



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

9TH MONTHLY ENVIRONMENTAL MONITORING AND
AUDIT (EM&A) REPORT – DECEMBER 2021

PREPARED FOR
HONG KONG LANDSCAPING CO., LTD.

Date	Reference No.	Prepared By	Certified By
27 May 2022	TCS01137/20/600/R0015v2	 Martin Li (Environmental Consultant)	 Ben Tam (Environmental Team Leader)

Version	Date	Remarks
1	25 January 2022	First Submission
2	27 May 2022	Amended according to the IEC's comment on 27 May 2022

01 June 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
9th Monthly EM&A Report for December 2021 (EP-354/2009/D)**

Reference is made to the Environmental Team's submission of the Monthly EM&A Report for December 2021 (ET's ref.: "TCS01137/20/600/R0015v2" dated 27 May 2022) certified by ET Leader and provided to us via e-mail on 27 May 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



Adi Lee
Independent Environmental Checker
Tuen Mun – Chek Lap Kok Link

C.C.

HyD	Attn.: Mr. Eric Wong	(By Fax: 3188 6614)
HyD	Attn.: Mr. Minian Wan	(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 9th 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 December 2021 (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 by this Contract during this reporting period, but **one** establishment period inspection was conducted by the ET of Contract HY/2017/10 in this reporting period for the planting area under HY/2012/07 (Zone 2) and HY/2017/10 separately.

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
December 2021	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 and the Contract HY/2013/12 were handover to this contract from December 2020 and June 2021 separately. 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. Therefore, the establishment planting inspection and maintenance works for the establishment planting area under the Contract HY/2012/07 Zone 1, 3 & 4 and the Contract HY/2013/12 responded by this Contract was commenced from December 2020 and June 2021.

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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:-
- 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 9th monthly EM&A report under the Contract HMWSD 2/2020 (HY) presenting the monitoring results and inspection findings for period from **1 to 31 December 2021**.

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. 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	December 2021 to February 2022 (7 th Quarter)
HY/2012/07 (Zone 2)	June 2020	TBA	March to May 2022 (8 th Quarter)
HY/2013/12	June 2020	June 2021	December 2021 to February 2022 (7 th Quarter)
HY/2017/10	February 2021	TBA	February to April 2022 (5 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 and the Contract HY/2013/12 were handover to this contract from December 2020 and June 2021 separately. 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. Therefore, the establishment planting inspection and maintenance works for the establishment planting area under the Contract HY/2012/07 Zone 1, 3 & 4 and the Contract HY/2013/12 responded by this Contract was commenced from December 2020 and June 2021.
- 3.1.3 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
- 3.1.4 In the Reporting Period, **one** establishment period inspection was conducted for the planting area HY/2012/07 (Zone 2) & HY/2017/10 separately. 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)	NA	NA
HY/2012/07 (Zone 2)	ET of the Contract HY/2017/10	December 2021 to February 2022 (7 th Quarter)	22 December 2021
HY/2013/12	ET of the Contract HMWSD 2/2020 (HY)	NA	NA
HY/2017/10	ET of the Contract HY/2017/10	November 2021 to January 2022 (4 th Quarter)	20 & 22 December 2021

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
December 2021	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
December 2021	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
December 2021	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.

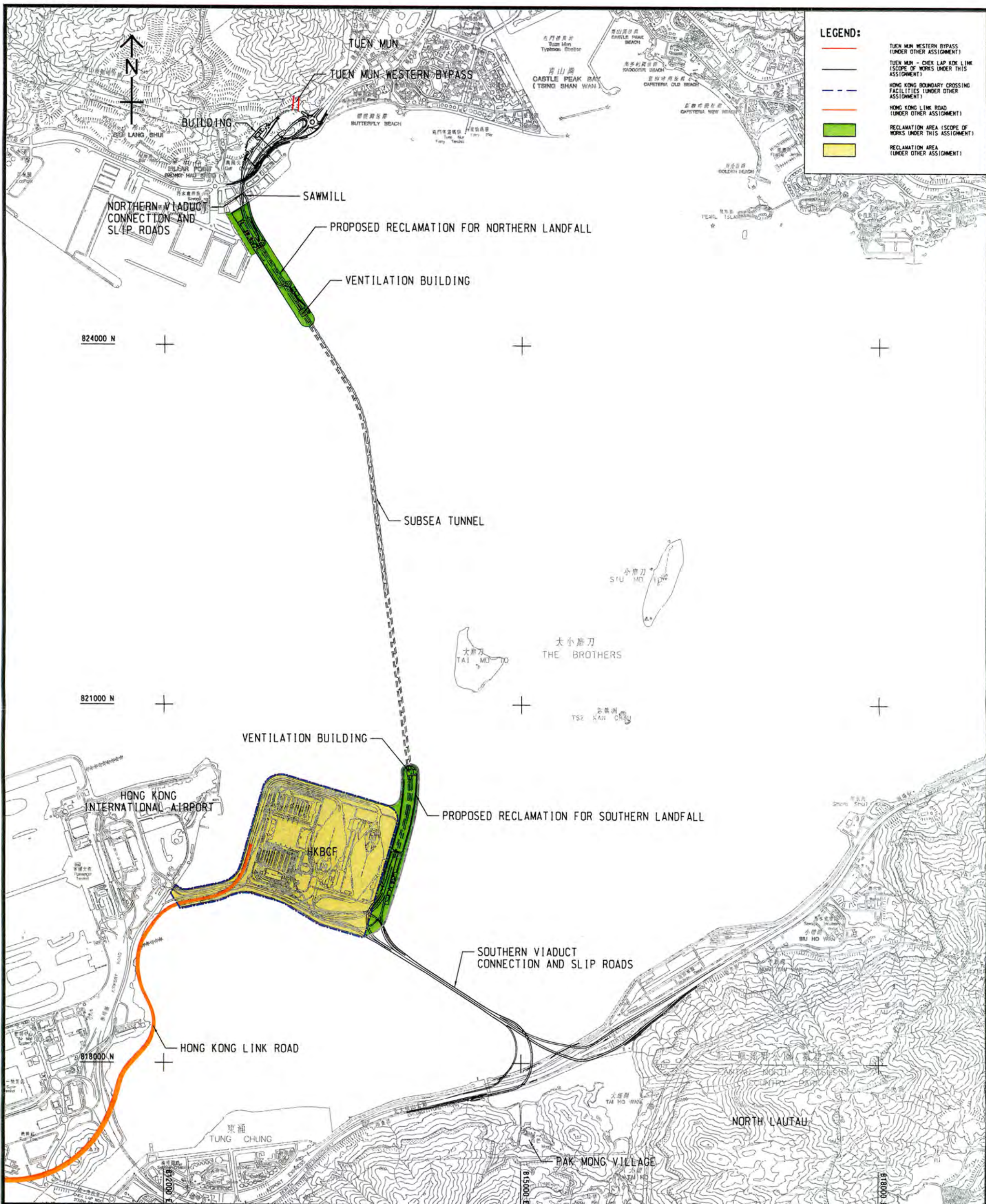
5 CONCLUSIONS AND RECOMMENDATIONS

5.1 CONCLUSIONS

- 5.1.1 This is 9th 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 December 2021.
- 5.1.2 There is no air quality, noise, water quality, ecology, cultural heritage and landfill gas monitoring was required for the contract.
- 5.1.3 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 by this Contract during this reporting period, but one establishment period inspection was conducted by the ET of Contract HY/2017/10 in this reporting period for the planting area under HY/2012/07 (Zone 2) and HY/2017/10 separately.
- 5.1.4 According to the contract arrangement, the establishment planting area under the Contract HY/2012/07 Zone 1, 3 & 4 and the Contract HY/2013/12 were handover to this contract from December 2020 and June 2021 separately. Therefore, the establishment planting inspection and maintenance works for those areas responded by this Contract was commenced from December 2020 and June 2021.
- 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

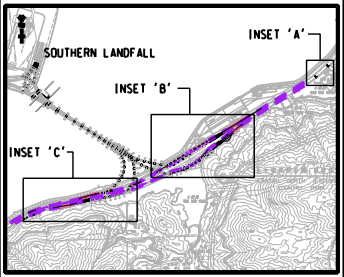
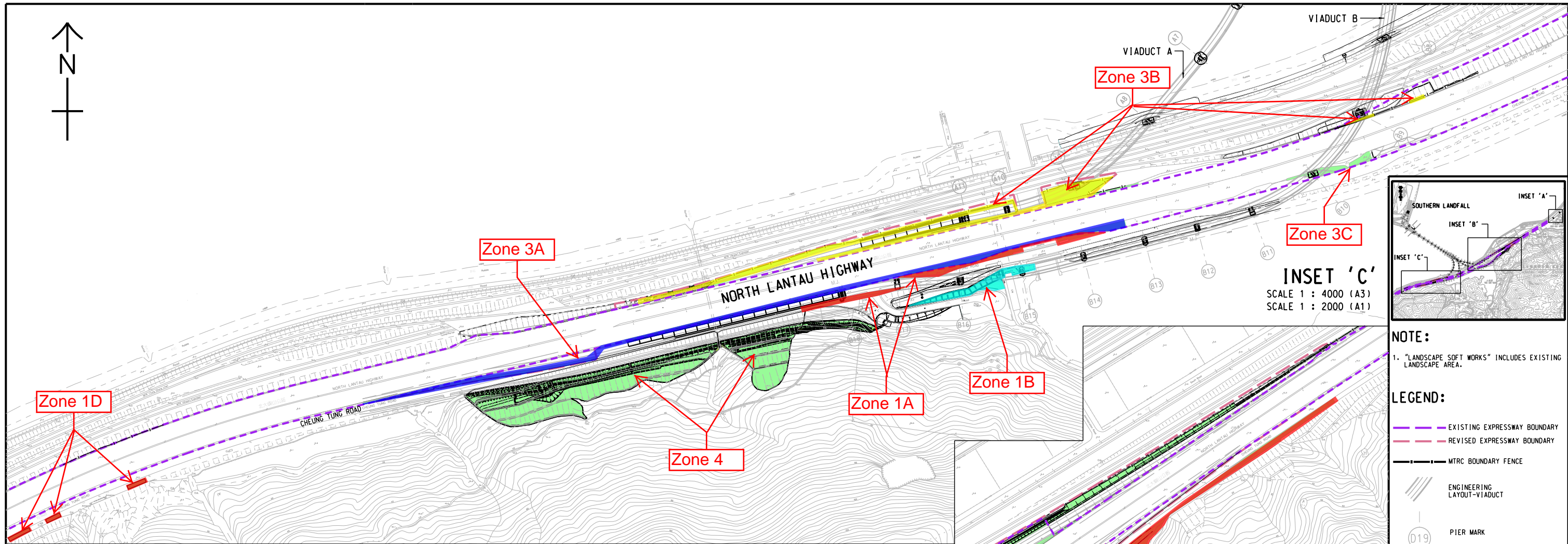
(Plan originated from Figure 3.1 of Approved EIA Report reference no.: AEIAR-146/2009)
 (圖則源自已批准的環境影響評估報告編號AEIAR-146/2009圖3.1)



Appendix B

Layout Plan of the Contract

Planting Area under Contract HY/2012/07



INSET 'C'
SCALE 1 : 4000 (A3)
SCALE 1 : 2000 (A1)

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

AECOM

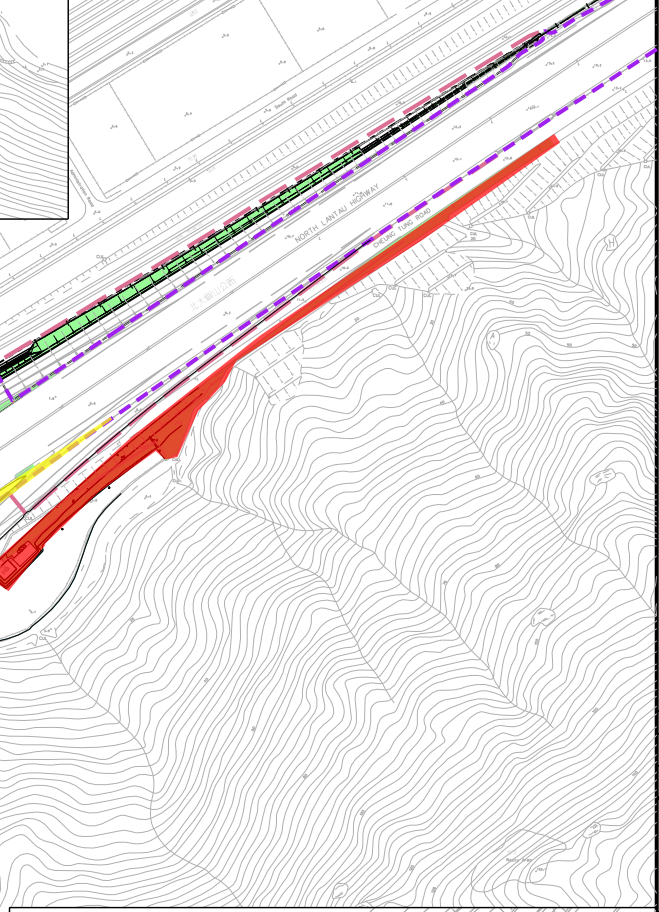
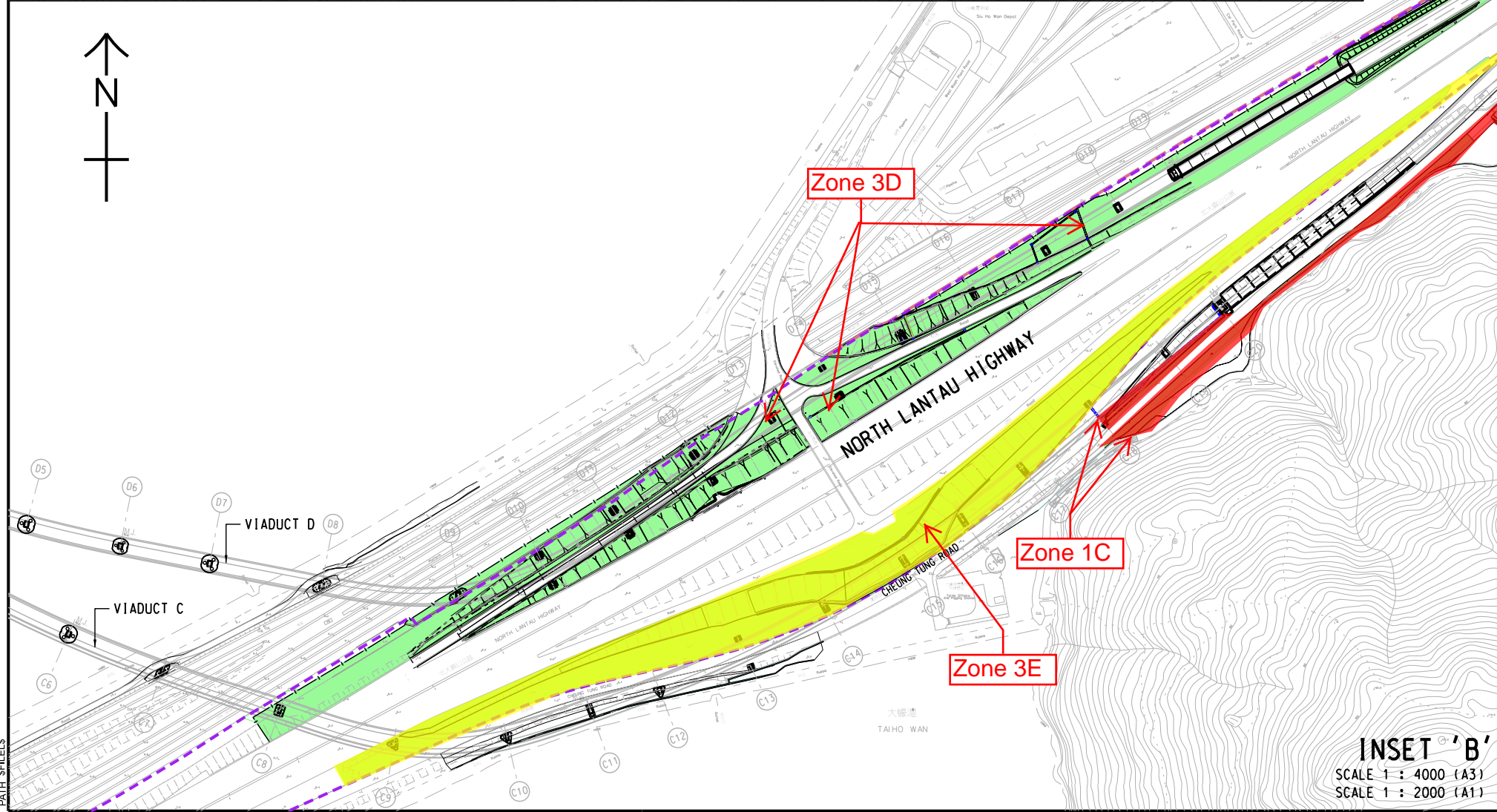
PROJECT
TUEN MUN - CHEK LAP KOK LINK

CONTRACT NO.
HMWS2 2/2020(HY)

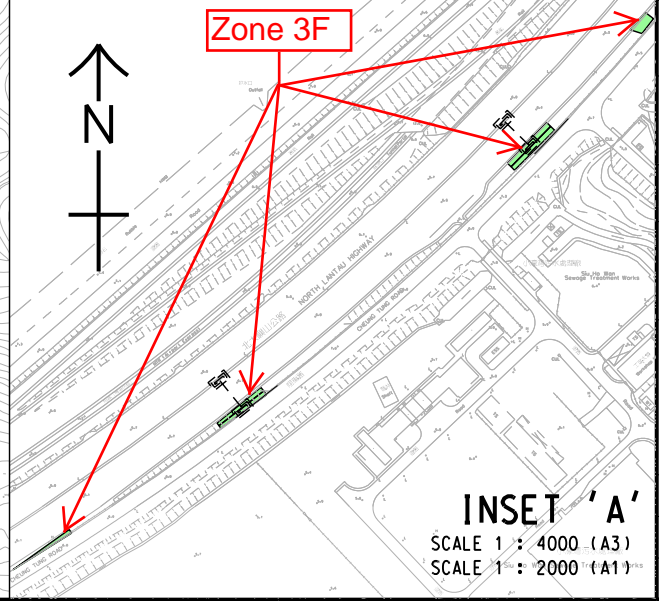
CONTRACT TITLE
ESTABLISHMENT OF LANDSCAPE SOFTWORKS FOR THE TUEN MUN - CHEK LAP KOK LINK PROJECT

TITLE
LANDSCAPE WORKS DEMARCATION PLAN (PORTION A)

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



INSET 'B'
SCALE 1 : 4000 (A3)
SCALE 1 : 2000 (A1)



INSET 'A'
SCALE 1 : 4000 (A3)
SCALE 1 : 2000 (A1)



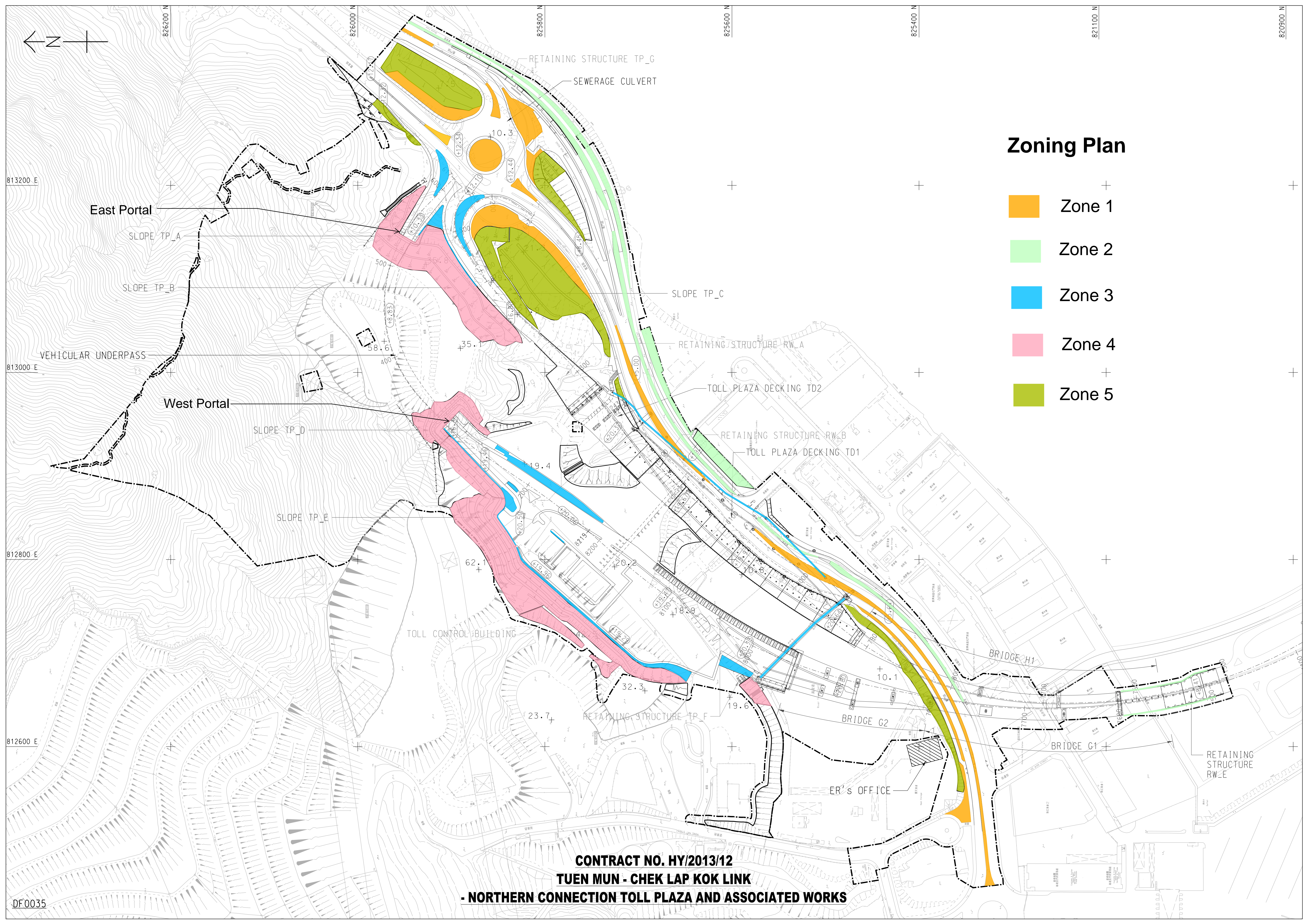
Contract No. HY/2017/10
TUEN MUN-CHEK LAP KOK LINK
- NORTHERN CONNECTION TUNNEL BUILDINGS,
ELECTRICAL AND MECHANICAL WORKS

ZONING PLAN – LANDSCAPE WORKS MONITORING (ESTABLISHMENT WORKS)

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

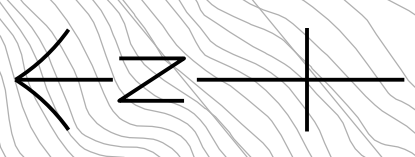
Monitoring of the establishment works continue under Contract No. HY/2017/10.

Planting Area under Contract HY/2013/12



Zoning Plan

- Zone 1
- Zone 2
- Zone 3
- Zone 4
- Zone 5



813200 E

813000 E

812800 E

812600 E

DF0035

826200 N

826000 N

825800 N

825600 N

825400 N

821100 N

820900 N

East Portal

SLOPE TP_A

SLOPE TP_B

VEHICULAR UNDERPASS

West Portal

SLOPE TP_D

SLOPE TP_E

TOLL CONTROL BUILDING

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

RETAINING STRUCTURE TP_G

SEWERAGE CULVERT

10.5

35.1

19.4

62.1

23.7

32.3

19.6

10.1

SLOPE TP_C

RETAINING STRUCTURE RW_A

TOLL PLAZA DECKING TD2

RETAINING STRUCTURE RW_B

TOLL PLAZA DECKING TD1

BRIDGE H1

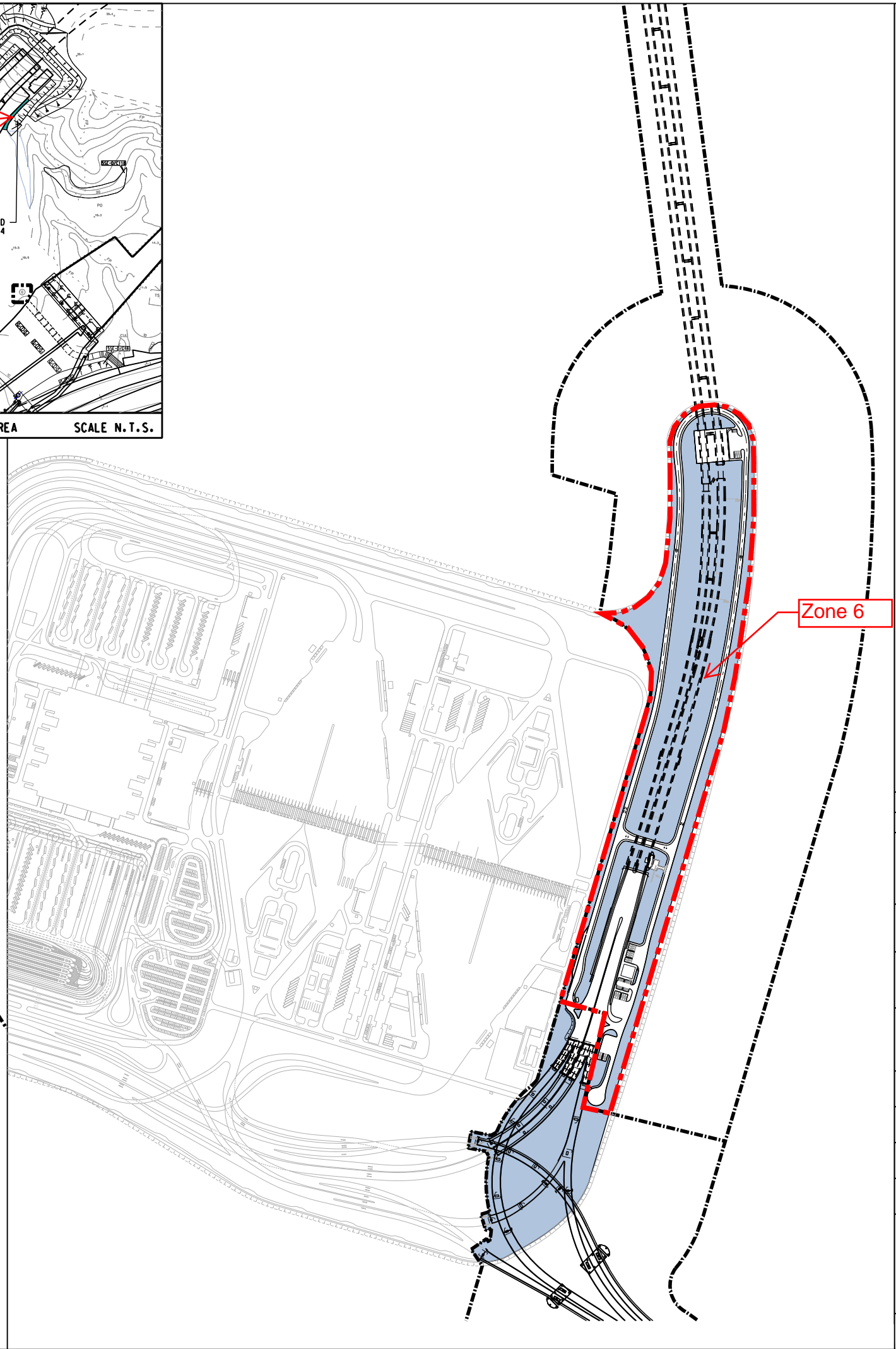
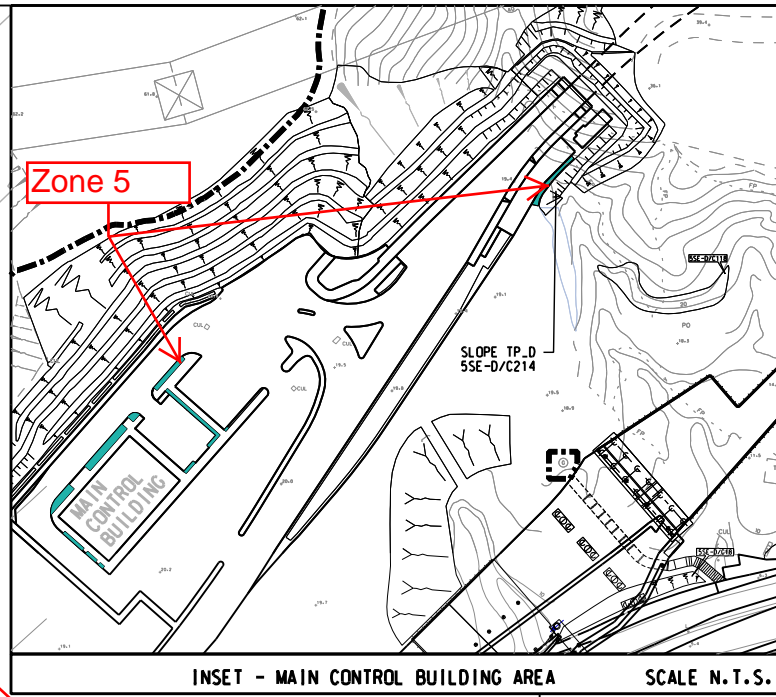
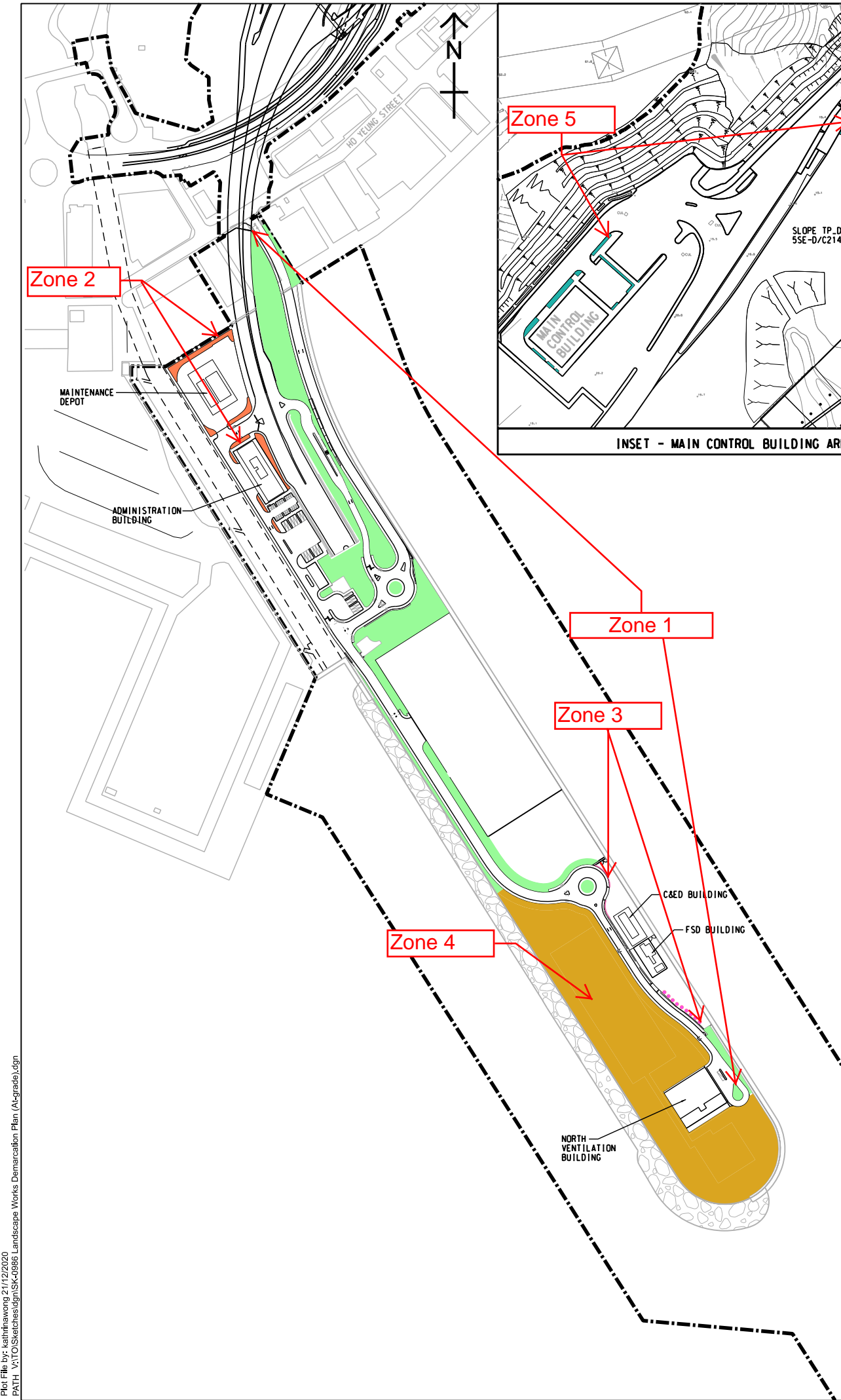
BRIDGE G2

BRIDGE G1

RETAINING STRUCTURE RW_E

ER'S OFFICE

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/

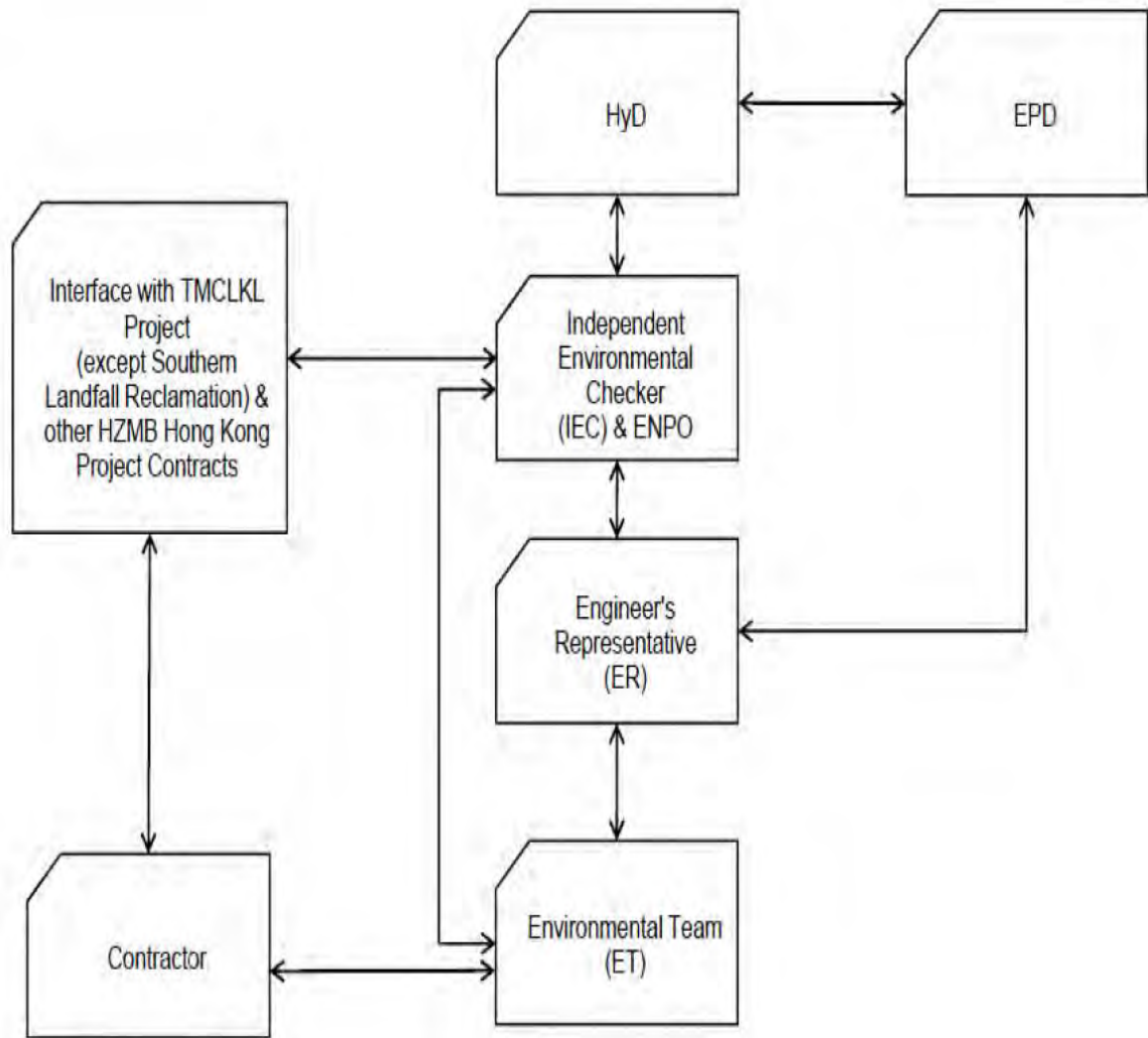
CHECKED	PREPARED	DRAWN
CL	CD	KW

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	Resident Engineer (S&E)	Mr. Kelvin Yeung	2293 6200	2218 7399
Ramboll	Environmental Project Office Leader (ENPO Leader)	Mr. YH Hui	3465 2850	3465 2899
Ramboll	Independent Environmental Checker (IEC)	Mr. Brian Tam (Since 12 April 2021)	9700 6767	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
Wed	1-December-21				
Thu	2-December-21				
Fri	3-December-21				
Sat	4-December-21				
Sun	5-December-21				
Mon	6-December-21				
Tue	7-December-21				
Wed	8-December-21				
Thu	9-December-21				
Fri	10-December-21				
Sat	11-December-21				
Sun	12-December-21				
Mon	13-December-21				
Tue	14-December-21				
Wed	15-December-21				
Thu	16-December-21				
Fri	17-December-21				
Sat	18-December-21				
Sun	19-December-21				
Mon	20-December-21				✓
Tue	21-December-21				
Wed	22-December-21		✓		✓
Thu	23-December-21				
Fri	24-December-21				
Sat	25-December-21				
Sun	26-December-21				
Mon	27-December-21				
Tue	28-December-21				
Wed	29-December-21				
Thu	30-December-21				
Fri	31-December-21				

✓	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
Sat	1-January-22				
Sun	2-January-22				
Mon	3-January-22				
Tue	4-January-22				
Wed	5-January-22				
Thu	6-January-22				
Fri	7-January-22				
Sat	8-January-22				
Sun	9-January-22				
Mon	10-January-22				
Tue	11-January-22				
Wed	12-January-22				
Thu	13-January-22				
Fri	14-January-22				
Sat	15-January-22				
Sun	16-January-22				
Mon	17-January-22				
Tue	18-January-22				
Wed	19-January-22				
Thu	20-January-22				
Fri	21-January-22				
Sat	22-January-22				
Sun	23-January-22				
Mon	24-January-22				
Tue	25-January-22				
Wed	26-January-22				
Thu	27-January-22				
Fri	28-January-22				
Sat	29-January-22				
Sun	30-January-22				
Mon	31-January-22				

✓	Monitoring Day
	Sunday or Public Holiday

Appendix F

Checklist for Establishment Works Monitoring

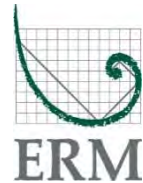
Planting Area under Contract HY/2012/07 (Zone 2)

6 January 2022

Our ref: 0463091_94_Establishment L&V Checklist (Portion XXII) Dec 21-Feb 22.docx

By email

Mr Brian Tam
Independent Environmental Checker
Ramboll Hong Kong Limited
21/F, BEA Harbour View Centre
56 Gloucester Road, Wan Chai, Hong Kong



Dear Sir,

**Contract No. HY/2017/10
Tuen Mun - Chek Lap Kok Link - Northern Connection Tunnel Buildings,
Electrical and Mechanical Works**

**Reporting of Landscape Planting Works for Portion XXII during the
24-month Establishment Period (December 2021 to February 2022)**

In accordance with *Section 7.3.1.2 of the Updated EM&A Manual*, we are pleased to provide you with the *Establishment Landscape Monitoring Checklist for December 2021 to February 2022* for your perusal and counter-signature.

Should you require any further information or clarification please do not hesitate to contact the undersigned.

Yours faithfully
For ERM-Hong Kong, Ltd

Dr Jasmine Ng
Environmental Team Leader

Direct Tel: (852) 2271 3311
E-mail: jasmine.ng@erm.com

C.c.
AECOM (Attn: Mr Desmond Fung)
GCL (Attn: Ms Phoebe Ng)



Inspection Date: 22nd December 2021 Inspected By: Ray Yan
 Time: 10:30 a.m. Weather Condition: Cloudy
 Participants: Sue Kei (AECOM); Agnes Wong (Gammon); Theo Chan (Ramboll)

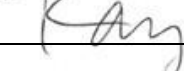
		N/A or not observed	Yes	No	Remarks / Photo
4	Zone: Area along Cheung Tung Road				
1.1	Is watering provided to plants to ensure satisfactory growth and health (manual and automatic irrigation)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.2	Are tree stakes, guys and ties provided properly for safety and avoid chaffing of bark?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.3	Are trees or limb overhanging branches pruned?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.4	Are pest and disease observed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.5	Are litter and debris removed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1.6	Are plants/ grasses overgrown?	<input type="checkbox"/>	<input type="checkbox"/>	<input 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 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 type="checkbox"/>	<input type="checkbox"/>	
1.9	Are the planting species on site matched with the approved planting plans? Consolidated planting schedule in Annex B.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		Good	Fair	Poor	
1.10	Overall health condition of the plants?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

		N/A or not observed	Yes	No	Remarks / Photo
2	Zone: Southern Landfall, HKBCF				
2.1	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"/>	
2.2	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"/>	
2.3	Are trees or limb overhanging branches pruned?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2.4	Are pest and disease observed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
2.5	Are litter and debris removed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.6	Are plants/ grasses overgrown?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
2.7	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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Obs. 1
2.8	Are planting locations and tree spacing matched with the approved planting plans?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.9	Are the planting species on site matched with the approved planting plans? Consolidated planting schedule in Annex B.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
		Good	Fair	Poor	
2.10	Overall health condition of the plants?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	


		N/A or not observed	Establishment		Inspection Checklist Remarks / Photo
			Yes	No	
3	Zone: Area within Expressway Boundary				
3.1	Is watering provided to plants to ensure satisfactory growth and health (manual and automatic irrigation)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.2	Are tree stakes, guys and ties provided properly for safety and avoid chaffing of bark?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.3	Are trees or limb overhanging branches pruned?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.4	Are pest and disease observed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.5	Are litter and debris removed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.6	Are plants/ grasses overgrown?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.7	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 type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.8	Are planting locations and tree spacing matched with the approved planting plans?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3.9	Are the planting species on site matched with the approved planting plans? Consolidated planting schedule in Annex B.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		Good	Fair	Poor	
3.10	Overall health condition of the plants?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4	Zone: Slopes outside Expressway Boundary				
4.1	Is watering provided to plants to ensure satisfactory growth and health (manual and automatic irrigation)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.2	Are tree stakes, guys and ties provided properly for safety and avoid chaffing of bark?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.3	Are trees or limb overhanging branches pruned?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.4	Are pest and disease observed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.5	Are litter and debris removed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.6	Are plants/ grasses overgrown?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.7	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 type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.8	Are planting locations and tree spacing matched with the approved planting plans?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.9	Are the planting species on site matched with the approved planting plans? Consolidated planting schedule in Annex B.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		Good	Fair	Poor	
4.10	Overall health condition of the plants?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5	General Document				
5.1	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: Follow-up actions taken for the observations as recorded during last landscape monitoring conducted on 8 November 2021: i) The wilted tree, <i>Plumeria rubra</i> , recommended being replaced with a new one during last landscape monitoring was still planted in the vicinity of E14-A (pier mark). (see <i>Follow-up action 1 & Observation 1</i>).
Observations: Obs. 1: Tree re-planting works for the wilted tree should be completed in accordance with the latest planting plan.
Corrective Actions (if any): • Tree re-planting works for the tree requiring replacement should be completed in accordance with the latest planting plan.
General Conclusion: Total number of trees planted: 275 (Zone 2). Planting area (Zone 2): 4.71 ha (based on the survey data provided by the SOR).


Inspected by
(ET's Representative): Ray Yan Title: Deputy Environmental Team Leader

Signature:  Date: 24 December 2021

Reviewed by
(RSS Landscape Representative): Candy Lau Title: Senior Resident Landscape Architect


Signature:  Date: 6 January 2022

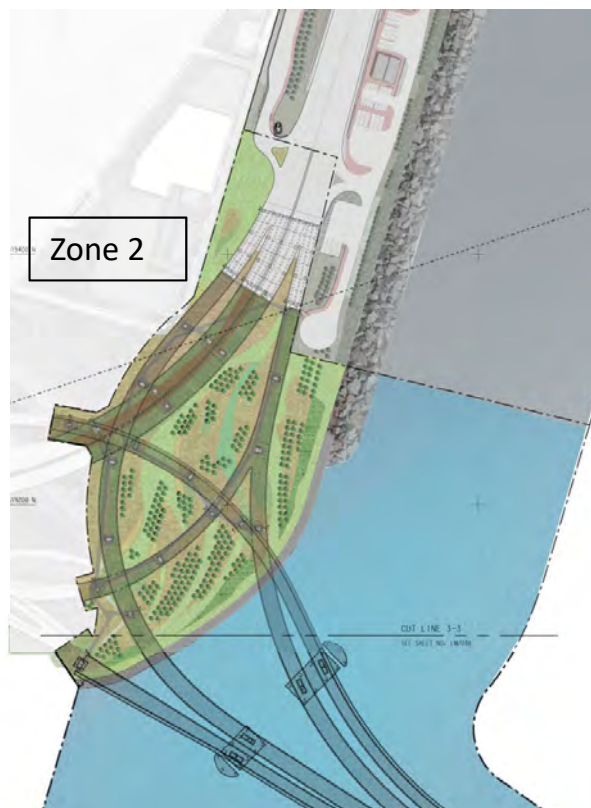
Contractor's
Representative: Agnes Wong Title: SHI

Signature:  Date: 6 January 2022

Checked by
(IEC's Representative): Theo Chan Title: Assistant Environmental Consultant

Signature:  Date: 10 January 2022

Location	Photo	Information
Zone 2		<p>Date: 22 December 2021</p> <p><i>Follow-up action 1 (Observation 1):</i> The wilted tree, <i>Plumeria rubra</i>, recommended being replaced with a new one during last landscape monitoring was still planted in the vicinity of E14-A (pier mark). Tree re-planting works for the wilted tree should be completed in accordance with the latest planting plan.</p> <p>Species: <i>Plumeria rubra</i></p>



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.

Annex B

PLANTING SCHEDULE FOR SOUTHERN LANDFALL								
CODE	BOTANICAL NAME	CHINESE NAME	SIZE (mm) HEIGHT (H) x SPREAD (S)	SPACING (mm)	NO./m ²	QUANTITY (NOS.)	REMARK	HKIA APPROVED IN ZONE
TREE PLANTING - EXOTIC								
GRE.ROB.	<i>Grevillea robusta</i>	銀樺	HEAVY STANDARD TREE	4000-5000	-	42	-	2
PLU.RUB.	<i>Plumeria rubra</i>	雞蛋花	HEAVY STANDARD TREE	4000-5000	-	233	MIN. 2000mm HEIGHT	2
SHRUB PLANTING								
RUS.EQU.	<i>Russelia equisetiformis</i>	爆仗竹	300(H) x 300(S)	250	18.4	350	-	1, 2
GROUNDCOVER PLANTING								
LAN.MON.	<i>Lantana montevidensis</i>	鋪地臭金鳳	200(H) x 200(S)	250	18.4	242383	REGULAR PRUNING TO MAINTAIN DENSE LOW CANOPY.	1, 2
TRA.SPA.	<i>Tradescantia spathacea</i>	蚌花	200(H) x 300(S)	250	18.4	15695	-	1, 2
OPH.JAP.	<i>Ophiopogon japonicus</i>	麥冬	150(H) x 200(S)	200	29	205813	-	1, 2
SYN.POD.	<i>Syngonium podophyllum</i>	白蝴蝶	100(H) x 200(S)	200	29	68614	-	1, 2
ZEP.ROS.	<i>Zephyranthes rosea</i>	玫瑰蔥蓮	100(H) x 200(S)	150	51.59	72278	-	1, 2
IPO.PES.	<i>Ipomoea pes-caprae</i>	海灘牽牛	200(H) x 200(S)	200	29	42311	-	1, 2
CLIMBER PLANTING								
MON.DEL.	<i>Monstera deliciosa</i>	龜背竹	MIN. 5 SHOOTS PER PLANT, 300mm LONG	500	4.6	239	-	1, 2
GRASS PLANTING								
ZOY.JAP.	<i>Zoysia japonica</i>	朝鮮草	300(L)x300(W)x50(H)	Area	-	10041 sq.m	REGULAR CUTTING TO PREVENT SEED HEAD PRODUCTION. WHOLE PIECE TURF (300x300x50)mm, 25mm HEIGHT SWORD AND 25mm SOIL BASE OF TURF.	1, 2
HYDROSEEDING								
HYDROSEEDING	HYDROSEEDING	噴草	-	-	-	200 sq.m	GRASS SEED AS CEDD GENERAL SPECIFICATION 3.26(3)	1, 2

NOTES:

1. THE PLANT SPECIES ALLOWED FOR PLANTING IN EACH ZONE STATED IN THE HONG KONG INTERNATIONAL AIRPORT (HKIA) APPROVED PLANT SPECIES LIST (Revision. 4.0.1: October 2015).
2. SHRUB / GROUNDCOVER / CLIMBER SHOULD BE PLANTED IN A STAGGERED PATTERN.
3. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH DRAWING NOS. 60240249/C1/1741Z AND 60240249/C1/1751Z.

REV.	DATE	DESCRIPTION	DRAWN	PREP.	APP.
-	27/03/20	PLANTING SCHEDULE FOR SOUTHERN LANDFALL	AW	GH	CL
CLIENT					
 HIGHWAYS DEPARTMENT 路政署 港珠澳大橋香港工程管理局 Hong Kong - Zhuhai - Macao Bridge Hong Kong Project Management Office					
 AECOM Imagine it. Delivered.					
PROJECT					
TUEN MUN - CHEK LAP KOK LINK					
CONTRACT NO.					
HY/2012/07					
CONTRACT TITLE					
TUEN MUN - CHEK LAP KOK LINK - SOUTHERN CONNECTION VIADUCT SECTION					
TITLE					
PLANTING SCHEDULE FOR SOUTHERN LANDFALL					
DRAWING REFERENCE					SCALE
NEW DRAWING					N. T. S.
DRAWN	PREPARED	APPROVED			
AW	GH	CL			
SKETCH NO.					REV.
SK0555					-

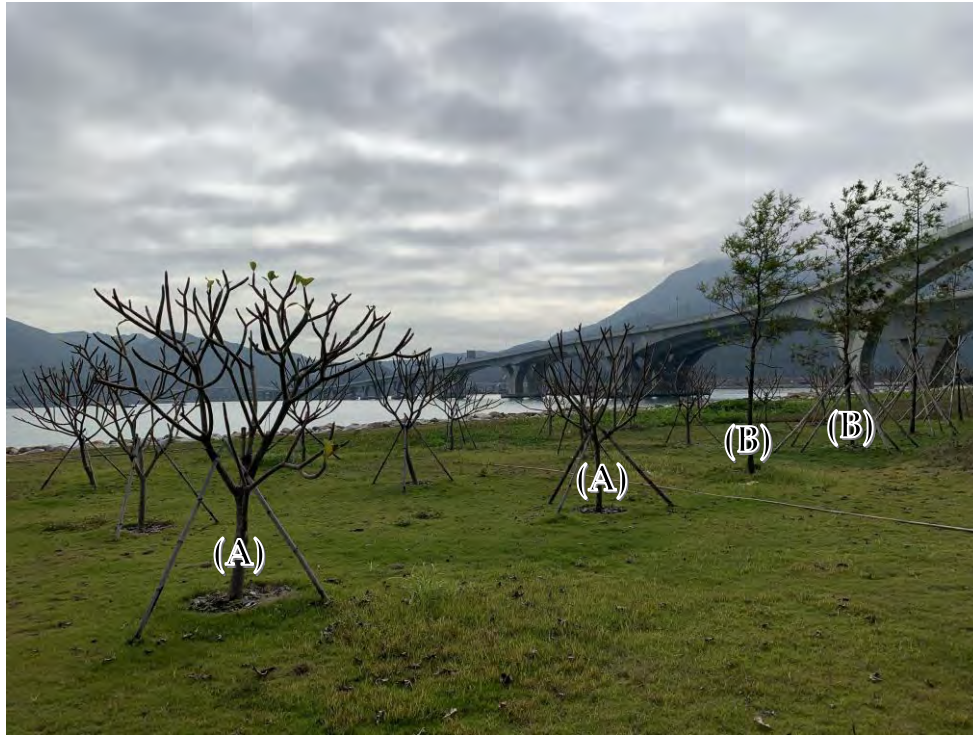


Photo 1: (A): *Plumeria rubra*; and (B): *Grevillea robusta* within Zone 2
 (Taken on: 22 December 2021)



Photo 2: (A): *Plumeria rubra*; and (B): *Grevillea robusta* within Zone 2
 (Taken on: 22 December 2021)

Source: P:\Projects\0463091 Gammon Construction Limited Gammon TMCLKL
 North Tunnel.JT\08_Site Audit\05_L&V establishment period
 checklist\01_Portion XXII\05_Dec 21-Feb 22

Date: 24/12/21

**Environmental
 Resources
 Management**

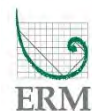




Photo 3: (A): *Plumeria rubra*; and (B): *Grevillea robusta* within Zone 2
 (Taken on: 22 December 2021)



Photo 4: (A): *Plumeria rubra* within Zone 2
 (Taken on: 22 December 2021)

Source: P:\Projects\0463091 Gammon Construction Limited Gammon TMCLKL
 North Tunnel.JT\08_Site Audit\05_L&V establishment period
 checklist\01_Portion XXII\05_Dec 21-Feb 22

Date: 24/12/21

**Environmental
 Resources
 Management**





Photo 5: (A): *Plumeria rubra*; and (B): *Grevillea robusta* within Zone 2
 (Taken on: 22 December 2021)



Photo 6: (A): *Plumeria rubra* within Zone 2
 (Taken on: 22 December 2021)

Source: P:\Projects\0463091 Gammon Construction Limited Gammon TMCLKL
 North Tunnel.JT\08_Site Audit\05_L&V establishment period
 checklist\01_Portion XXII\05_Dec 21-Feb 22

Date: 24/12/21

**Environmental
 Resources
 Management**

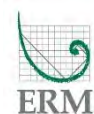




Photo 7: (A): *Plumeria rubra* within Zone 2
 (Taken on: 22 December 2021)



Photo 8: (A): *Syngonium podophyllum* within Zone 2
 (Taken on: 22 December 2021)

Source: P:\Projects\0463091 Gammon Construction Limited Gammon TMCLKL
 North Tunnel.JT\08_Site Audit\05_L&V establishment period
 checklist\01_Portion XXII\05_Dec 21-Feb 22

Date: 24/12/21

**Environmental
 Resources
 Management**

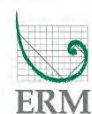




Photo 9: (A): *Russelia equisetiformis*; (B): *Lantana montevidensis*; and (C): *Ophiopogon japonicus* within Zone 2

(Taken on: 22 December 2021)



Photo 10: (A): *Zoysia japonica*; and (B): hydroseeding within Zone 2

(Taken on: 22 December 2021)

Source: P:\Projects\0463091 Gammon Construction Limited Gammon TMCLKL North Tunnel.JT\08_Site Audit\05_L&V establishment period checklist\01_Portion XXII\05_Dec 21-Feb 22

Date: 24/12/21

**Environmental
Resources
Management**





- NOTES:**
1. THE PROPOSED PLANTING SPECIES AND ARRANGEMENT ON THE SOUTHERN LANDFILL SHALL FOLLOW THE GUIDELINES IN HONG KONG INTERNATIONAL AIRPORT APPROVED PLANT SPECIES LIST (REVISION 3, 11 JUNE 2001), AS ATTACHED IN ER AREA 4.
 2. THE DRAWING SHALL BE READ IN CONJUNCTION WITH SHEET NOS. 60240249/C1/1741 TO 1746 AND 1771.

- LEGEND:**
- SITE BOUNDARY
 - AS-BUILT U-Channel
 - AS-BUILT MAINTENANCE ACCESS
 - AS-BUILT MAINTENANCE FOOTPATH
 - AS-BUILT SHRUB PLANTING
 - AS-BUILT ENGINEERING LAYOUT-VIADUCT
 - PIER MARK
 - RHA, EXC. 905.78 m²
 - SPECIES AREA (sq.m)
 - 10%W - C/F11 EXISTING SIMAR SLOPES WITH SLOPE REGISTRATION NO. SHOWN THUS

Z	NOV/19	AS-CONSTRUCTED	CPN
REV.	DATE	DESCRIPTION	CHKD.

CLIENT

路政署
HIGHWAYS DEPARTMENT
港務局大橋及橋樑工程處
Hong Kong - Zhuhai - Macao Bridge
Hong Kong Project Management Office

AECOM Imagine it. Delivered.

PROJECT
TUEN MUN - CHEK LAP KOK LINK

CONTRACT NO.
HY/2012/07

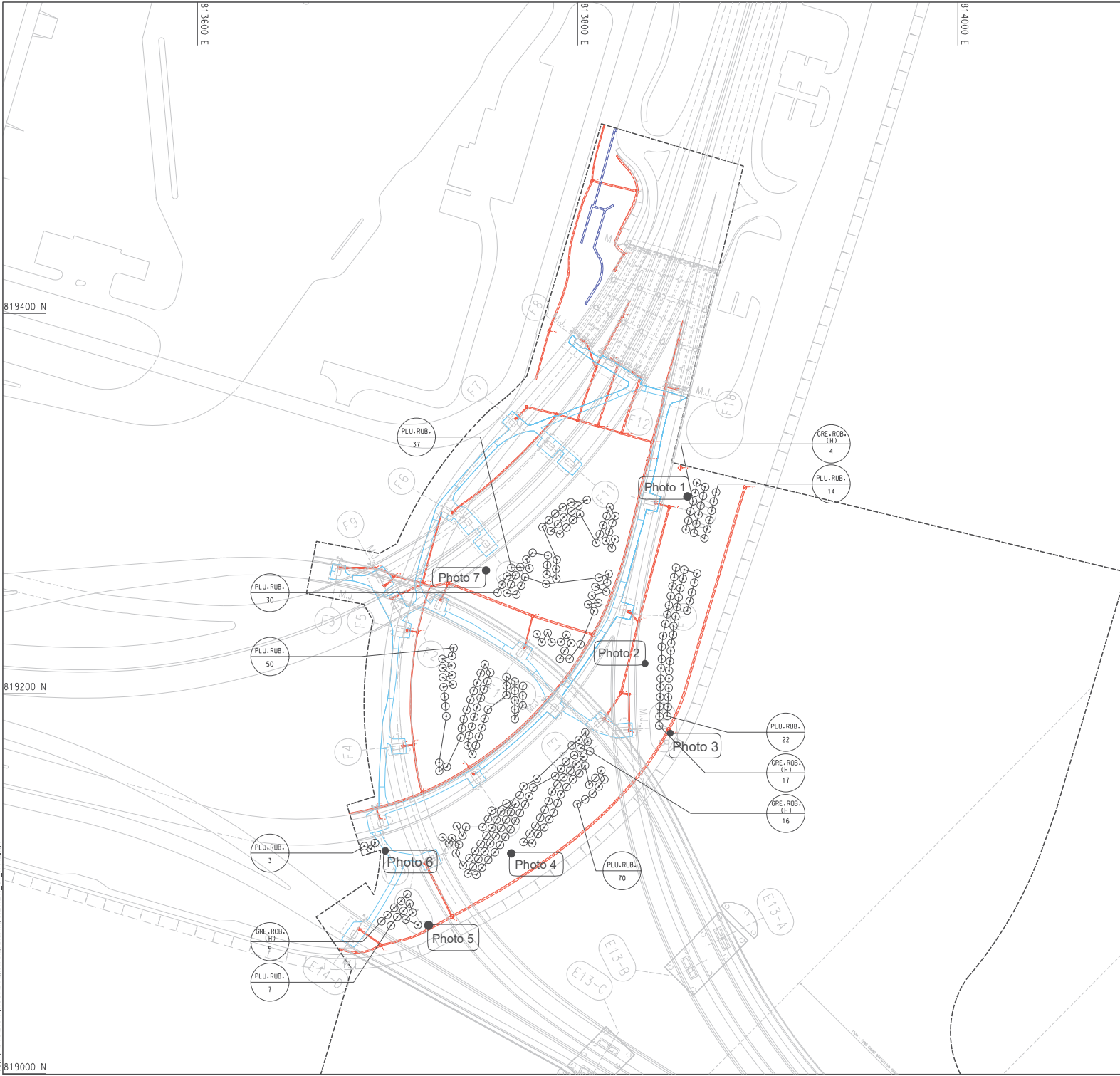
CONTRACT TITLE
TUEN MUN - CHEK LAP KOK LINK - SOUTHERN CONNECTION VIADUCT SECTION

TITLE
SHRUB PLANTING PLAN

SHEET 1 OF 6

STATUS	AS-BUILT DRAWING	SCALE	1:1000 (A1)
			1:2000 (A3)
DRAWN	GC	PRESERVED	GH
		APPROVED	CL
DRAWING NO.	60240249/C1/1741		
		REV.	Z

Plot File: brt001_21_140130
 PATH: K:\TOD\DRAWINGS\AECOM\AECOM\Drawing\60240249_C1_1741Z.dgn



GENERAL NOTES FOR LANDSCAPE WORKS:

- GENERAL INFORMATION**
THESE DRAWINGS INTEND TO SHOW SOFT LANDSCAPE TREATMENT ONLY. FOR SETTING OUT AND STRUCTURAL DESIGNS, REFER TO ENGINEERING DRAWINGS. FOR CONTRACTOR OF ALL ENGINEERING WORKS INCLUDING ROADWAYS, BRIDGES AND UTILITIES, REFER TO ENGINEERING DRAWINGS. THE CONTRACTOR SHALL REPORT TO THE SUPERVISING OFFICER IMMEDIATELY FOR ANY DISCREPANCY BETWEEN THE ENGINEERING AND LANDSCAPE DRAWINGS.
- DRAWING DIMENSIONS**
ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
- EXISTING TREES / VEGETATION**
THE CONTRACTOR SHALL PROTECT ALL TREES TO BE RETAINED ON SITE AS STIPULATED IN ER PART 14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REINSTATING EXISTING / RETAINED VEGETATION AFFECTED BY THE CONSTRUCTION WORKS.
- TREE FELLING**
NO TREES SHALL BE FELLED OR REMOVED WITHOUT DLO APPROVAL.
- GROUND PREPARATION WORKS**
GROUND PREPARATION WORKS SHALL BE CARRIED OUT TO ALL AREAS (EXCEPT SLOPE AREA) TO BE PLANTED AS SPECIFIED.
- SOIL MIX AND SOIL CONDITIONER**
SOIL MIX SHALL CONSIST OF FRIABLE COMPLETELY DECOMPOSED GRANITE AND SOIL CONDITIONER IN THE PROPORTIONS 3:1 BY VOLUME AND SHALL BE FREE FROM DELETERIOUS MATERIALS AS SPECIFIED IN CLAUSE 3.30 AND 3.31 OF ER PART 14.
- MULCHING**
TREE PLANTING AND SHRUB AREAS SHALL BE MULCHED TO A DEPTH OF 50mm. FINISH LEVEL OF MULCH SHALL BE 20MM BELOW ADJACENT FINISHED SURFACES, AND COMPLY WITH CLAUSE 3.32 OF ER PART 14.
- PLANT NAME**
BOTANICAL NAME SHALL TAKE PRECEDENCE TO ENGLISH AND CHINESE NAME.
- PLANTING PATTERN**
ALL PLANTS ARE TO BE PLANTED IN STAGGERED PATTERN AT SPACING INDICATED IN THE SCHEDULE. CLIMBING PLANTS SHALL BE PLANTED AGAINST SUPPORTING STRUCTURE.
- TREE PLANTING**
LOCATIONS OF TREES ARE SHOWN ON THE DRAWINGS. SPACING INDICATED IN THE PLANT SCHEDULE IS INDICATIVE. TREES SHALL BE LOCATED TO AVOID ANY UNDERGROUND UTILITIES. ALL SOIL LEVELS SHALL BE SURVEYED AND VERIFIED PRIOR TO COMMENCEMENT OF PLANTING.
- STAKING**
BAMBOO STAKES SHALL BE USED FOR ALL TREES EXCEPT WHIPS AS SPECIFIED IN G.S. 3.36. TREE TRUNKS SHALL BE PROTECTED BY USING RUBBER HOLES PROTECTIVE SLEEVING OR SIMILAR, AND SHALL BE LOOSENED TWICE A YEAR.
- DRAINAGE**
ALL PLANTING AREA AND DRAINAGE DETAILS SHALL REFER TO ENGINEERING DRAWINGS.
- UNDERGROUND UTILITIES**
UTILITY COVERS SERVICES SHOWN ON THE PLANS ARE INDICATIVE. EXACT LOCATIONS TO BE CONFIRMED BY THE SO. NO TREES SHALL BE PLANTED WITHIN 1m OF A MANHOLE OR DRAINAGE U-CHANNEL. THERE SHALL BE NO PLANTING WITHIN THE SPACE OF 1.5m AROUND THE COVER OF ANY HYDRANT VALVE OR THE COVER OF ROAD'S VALVES, OR WITHIN A DISTANCE OF 1M FROM ANY HYDRANT OUTLET. NO TREES SHALL BE PLANTED WITHIN 2M OF A ROAD KERB OR ENGINEERING STRUCTURE.
- WATER**
THE CONTRACTOR SHALL PROVIDE ADEQUATE WATERING TO ALL PLANTED AREAS AS SPECIFIED IN G.S. 3.04 - WATERING.
- ESTABLISHMENT WORKS**
ALL PLANTED MATERIAL SHALL BE MAINTAINED AFTER PLANTING FOR A PERIOD AS SPECIFIED IN THE CONTRACT DOCUMENTS.
- PLANTING AREA**
 - ALL PLANTING AREAS ARE BACKFILLED WITH 1.2m COMPACTED DEPTH OF SOIL MIX.
 - ALL EDGES OF PLANTING AREA AT ROADWAYS ARE GRANITE KERBS IN ACCORDANCE WITH DETAILS.
 - ALL EDGES OF PLANTING AREA AT PATHWAYS OR FOOTPATHS ARE 40MM BELOW ADJACENT PAVEMENT AND IN ACCORDANCE WITH THE DETAILS.
 - ALL SOIL LEVELS ARE SURVEYED AND VERIFIED PRIOR TO COMMENCEMENT OF PLANTING. ALL PLANTING WORK ARE DIRECTED ON SITE BY THE SUPERVISING OFFICER.
 - ALL SPACING FOR SHRUBS AND GROUND COVER PLANTING ARE AT STAGGERED SPACING.
 - ALL FINAL TREE LOCATIONS ARE SUBJECT TO DIRECTION BY THE SUPERVISING OFFICER.
 - ALL HEIGHT INDICATED FOR TREES ARE OVERALL HEIGHT.
 - ALL HEIGHT INDICATED FOR PALMS ARE CLEAR TRUNK HEIGHT.
 - ALL TREES ARE STAKED/GUYED ACCORDING TO THE SPECIFICATION AND DETAILS.
 - ROOT BARRIERS ARE INSTALLED FOR ALL TREE PLANTING AREAS ADJUTING THE UTILITIES CORRIDOR.
- THE PROPOSED PLANTING SPECIES AND ARRANGEMENT ON THE SOUTHERN LANDFALL SHALL FOLLOW THE GUIDELINES IN HONG KONG INTERNATIONAL AIRPORT APPROVED PLANT SPECIES LIST (REVISION 2-1 JUNE 2007) AS ATTACHED IN ER PART 4.**

LEGEND:

- SITE BOUNDARY
- AS-BUILT U-Channel
- AS-BUILT MAINTENANCE ACCESS
- AS-BUILT MAINTENANCE FOOTPATH
- AS-BUILT TREE
- CODE NOS.
- AS-BUILT ENGINEERING LAYOUT-VIADUCT
- PIER MARK
- EXISTING SIMAR SLOPES WITH SLOPE REGISTRATION NO. SHOWN THUS

Z	NOV/19	AS-CONSTRUCTED	SWH
REV.	DATE	DESCRIPTION	CHKD.

CLIENT

 路政署 HIGHWAYS DEPARTMENT
 港務局大橋及橋樑工程處
 Hong Kong - Zhuhai - Macao Bridge
 Hong Kong Project Management Office

PROJECT
 TUEN MUN - CHEK LAP KOK LINK

CONTRACT NO.
 HY/2012/07

CONTRACT TITLE
 TUEN MUN - CHEK LAP KOK LINK - SOUTHERN CONNECTION VIADUCT SECTION

TITLE
 TREE PLANTING PLAN

STATUS
 AS-BUILT DRAWING

SCALE
 1:1000 (A1)
 1:2000 (A3)

DRAWN
 GC

PREPARED
 GH

APPROVED
 CH

DRAWING NO.
 60240249/C1/1751

REV.
 Z

Sheet 1 of 11



- LEGEND:**
- SITE BOUNDARY
 - AS-BUILT U-Channel
 - AS-BUILT MAINTENANCE ACCESS
 - AS-BUILT MAINTENANCE FOOTPATH
 - AS-BUILT PLANTING
 - ENGINEERING LAYOUT-VIADUCT
 - PIER MARK
 - AREA BOUNDARY

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

FOR INFORMATION

REV.	DATE	DESCRIPTION	DRAWN	PRE.	APP.

CLIENT
 路政署
HIGHWAYS DEPARTMENT
 港務局大橋及港務工程管理處
 Hong Kong - Zhuhai - Macao Bridge
 Hong Kong Project Management Office

AECOM Imagine it. Delivered.

PROJECT
TUEN MUN - CHEK LAP KOK LINK

CONTRACT NO.
HY/2012/07

CONTRACT TITLE
TUEN MUN - CHEK LAP KOK LINK - SOUTHERN CONNECTION VIADUCT SECTION

TITLE
LANDSCAPE AREA A (SOUTHERN LANDFALL)

DRAWING REFERENCE
NEW DRAWING

SCALE
 1:1000 (A1)
 1:2000 (A3)

DRAWN	PREPARED	APPROVED	
KW	CL	CL	

SKETCH NO. SK-0600

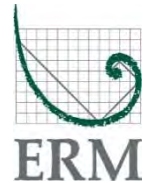
Planting Area under Contract HY/2017/10

6 January 2022

Our ref: 0463091_95_Establishment L&V Checklist (SLF_NLF_MCB) Nov 21-Jan 22.docx

By email

Mr Brian Tam
Independent Environmental Checker
Ramboll Hong Kong Limited
21/F, BEA Harbour View Centre
56 Gloucester Road
Wan Chai, Hong Kong



Dear Sir,

**Contract No. HY/2017/10
Tuen Mun - Chek Lap Kok Link - Northern Connection Tunnel Buildings,
Electrical and Mechanical Works**

**Reporting of Landscape Planting Works for
Southern Landfall, Northern Landfall and Main Control Building
during the 24-month Establishment Period (Nov 2021 to Jan 2022)**

In accordance with *Section 7.3.1.2* of the *Updated EM&A Manual*, we are pleased to provide you with the *Establishment Landscape Monitoring Checklist for November 2021 to January 2022* for your perusal and counter-signature.

Should you require any further information or clarification please do not hesitate to contact the undersigned.

Yours faithfully
For ERM-Hong Kong, Ltd

Dr Jasmine Ng
Environmental Team Leader

Direct Tel: (852) 2271 3311
E-mail: jasmine.ng@erm.com

c.c.

AECOM (Attn: Mr Desmond Fung)
GCL (Attn: Ms Phoebe Ng)



Inspection Date: 20th and 22nd December 2021 Inspected By: Ray Yan
 Time: 9:30 a.m. Weather Condition: Cloudy with occasional shower
 Participants: 20th (Zones 1 to 4): Sue Kei (AECOM); Agnes Wong (Gammon); Theo Chan (Ramboll)
22nd (Zones 5 to 6): Sue Kei (AECOM); Agnes Wong (Gammon); Theo Chan (Ramboll)

		N/A or not observed	Yes	No	Remarks / Photo
1	Zone 1				
1.1	Is watering provided to plants to ensure satisfactory growth and health (manual and automatic irrigation)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Obs. 1
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 plans? Consolidated planting schedule in Annex B.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
		Good	Fair	Poor	
1.10	Overall health condition of the plants?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2	Zone 2				
2.1	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"/>	
2.2	Are tree stakes, guys and ties provided properly for safety and avoid chaffing of bark?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No trees
2.3	Are trees or limb overhanging branches pruned?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No trees
2.4	Are pest and disease observed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
2.5	Are litter and debris removed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.6	Are plants/ grasses overgrown?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
2.7	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"/>	
2.8	Are planting locations and tree spacing matched with the approved planting plans?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.9	Are the planting species on site matched with the approved planting plans? Consolidated planting schedule in Annex B.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
		Good	Fair	Poor	
2.10	Overall health condition of the plants?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

		N/A or not observed	Yes	No	Remarks / Photo
3	Zone 3				
3.1	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"/>	
3.2	Are tree stakes, guys and ties provided properly for safety and avoid chaffing of bark?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No trees
3.3	Are trees or limb overhanging branches pruned?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No trees
3.4	Are pest and disease observed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
3.5	Are litter and debris removed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.6	Are plants/ grasses overgrown?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
3.7	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"/>	
3.8	Are planting locations and tree spacing matched with the approved planting plans?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.9	Are the planting species on site matched with the approved planting plans? Consolidated planting schedule in Annex B.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
		Good	Fair	Poor	
3.10	Overall health condition of the plants?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4	Zone 4				
4.1	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"/>	
4.2	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"/>	
4.3	Are trees or limb overhanging branches pruned?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4.4	Are pest and disease observed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
4.5	Are litter and debris removed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.6	Are plants/ grasses overgrown?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
4.7	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"/>	
4.8	Are planting locations and tree spacing matched with the approved planting plans?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4.9	Are the planting species on site matched with the approved planting plans? Consolidated planting schedule in Annex B.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
		Good	Fair	Poor	
4.10	Overall health condition of the plants?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

		N/A or not observed	Yes	No	Remarks / Photo
5	Zone 5				
5.1	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"/>	
5.2	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"/>	
5.3	Are trees or limb overhanging branches pruned?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.4	Are pest and disease observed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
5.5	Are litter and debris removed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5.6	Are plants/ grasses overgrown?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
5.7	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"/>	
5.8	Are planting locations and tree spacing matched with the approved planting plans?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5.9	Are the planting species on site matched with the approved planting plans? Consolidated planting schedule in Annex B.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
		Good	Fair	Poor	
5.10	Overall health condition of the plants?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6	Zone 6				
6.1	Is watering provided to plants to ensure satisfactory growth and health (manual and automatic irrigation)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Obs. 3
6.2	Are tree stakes, guys and ties provided properly for safety and avoid chaffing of bark?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Obs. 2
6.3	Are trees or limb overhanging branches pruned?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6.4	Are pest and disease observed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
6.5	Are litter and debris removed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.6	Are plants/ grasses overgrown?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
6.7	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"/>	
6.8	Are planting locations and tree spacing matched with the approved planting plans?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.9	Are the planting species on site matched with the approved planting plans? Consolidated planting schedule in Annex B.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
		Good	Fair	Poor	
6.10	Overall health condition of the plants?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7	General Document				
7.1	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:

Follow-up actions taken for the observations as recorded during last landscape monitoring conducted on 20 and 24 September 2021:

i) Suspected pest infestation was no longer noticed on the leaves of shrub species, *Schefflera arboricola* “variegata”, planted in the vicinity of car park area and Main Control Building within Zone 5 (see *Follow-up action 1*); ii) The health of tree – TM160 (*Sterculia lanceolata*) within Zone 4 was satisfactory with leaf buds observed (see *Follow-up action 2*); iii) The health of trees – TM2 and TM9 (*Viburnum odoratissimum*) within Zone 4 was satisfactory with leaf buds observed (see *Follow-up action 3*); iv) The health of trees – TN297 and TN308 (*Elaeocarpus hainanensis*) within Zone 1 was satisfactory with leaf buds observed, and the tree – TN309 (*Elaeocarpus hainanensis*) with necrotic foliage within Zone 1 was still noticed. The health of the tree (TN309) should be closely monitored and reviewed; and tree re-planting works should also be carried out in accordance with the latest planting plan if the tree is unavoidably removed from site (see *Follow-up action 4 & Observation 1*); and v) The health of groundcover species (*Cuphea hyssopifolia*) within Zone 2 was satisfactory (see *Follow-up action 5*).

Observations:

Obs. 1: Tree – tree no. TN309 (*Elaeocarpus hainanensis*) with necrotic foliage within Zone 1 was noticed. The health of the tree should be closely monitored and reviewed; and tree re-planting works should also be carried out in accordance with the latest planting plan if the tree is unavoidably removed from site.

Obs. 2: Guying system (tree-to-tree) implemented for trees – tree nos. TS162 and TS163 (*Grevillea robusta*) within Zone 6 with inappropriate points of attachment was observed. Guying system with proper points of attachment or other tree support systems should be considered for implementation.

Obs. 3: Tree – tree no. TS438 (*Grevillea robusta*) with cut and exposed roots within Zone 6 was in wilting. The health of the tree should be closely monitored and reviewed, and tree re-planting works should also be carried out in accordance with the latest planting plan if the tree is unavoidably removed from site.

Corrective Actions (if any):

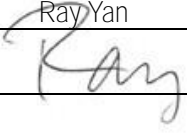

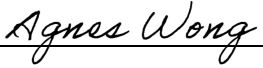

- The health of trees should be closely monitored and reviewed.
- Tree re-planting works for the trees requiring replacement should be completed in accordance with the latest planting plan.
- Proper tree support systems with appropriate points of attachment should be implemented for trees requiring supplemental support for mitigating the structural failures.



General Conclusion:

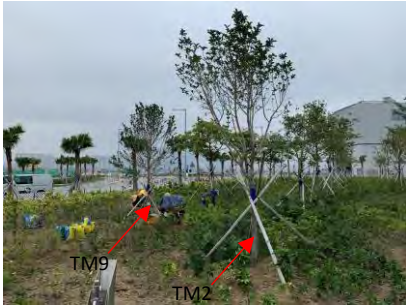

Total number of trees planted ⁽¹⁾: 431 (Zone 1); 0 (Zone 2); 0 (Zone 3); 435 (Zone 4); 4 (Zone 5); and 2,127 (Zone 6).

Planting area under Contract No. HY/2017/10: 14.42 ha (based on the survey data provided by the SOR).




⁽¹⁾ Only compensatory trees were counted during the monitoring with reference to the approved Landscape and Visual Plan for Tuen Mun-Chek Lap Kok Link project.

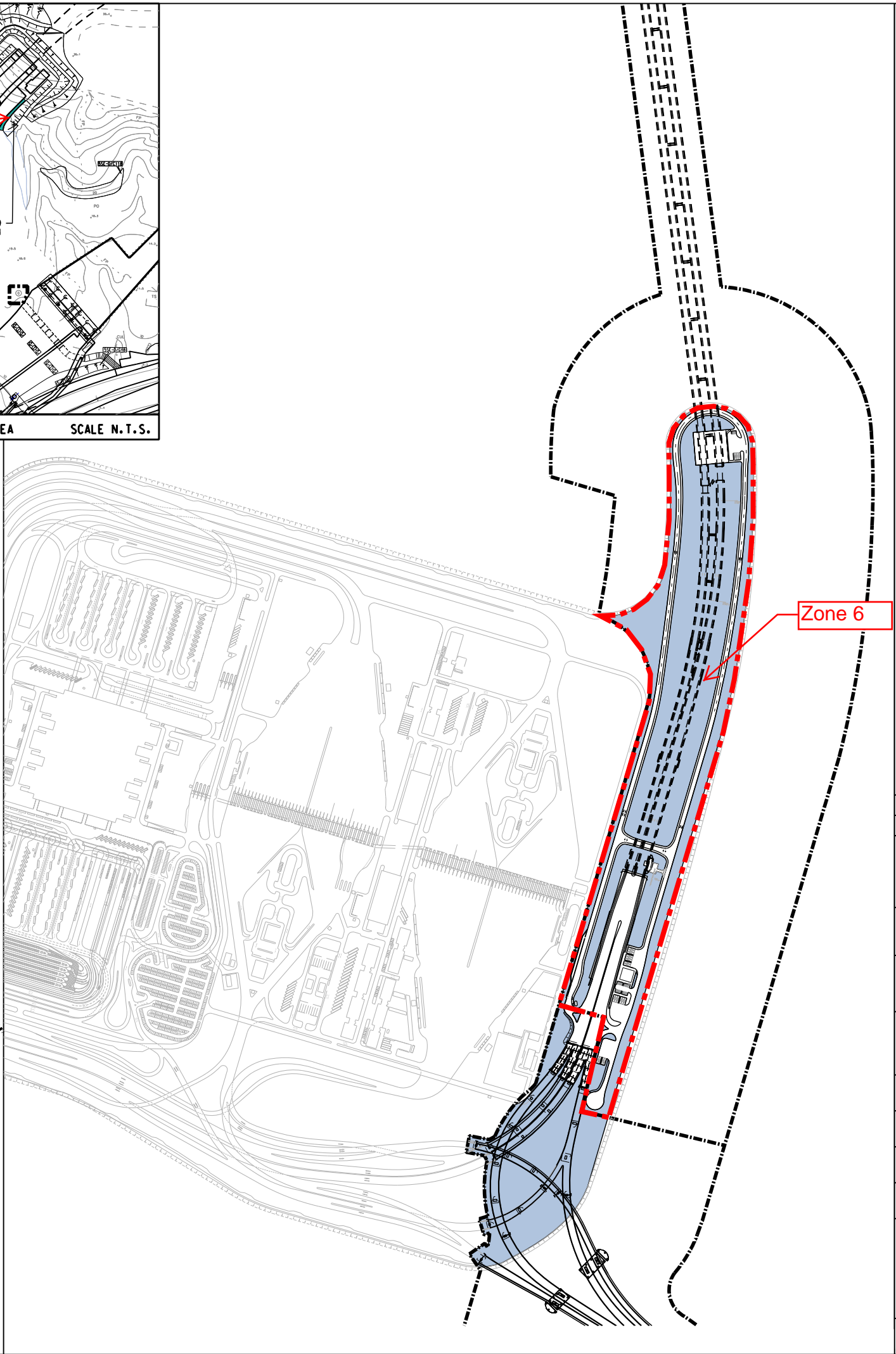
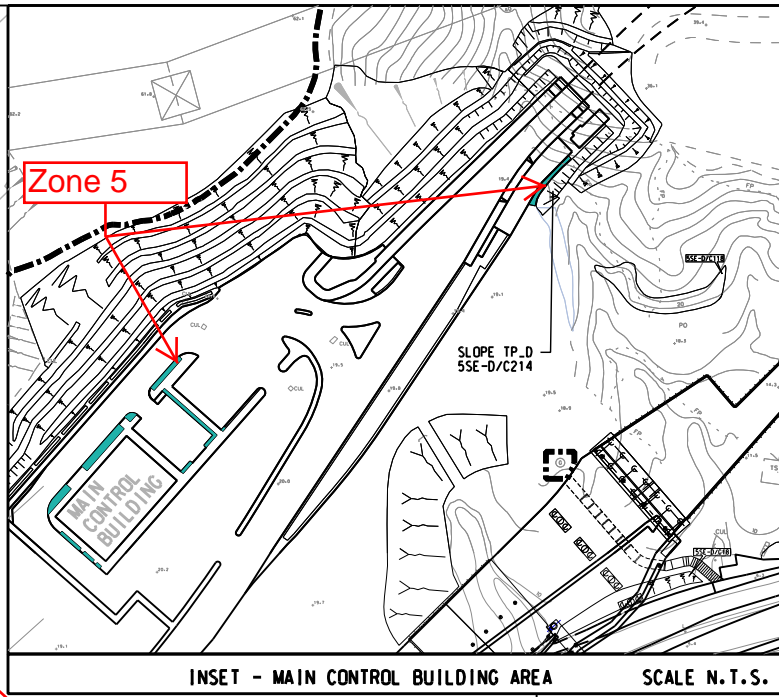
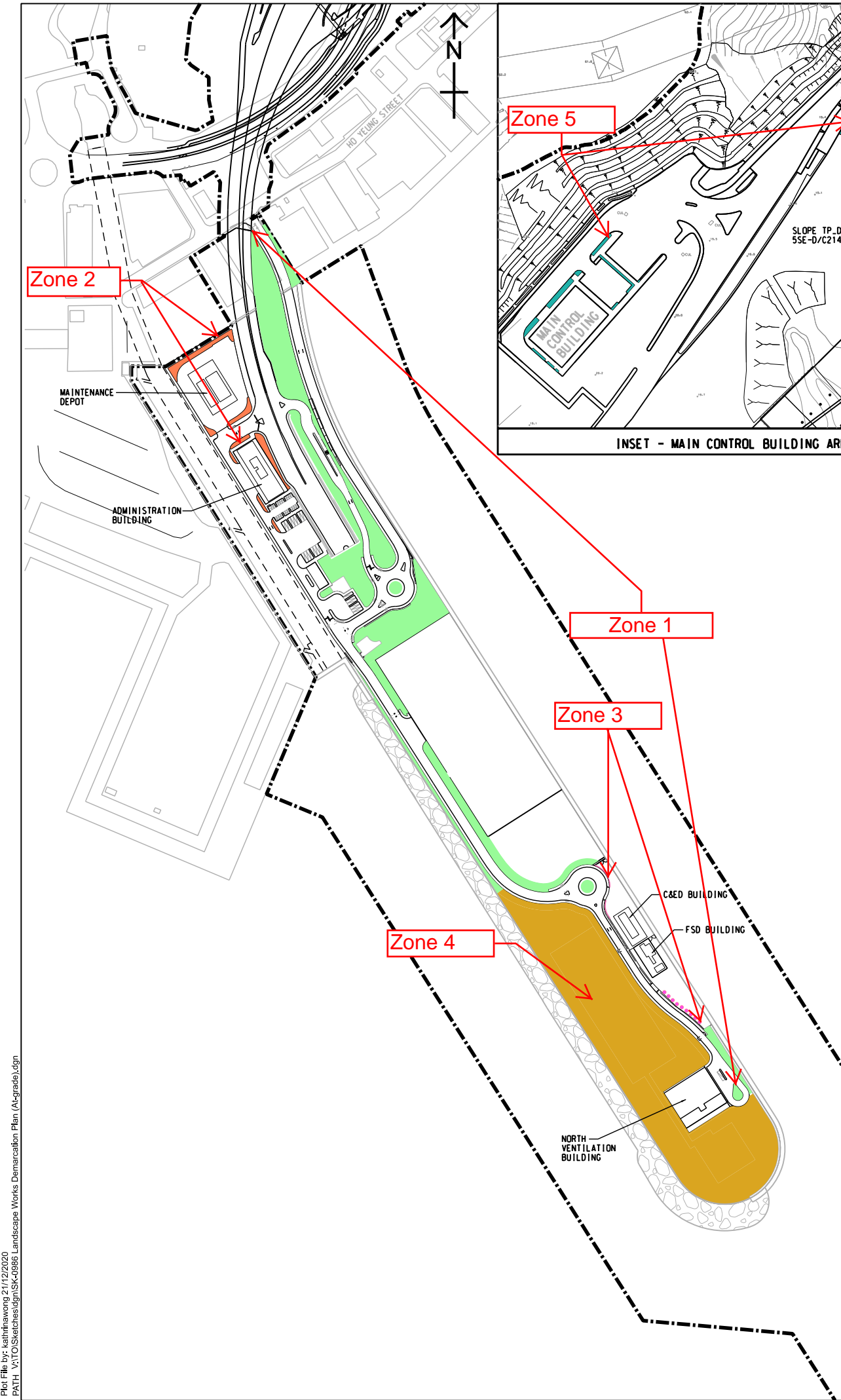
Inspected by (ET's Representative):	<u>Ray Yan</u>	Title:	<u>Deputy Environmental Team Leader</u>
Signature:	<u></u>	Date:	<u>24 December 2021</u>
Reviewed by (RSS Landscape Representative):	<u>Candy Lau</u>	Title:	<u>Senior Resident Landscape Architect</u>
Signature:	<u></u>	Date:	<u>6 January 2022</u>
Contractor's Representative:	<u>Agnes Wong</u>	Title:	<u>SHI</u>
Signature:	<u></u>	Date:	<u>5 Jan 2022</u>
Checked by (IEC's Representative):	<u>Theo Chan</u>	Title:	<u>Assistant Environmental Consultant</u>
Signature:	<u></u>	Date:	<u>10 January 2022</u>

Location	Photo	Information
Zone 5	 <p>car park</p> <p>MCB</p>	<p>Date: 22 December 2021</p> <p><i>Follow-up action 1:</i> Suspected pest infestation was no longer noticed on the leaves of shrub species, <i>Schefflera arboricola</i> “variegata”, planted in the vicinity of car park area and Main Control Building within Zone 5.</p> <p>Species: <i>Schefflera arboricola</i> “variegata”</p>
Zone 4		<p>Date: 20 December 2021</p> <p><i>Follow-up action 2:</i> The health of tree – TM160 (<i>Sterculia lanceolata</i>) within Zone 4 was satisfactory with leaf buds observed.</p> <p>Species: <i>Sterculia lanceolata</i></p>

Location	Photo	Information
Zone 4		<p>Date: 20 December 2021</p> <p><i>Follow-up action 3:</i> The health of trees – TM2 and TM9 (<i>Viburnum odoratissimum</i>) within Zone 4 was satisfactory with leaf buds observed.</p> <p>Species: <i>Viburnum odoratissimum</i></p>
Zone 1	 <p style="text-align: right;">TN297</p> <p style="text-align: right;">TN308</p>	<p>Date: 20 December 2021</p> <p><i>Follow-up action 4 (Observation 1):</i> The health of trees – TN297 and TN308 (<i>Elaeocarpus hainanensis</i>) within Zone 1 was satisfactory with leaf buds observed, and the tree – TN309 (<i>Elaeocarpus hainanensis</i>) with necrotic foliage within Zone 1 was still noticed. The health of the tree (TN309) should be closely monitored and reviewed; and tree re-planting works should also be carried out in accordance with the latest planting plan if the tree is unavoidably removed from site.</p> <p>Species: <i>Elaeocarpus hainanensis</i></p>

Location	Photo	Information
	 <p>TN309</p>	
Zone 2		<p>Date: 20 December 2021</p> <p><i>Follow-up action 5:</i> The health of groundcover species (<i>Cuphea hyssopifolia</i>) within Zone 2 was satisfactory.</p> <p>Species: <i>Cuphea hyssopifolia</i></p>

Location	Photo	Information
Zone 6	 <p>TS162 TS163</p>	<p>Date: 22 December 2021</p> <p><i>Observation 2:</i> Guying system (tree-to-tree) implemented for trees – tree nos. TS162 and TS163 (<i>Grevillea robusta</i>) within Zone 6 with inappropriate points of attachment was observed. Guying system with proper points of attachment or other tree support systems should be considered for implementation.</p> <p>Species: <i>Grevillea robusta</i></p>
Zone 6	 <p>TS438</p>  <p>cut & exposed roots</p>	<p>Date: 22 December 2021</p> <p><i>Observation 3:</i> Tree – tree no. TS438 (<i>Grevillea robusta</i>) with cut and exposed roots within Zone 6 was in wilting. The health of the tree should be closely monitored and reviewed, and tree re-planting works should also be carried out in accordance with the latest planting plan if the tree is unavoidably removed from site.</p> <p>Species: <i>Grevillea robusta</i></p>



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

Northern Landfall - Roadside Planting

CODE	BOTANICAL NAME	CHINESE NAME	SIZE (mm) HEIGHT (H) X SPREAD (S)	SPACING (mm)
TREE				
BAU.BLA	<i>Bauhinia x blakeana</i> *	洋紫荊	HEAVY STANDARD	4500-5000
BAU.VAR	<i>Bauhinia variegata</i>	宮粉羊蹄甲	HEAVY STANDARD	4500-5000
ELA.API	<i>Elaeocarpus apiculatus</i>	尖葉杜英	HEAVY STANDARD	6000
ELA.HAI	<i>Elaeocarpus hainanensis</i>	水石榕	HEAVY STANDARD	5000
GAR.SUB	<i>Garcinia subelliptica</i>	菲島福木	HEAVY STANDARD	3500-4000
GRE.ROB	<i>Grevillea robusta</i>	銀樺	HEAVY STANDARD	4500-5000
MEL.QUI	<i>Melaleuca quinquenervia</i>	白千層	HEAVY STANDARD	4500-5000
PLU.MUL	<i>Plumeria rubra</i> (multi-colour flower)	雞蛋花(多色花)	HEAVY STANDARD 2000(H) x 2000(S) - 2500(H) x 2500(S)	4000-4500
PLU.RUB	<i>Plumeria rubra</i> (red flower)	雞蛋花(紅花)	HEAVY STANDARD 2000(H) x 2000(S) - 2500(H) x 2500(S)	4000-4500
PLU.RUB(Y)	<i>Plumeria rubra</i> (yellow flower)	雞蛋花(黃花)	HEAVY STANDARD 2000(H) x 2000(S) - 2500(H) x 2500(S)	4000-4500
PON.PIN	<i>Pongamia pinnata</i> *	水黃皮	HEAVY STANDARD	5000-6000
STEL.LAN	<i>Sterculia lanceolata</i> *	假蒺藜	HEAVY STANDARD	4500-5000
TER.CAT	<i>Terminalia catappa</i>	欖仁樹	HEAVY STANDARD	5000-7000
VIB.ODO	<i>Viburnum odoratissimum</i> *	珊瑚樹	HEAVY STANDARD	4500-5000
XAN.CHR	<i>Xanthostemon chrysanthus</i>	金蒲桃	HEAVY STANDARD	5000
PALM				
ARE.CAT	<i>Areca catechu</i>	檳榔	3000(H) x 1500(S)	4000
HYO.LAG	<i>Hyophorbe lagenicaulis</i>	酒瓶椰子	2000(H) x 1500(S)	3000
LIV.CHI	<i>Livistona chinensis</i>	蒲葵	3000(H) x 2000(S)	4000-4500
ROY.REG	<i>Roystonea regia</i>	王棕	4000(H) x 2000(S)	4500-5000
WOD.BIF	<i>Wodyetia bifurcata</i>	狐尾椰子	3000(H) x 1500(S)	4500
SHRUB				
CMI	<i>Carmona microphylla</i>	福建茶	300(H) x 300(S)	300
CRE	<i>Cycas revoluta</i>	蘇鐵	500(H) x 600(S)	N/A
DLU	<i>Dyopsis lutescens</i>	散尾葵	2000(H) x 2000(S)	2000
JKA	<i>Juniperus chinensis</i> 'Kaizuca'	龍柏球	600(H) x 600(S)	N/A
ICH	<i>Ixora chinensis</i> *	龍船花	300(H) x 300(S)	300
ICO	<i>Ixora coccinea</i>	橙紅龍船花	300(H) x 300(S)	300
ILU	<i>Ixora coccinea</i> 'Lutea'	黃花龍船花	400(H) x 300(S)	300
IST	<i>Ixora stricta</i>	細葉龍船花	250(H) x 250(S)	250
IWE	<i>Ixora westii</i>	粉紅龍船花	400(H) x 300(S)	300
NOL	<i>Nerium oleander</i>	夾竹桃	500(H) x 400(S)	500
PTO	<i>Pittosporum tobira</i>	海桐	300(H) x 300(S)	350
PMA	<i>Podocarpus macrophyllus</i> *	羅漢松	600(H) x 500(S)	N/A
PAX	<i>Polyspora axillaris</i> *	大頭茶	300(H) x 300(S)	350
RIN	<i>Rhaphiolepis indica</i> *	車輪梅	300(H) x 300(S)	300-350
RPU	<i>Rhododendron pulchrum</i>	錦繡杜鵑	300(H) x 300(S)	350
RSI	<i>Rhododendron simsii</i> *	紅杜鵑	250(H) x 250(S)	350
RTO	<i>Rhodomyrtus tomentosa</i> *	桃金娘	300(H) x 300(S)	350
STA	<i>Scaevola taccada</i> *	草海桐	300(H) x 300(S)	350
SDA	<i>Schefflera arboricola</i> 'Dazzle'	黃金八葉	300(H) x 300(S)	350
SVA	<i>Schefflera arboricola</i> 'Variegata'	斑葉鵝掌藤 (花葉八葉木)	300(H) x 300(S)	300-350

CODE	BOTANICAL NAME	CHINESE NAME	SIZE (mm) HEIGHT (H) X SPREAD (S)	SPACING (mm)
GROUND COVER				
ADD	<i>Aeschylus chinensis</i>	翠花生(金花牛)	100(H) x 200(S)	200
AMY	<i>Asparagus densiflorus</i> 'Myersii'	寬葉千冬	300(H) x 300(S)	300
ASP	<i>Asparagus densiflorus</i> 'Spratgeri'	非洲天門冬	100(H) x 200(S)	200
CIV	<i>Cuphea hyssopifolia</i>	細葉錦雞花	200(H) x 250(S)	250
CRO	<i>Galbanimithus roseus</i>	長壽花	200(H) x 200(S)	200
DPL	<i>Lantana camara</i> 'Flava'	黃花馬纓丹	200(H) x 200(S)	200
LMD	<i>Lantana montevidensis</i>	小葉馬纓丹	200(H) x 200(S)	200
NAD	<i>Nephrolepis aurea</i> *	腎蕨	250(H) x 250(S)	200
NHI	<i>Nephrolepis hirsuta</i> *	毛葉腎蕨	250(H) x 250(S)	200
ONA	<i>Ophiopogon japonicus</i> 'Nana'	玉階草	50(H)	N/A
WTR	<i>Wedelia trilobata</i>	三裂葉龍船菊	150(H) x 200(S)	200
CLIMBER				
BOC	<i>Bauhinia corymbosa</i>	甘密樹	MIN. 4 SHOOTS PER PLANT, 600mm LONG	300-500
QIN	<i>Quisqualis indica</i>	使君子	MIN. 4 SHOOTS PER PLANT, 600mm LONG	300-500

NOTE:

1. ALL PROPOSED PLANT SPECIES AND SPECIFICATIONS ARE SUBJECT TO CHANGE DURING CONSTRUCTION TO SUIT THE SITE CONDITIONS.
2. SHRUB / GROUND COVER SHOULD BE PLANTED IN A STAGGERED PATTERN.
3. SIZE OF TREES SHALL REFER TO THE GENERAL SPECIFICATION FOR CIVIL ENGINEERING WORKS, 2006 EDITION.
4. GRASS SEED AS GENERAL SPECIFICATION FOR CIVIL ENGINEERING WORKS, (CLAUSE 3.16(3)).
5. * SPECIES NATIVE TO HONG KONG ACCORDING TO THE HONG KONG HERBARIUM WEBSITE.

Agreement No. CE7/2011(HY)

Tuen Mun - Chek Lap Kok Link - Northern Connection Tunnel Buildings, Electrical and Mechanical Works
Planting Schedule for Northern Landfall - Road Planting (Contract 4 - HY/2017/10)

Drawing No.: Figure 6.3

Southern Landfall (Contract 4 - HY/2017/10)

CODE	BOTANICAL NAME	CHINESE NAME	SIZE (mm) HEIGHT (H) X SPREAD (S)	SPACING (mm)
TREE				
CV	<i>Callistemon viminalis</i>	串錢柳	HEAVY STANDARD	4000-5000
GR	<i>Grevillea robusta</i>	銀樺	HEAVY STANDARD	4000-5000
PRR	<i>Plumeria rubra</i> (red flower)	雞蛋花(紅花)	HEAVY STANDARD 2000(H) x 2000(S) - 2500(H) x 2500(S)	4000-5000
PRY	<i>Plumeria rubra</i> (yellow flower)	雞蛋花(黃花)	HEAVY STANDARD 2000(H) x 2000(S) - 2500(H) x 2500(S)	4000-5000
PLU.MUL	<i>Plumeria rubra</i> (multi-colour flower)	雞蛋花(多色花)	HEAVY STANDARD 2000(H) x 2000(S) - 2500(H) x 2500(S)	4000-5000
GROUND COVER				
IPE	<i>Ipomoea pes-caprae</i> *	海灘牽牛	150(H) x 200(S)	200
LMO	<i>Lantana montevidensis</i>	小葉馬纓丹 (鋪地臭金鳳)	200(H) x 300(S)	200
OJA	<i>Ophiopogon japonicus</i> *	麥冬(沿階草)	100(H) x 100(S)	100
SPO	<i>Syngonium podophyllum</i>	白蝴蝶	100(H) x 200(S)	200
TSP	<i>Tradescantia spathacea</i> 'dwarf'	矮蚌花	100(H) x 100(S)	100
WTR	<i>Wedelia trilobata</i>	三裂葉薔琪菊	150(H) x 200(S)	200
GRASS				
ZJA	<i>Zoysia japonica</i>	朝鮮草	300(L)x300(W)x50(H)	N/A

NOTE:

1. ALL PROPOSED PLANT SPECIES AND SPECIFICATIONS ARE SUBJECT TO CHANGE DURING CONSTRUCTION TO SUIT THE SITE CONDITIONS.
2. SHRUB / GROUND COVER SHOULD BE PLANTED IN A STAGGERED PATTERN.
3. SIZE OF TREES SHALL REFER TO THE GENERAL SPECIFICATION FOR CIVIL ENGINEERING WORKS, 2006 EDITION.
4. GRASS SEED AS GENERAL SPECIFICATION FOR CIVIL ENGINEERING WORKS, CLAUSE 3.26(3).
5. * SPECIES NATIVE TO HONG KONG ACCORDING TO THE HONG KONG HERBARIUM WEBSITE.
6. THE PLANT SPECIES ALLOWED FOR PLANTING IN EACH ZONE STATED IN THE HONG KONG INTERNATIONAL AIRPORT (HKIA) APPROVED PLANT SPECIES LIST (Revision: 4.0.1: October 2015).



Photo 1: (A): *Roystonea regia*; and (B): *Areca catechu* within Zone 1
 (Taken on: 20 December 2021)

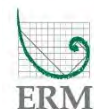


Photo 2: (A): *Elaeocarpus apiculatus* within Zone 1
 (Taken on: 20 December 2021)

Source: P:\Projects\0463091 Gammon Construction Limited Gammon TMCLKL
 North Tunnel.JT\08_Site Audit\05_L&V establishment period
 checklist\02_SLF_NLF_TM\04_Nov 2021-Jan 2022

Date: 24/12/21

**Environmental
 Resources
 Management**



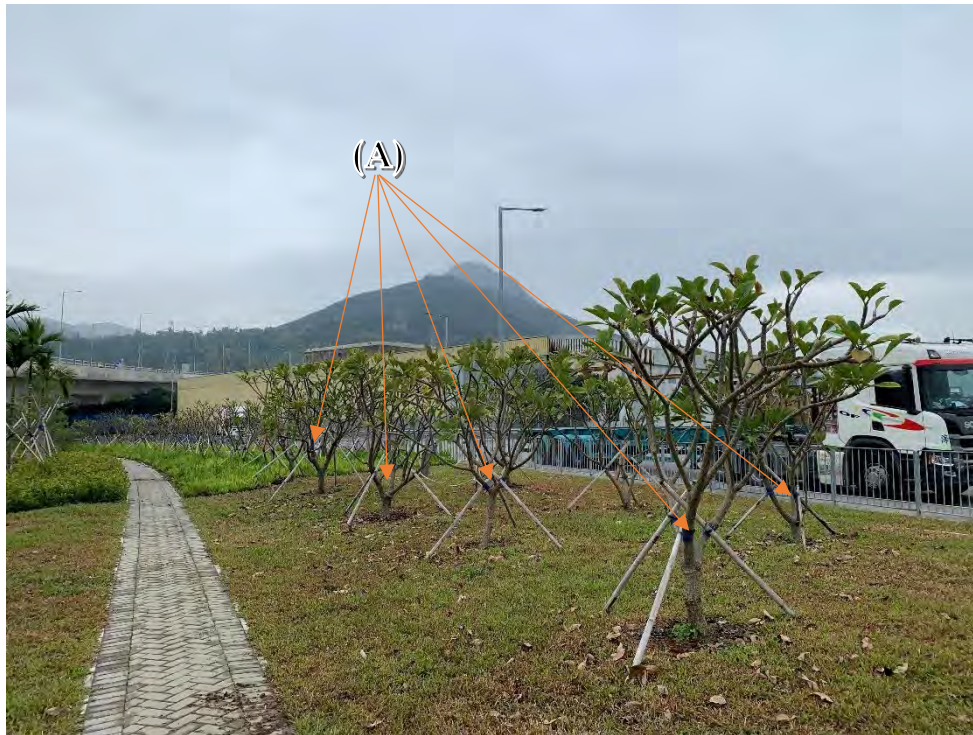


Photo 3: (A): *Plumeria rubra* within Zone 1
(Taken on: 20 December 2021)



Photo 4: (A): *Garcinia subelliptica*; and (B): *Terminalia catappa* within Zone 1
(Taken on: 20 December 2021)

Source: P:\Projects\0463091 Gammon Construction Limited Gammon TMCLKL
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Date: 24/12/21

**Environmental
Resources
Management**

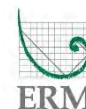




Photo 5: (A): *Hyophorbe lagenicaulis* within Zone 1
(Taken on: 20 December 2021)



Photo 6: (A): *Livistona chinensis* within Zone 1
(Taken on: 20 December 2021)

Source: P:\Projects\0463091 Gammon Construction Limited Gammon TMCLKL
North Tunnel.JT\08_Site Audit\05_L&V establishment period
checklist\02_SLF_NLF_TM\04_Nov 2021-Jan 2022

Date: 24/12/21

**Environmental
Resources
Management**

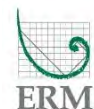




Photo 7: (A): *Wodyetia bifurcata* within Zone 1
 (Taken on: 20 December 2021)



Photo 8: (A): *Elaeagnus hainanensis*; and (B): *Xanthostemon chrysanthus* within Zone 1
 (Taken on: 20 December 2021)

Source: P:\Projects\0463091 Gammon Construction Limited Gammon TMCLKL
 North Tunnel.JT\08_Site Audit\05_L&V establishment period
 checklist\02_SLF_NLF_TM\04_Nov 2021-Jan 2022

Date: 24/12/21

**Environmental
 Resources
 Management**





Photo 9: (A): *Pongamia pinnata* within Zone 1
(Taken on: 20 December 2021)



Photo 10: (A): *Cycas revolute*; and (B): *Latana montevidensis* within Zone 2
(Taken on: 20 December 2021)

Source: P:\Projects\0463091 Gammon Construction Limited Gammon TMCLKL
North Tunnel.JT\08_Site Audit\05_L&V establishment period
checklist\02_SLF_NLF_TM\04_Nov 2021-Jan 2022

Date: 24/12/21

**Environmental
Resources
Management**





Photo 11: (A): *Ixora westii*; and (B): *Cuphea hyssopifolia* within Zone 2
 (Taken on: 20 December 2021)



Photo 12: (A): *Schefflera arboricola* 'Dazzle' within Zone 3
 (Taken on: 20 December 2021)

Source: P:\Projects\0463091 Gammon Construction Limited Gammon TMCLKL
 North Tunnel.JT\08_Site Audit\05_L&V establishment period
 checklist\02_SLF_NLF_TM\04_Nov 2021-Jan 2022

Date: 24/12/21

**Environmental
 Resources
 Management**



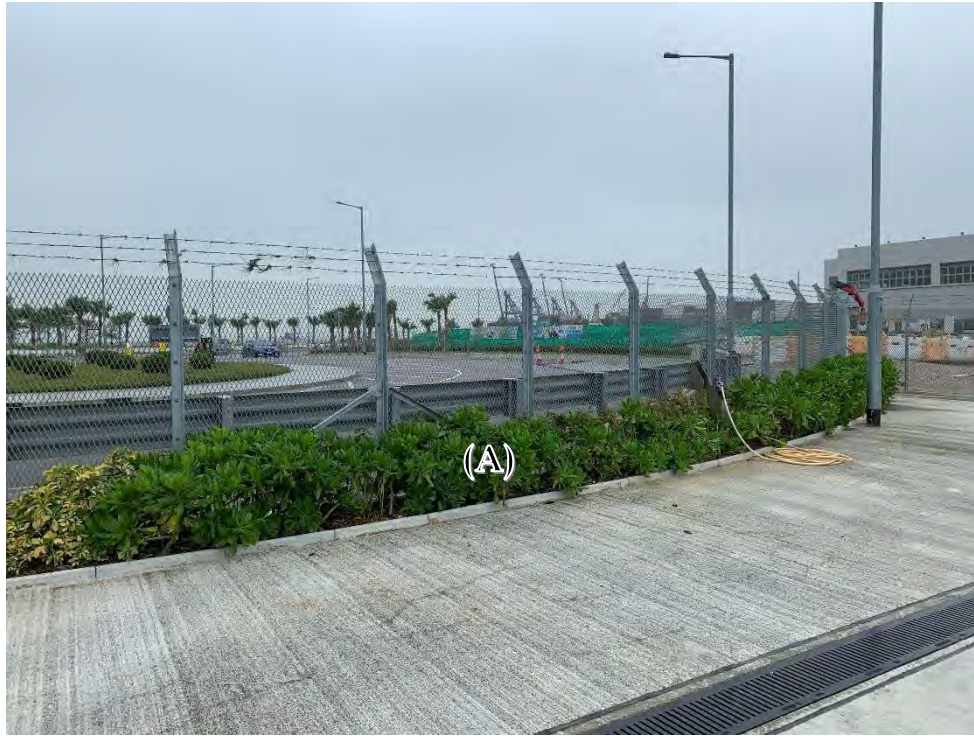


Photo 13: (A): *Scaevola taccada* within Zone 3
 (Taken on: 20 December 2021)



Photo 14: (A): *Bauhinia variegata* within Zone 4
 (Taken on: 20 December 2021)

Source: P:\Projects\0463091 Gammon Construction Limited Gammon TMCLKL
 North Tunnel.JT\08_Site Audit\05_L&V establishment period
 checklist\02_SLF_NLF_TM\04_Nov 2021-Jan 2022

Date: 24/12/21

**Environmental
 Resources
 Management**





Photo 15: (A): *Bauhinia x blakeana* within Zone 4
(Taken on: 20 December 2021)



Photo 16: (A): *Grevillea robusta* within Zone 4
(Taken on: 20 December 2021)

Source: P:\Projects\0463091 Gammon Construction Limited Gammon TMCLKL
North Tunnel.JT\08_Site Audit\05_L&V establishment period
checklist\02_SLF_NLF_TM\04_Nov 2021-Jan 2022

Date: 24/12/21

**Environmental
Resources
Management**





Photo 17: (A): *Livistona chinensis* within Zone 4
 (Taken on: 20 December 2021)



Photo 18: (A): *Melaleuca quinquenervia* within Zone 4
 (Taken on: 20 December 2021)

Source: P:\Projects\0463091 Gammon Construction Limited Gammon TMCLKL
 North Tunnel.JT\08_Site Audit\05_L&V establishment period
 checklist\02_SLF_NLF_TM\04_Nov 2021-Jan 2022

Date: 24/12/21

**Environmental
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 Management**





Photo 19: (A): *Pongamia pinnata* within Zone 4
(Taken on: 20 December 2021)



Photo 20: (A): *Terminalia catappa*; and (B): *Sterculia lanceolata* within Zone 4
(Taken on: 20 December 2021)

Source: P:\Projects\0463091 Gammon Construction Limited Gammon TMCLKL
North Tunnel.JT\08_Site Audit\05_L&V establishment period
checklist\02_SLF_NLF_TM\04_Nov 2021-Jan 2022

Date: 24/12/21

**Environmental
Resources
Management**





Photo 21: (A): *Viburnum odoratissimum* within Zone 4
(Taken on: 20 December 2021)



Photo 22: (A): *Wodyetia bifurcata* within Zone 4
(Taken on: 20 December 2021)

Source: P:\Projects\0463091 Gammon Construction Limited Gammon TMCLKL
North Tunnel.JT\08_Site Audit\05_L&V establishment period
checklist\02_SLF_NLF_TM\04_Nov 2021-Jan 2022

Date: 24/12/21

**Environmental
Resources
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Photo 23: (A): *Wodyetia bifurcata* within Zone 5
(Taken on: 22 December 2021)



Photo 24: (A): *Ixora chinensis* within Zone 5
(Taken on: 22 December 2021)

Source: P:\Projects\0463091 Gammon Construction Limited Gammon TMCLKL
North Tunnel.JT\08_Site Audit\05_L&V establishment period
checklist\02_SLF_NLF_TM\04_Nov 2021-Jan 2022

Date: 24/12/21

**Environmental
Resources
Management**





Photo 25: (A): *Ixora coccinea* within Zone 5
(Taken on: 22 December 2021)



Photo 26: (A): *Schefflera arboricola* 'variegata' within Zone 5
(Taken on: 22 December 2021)

Source: P:\Projects\0463091 Gammon Construction Limited Gammon TMCLKL
North Tunnel.JT\08_Site Audit\05_L&V establishment period
checklist\02_SLF_NLF_TM\04_Nov 2021-Jan 2022

Date: 24/12/21

**Environmental
Resources
Management**





Photo 27: (A): *Cuphea hyssopifolia* within Zone 5
(Taken on: 22 December 2021)



Photo 28: (A): *Callistemon viminalis* within Zone 6
(Taken on: 22 December 2021)

Source: P:\Projects\0463091 Gammon Construction Limited Gammon TMCLKL
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checklist\02_SLF_NLF_TM\04_Nov 2021-Jan 2022

Date: 24/12/21

**Environmental
Resources
Management**





Photo 29: (A): *Grevillea robusta* within Zone 6
(Taken on: 22 December 2021)

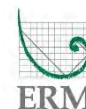


Photo 30: (A): *Plumeria rubra* within Zone 6
(Taken on: 22 December 2021)

Source: P:\Projects\0463091 Gammon Construction Limited Gammon TMCLKL
North Tunnel.JT\08_Site Audit\05_L&V establishment period
checklist\02_SLF_NLF_TM\04_Nov 2021-Jan 2022

Date: 24/12/21

**Environmental
Resources
Management**



Contract No. HY/2017/10 (C4) Landscape Area Checking for EP Condition 2.9

Area Code	Location	Plan Area (sq.m.) Approx.
N1	VPR	25
N2	NLF	6485
N3	NLF	177
N4	NLF	4350
N5	NLF	2124
N6	NLF	3867
N7	NLF	801
N8	NLF	20177
N9	NLF	177
N10	NLF	561
N11	NLF	144
Sub-total (A)		38888
N12	SLF	105314
Sub-total (B)		105314
Total (A) + (B)		144202

ABBREVIATIONS

VPR

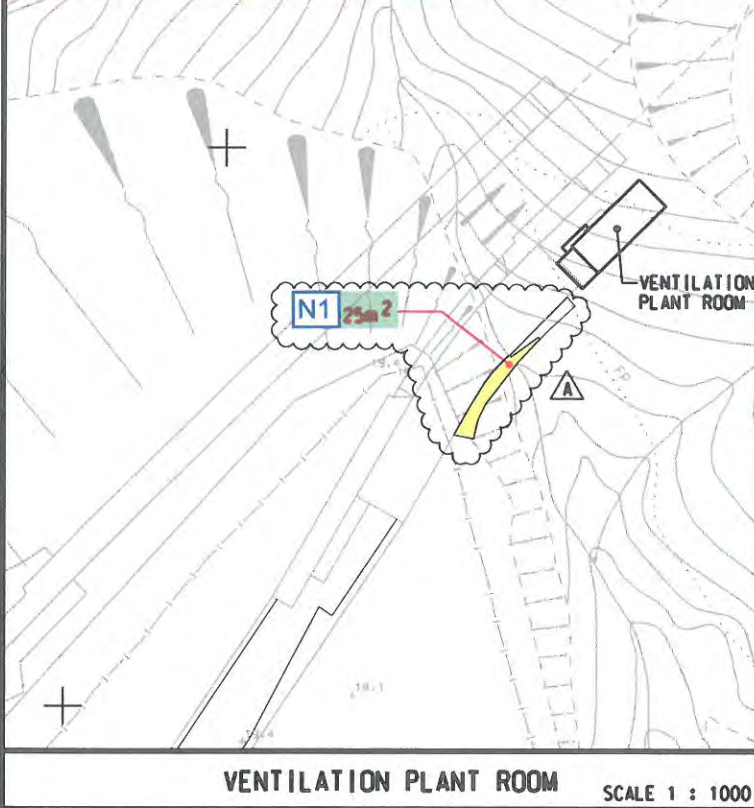
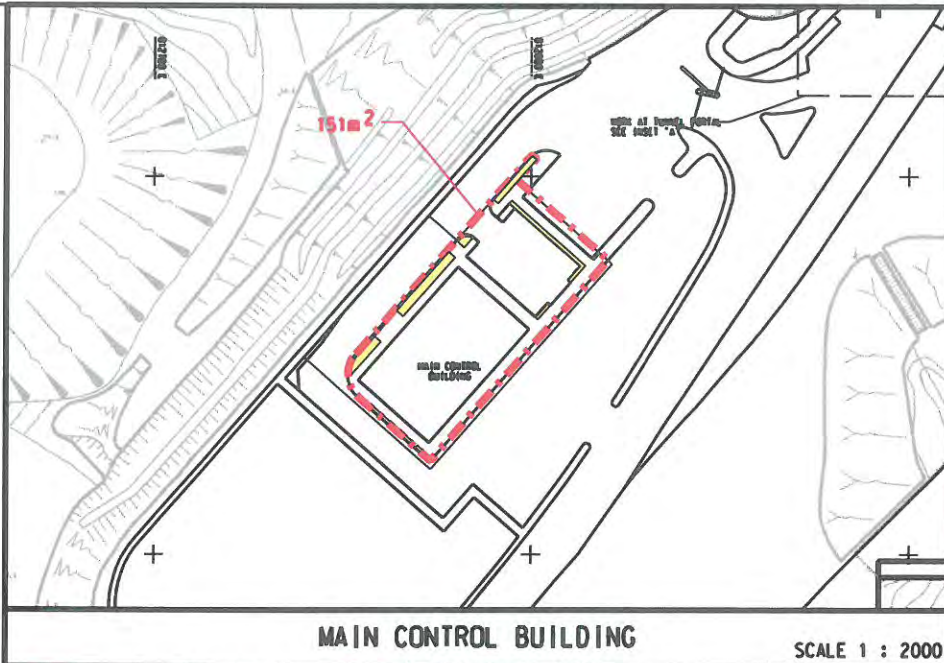
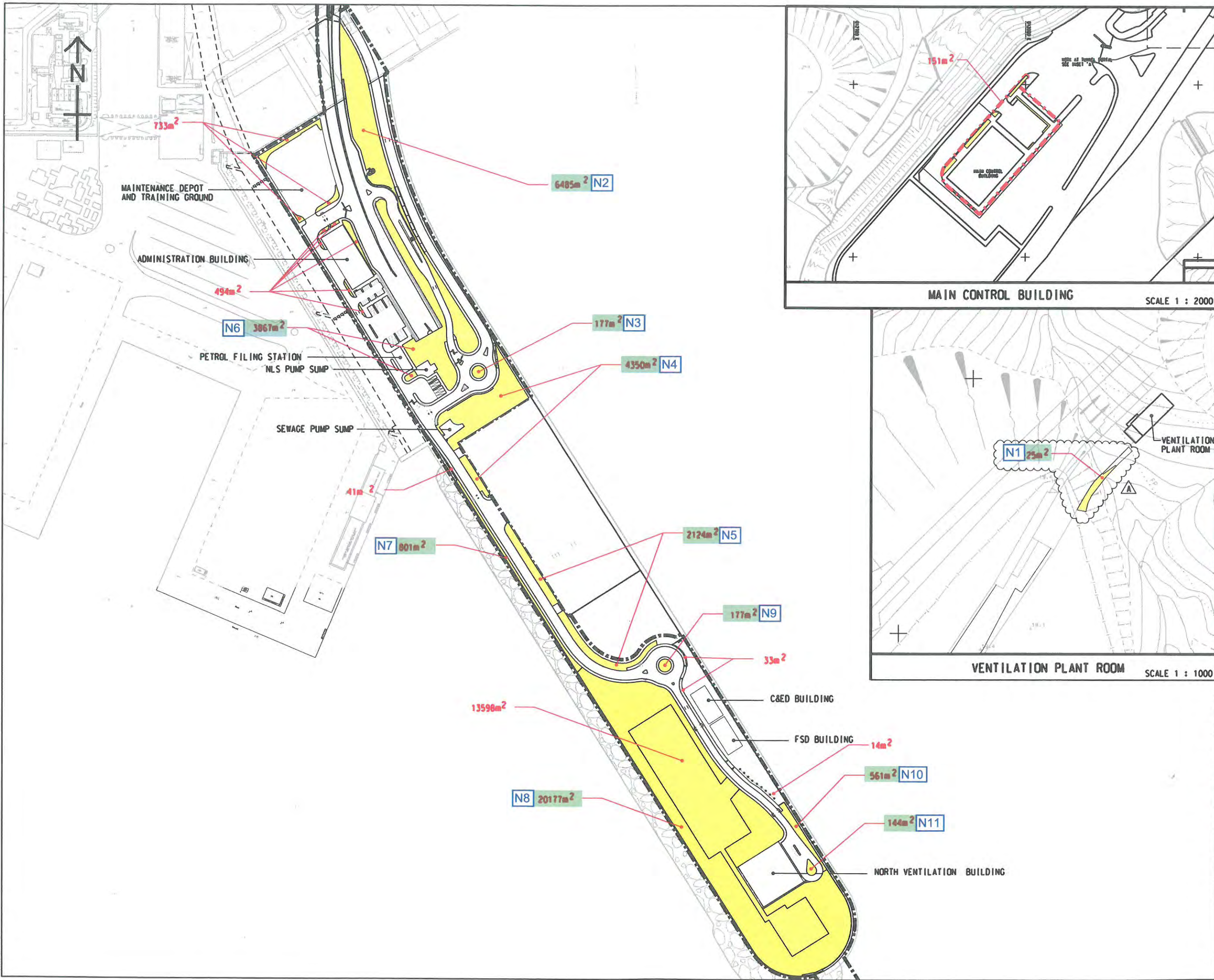
Ventilation Plant Room

NLF

Northern Landfall

SLF

Southern Landfall



LEGEND:
 - - - - - SITE BOUNDARY
 Landscape Area

APPROVED AND CONFIRMED BY
 TITLE: AECOM (SRLA)
 NAME: CANDY LAU
 SIGNATURE: *Candy*
 4-8-2021

FOR INFORMATION

REV.	DATE	DESCRIPTION	CHK.	PREP.	DRAWN
A	04/08/21	N1 REVISED	CL	CD	JW

路政署
HIGHWAYS DEPARTMENT
 主要工程管理局(專責職務)
 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	PREPARED	DRAWN
CL	CD	JW

SKETCH TITLE
 LANDSCAPE AREA

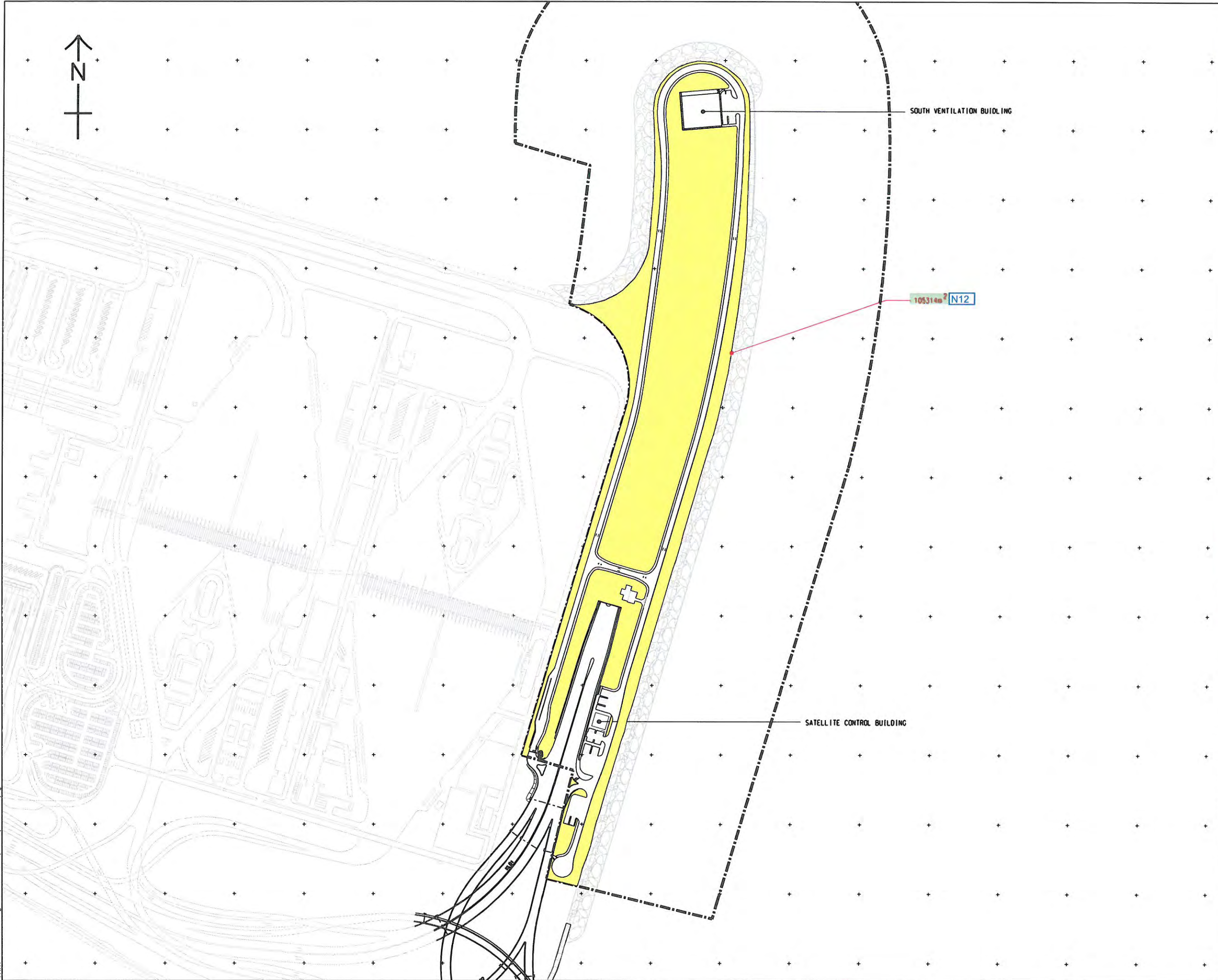
SHEET 1 OF 2

SKETCH NO.
 60240249/C4/SK/1011A



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

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)

**TUEN MUN – CHECK LAP KOK LINK – NORTHERN CONNECTION TOLL PLAZA AND ASSOCIATED WORKS
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

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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

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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
December 2021	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
December 2021	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
December 2021	0	0	NA	NA	NA
Cumulative since Contract commencement	0	0	NA	NA	NA