



## Civil Engineering and Development Department

Agreement No. CE 70/2021(HY)

**Project Name: Revised Trunk Road T4 –  
Design and Construction****Pre-Construction Ardeid Survey Plan  
(Report Ref: PASP - 03)**

November 2024

	Name	Signature
Prepared by Qualified Ecologist	Ken Cheng	
Certified by Environmental Team Leader	Lemon Lam	

Version: 2 Date: 14 November 2024

This Pre-Construction Ardeid Survey Plan is prepared for Civil Engineering and Development Department (CEDD) and is given for its sole benefit in relation to and pursuant to Agreement No. CE 70/2021(HY) and may not be disclosed to, quoted to or relied upon by any person other than CEDD without our prior written consent. No person (other than CEDD) into whose possession a copy of this Report comes may rely on this Report without our express written consent and CEDD may not rely on it for any purpose other than as described above.

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Our ref.: LES/J2024-08/CS/L007  
Date : 15 November 2024

**By Email**

Civil Engineering and Development Department  
8/F, South Tower,  
West Kowloon Government Offices  
11 Hoi Ting Road, Yau Mei Tei,  
Kowloon, Hong Kong

**Attn: Mr. NG Chou Keen, Horace (Ch Engr / E1)**

Dear Sir,

**Agreement No. EDO 11/2023**  
**Trunk Road T4 and Associated Works – Independent Environmental Checker**  
**Verification of Pre-construction Ardeid Survey Plan (PASP)**

Reference is made to the Pre-construction Ardeid Survey Plan (Report Ref: PASP-03, dated 14 November 2024) certified by the ET Leader. We hereby verify the captioned for submission in accordance with the approved EIA Report (Register No. AEIAR-231/2021) under Condition 2.17 of Environmental Permit No.: EP-593/2021 of the Project.

Yours faithfully,  
For and On Behalf Of  
**Lam Environmental Services Limited**

A handwritten signature in black ink that reads "Serena Shek".

Serena Shek  
Independent Environmental Checker

c.c.: AECOM

Mr. Stephen GO

By Email

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## 1 INTRODUCTION

### 1.1 Background

- 1.1.1 The proposed Revised Trunk Road T4 is part of the strategic road network connecting Sha Tin Road with Tsing Sha Highway (TSH) and Shing Mun Tunnel Road (SMTR). The Project, as a strategic route, would serve as a bypass route providing a direct connection for through traffic between Ma On Shan area and Tsuen Wan / West Kowloon areas without the need of travelling along the existing major roads in Sha Tin Central, for example, Tai Po Road (Sha Tin Section) (TPR-ST), Tai Chung Kiu Road, etc., which are already very busy especially in peak hours. The Project will not only help to relieve traffic congestion on TPR-ST and other major roads in Sha Tin area but also improve the capacity of major local road junctions by directing traffic between Ma On Shan area and Tsuen Wan / West Kowloon areas away from the local road network.
- 1.1.2 An Environmental Impact Assessment (EIA)<sup>1</sup> study for the Project was conducted in accordance with the EIA Study Brief No. ESB-315/2019 (hereafter referred as “approved EIA”). The EIA Report and Environmental Monitoring and Audit (EM&A) Manual (Register No.: AEIAR-231/2022) were approved under the Environmental Impact Assessment Ordinance (EIAO), with an Environmental Permit (EP) granted on 08 November 2021 (EP No: EP-593/2021).
- 1.1.3 The Project provide a direct connection for through traffic between Ma On Shan area and Tsuen Wan / West Kowloon areas bypassing the busy at-grade road network of Sha Tin Central. Section of the proposed viaduct structure which crossing the Shing Mun River Channel (SMRC) would be located adjacent to ardeid night roosts, which recorded under the approved EIA, situated on trees planted along SMRC at the riverside between Hong Kong Heritage Museum (HKHM) and Man Lai Court (**Figure 1** refers) outside the Project boundary. According to the ecological surveys conducted in 2019 during the EIA study, this night roost comprises a group of mature trees (Chinese Banyan (*Ficus macrocarpa*), White Popinac (*Leucaena leucocephala*) and Lemon-scented Gum (*Corymbia citriodora*)), which supports night roosting ardeids, including Little Egret (*Egretta garzetta*), Great Egret (*Ardea alba*), Chinese Pond Heron (*Ardeola bacchus*) and Grey Heron (*Ardea cinerea*). As per the survey result from the approved EIA, the night roost was divided into Zone A to C, while majority of the ardeids (about 86%) was found roosting on Zone B to C. The abundance of night roosting ardeids at this night roost ranged from three individuals to 38 individuals in dry season. In, addition, some individuals of Grey Heron were also observed roosting at the rooftop of HKHM. Pre-roosting behavior was also observed at channel sections close to the night roost (**Figure 1** refers) as stated in the approved EIA. Around 60% of roosting ardeids foraged along the SMRC or temporarily perched on different trees before heading to their final roost after sunset.
- 1.1.4 The construction of the viaduct structure may result in potential disturbance and indirect impact on the night roosting ardeids and disruption on ardeid flight line utilising the SMRC. Mitigation measures include minimisation of glare near the night roost, good site practices and lining hoarding at the Project boundary, and restriction of working hours for construction works within 100 m from the ardeid night roost site (Dry season (Oct - Mar) 16:30 – 07:30; Wet season (Apr - Sep) 17:00-07:00) were recommended in the approved EIA Report to minimise the potential disturbance to the night roost during the construction stage. A Pre-Construction Ardeid Survey should therefore be conducted to update and verify the ecological conditions of the night roost prior to the commencement of construction works.
- 1.1.5 The construction works of the Project are tentatively scheduled to commence in Jan

<sup>1</sup> Civil Engineering and Development Department (CEDD) (2021). Revised Trunk Road T4 in Sha Tin– EIA Report.

2025. Pursuant to Condition 2.17 of EP-593/2021, a Pre-construction Ardeid Survey Plan (PASP), which provides the details including but not limited to the programme, methodology and location of the pre-construction ardeid survey, shall be prepared by qualified ecologist(s) appointed under Condition 2.5 of EP-593/2021 and shall be submitted to the Director of Environmental Protection (DEP) for approval no later than 3 months before commencement of construction works of the Project.

## 1.2 Purpose of this Plan

1.2.1 This PASP prepared by qualified ecologist presents the programme, methodology, and location of the pre-construction ardeid surveys, in order to achieve the objective of verification and update of ecological conditions (e.g. location and conditions of the night roost, and the presence of any new or alternative night roosts adjacent / within the Project boundary). Upon the approval of PASP, a pre-construction ardeid survey will be conducted accordingly. Subject to the latest findings from the pre-construction ardeid survey, the results from the EIA Study will also be reviewed for the applicability as monitoring baseline for subsequent ecological monitoring.

## 2 PRE-CONSTRUCTION ARDEID SURVEY

### 2.1 Survey Area and Methodology

2.1.1 For the purpose of the pre-construction ardeid survey and subsequent monthly monitoring, the surveys will be conducted in areas covering the ardeid night roosting site between Man Lai Court and HKHM. The pre-construction ardeid surveys will be undertaken to confirm the location of ardeid night roost and pre-roosting site(s) of ardeids, including the identified night roost, and any new / alternative locations of night roosts. Direct observation (with the aid of binoculars) of the night roosting ardeids will be made from the proposed vantage points (VP1 – VP3). The proposed vantage points are shown in **Figure 1**.

2.1.2 Species, abundance, flight lines, locations, and the tree species used for night roosting ardeids will be recorded as close to the night roosts as possible. Observation of the flight lines (including flight direction, flight height, and returning time of the pre-roosting and roosting ardeids) will be undertaken at the proposed vantage points.

2.1.3 The survey will start from approximately an hour before sunset and last until nightfall, which will be the peak period of ardeid activities at the night roost and pre-roost sites. The exact time of sunset on the date of survey will be made reference to the Hong Kong Observatory.

### 2.2 Survey Programme

2.2.1 The pre-construction ardeid survey will be conducted once per month between November 2024 and January 2025, prior to the commencement of construction works of the Project. The aim of the survey is to obtain the most updated conditions of the night roost in order to verify the findings from the approved EIA Report, and to establish the latest conditions for the purpose of subsequent monthly monitoring. **Table 2.1** summarizes the survey programme.

**Table 2.1 Proposed Survey Programme**

Survey	Nov 2024	Dec 2024	Jan 2025
Pre-construction Ardeid Survey	29th Nov	13th Dec	17th Jan

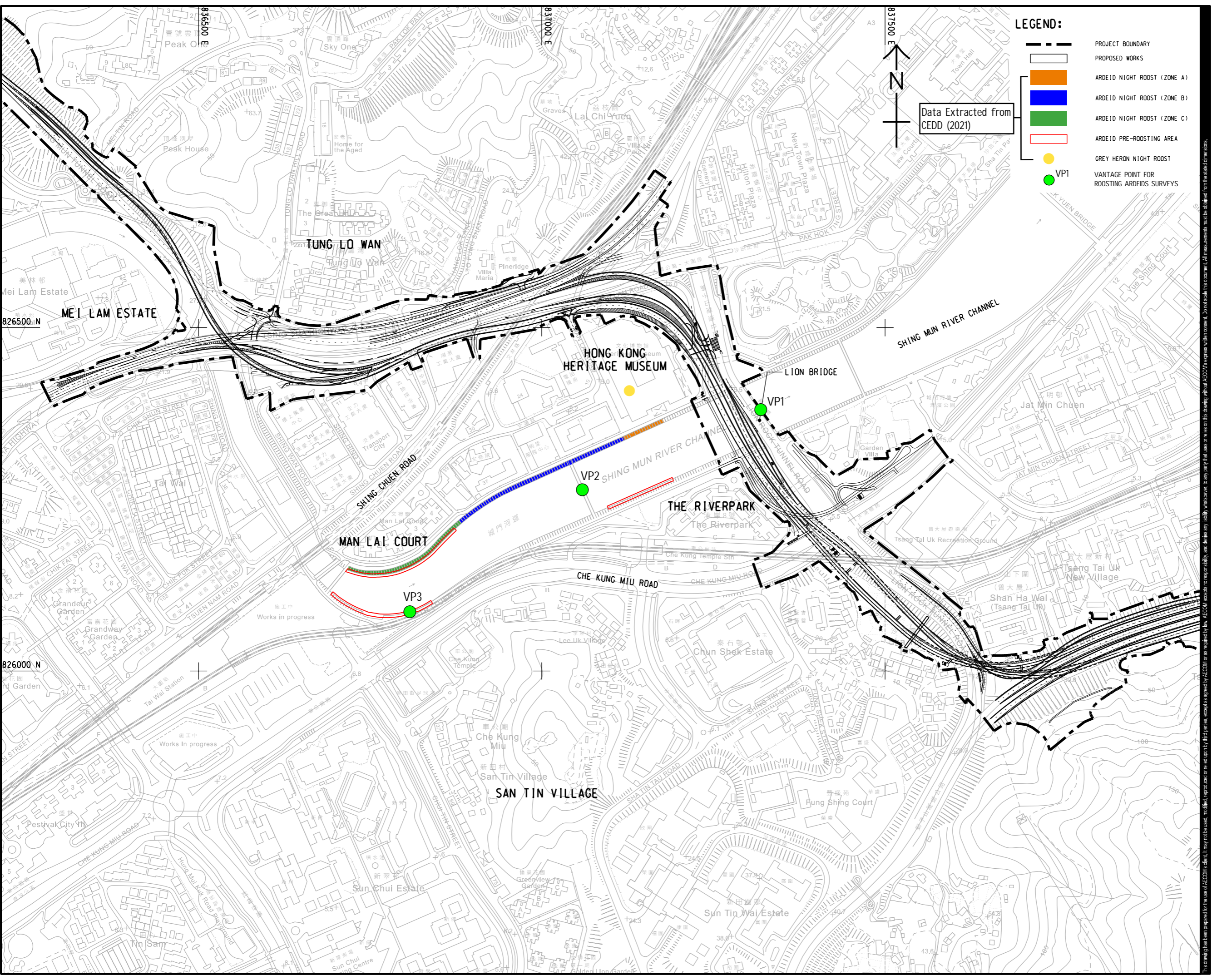
# The survey date would be subjected to weather condition.

### **3 PRE-CONSTRUCTION ARDEID SURVEY REPORT (PASR)**

- 3.1.1 According to the Condition 2.18 of EP-593/2021, a Pre-Construction Ardeid Survey Report (PASR) shall be submitted to the DEP for approval. The PASR will present the findings obtained from the pre-construction ardeid survey and from the EIA Study to establish the latest conditions.
- 3.1.2 The PASR will also list out the mitigation measures required to minimize impact on ardeid night roost during construction of the Project, including an implementation schedule in table form to clearly list out the mitigation measures to be implemented, including the implementation party, location, timing, and environmental performance required for implementation of the mitigation measures.
- 3.1.3 Subject to the findings of the survey, if any unwanted direct encroachment of construction works to ardeid roosting tree(s) would occur according to latest extent of ardeid night roosting prior to the construction activities, remedial actions should then be recommended, where appropriate, in consultation with relevant authorities, including AFCD and EPD.

**Figure 1**

ISO A1: 594mm x 841mm  
Approved:  
Checked:  
Designer:  
Project Management Initials:  
826500.N  
826000.N  
C:\ProgramData\Bentley\MicroStation\_V8i (SELECTseries)\WorkSpace\System\pltdlg\CSWP-75\color.plt  
Plot File: WJN\CKR\14102024  
PATH: P:\PROJECTS\6068607\DRAWINGS\SKETCH\CHSK7001.dgn



**LEGEND:**

- PROJECT BOUNDARY
- PROPOSED WORKS
- ARDEID NIGHT ROOST (ZONE A)
- ARDEID NIGHT ROOST (ZONE B)
- ARDEID NIGHT ROOST (ZONE C)
- ARDEID PRE-ROOSTING AREA
- GREY HERON NIGHT ROOST
- VANTAGE POINT FOR ROOSTING ARDEIDS SURVEYS

Data Extracted from CEDD (2021)

VP1

**AECOM**

**PROJECT**  
REVISED TRUNK ROAD T4 - DESIGN AND CONSTRUCTION

**CLIENT**  
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Civil Engineering and Development Department

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**ISSUE/REVISION**

NO.	DATE	DESCRIPTION	CHK.

**STATUS**  
編制

**SCALE**  
比例  
A1: 2500

**DIMENSION UNIT**  
尺寸單位  
METRES

**KEY PLAN**  
索引圖

**PROJECT NO.**  
項目編號  
60686076

**CONTRACT NO.**  
合約編號  
CE70/2021 (HY)

**SHEET TITLE**  
圖紙名稱  
LOCATION OF TRUNK ROAD T4 ALIGNMENT, ARDEID NIGHT ROOST AND PROPOSED VANTAGE POINTS

**SHEET NUMBER**  
圖紙編號  
60579757/SK7001/FIGURE 1

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