

CONTRACT NO: DC/2016/01

## CONSTRUCTION OF AN ADDITIONAL SEWAGE RISING MAIN BETWEEN TUNG CHUNG AND SIU HO WAN AND ASSOCIATED WORKS

## ENTRUSTED LANDSCAPE WORKS FROM CONTRACT NO. HY/2012/07 TO CONTRACT NO. DC/2016/01 UNDER ENVIRONMENTAL PERMIT NO. EP-354/2009/D

## ANNUAL ENVIRONMENTAL MONITORING & AUDIT REVIEW REPORT

## SEPTEMBER 2022 – AUGUST 2023

CLIENTS:

**Highways Department** 

PREPARED BY:

Lam Environmental Services Limited

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**CERTIFIED BY:** 

Raymond Dai Environmental Team Leader

DATE:

24 November 2023



Highways Department 5th Floor, Ho Man Tin Government Offices 88 Chung Hau Street Ho Man Tin Kowloon Your reference:

Our reference:

HKHYD203/50/109331

Date:

24 November 2023

Attention: Mr Eric Wong

## BY EMAIL & POST (email: se1tcl.mw@hyd.gov.hk)

Dear Sirs

Agreement No. HMWSD 6/2022 (EP) Environmental Project Office for the Hong Kong-Zhuhai-Macao Bridge Hong Kong Link Road, Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities & Tuen Mun-Chek Lap Kok Link – Investigation

Contract No. DC/2016/01 Entrusted Landscape Works from Contract No. HY/2012/07 to Contract No. DC/2016/01 Under Environmental Permit No.: EP-354/2009/D Annual EM&A Report for September 2022 to August 2023

We refer to the emails of 10 and 24 November 2023, attaching the Annual EM&A Report for September 2022 to August 2023 prepared by the Environmental Team (ET) of the captioned.

We have no comment and hereby verify the Annual EM&A Report in accordance with Section 12.9 of EM&A Manual under the Environmental Permit no. EP-354/2009/D.

Should you have any queries, please do not hesitate to contact the undersigned or our Mr Alex Chan on 2618 2831.

Yours faithfully ANEWR CONSULTING LIMITED

James Choi Independent Environmental Checker

CPSJ/LCCR/CYCA/lsmt

cc Highways Department – Mr Nick Li (email: e1tcl.mw@hyd.gov.hk)
 Lam Environmental Services Limited – Mr Raymond Dai (email: raymonddai@lamenviro.com)
 Binnies Hong Kong Limited – Mr Charlson Leung (email: leungcsc@binnies.com)

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## **EXECUTIVE SUMMARY**

- i. This is the annual Environmental Monitoring and Audit (EM&A) Review Report: September 2022 – August 2023 as referred to the approved EM&A manual under the approved EIA report for the Agreement No. CE52/2007(HY) for the entrusted landscape works under Environmental Permit no. EP-354/2009/D, presenting the environmental monitoring findings and information recorded during the period of 01 September 2022 to 31 August 2023.
- ii. In the reporting period, the work activities conducted for the establishment period of the entrusted landscape works are as follow:
  - Pruning, watering, apply fertilizer, weeding, shrubs replacement, tree replacement

## EM&A activities for the reporting period

- iii. The EM&A programme was carried out in accordance with the contract specific EM&A Manual requirements, no air quality, noise, water quality, ecology, cultural heritage and landfill gas monitoring was required for the contract.
- iv. With the completion of all the entrusted landscape works associated with the interface areas between Contract No. HY/2012/07 and DC/2016/01 along a section of Cheung Tung Road certified by the Project Manager's Delegate under Contract No. DC/2016/01 in mid-July 2022, the 24-month landscape establishment period was proposed for commencement on 14 July 2022 as per the joint inspection with HyD, IEC and ET.

## Complaints, Notifications of Summons and Successful Prosecutions

v. No environmental complaint, notification of summons and successful prosecution regarding the construction works was recorded in the reporting period.

## **Reporting Changes**

vi. No changing circumstances requiring alterations to the EM&A programme were made in the reporting period.



## 1 Introduction

## 1.1 Scope of the Report

- 1.1.1. Lam Environmental Services Limited has been appointed by Penta-Ocean Wo Hing Joint Venture (hereinafter referred to as "Contractor") to undertake the Environmental Monitoring and Audit (EM&A) works for the Additional Entrusted Landscape Works under Contract no. DC/2016/01 (Hereafter referred as "the entrusted landscape works").
- 1.1.2. As referred to the approved EM&A manual under the approved EIA report for the Agreement No. CE52/2007(HY) for the entrusted landscape works under Environmental Permit no. EP-354/2009/D, a contract-specific EM&A manual has been submitted to the Environmental Protection Department (EPD) and accepted for commencing EM&A programme for the establishment period of the entrusted landscape works.
- 1.1.3. This is the 1<sup>st</sup> Annual EM&A Review Report: September 2022 August 2023 of the entrusted landscape works, presenting the environmental monitoring findings and information recorded during the period of 01 September 2022 to 31 August 2023.

## 1.2 Structure of the Report

- **Section 1** *Introduction* details the scope and structure of the report.
- Section 2 *Project Background* summarizes background and scope of the project, site description, project organization and contact details of key personnel during the reporting period.
- Section 3 Status of Regulatory Compliance summarizes the status of EM&A implementation, valid Environmental Permits / Licenses during the reporting period.
- Section 4 *Monitoring Programme* summarizes all monitoring requirements, monitoring locations, monitoring frequency, and respective event and action plan and monitoring programmes.
- Section 5 *Monitoring Results* summarizes the monitoring results obtained in the reporting period.
- Section 6 Complaints, Notification of summons and Prosecution summarizes the cumulative statistics on complaints, notification of summons and prosecution

## Section 7 Conclusion



## 2 Project Background

## 2.1 Background

- 2.1.1. The entrusted landscape works associated with the interface areas between Contract No. HY/2012/07 and DC/2016/01 along a section of Cheung Tung Road form part of landscape mitigation measures as recommended under the approved EIA report (Register No.: AEIAR-146/2009). A Landscape and Visual Plan (LVP) has been submitted under Condition 2.9 of Environmental Permit EP-354/2009/D and approved by EPD.
- 2.1.2. Locations and planting schedule of entrusted landscape works are showed in <u>Figure 2.1</u>, <u>Figure 2.2</u> and <u>Figure 2.3</u> respectively.

## 2.2 **Project Organization and Contact Personnel**

- 2.2.1 Highways Department is the overall project controllers for the Project. For the construction phase of the Project, Project Engineer / Supervisor, Contractor(s), Environmental Team and Independent Environmental Checker are appointed to manage and control environmental issues.
- 2.2.2 The project organization and lines of communication with respect to environmental protection works are shown in *Figure 2.4*. Key personnel and contact particulars are summarized in *Table 2.1*:

Party	Role	Post	Name	Contact No.	Contact Fax
Highways Department (HyD)	Project Proponent	Principal Project Coordinator	LO Kwok-chung, David	2762 4153	3188 6614
Drainage Services Department (DSD)	Project Manager	Engineer / Consultants Management	Marcus LAU	2594 7218	3104 6426
Binnies Hong Kong Limited	Project Manager's Delegate	Senior Resident Engineer	Charlson LEUNG	3757 6615	3100 0143
Penta-Ocean Wo Hing JV	Contractor	Sub Agent	Sandy NGAN	9280 6602	2398 8301
ANewR Consulting Limited	Environmental Project Office (ENPO)	Independent Environmental Checker (IEC)	James CHOI	2618 2831	3007 8648
Lam Environmental Services Limited	Environmental Team (ET)	Environmental Team Leader (ETL)	Raymond DAI	2882 3939	2882 3331

## Table 2.1 Contact Details of Key Personnel



## 2.3 Work Activities

- 2.3.1 In the reporting period, the work activities conducted for the establishment period of the entrusted landscape works are as follows,
  - Pruning, watering, apply fertilizer, weeding, shrubs replacement, tree replacement



## 3 Status of Regulatory Compliance

## 3.1 EM&A Implementation under the Project

3.1.1. As per the a contract-specific EM&A manual submitted to and accepted by EPD, the monitoring and audit requirements of the environmental aspects of the EM&A programme for the establishment period of the entrusted landscape works are summarized in the sub-sections below,

## Air Quality

3.1.2. Scopes of the entrusted landscape works 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 and no specific monitoring and mitigation measures would be required.

<u>Noise</u>

3.1.3. Most of the works under the entrusted landscape works would be conducted manually, with limited use of Power Mechanical Equipment (PME) for delivery material on site and watering the planting area along the road side. Therefore, no unacceptable noise impact would be expected and no specific monitoring and mitigation measures would be required.

## Water Quality

3.1.4. All planting area under the entrusted landscape works 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 and no specific monitoring and mitigation measures would be required.

## Ecology

3.1.5. 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 monitoring and mitigation measures would be required.

## Landscape and Visual

3.1.6. The approved EIA report (Register No.: AEIAR-146/2009) has recommended landscape and visual mitigation measures to be undertaken. Furthermore, Section 7.3 of the Updated EM&A Manual for the TM-CLK Link Project has recommended monitoring and audit of these measures as referred to the design laid down in the Landscape and Visual Plan (LVP) submitted under Condition 2.9 of Environmental Permit EP-354/2009/D approved by EPD.



3.1.7. Monitoring and audit is necessary for monitoring of landscape establishment stage for fulfilling the requirements in Section 7 of the Updated EM&A Manual for the TM-CLK Link Project are presented in *Table 3.1*.

Stage	Monitoring Task	Monitoring Report	Form of Approval	Frequency
Establishment Works	Monitoring of the planting works during the 24-month Establishment period after completion of the construction works.	Contractor's compliance, by	Counter- signature of report by IEC	Quarterly

## Table 3.1 Monitoring Requirement of Landscape Establishment

Remark:

\*Quarterly monitoring for 24-month establishment period has been commenced starting from October 2022 as notified in August 2022 via the submission of the contract specific EM&A manual to EPD.

3.1.8. Implementation status of the recommended mitigation measures is presented in Appendix 3.1.

## Waste Management

3.1.9. All planting area under the entrusted landscape works are land-based, no dredged sediment, excavated C&D material, C&D waste, chemical waste and sewage would be generated. With only limited level of dead plant would be generated from works during maintenance of the planting area handled as part of overall waste management under Contract No. DC/2016/01 instead of as part of the EM&A under TM-CLKL project easily controlled by standard waste management practice, no specific monitoring and mitigation measure would be required.

## Cultural Heritage

3.1.10. No historical/heritage object is required to be handled, no specific monitoring and mitigation measures would be required.

## Landfill Gas

3.1.11. No landfill gas hazard is required to be handled, no specific monitoring and mitigation measures would be required.

## 3.2 Status of Environmental Licensing and Permitting under the Project

3.2.1. As reported by contractor, no environmental license and permit are applicable to the area of the entrusted landscape works in the reporting period.



#### 4 **Monitoring Programme**

#### 4.1 Landscape and Visual Monitoring Requirements

As referred to layout plan of the entrusted landscape works, the landscape and visual impact 4.1.1. mitigation measures applicable to the entrusted landscape works are listed in Table 4.1:

## Table 4.1 Landscape and Visual Mitigation Measures applicable to the entrusted

## landscape works

Ref.	Landscape and Visual Mitigation Measures
CM2	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.
CM10	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.
OM4	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.

Mitigation measures OM1, OM2, OM3, OM5 and OM6 are NOT applicable to the entrusted landscape works.

\*Approved L&VP states that under the Contract Specification for HY/2012/07, 'Transplanted trees shall be relocated to the specified locations under single handling where possible. If it not possible, the Contractor shall make provision for the relocation of the transplanted trees temporarily to a holding nursery and replanting back of the transplanted trees to the specified locations." As such, 5 transplant trees no. A149, NL0483, NL0489, NL0490 and NL0498 have been maintained in landscape sub-contractor's nursery to be replanted to final receptor site at Area 3A.

\*\*Change of tree nos. ET092 and ET093 from Peltophorum tonkinense 銀珠 to Xanthostemon chrysanthus 黃金蒲桃/澳洲黃花 樹(due to lack of availability) is approved by AECOM, DSD Landscape Unit, HyD and LCSD.

Should non-compliance of the landscape and visual impacts occur, actions in accordance with 4.1.2. the action plan as presented in Table 4.2 should be carried out.



EVENT	ACTION				
ACTION LEVEL	ET	IEC	PMD	CONTRACTOR	
Design Check	Check final design conforms to the requirements of EP and prepare report	Check report.     Recommend remedial design if necessary	<ul> <li>Undertake remedial design if necessary</li> </ul>		
Non-conformity on one occasion	<ul> <li>Identify Source</li> <li>Inform IEC and PMD</li> <li>Discuss remedial actions with IEC, PMD and Contractor</li> <li>Monitor remedial actions until rectification has been completed</li> </ul>	<ul> <li>Check report</li> <li>Check Contractor's working method</li> <li>Discuss with ET and Contractor on possible remedial measures</li> <li>Advise PMD on effectiveness of proposed remedial measures.</li> <li>Check implementation of remedial measures</li> </ul>	Notify Contractor     Ensure remedial     measures are     properly     implemented	<ul> <li>Amend working methods</li> <li>Rectify damage and undertake any necessary replacement</li> </ul>	
Repeated Non- conformity	<ul> <li>Identify Source</li> <li>Inform IEC and PMD</li> <li>Increase monitoring frequency</li> <li>Discuss remedial actions with IEC, PMD and Contractor</li> <li>Monitor remedial actions until rectification has been completed</li> <li>If non-conformity stops, cease additional monitoring</li> </ul>	<ul> <li>Check monitoring report</li> <li>Check Contractor's working method</li> <li>Discuss with ET and Contractor on possible remedial measures</li> <li>Advise PMD on effectiveness of proposed remedial measures</li> <li>Supervise implementation of remedial measures</li> </ul>	Notify Contractor Ensure remedial measures are properly implemented	Amend working methods     Rectify damage and undertake any necessary replacement	

Table 4.2 Event and Action I	Plan for Landscape a	nd Visual Impact

## 4.2 Monitoring Programme

- 4.2.1. With the completion of all the entrusted landscape works associated with the interface areas between Contract No. HY/2012/07 and DC/2016/01 along a section of Cheung Tung Road certified by the Project Manager's Delegate under Contract No. DC/2016/01 in mid-July 2022, the 24-month landscape establishment period was proposed for commencement on 14 July 2022 as per the joint inspection with HyD, IEC and ET.
- 4.2.2. Quarterly monitoring for 24-month establishment period conducted in the reporting period is presented in *Table 4.3*:

## Table 4.3 Landscape Establishment Monitoring during the reporting period

Month	Monitoring Location
October 2022	Entrusted landscape areas (c.f. <i>Figure 1.2</i> )
January 2023	Entrusted landscape areas (c.f. <i>Figure 1.2</i> )
April 2023	Entrusted landscape areas (c.f. <i>Figure 1.2</i> )
July 2023	Entrusted landscape areas (c.f. <i>Figure 1.2</i> )



## 5 Monitoring Results

## 5.1 Landscape Establishment Monitoring Results

5.1.1 Quarterly landscape establishment monitoring conducted in this reporting period as reported in on-going monthly EM&A report. Summary of findings in this reporting period are presented in the table below.

Date	Observation(s)	Follow up status
21 Oct 2022	Area 3 – Weeding shall be strengthened around the eastern end of Area 3. Area 3 – Health condition of <i>Viburnum odoratissimum</i> , T087 shall be closely monitored. Area 6 – <i>Nephrolepis auriculata</i> replacement shall be arranged.	Area 3 – Weeding around the eastern end of Area 3 has been rectified. Area 3 – <i>Viburnum odoratissimum</i> (T087) has been improved. Area 6 – <i>Nephrolepis auriculata</i> has been replanted.
20 Jan 2023	Area 1 – Grass verge damaged was observed and reinstatement is required. Area 1A – Palm tree, <i>Areca catechu</i> (T015) shall be replaced. Area 3B – Health condition of <i>Garcinia subelliptica</i> (T100) shall be closely monitored. Area 5 – Several ant colonies were observed and proper treatment is advised. Area 6A – Grass verge removed by others at roadside barrier works requires reinstatement.	Grass verge damaged observed last quarter still pending reinstatement. Area 1A – Palm tree, <i>Areca catechu</i> (T015) has been replaced. Area 3B – Health condition of <i>Garcinia subelliptica</i> (T100) has been improved. Area 5 – Several ant colonies observed last quarter still require proper treatment. Area 6A – Grass verge removed by others at roadside barrier works has been reinstated.
27 Apr 2023	Area 1 – Grass verge damaged was observed, reinstatement is required. Area 3A, 4, 5 – Grass verge removed by others interface works requires reinstatement. (Obs.2, 5, 9) Area 3B, 4, 5 – Health condition of <i>Garcinia subelliptica</i> (ET101, ET107, ET130, ET131, ET135) shall be closely monitored. Area 5, 5A – Further growth of ant colonies were observed, proper treatment is required.	Area 1, 3A, 4, 5 – Observed grass verge damaged observed have been reinstated. Area 3B, 4, 5 – Health condition of <i>Garcinia subelliptica</i> observed have been improved Area 5 – Observed ant colonies growth has been treated.

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Date	Observation(s)	Follow up status
31 Jul 2023	Area 1B – Over-hanging branch above plantation posed threat to potential damage was observed, interface liaison maintenance party for removal shall be arranged. Area 1A, 2, 3A, 4, 6 – Weed observed at various area require regular weeding. Area 3B, 5 – Grass verge damage and temporary stored materials affecting shrubs require reinstatement. Area 5 – Tilted <i>Garcinia subelliptica</i> shall be reinstated. Area 5 – Fencing for tree protection shall be provided for <i>Garcinia</i> <i>subelliptica</i> next to remedial works area to protect plant damage from machinery and vehicle movement. Area 5 – Ant colonies were observed, proper treatment is required.	Area 1A, 2, 3A, 4, 6 – Weed observed at various area rectified with weeding. Area 3B, 5 – Grass verge damage and temporary stored materials affecting shrubs rectified. Area 3B, 4, 5 – Tilted <i>Garcinia</i> <i>subelliptica</i> have been reinstated Area 5 – <i>Garcinia subelliptica</i> next to remedial works area reinstated. Area 5 – Observed ant colonies growth has been treated but required continuous attention.



## 6 Complaints, Notification of Summons and Prosecution

- 6.0.1. No environmental complaint, notification of summons and successful prosecution associated with entrusted landscape establishment was recorded for the in the reporting period.
- 6.0.2. The details of cumulative complaint log and updated summary of complaints are presented in <u>Appendix 6.1</u>.
- 6.0.3. Cumulative statistic on complaints, notification of summons and successful prosecutions are summarized in *Table 6.1*, *Table 6.2* and *Table 6.3* respectively.

## Table 6.1 Cumulative Statistics on Complaints

Reporting Period	No. of Complaints
September 2022 – August 2023	0
Project commencement to the end of last reporting month	-
Total	0

## Table 6.2 Cumulative Statistics on Summons

Up to latest month of the reporting period	Cumulative No. Brought Forward	No. of Summons this month (Offence Date)	Cumulative No. Project-to-Date
August 2023	-	0	0
Total	-	0	0

## Table 6.3 Cumulative Statistics on Successful Prosecutions

Up to latest month of the reporting period	Cumulative No. Brought Forward	No. of Successful Prosecutions this month (Offence Date)	Cumulative No. Project-to-Date		
August 2023	-	0	0		
Total	-	0	0		



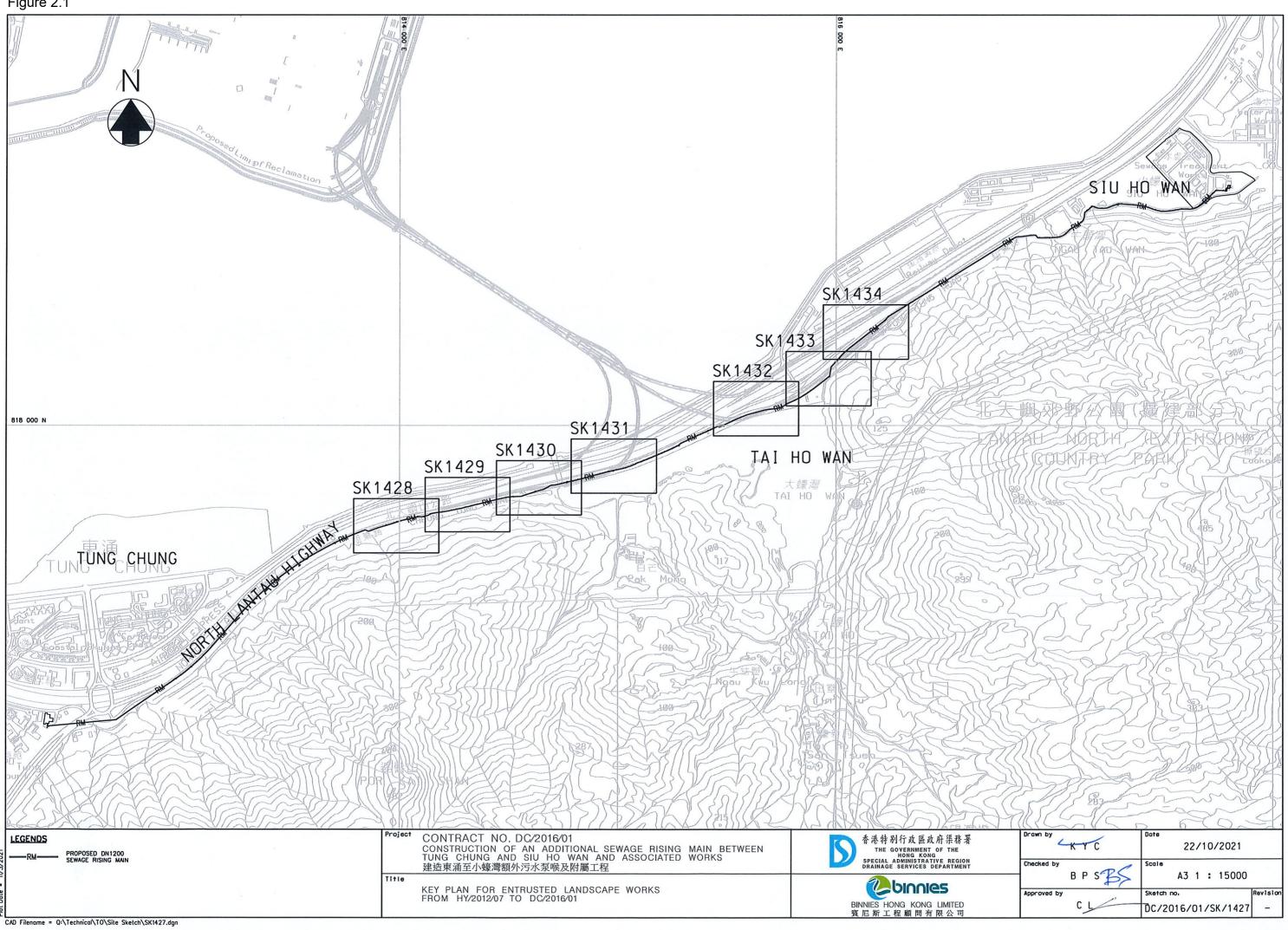
## 7 Conclusion

- 7.0.1. The EM&A programme was carried out in accordance with the contract specific EM&A Manual requirements, no air quality, noise, water quality, ecology, cultural heritage and landfill gas monitoring was required for the contract. No alterations to the programme proposed were made in response to changing circumstances.
- 7.0.2. With the completion of all the entrusted landscape works associated with the interface areas between Contract No. HY/2012/07 and DC/2016/01 along a section of Cheung Tung Road certified by the Project Manager's Delegate under Contract No. DC/2016/01 in mid-July 2022, the 24-month landscape establishment period was proposed for commencement on 14 July 2022 as per the joint inspection with HyD, IEC and ET.
- 7.0.3. Quarterly landscape establishment monitoring were conducted in this reporting period in October 2022, January 2023, April 2023 and July 2023.
- 7.0.4. No environmental complaint, notification of summons and successful prosecution associated with entrusted landscape establishment was recorded for the in the reporting period.



# Key Plan for Entrusted Landscape Works from HY/2012/07 to DC/2016/01

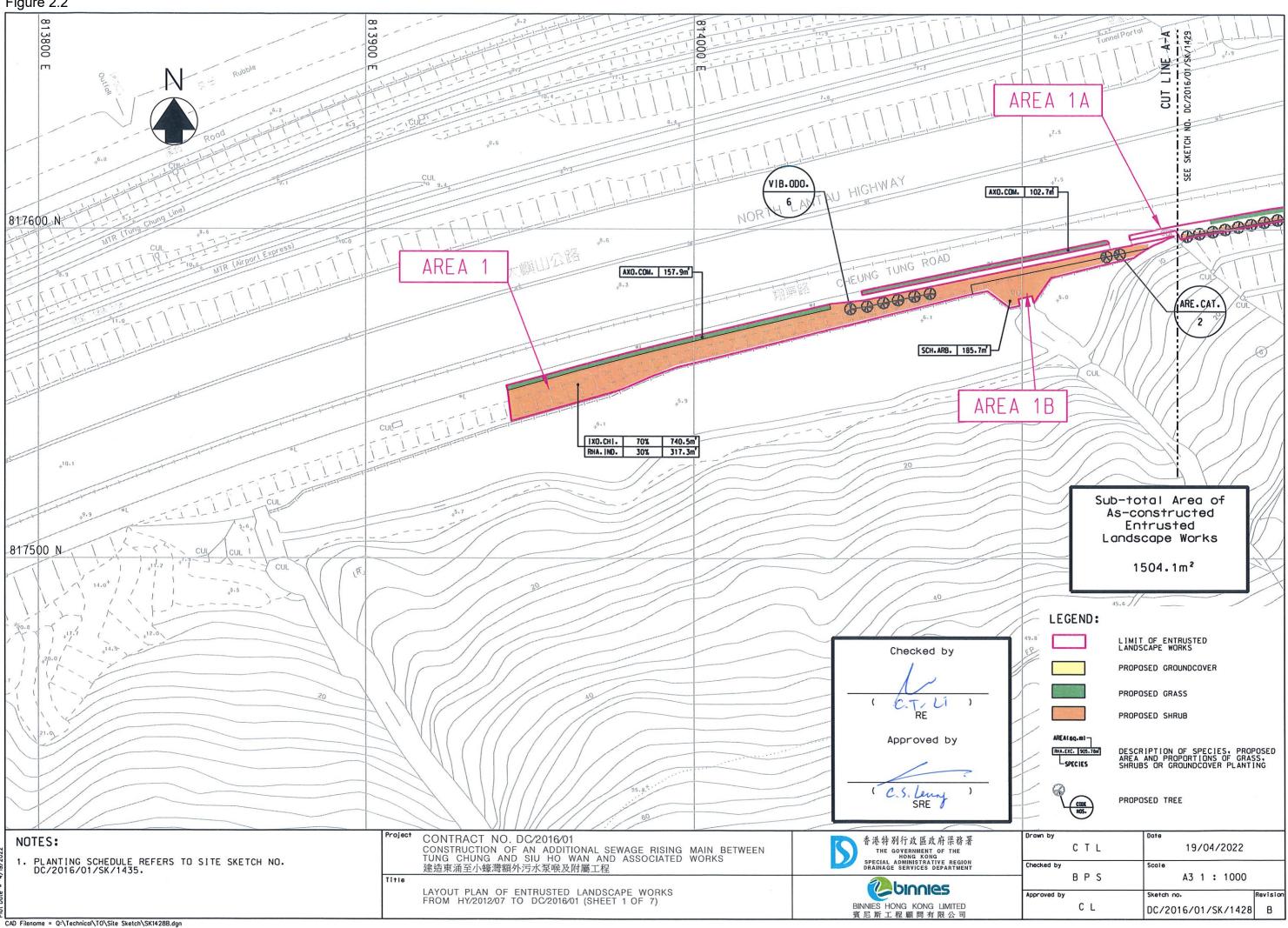




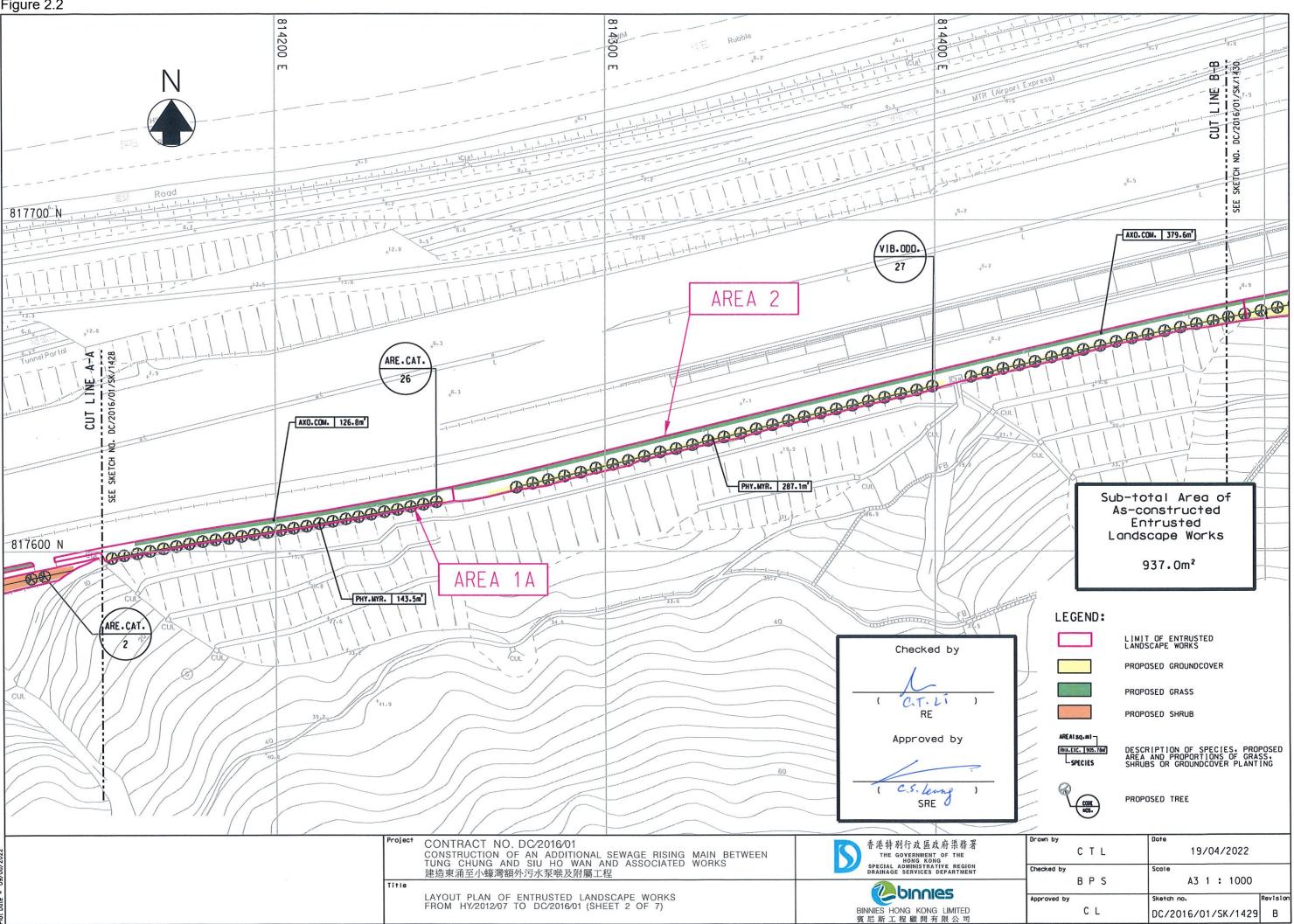


# Layout Plan of Entrusted Landscape Works from HY/2012/07 to DC/2016/01 (Sheet 1 to Sheet 7)

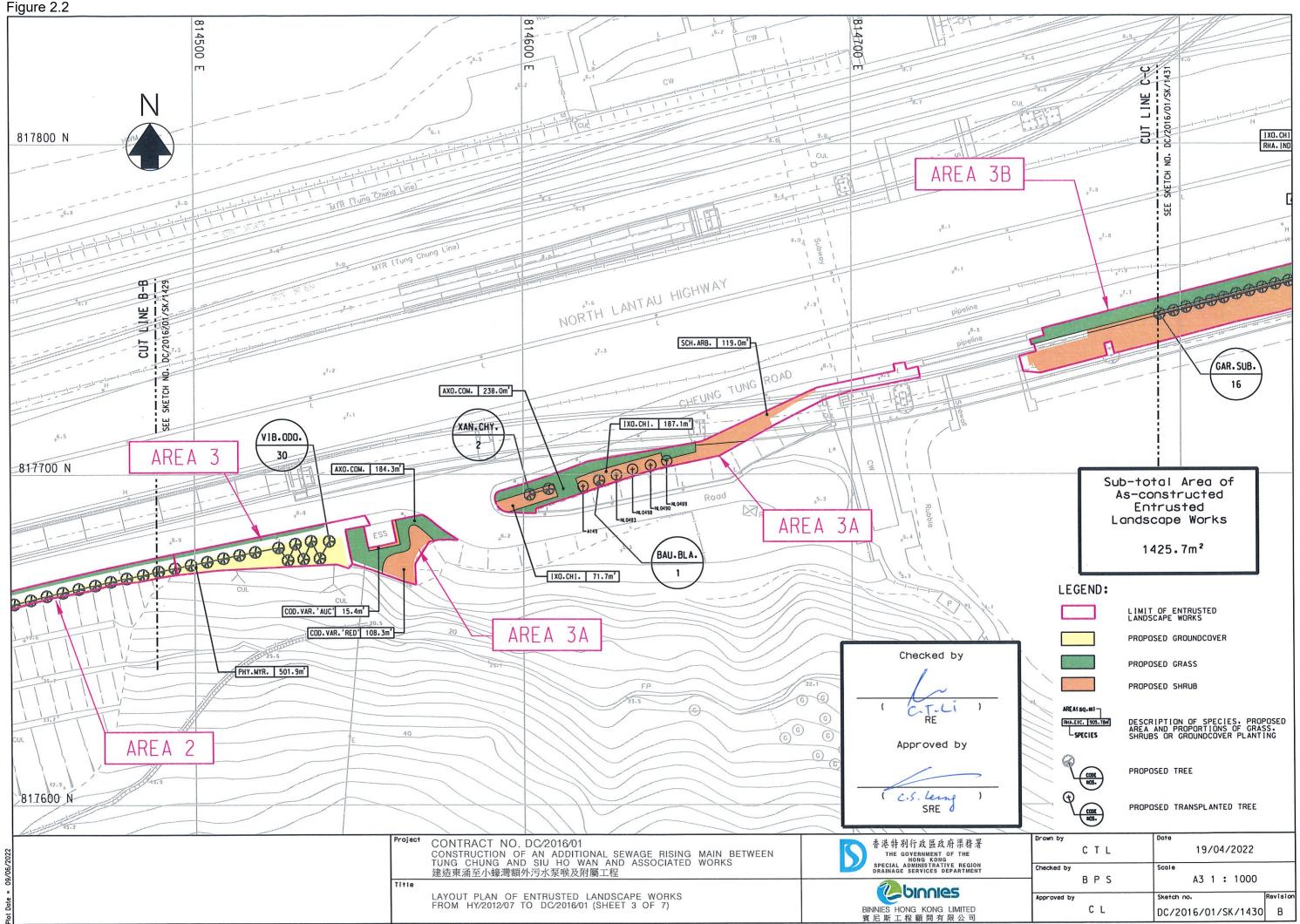


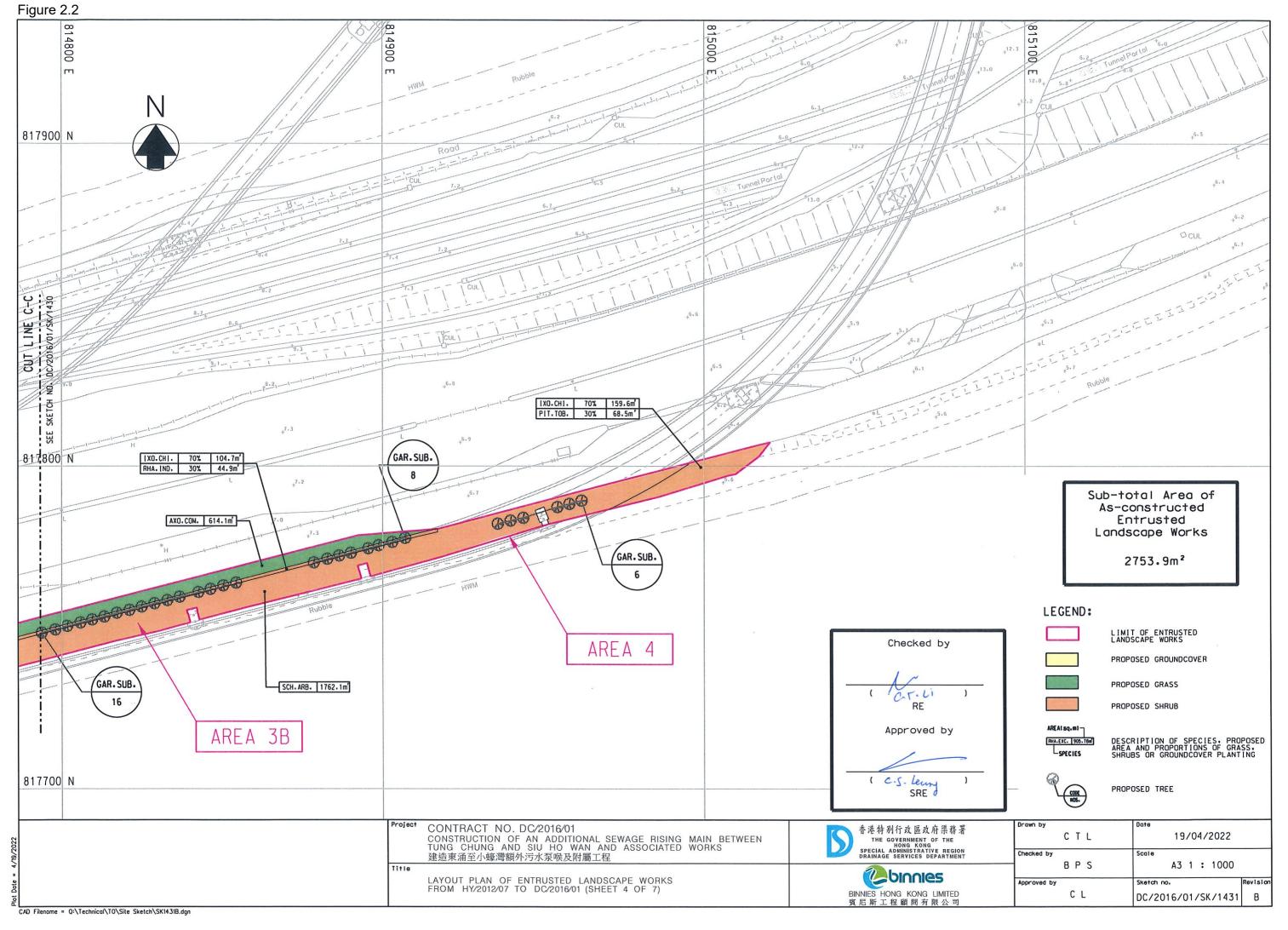




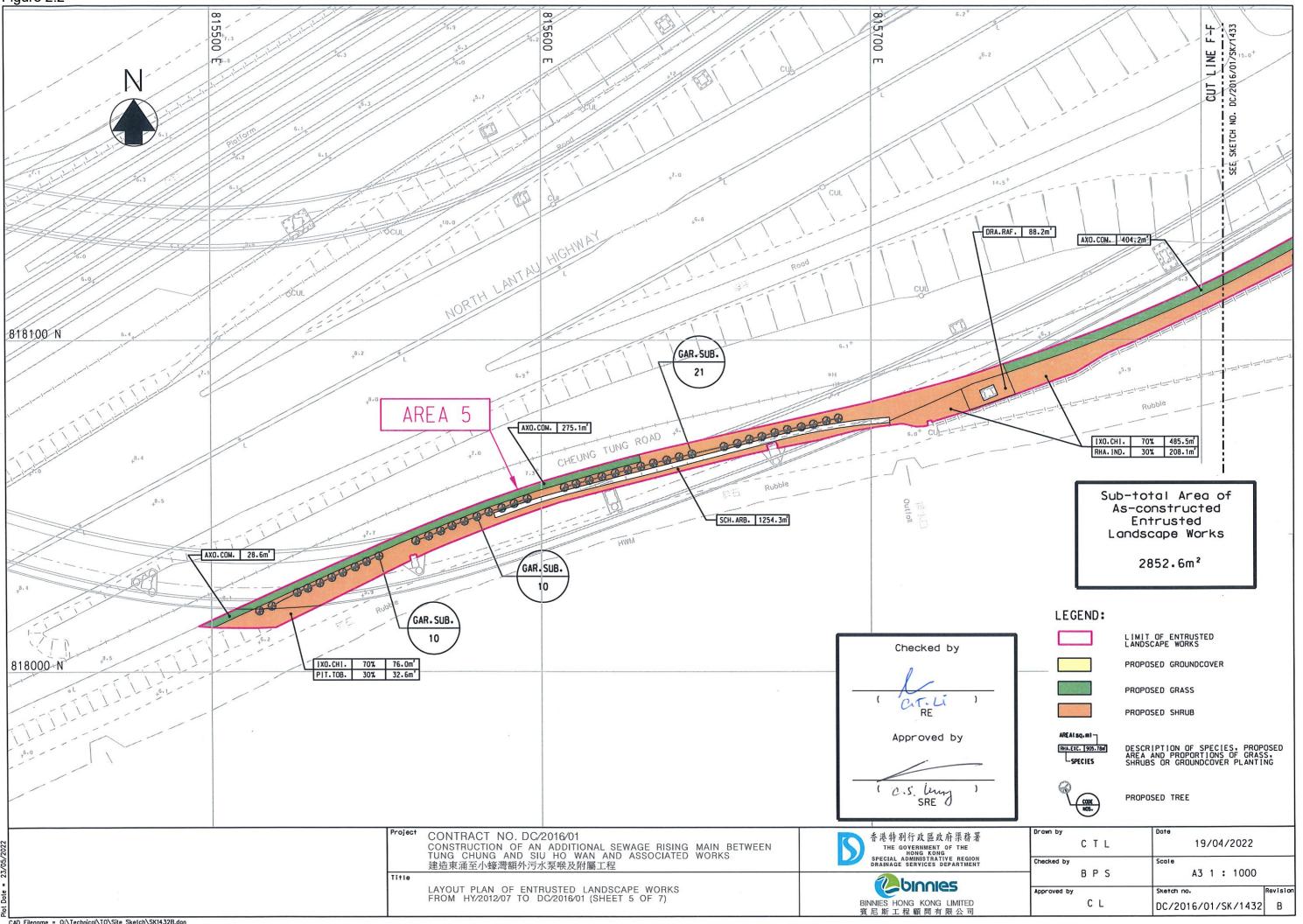






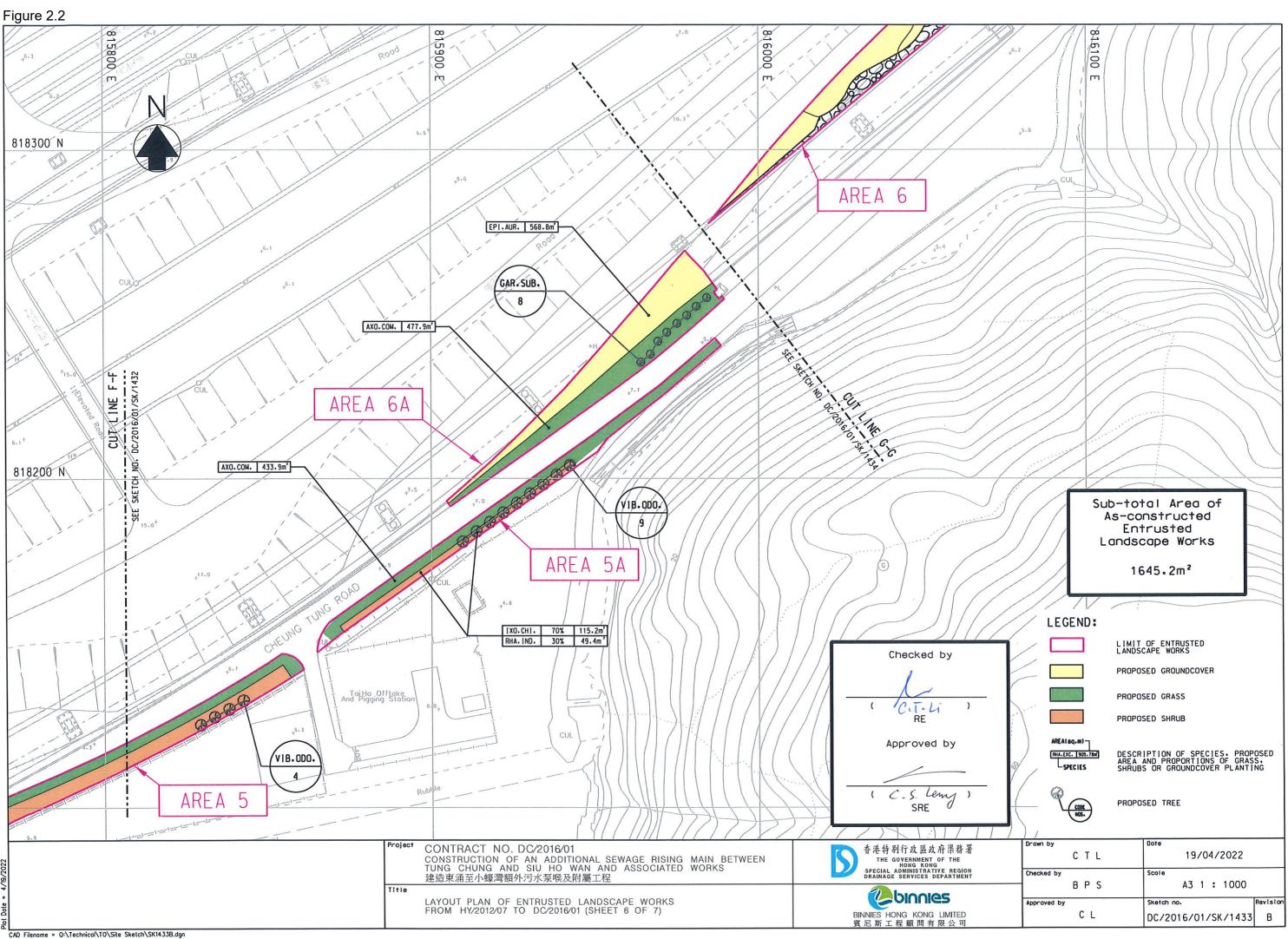


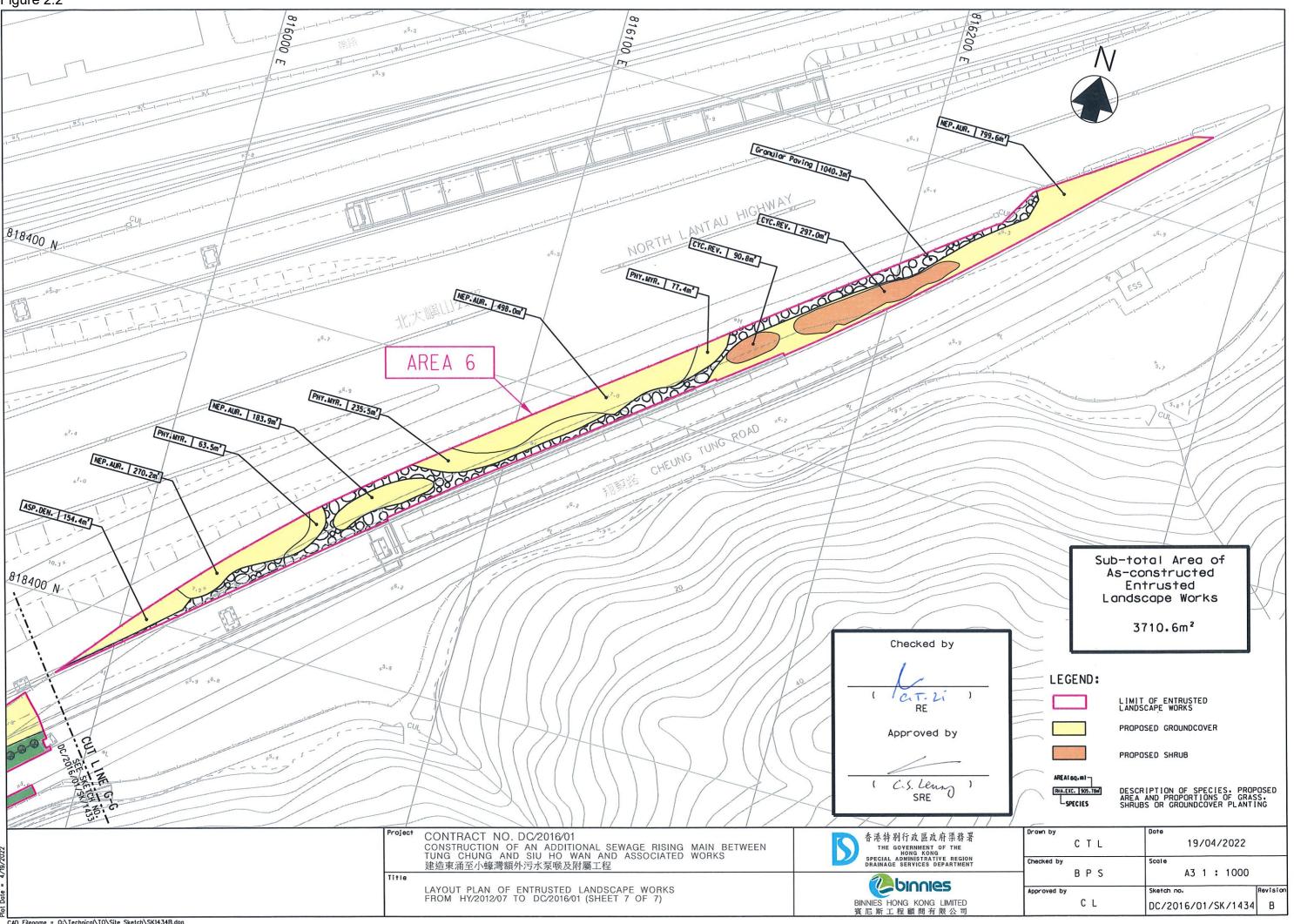




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# Planting Schedule of Entrusted Landscape Works from HY/2012/07 to DC/2016/01

	PLANTING SCHEDULE									
CODE	BOTANICAL NAME	CHINESE NAME	SIZE (mm) HEIGHT (H) x SPREAD (S)	SPACING (mm)	NO./m²	%MIX.	QUANT (APPROX			
			TR	EE PLANTING						
GAR.SUB.	Garcinia subelliptica	非洲福木	Light Standard	4000-5000	-	-	79			
BAU.BLA	Bauhinia x blakeana	洋紫荊	Heavy Standard	5000	-	-	5			
PEL.TON.	Peltophorum tonkinense	銀珠	Heavy Standard	5000	-	-	1			
VIB.ODO.	Viburnum odoratissimum	珊瑚樹	Heavy Standard	5000	-	-	76			
XAN.CHR.	Xanthostemon chrysanthus	金蒲桃	Heavy Standard	5000	-	-	2			
			PALM F	LANTING - EXOTIC						
ARE.CAT	Areca catechu	檳榔	4000(H)	4000	-	-	28			
			SH	RUB PLANTING	1					
IXO.CHI.	lxora chinensis	龍船花	300(H) × 300(S)	300	12.54	-	2433			
DRA.REF.	Dracaena reflexa	金黃百合竹	600(H)	500	4.62	-	407			
SCH.ARB.	Schefflera arboricola	八葉	300(H) × 300(S)	300	12.54	-	4164			
COD.VAR.'AUC'	Codiaeum variegatum 'aucubaefolium'	灑金榕	300(H) x 300(S)	300	12.54	-	1358			
COD.VAR.'RED'	Codiaeum variegatum 'red'	灑金榕 (紅色)	300(H) x 300(S)	300	12.54	-	193			
PIT.TOB.	Pittosporum tobira	海桐花	300(H) x 300(S)	300	12.54	-	1268			
RHA.IND.	Rhaphlolepis indica	車輪梅	300(H) x 300(S)	300	12.54	-	777			
CYC.REV.	Cycas revoluta	蘇鐵	400(H) x 500 (S)	· 500	4.6	-	1784			
	-	1	GROUN	DCOVER PLANTING	1	1				
ASP.DEN.	Asparagus densiflorus	非洲天門冬	, 200(H) x 300 (S)	200	29	-	4478			
NEP.AUR.	Nephrolepis auriculata	腎蕨	250(H) x 250 (S)	150	51.59	-	9037			
EPI.AUR.	Epipremnum aureum	綠蘿	200(H) x 300(S)	300	12.54	-	7133			
PHY.MYR.	Phyllanthus myrtifolius	錫蘭葉下珠	300(H) x 300(S)	300	12.54	-	1641			
				ASS PLANTING	÷					
AXO.COM.	Axonopus compressus	地毯草 (大葉草)	WHOLE PIECE TURF 300(L) x 300(W) x 50(H)	-	-	-	3423			
			GRA	ANULAR PAVING						
-	-	-		-	-	-	1040			

NOTES:

1. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH DRAWING NOS. DC/2016/01/SK/1428 TO DC/2016/01/SK/1434.

2. SHRUB / GROUNDCOVER SHOULD BE PLANTED IN STAGGERED PATTERN.

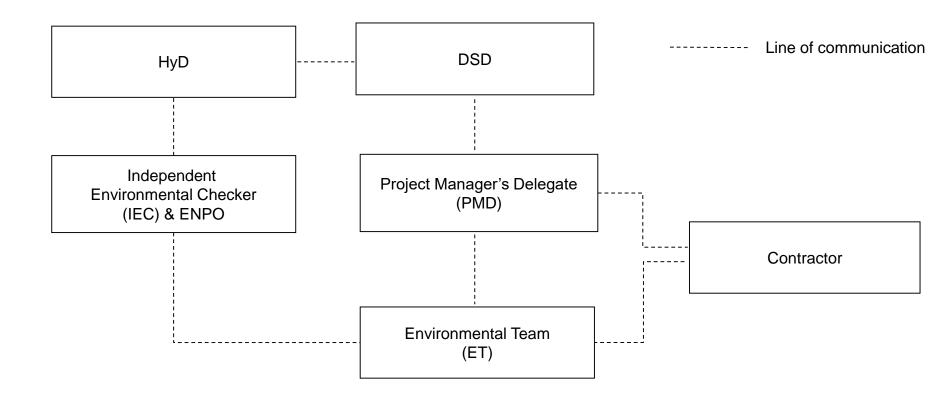
Project	CONTRACT NO. DC/2016/01 CONSTRUCTION OF AN ADDITIONAL SEWAGE RISING MAIN BETWEEN	ADDITIONAL SEWAGE RISING MAIN BETWEEN HO WAN AND ASSOCIATED WORKS	Drawn by CTL	Dote 20/04/2022	
	建造東涌至小蠔灣額外污水泵喉及附屬工程	SPECIAL ADMINISTRATIVE REGION DRAINAGE SERVICES DEPARTMENT	Checked by BPS	SCHEDULE	
Title	SCHEDULE OF ENTRUSTED LANDSCAPE WORKS FROM HY/2012/07 TO DC/2016/01		Approved by C L	Sketch no. DC/2016/01/SK/1435	Revision B
		賓 尼 斯 工 程 顧 問 有 限 公 司		0072010701751071455	5

NTITY X. NOS.)	REMARK
9	
5	4 NOS. TRANSPLANTED TREE NOS. NL0483, NL0489, NL0490 AND NL0498
1	1 NO. TRANSPLANTED TREE NO. A149
6	
2	
8	
331	
07	
647	
58	
93	
68	
71	
'84	
78	÷
370	
33	
414	-
	1
123 m²	25mm HIGH SWORD AND 25mm SOIL BASE OF TURF
)40 m²	



## **Project Organization Chart**

# Figure 2.4 Organization Chart of Environmental Team for Contract DC/2016/01





## Appendix 3.1

# Environmental Mitigation Implementation Schedule

EIA Ref.	EM&A Manual	inual	Location/ Timing	Implementation Agent	Relevant Standard or	Implementation Stages			Maintenance Agency
	Ref.				Requirement	D	C	0	
10.9	7.6	The large surface of the retaining wall along the toll plaza area shall adopt a patterned/ smoother finishes and texture design to break the large surface. Climber treatment is proposed to soften the structures (DM1)	All areas Detailed design	Design Consultant	TMEIA	✓			N/A
10.9	7.6	The colour and shape of the toll control buildings, ventilation building and administration building shall adopt a design which could blend it into the vicinity elements, and the details will be developed in detailed design stage (DM2)	All areas Detailed design	Design Consultant	TMEIA	<b>~</b>			N/A
10.9	7.6	Round angle, patterned finishes, and oval shaped pier were considered in the viaduct design, and further details will be developed under ACABAS submission (DM3)	All areas Detailed design	Design Consultant	TMEIA	~			N/A
10.9	7.6	Details of the street furniture will be developed in the detailed design stage (DM4)	All areas Detailed design	Design Consultant	TMEIA	~			N/A
10.9	7.6	Aesthetic design of the viaduct, retaining wall and other structures will be developed under ACABAS submission (DM5)	All areas Detailed design	Design Consultant	TMEIA	~			N/A

EIA Ref.	EM&A Manual	Environmental Protection Measures		Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Maintenance Agency
10.9	Ref.           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	Requirement         TMEIA	 ✓	¢ v	0	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	V	~		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	✓	~		N/A

EIA Ref.	EM&A Manual	Environmental Protection Measures		Implementation Agent	Relevant Standard or	Implementation Stages			Maintenance Agency
	Ref.				Requirement	D	C	0	
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	✓	¥		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/post construction	Design Consultant/ Contractor	TMEIA	•	~		N/A
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	~	~		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	~	~		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	~	*		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	~	~		N/A

EIA Ref.	EM&A Manual Ref.	Environmental Protection Measures	Location/ Timing Implemen Agent	Agent Stan	Standard or	Imp	lement Stage		Maintenance Agency
-					Requirement	D	C	0	- <b>3</b> * • <b>y</b>
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	•	~		N/A
10.9	7.6	Re-vegetation of affected woodland/shrubland with native species (OM1)	All areas Detailed design / during construction / during operation	Design Consultant/ Contractor	TMEIA	-	-	-	AFCD/ HyD/ LCSD
10.9	7.6	Tall buffer screen tree / shrub / climber planting should be incorporated to soften hard engineering structures and facilities (OM2)	All areas Detailed design / during construction / during operation	Design Consultant/ Contractor	TMEIA	-	-	-	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 minimise unnecessary light spill (OM3)	All areas Detailed design / during construction / during operation	Design Consultant/ Contractor	TMEIA	-	-	-	HyD/ LCSD
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 / during operation	Design Consultant/ Contractor	TMEIA	~	~	~	HyD/ LCSD

EIA Ref.	EM&A Manual		U U	Implementation Agent	Relevant Standard or	Implementation Stages			Maintenance Agency
	Ref.				Requirement	D	С	0	1
10.9	7.6	Aesthetically pleasing design (visually unobtrusive and non-reflective) as regard to the form, material and furnishes shall be incorporated to all buildings, engineering structures and associated infrastructure facilities (OM5)	All areas Detailed design / during construction / during operation	Design Consultant/ Contractor	ΤΜΕΙΑ	-	-	-	HyD
10.9	7.6	Avoidance of excessive height and bulk of buildings and structures (OM6)	All areas Detailed design / during construction / during operation	Design Consultant/ Contractor	TMEIA	-	-	-	N/A

Abbreviations:

D: Design; C: Construction; and O: Operation.

AFCD: Agriculture, Fisheries and Conservation Department; HyD: Highways Department; and LCSD: Leisure, Cultural and Services Department. TMEIA: Technical Memorandum on Environmental Impact Assessment Process. N/A: Not applicable.

Note:

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



## Appendix 6.1

## **Complaint Log**

## **COMPLAINT LOG**

Log Ref.	Date / Location	Complainant/ Date of Contract	Details of Complaint	Investigation / Mitigation Action	File Closed

\_\_\_\_\_

Filed by Environmental Team Leader

Date:

Ref: \_\_\_\_\_

\_\_\_\_\_