

Ocean Park Tai Shue Wan Water World Project

Operation Phase Monthly EM&A Report
February 2022

March 2022

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This Operation Phase Monthly EM&A Report for February 2022 has been reviewed and certified by the Environmental Team Leader (ETL) and verified by the Independent Environmental Checker (IEC) as having complied with the requirements as set out in the EM&A Manual in accordance with Condition 3.4 of Environmental Permit No. EP-487/2014/A.

Certified by:



Gary Chow
Environmental Team Leader (ETL)
Mott MacDonald Hong Kong Limited

Date:

11 MAR 2022

Verified by:



Mandy To
Independent Environmental Checker (IEC)
ERM-Hong Kong Limited

Date:

14 Mar 2022

Information class: Standard

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Executive summary

Mott MacDonald Hong Kong Ltd. (“MMHK”) has been commissioned by the Ocean Park Corporation to undertake the Environmental Team (ET) services to carry out environmental monitoring and audit (EM&A) for the operation phase of Ocean Park Tai Shue Wan Water World (the Project).

This is the 4th Monthly EM&A Report for the operation phase of the Project summarising the findings on EM&A during the period from 1 to 28 February 2022, and is submitted under the Environmental Permit (No. EP-487/2014/A).

Environmental Monitoring and Audit Progress

A summary of the operation phase monitoring activities during the reporting period is listed as below:

- Monitoring of the Ecological Enhancement Area (monthly): 22 February 2022
- Landscape and visual monitoring (bi-monthly): To be conducted during the next reporting period.

1 Introduction

1.1 Background

On 27 August 2014, the Environment Impact Assessment (EIA) Report and Environmental Monitoring and Audit (EM&A) Manual (Register No.: AEIAR-184/2014) for the “Tai Shue Wan Development at Ocean Park” (the Project) was approved and an Environmental Permit (EP) (Permit No.: EP-487/2014) was issued to the Ocean Park Corporation (Project Proponent). Based on the Application for Variation of Environmental Permit No. VEP-539/2017, the current valid EP (Permit No.: EP-487/2014/A) was issued on 10 January 2018. The location and layout of the Project are presented in **Appendix A**.

Upon the completion of construction of the Project in May 2021 and the approved termination of construction phase EM&A programme in July 2021, the Water World opened on 21 September 2021. Mott MacDonald Hong Kong Ltd. (“MMHK”) has been commissioned by the Project Proponent to undertake the Environmental Team (ET) services to carry out operation phase EM&A for the Ocean Park Tai Shue Wan Water World Project.

Under the requirements of Section 3 of EP and the EM&A Manual, environmental monitoring of ecology, landscape and visual are required for one year during operation phase. This is the 4th Operation Phase Monthly EM&A Report summarising the monitoring results for the Project during the Reporting Period from 1 to 28 February 2022.

1.2 Project Organisation

The project organisation and the contacts of key personnel of the Project are shown in **Appendix B**.

1.3 Environmental Status and Programme

The current monitoring is under the operation phase of the Project with all construction activities completed, thus there were no construction works involved.

Monitoring of ecological enhancement area was conducted with a monitoring programme for once per month for 12 months during operation phase.

Landscape and visual monitoring was conducted with a monitoring programme for once in bi-monthly intervals throughout the 12-month establishment period in operation phase.

Submissions required under the EP that were approved by the EPD and deposited to the EIA Ordinance Register Office are as listed below:

- Detailed Vegetation Survey Report
- Woodland Compensation Plan
- Ardeid Inspection Report
- Short-nosed Fruit Bat Inspection Report
- Baseline Monitoring Report
- Ecological Enhancement Plan
- Visual and Landscape Plan
- Detailed Design Report for the Sewerage Facilities
- Noise Audit Report

2 Monitoring of Ecological Enhancement Area

2.1 Monitoring Requirement

As required under the Section 8.3.2.4 of the approved EM&A Manual and the approved Ecological Enhancement Plan under EP Condition 2.8, the Ecological Enhancement Area (EEA) should be monitored monthly after establishment, for one year during operation phase to check the effectiveness of the setting.

Direct observation and counting of ardeids was made from a vantage point (i.e., point count method) at the evening time from an hour before sunset, and last until the nightfall. Before conducting point count survey, the EEA was also inspected and searched for any ardeids, other birds or faunal groups utilising the habitat. Any aggregation of night roosting ardeids in the EEA or adjacent area would be located, and the ardeid species would be identified and counted throughout the monitoring. Moreover, day roost of Black-crowned Night Heron in the EEA or adjacent area would also be recorded if any.

2.2 Monitoring Findings

Monitoring of the EEA was undertaken on 22 February 2022. The EEA was inspected, but no ardeids or day roost of Black-crowned Night Heron were found in the EEA. Individuals of Black Kite (*Milvus migrans*) were observed soaring over the area. Other bird species observed within the EEA include Black-collared Starling (*Gracupica nigricollis*), Blue Whistling Thrush (*Myophonus caeruleus*), Chinese Bulbul (*Pycnonotus sinensis*), Grey Wagtail (*Motacilla cinerea*), White Wagtail (*Motacilla alba*), Red-billed Blue Magpie (*Urocissa erythroryncha*), and Plumbeous Water Redstart (*Phoenicurus fuliginosus*). Plumbeous Water Redstart is a species considered as of Local Concern (Fellowes et al., 2002)¹ and it was observed perching at a bush near the pond. Field signs i.e. diggings left by wild boars were observed next to the pond within the EEA (see **Figure 2.1**). Two groups of Short-nosed Fruit Bat (*Cynopterus sphinx*), which is a species listed as “Near Threatened” in Red List of China’s Vertebrates (Jiang et al., 2016)², were also observed roosting under Chinese Fan-palms within the EEA (see **Figure 2.2**), which echoes the findings of the Short-nosed Fruit Bat Inspection Report submitted prior the construction phase.

¹ Fellowes, J.R., Lau, M.W.N., Dudgeon, D., Reels, G.T., Ades, G.W.J., Carey, G.J., Chan, B.P.L., Kendrick, R.C., Lee, K.S., Leven, M.R., Wilson, K.D.P., and Yu, Y.T. (2002). Wild Animals to Watch: Terrestrial and Freshwater Fauna of Conservation Concern in Hong Kong. *Memoirs of the Hong Kong Natural History Society*, 25, 123-160.

² Jiang, Z. G., Jiang, J.-P., Wang, Y. Z., Zhang, E., Zhang, Y. Y., Li, L.L., Xie, F., Cai, B., Cao, L., Zheng, G. M., Dong, L., Zhang, Z. W., Ding, P., Luo, Z. H., Ding, C. Q., Ma, Z. J., Tang, S. H., Cao, W. X., Li, C. W., Hu, H. J., Ma, Y., Wu, Y., Wang, Y. X., Zhou, K. Y., Liu, S. Y., Chen, Y. Y., Li, J. T., Feng, Z. J., Wang, Y., Wang, B., Li, C., Song, X. L., Cai, L., Zang, C. X., Zeng, Y., Meng, Z. B., Fang, H. X. and Ping, X. G. (2016). Red List of China’s Vertebrates. *Biodiversity Science*, 24(5): 500–551.



Figure 2.1 Diggings left by wild boars within the EEA



Figure 2.2 Short-nosed Fruit Bat roosting on frond of Chinese Fan-palm

Point count survey was conducted covering the period from one hour before sunset until nightfall (17:14 to 18:45). Direct observation was made at the vantage point next to the EEA with an unobstructed view covering the EEA, seawall at Tai Shue Wan, Aberdeen Channel and a portion of the East Lamma Channel. The location of the vantage point is indicated in **Appendix C**. Throughout the monitoring period, no ardeids were noted roosting within or flying towards the EEA. On the other hand, an individual of Great Egret was observed resting at a floating object at Aberdeen Channel, while an individual of Little Egret was observed flying in towards the typhoon shelter.

3 Landscape & Visual Monitoring

3.1 Monitoring Requirement

Landscape and visual mitigation measures for the operation phase are listed in Table 9.2 of the Approved EM&A Manual, while the detailed implementation plans are presented in the approved Visual and Landscape Plan.

According to Section 9.1 of the approved EM&A Manual, a Registered Landscape Architect (RLA), as a member of the ET team, would be responsible for monitoring the implementation of landscape and visual measures during the operation phase.

As required under the Section 9.5 of the approved EM&A Manual, all landscape planting shall be monitored bi-monthly during the first year of the operation phase to ensure proper establishment and its effectiveness as landscape and visual mitigation measures. The scope of the site audit during this 12-month establishment period in operation phase shall include the following:

- All necessary horticultural operations and replacement planting are undertaken throughout the 12-month establishment period to ensure healthy establishment.

Any observation of unsatisfactory horticultural maintenance works, failure of establishment of soft landscape or poor condition of established planting shall be recorded for Ocean Park operator to undertake any necessary actions to improve the conditions of the landscape planting.

3.2 Audit Summary

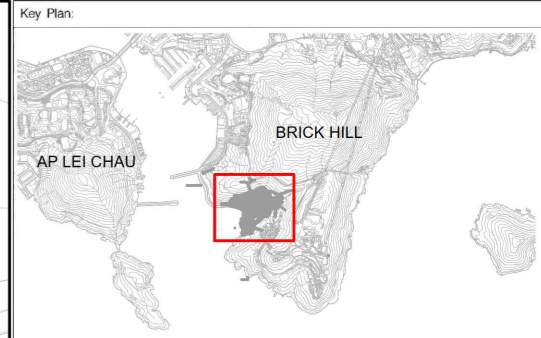
In the reporting period, no landscape and visual site inspection was conducted. Landscape and visual site inspection was last conducted on 19 January 2022, while the next site inspection will be conducted tentatively on 15 March 2022 for the next reporting period.

4 Conclusions

Operation phase EM&A works including the monitoring of the EEA were conducted in accordance with the EM&A Manual during the reporting period.

In this month of monitoring of the EEA, survey was conducted on 22 February 2022 covering the period from one hour before sunset until nightfall. No ardeids were noted roosting in the EEA, while two species of conservation importance, Plumbous Water Redstart and Short-nosed Fruit Bat, were observed within the EEA.


Appendix A Project Layout



Notes:

Key to symbols:

LEGEND

 PROJECT AREA



| Rev | Date | Drawn | Description | Ch'k'd | App'd |
|-----|----------|-------|-------------|--------|-------|
| P1 | JUL 2021 | KN | | HL | GC |

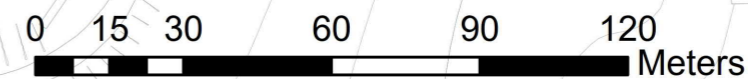
M M
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Project
**TAI SHUE WAN DEVELOPMENT
AT OCEAN PARK**

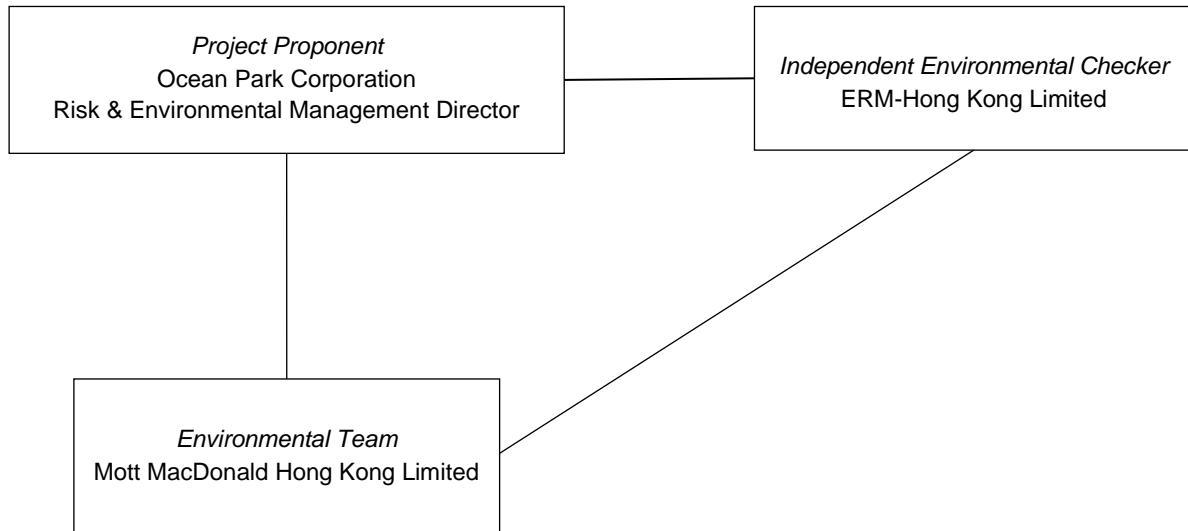
Title
LOCATION OF THE PROJECT

| | | | |
|-------------|--------|--------------|--|
| Designed | | Eng check | |
| Drawn | | Coordination | |
| Dwg check | | Approved | |
| Scale at A3 | Status | Rev | |



Drawing Number **FIGURE 1.1**

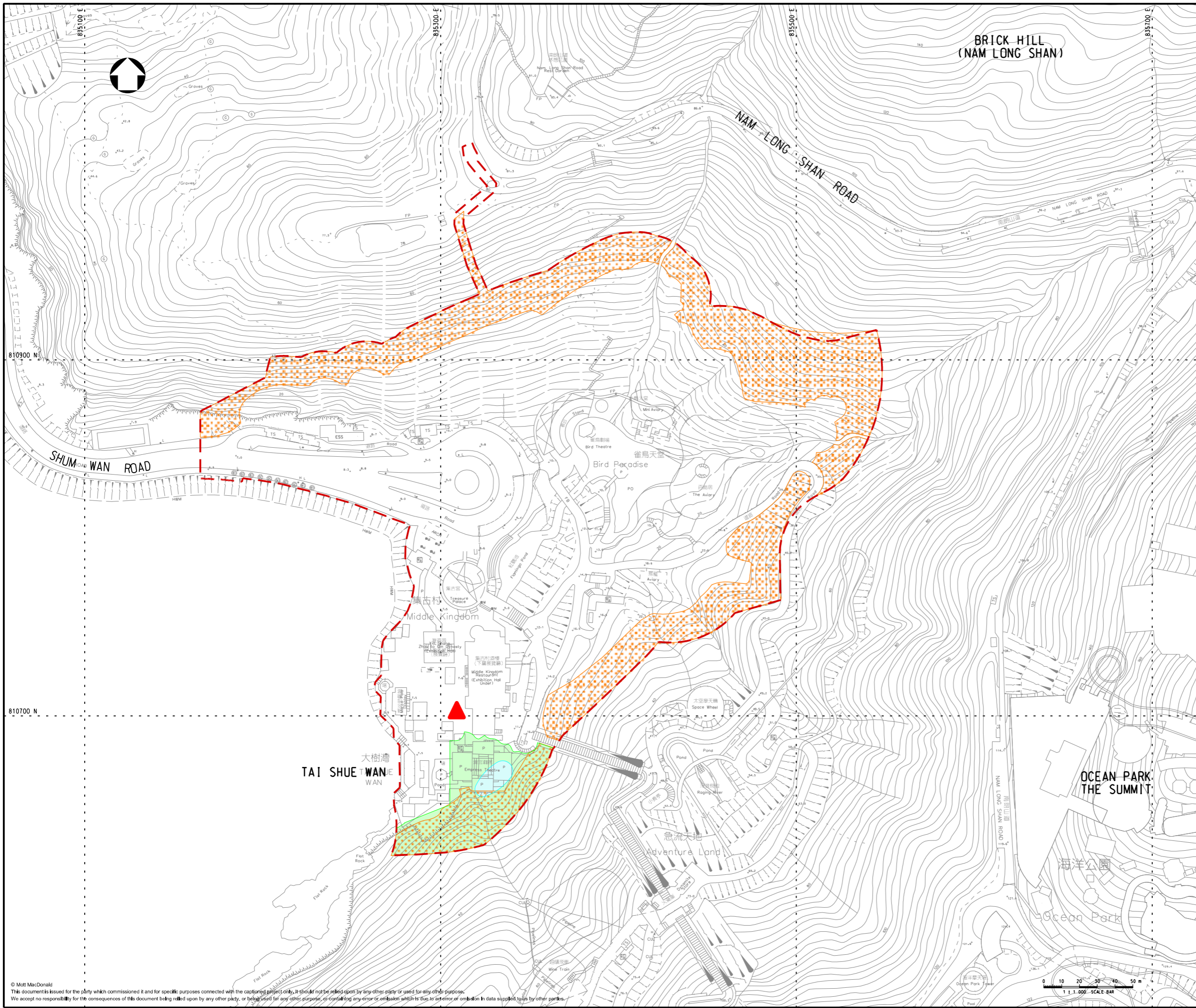
Appendix B Project Organisation



Contact information

| Company / Department | Position | Name | Telephone / Mobile | Fax No. |
|-------------------------------|--|----------------|--------------------|-----------|
| Ocean Park Corporation | Risk & Environmental Management Director | Mr Frankie Hau | 3923 2528 | 2518 4738 |
| ERM-Hong Kong Ltd. | Independent Environmental Checker | Ms Mandy To | 2271 3113 | 3015 8052 |
| Mott MacDonald Hong Kong Ltd. | Environmental Team Leader | Mr Gary Chow | 2828 5874 | 2827 1823 |

Appendix C Location of Vantage Point



Notes

Key to symbols

- PROPOSED PROJECT BOUNDARY
- PROPOSED WOODLAND COMPENSATION AREA
- PROPOSED ECOLOGICAL ENHANCEMENT AREA
- PROPOSED FRESHWATER POND
- ▲ PROPOSED VANTAGE POINT

Reference drawings

| Rev | Date | Drawn | Description | Ch'k'd | App'd |
|-----|--------|-------|-------------|--------|-------|
| P1 | DEC 19 | MING | FIRST ISSUE | HY | EC |

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Project

**TAI SHUE WAN DEVELOPMENT
AT OCEAN PARK**

Title

**LOCATION OF VANTAGE POINT
FOR MONITORING**

| | | | |
|----------------|-------------------|--------------|-----|
| Designed | HY | Eng check | HY |
| Drawn | MING | Coordination | HY |
| Dwg check | HY | Approved | EC |
| Scale at A1 | 1:1000 | Status | PRE |
| Rev | | | P1 |
| Drawing Number | APPENDIX C | | |

