Contract HY/2011/09

Hong Kong-Zhuhai-Macao Bridge

Hong Kong Link Road-Section between HKSAR Boundary and Scenic Hill

Landscape Monitoring Report (Long Term Management)

(23 May 2023 – 22 May 2024)

Certified By

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REMARKS:

The information supplied and contained within this report is, to the best of our knowledge, correct at the time of printing.

WELLAB accepts no responsibility for changes made to this report by third parties

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TABLE OF CONTENTS

	P	age	
1.	INTRODUCTION	1 -	
	kground		
2.	METHODOLOGY	2 -	
3.	ANNUAL MONITORING FOR PLANTING WORKS	3 -	
Monitoring			
4.	CONCLUSIONS AND RECOMMENDATION	8 -	
	Conclusion		

LIST OF TABLES

Table 3.1 Summary of Planted Tree Species and Tree Numbers

LIST OF FIGURES

Figure 3.1 Tree Planted at Designated Areas under or Near the Bridge Deck

Figure 3.2 Tree Planted at Designated Areas at Kwo Lo Wan Road

LIST OF APPENDICES

Appendix A Soft Landscape Layout Plan

1. INTRODUCTION

Background

- 1.1 The Hong Kong Zhuhai Macao Bridge Hong Kong Link Road (HKLR) comprises a 9.4km long viaduct section from the HKSAR boundary to Scenic Hill on the Airport Island; a 1km tunnel section to the reclamation formed along the east coast of the Airport Island and a 1.6km long at-grade road section on the reclamation connecting to the HKBCF. The tunnel section of HKLR will pass under Scenic Hill, Airport Road and Airport Railway to minimize the environmental and visual impacts to Tung Chung residents.
- 1.2 An Environmental Impact Assessment (EIA) Study (Reg. No. AEIAR-144/2009) has been undertaken to provide information on nature and extent of environmental impacts arising from the construction and operation of HKLR. Pursuant to Section 13 of the EIAO, the Director of Environmental Protection has issued Further Environmental Permit (No. FEP-01/352/2009/D) based on the Application No. FEP-186/2018 for HKLR to the Airport Authority as the Permit Holder on 29 March 2018.
- 1.3 The Hong Kong Link Road project has been separated into two contracts. They are Contract No. HY/2011/03 Hong Kong-Zhuhai-Macao Bridge Hong Kong Link Road-Section between Scenic Hill and Hong Kong Boundary Crossing Facilities and Contract No. HY/2011/09 Hong Kong-Zhuhai-Macao Bridge Hong Kong Link Road-Section between HKSAR Boundary and Scenic Hill (hereafter referred to as the Contract).
- 1.4 Dragages -China Harbour-VSL JV (hereinafter called "the Contractor") was the main contractor of the Contract. All construction activities undertaken by Contract No. HY/2011/09 (the Contract) for construction of a dual 3-lane carriageway in the form of viaduct from the HKSAR boundary to Scenic Hill of approximately 9.4km in length under the Environmental Permit (EP-352/2009/D) have been completed in August 2018. In addition, HKLR has been commissioned on 24 October 2018.
- 1.5 According to Section 14.2.10 of the EM&A Manual for HKLR, monitoring of the planting works during the first 10 years of the operation phase of HKLR are required after completion of the construction works. All landscape works were completed on 22nd May 2019. Wellab Limited (Wellab) was appointed to undertake this Annual Monitoring of Long-Term Management of Planting Works.

Purpose of the Report

1.6 This is the 4th Annual Monitoring Report, which present the monitoring of the long-term management of the planting works and report any areas of planted trees which were failed to establish, for Long Term Management of Planting Works under the Contract.

2. METHODOLOGY

- 2.1 In accordance with Section 14.2.10 of the EM&A Manual, the planting works shall be monitored during the first 10 years of the operation phase of the project. Any areas of vegetation which is failed to establish, should be corrected by the relevant maintenance parties at the earliest opportunity. The maintenance requirement of the planting works stated under the 10-Year Management Programme is included in the monitoring requirement.
- 2.2 According to Environment, Transport and Works Bureau Technical Circular (Works) No. 2/2004, maintenance operations for vegetation on landscape areas are required to ensure the healthy establishment and growth of plants, which in general include watering, fertilizing, weeding, pruning, mulching, pest control, replacement etc. as appropriate.
- 2.3 This annual monitoring is to check the location and plant species which have been planted according to the approved Soft Landscape Layout Plan and ensure the planting maintenance operations are properly carried out during the operation phase of the Contract, including:
 - Inspection for fungal / viral attacks and pest infestation;
 - Litter collection;
 - Watering;
 - Weeding removal;
 - Replacement of defective planting material;
 - Grass cutting / groundcover trimming and removal of arisings;
 - Fertilizing application as required in specification; and
 - Aeration / mulching application.

Location of Planting Area

2.4 The soft landscape layout plan provides updated information of details such as locations of planting works and species, and these were agreed by the Airport Authority Hong Kong is shown in **Appendix A**.

Monitoring Frequency

2.5 Monitoring of planting works shall be carried out annually for 10 years after completion of the landscape construction works on 22nd May 2019.

3. ANNUAL MONITORING FOR PLANTING WORKS

Monitoring

3.1 This Annual Monitoring for Long Term Management of Planting Works under the Contract was conducted in the end of April 2024.

Site Description

- 3.2 The location and plant species have been checked during the inspection which are followed the approved Soft Landscape Layout Plan in **Appendix A**.
- 3.3 There was a total of 4 tree species were planted under the Contract at the designated planting zones at Hong Kong International Airport Island. The summary of the planted species and numbers are shown in **Table 3.1.**

Table 3.1 Summary of Planted Tree Species and Tree Numbers

	Tree Species		Tree Number	Remark
Location	Botanical Name	Chinese Name	Planted	
	Bauhinia blakeana	洋紫荊	26	All observed dead/removed/ cut
Bridge Deck	Plumeria rubra	雞蛋花	143	
	Bauhinia variegate	宮粉羊蹄 甲	4	
	Phoenix roebelenii	日本葵	28	All observed dead/removed/ cut or in poor health condition
Kwo Lo Wan Road	Plumeria rubra	雞蛋花	41	
	Bauhinia variegate	宮粉羊蹄 甲	14	

Observation on Planting Works and Maintenance Operations

A. Trees Planted Under or Near Bridge Deck

3.4 Trees planted at the designated planting areas under or in the vicinity of the Bridge Deck for the Contract were all observed dead/removed/cut during the site inspection. The trees planted in these areas included *Bauhinia blakeana*, *Plumeria rubra* and *Bauhinia variegate*, as listed in **Table 3.1**. The photographic records of the condition of designated planting areas under or near Bridge Deck are shown in **Figure 3.1**.

Figure 3.1 Tree Planted at Designated Areas under or Near the Bridge Deck



Figure 3.1 Tree Planted at Designated Areas under or Near the Bridge Deck (Cont'd)



Tree Planted at Designated Areas under or Near the Bridge Deck (Cont'd) Figure 3.1



B. Trees Planted at Kwo Lo Wan Road

- 3.5 The planted trees, *Phoenix roebelenii*, at Kwo Lo Wan Road were almost dead and only 9 were observed still alive. The trees planted, *Plumeria rubra* and *Bauhinia variegate* in this area were also observed dead/removed/cut or in poor health condition. Photographs were taken and shown in **Figure 3.2**.
- 3.6 As shown in **Figure 3.2**, the soil at the planted areas were observed packed and dried.
- 3.7 In addition, the health conditions of the remaining plants were also observed weak. Leaves are withered / yellow. Both water and nutrients were considered insufficient.

Figure 3.2 Tree Planted at Designated Areas at Kwo Lo Wan Road



4. CONCLUSIONS AND RECOMMENDATION

Conclusion

- There are 4 tree species planted according to the approved soft landscape layout plan at 4.1 the designated planting zones at Hong Kong International Airport under the Contract.
- As reported in the past 3 annual reports, the planted trees were all poorly maintained at 4.2 the designated planting areas.
- 4.3 Among 256 trees planted under the Contract, more than 90% of total planted trees were observed dead/removed/cut or in poor health condition and maintenance.

Recommendations

- This is the 4th Annual Monitoring Report after completion of all landscape works under 4.4 the Contract. The current stage for implementation of mitigation measures should be categorized as Operation Phase.
- It is recommended to terminate the annual landscape monitoring report, as stipulated Section 14.2.10 of the EM&A Manual, under the Contract as Highways Department is no longer the maintenance agent in operation phase.

APPENDIX A SOFT LANDSCAPE LAYOUT PLAN













