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# **Pre-construction Survey of the Night Roosting Site for Great Egrets and other Ardeid Species for the Expansion of Sha Tau Kok Sewage Treatment Works**

Pre-construction Survey Report | Hong Kong

0118/18/ED/0382 03 | 26 November 2019

Final

**Drainage Services Department**

# Document Control

## Document Information

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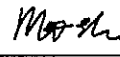

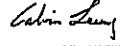
## Client Information

Client	Drainage Services Department
Client Address	42/F, Revenue Tower, 5 Gloucester Road, Wan Chai, Hong Kong
Client Contact	Gary K.K. LEUNG
Client Document No.	Contract No. CM 08/2018

## Revision History

Issue	Date	Status	Comments on Content	Prepared By	Certified By	Verified By
01	08 Nov 2019	For Review	Awaiting IEC comments/verification	MS/FN	CL	ANewR
02	22 Nov 2019	For IEC Verification	Addressed IEC's comments (20 Nov 2019)	MS/FN	CL	ANewR
03	26 Nov 2019	For Submission	Nil Comment	MS/FN	CL	ANewR

## Project Team

Initials	Name	Role	Signature
MS	Mark Shea	Ecologist/CHKEC	
FN	Fenelyn Nabuab	Ecologist/FTS	
CL	Calvin Leung	Environmental Team Leader	
ANewR	James Choi	Independent Environmental Checker	

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# 1. INTRODUCTION

## 1.1 Background

- 1.1.1 Fugro Technical Services Limited (FTS) was commissioned as the Baseline Phase Environmental Team (ET) by the Drainage Services Department (DSD) to implement the Environmental Monitoring and Audit (EM&A) programme for the Environmental Permit No. EP-517/2017/A – Expansion of Sha Tau Kok Sewage Treatment Works (STKSTW).
- 1.1.2 The EM&A programme of this Project shall be implemented in accordance with the requirements and procedures set out in Section 12 Environmental Monitoring and Audit (EM&A) Requirements of the EIA report (AEIAR-207/2017) and the Environmental Permit No. EP-517/2017/A.
- 1.1.3 As the ET, FTS shall also undertake the pre-construction survey to reconfirm the usage of the Night Roosting Site (NRS) for Great Egret and other ardeid species, which may be potentially affected by the expansion of STKSTW.
- 1.1.4 China Hong Kong Ecology Consultants Ltd. was appointed by FTS to undertake the aforementioned pre-construction survey.

## 1.2 Purpose of this Document

- 1.2.1 This document presents the results of the pre-construction survey of the NRS for Great Egrets and other ardeid species for the expansion of STKSTW in compliance with Section 2.12 of the Environmental Permit No. EP-517/2017/A, Section 7.0 of the EM&A Manual, and Section 12.7 of the EIA report (AEIAR-207/2017).

## 1.3 Objectives

- 1.3.1 The pre-construction surveys shall be conducted before the commencement of the construction activities to reconfirm the usage of the NRS for Great Egret and other Ardeid species. Specifically, the survey shall be conducted to:
- reconfirm the usage of NRS by the Great Egrets and other ardeid species; and
  - prepare a pre-construction survey report.

## 2. METHODOLOGY

### 2.1 Survey Area

2.1.1 Surveys were primarily focused on the location of the reported NRS. Area within 100 m radius of the reported NRS was also checked for the presence of any pre-roost and in case the NRS have changed location.

2.1.2 The boundary of the survey area is shown in Appendix A.

### 2.2 Field Surveys

2.2.1 Surveys were focused on ardeid population especially on the Great Egrets which are potentially utilizing the NRS at Sha Tau Kok.

2.2.2 Primary data collection were from about one hour before sunset time according to Hong Kong Observatory until about half an hour after sunset, the period when most ardeids return to a night roosting site.

2.2.3 Species composition and abundance of ardeid birds at the NRS and the location of night roosts were recorded.

2.2.4 Pre-roosting sites were also identified. Species composition and abundance of ardeid birds utilizing these sites were likewise recorded.

2.2.5 Direct observations had been made from a vantage point around the NRS. Observations such as bird droppings on the ground which indicate possible presence of night roost were noted.

2.2.6 Any breeding activity detected within the study area was also documented.

### 2.3 Survey Schedule

2.3.1 The NRS surveys were completed in October 2019. The initial survey was conducted on 3 October and was repeated on 22 October.

### 2.4 Reporting

2.4.1 This pre-construction report was prepared by qualified ecologists in accordance with the guidelines for Planning and Carrying out Construction Works at Egrettries by the Hong Kong Bird Watching Society (HKBWS).

2.4.2 The approval of the ecologist's appointment by the Environmental Protection Department is attached in Appendix B.

2.4.3 This pre-construction report was certified by the ETL and verified by the IEC.

### 3. RESULTS

- 3.1 In order to confirm the usage of the reported NRS, direct observations of the flight lines of ardeid birds were undertaken from a vantage point around the roosting site from one hour before sunset to half an hour after sunset (Appendix C.1 to Appendix C.2). The specific survey time periods are shown on **Table 3.1**.

Table 3.1: The Time Period of the Pre-Construction Survey

Date	Start Time	End Time
3 October 2019	17:00	18:35
22 October 2019	16:55	18:35

- 3.2 During the surveys, no ardeid birds were observed or traced to return to the reported NRS. Furthermore, no nests or bird droppings on the understory vegetation or on the ground were present within the reported NRS or its surroundings, i.e. 100m radius around the site (Appendix C.3 to Appendix C.4).
- 3.3 Numbers of broken branches were observed within the reported NRS, especially on large trees that potentially served as ardeid roosting sites. The broken branches might have been caused by Typhoon Mangkhut in 2018, and have consequently rendered the reported NRS as an unsuitable environment for ardeid roosting sites. (Appendix C.5 to Appendix C.6).
- 3.4 In the view of the above, the reported NRS is no longer utilized by ardeid birds.

### 4. CONCLUSION

- 4.1 According to the survey result, it is confirmed that the reported NRS within the study area is no longer utilized by ardeid birds. No further mitigation measures for the night roosting site shall be implemented after the commencement of the construction activities.
- 4.2 However, it is recommended that the contractors shall keep monitoring the signs of suspected NRS reformation and be aware of the follow up measures to take in this situation. If new NRS is forming, advice shall be sought from AFCD and/ or HKBWS to confirm or dismiss the validity of the suspicion (HKBWS, 2018).

### 5. REFERENCE

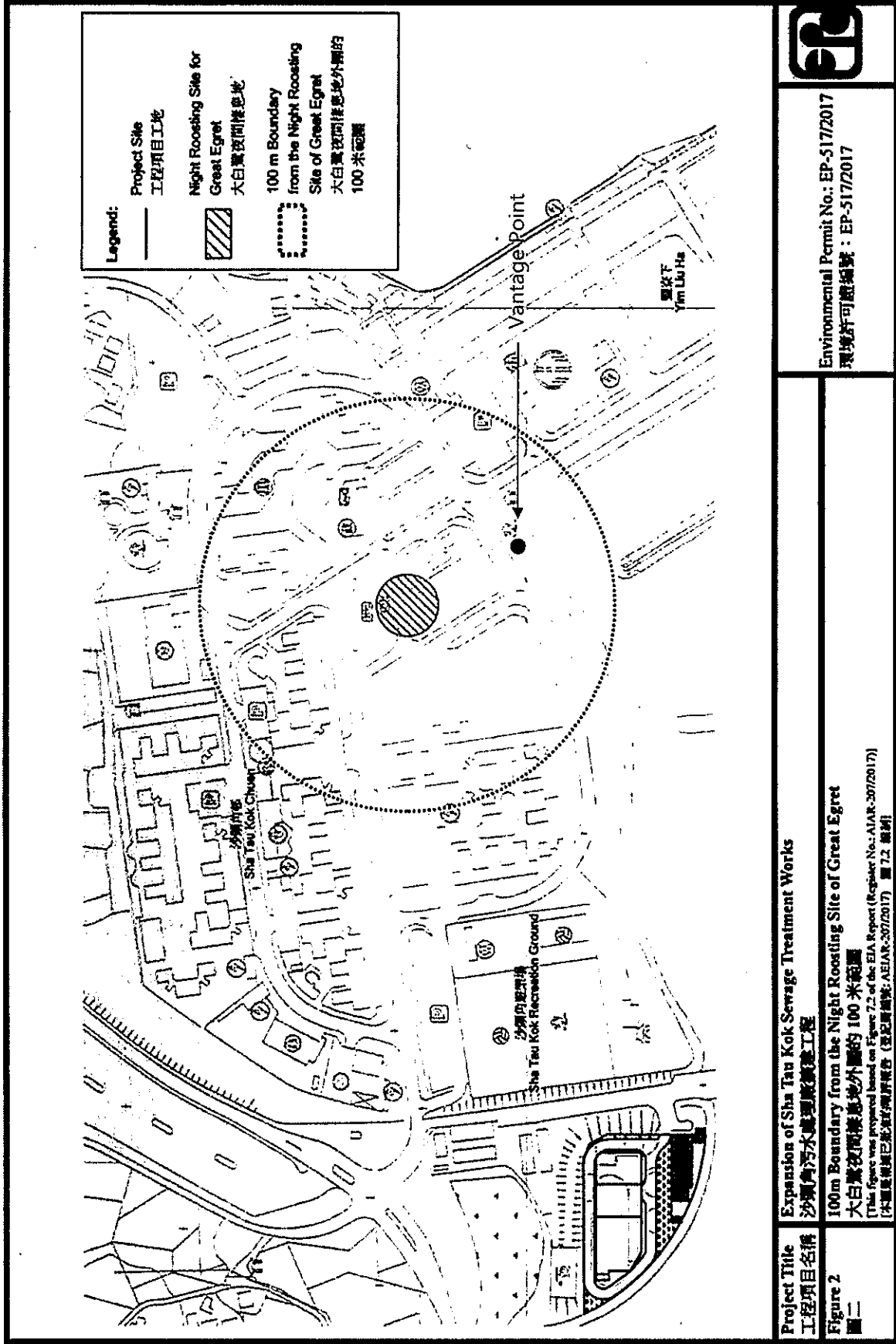
Hong Kong Bird Watching Society. 2018. Guidelines for Planning and Carrying out Construction Works at Egrettries.



# **Appendix A**

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Location of the Night Roosting  
Site Survey







# **Appendix B**

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Approval of Proposed Ecologists  
from EPD

18-OCT-2019 15:07 FROM EPD BIAO REGISTER OFFICE TO 31046426

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本署編號  
OUR REF: ( ) in EP 2/N7/F77 PL2  
來稿編號  
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Environmental Protection Department  
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修頓中心八樓



18 October 2019

**Urgent By Fax (3104 6426)**

Drainage Services Department  
42/F, Revenue Tower  
5 Gloucester Road  
Wan Chai, Hong Kong  
(Attn: Mr K.K. LEUNG)

Dear Mr LEUNG,

Environmental Impact Assessment Ordinance, Cap.499  
Project Title: Expansion of Sha Tau Kok Sewage Treatment Works  
Environmental Permit No. EP-517/2017

**Condition 2.1 – Employment of Ecologist under Environmental Team**

I refer to your letters of 30 July 2019 and 9 August 2019 proposing the employment of Mr Mark Shea and Ms Fenelyn Nabwab as Ecologist under the Environmental Team of the captioned project under Condition 2.1 of the captioned Environmental Permit (EP).

Pursuant to Condition 2.1 of the EP and having sought the advice of the Agriculture, Fisheries and Conservation Department, the above proposed employments are hereby approved.

Yours sincerely,

( Steve T.S. LI )

Senior Environmental Protection Officer  
for Director of Environmental Protection

c.c.

DAFC

ANewR (IEC)

Fugro (ET)

(Attn: Dr. Alvin Y. T. HO)

(Attn: Mr. James CHOI)

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C/O LYM

**Internal**

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# Appendix C

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Survey Photos



Appendix C.1: Direct observation during survey (3 October 2019)



Appendix C.2: Direct observation during survey (22 October 2019)



Appendix C.3: Previous Roosting Site (3 October 2019)



Appendix C.4: Previous Roosting Site (22 October 2019)



Appendix C.5: Broken branches (3 October 2019)



Appendix C.6: Broken branches (22 October 2019)