Contract No. CV/2016/10
Site Formation and Associated Infrastructural Works for Development of Columbarium, Crematorium and Related Facilities at Sandy Ridge Cemetery

# Vegetation Survey Report and Transplantation Proposal

| | | |
|---|---|---|
| Revision | 1 | |
| Date of issue | 12 Sep 2018 | |
| Prepared by | Desmond Tang<br>Qualified Ecologist |  |
| Certified by | T.W. Tam<br>Environmental Team Leader |  |
| Verified by | Jacky Leung<br>Independent Environmental Checker (IEC) |  |

Our Ref: TCS00881/18/300/L0151

**Hsin Chong Tsun Yip Joint Venture**
Hsin Chong Center,
107-109 Wai Yip Street,
Kwun Tong,
Kowloon, Hong Kong

**Attn: Mr. HO Man To**

**20 September 2018**
By e-mail and by Hand

Dear Sirs,

**Re: CEDD Contract CV/2016/10**
**Site Formation and Associated Infrastructural Works for Development of Columbarium at Sandy Ridge Cemetery**
**Vegetation Survey Report and Transplantation Proposal (Revision 1)**

I refer to the Vegetation Survey Report and Transplantation Proposal (Revision 1), it has conformed to the information and recommendations contained in the approved EIA Report (Register No. AEIAR-198/2016). We herewith certify the Vegetation Survey Report and Transplantation Proposal (Revision 1) pursuant to Specific Conditions 2.16 of the Environmental Permit no. FEP-01/534/2017.

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 | CEDD | Mr. Joseph Wong | By-email |
| | Arup (RE) | Mr. Steve Tang | By-email |
| | Acuity (IEC) | Mr. Jacky Leung | By-email |

ACUITY
SUSTAINABILITY
CONSULTING LIMITED

Website: www.acuityhk.com

Unit 1908, iPlace,
Nos. 301-305 Castle Peak Road,
Kwai Chung, New Territories

Tel. : (852) 2698 6833
Fax.: (852) 2698 9383

Our ref: CJO4068

Hsin Chong Tsun Yip Joint Venture (CV/2016/10)
Hsin Chong Centre
107-109 Wai Yip Street
Kwun Tong, Kowloon
Hong Kong

Attention: Mr. HO Man-to

19 September 2018

Dear Sir,

**Contract No. CV/2016/10**
**Site formation and Associated Infrastructural Works for Development of Columbarium at Sandy Ridge Cemetery**
**Vegetation Survey Report and Transplantation Proposal**

Referred to the email from ETL dated 18 September 2018 regarding to the Vegetation Survey Report and Transplantation Proposal (Revision 1) (Dated 12 September 2018), we have no further comment on it and confirm this submission conforms to the information and recommendations contained in the approved EIA report (Register No. AEIAR-198/2016) after verification.

Yours faithfully,

CH Leung

Ir Leung CH Jacky
Independent Environmental Checker

Cc. CEDD-DPTL/Land Works – Mr. LI Kwok Hung
ARUP – Mr. LEE Davis
ET Leader – Mr. TAM

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# 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 includes:

| **Area** | **Proposed Works** |
|---|---|
| Works Within Study Area | ● Site formation works for a platform of about 1.8 hectares and associated drainage, sewerage and landscape works for development of Columbarium facilities at the Sandy Ridge Cemetery;<br>● Construction of a pick-up/drop-off point near the junction of Sha Ling Road and Man Kam To Road;<br>● Widening of about 800m of the existing Sha Ling Road;<br>● Construction of the new access road connecting Man Kam To Road and Crematorium site including the viaduct;<br>● Widening of about 1.4km of the existing Lin Ma Hang Road; and associated drainage, sewerage, waterworks and utility works along Man Kam To Road and Lin Ma Hang Road; and<br>● Associated roadworks, landscaping, drainage, sewerage and waterworks. |

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

(i) Item A.8 – A road or railway bridge more than 100 m in length between abutments;

(ii) 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 (EP-534/2017) on 7 April 2017. A Further Environment Permit (FEP) for the Project (FEP-01/534/2017) was issued on 23 February 2018.

1.1.5 The proposed works of that project will be divided into three main works packages and constructed by three main contractors. This vegetation survey report will cover the proposed works and vegetations related to Contract Package 1 only. The extent of the project boundary for Contract Package 1 is shown in **Appendix A** of this Plan. Works details of the proposed contract packages are summarized as follow:

Contract Package 1:

- Site formation works for a platform of about 1.8 hectares and associated drainage, sewerage and landscape works for development of Columbarium facilities at the Sandy Ridge Cemetery;
- Construction of a pick-up/drop-off point near the junction of Sha Ling Road and Man Kam To Road; and
- Widening of about 800m of the existing Sha Ling Road.
- Estimated time of works commencement: 15 Dec 2017

Contract Package 2:

- Construction of the new access road connecting Man Kam To Road and Crematorium site including the viaduct;
- Site formation works and associated drainage, sewerage and landscape works for development of Columbarium at Sandy Ridge Cemetery;
- Widening of about 1.4km of the existing Lin Ma Hang Road; and associated drainage, sewerage, waterworks and utility works along Man Kam To Road and Lin Ma Hang Road.
- Estimated time of works commencement: 31 May 2018

Contract Package 3:

- Site Formation and associated slope works for a platform for development of Crematorium facilities at Sandy Ridge Cemetery;
- Associated roadworks, landscaping, drainage, sewerage and waterworks.

- Estimated time of works commencement: Late 2021 (Anticipated)

## 1.2 OBJECTIVE

1.2.1 As stipulated in Condition 2.15 of the EP and Condition 2.14 of the FEP, the Permit Holder shall, no later than one month before the commencement of construction of the Project, submit a vegetation survey report to the Director of EPD for approval. This Vegetation Survey Report is prepared to meet this FEP condition.

1.2.2 Accordingly, the EIA report (Register No.: AEIAR-198/2016) and the associated EM&A Manual has recommended that 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 these species and other rare/protected plant species (if any) identified within construction works areas.
- Determine the number and locations of the affected individuals of floral species of concern.
- Evaluate the suitability and/or practicality of the transplantation.

1.2.3 As stipulated in Condition 2.16 of the EP and Condition 2.15 of the FEP, If the Vegetation Survey concluded that transplantation of the affected floral species of conservation importance is needed, a Transplantation Proposal shall be submitted no less than one month before commencement of transplantation to the Director for approval.

# 2. EIA BASELINE INFORMATION

2.1 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, egretry flight lines), herpetofauna, odonata, butterflies and aquatic fauna. Based on these surveys, habitat mapping is carried out.

2.2 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 (Application No. EIA-236/2016).

2.3 A total of 10 botanical species within the Assessment Area were of conservation interest. The locations of flora species of conservation interest are illustrated in Appendix B.

2.4 A total of 13 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 woodland edge along the eastern boundary of the Project boundary above Sha Ling Road;
- 1 tree at the woodland edge at the central part of the Project;
- 2 saplings in the roadside plantation at the east of the Lin Ma Hang Road.

2.5 The other 9 flora species of conservation interest located within the Assessment Area but outside the project site are:

- Ailanthus (*Ailanthus fordii*)
- Bamboo Orchid (*Arundina graminifolia*)
- Pale Purple Eulophia (*Eulophia graminea*)
- Toothed Habenaria (*Habenaria dentata)*
- Common Pecteilis (*Pecteilis susannae*)
- White Azalea (*Rhododendron mucronatum*)
- Lovely Azalea (*Rhododendron pulchrum*)
- Purple Azalea (*Rhododendron pulchrum* Sweet var. *phoeniceum*)
- Buttercup Orchid (*Spathoglottis pubescens*)

# 3. RESULT OF VEGETATION SURVEY

## 3.1 SURVEY PERIOD

A vegetation survey was undertaken in April 2018 within the Project boundary as stated in Appendix A.

## 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. The vegetation survey was carried out by a qualified ecologist with at least 5 years of experience in flora study.

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 In the vegetation survey, one *Aquilaria sinensis* was identified in woodland at the central part of project.

3.3.2 Details such as size, health, structural condition, etc. of the identified *Aquilaria sinensis* are listed in Table 1. The location of the *Aquilaria sinensis* is shown in Appendix C and the photographic records of this vegetation survey are shown in Appendix D.

**Table 1 Details of the *Aquilaria sinensis* identified in the vegetation survey**

| **Species** | **DBH (mm)** | **Height (m)** | **Crown Spread (m)** | **Health** | **Structural Condition** | **Survival rate after transplanting** (High/Medium/Low) |
|---|---|---|---|---|---|---|
| *Aquilaria sinensis* | 295 | 11 | 5 | Fair | Fair | Medium |

3.3.3 No additional flora species of conservation interest was identified within the site boundary during the vegetation survey.

# 4. RECOMMENDATION

4.1 The *Aquilaria sinensis* recorded within the surveyed area is a mature tree with 11 meters in height. It is located in woodland at the central part of project which a fill slope (FS1) will be constructed in this area as shown in Appendix E. Excavation and change in terrain will inevitably damage the tree especially its rooting system and reduce the survival rate during the construction period. Avoidance of disturbance to the *Aquilaria sinensis* would be technically infeasible. Therefore, transplantation to a receptor site in proximity area is recommended.

4.2 Since the *Aquilaria sinensis* recorded within the surveyed area has direct conflict with the construction work, and the formation of rootball of adequate shape and size for transplanting would be technical feasible, it is recommended to transplant the *Aquilaria sinensis* to a permanent receptor site beyond the work site boundary. The proposed receptor site for the transplanting trees is shown in Appendix F.

4.3 No flora species of conservation interest other than *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.

# 5. TRANSPLANTATION PROPOSAL

## 5.1 GENERAL

5.1.1 A total number of 1 *Aquilaria sinensis* has been recommended for transplanting. The tree was located in woodland at the central part of project which have direct conflict with the proposed construction works. As stipulated in Condition 2.16 of the EP and Condition 2.15 of the FEP, If the Vegetation Survey concluded that transplantation of the affected floral species of conservation importance is needed, a Transplantation Proposal shall be submitted no less than one month before commencement of transplantation to the Director for approval.

5.1.2 The transplanting process should refer to the recommendation and requirements as detailed in the "Guidelines on Tree Transplanting" issued by the Tree Management Office, Development Bureau HKSAR, as well as the applicable clauses stipulated in the Section 3 of the CEDD's General Specification (2006 ed.). All recommended measures as set out in this Transplantation Proposal shall be fully and properly implemented. The approved transplantation works will be supervised by a qualified botanist/ horticulturist/arborist with relevant experience in transplanting floral species of conservation importance.

## 5.2 TRANSPLANTATION PROGRAMME

All transplanting works should ideally be undertaken in fall and spring to increase the chances of the trees' successful re-establishment. In general, summer is not a common transplanting season as evapotranspiration rate is high and the transplanted trees will be under stress when transplanting work is taken place during that time. Transplanting operation should be timed so as to avoid strong sun or drying winds. In addition, all the dug plants should be transported and planted to their receptor sites on the same day of digging to enhance the transplanting success. A detail transplanting programme should be prepared by the specialist contractor and submitted to Engineer before commencement of transplanting.

## 5.3 SITE PREPARATION

5.3.1 Before transplanting, site clearance at the receptor sites should be carried out and overgrown weeds should be removed. Planting holes should be marked with individual tree numbers before the transplant and chosen to provide adequate growth space for future growth. Any large stones and concrete materials in and

around the selected planting holes should be removed. Soil at the receptor sites should be ploughed and conditioned before the transplant as necessary. Preparation of receptor site should be done carefully so that the root systems of the nearby vegetation are not damaged.

5.3.2 Pits at receptor site shall be dug in advance to appropriate width and depth in preparation to receive the transplanted trees on the same day. The pit shall be of a saucer shape, with a flat bottom in the centre and sloping sides. The flat bottom part shall be as wide as the root ball width, and each sloping edge shall also be as wide as the root ball plus 300mm on all sides.

## 5.4 FORMATION OF ROOTBALL

5.4.1 The diameter of the rootball to be prepared should be as large as practicable, with the principle to maximize the potential of survival during and after transplanting while balancing other logistical and cost concerns. The root ball size may varies depending on species, habit, location and specific attributes. In general, the width of root ball shall be 10 times the trunk diameter (DBH).

5.4.2 A sharp spade should be used for root pruning to assure root wounds are clean cut. The trenches for the root ball shall be at least 300 mm wide and 1000mm depth. Digging should be done by hand and special attention should be paid so that no damage is done to the fine root systems of the individual or the roots of the existing trees in the vicinity.

5.4.3 Root pruning is required to be carried out at different stages with a minimum of 6 weeks allowed for root regeneration between cuts. Stage digging should be carried out in the following stages in situations if the locations and work programme are considered suitable. The three stages are:

a. **1st stage** – Dig a trench on the outside of the marked circumference in only two opposing segments;
b. **2nd stage** – After a period of no less than 6 weeks since the 1st root pruning, dig a trench on the outside of the marked circumference in the adjacent two opposing segments;
c. **3rd stage** – After a further period of not less than 6 weeks since the 2nd root pruning, prepare the root ball and cut the underside of the root ball, followed by

uplifting and transplanting.

5.4.4 Removal of the root system may aggravate the natural form and balance of a tree and is prone to tree failure. Temporary support such as guying or simple prop is required before the tree is delivered to the new receptor site. Where appropriate, robust protective fencing to fence off the area of a tree undergoing stage cutting may be required. Regular inspection should also be made to adjust the physical support and to check for the stability of the tree, in particular after the passage of inclement weather.

5.4.5 The rootball should be wrapped in damp Hessian and galvanized wire after undercutting. The root of plants should be kept moist during the whole transplantation process.

## 5.5 TRANSPLANTATION

5.5.1 The receptor sites should be ready before uplifting or transportation of the plants from their original location. Planting holes should be larger than the rootball and thoroughly watered before planting. Soil characteristics at receptor site should be similar to those at the original locations of the plants. Soil from their original locations could be used for refilling as necessary.

5.5.2 Lifting should be done by direct lift, with padded protection for the tree, using a machine of appropriate capacity connected to the support around the root ball, not to any other part of the tree. Tree should not be lifted by the trunk as this can cause serious trunk injury.

5.5.3 The trunk and branches should be padded with several thicknesses of burlap to prevent damages and injury during the transplanting operation.

5.5.4 All root ball supporting materials should be removed from the planting hole prior to final back filling. All of the plant material should be vertically positioned in the planting pit and the root collar of the plant material should be at or slightly above the finished grade.

5.5.5 A soil saucer of 150mm high shall be formed on the soil surface either around the edge of the root ball circumference or width of the root plate to permit rain or irrigation water to be retained and slowly infiltrate into the root system, and mulching should be placed around the seedling.

## 5.6 POST-TRANSPLANTATION MAINTENANCE

5.6.1 The transplanted trees shall be maintained immediately after transplanting and shall continue until the completion of all construction work at the site, and thereafter for a period of 12 more months.

5.6.2 The receptor site should be fenced off to avoid accidental infringement during the construction process.

5.6.3 The receptor site should be thoroughly watered immediately after planting. During the maintenance period, provision should be made for watering, allowing for total wetting of the rooting volume to minimize susceptibility to stress and assure survival.

5.6.4 Insect/fungal infested stems, or those infected with disease would be removed after transplantation. Pruning may also be required after transplantation to remove any broken stems. The receptor sites should be kept free from weeds throughout maintenance period.

5.6.5 Stake transplanted tree with 3 nos. cable from the trunk with one end tie above the lowest branch of the trunk and the other end tie to the metal stakes 1000mm long with 700 mm driven into ground. Guys and stakes and ties should be removed, replaced or adjusted as necessary to ensure their effectiveness and to prevent constriction or abrasion damage to the tree.

## 5.7 POST-TRANSPLANTATION MONITORING

The monitoring should include a 12-month post-transplantation/ establishment monitoring on the health condition of the transplanted plants, as well as presence of any pest and disease, and undertake weeding, fertilizing, and if necessary application of pesticide/fungicide to maintain the health condition of the plants. The monitoring of the transplanted individuals should be conducted once per week in the first three months after the transplantation and once in each of the following month in the remaining establishment period. During the remaining construction phase of the project, these transplanted individuals should be monitored on a quarterly basis. The monitoring should be undertaken by a qualified ecologist/botanist of the Environmental Team (ET).

# 6. CONCLUSION

6.1 In the detailed vegetation survey, one mature tree of *Aquilaria sinensis* was identified within the Project area. Direct impact on that tree due to the Project is anticipated. As mitigation measure, it is recommended to transplant the *Aquilaria sinensis* to a permanent receptor site to avoid direct impact from construction activities. Also, regular monitoring of the identified *Aquilaria sinensis* throughout the construction phase is recommended to make sure that they are not affected by the construction works of the Project.

6.2 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.

# 7. REFERENCE

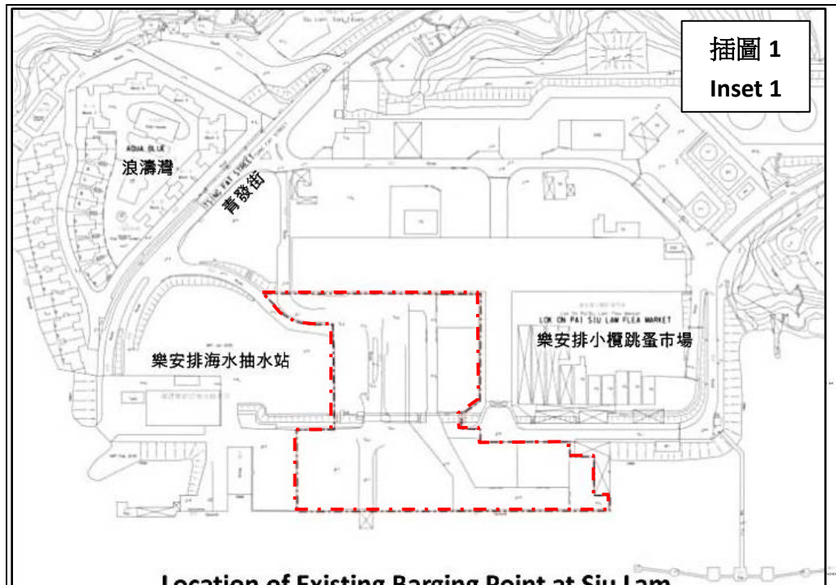
This vegetation survey has made reference to the following documents/website:

- 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 Further Environmental Permit to Construct a Designated Project (Environmental Permit No. FEP-01/534/2017)
- 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

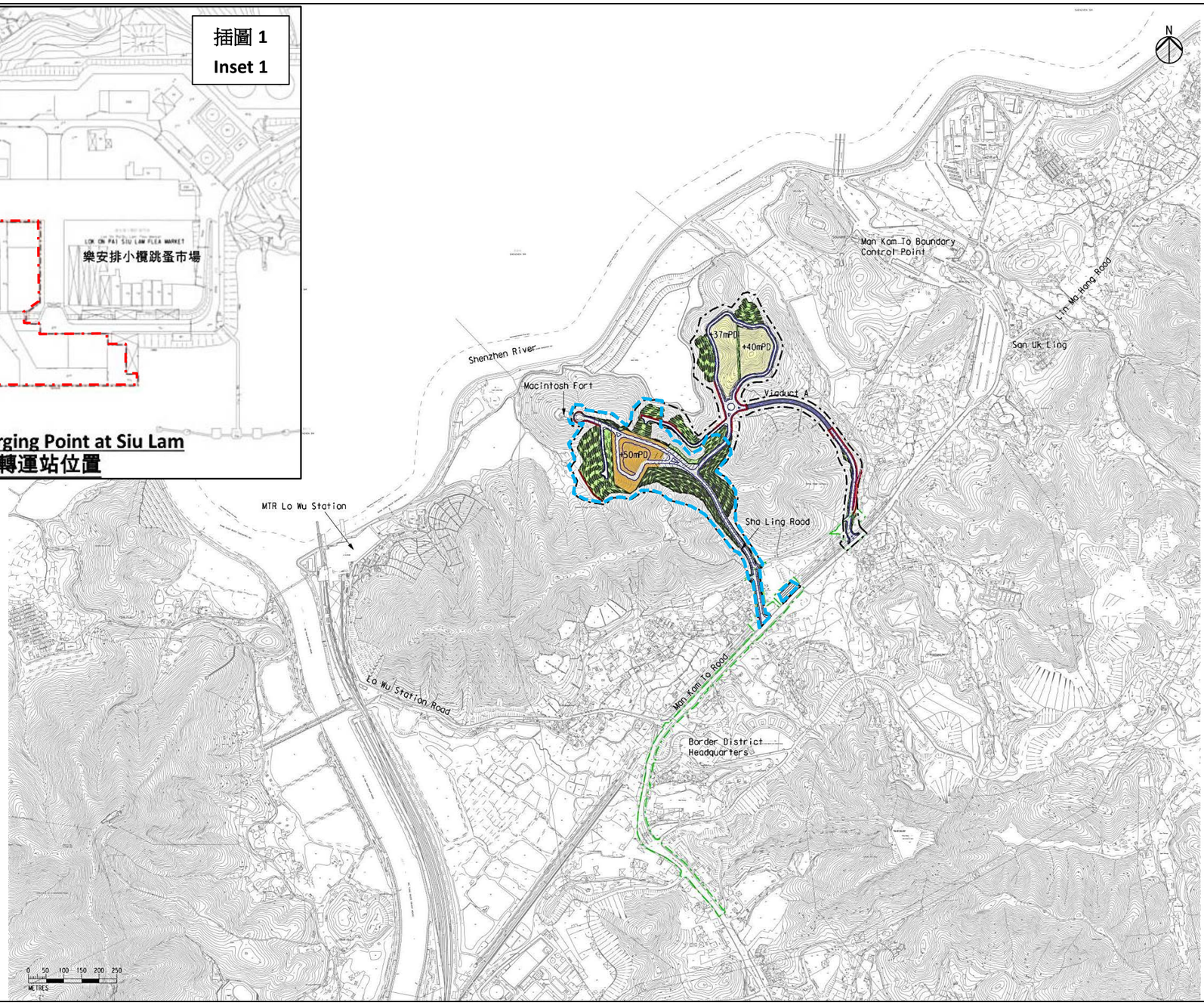
# APPENDIX A

# The extent of the project boundary for Contract Package 1

插圖 1
Inset 1




**Location of Existing Barging Point at Siu Lam**
**現有的小欖蹇船轉運站位置**




Legend
圖例

- Project Boundary in Environmental Permit No. EP-534/2017
  環境許可證編號 EP-534/2017 內的項目範圍
- Utilities Construction
  興建公用設施
- Proposed Access Road
  擬建場內通道
- Proposed Viaduct
  擬建高架道路
- Proposed Platform for Crematorium, Funeral Parlour and Visitor Service Centre
  擬建工地平整工程用以興建沙嶺墳場火葬場及有關設施
- Proposed Platforms for Columbarium
  擬建工地平整工程用以興建沙嶺墳場骨灰龕
- Proposed Pick-up and Drop-off Point
  擬建上客、落客範圍
- Proposed Cut / Fill Slope
  斜坡工程
- BARGING POINT AREA
  轉運站範圍
- Site Boundary
  地盤界線

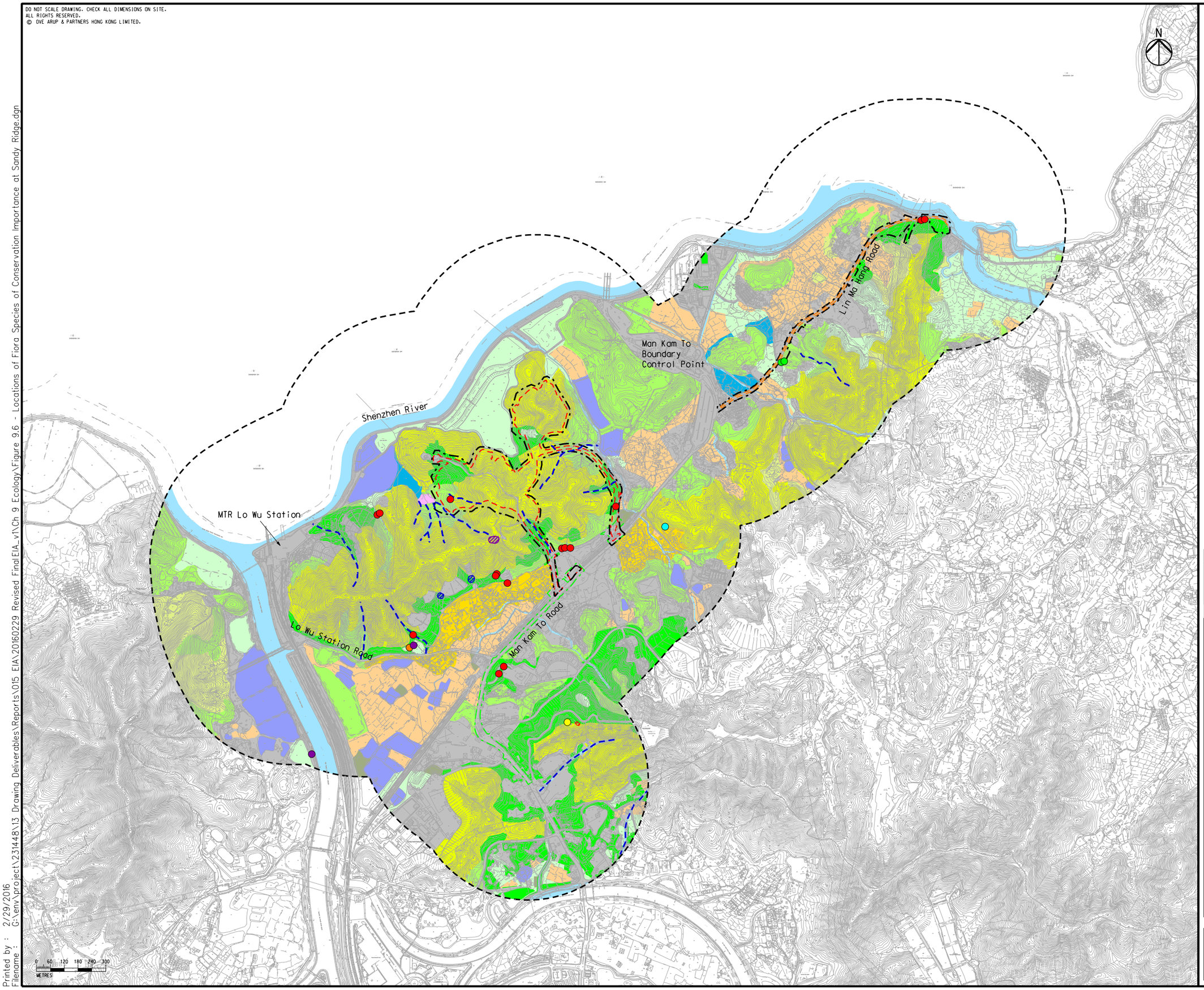
**Project Title: Site Formation and Associated Infrastructural Works for Development of Columbarium at Sandy Ridge Cemetery**
工程名稱：沙嶺墳場興建骨灰龕的工地平整及相關基建工程

**Figure 1: Location Plan**
**圖 1：工程位置圖**
**(This figure was prepared based on General Layout Sheet 1 to 3 attached to FEP application (Application No. FEP-180/2018))**
**(**本圖是根據隨附於新的環境許可證申請 (申請書編號：FEP-180/2018) 的總圖第 1 頁至第 3 頁編制**)**

**Environmental Permit No.: FEP-01/534/2017**
**環境許可證編號：FEP-01/534/2017**

# APPENDIX B

# The locations of flora species of conservation interest within the Assessment Area




## 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*
- *Eulophia graminea*
- *Ailanthus fordii*
- *Rhododendron mucronatum*
- *Rhodendron pulcurum var. phoeniceum* ✱
- *Spathoglottis pubescens*
- *Rhododendron pulchrum* ✱
- *Orchids group of Arundina graminifolia and Habenaria dentata* ✱
- *Pecteilis susannae*

✱ Group more than 5 individuals

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

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. | | | Rev. |
|---|---|---|---|
| Figure 9.6 | | | G |
| Drawn: GL | Date: 02/16 | Checked: EL | Approved: ST |
| Scale: AS SHOWN | | Status: PRELIMINARY | |

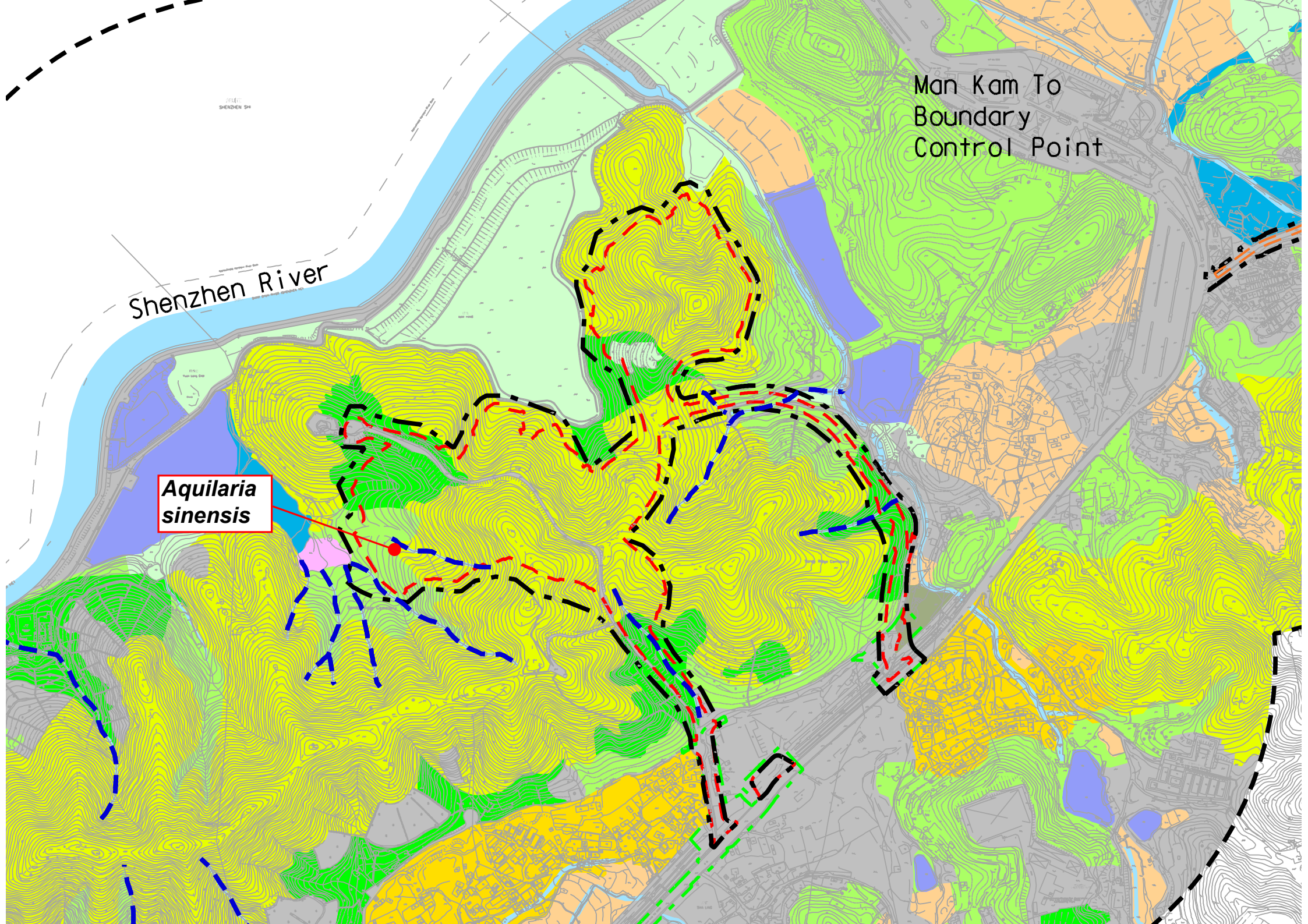


CEDD 土木工程拓展署 Civil Engineering and Development Department

Printed by : 2/29/2016
Filename : G:\env\project\231448\13 Drawing Deliverables\Reports\015 EIA\20160229 Revised Final\EIA_v1\Ch 9 Ecology\Figure 9.6 - Locations of Flora Species of Conservation Importance at Sandy Ridge.dgn

# APPENDIX C

# The locations of the *Aquilaria sinensis* within the project boundary


Man Kam To
Boundary
Control Point
Shenzhen River
Aquilaria
sinensis

# APPENDIX D

# Photo Record of the Vegetation Survey within the project boundary

Contract No. CV/2016/10 - Site Formation and Associated Infrastructural Works for Development of Columbarium at Sandy Ridge Cemetery

Photo Record of Vegetation Survey

*Aquilaria sinensis* (1)

*Aquilaria sinensis* (2)

*Aquilaria sinensis* (3)

*Aquilaria sinensis* (4)

Contract No. CV/2016/10 - Site Formation and Associated Infrastructural Works for Development of Columbarium at Sandy Ridge Cemetery

Photo Record of Vegetation Survey

General View (1)

General View (2)

Contract No. CV/2016/10 - Site Formation and Associated Infrastructural Works for Development of Columbarium at Sandy Ridge Cemetery

Photo Record of Vegetation Survey

General View (3)

General View (4)

Contract No. CV/2016/10 - Site Formation and Associated Infrastructural Works for Development of Columbarium at Sandy Ridge Cemetery

Photo Record of Vegetation Survey

General View (5)

General View (6)

Contract No. CV/2016/10 - Site Formation and Associated Infrastructural Works for Development of Columbarium at Sandy Ridge Cemetery

Photo Record of Vegetation Survey

General View (7)

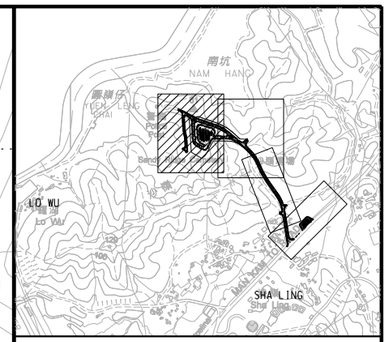
General View (8)

# APPENDIX E

# Proposed construction work around the location of the *Aquilaria sinensis*

Aquilaria sinensis

MATCH LINE
FOR CONTINUATION
SEE DRG 231448/C1/LS/1011




## KEY PLAN

## NOTE:

1. THE RECEPTOR SITE OF TRANSPLANTED TREES REFER TO DRAWING NO. 231448/C1/LS/1024.
2. LOCATION OF EXISTING TREES AS SHOWN ON DRAWINGS 231448/C1/LS/1011 - 1013 ARE INDICATIVE ONLY. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF EXISTING TREES AND AGREED WITH THE PROJECT MANAGER.
2. THE CONTRACTOR SHALL CONDUCT THEIR TREE SURVEY IN ACCORDANCE WITH THE REQUIREMENTS STIPULATED UNDER SECTION 26 OF GENERAL SPECIFICATIONS AND PARTICULAR SPECIFICATIONS.

## LEGEND:

- SITE WORKS SITE
- PROPOSED WORKS
- EXISTING SIMAR SLOPE BOUNDARY
- EXISTING HyD SIMAR SLOPE
- EXISTING TREES TO BE RETAINED
- EXISTING TREES TO BE TRANSPLANTED
- EXISTING TREES TO BE FELLED
- PROPOSED EXCAVATION AND FORMATION AREA

| Rev | Description | By | Date |
|---|---|---|---|
| - | FIRST ISSUE | AW | 12/16 |

Consultant

**ARUP**

Contract No. and Title:

**Contract No. CV/2016/10**

**Site Formation and Associated Infrastructural Works for Development of Columbarium at Sandy Ridge Cemetery**

Drawing title

EXISTING TREE SURVEY AND TREATMENT PLAN (SHEET 1 OF 3)

| Drawing no. | Rev. |
|---|---|
| 231448/C1/LS/1011 | - |

| Drawn | Date | Checked | Approved |
|---|---|---|---|
| WM | 12/16 | AW | DL |

Scale: 1:500 @A1
Status: TENDER



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Printed by : 1/3/2017
Filename : J:\231448\ARUP\Landscape\231448_C1_LS_1011.dgn

# APPENDIX F

# The proposed receptor site for the transplanting

# *Aquilaria sinensis*

MATCH LINE 15 - 15
FOR CONTINUATION
SEE DRG 231448/TC/107

MATCH LINE 24 - 24
FOR CONTINUATION
SEE DRG 231448/TC/111

MATCH LINE 25 - 25
FOR CONTINUATION
SEE DRG 231448/TC/113 INSET C

MATCH LINE 26 - 26
FOR CONTINUATION
SEE DRG 231448/TC/113

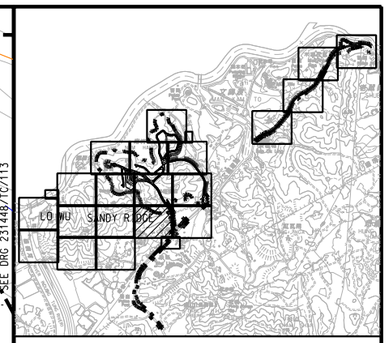
830600 E
830700 E
830800 E
830900 E
843300 N
843200 N
843100 N

3NW-C/C259
3NW-C/C260
3NW-C/C261
3NW-C/C438
3NW-C/C437
3NW-C/C21
3NW-C/C22

T-2469
T-2928
T-2465
T-715
T-716
T-717
T-145
T-1149

*Aquilaria sinensis*
**after transplantaton**

25 NOS. XAN. CHR.




KEY PLAN

NOTE:

1. NOTES AND LEGEND, REFER TO DRAWING NO. 231448/TS/101.

| 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

TREE COMPENSATORY PLAN (SHEET 12)

| Drawing no. | | Rev. |
|---|---|---|
| 231448/TC/112 | | - |
| Drawn: WM | Date: 06/14 | Checked: AW | Approved: DL |
| Scale: 1:500 @A1 | | Status: PRELIMINARY | |



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Printed by : $DATE$
Filename : $FILE$