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BY HAND

Your ref () in EP2/N7/A/78 Pt.26

Our ref 231448/(CV/2017/02)/M45/950/B02213

Environmental Protection Department
The EIA Ordinance Register Office
27th Floor, Southorn Centre
130 Hennessy Road
Wan Chai, Hong Kong

2 June 2022

Dear Sir

Contract No. CV/2017/02

Development of Columbarium at Sandy Ridge Cemetery – Infrastructural Works at Man Kam To Road and Lin Ma Hang Road

Submission under Environmental Permit (EP-534/2017/A) – Condition 2.15 - 2.17 (Submission of Vegetation Survey Report and Transplantation Proposal (By Qualified Ecologist) – Revision 5)

We refer to the above referenced email dated 23 January 2022 from Ms. Candice Chung providing comments on the captioned proposal.

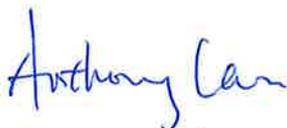
We submit herewith four hard copies and one electronic copy of the revised proposal (*Attachment A* refers).

The certification letter by ET Leader and the verification letter by IEC for the foregoing proposal are enclosed (*Attachment B* refers).

The Response to Comments table for the foregoing proposal is also enclosed for your review (*Attachment C* refers).

Should you have comment on the foregoing submission, please feel free to contact my Resident Engineer, Mr. C.S. DING at 6190-1835 or ET Leader, Mr. TAM Tak-wing at 9212-0408.

Yours faithfully



LAU Pak-yan, Anthony

The *Project Manager's* delegate for this contract

cc CEDD – DPTL/HEP	- Mr. SHUM Ngai-hung, Steven	} w/o electronic copy
SHCCCL	- Mr. Elvin LAM	
ET (AUES)	- Mr. T.W. TAM (via e-mail)	
IEC (Acuity)	- Mr. Jacky LEUNG (via e-mail)	

Response required : Yes
Date required : N/A
Attachment : Yes (4 sets + 1 CD)

HL/DH/BL/ac

Attachment A

Contract No. CV/2017/02
 Development of Columbarium at Sandy Ridge Cemetery
 – Infrastructure Works at Man Kam To Road and Lin Ma
 Hang Road

Vegetation Survey Report and Transplantation Proposal

Revision	0	1	2	3	4
Date of issue	10 Sep 2018	21 Sep 2018	31 Oct 2018	12 Nov 2020	17 May 2020
Revision	5	6			
Date of issue	5 Nov 2021	25 May 2022			
Prepared by	Mike Leung Qualified Ecologist				
Certified by	T.W. Tam Environmental Team Leader				
Verified by	Jacky Leung Independent Environmental Checker (IEC)				

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EXECUTIVE SUMMARY

Site formation and associated infrastructural works for the columbarium and crematorium (C&C) facilities at Sandy Ridge Cemetery (the Project) will be divided into three works packages. This report will cover the proposed works and vegetations related to Contract Package 2 only.

In accordance with the conditions 2.15, 2.16 and 2.17 of the amended Environment Permit (No. EP-534/2017/A), the Permit Holder shall submit a vegetation survey report and transplantation proposal. The report shall report the presence, as well as update the conditions, number, locations and habitat types of any identified floral species of conservation importance within the works area. The survey shall also identify the number and locations of the individuals of floral species of conservation importance to be affected by the Project and evaluate suitability and/or practicability of transplantation. This vegetation survey report and transplantation proposal was prepared by qualified ecologist(s) approved under EP Conditions 2.1 and 2.4.

Vegetation surveys were undertaken on Aug 2018, Sep 2018 and Feb 2019 by the Qualified Ecologist of the Project. Among all species of conservation significance identified in EIA report, two species were found either within works area of Contract Package 2 or potentially affected by the Project. According to the vegetation surveys, two *Aquilaria sinensis* and two *Ailanthus fordii* identified at EIA stage were found missing on site. Three additional saplings of *Aquilaria sinensis* were identified along Lin Ma Hang Road. Feasibility of transplantation of these existing *Aquilaria sinensis* was evaluated base on numbers of factors including size, health condition, presence of structural defects, survival rate after transplanting, access of site etc.

Consider the difficulties in the formation of solid rootball with sufficient size and uniform shape and the existing structural defects, transplanting of the 3 *Aquilaria sinensis* is not recommended.

Since no transplantation is recommended, no transplantation proposal is included in this report.

1. INTRODUCTION

1.1 BACKGROUND

1.1.1 The main objective of the proposed site formation and associated infrastructural works for development of columbarium, crematorium (C&C) and related facilities at Sandy Ridge Cemetery is to increase the public cremation services and supply of public niches to meet the future demand.

1.1.2 The Project is to carry out site formation and associated infrastructural works for the columbarium and crematorium (C&C) facilities at Sandy Ridge Cemetery. The scope for the Project include:

<u>Area</u>	<u>Proposed Works</u>
Works Within Study Area	<ul style="list-style-type: none"> ● Site formation of about 5.5 hectares of land and associated drainage, sewerage and landscape works for development of Columbarium and Crematorium facilities at the Sandy Ridge Cemetery; ● Construction of a new road (about 800m) connecting the Crematorium and Man Kam To Road and the pick-up/drop-off point at Man Kam To Road; ● Widening of two sections of the existing Sha Ling Road (about 900m and 500m respectively); ● Widening of about 1.4km of the existing Lin Ma Hang Road.

1.1.3 The Project consists of the following designated projects under Part I, Schedule 2 of the EIAO:

- Item I.1 (b)(vii) – A drainage channel or river training and diversion works which discharges or discharge into an area which is less than 300 m from the nearest boundary of an existing or planned conservation area.

1.1.4 The EIA report was approved with conditions on 8 August 2016 (Register No.: AEIAR-198/2016). EPD issued an Environmental Permit (EP) for the Project (No. EP-534/2017) on 7 April 2017. Subjected to the Application for Variation of Environmental Permit (No. VEP-554/2018), a variation of EP (No. EP-534/2017/A) was granted by the EPD on 24 December 2018.

1.1.5 The proposed works of that project will be divided into three works packages and constructed by three main contractors. This report will cover the proposed works and vegetations related to Contract Package 2 only. The extent of the project boundary for Contract Package 2 is shown in **Appendix A** and works details are listed as follow:

For Contract Package 2:

- Construction of a new road connecting Columbarium site to Crematorium site;
- Construction of one EVA with a total length of about 300m;
- Widening of a section of 1.4 km long Lin Ma Hang Road (between Man Kam To Road and Ping Yuen River) from 6m wide carriageway to 7.3m with 2m width footpath on both sides;
- Provision of a pair of lay-by at Lin Ma Hang Road;
- Construction of a new vehicular access connecting the Sheung Shui Landmark North PTI and Lung Sum Avenue;
- Construction of covered walkway along Fanling Station Road;
- Removal of planters and central divider along Fanling Station Road and San Wan Road;
- Associated drainage, sewerage, waterworks and utility works along Man Kam To Road and Lin Ma Hang Road;
- Associated geotechnical works including cut and fill slopes, soil nailing works and retaining structures; and
- Associated landscaping works.

1.1.6 The vegetation survey and transplantation proposal for Contract Package 1 and Contract Package 3 were/would be provided in the relevant submission under FEP-01/534/2017/A and separated submission prepared by Contract Package 3 at suitable juncture in the future respectively.

1.2 OBJECTIVE

1.2.1 In accordance with the conditions 2.15, 2.16 and 2.17 of the amended Environment Permit (No. EP-534/2017/A), the Permit Holder shall submit a vegetation survey report and transplantation proposal no later than one month before the commencement of construction of the Project. Relevant EP conditions are extracted below:

- Condition 2.15: The survey shall report the presence, as well as update

the conditions, number, locations and habitat types of any identified floral species of conservation importance within the works area. The survey shall also identify the number and locations of the individuals of floral species of conservation importance to be affected by the Project and evaluate suitability and/or practicability of transplantation.

- Condition 2.16: If the Vegetation Survey concluded that transplantation of the affected floral species of conservation importance is needed, the Permit Holder shall submit a Transplantation Proposal no less than one month before commencement of transplantation to the Director for approval.
- Condition 2.17: The Vegetation Survey Report and the Transplantation Proposal shall be prepared by a qualified ecologist/botanist and shall be certified by the ET Leader and verified by the IEC as conforming to the information and recommendations contained in the EIA Report (Register No.: AEIAR-198/2016).

1.2.2 This report is prepared to fulfill the requirements of the above mentioned EP Conditions based on the best available information at the time of submission. All recommended measures as set out in the approved Transplantation Proposal shall be fully and properly implemented.

1.2.3 As recommended by the EIA report (Register No.: AEIAR-198/2016), associated EM&A Manual and the supporting document for VEP applications VEP-554/2018 and VEP-555/2018, vegetation surveys of impacted works areas should be conducted prior to any vegetation removal so as to:

- Ascertain the presence, as well as update the conditions, number, locations and habitat types of flora species of conservation importance and other rare/protected plant species (if any) identified within construction works areas.
- Identify the number and locations of the individuals of floral species of conservation importance to be affected by the Project.
- Evaluate the suitability and/or practicality of the transplantation.

1.2.4 A Transplantation Plan should be prepared if needed as concluded in the Vegetation Survey Report. As stated in the EM&A Manual, the Transplantation Plan should include full details of the findings of the comprehensive vegetation survey (including number and locations of the affected individuals, and assessment of suitability and/or practicality of the

transplantation), locations of the receptor site(s), transplantation methodology, implementation programme of transplantation, post-transplantation monitoring and maintenance programme.

1.3 STRUCTURE OF THE REPORT

1.3.1 This Report is divided into 6 sections as follow:

- Section 1 outlines an introduction to the project outline and EP requirements regarding this Report.
- Section 2 presents the baseline finding of the approved EIA Report
- Section 3 presents result of vegetation survey
- Section 4 provides recommendation and evaluate the suitability and/or practicality of the transplantation
- Section 5 presents the details of Transplantation Proposal
- Section 6 concludes the Vegetation Survey and Transplantation Proposal
- Section 7 lists the appendices as supporting information

2. BASELINE INFORMATION

2.1 APPROVED EIA REPORT (Register No.: AEIAR-198/2016)

2.1.1 Nine months survey from April to December 2014 has been carried out within 500m of the Project boundary including Sandy Ridge, Man Kam To Road, Sha Ling Road and Lin Ma Hang Road. The survey includes vegetation, terrestrial mammals, avifauna (birds, egret flight lines), herpetofauna, odonata, butterflies and aquatic fauna. Based on these surveys, habitat mapping is carried out.

2.1.2 The ecological significance of observations of species of conservation significance and protected species found in the Project works boundary and 500m assessment area are addressed in the section 9.5.2 of the EIA Report.

2.1.3 A total of 10 botanical species within the Assessment Area were of conservation interest. Individuals of two species were included in this report:

- *Aquilaria sinensis* (recorded within works area)
- *Ailanthus fordii* (recorded outside works area but potentially affected by the Project)

The locations of flora species of conservation interest are illustrated in **Appendix B**.

2.1.4 A total of 15 nos. of Incense Tree (*Aquilaria sinensis*) in seedlings, saplings or trees are recorded in the survey. Among them, 4 nos. of Incense Tree (*Aquilaria sinensis*) were recorded within the project site as follows:

- 1 tree at the Plantation along Sha Ling Road east of the Project boundary (within boundary of Contract Package 3)
- 2 saplings in Plantation edge along Lin Ma Hang Road section (within boundary of Contract Package 2; Identified as AS1 and AS2 in this report)
- 1 tree at the edge of Woodland (within boundary of Contract Package 1)

2.2 Update survey (Supporting Document for VEP Application VEP-554/2018)

2.2.1 A 4-month ecological update survey was conducted from Feb 2018 to May 2018 as a supporting document for Application of Variation of Environmental Permit in the east of Sandy Ridge. The survey includes vegetation, terrestrial mammals, birds, herpetofauna, odonata, butterflies and aquatic fauna. The locations of flora species of conservation interest are illustrated in **Appendix**

C.

- 2.2.2 The plant composition and structure recorded in these terrestrial habitats remain largely unchanged as per the approved EIA report, and are typical to similar habitats in the territory. Two additional tree saplings of *Aquilaria sinensis* were recorded along the woodland edge next to Sha Ling Road. They were located outside the project boundary of Contract Package 1, 2 and 3 and were not affected by the Project.

3. RESULT OF VEGETATION SURVEY

3.1 SURVEY PERIOD

A vegetation survey was undertaken on 28 Aug 2018 within the Project boundary. Additional inspections were conducted on 14 Sep 2018 and 25 Feb 2019. All surveys were conducted by Qualified Ecologist without the presence of AFCD.

3.2 SURVEY METHODOLOGY

3.2.1 A vegetation survey was conducted by actively searching for individuals of *Aquilaria sinensis* and any other flora species of conservation interest within the Project boundary.

3.2.2 The number, locations and condition of *Aquilaria sinensis* identified were recorded. Should other flora species of conservation interest be encountered during the vegetation survey, their number, locations and condition were also recorded.

3.2.3 The health condition (good/fair/poor) and size (height and crown spread) of all identified plant individuals has been recorded, and their suitability for transplanting has been evaluated on-site with the following criteria:

- Health – with regard to the foliage density, leave size and color, presence and severity of pest and disease, presence of severity of structural defect, and only those plants in fair or good condition would be expected to recover from the transplanting shock
- Size – the extensiveness of the root system would expect to be proportional to the plant size, and loss of root mass and hence plant vigor during rootball preparation/transplanting would expect to be more severe for mature and plant of larger size
- Local environment - the immediate environment (such as the local gradient, presence of man-made structure, bedrock or other tree) of the plant may limit the size and shape of the rootball that could be formed during rootball formation, and hence the chance of recovery from transplanting shock.

3.3 SURVEY FINDING

3.3.1 *Aquilaria sinensis*

3.3.1.1 According to the paragraph 9.5.1.19 and summarized in table 9.18 of the EIA report, two saplings of *Aquilaria sinensis* in plantation edge along Lin Ma Hang Road has been identified (referred as AS1 and AS2 in this report). Both AS1 and AS2 were located within the project boundary and are affected by proposed construction works. However, during the vegetation survey on 28 August 2018, only one of them (AS2) was found at the aforesaid location. In addition, another sapling of *Aquilaria sinensis* (AS3) was identified in Sandy Ridge. Please refer to **Appendix E** for photo records.

3.3.1.2 During a follow-up inspection on 14 September 2018, the two surveyed and tagged *Aquilaria sinensis* (AS2 and AS3) were missing at the original location. Since no site clearance of the vegetation is observed from both locations, only the *Aquilaria sinensis* are missing and no plant debris could be found on site, vandalism of the two tagged *Aquilaria sinensis* is suspected. The photo record of this additional inspection was shown in **Appendix F**.

3.3.1.3 A third vegetation survey was conducted on 25 February 2019. Three additional saplings of *Aquilaria sinensis* were identified as AS4, AS5 and AS6 along Lin Ma Hang Road. The photographic record of this additional vegetation survey is shown in **Appendix G**.

3.3.1.4 The location of the *Aquilaria sinensis* identified is shown in **Appendix D**.

3.3.2 Other flora species of conservation importance

3.3.2.1 Within the works area, no other flora species of conservation interest apart from *Aquilaria sinensis* was identified during the vegetation survey.

3.3.2.2 According to the approved EIA report, two *Ailanthus fordii* tree specimens (AF1 and AF2) were recorded from the Lin Ma Hang Road section, opposite to the access path leading to Muk Wu Village. The trees were located outside but close to site boundary of Contract Package 2 and were potentially affected by the Project. Whilst this species is native, it is

considered that these two specimens have been planted for their ornamental value. Both AF1 and AF2 were found missing during the vegetation survey.

3.3.2.3 Other individuals of floral species of conservation importance identified in EIA report but outside works area were a significant distance away from the proposed development. Those individual were not affected by the Project and therefore not included in this report.

3.3.2.4 Details of flora species of conservation importance related to Contract Package 2 are listed in Table 1.

Table 1 Details of flora species of conservation importance identified

No.	Location^	First identified	Co-ordinate	Habitat type	Trunk Diameter (mm)	Height (m)	Crown Spread (m)	Health Condition	Structural Condition	Survival rate after transplanting (High/Medium/Low)	Feasibility of transplantation
AS1*	(A) Roadside plantation edge at the eastern end of Lin Ma Han Road section	EIA baseline survey	unknown	Plantation	Sapling			unknown	unknown	unknown	-
AS2*	(A) Along Lin Ma Hang Road on SIMAR slope 3NW-C/C225	EIA baseline survey	843693N 830787E	Plantation	Sapling			Fair	Fair	Medium	-
AF1*	(B) Along Lin Ma Hang Road, opposite to the access path leading to Muk Wu Village	EIA baseline survey	unknown	Developed area	Unknown						-
AF2*	(B) Along Lin Ma Hang Road, opposite to the access path leading to Muk Wu Village	EIA baseline survey	unknown	Developed area	Unknown						-
AS3*	(A) Within Sandy Ridge Cemetery	Vegetation survey (Aug 2018)	844699N 832615E	Plantation	Sapling			Fair	Fair	Medium	-

No.	Location [^]	First identified	Co-ordinate	Habitat type	Trunk Diameter (mm)	Height (m)	Crown Spread (m)	Health Condition	Structural Condition	Survival rate after transplanting (High/Medium/Low)	Feasibility of transplantation
AS4	(A) Along Lin Ma Hang Road on SIMAR slope 3NW-C/C230	Vegetation survey (Feb 2019)	844725N 832530E	Plantation	30	3	1	Fair	Fair	Low	Low: located on steep slope; Structural defect
AS5	(A) Along Lin Ma Hang Road on SIMAR slope 3NW-C/C230	Vegetation survey (Feb 2019)	844723N 832523E	Plantation	85	7	3	Fair	Fair	Low	Low: located on steep slope; Close to other trees
AS6	(A) Along Lin Ma Hang Road on SIMAR slope 3NW-C/C230	Vegetation survey (Feb 2019)	844723N 832514E	Plantation	48	5	2	Fair	Fair	Low	Low: Structural defect

[^] A: Within works area; B: Outside works area but potentially affected by the Project

* AS1 was found missing during the inspection on August 2018; AS2 and AS3 were found missing during inspection on September 2018; AF1 and AF2 were found missing during the inspection on August 2018

4. RECOMMENDATION

No other flora species of conservation interest apart from *Aquilaria sinensis* was recorded within the Project area during the vegetation survey. Therefore, no direct impact on any flora species of conservation of interest other than *Aquilaria sinensis* is anticipated. No additional protective / preventive / mitigation measure for flora species of conservation concern is required.

The two *Aquilaria sinensis* (AS2 and AS3) recorded in Aug 2018 within the surveyed area were saplings with approximate 80 & 130 millimeters (mm) in height. They are located at the roadside plantation slope at the eastern end of the Lin Ma Hang Road and in the woodland at the central part of the project which both have direct conflict with the proposed construction works. Those two sapling were found missing on site during the inspection on September 2018 and therefore no recommendation for these two *Aquilaria sinensis* is required.

The three *Aquilaria sinensis* (AS4, AS5 and AS6) identified in Feb 2019 within the surveyed area were approximately 3 to 7 meters in height. They are located at the roadside plantation slope (Slope No. 3NW-C/C230) at the eastern end of the Lin Ma Hang Road. Feasibility of transplanting is evaluated in this section.

4.1 SUITABILITY AND PACTICABILITY OF TRANSPLANTATION

4.1.1 AS4, AS5 and AS6 are located on steep slope with slope angle of 40 degree (Please refer to **Appendix H** for details) and are closely planted with other trees in mature size. Due to the proposed slope upgrade works, existing trees in the vicinity are proposed to be removed in the approved Tree Preservation and Removal Proposal. Therefore, retaining these 3 *Aquilaria sinensis* is technical impracticable.

4.1.2 The formation of rootball of reasonable/recommended shape and size for transplanting would not be technical feasible on steep slope with the constraint of larger tree root from adjacent trees. According to the "Technical Guidelines on Landscape Treatment for Slopes" issued by Geotechnical Engineering Office, the inclined rooting pattern for trees on slopes may greatly limit the chances of survival in new locations. And the "Guidelines on Tree

size is not practicable are considered not transplantable.

- 4.1.3 AS4 is a sapling growing on the middle of the slope with sign of bending near trunk base. Root ball formation of reasonable size is not feasible on steep slope. Considered that the difference between the gradient of the receptor site and the original location, it would be difficult for the tree to restore an upright and normal tree form after transplanting.
- 4.1.4 There are mature trees growing very close to AS5. The rooting system is restricted and it is not practical to separate the roots of AS5 from the roots of adjacent trees. Although the trees in the vicinity were proposed to be removed, the remaining tree stump would inhibit the formation of rootball and removing the stump without damaging the root system of AS5 is not feasible. With such constraint, the formation of solid rootball, even in smaller size, would be technically impracticable.
- 4.1.5 For AS6, girdling root causing large area of wound at trunk base was observed. Tree with such structural defect is considered not suitable for transplantation. In addition, the rooting system of AS6 is restricted by the other trees in the vicinity. Separating the root systems and formation of rootball in reasonable size is not practical. Although the adjacent trees were proposed to be removed, the remaining tree stump would inhibit the formation of rootball and removing the stump without damaging the root system of AS6 is not feasible.
- 4.1.6 Consider the difficulties in the formation of solid rootball with sufficient size and uniform shape and the existing structural defects, the survival rate after transplantation is expected to be low. Transplanting of these 3 *Aquilaria sinensis* to a permanent receptor site beyond the work site boundary is therefore not recommended.
- 4.1.7 Since no transplantation is recommended, no transplantation proposal is included in this report.

5. CONCLUSION

- 5.1 This vegetation survey report and transplantation proposal was prepared by qualified ecologist(s) approved under EP Conditions 2.1 and 2.4.
- 5.2 In the first detailed vegetation survey in Aug 2018, two saplings of *Aquilaria sinensis* (AS2 and AS3) were identified within the Project area. Since direct impact on that plant due to the Project is anticipated, recommendation of transplantation of the *Aquilaria sinensis* to a permanent receptor site and regular monitoring of the *Aquilaria sinensis* throughout the construction phase is proposed.
- 5.3 However, during the additional inspection in Sep 2018, two saplings of *Aquilaria sinensis* identified in the first vegetation survey were missing and vandalism is suspected after the site investigation.
- 5.4 During the vegetation survey in Feb 2019 (Third inspection), three more saplings of *Aquilaria sinensis* (AS4, AS5 and AS6) were identified within the works area. However, the saplings are located at steep slope with slope angle of 40 degree and are closely planted with other trees in mature size. Due to the proposed slope upgrade works, existing trees in the vicinity are proposed to be removed in the approved Tree Preservation and Removal Proposal. Therefore, retaining these 3 *Aquilaria sinensis* is technical impracticable.
- 5.5 The formation of rootball of adequate shape and size for transplanting would not be technical feasible. Without sufficient size of rootball obtained, the survival rate of saplings after transplantation are expected to be low. Therefore, transplanting of these 3 saplings of *Aquilaria sinensis* to a permanent receptor site beyond the work site boundary is not recommended.
- 5.6 In the vegetation survey, no flora species of conservation interest other than *Aquilaria sinensis* was recorded within the Project area. No additional protective / preventive / mitigation measure for flora species of conservation interest is required.
- 5.7 Since not transplantation of sapling/trees is recommended in the vegetation survey, no transplantation proposal is included in this report.

6. REFERENCE

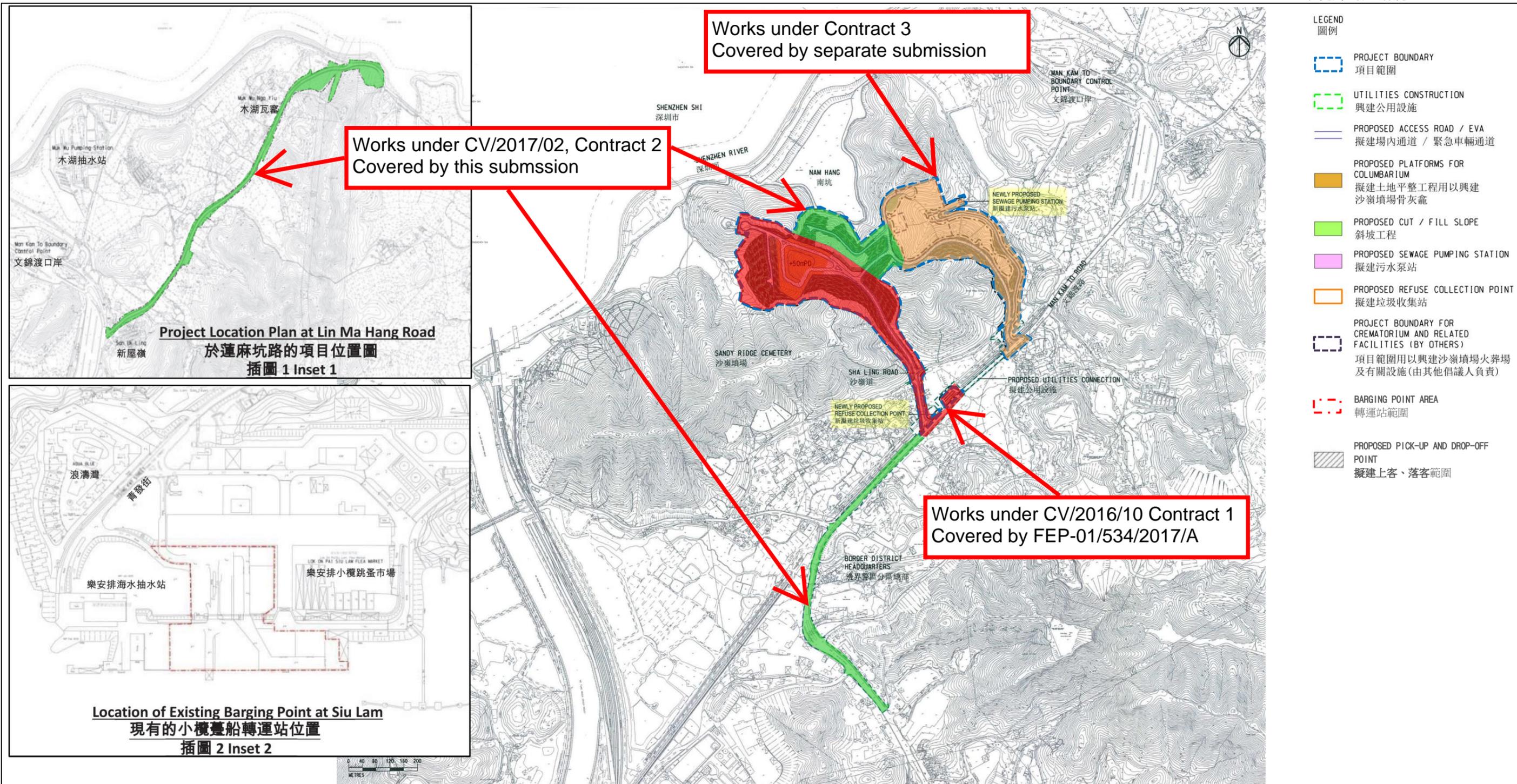
This vegetation survey has made reference to the following documents/website:

- The approved EIA report and the associated EM&A Manual for development of columbarium, crematorium (C&C) and related facilities at Sandy Ridge Cemetery (EIA Register No.: AEIAR-198/2016)
- The Environmental Permit to Construct a Designated Project (Environmental Permit No. EP-534/2017/A)
- Layout plans of the Contract No. CV/2016/10 – Site Formation and Associated Infrastructural Works for Development of Columbarium at Sandy Ridge Cemetery
- CEDD's General Specification
- ANSI A300 - Trees, Shrub, and Other Woody Plant Maintenance – Standard Practices (Planting and Transplanting)
- Guidelines on Tree Transplanting issued by the Tree Management Office, Development Bureau, HKSAR Rare and Precious Plants of Hong Kong (online version)

<http://herbarium.gov.hk/PublicationsPreface.aspx?BookNameId=1&SectionId=1&ContentId=1>

APPENDIX A

Project boundary



Project Title: Site Formation and Associated Infrastructural Works for Development of Columbarium, Crematorium and Related Facilities at Sandy Ridge Cemetery
工程名稱：沙嶺墳場興建骨灰龕、火葬場及有關設施的工地平整及相關基建工程

Figure 1: Project Location Plan

圖 1：項目位置圖

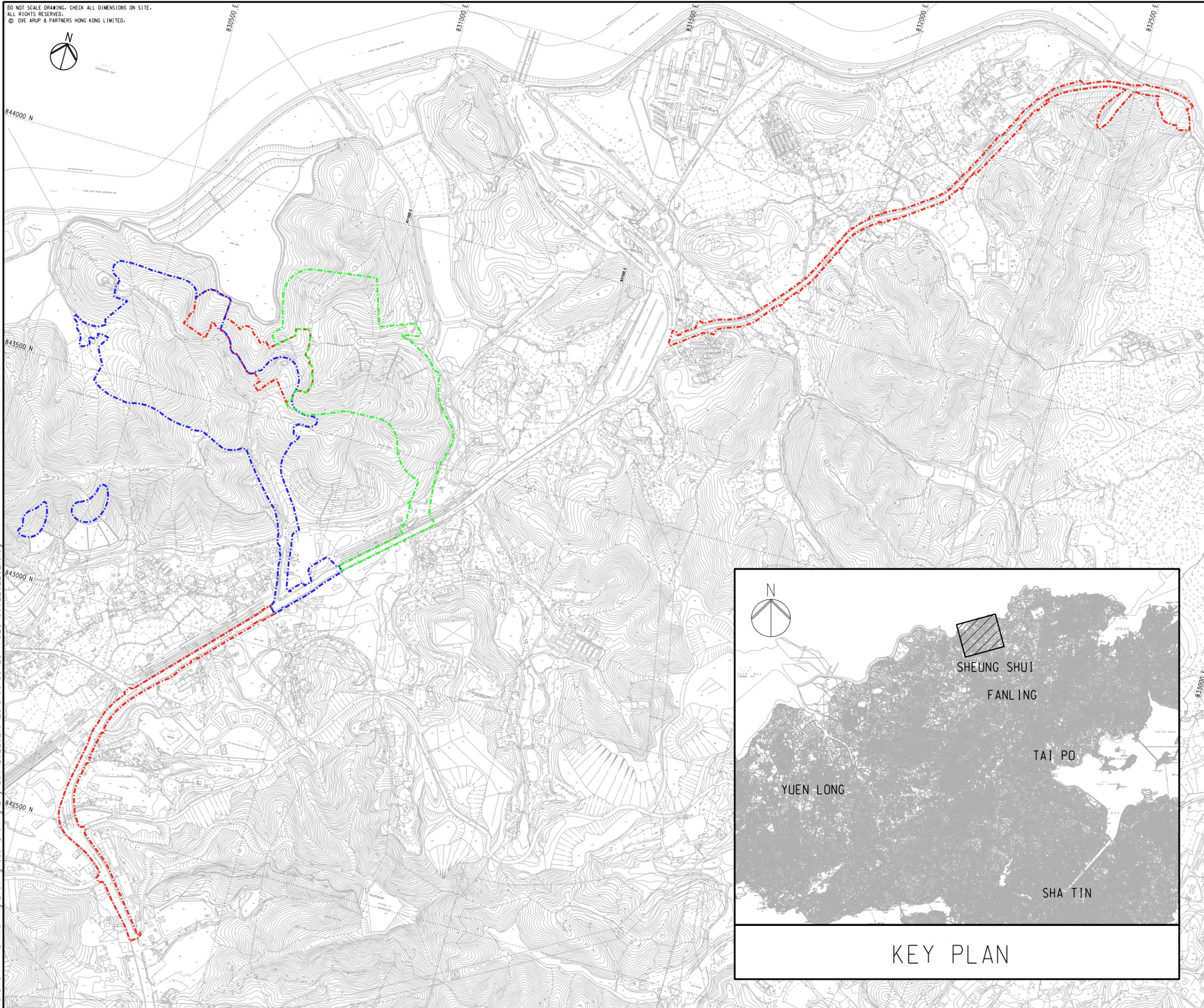
(This figure was prepared based on Figure 1 attached to the VEP Application No. VEP-554/2018 and Figures 1.2 and 1.3 of the Approved EIA Report No. AEIAR-198/2016)

(本圖是根據更改環境許可證申請文件編號 VEP-554/2018 所隨附的圖 1 和環境影響評估報告編號 AEIAR-198/2016 圖 1.2 及 1.3 編制)

Environmental Permit No.: EP-534/2017/A
環境許可證編號：EP-534/2017/A



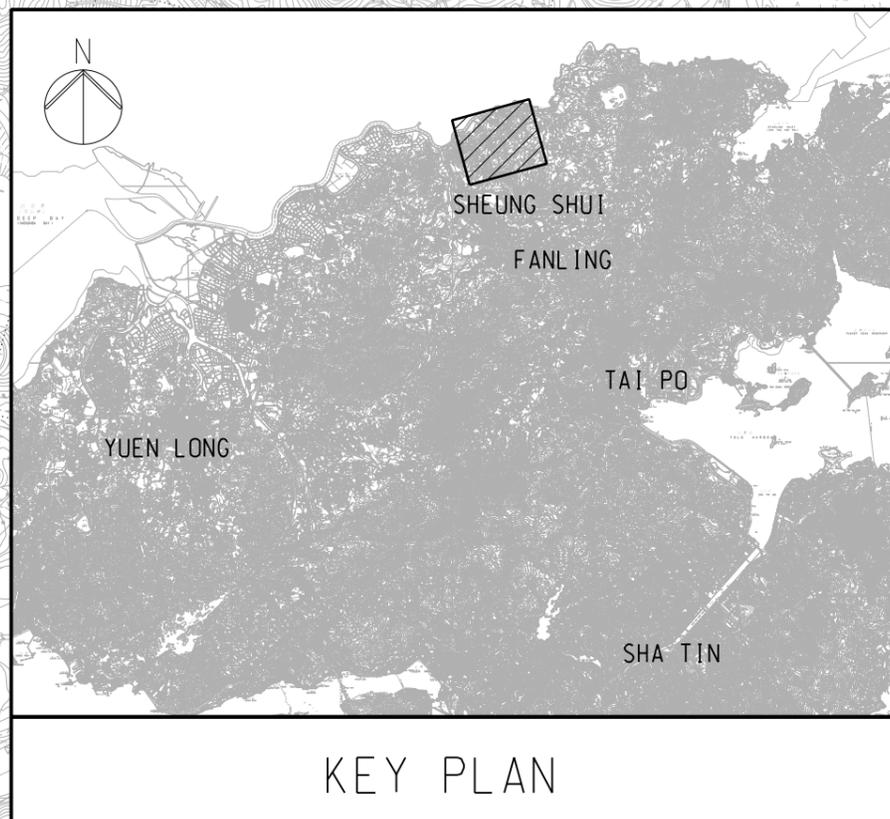
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LEGEND:

	CONTRACT 1 SITE BOUNDARY
	CONTRACT 2 SITE BOUNDARY
	CONTRACT 3 SITE BOUNDARY

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KEY PLAN

Rev	Description	By	Date

Consultant
ARUP

Contract No. and Title:
 Contract No. CV/2017/02
 Development of Columbarium
 at Sandy Ridge Cemetery -
 Infrastructural Works at
 Man Kam To Road and
 Lin Ma Hang Road

Drawing title

Drawing no. **231448/SK/366** Rev. **-**

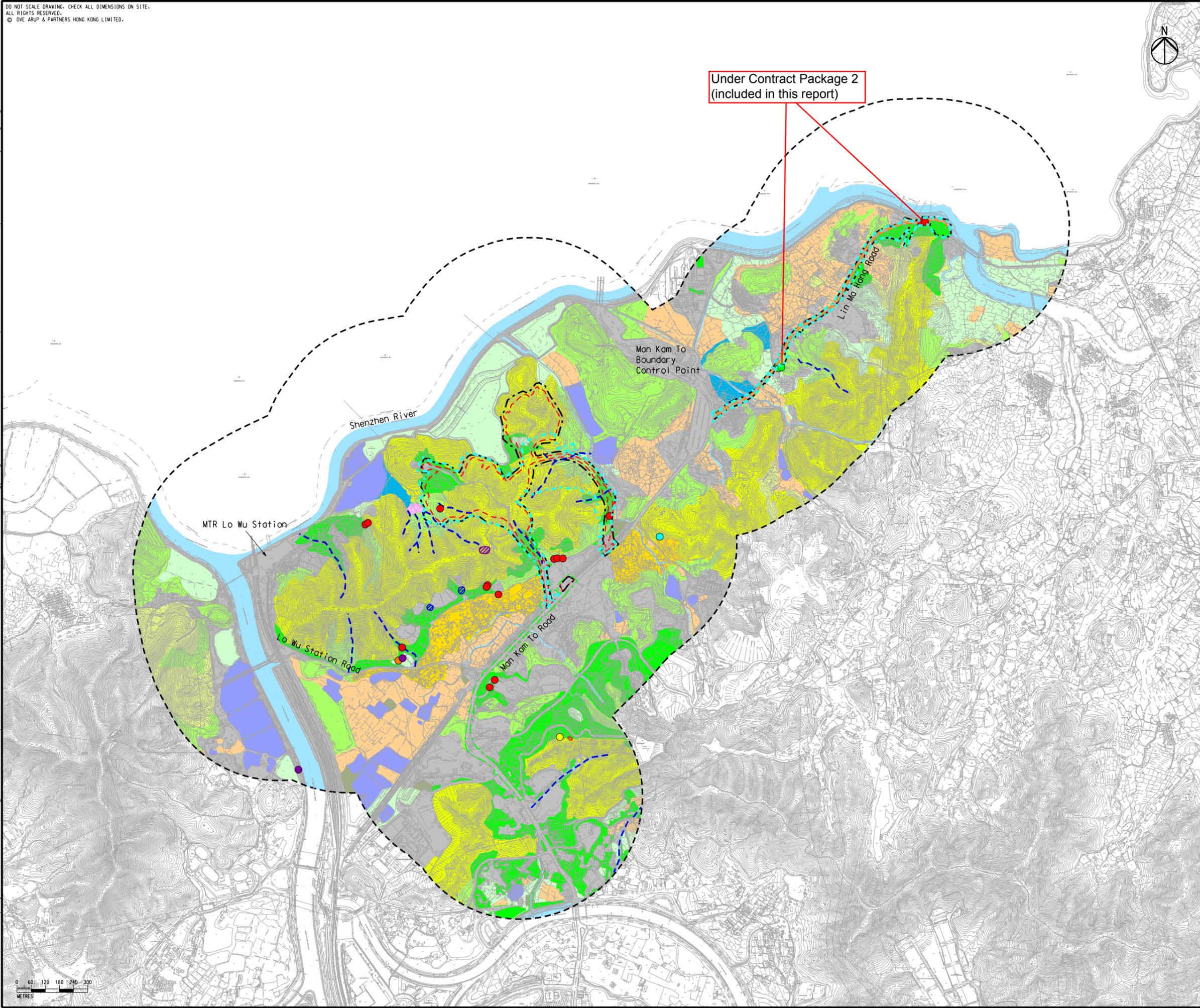
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APPENDIX B

Locations of flora species of conservation interest within the Assessment Area (EIA report AEIAR-198/2016)



- Legend**
- Project Boundary
 - Utilities Construction
 - Sandy Ridge Works Area
 - Lin Ma Hang Road Works Area
 - 500m Assessment Area
 - Watercourse
 - Seasonal Watercourse
 - Pond
 - Developed Area
 - Agricultural Land
 - Marsh
 - Wasteland
 - Grassland
 - Upland Grassland
 - Shrubland
 - Plantation
 - Woodland
 - Wet Woodland
 - Village Area

- Flora Species of Conservation Importance**
- Aquilaria sinensis* (AS1, AS2)
 - Eulophia graminea*
 - Ailanthus fordii* (AF1, AF2)
 - Rhododendron mucronatum*
 - Rhododendron pulcurum* var. *phoeniceum* *
 - Spathoglottis pubescens*
 - Rhododendron pulchrum* *
 - Orchids group of Arundina graminifolia and Habenaria dentata* *
 - Pecteilis susanna*
 - Revised project boundary (EP-534/2017/A)
 - * Group more than 5 individuals

G	SEVENTH ISSUE	GL	02/16
F	SIXTH ISSUE	GL	01/16
E	FIFTH ISSUE	GL	12/15
D	FOURTH ISSUE	GL	10/15
Rev	Description	By	Date

Consultant
ARUP

Contract No. and Title:
 Agreement No. CE 1/2013(CE)
 Site Formation and Associated Infrastructural Works for Development of Columbarium, Crematorium and Related Facilities at Sandy Ridge Cemetery - Design and Construction

Drawing title
Locations of Flora Species of Conservation Importance at Sandy Ridge

Drawing no. Figure 9.6		Rev. G	
Drawn GL	Date 02/16	Checked EL	Approved ST
Scale AS SHOWN		Status PRELIMINARY	

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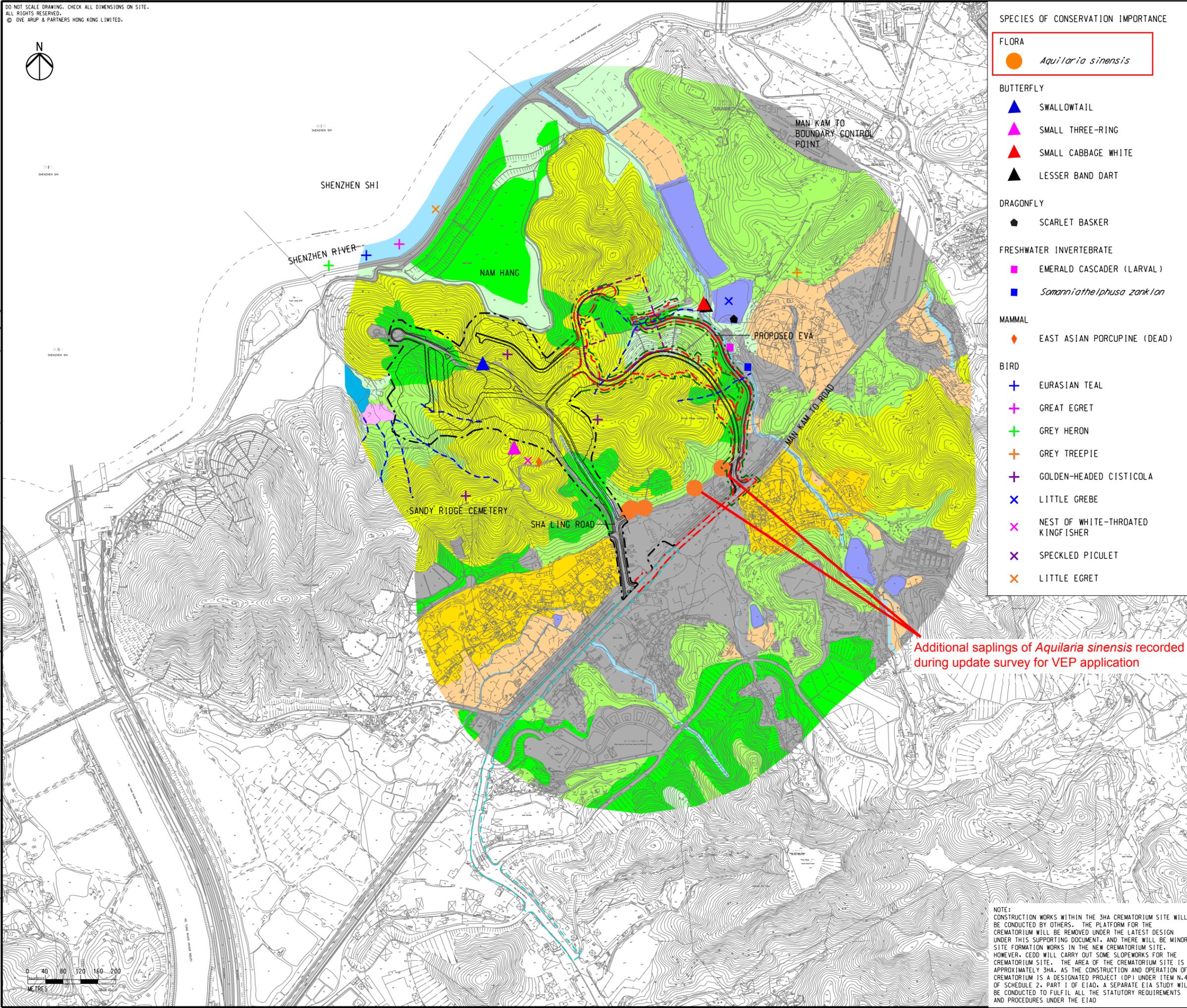
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 Civil Engineering and Development Department

APPENDIX C

Habitat Map and Species of Conservation Importance at Sandy Ridge (Supporting Document for Application of Variation of Environmental Permit (VEP-554/2018))



Printed by : 11/28/2018, Filename : G:\env\project\231448\13 Drawing Deliverables\Reports\028_VEP\Figure 8.1 - Habitat Map and Species of Conservation Importance at Sandy Ridge.dgn



- SPECIES OF CONSERVATION IMPORTANCE**
- FLORA**
- *Aquilaria sinensis*
- BUTTERFLY**
- ▲ SWALLOWTAIL
 - ▲ SMALL THREE-RING
 - ▲ SMALL CABBAGE WHITE
 - ▲ LESSER BAND DART
- DRAGONFLY**
- SCARLET BASKER
- FRESHWATER INVERTEBRATE**
- EMERALD CASCADE (LARVAL)
 - *Somanniathelphusa zanklon*
- MAMMAL**
- ◆ EAST ASIAN PORCUPINE (DEAD)
- BIRD**
- + EURASIAN TEAL
 - + GREAT EGRET
 - + GREY HERON
 - + GREY TREEPIE
 - + GOLDEN-HEADED CISTICOLA
 - x LITTLE GREBE
 - x NEST OF WHITE-THROATED KINGFISHER
 - x SPECKLED PICULET
 - x LITTLE EGRET

- LEGEND**
- PROJECT BOUNDARY ACCORDING TO APPROVED EIA REPORT (AEIAR-198/2016)
 - CONSTRUCTION UTILITIES ACCORDING TO APPROVED EIA REPORT (AEIAR-198/2016)
 - PROJECT BOUNDARY IN THIS STUDY
 - PROPOSED AMENDMENTS IN THIS STUDY
 - 500m ASSESSMENT AREA
 - LAYOUT ACCORDING APPROVED EIA REPORT (AEIAR-198/2016)
 - PROJECT BOUNDARY FOR CREMATORIUM AND RELATED FACILITIES (BY OTHERS)
- HABITAT MAP**
- WATERCOURSE
 - SEASONAL WATERCOURSE
 - POND
 - DEVELOPED AREA
 - AGRICULTURAL LAND
 - MARSH
 - WASTELAND
 - GRASSLAND
 - UPLAND GRASSLAND
 - PLANTATION
 - WOODLAND
 - WET WOODLAND
 - VILLAGE AREA

Additional saplings of *Aquilaria sinensis* recorded during update survey for VEP application

Rev	Description	By	Date
B	SECOND ISSUE	GL	11/18
A	FIRST ISSUE	GL	08/18

Consultant
ARUP

Contract No. and Title:
 Agreement No. CE 1/2013(CE)
 Site Formation and Associated Infrastructural Works for Development of Columbarium, Crematorium and Related Facilities at Sandy Ridge Cemetery - Design and Construction

Drawing title
HABITAT MAP AND SPECIES OF CONSERVATION IMPORTANCE AT SANDY RIDGE

Drawing no. FIGURE 8.1		Rev. B	
Drawn GL	Date 11/18	Checked EL	Approved FC
Scale AS SHOWN		Status PRELIMINARY	

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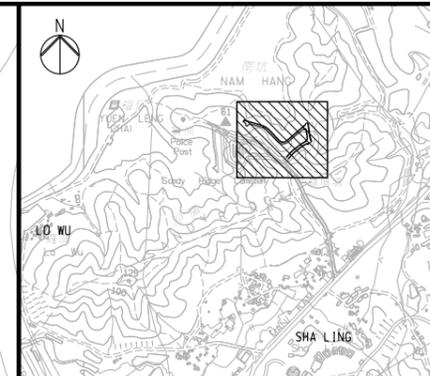
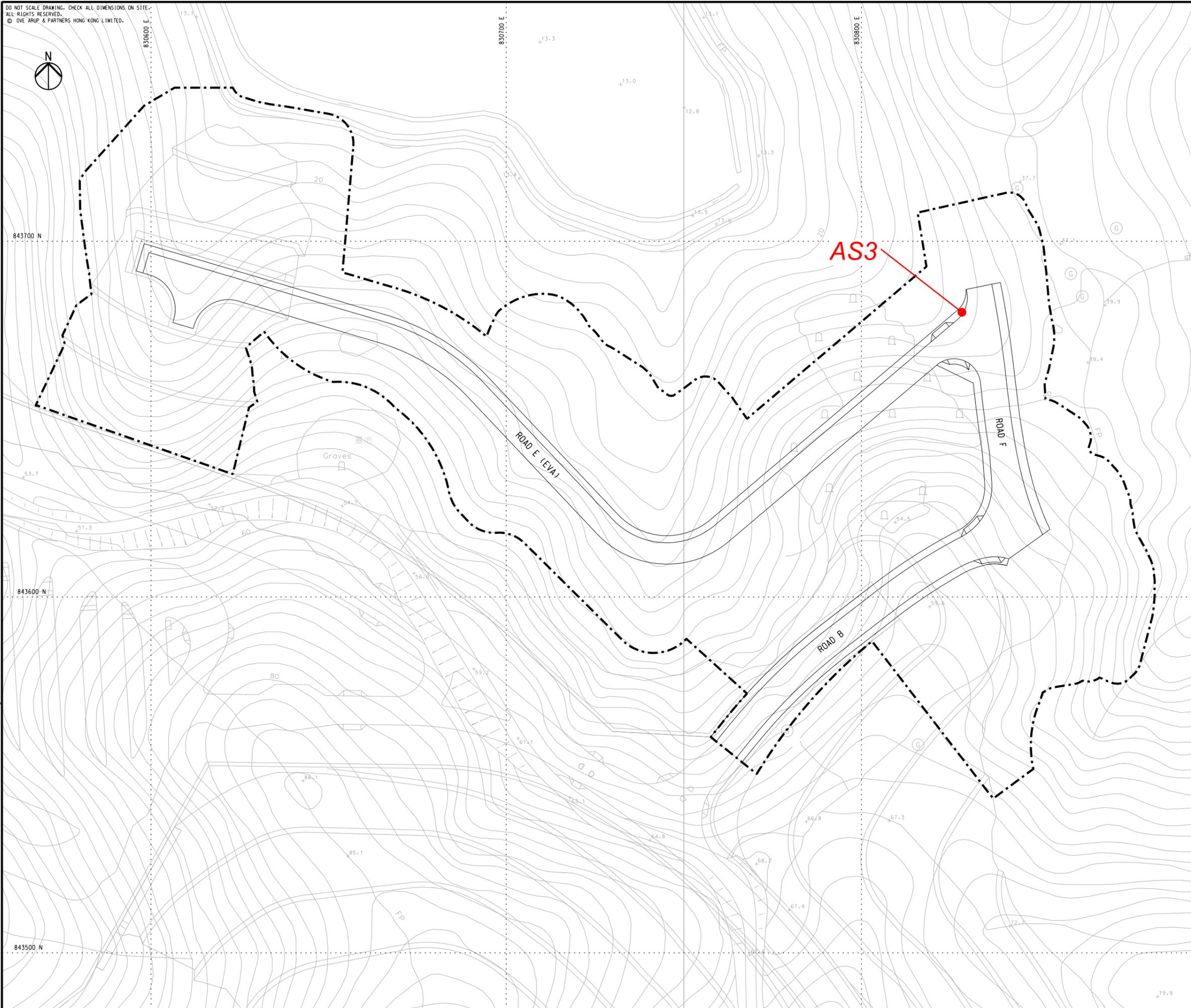
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 Civil Engineering and Development Department

NOTE:
 CONSTRUCTION WORKS WITHIN THE 3HA CREMATORIUM SITE WILL BE CONDUCTED BY OTHERS. THE PLATFORM FOR THE CREMATORIUM WILL BE REMOVED UNDER THE LATEST DESIGN UNDER THIS SUPPORTING DOCUMENT, AND THERE WILL BE MINOR SITE FORMATION WORKS IN THE NEW CREMATORIUM SITE. HOWEVER, CEDD WILL CARRY OUT SOME SLOPEWORKS FOR THE CREMATORIUM SITE. THE AREA OF THE CREMATORIUM SITE IS APPROXIMATELY 3HA. AS THE CONSTRUCTION AND OPERATION OF CREMATORIUM IS A DESIGNATED PROJECT (DP) UNDER ITEM N.4 OF SCHEDULE 2, PART 1 OF EIAO, A SEPARATE EIA STUDY WILL BE CONDUCTED TO FULFIL ALL THE STATUTORY REQUIREMENTS AND PROCEDURES UNDER THE EIAO

APPENDIX D

Locations of the *Aquilaria sinensis* within the project boundary

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KEY PLAN

LEGEND:

--- SITE BOUNDARY

Rev	Description	By	Date
-	TENDER DRAWING	AW	11/17

Consultant
ARUP

Contract No. and Title:
 Contract No. CV/2017/02
 Development of Columbarium
 at Sandy Ridge Cemetery -
 Infrastructural Works at
 Man Kam To Road and
 Lin Ma Hang Road

Drawing title
**GENERAL LAYOUT
 (SHEET 1 OF 5)**

Drawing no. 231448/C2/G/1001		Rev. -	
Drawn WM	Date 07/17	Checked AW	Approved DL
Scale 1:500 @A1		Status TENDER	

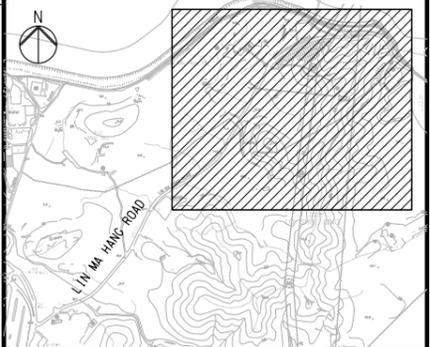
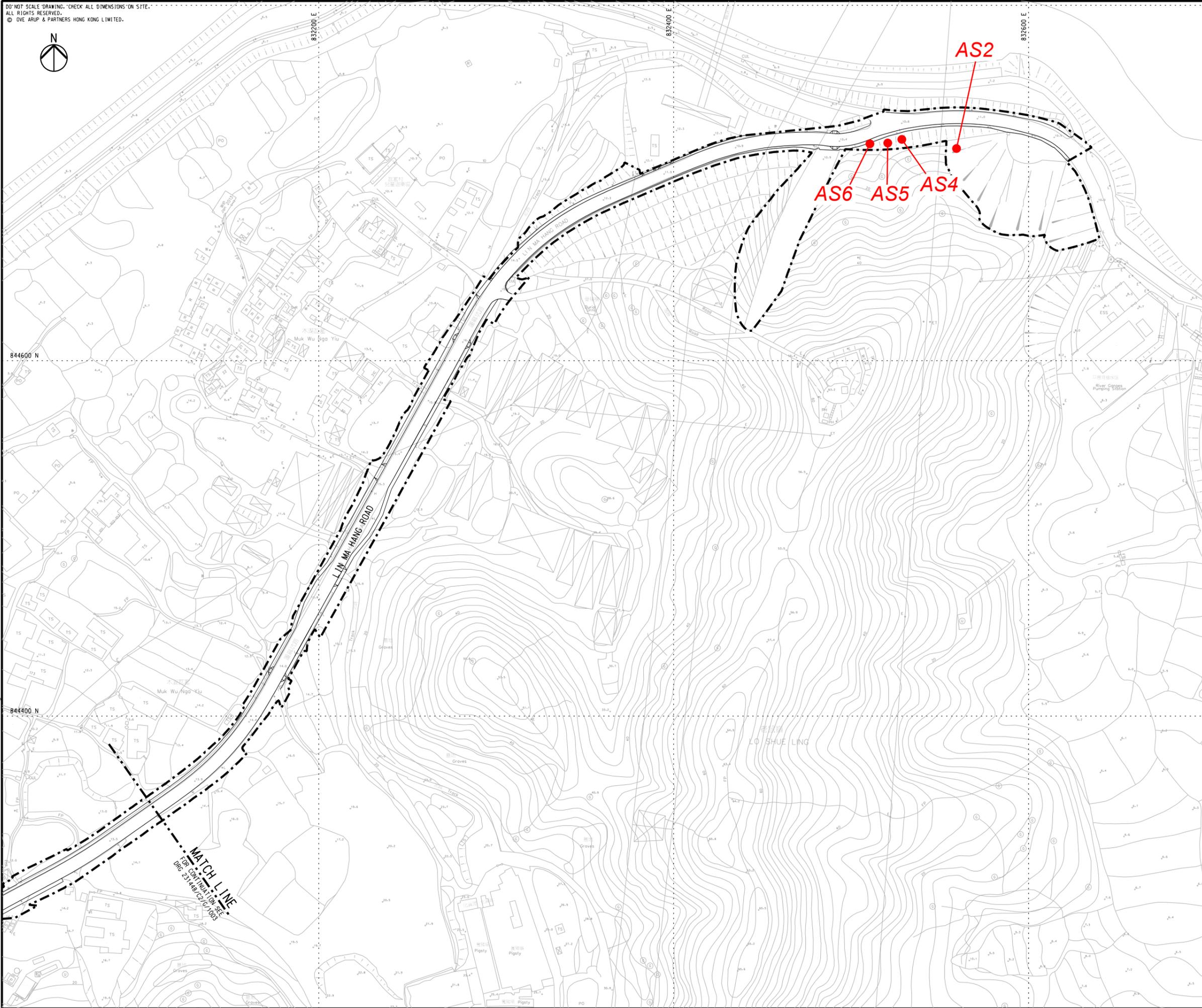
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KEY PLAN

LEGEND:

--- SITE BOUNDARY

Rev	Description	By	Date
-	TENDER DRAWING	AW	11/17

Consultant
ARUP

Contract No. and Title:
 Contract No. CV/2017/02
 Development of Columbarium -
 Infrastructural Works at
 Man Kam To Road and
 Lin Ma Hang Road

Drawing title
**GENERAL LAYOUT
 (SHEET 4 OF 5)**

Drawing no. 231448/C2/G/1004		Rev. -	
Drawn WM	Date 07/17	Checked AW	Approved DL
Scale 1:1000 @A1		Status TENDER	

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 Filename : J:\231448\ARUP\Civil\CONTRACT 2\231448_C2_G_1004.dgn

MATCH LINE
 SEE CONTRACT DRAWING
 Dwg 231448/C2/G/1004

APPENDIX E

Photo Record of Inspection in August 2018

Contract No. CV/2017/02
Development of Columbarium at Sandy Ridge Cemetery –
Infrastructure Works at Man Kam To Road and Lin Ma Hang Road
Vegetation Survey Report - Photographic Records (Aug 2018)



Aquilaria sinensis (AS2) (1)



Aquilaria sinensis (AS2) (2)



Aquilaria sinensis (AS2) (3)



Aquilaria sinensis (AS2) (4)

Contract No. CV/2017/02
Development of Columbarium at Sandy Ridge Cemetery –
Infrastructure Works at Man Kam To Road and Lin Ma Hang Road
Vegetation Survey Report - Photographic Records (Aug 2018)



Aquilaria sinensis (AS3) (1)



Aquilaria sinensis (AS3) (2)



Aquilaria sinensis (AS3) (3)



Aquilaria sinensis (AS3) (4)

Contract No. CV/2017/02
Development of Columbarium at Sandy Ridge Cemetery –
Infrastructure Works at Man Kam To Raod and Lin Ma Hang Road
Vegetation Survey Report - Photographic Records (Aug 2018)



General View (1)



General View (2)



General View (3)



General View (4)



General View (5)



General View (6)

Contract No. CV/2017/02
Development of Columbarium at Sandy Ridge Cemetery –
Infrastructure Works at Man Kam To Raod and Lin Ma Hang Road
Vegetation Survey Report - Photographic Records (Aug 2018)



General View (7)



General View (8)



General View (9)



General View (10)

APPENDIX F

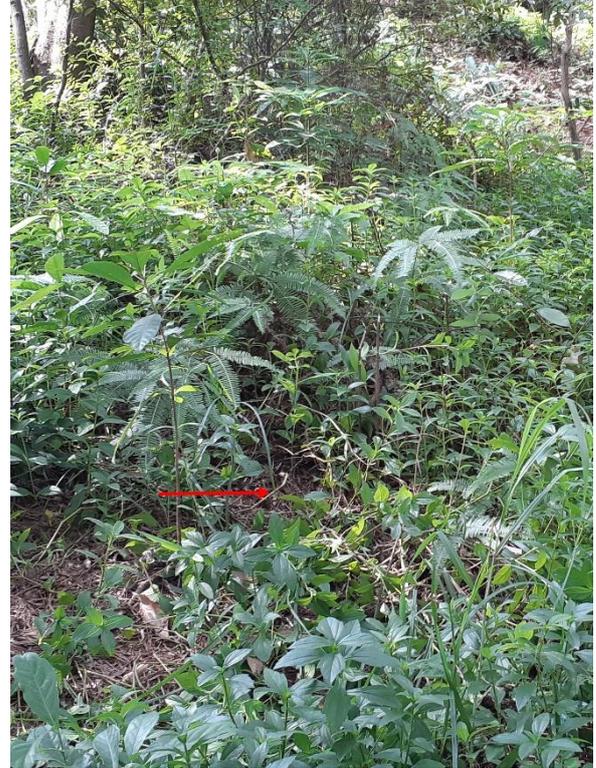
Photo Record of Inspection in September 2018

Vegetation survey in August 2018



AS2_Before (1)

Additional inspection on 14 September 2018



AS2_Missing (1)



AS2_Before (2)



AS2_Missing (2)

Contract No. CV/2017/02
Development of Columbarium at Sandy Ridge Cemetery –
Infrastructure Works at Man Kam To Raod and Lin Ma Hang Road
Vegetation Survey Report - Photographic Records of Additional Inspection



AS2_Before (3)



AS2_Missing (3)



AS2_Before (4)



AS2_Missing (4)

Aquilaria sinensis (AS3)

Vegetation survey in August 2018

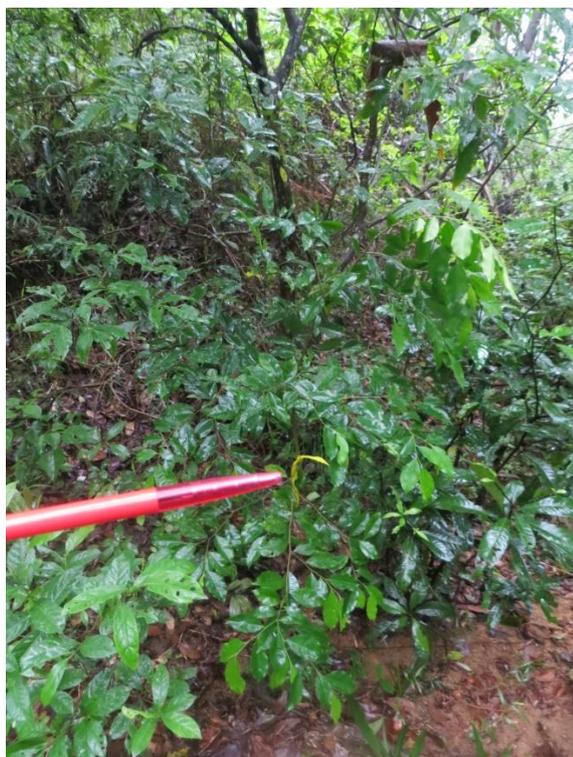


AS3_Before (1)

Additional inspection on 14 September 2018



AS3_Missing (1)



AS3_Before (2)



AS3_Missing (2)

Contract No. CV/2017/02
Development of Columbarium at Sandy Ridge Cemetery –
Infrastructure Works at Man Kam To Raod and Lin Ma Hang Road
Vegetation Survey Report - Photographic Records of Additional Inspection



AS3_Before (3)



AS3_Missing (3)



AS3_Before (4)



AS3_Missing (4)

APPENDIX G

Photo Record of Inspection in February 2019

Contract No. CV/2017/02
Development of Columbarium at Sandy Ridge Cemetery –
Infrastructure Works at Man Kam To Raod and Lin Ma Hang Road
Vegetation Survey Report - Photographic Records (Feb 2019)



AS4_Wholeview 1



AS4_Wholeview 2



AS4_Leaves (1)



AS4_Leaves (2)

Contract No. CV/2017/02
Development of Columbarium at Sandy Ridge Cemetery –
Infrastructure Works at Man Kam To Raod and Lin Ma Hang Road
Vegetation Survey Report - Photographic Records (Feb 2019)



AS5_Wholeview (1)



AS5_Wholeview (2)



AS5_Wholeview (3)



AS5_Leaves

Contract No. CV/2017/02
Development of Columbarium at Sandy Ridge Cemetery –
Infrastructure Works at Man Kam To Raod and Lin Ma Hang Road
Vegetation Survey Report - Photographic Records (Feb 2019)



AS6_Wholeview 1 (1)



AS6_Wholeview 1 (2)



AS6_Wholeview 2



AS6_Leaves

APPENDIX H

Slope profile_3NW-C/C230

+6.9

LIN MA HANG ROAD

3NW-C/C230

Sec.A

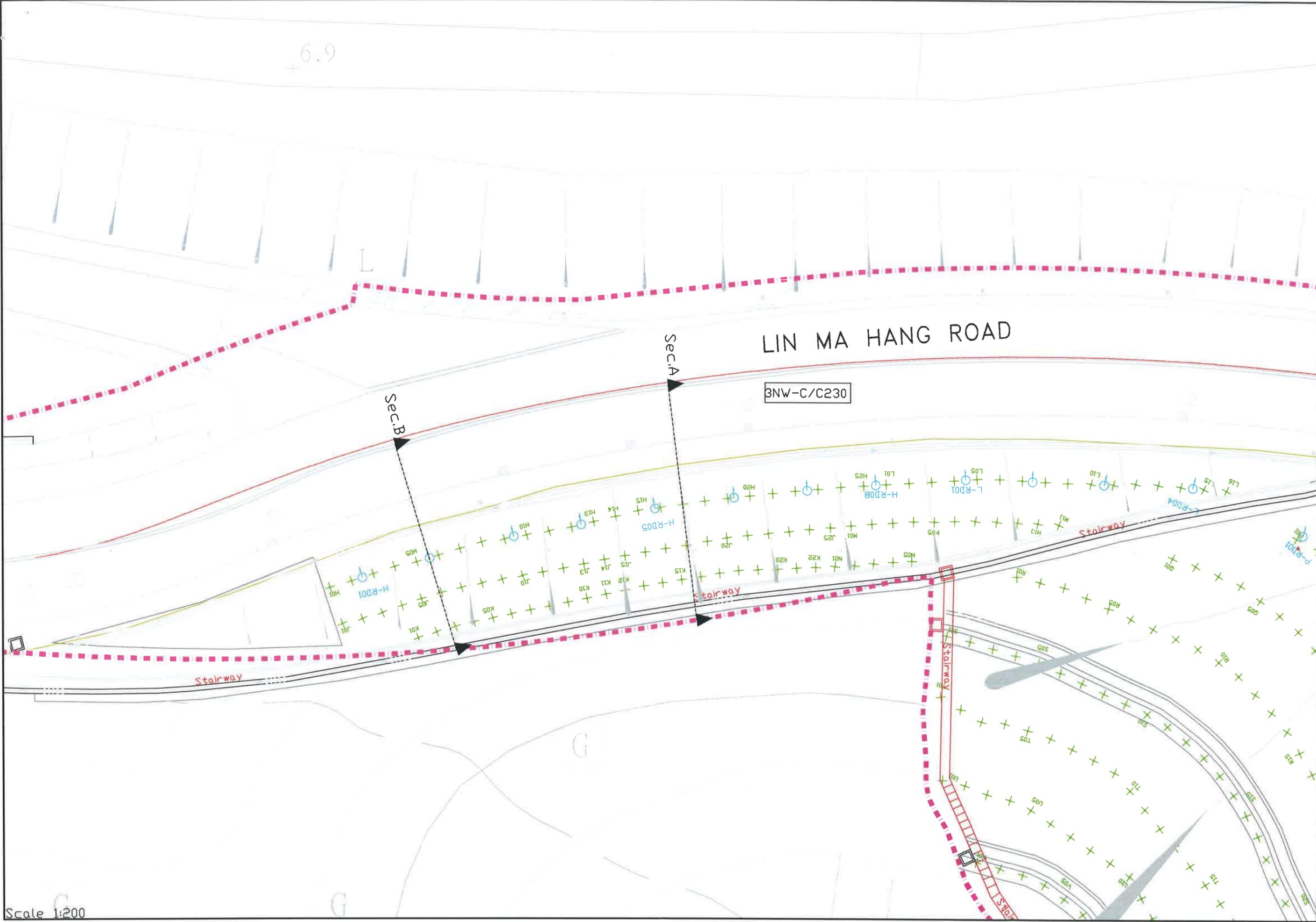
Sec.B

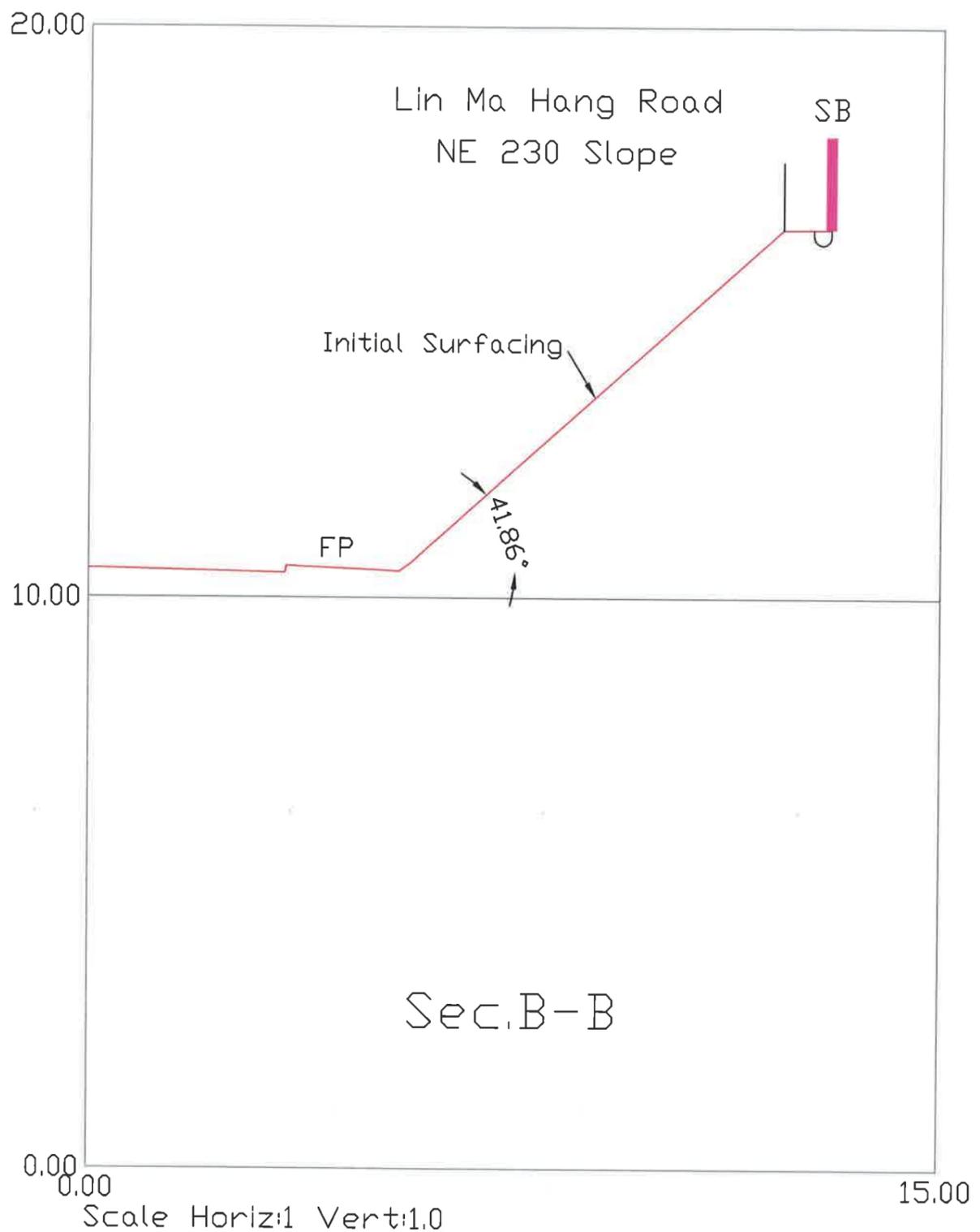
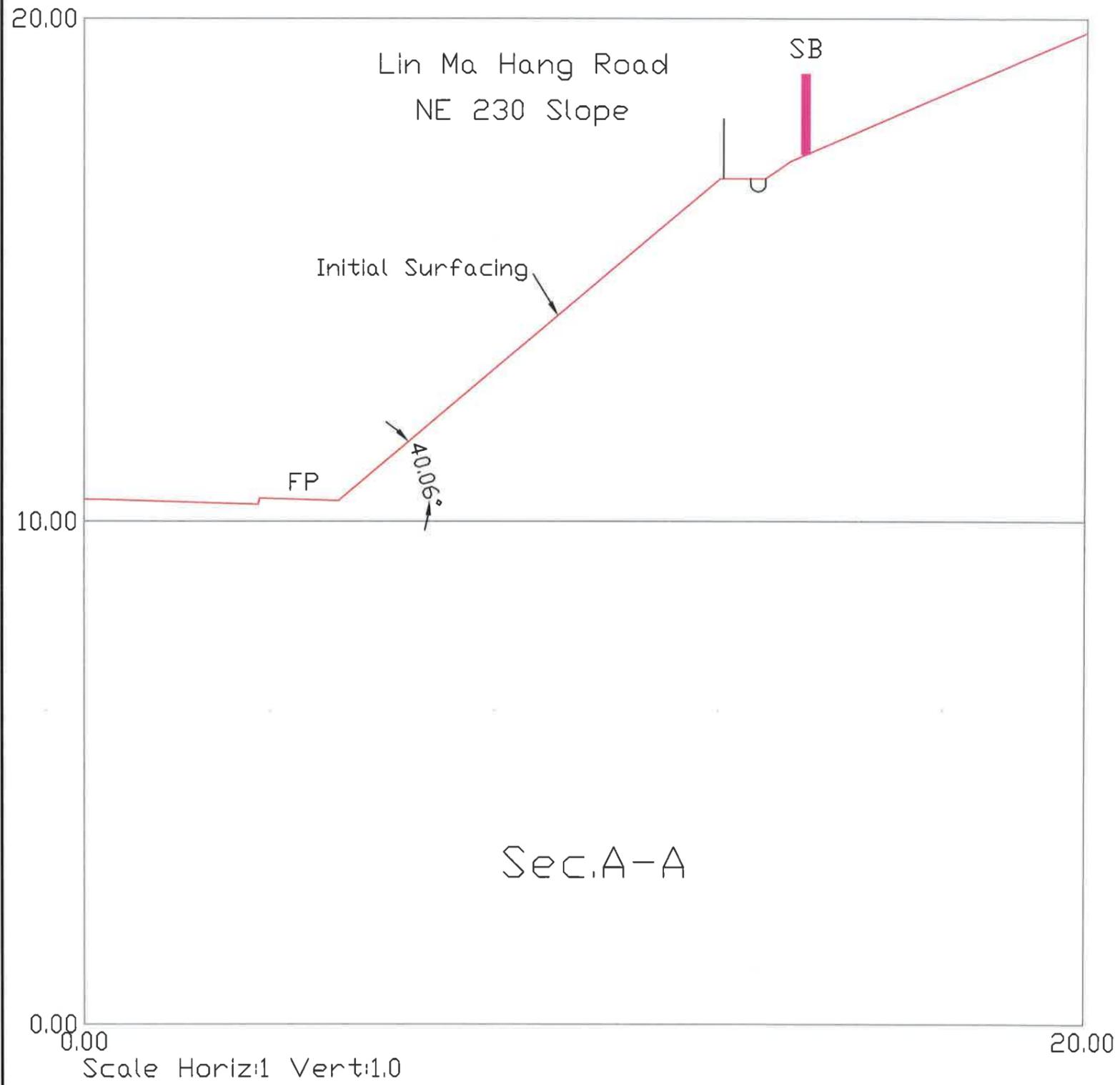
Stairway

Stairway

Stairway

Stairway





Attachment B

Our Ref: TCS00944/18/300/L0413

Civil Engineering and Development Department
Civil Engineering Office
Land Works Division
Section 8
2/F, Civil Engineering and Development Building,
101 Princess Margaret Rd,
Homantin, Kowloon

Attn: Mr. SHUM Ngai Hung, Steven

31 May 2022

By email

Dear Sirs,

Re: Contract No. CV/2017/02 - Development of Columbarium at Sandy Ridge Cemetery – Infrastructural Works at Man Kam To Road and Lin Ma Hang Road Vegetation Survey Report and Transplantation Proposal (Revision 6)

With reference to the Vegetation Survey Report and Transplantation Proposal (Revision 6), it has conformed to the information and recommendations contained in the approved EIA Report (Register No. AEIAR-198/2016). We herewith certify the captioned pursuant to Condition 2.17 of the Environmental Permit no. EP-534/2017/A.

Should you have any queries, please feel free to contact the undersigned at Tel: 2959-6059 or Fax: 2959-6079 or Email: twtam@fordbusiness.com.

Yours sincerely,

For and on Behalf of

Action-United Environmental Services & Consulting (AUES)



T. W. Tam
Environmental Team Leader
TW/nh

cc	Arup (RE)	Mr. Anthony Lau	By-email
	Acuity (IEC)	Mr. Jacky Leung	By-email
	Sang Hing (Contractor)	Mr. Elvin Lam	By-email



Our ref: PL-202205051

LAND WORKS DIVISION
CIVIL ENGINEERING OFFICE
CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
2/F, CIVIL ENGINEERING AND DEVELOPMENT BUILDING
101, PRINCESS MARGARET ROAD
HOMANTIN, KOWLOON HONG KONG

Attention: Mr. Steven SHUM

31 May 2022

Dear Steven,

Contract No. CV/2017/02

**Development of Columbarium at Sandy Ridge Cemetery – Infrastructural Works at Man Kam To Road and Lin Ma Hang Road
Vegetation Survey Report and Transplantation Proposal (Revision 6)**

I refer to the email of the ET dated 31 May 2022 concerning the captioned. We have no adverse comment on the updated version (Revision 6) dated 25 May 2022. According to section 1.9 of the EP-534/2017/A, we verify that it has conformed to the information and recommendations contained in the approved EIA Report (Register No. AEIAR 198/2016).

Yours faithfully,

CH Leung

Leung CH Jacky
Independent Environmental Checker

cc. CEDD-DPTL/Land Works – Mr. SHUM Steven
ARUP – Mr. LEE Davis
ET Leader – Mr. TAM

Attachment C

Comments received:		Responses:
	<p>From EPD</p> <p>Ref : Email ref. EP2/N7/A/78 Pt.26</p> <p>Date : 19 January 2022</p>	
	<p>I refer to Arup's letter (Your Ref: 231448/(CV/2017/02)/M45/950/B02013) submitting the Vegetation Survey Report and Transplantation Proposal under Conditions 2.15 - 2.17 under EP-534/2017/A, dated 22.11.2021, for our review.</p>	
(1)	<p>According to the submission, it is understood that <i>Aquilaria sinensis</i> and <i>Ailanthus fordii</i> were identified within the works area and identified as would be affected by the Project. A total of 4 no. and 15 no. of <i>Aquilaria sinensis</i> were recorded in the EIA study and vegetation surveys respectively, yet it seems that only 6 no. <i>Aquilaria sinensis</i> were discussed in Table 1.</p>	<p>As mentioned in S2.1.4, as background information in EIA, 15 nos. of <i>Aquilaria sinensis</i> were recorded in EIA (500m assessment area), however, only 4 nos. were recorded within the Project Site (within project boundary of Contracts 1, 2 and 3). Among of them, 1 tree was found within boundary of Contract 1; 2 saplings were found within boundary of contract 2 and 1 tree was found within boundary of Contract 3.</p> <p>This vegetation survey report focuses on Contract 2 only.</p>
(2)	<p>To facilitate our review:-</p>	
	<p>a. Please fill in the attached table to provide a summary of the number and ID of concerned species within works area and potentially affected by the Project.</p>	<p>Table updated. Please see Annex 1 in this Response to Comments.</p>
	<p>b. Please make sure the impact on <u>all</u> species of conservation importance mentioned in Comment #1 above is properly addressed in the report, and assessment of whether transplantation is considered required/feasible for <u>all</u>, if applicable.</p>	<p>The details of species of conservation importance identified are summarised in Table 1 of the vegetation survey report.</p>
	<p>c. No tree in Table 1 were identified as outside works area but potentially affected by the Project (i.e. "B" in the 2nd column). Besides, it seems that there is no discussion on <i>Ailanthus fordii</i>, in a format similar to that in Table 1, in the report. Please update Table 1 as appropriate.</p>	<p>Only trees of conservation importance within works area of Contract 2 and potentially affected by Contract 2 would be discussed in Table 1. The status of <i>Ailanthus fordii</i> is updated in Table 1.</p>
	<p>d. Please update Appendix H to show the location of the concerned species in the figure.</p>	<p>Updated</p>

Comments received:		Responses:
	e. We understand from S.4.1.4 - 4.1.5 that transplantation of AS5 and AS6 is considered infeasible due to restriction imposed by existing trees nearby. However, according S.4.1.1, it is understood that existing trees in the vicinity are proposed to be removed. Please clarify if the said constraint is still valid and if it is an overriding factor.	S4.1.4 – 4.1.5 are updated to clarify the constraint of rooting system among trees.
	Thank you.	

	Incense Tree <i>Aquilaria sinensis</i>			Ailanthus <i>Ailanthus fordii</i>		
	Within works area			Potentially affected by the Project	Within works area	Potentially affected by the Project
	Contract 1	Contract 2	Contract 3			
Vegetation survey to support EIA study	1	2 [Identified as AS1 and AS2]	1	/	/	2 [Identified as AF1 and AF2]
Vegetation survey to support VEP application	/	/	/	/	/	/
Vegetation survey dated 28.8.2018 (Contract 2 only)	Vegetation survey for Contract 1 was conducted and submitted separated and approved by EPD	2 [Identified as AS2 and AS3]	Vegetation survey for Contract 3 is not yet commenced.	/	/	/
Vegetation survey dated 14.9.2018	Vegetation survey for Contract 1 was conducted and	/	Vegetation survey for Contract 3 is not yet	/	/	/

(Contract 2 only)	submitted separated and approved by EPD		commenced.			
Vegetation survey dated 25.2.2019 (Contract 2 only)	Vegetation survey for Contract 1 was submitted separated and approved by EPD	3 [Identified as AS4, AS5 and AS6]	Vegetation survey for Contract 3 is not yet commenced.	/	/	Vegetation survey for Contract 3 is not yet commenced.

Remark:

AS1, AF1 and AF2 were found missing during the inspection on August 2018; AS2 and AS3 were found missing during inspection on September 2018.