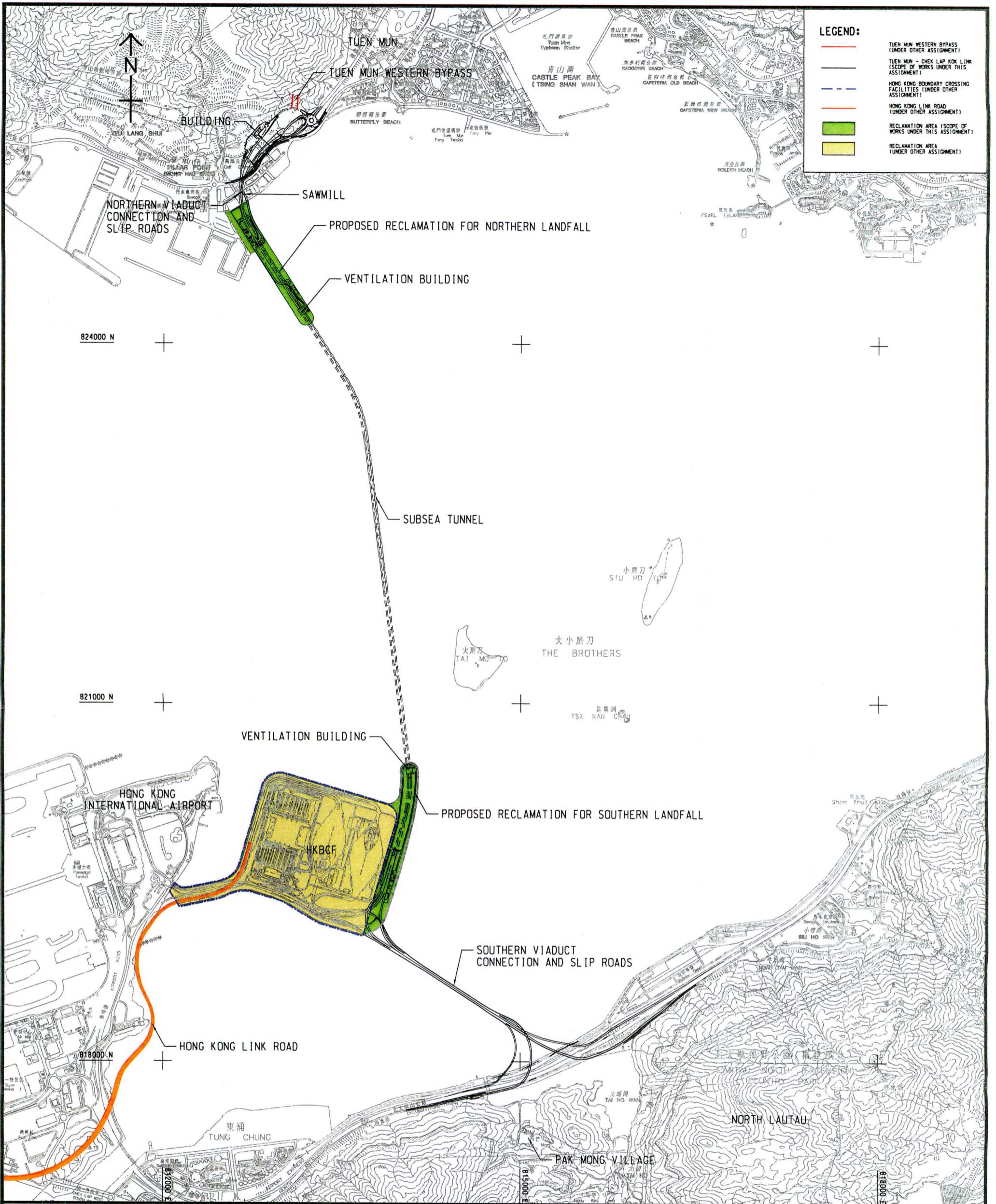
5 CONCLUSIONS AND RECOMMENDATIONS

5.1 CONCLUSIONS

- 5.1.1 This is 16th monthly EM&A report presenting the monitoring results and inspection findings under the Contract HMWSD 2/2020 (HY) for the period of 1 to 31 July 2022.
- 5.1.2 There is no air quality, noise, water quality, ecology, cultural heritage and landfill gas monitoring was required for the contract.
- 5.1.1 The Establishment Period monitoring once per three months for planting works was commenced on 1 June 2020 for the planting area under the contract HY/2012/07 & HY/2013/12 and commenced on 1 February 2021 for the planting area under the contract HY/2017/10 according to the EM&A manual requirement. No establishment period inspection was conducted for this contract, but one establishment period inspection was conducted for the planting area HY/2017/10 (Zone 6) by other Contract's ET during this reporting period.
- 5.1.2 According to the contract arrangement, the establishment planting area under the Contract HY/2012/07 Zone 1, 3 & 4, the Contract HY/2013/12 and the Contract HY/2017/10 Zone 1 to 5 were handover to this contract from December 2020, June 2021 and 27 May 2022. For the establishment planting area under the Contract HY/2012/07 Zone 2, it was handed over to the ET of Contact HY/2017/10 until 9 February 2022. Therefore, the establishment planting inspection and maintenance works for the establishment planting area under the Contract HY/2012/07 Zone 1, 3 & 4, the Contract HY/2013/12 and the Contract HY/2017/10 Zone 1 to 5 responded by this Contract was commenced from December 2020, June 2021 and 27 May 2022.
- 5.1.3 After 10 February 2022, the maintenance for the planting areas HY/2012/07 (zone 2) and HY/2017/10 (Zone 6) was handed over to another contract HY/2021/13.
- 5.1.4 The 24-month establishment period for the planting area under the Contract HY/2012/07 and the Contract HY/2013/12 were completed at the end of May 2022. The condition of the planted tree is satisfaction. Moreover, the species and quantity of tree planted in those areas are complied with the approved Landscape & Visual Plan.
- 5.1.5 In the Reporting Period, no environmental complaint was received.
- 5.1.6 No notifications of summons, or successful prosecution were received during the Reporting Period.

Appendix A

Project Layout Plan



Project Title: Tuen Mun - Chek Lap Kok Link

工程項目名稱: 屯門至赤鱸角連接路

Project Location

工程項目位置

(Plan originated from Figure 3.1 of Approved EIA Report reference no.: AEIAR-146/2009)
(圖則源自已批准的環境影響評估報告編號AEIAR-146/2009圖3.1)

Environmental Protection Department
環境保護署



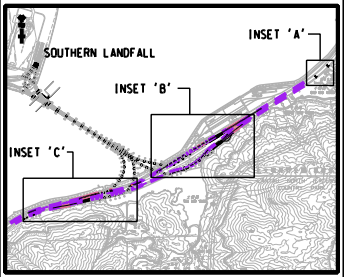
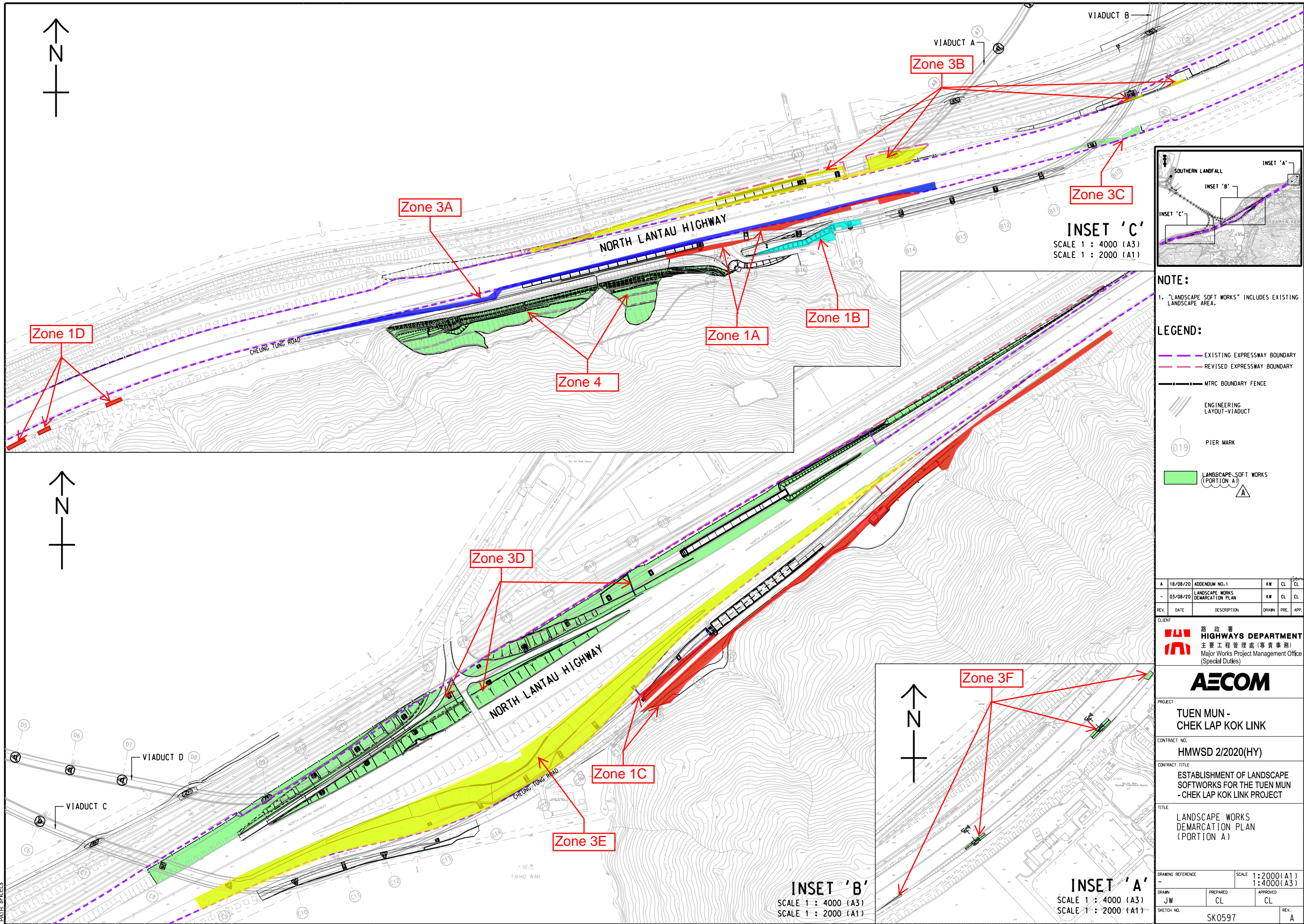
Environmental Permit No.: EP-354/2009/D
環境許可證編號: EP-354/2009/D

Figure 1
圖1

Appendix B

Layout Plan of the Contract

Planting Area under Contract HY/2012/07



NOTE:
1. "LANDSCAPE SOFT WORKS" INCLUDES EXISTING LANDSCAPE AREA.

- LEGEND:**
- EXISTING EXPRESSWAY BOUNDARY
 - REVISED EXPRESSWAY BOUNDARY
 - MTRC BOUNDARY FENCE
 - ENGINEERING LAYOUT-VIADUCT
 - D19 PIER MARK
 - LANDSCAPE SOFT WORKS (PORTION A)

REV.	DATE	DESCRIPTION	DRAWN	PRE.	APP.
A	18/08/20	ADDENDUM NO.1	KW	CL	CL
-	03/08/20	LANDSCAPE WORKS DEMARCATION PLAN	KW	CL	CL

CLIENT
HIGHWAYS DEPARTMENT
 主要工程管理处(專責事務)
 Major Works Project Management Office
 (Special Duties)

AECOM

PROJECT
TUEN MUN - CHEK LAP KOK LINK

CONTRACT NO.
HMWSD 2/2020(HY)

CONTRACT TITLE
ESTABLISHMENT OF LANDSCAPE SOFTWORKS FOR THE TUEN MUN - CHEK LAP KOK LINK PROJECT

TITLE
LANDSCAPE WORKS DEMARCATION PLAN (PORTION A)

DRAWING REFERENCE	SCALE 1:2000(A1) 1:4000(A3)
DRAWN JW	PREPARED CL
APPROVED CL	REV. A
SKETCH NO. SK0597	

Plot File by: Jerry Wong 24-Aug-20
 PATH SPILLS



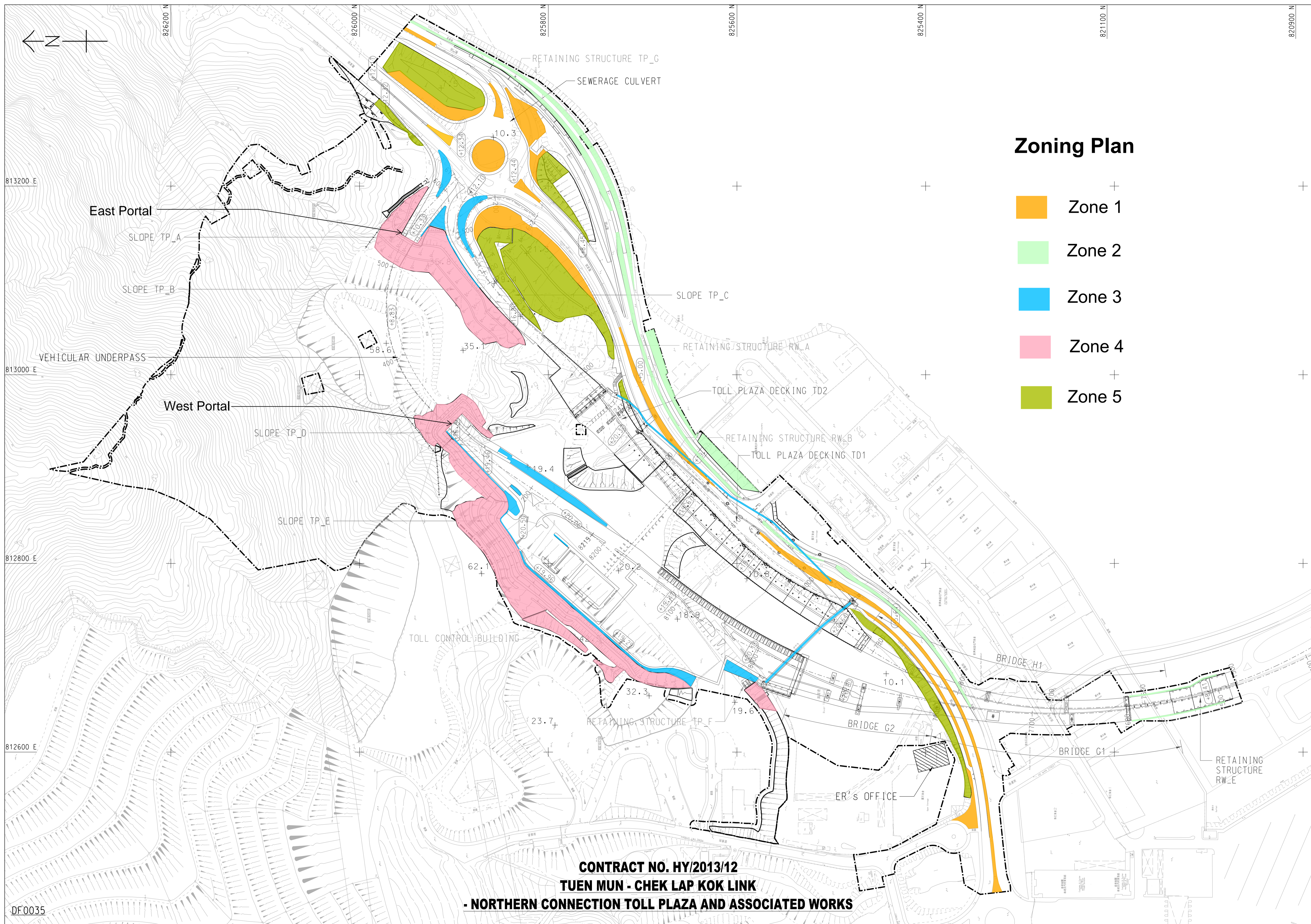
Contract No. HY/2017/10
TUEN MUN-CHEK LAP KOK LINK
- NORTHERN CONNECTION TUNNEL BUILDINGS,
ELECTRICAL AND MECHANICAL WORKS

ZONING PLAN – LANDSCAPE WORKS MONITORING (ESTABLISHMENT WORKS)

Note: Planting works were completed under Contract No. HY/2012/07.

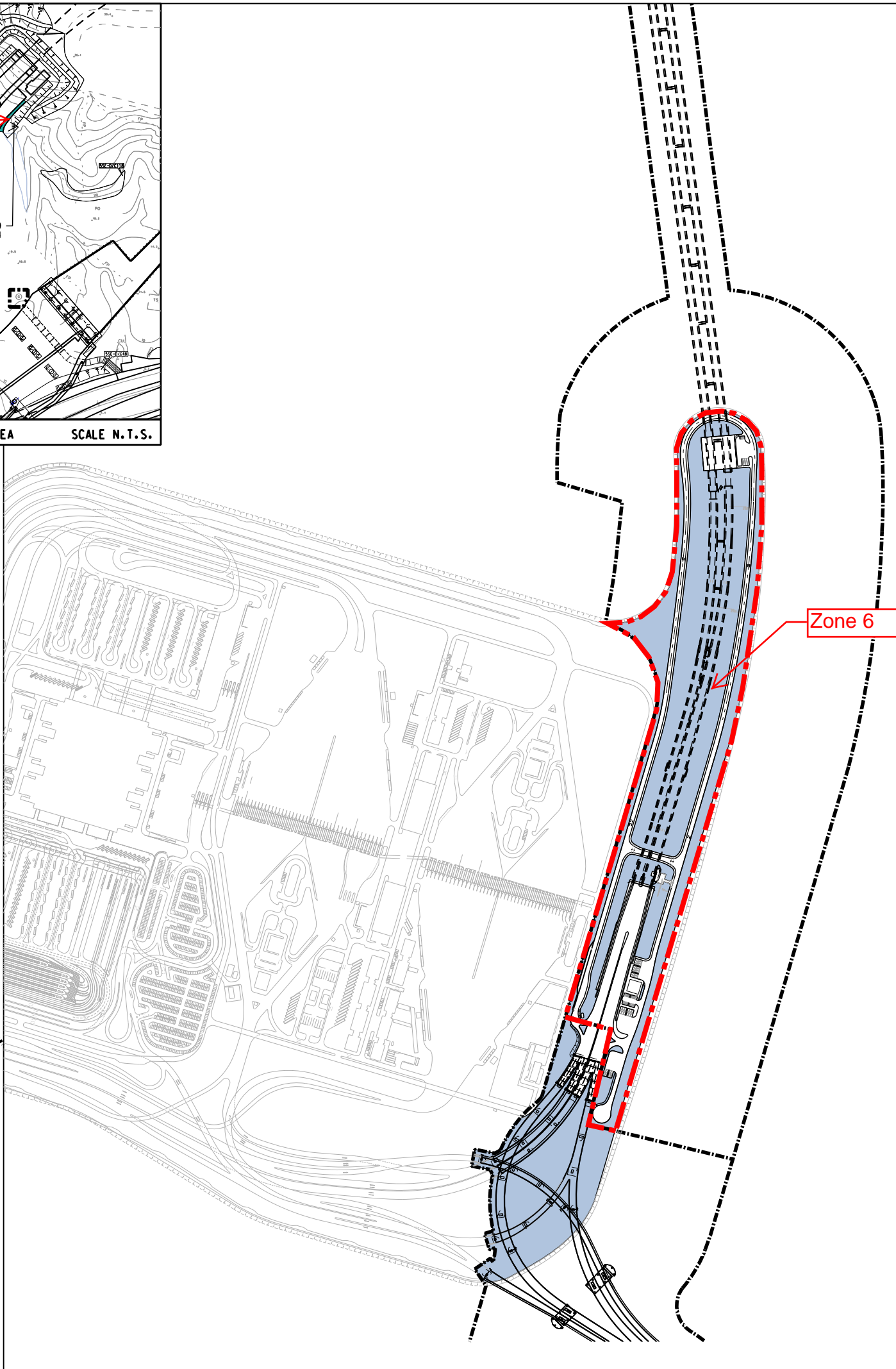
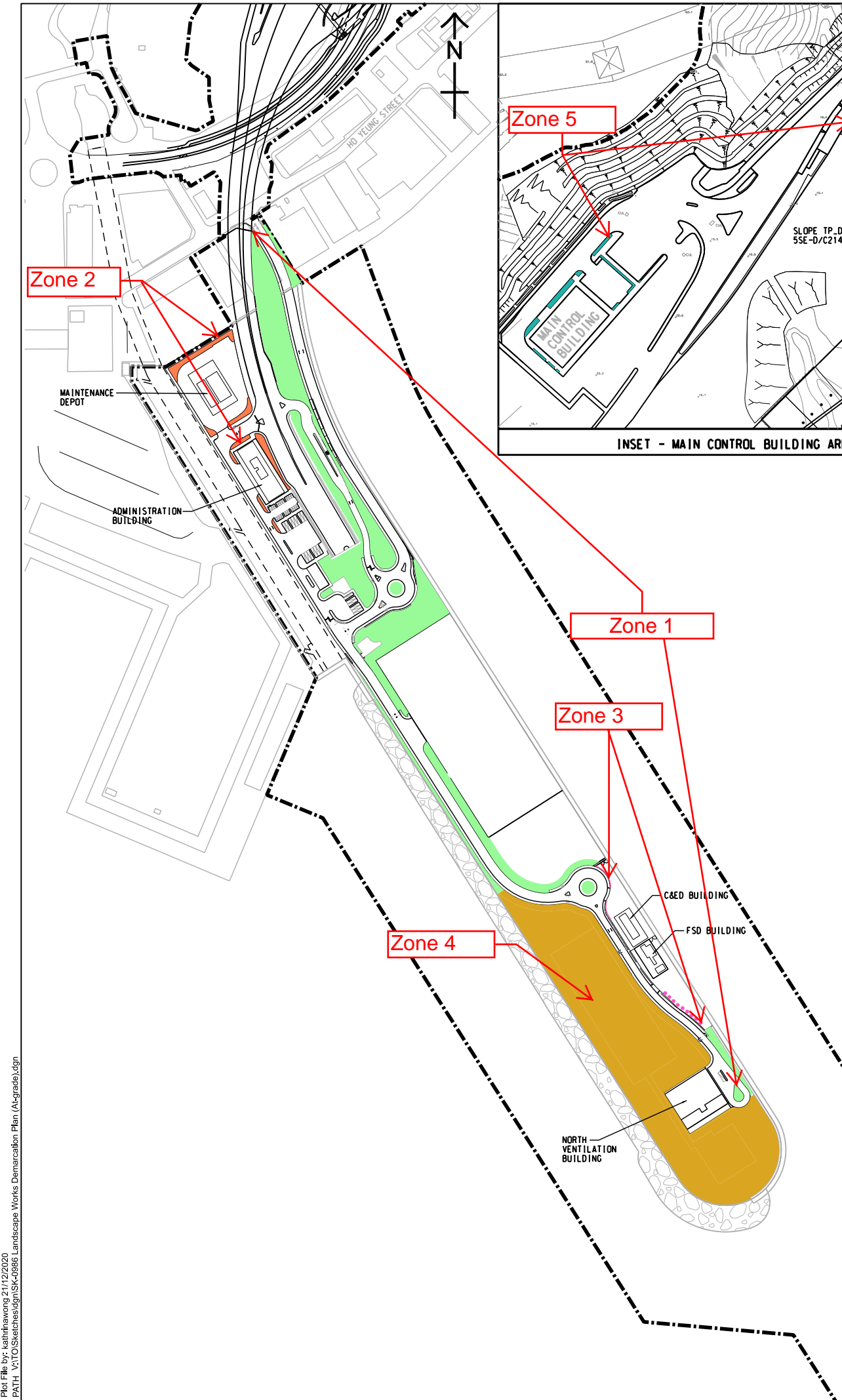
Monitoring of the establishment works continue under Contract No. HY/2017/10.

Planting Area under Contract HY/2013/12



CONTRACT NO. HY/2013/12
TUEN MUN - CHEK LAP KOK LINK
- NORTHERN CONNECTION TOLL PLAZA AND ASSOCIATED WORKS

Planting Area under Contract HY/2017/10



FOR INFORMATION

REV.	DATE	DESCRIPTION	CHK.	PREP.	DRAWN

CLIENT

HIGHWAYS DEPARTMENT
 主要工程管理處(專責事務)
 Major Works Project Management Office
 (Special Duties)

AECOM Imagine it. Delivered.

PROJECT
TUEN MUN - CHEK LAP KOK LINK

CONTRACT TITLE
TUEN MUN - CHEK LAP KOK LINK - NORTHERN CONNECTION TUNNEL - BUILDINGS, ELECTRICAL AND MECHANICAL WORKS

PROJECT NO. 60240249 CONTRACT NO. HY/2017/10

SCALE N.T.S. DATE 21 DEC. 2020

AMENDMENT TO WORKING DRAWING NO.
 60240249/C4/

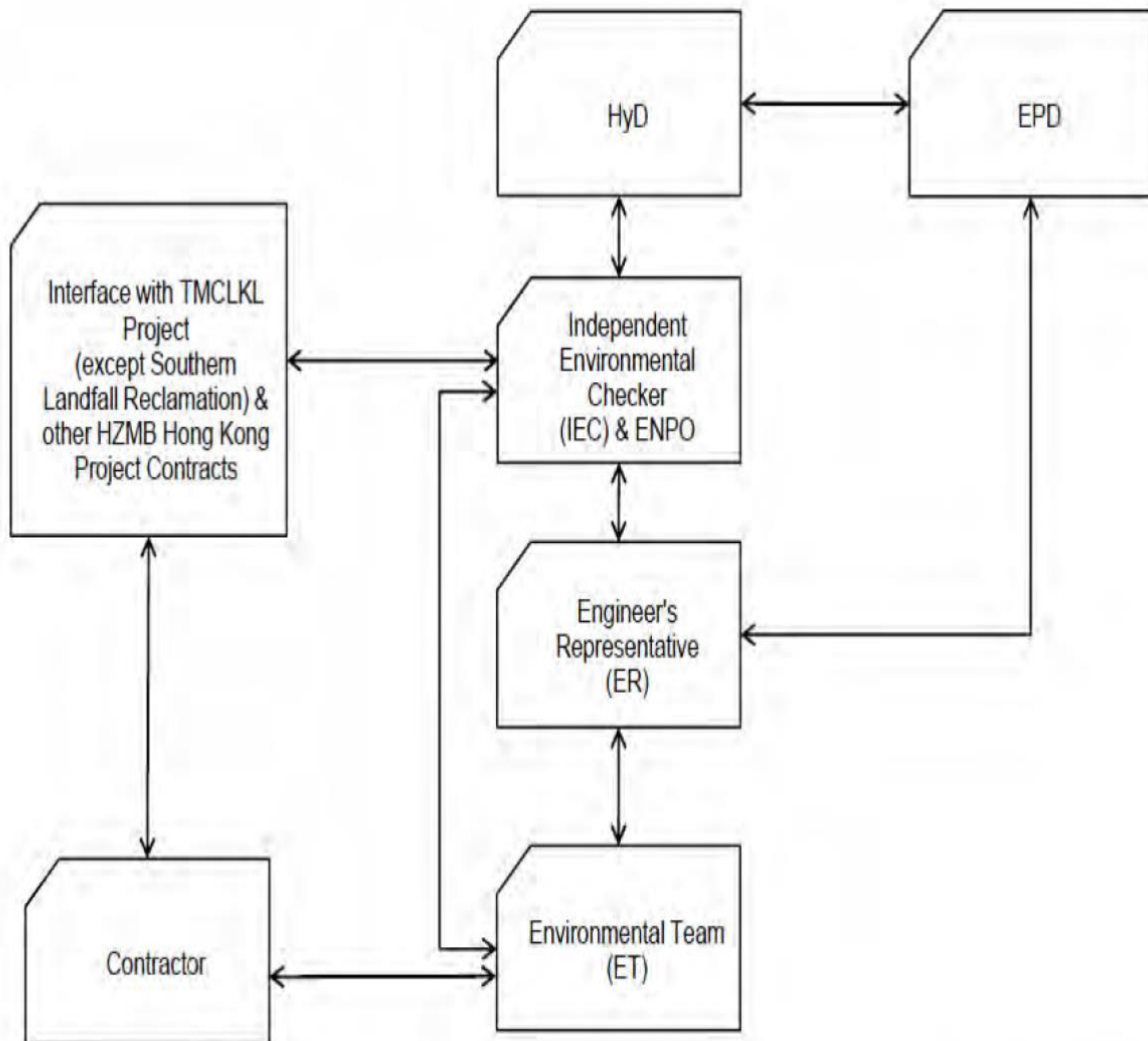
CHECKED	PREPARED	DRAWN
CL	CD	KW

SKETCH TITLE
ZONING PLAN - LANDSCAPE WORKS MONITORING (ESTABLISHMENT WORKS)

SKETCH NO.
 60240249/C4/SK/0986

Appendix C

Organization of the Contract



↔ Line of Communication

Project Organization chart

Contact Details of Key Personnel for the Contract HMWSD 2/2020 (HY)

Organization	Project Role	Name of Key Staff	Tel No	Fax No.
HyD	Employer	Mr. Tony Wong	2762 4982	3188 6614
AECOM	Principal Resident Engineer	Mr. S.W. Fok	2293 6200	2218 7399
AECOM	Senior Resident Landscape Architect	Ms. Candy Lau	2293 6200	2218 7399
AECOM	Senior Resident Engineer (S&E)	Mr. K P Wong	2293 6200	2218 7399
Ramboll	Environmental Project Office Leader (ENPO Leader)	Mr. YH Hui	3465 2850	3465 2899
Ramboll	Independent Environmental Checker (IEC)	Mr. Adi Lee Mr. Brian Tam (Since 25 July 2022)	3465 2850	3465 2899
HKL	Project Manager	Mr. S.C. Wong	2388 6332	2385 7911
AUES	Environmental Team Leader	Mr. Ben Tam	2959 6059	2959 6079
AUES	Environmental Consultant	Miss Nicola Hon	2959 6059	2959 6079
AUES	Environmental Consultant	Mr. Martin Li	2959 6059	2959 6079

Legend:*HyD (Employer) – Highways Department**AECOM (Engineer) – AECOM Asia Co. Ltd.**HKL (Main Contractor) – Hong Kong Landscaping Co., Ltd.**Ramboll (ENPO and IEC) – Ramboll Hong Kong Limited**AUES (ET) – Action-United Environmental Services & Consulting*

Appendix D

Event and Action Plan

Event and Action Plan for Landscape and Visual Impact

EVENT ACTION LEVEL	ACTION			
	ET	IEC	ER	Contractor
Design Check	<ul style="list-style-type: none"> Check final design conforms to the requirements of EP and prepare report. 	<ul style="list-style-type: none"> Check report. Recommend remedial design if necessary 	<ul style="list-style-type: none"> Undertake remedial design if necessary 	
Non- conformity on one occasion	<ul style="list-style-type: none"> Identify Source Inform IEC and ER Discuss remedial actions with IEC, ER and Contractor Monitor remedial actions until rectification has been completed 	<ul style="list-style-type: none"> Check report Check Contractor's working method Discuss with ET and Contractor on possible remedial measures Advise ER on effectiveness of proposed remedial measures. Check implementation of remedial measures 	<ul style="list-style-type: none"> Notify Contractor Ensure remedial measures are properly implemented 	<ul style="list-style-type: none"> Amend working methods Rectify damage and undertake any necessary replacement
Repeated Non-conformity	<ul style="list-style-type: none"> Identify Source Inform IEC and ER Increase monitoring frequency Discuss remedial actions with IEC, ER and Contractor Monitor remedial actions until rectification has been completed If nonconformity stops, cease additional monitoring 	<ul style="list-style-type: none"> Check monitoring report Check Contractor's working method Discuss with ET and Contractor on possible remedial measures Advise ER on effectiveness of proposed remedial measures Supervise implementation of remedial measures 	<ul style="list-style-type: none"> Notify Contractor Ensure remedial measures are properly implemented 	<ul style="list-style-type: none"> Amend working methods Rectify damage and undertake any necessary replacement

ET – Environmental Specialist, IEC – Independent Environmental Checker, ER – Engineer’s Representative

Appendix E

Monitoring Schedule

Establishment Inspection Schedule for this Reporting Period

Date		Planting Area under HY/2012/07 (Zone 1, 3 & 4)	Planting Area under HY/2012/07 (Zone 2)	Planting Area under HY/2013/12	Planting Area under HY/2017/10 (Zone 1 to 5)	Planting Area under HY/2017/10 (Zone 6)
Fri	1-July-22					
Sat	2-July-22					
Sun	3-July-22					
Mon	4-July-22					
Tue	5-July-22					
Wed	6-July-22					
Thu	7-July-22					
Fri	8-July-22					
Sat	9-July-22					
Sun	10-July-22					
Mon	11-July-22					
Tue	12-July-22					
Wed	13-July-22					
Thu	14-July-22					
Fri	15-July-22					
Sat	16-July-22					
Sun	17-July-22					
Mon	18-July-22					
Tue	19-July-22					
Wed	20-July-22					
Thu	21-July-22					✓
Fri	22-July-22					
Sat	23-July-22					
Sun	24-July-22					
Mon	25-July-22					
Tue	26-July-22					
Wed	27-July-22					
Thu	28-July-22					
Fri	29-July-22					
Sat	30-July-22					
Sun	31-July-22					

✓	Monitoring Day
	Sunday or Public Holiday

Establishment Inspection Schedule for the Next Reporting Period

Date		Planting Area under HY/2012/07 (Zone 1, 3 & 4)	Planting Area under HY/2012/07 (Zone 2)	Planting Area under HY/2013/12	Planting Area under HY/2017/10 (Zone 1 to 5)	Planting Area under HY/2017/10 (Zone 6)
Mon	1-August-22					
Tue	2-August-22					
Wed	3-August-22					
Thu	4-August-22					
Fri	5-August-22					
Sat	6-August-22					
Sun	7-August-22					
Mon	8-August-22					
Tue	9-August-22					
Wed	10-August-22					
Thu	11-August-22					
Fri	12-August-22					
Sat	13-August-22					
Sun	14-August-22					
Mon	15-August-22					
Tue	16-August-22					
Wed	17-August-22					
Thu	18-August-22					
Fri	19-August-22					
Sat	20-August-22					
Sun	21-August-22					
Mon	22-August-22					
Tue	23-August-22					
Wed	24-August-22					
Thu	25-August-22					
Fri	26-August-22					
Sat	27-August-22					
Sun	28-August-22					
Mon	29-August-22					
Tue	30-August-22					
Wed	31-August-22					

✓	Monitoring Day
	Sunday or Public Holiday

Appendix F

Checklist for Establishment Works Monitoring

Inspection Date: 21 July 2022

Inspected By: AUES

Time: 9:30 – 12:00

Weather Condition: Sunny

Participants: AECOM (RSS), Wing Ho Yuen (Contractor), Ramboll (IEC) & AUES (ET) Rep.

		N/A or not observed	Yes	No	Remarks / Photo
1	Zone: 6 of planting area of HY/2017/10 (Southern Landfall, HKBCF)				
1.1	Is watering provided to plants to ensure satisfactory growth and health (manual and automatic irrigation)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
1.2	Are tree stakes, guys and ties provided properly for safety and avoid chaffing of bark?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
1.3	Are trees or limb overhanging branches pruned?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
1.4	Are pest and disease observed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
1.5	Are litter and debris removed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
1.6	Are plants/ grasses overgrown?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
1.7	After inclement weather conditions, are proper action implemented to replace dead plants, repair damaged plants, bed in all plants that have blown over, firm up all other plants and immediately thereafter, remove dead plants and plant debris from the site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
1.8	Are planting locations and tree spacing matched with the approved planting plans?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
1.9	Are the planting species on site matched with the approved planting schedules (Annex B)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
		Good	Fair	Poor	
1.10	Overall health condition of the plants?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
2	General Document				
2.1	Are the records of watering, fertilizing, weeding, pruning and mowing kept for checking?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____

Follow up actions for previous Site Audit on 25 April 2022: Nil
Observations: No observation was observed during the inspection. Watering system was installed for the planting area. Moreover, regular maintenance works was observed during the inspection.
Corrective Actions (if any): 1. Regularly weeding should be provided.
General Conclusion: Total number of trees planted: 2,127 (Zone 6). Planting area under Contract No. HY/2017/10: 10.53 ha (Zone 6) (based on the survey data provided by the SOR).
Remarks: The planting Zone 6 under Contract No. HY/2017/10 at Southern Landfall, HKBCF had been handed over to this contract from 10 February 2022.

Inspected by
(ET's Representative):

Ben Tam

Title:

Environmental Consultant

Signature:



Date:

21 July 2022

Reviewed by
(RSS Landscape
Representative):

Candy Lau

Title:

Senior Resident Landscape Architect

Signature:



Date:

11 August 2022

Contractor's
Representative:

Joe Fung

Title:

Project Manager

Signature:



Date:

15 August 2022

Checked by
(IEC's Representative):

Theo Chan

Title:

Environmental Consultant

Signature:



Date:

15 August 2022

Zone 6

Area at Southern Landfall, HKBCF



General View for Zone 6



General View for Zone 6



General View for Zone 6



General View for Zone 6



General View for Zone 6



General View for Zone 6



General View for Zone 6



General View for Zone 6



General View for Zone 6



General View for Zone 6



General View for Zone 6



General View for Zone 6



General View for Zone 6



General View for Zone 6



General View for Zone 6



General View for Zone 6

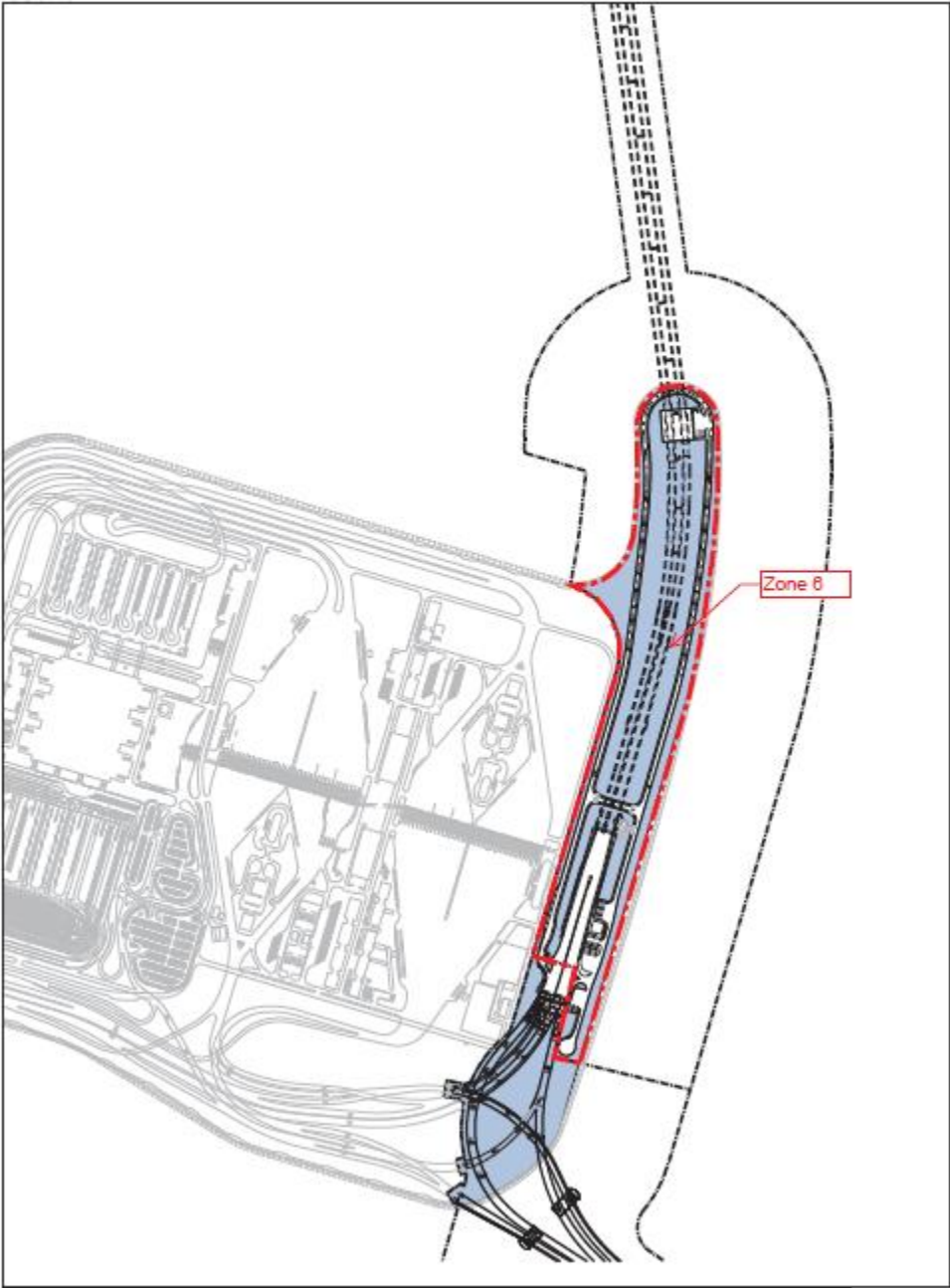


Regular maintenance at Zone 6



Watering at Zone 6

Appendix A
Zoning Plan for Contract No. HY/2017/10 (Zone 6)



**Contract No. HY/2021/13
Provision of Remaining Compensation Tree Planting for the Tuen Mun – Chek
Lap Kok Link Project**

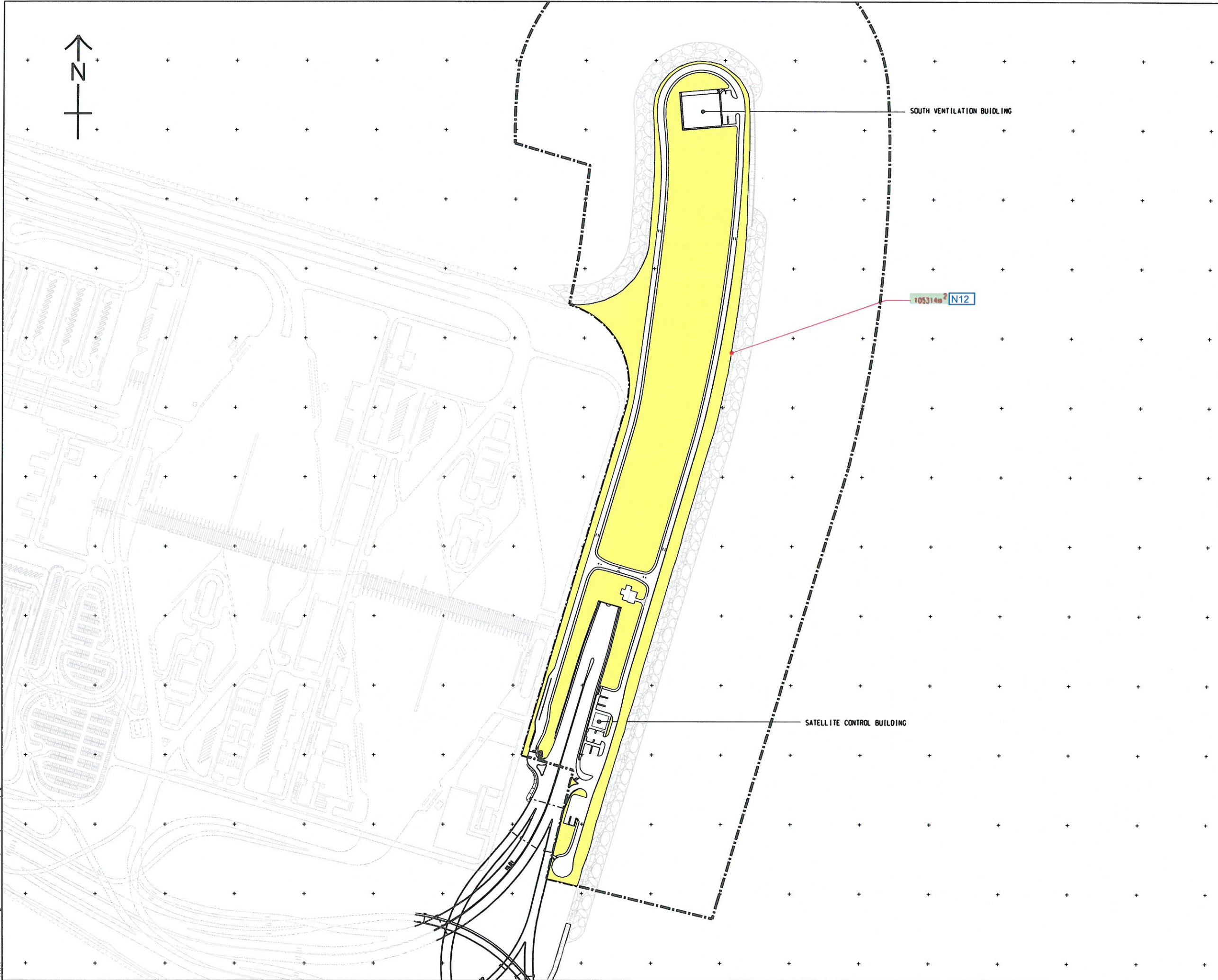
Zoning Plan for the Planting Area under Contract HY/2017/10 (Zone 6)

Appendix B
Summary of Compensatory Planting Area for Contract No. HY/2017/10 (Zone 6)



LEGEND:

- SITE BOUNDARY
- LANDSCAPE AREA



APPROVED AND CONFIRMED BY
 TITLE
 AECOM (RLS)
 NAME
 SAMMY TSOI
 SIGNATURE

22-3-2021

FOR INFORMATION

REV.	DATE	DESCRIPTION	CHK.	PREP.	DRAWN

CLIENT
HIGHWAYS DEPARTMENT
 主要工程管理局 (專責事務)
 Major Works Project Management Office
 (Special Duties)

AECOM Imagine it. Delivered.

PROJECT
TUEN MUN - CHEK LAP KOK LINK

CONTRACT TITLE
TUEN MUN - CHEK LAP KOK LINK - NORTHERN CONNECTION TUNNEL - BUILDINGS, ELECTRICAL AND MECHANICAL WORKS

PROJECT NO. **60240249** CONTRACT NO. **HY/2017/10**

SCALE **A3 1:4000** DATE **19 FEB. 2021**

AMENDMENT TO WORKING DRAWING NO.
NIL

CHECKED CL	PREPARED CD	DRAWN JW
----------------------	-----------------------	--------------------

SKETCH TITLE
LANDSCAPE AREA

SHEET 2 OF 2

SKETCH NO.
60240249/C4/SK/1012

Appendix C
Approved Planting Schedule for Contract No. HY/2017/10 (Zone 6)

Summary of Compensatory Trees under Contract No. HY/2017/10

Compensatory tree		Quantity					
Botanical name	Chinese name	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6
<i>Areca catechu</i>	檳榔	48					
<i>Bauhinia variegata</i>	宮粉羊蹄甲				38		
<i>Bauhinia x blakeana</i>	洋紫荊				10		
<i>Callistemon viminalis</i>	串錢柳						135
<i>Elaeocarpus apiculatus</i>	尖葉杜英	6					
<i>Elaeocarpus hainanensis</i> *	水石榕	18					
<i>Garcinia subelliptica</i>	福木	3					
<i>Grevillea robusta</i> #	銀樺				18		306
<i>Hyophorbe lagenicaulis</i>	酒瓶椰子	16					
<i>Livistona chinensis</i>	蒲葵	87			158		
<i>Melaleuca quinquenervia</i>	白千層				18		
<i>Plumeria rubra</i>	雞蛋花	159					1686
<i>Pongamia pinnata</i>	水黃皮	25			26		
<i>Roystonea regia</i>	王棕	44					
<i>Sterculia lanceolata</i>	假蘋婆				54		
<i>Terminalia catappa</i>	欖仁樹	2			36		
<i>Viburnum odoratissimum</i>	珊瑚樹				10		
<i>Wodyetia bifurcata</i>	狐尾椰子	10			67	4	
<i>Xanthostemon chrysanthus</i>	金蒲桃	13					
	Sub-total	431	0	0	435	4	2127
	Total	2997					

Remarks * One in terms of quantity in Zone 1 will be re-planted as per latest planting plan if the tree is unavoidably removed from site.

One in terms of quantity in Zone 6 will be re-planted as per latest planting plan if the tree is unavoidably removed from site.

Appendix G

Environmental Mitigation and Enhancement Measures Implementation Schedule (EMIS)

CONTRACT NO. HMWSD 2/2020 (HY)
ESTABLISHMENT OF LANDSCAPE SOFTWARES FOR THE TUEN MUN - CHEK LAP KOK LINK
ENVIRONMENTAL MITIGATION AND ENHANCEMENT MEASURE IMPLEMENTATION SCHEDULE

Landscape and Visual									
EIA reference	EM&A Manual reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status
						D	C	O	
10.9	7.6	Existing trees on boundary of the Project Area shall be carefully protected during construction. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in contractor's works areas. (Tree protection measures will be detailed at Tree Removal Application stage) (CM1)	All areas/detailed design/ during construction	Design Consultant/ Contractor	TMEIA	Y	Y		N/A
10.9	7.6	Trees unavoidably affected by the works shall be transplanted where practical. Trees will be transplanted straight to their final receptor site and not held in a temporary nursery. A detailed Tree Transplanting Specification shall be provided in the Contract Specification. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme (CM2)	All areas/detailed design/ during construction	Design Consultant/ Contractor	TMEIA	Y	Y		N/A
10.9	7.6	Hillside and roadside screen planting to proposed roads, associated structures and slope works (CM3)	All areas/detailed design/ during Construction/ post construction	Design Consultant/ Contractor	TMEIA	Y	Y		N/A
10.9	7.6	Hydroseeding or sheeting of soil stockpiles with visually unobtrusive material (in earth tone) (CM4)	All areas/detailed design/ during Construction/ post construction	Design Consultant/ Contractor	TMEIA	Y	Y		N/A
10.9	7.6	Screening of construction works by hoardings around works area in visually unobtrusive colours, to screen works (CM5)	All areas/detailed design/ during Construction	Design Consultant/ Contractor	TMEIA	Y	Y		N/A

CONTRACT NO. HMWSD 2/2020 (HY)
ESTABLISHMENT OF LANDSCAPE SOFTWARES FOR THE TUEN MUN - CHEK LAP KOK LINK
ENVIRONMENTAL MITIGATION AND ENHANCEMENT MEASURE IMPLEMENTATION SCHEDULE

Landscape and Visual									
EIA reference	EM&A Manual reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status
						D	C	O	
10.9	7.6	Control night-time lighting and glare by hooding all lights (CM6)	All areas/detailed design/ during Construction	Design Consultant/ Contractor	TMEIA	Y	Y		N/A
10.9	7.6	Ensure no run-off into water body adjacent to the Project Area (CM7)	All areas/detailed design/ during Construction	Design Consultant/ Contractor	TMEIA	Y	Y		N/A
10.9	7.6	Avoidance of excessive height and bulk of buildings and structures (CM8)	All areas/detailed design/ during Construction	Design Consultant/ Contractor	TMEIA	Y	Y		N/A
10.9	7.6	Recycle/Reuse all felled trees and vegetation, e.g. mulching (CM9)	All areas/detailed design/ during Construction	Design Consultant/ Contractor	TMEIA	Y	Y		N/A
10.9	7.6	Compensatory tree planting shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Felling Application process under ETWBTC 3/2006 (CM10)	All areas/detailed design/ during Construction	Design Consultant/ Contractor	TMEIA	Y	Y		✓
10.9	7.6	Re-vegetation of affected woodland/shrubland with native species (OM1)	All areas/detailed design/ during Construction/ post construction	Design Consultant/ Contractor	TMEIA	Y	Y	Y	✓ maintenance agent : HyD
10.9	7.6	Tall buffer screen tree / shrub / climber planting where appropriate should be incorporated to soften hard engineering structures and facilities (OM2)	All areas/detailed design/ during Construction/ post construction	Design Consultant/ Contractor	TMEIA	Y	Y	Y	✓ maintenance agent : HyD & LCSD
10.9	7.6	Streetscape elements (e.g. paving, signage, street furniture, lighting etc.) shall be sensitively designed in a manner that responds to the local context, and minimises potential negative landscape and visual impacts. Lighting units should be directional and	All areas/detailed design/ during Construction/ post construction	Design Consultant/ Contractor	TMEIA	Y	Y	Y	N/A

CONTRACT NO. HMWSD 2/2020 (HY)
ESTABLISHMENT OF LANDSCAPE SOFTWARES FOR THE TUEN MUN - CHEK LAP KOK LINK
ENVIRONMENTAL MITIGATION AND ENHANCEMENT MEASURE IMPLEMENTATION SCHEDULE

Landscape and Visual									
EIA reference	EM&A Manual reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status
						D	C	O	
		minimize unnecessary light spill (OM3)							
10.9	7.6	Structure, ornamental tree / shrub / climber planting should be provided along roadside amenity strips, central dividers and newly formed slopes to enhance the townscape quality and further greenery enhancement (OM4)	All areas/detailed design/ during Construction/ post construction	Design Consultant/ Contractor	TMEIA	Y	Y	Y	✓ maintenance agent : HyD & LCSD
10.9	7.6	Aesthetically pleasing design (visually unobtrusive and non-reflective) as regard to the form, material and finishes shall be incorporated to all buildings, engineering structures and associated infrastructure facilities (OM5)	All areas/detailed design/ during Construction/ post construction	Design Consultant/ Contractor	TMEIA	Y	Y	Y	N/A
10.9	7.6	Avoidance of excessive height and bulk of buildings and structures (OM6)	All areas/detailed design/ during Construction/ post construction	Design Consultant/ Contractor	TMEIA	Y	Y	Y	N/A

Remarks:

- ✓ Compliance of Mitigation Measures
- <> Compliance of Mitigation Measures but need improvement.
- × Non-compliance of Mitigation Measures
- ▲ Non-compliance of Mitigation Measures but rectified by Contractor
- △ Deficiency of Mitigation Measures but rectified by Contractor
- N/A Not Applicable in Reporting Period

Legend: D=Design, C=Construction, O=Operation

Note: Funding Agent for all mitigation measures will be the Highways Department of the Hong Kong SAR Government

Appendix H

Cumulative Statistics on Exceedance and Complaint

Table H-1 Statistical Summary of Environmental Complaints

Reporting Period	Environmental Complaint Statistics					
	Frequency	Cumulative	Complaint Nature			
			Air	Noise	Water	Others
July 2022	0	0	NA	NA	NA	NA
Cumulative since Contract commencement	0	0	NA	NA	NA	NA

Table H-2 Statistical Summary of Environmental Summons

Reporting Period	Environmental Summons Statistics				
	Frequency	Cumulative	Complaint Nature		
			Air	Noise	Water
July 2022	0	0	NA	NA	NA
Cumulative since Contract commencement	0	0	NA	NA	NA

Table H-3 Statistical Summary of Environmental Prosecution

Reporting Period	Environmental Prosecution Statistics				
	Frequency	Cumulative	Complaint Nature		
			Air	Noise	Water
July 2022	0	0	NA	NA	NA
Cumulative since Contract commencement	0	0	NA	NA	NA