

Your Ref : (9) in EP 2/N7/A/52 Ax (1) Pt. 18
Our Ref : (CV/2013/08)/M45/200/(H03468)

18 January 2017

By Hand

Environmental Impact Assessment Ordinance Register Office
Environmental Protection Department
27/F, Southorn Centre,
130 Hennessy Road,
Wanchai, Hong Kong

Attn.: Mr. Charles Pang

Dear Sirs,

Contract No. CV/2013/08
Liantang / Heung Yuen Wai Boundary Control Point
Site Formation and Infrastructure Works – Contract 6

Environmental Permit No. EP-404/2011/C
Condition 2.8 – Vegetation Survey Report (Revision 5)

With reference to Condition 2.8 of the Environmental Permit (EP) No. EP-404/2011/C for the captioned Project, and on behalf of the Permit Holder, Civil Engineering and Development Department (CEDD), I would like to submit three hard copies of the Vegetation Survey Report (Revision 5) for the Project titled "Liantang / Heung Yuen Wai Boundary Control Point and Associated Works", which had been certified by the ET Leader and verified by the IEC for your retention.

Revision 4 of the Report had been submitted to the Office and "no comment" was received through the above referenced letter dated 12 October 2015. The Report is updated mainly due to the approval of application for further tree felling, transplanting and compensatory planting which involve two numbers of *Aquilaria sinensis* trees.


Should you have any queries, please contact the undersigned or our Mr. Perry Yam at 2171 3350.

Yours faithfully,


Simon Leung
Chief Resident Engineer
AECOM Asia Co. Ltd.

Encl.

c.c. CEDD/BCP - Attn: Mr. Steve Lo
AECOM - Attn: Mr. Francis Leong / Mr. Pat Lam - 1 CD copy
SMEC(IEC) - Attn: Mr. Antony Wong - 1 CD copy
AUES(ET) - Attn: Mr. T. W. Tam - 1 CD copy

SL/PY/tc




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10 January 2017

Our ref: 7076192/L21362/AB/AW/MC/rw

AECOM
8/F, Grand Central Plaza, Tower 2
138 Shatin Rural Committee Road
Shatin, N.T.

By Email & Post

Attention: Mr Simon LEUNG

Dear Sirs

**Agreement No. CE 45/2008 (CE)
Liantang/Heung Yuen Wai Boundary Control Point and Associated Works
Independent Environmental Checker – Investigation
Revised Vegetation Survey Report (Rev. 5)**

Reference is made to the revised Vegetation Survey Report (Rev. 5) received via email on 16 December 2016 and certified by the ET Leader. Please be noted that we have no adverse comments on the captioned submission. We herewith verify the captioned submission in accordance with Condition 2.8 of the Environmental Permit No. EP-404/2011/C.

Thank you for your attention and please do not hesitate to contact the undersigned on tel. 3995 8120 or by email to antony.wong@smec.com; or our Mr Man CHEUNG on tel. 3995 8132 or by email to man.cheung@smec.com.

Yours faithfully
for and on behalf of
SMEC Asia Limited

Antony WONG
Independent Environmental Checker

cc	CEDD/BCP	-	Mr Desmond LAM	by fax: 3547 1659
	AECOM	-	Mr Pat LAM / Mr Perry YAM	by email
	AUES	-	Mr TW TAM	by email



Our Ref: TCS00670/13/300/L0812

AECOM
8/f Grand Central Plaza, Tower 2
138 Shatin Rural Committee Road
Shatin, Hong Kong

Attn: Mr. Simon Leung

22 December 2016
By E-mail and fax
Fax: 2251 0698

Dear Sir,

Re: Agreement No. CE 45/2008 (CE)
Liantang/ Heung Yuen Wai Boundary Control Point and Associated Works
Vegetation Survey Report (Rev.5)

With reference to the captioned report submitted to us via e-mail on 16 December 2016, please note that we have no adverse comment on this submission. We herewith certify the captioned report in accordance with *Condition 2.8* of Environmental Permit (EP) No. EP-404/2011/C.

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

Yours sincerely,
For and on Behalf of
Action-United Environmental Services & Consulting



T. W. Tam
Environmental Team Leader

cc SMEC (IEC) Attn: Mr. Antony Wong By e-mail

Civil Engineering and Development Department

Contract No. CV/2013/08

**Liantang/Heung Yuen Wai Boundary Control Point
Site Formation and Infrastructure – Contract 6**

Vegetation Survey Report

(Revision 5)

December 2016

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1 INTRODUCTION

Background

- 1.1 Mott MacDonald Hong Kong Ltd. (MMHK) was commissioned by the Civil Engineering and Development Department (CEDD) on 24 April 2009 under Agreement No. CE 45/2008 (CE) to provide professional services to address issues related to the planning, design and construction of the proposed Liantang / Heung Yuen Wai Boundary Control Point and Associated Works (the Project). An Environmental Impact Assessment (EIA) study for the Project was conducted to provide information on the nature and extent of environmental impacts arising from the construction and operation of the Project. The EIA Report was approved on 24 March 2011 and the Environmental Permit (EP No. EP-404/2011) was granted under the Environmental Impact Assessment Ordinance (EIAO) to construct and operate the designated project.
- 1.2 Under Condition 2.8 of the Environmental Permit a Vegetation Survey Report (VSR) shall be submitted to provide the results of a detailed vegetation survey for the purpose of:
- (a) confirming the conditions of individual flora species of conservation importance identified in the EIA Report and during the course of the survey, including *Euonymus kwangtungensis* and *Aquilaria sinensis*; (Habitat Map in the EIA Report showing the Location of *Euonymus kwangtungensis* and *Aquilaria sinensis* is in **Appendix A**)
 - (b) preparing an updated location plan showing the individual species of conservation importance and identifying the individuals which will be affected by the Project;
 - (c) identifying suitable treatment for the identified individual species of conservation importance and reception site for transplantation;
 - (d) recommending an implementation programme for in-situ preservation of the identified species of conservation importance and transplantation of the affected species.
- 1.3 AECOM Asia Co. Ltd (AECOM) has been commissioned by the Civil Engineering and Development Department to prepare and submit the Vegetation Survey Report.
- 1.4 This report is to summarize findings of the vegetation survey for the contracts awarded and propose suitable treatment for the plants affected.

Project Scope

- 1.5 The Project covers the site formation and infrastructures for the LT/HYW, and comprises:
- (a) Construction of a dual two-lane trunk road of 11 in length;
 - (b) On-site sewage treatment facility and effluent reuse;
 - (c) Site formation for construction of a Boundary Control Point (BCP) building in the area of Chuk Yuen Village;
 - (d) Associated drainage facilities discharging into the Shenzhen River;
 - (e) Cargo processing facilities;
 - (f) Passenger related facilities;
 - (g) Accommodation for and facilities of the Government departments;

- (h) Provision of transport related facilities inside the BCP;
- (i) Other peripheral structures and supporting facilities;
- (j) Associated diversion / modification works at Lin Ma Hang Road; and
- (k) Associated environmental mitigation measures.

Construction Contract Packaging

1.6 To facilitate project management and implementation, the Project will be implemented in the following contract packages: (refer to **Figure 1.0** Project Layout Plan)

- Contract 2 (CV/2012/08)
- Contract 3 (CV/2012/09)
- Contract 4 (TCSS/NE2014/02)
- Contract 5 (CV/2013/03)
- Contract 6 (CV/2013/08)
- Contract 7 (NE/2014/03)

1.7 The details of the contracts are summarized below:

Contract 2	
Contract No.:	CV/2012/08
Contract Name:	Liantang/ Heung Yuen Wai Boundary Control Point Site Formation and Infrastructure Works - Contract 2
Contract Period:	The works commenced in December 2013 and will take about 54 months to complete.
Major Scope of Works:	The works include construction of a dual two-lane trunk road (with about 0.4km of at-grade road and 4.8km of tunnel) connecting the Fanling Interchange with the proposed Sha Tau Kok Interchange, provision and installation of ventilation system, E&M works and building services works for Lung Shan tunnel and Cheung Shan tunnel and their portal buildings, Tunnel Administration Building adjacent to Wo Keng Shan Road and associated landscaping works, drainage / sewerage, waterworks, utilities and traffic engineering works.
Contractor:	Dragages Hong Kong Limited

Contract 3	
Contract No.:	CV/2012/09
Contract Name:	Liantang/ Heung Yuen Wai Boundary Control Point Site Formation and Infrastructure Works - Contract 3
Contract Period:	The works commenced in July 2013 and will take about 63 months to complete.
Major Scope of Works:	The works include construction of four link roads connecting the existing Fanling Highway with the south portal of the Lung Shan Tunnel, realignment of the existing Tai Wo Service Road West and Tai Wo

	Service Road East, widening portion of the existing Fanling Highway and the associated works, demolition of the existing vehicular bridge and footbridge at Kiu Tau and reconstruction of the Kiu Tau Footbridge.
Contractor:	Chun Wo Construction and Engineering Company Limited

Contract 4	
Contract No.:	NE/2014/02
Contract Name:	Liantang/ Heung Yuen Wai Boundary Control Point Site Formation and Infrastructure Works - Contract 4
Contract Period:	The works commenced in April 2016 and will be completed in early 2021. (Major part of the works will be completed by end 2018)
Major Scope of Works:	The works mainly include provision and installation of Traffic Control and Surveillance System for the connecting road.
Contractor:	Siemens Limited

Contract 5	
Contract No.:	CV/2013/03
Contract Name:	Liantang/ Heung Yuen Wai Boundary Control Point Site Formation and Infrastructure Works - Contract 5
Contract Period:	The works commenced in April 2013 and was substantially completed in January 2016.
Major Scope of Works:	The works include site formation of about 23 hectares of land for the development of the new Boundary Control Point (BCP), diversion/modification of Lin Ma Hang Road, landscaping works, drainage/sewerage, waterworks, utilities and traffic engineering works.
Contractor:	Sang Hing Civil - Richwell Machinery JV

Contract 6	
Contract No.:	CV/2013/08
Contract Name:	Liantang/ Heung Yuen Wai Boundary Control Point Site Formation and Infrastructure Works - Contract 6
Contract Period:	The works commenced in June 2015 and will take about 40 months to complete.
Major Scope of Works:	The works include construction of a 4.6km long dual two-lane trunk road (with about 0.6km at grade roads, 3.3km viaducts and a 0.7km tunnel) connecting Sha Tau Kok Road Interchange to BCP, and the associated environmental mitigation measures, landscaping, drainage/sewerage, waterworks and utilities works.
Contractor:	CRBC-CEC-KADEN Joint Venture

Contract 7	
Contract No.:	NE/2014/03
Contract Name:	Liantang/ Heung Yuen Wai Boundary Control Point Site Formation and Infrastructure Works - Contract 7
Contract Period:	The works commenced in December 2015 and will take about 33 months to complete.
Major Scope of Works:	The works include construction of the Hong Kong Special Administrative Region (HKSAR) portion of four vehicular bridges and one pedestrian bridge crossing Shenzhen (SZ) River (cross boundary bridges).
Contractor:	Kwan On-Richwell-SCG JV

2 KEY FINDINGS OF THE VEGETATION SURVEY

- 2.1 A detailed vegetation survey was conducted focuses on confirming and updating the condition of the floral species of conservation importance which will be affected directly under the contracts to confirm the condition of *Aquilaria sinensis* and *Euonymus kwangtungensis* identified in the EIA Report. Vegetation Survey for Contract 2, Contract 3, Contract 5, and Contract 6 was conducted.
- 2.2 Section 9.5.4 of the EIA Report provided the detailed description of habitats, including *Aquilaria sinensis* within different sections of the Works Area. **Figure 9.1b** of the EIA Report is provided to illustrate the sections of the Works Areas which is given in the following order:
- Section 1 – BCP;
 - Section 2 & 3 – Lin Ma Hang to Frontier Closed Area Boundary and Ping Yeung to Wo Keng Shan;
 - Section 4 – North Tunnel (Cheung Shan tunnel section);
 - Section 5 – Sha Tau Kok Road (between North and South Tunnel);
 - Section 6 – South Tunnel (Lau Shui Heung tunnel section); and
 - Section 7 – Fanling

Aquilaria sinensis

- 2.3 *Aquilaria sinensis* were identified in Sections 2 & 3, North of Section 5 (Shan Tong), South of Section 5 (Princess Hill) and Section 7. No *Aquilaria sinensis* was identified in Section 1, Section 4 and Section 6. **Table 2.1** summarizes *Aquilaria sinensis* identified in the EIA Report and the Vegetation Survey.

Table 2.1 *Aquilaria sinensis* identified in the EIA Report and the Vegetation Survey

Section of Works Area in the EIA Report	EIA Findings (refer to Section 9.5.4)		Vegetation Survey Result				
	Size	Abundance	Relevant Contract in this Project	Trees			Seedling
				Alive	Dead/Topped	Felled by others/Missing	
Section 1 - BCP	No	No	Contract 5	0	0	0	0
Section 2 & 3 - Lin Ma Hang to Frontier Closed Area Boundary and Ping Yeung to Wo Keng Shan	Semi-mature	Some	Contract 5 and Contract 6	65	2	6*	5
Section 4 – North Tunnel (Cheung Shan Tunnel Section)	No	No	Contract 6	0	0	0	0
Section 5 - Sha Tau Kok Road (between North and South Tunnel) - <i>Shan Tong</i>	1.0m tall	1	Contract 6	8	1	0	1
Section 5 - Sha Tau Kok Road (between North and South Tunnel) - <i>Princess Hill</i>	Trees	Some	Contract 2	19	5	18	2
Section 6 – South Tunnel (Lau Shui Heung Tunnel Section)	No	No	Contract 2	0	0	0	0
Section 7 – Fanling	Tree	1	Contract 2 and Contract 3	5	0	1	0
Sub-total				97	8	25	8
Total				130			8
Notes:							
Survey had been conducted after Contract 6 awarded in June 2015.							
*6 numbers of trees were found missing.							

2.4 130 numbers of *Aquilaria sinensis* trees were identified in the Tree Removal Application (TRA) which approved by DLO/N and DLO/TP on 8 August 2013 via DLO/N's memo to CEDD ref. (41) in L/M(5) to DLON 2/61/06 Pt.2 and on 21 October 2013 via DLO/TP's memo to CEDD ref. (11) in LM 6 to DLO/TP 781/173/07 II respectively.

2.5 130 numbers of *Aquilaria sinensis* trees were identified in the vegetation survey in which 49 numbers were within Contract 2, Contract 3 and Contract 5 Works Area and 75 numbers were identified in Contract 6. 6 numbers of trees identified in the TRA were found missing. All the trees identified were summarized in **Table 2.2** with Photographs in **Appendix B**. Damages, mainly wounding in the middle of the trunk, are commonly found which likely due to the illegal extraction of agarwood. A number of trees in Princess Hill area were felled or topped.

Table 2.2 Summary of *Aquilaria sinensis* Trees Identified in the Vegetation Survey

Tree No.	Ht. (m)	Spd. (m)	DBH (mm)	Health	Form
STK1834	9.0	3.5	230	Poor	Poor
STK1865	Felled by others				
STK1887	9.5	5.0	220	Fair	Poor
STK2290	Felled by others				
STK2291	5.0	3.0	110	Poor	Poor
STK2310	Felled by others				
STK2322	7.0	4.5	110	Fair	Poor
STK2472	Felled by others				
STK2479	7.5	9.0	200	Fair	Fair

Tree No.	Ht. (m)	Spd. (m)	DBH (mm)	Health	Form
STK2701	5.5	3.0	188	Fair	Fair
STK2876	-	-	-	Dead	-
STK2879	Felled by others				
STK2900	7.0	4.0	110	Poor	Poor
STK2927	Felled by others				
STK2935	Felled by others				
STK2943	12.0	8.0	350	Poor	Poor
STK2974	-	-	-	Dead	-
STK2984	4.0	3.0	120	Poor	Poor
STK2991	5.0	3.5	120	Poor	Poor
STK3009	9.5	6.0	220	Poor	Poor
STK3013	Felled by others				
STK3014	Felled by others				
STK3107	Felled by others				
STK3114	7.0	3.0	150	Fair	Poor
STK3134	Felled by others				
STK3141	-	-	-	Dead	-
STK3323	Felled by others				
STK3459	7.0	3.0	120	Poor	Poor
STK3542	Felled by others				
STK3618	Felled by others				
STK3630	-	-	-	Dead	-
STK3643	Felled by others				
STK3691	Felled by others				
STK3712	-	-	-	Dead	-
STK3736	9.0	4.0	180	Fair	Poor
STK3768	7.0	4.0	180	Fair	Poor
STK3882	8.0	6.0	200	Fair	Fair
STK4000	8.0	3.0	170	Poor	Poor
STK4017	7.0	4.0	140	Fair	Poor
STK4101	8.0	6.0	135	Fair	Poor
STK4251	Felled by others				
STK4253	Felled by others				
T306	13.0	6.0	470	Fair	Fair
T2163	6.0	2.0	105	Fair	Fair
T2413	7.0	5.0	290	Poor	Poor
U381	14.0	9.0	210	Fair	Fair
U415	Felled by others				
U543	11.0	5.0	280	Poor	Fair
U649	8.0	3.0	330	Poor	Poor
75 Numbers of trees were identified in Contract 6 (81 numbers in TRA)					
N252	Missing				
N306	5.0	3.0	130	Fair	Fair
N313	Missing				
N317	4.0	4.0	110	Fair	Fair
N318	Missing				
N320	Missing				
N326	5.0	3.0	130	Fair	Fair
N327	5.0	3.0	120	Fair	Fair
N330	Missing				
N383	7.0	5.0	270	Fair	Fair
N384	5.0	3.0	110	Fair	Fair
N388	Missing				
N471	4.0	3.0	150	Fair	Fair
N472	6.0	4.0	310	Fair	Fair
N498	6.0	4.0	230	Fair	Fair

Tree No.	Ht. (m)	Spd. (m)	DBH (mm)	Health	Form
STK1548	6.0	4.0	120	Fair	Fair
STK1603	9.0	6.0	250	Fair	Fair
STK1609	9.0	5.0	270	Poor	Poor
STK1679	10.0	6.0	300	Fair	Fair
STK1728	5.0	2.0	150	Fair	Fair
STK2091	10.0	8.0	500	Fair	Fair
STK2121	-	-	-	Dead	-
STK2140	7.0	3.0	155	Fair	Fair
STK2176	11.0	3.5	120	Fair	Fair
T708	14.0	6.0	230	Fair	Fair
T1259A	5.0	3.0	120	Fair	Fair
T1268	9.0	5.0	130	Fair	Fair
T1284	5.0	3.0	140	Fair	Fair
T1344	12.0	7.0	320	Fair	Fair
T1346	13.0	6.0	300	Fair	Fair
T1489	-	-	-	Dead	-
T1503	11.0	8.0	320	Fair	Fair
T1505	9.0	5.0	220	Fair	Fair
T1577	7.0	3.0	190	Fair	Fair
T1579	8.0	5.0	230	Fair	Fair
T1586	7.0	4.0	170	Fair	Fair
T1601	6.0	3.0	100	Fair	Fair
T1602	7.0	4.0	130	Fair	Fair
T1608	5.0	3.0	100	Fair	Fair
T1611	8.0	4.0	150	Fair	Fair
T1628	9.0	5.0	130	Fair	Fair
T1639	7.0	4.0	160	Fair	Fair
T1704	9.0	3.0	110	Fair	Fair
T1818	8.0	3.0	110	Fair	Fair
T1835	12.0	5.0	190	Fair	Fair
T1868	11.0	5.0	210	Fair	Fair
T1877	11.0	5.0	260	Fair	Fair
T1880	8.0	4.0	130	Fair	Fair
T1887	12.0	4.0	200	Fair	Fair
T1906	7.0	4.0	110	Fair	Fair
T1944	10.0	3.0	160	Fair	Fair
T1947	9.0	4.0	160	Fair	Fair
T1993	9.0	4.0	190	Fair	Fair
T2070	8.0	4.0	150	Fair	Fair
T2803	11.0	7.0	250	Fair	Fair
T2812	9.0	5.0	160	Fair	Fair
T2845	10.0	5.0	200	Fair	Fair
T2846	-	-	-	Dead	-
T2854	12.0	4.0	210	Fair	Fair
T2857	7.0	4.0	130	Fair	Fair
T2866	10.0	4.0	150	Fair	Fair
T2901	5.0	2.0	190	Fair	Fair
T2921	7.0	3.0	180	Fair	Fair
T2983	9.0	3.0	250	Fair	Fair
T3007	8.0	3.0	120	Fair	Fair
T3041	8.0	4.0	260	Fair	Fair
T3048	10.0	3.0	200	Fair	Fair
T3053	10.0	4.0	130	Fair	Fair
T3060	7.0	2.0	100	Fair	Fair
T3149	9.0	2.0	180	Fair	Fair
T3184	8.0	2.0	100	Fair	Fair

Tree No.	Ht. (m)	Spd. (m)	DBH (mm)	Health	Form
T3219	10.0	3.0	200	Fair	Fair
T3225	5.0	2.0	100	Fair	Fair
T3247	10.0	7.0	340	Fair	Fair
T3260	8.0	3.0	100	Fair	Fair
T3261A	9.0	3.0	190	Fair	Fair
T3262	9.0	4.0	140	Fair	Fair
T3282	11.0	6.0	220	Fair	Fair
T3287	8.0	7.0	290	Fair	Fair
T3318	7.0	3.0	130	Fair	Fair
T3330	8.0	4.0	180	Fair	Fair

- 2.6 Eight numbers of seedlings were identified. **Table 2.3** summaries the details of the seedlings with photographs in **Appendix B**.

Table 2.3 Summary of *Aquilaria sinensis* Seedlings Identified in the Vegetation Survey

Seedling No.	Ht. (mm)	Spd. (mm)	Health Condition
AS01	400	300	Fair
AS02	300	300	Fair
AS03	200	200	Fair
Seedlings Identified in Contract 6			
AS04	300	200	Fair
AS05	100	100	Fair
AS06	200	150	Fair
AS07	50	50	Fair
AS08	150	100	Fair

Euonymus kwangtungensis

- 2.7 Two individuals of *Euonymus kwangtungensis* were recorded within the Works Area of Section 5 – Sha Tau kok Road (between North and South Tunnel) in EIA Report. Two individual plants of 600mm~900mm in height were found in Princess Hill. **Table 2.4** summarised *Euonymus kwangtungensis* identified in the vegetation survey with photographs in **Appendix C**.

Table 2.4 Summary of *Euonymus kwangtungensis* Identified in the Vegetation Survey

Plant No.	Ht. (mm)	Spd. (mm)	Health Condition
EK01	900	400	Fair
EK02	600	300	Fair

- 2.6 An updated location plan is in **Appendix D** showing the *Aquilaria sinensis* trees and seedlings and *Euonymus kwangtungensis* identified in the Survey and will be affected by the Project.

3 PROPOSED SUITABLE TREATMENT

Aquilaria sinensis

- 3.1 Trees are retained in-situ where possible. For trees in conflict with construction works, transplantation is recommended if they are considered suitable for transplanting. Felling is recommended for trees which cannot be transplanted or not suitable for transplanting due to various reasons. For example, trees growing on slope are difficult to form an intact and

sufficient-sized rootball and trees with poor health condition and significant structural problem. Trees in both cases are not transplantable and hence felling is recommended. The felling of these trees under the previous tree removal application have been separately approved by the DLO/N and DLO/TP on 8 August 2013 via DLO/N's memo to CEDD ref. (41) in L/M(5) to DLON 2/61/06 Pt.2 and on 21 October 2013 via DLO/TP's memo to CEDD ref. (11) in LM 6 to DLO/TP 781/173/07 II respectively. **Table 3.1** and **Table 3.2** summarised the proposed treatment and actual status of *Aquilaria sinensis* identified in the Survey.

3.2 **Table 3.1** and **Table 3.2** are updated due to the following reason after the approval of Revision 4 of this Report.

- Approval of application for further tree felling, transplanting and compensatory planting (2 numbers of *Aquilaria sinensis* trees were identified in the application which approved by DLO/N on 26 April 2016 via DLO/N's memo to CEDD ref. (47) in L/M(5) to DLON 2/61/06 Pt.6.)
- Illegal tree felling by others
- Removed due to safety concern

Table 3.1 Proposed Treatment to *Aquilaria sinensis* Trees

Tree No.	Ht. (m)	Spd. (m)	DBH (mm)	Health	Form	Proposed Treatment	Justification	Status		
Trees not in conflict with Construction and to be Retained										
STK1834	9.0	3.5	230	Poor	Poor	Retain	N/A	Removed on 3/4/2014*		
STK1887	9.5	5.0	220	Fair	Poor					
STK3114	7.0	3.0	150	Fair	Poor					
STK3459	7.0	3.0	120	Poor	Poor					
STK3882	8.0	6.0	200	Fair	Fair					
T306 ¹	13.0	6.0	470	Fair	Fair					
T2163 ²	6.0	2.0	105	Fair	Fair					
T2413	7.0	5.0	290	Poor	Poor					
U381	14.0	9.0	210	Fair	Fair					
U543	11.0	5.0	280	Poor	Fair					
U649 ³	8.0	3.0	330	Poor	Poor					
Trees Identified in Contract 6										
STK1548	6.0	4.0	120	Fair	Fair			Retain	N/A	Retained
N383	7.0	5.0	270	Fair	Fair					
N384	5.0	3.0	110	Fair	Fair					
N471	4.0	3.0	150	Fair	Fair					
N472	6.0	4.0	310	Fair	Fair					
N498	6.0	4.0	230	Fair	Fair					
T708	14.0	6.0	230	Fair	Fair					
T1868	11.0	5.0	210	Fair	Fair					
T1944	10.0	3.0	160	Fair	Fair					
T1947	9.0	4.0	160	Fair	Fair					
T2803	11.0	7.0	250	Fair	Fair					
T2812	9.0	5.0	160	Fair	Fair					
T2901	5.0	2.0	190	Fair	Fair					
T2921	7.0	3.0	180	Fair	Fair					
Trees in conflict with Construction and Suitable for Transplantation										
STK2701 ⁴	5.5	3.0	188	Fair	Fair	On Site Transplant	Suitable for Transplant	Transplanted on 12/5/2014		
STK3736	9.0	4.0	180	Fair	Poor	On Site Transplant	Suitable for Transplant	Transplanted on 24/8/2015		
Trees Identified in C6										
STK1609 ⁺	9.0	5.0	270	Fair	Fair	On Site Transplant	Suitable for Transplant	-		
N317 ⁵	4.0	4.0	110	Fair	Fair					
T1268 ⁵	9.0	5.0	130	Fair	Fair					
T1503 ⁵	11.0	8.0	320	Fair	Fair					
T1608	5.0	3.0	100	Fair	Fair					

Tree No.	Ht. (m)	Spd. (m)	DBH (mm)	Health	Form	Proposed Treatment	Justification	Status	
T1628	9.0	5.0	130	Fair	Fair				
T1639	7.0	4.0	160	Fair	Fair				
T1704	9.0	3.0	110	Fair	Fair				Not yet Transplanted
T1818	8.0	3.0	110	Fair	Fair				Not yet Transplanted
T1835	12.0	5.0	190	Fair	Fair				Transplanted on 26/11/2015
T1906	7.0	4.0	110	Fair	Fair				Not yet Transplanted
T2845	10.0	5.0	200	Fair	Fair				Transplanted on 12/9/2015
T2854	12.0	4.0	210	Fair	Fair				Not yet Transplanted
T2857 ^s	7.0	4.0	130	Fair	Fair				Transplanted on 5/9/2015
T2866 ^s	10.0	4.0	150	Fair	Fair				
T3007	8.0	3.0	120	Fair	Fair				Transplanted on 26/11/2015
T3184	8.0	2.0	100	Fair	Fair				Transplanted on 5/9/2015
T3225	5.0	2.0	100	Fair	Fair				Transplanted on 12/9/2015
T3260	8.0	3.0	100	Fair	Fair				
T3262	9.0	4.0	140	Fair	Fair				
T3282	11.0	6.0	220	Fair	Fair				
T3287	8.0	7.0	290	Fair	Fair				Transplanted on 5/9/2015
T3318	7.0	3.0	130	Fair	Fair				Not yet Transplanted
T3330	8.0	4.0	180	Fair	Fair				Not yet Transplanted
Trees in conflict with Construction and to be Felled due to various reasons									
STK2291	5.0	3.0	110	Poor	Poor	Fell	Low survival rate after transplanting	Felled on 13/4/2014	
STK2322	7.0	4.5	110	Fair	Poor		Difficult to form rootball on slope	Felled on 13/4/2014	
STK2479	7.5	9.0	200	Fair	Fair			Felled on 15/4/2014	
STK2900	7.0	4.0	110	Poor	Poor		Low survival rate after transplanting	Felled on 14/4/2014	
STK2943	12.0	8.0	350	Poor	Poor			Felled on 11/4/2014	
STK2984	4.0	3.0	120	Poor	Poor			Felled on 12/4/2014	
STK2991	5.0	3.5	120	Poor	Poor			Felled on 12/4/2014	
STK3009	9.5	6.0	220	Poor	Poor			Felled on 12/4/2014	
STK3768	7.0	4.0	180	Fair	Poor		Difficult to form rootball on slope	Felled on 9/6/2014	
STK4000	8.0	3.0	170	Poor	Poor			Felled on 17/4/2014	
STK4017	7.0	4.0	140	Fair	Poor		Roots integrated with graveyard nearby	Felled on 11/4/2014	
STK4101	8.0	6.0	135	Fair	Poor		Difficult to form rootball on slope	Felled on 17/4/2014	
T306 ^l	13.0	6.0	470	Fair	Fair		Slightly leaning, wound, low live crown ratio, epicormics	Felled on 21/05/2016	
Trees Identified in C6									
STK1603	9.0	6.0	250	Fair	Fair		Fell	Difficult to form rootball on slope	Not yet felled
STK1609 ^l	9.0	5.0	270	Fair	Fair			On slope, leaning, an open cut	Felled on 16/07/2016

Tree No.	Ht. (m)	Spd. (m)	DBH (mm)	Health	Form	Proposed Treatment	Justification	Status	
							wound at the truck (1.2m above ground level)		
STK1679	10.0	6.0	300	Fair	Fair	Fell	Difficult to form rootball on slope	Not yet felled	
STK1728	5.0	2.0	150	Fair	Fair		Difficult to form rootball on slope	Not yet felled	
STK2091	10.0	8.0	500	Fair	Fair		Low survival rate after transplanting	Felled on 4/7/2015	
STK2140	7.0	3.0	155	Fair	Fair		Difficult to form rootball on slope	Felled on 8/7/2015	
STK2176	11.0	3.5	120	Fair	Fair			Felled on 17/9/2015	
N306	5.0	3.0	130	Fair	Fair		Low survival rate after transplanting	Felled on 20/7/2015	
N326	5.0	3.0	130	Fair	Fair			Felled on 9/7/2015	
N327	5.0	3.0	120	Fair	Fair			Felled on 9/7/2015	
T1259A	5.0	3.0	120	Fair	Fair			Not yet felled	
T1284	5.0	3.0	140	Fair	Fair			Not yet felled	
T1344	12.0	7.0	320	Fair	Fair			Felled on 17/7/2015	
T1346	13.0	6.0	300	Fair	Fair			Felled on 17/7/2015	
T1505	9.0	5.0	220	Fair	Fair			Felled on 22/7/2015	
T1577	7.0	3.0	190	Fair	Fair			Felled on 28/7/2015	
T1579	8.0	5.0	230	Fair	Fair			Felled on 28/7/2015	
T1586	5.0	2.0	170	Fair	Fair			Not yet felled	
T1601	6.0	3.0	100	Fair	Fair			Difficult to form rootball on slope	Felled on 22/7/2015
T1602	7.0	4.0	130	Fair	Fair				Felled on 22/7/2015
T1611	8.0	4.0	150	Fair	Fair			Low survival rate after transplanting	Felled on 22/7/2015
T1877	11.0	5.0	260	Fair	Fair				Felled on 7/7/2015
T1880	8.0	4.0	130	Fair	Fair				Felled on 7/7/2015
T1887	12.0	4.0	200	Fair	Fair				Felled on 9/7/2015
T1993	9.0	4.0	190	Fair	Fair				Felled on 9/7/2015
T2070	8.0	4.0	150	Fair	Fair		Felled on 20/7/2015		
T2983	9.0	3.0	250	Fair	Fair		Felled on 6/7/2015		
T3041	8.0	4.0	260	Fair	Fair		Felled on 6/7/2015		
T3048	10.0	3.0	200	Fair	Fair		Felled on 7/7/2015		
T3053	10.0	4.0	130	Fair	Fair		Not yet felled		
T3060	7.0	2.0	100	Fair	Fair	Felled on 6/7/2015			
T3149	9.0	2.0	180	Fair	Fair	Not yet felled			
T3219	10.0	3.0	200	Fair	Fair	Felled on 7/7/2015			
T3247	10.0	7.0	340	Fair	Fair	Felled on 9/7/2015			
T3261A	9.0	3.0	190	Fair	Fair	Felled on 9/7/2015			
Trees found Dead									
STK2876	-	-	-	Dead	-	Fell		N/A	
STK2974	-	-	-		-				
STK3141	-	-	-		-				
STK3630	-	-	-		-				
STK3712	-	-	-		-				
Trees Identified in C6									
STK2121	-	-	-	Dead	-	Fell		N/A	
T1489	-	-	-		-	Retain			
T2846	-	-	-		-	Transplant			
Trees found Felled by Others									
STK1865	Felled by others					N/A		N/A	
STK2290									
STK2310									
STK2472									

Tree No.	Ht. (m)	Spd. (m)	DBH (mm)	Health	Form	Proposed Treatment	Justification	Status
STK2879								
STK2927								
STK2935								
STK3013								
STK3014								
STK3107								
STK3134								
STK3323								
STK3542								
STK3618								
STK3643								
STK3691								
STK4251								
STK4253								
T2163 ²								
U415								
U649 ³								
Trees found Missing in Contract 6								
N252								
N313								
N318								
N320								
N330								
N388								
<p>Notes:</p> <p>*STK1834 was identified as a hazardous tree with a high risk of failure during tree risk assessment. Therefore, it was removed.</p> <p>¹ T306 and STK1609 were found in conflict with the construction works and application for further tree felling, transplanting and compensatory planting was submitted to DLO/N on 22 March 2016. The application was approved by DLO/N on 26 April 2016.</p> <p>² T2163 was reported felled by others on 28 October 2016. The Contractor reported the case to the Police on 1 November 2016.</p> <p>³ U649 was reported felled by others on 26 November 2014. The Contractor reported the case to the Police on 27 November 2014.</p> <p>⁴ STK2701 was felled during tree risk assessment (Form 1 on 6 Feb 2016)</p> <p>⁵ N317, T1268, T1503, T2857 and T2866 were collapsed during Typhoon signal No. 8 of "HAIMA" on 21 October 2016.</p>								

Table 3.2 Summary of Proposed Treatment to *Aquilaria sinensis* Trees

Number of Trees to be Retained	22
Number of Trees Suitable for Transplantation	25
Number of Trees to be Felled	48
Number of Trees found Dead	8
Number of Trees found Felled by Others	21
Number of Trees found Missing	6
Total	130

3.3 In-situ preservation of *Aquilaria sinensis* seedlings around trees to be retained is recommended. Seedlings around trees to be felled and transplanted identified during the process will be collected and transplanted to a nursery area. A Woodland compensation Area (WCA) was proposed in the EIA Report. It is recommended to transplant the *Aquilaria sinensis* seedlings from the nursery to the Woodland compensation Area when the area is ready.

3.4 The proposed Woodland Compensation Area in the EIA Report is shown in **Appendix E**. A

Woodland Compensation Plan will be submitted separately to set out the planting strategy for the establishment of the habitats and subsequent maintenance and monitoring requirements for the WCA.

Euonymus kwangtungensis

- 3.5 The two individuals of *Euonymus kwangtungensis* identified in the Survey will be affected by construction works. It is recommended to transplant the individuals directly to a nearby suitable reception site within the Project limit with similar habitat where will not be affected by construction activities. The proposed reception site is shown in **Appendix F**.

4 IMPLEMENTATION PROGRAMME

Aquilaria sinensis

- 4.1 A nursery will be identified for holding the trees and seedlings for future transplantation. Transplantation of trees will be conducted with the overall landscaping works target in 2017. Seedlings will be planted in the Woodland Compensation Area. Planting details and schedule will be specified in the Woodland Compensation Plan.
- 4.2 Trees identified for In-situ preservation will be protected by temporary protective fencing. No site works will be carried out within the tree protection zone. Monitoring with photographic record will be conducted once per two months.
- 4.3 The transplanted trees and seedlings will be held in a nursery until transplanted to their final location. The Contractor will carry out necessary arboricultural work to maintain the transplanted trees in healthy condition during the holding period. After transplanting to their final locations, the transplanted trees will be maintained immediately by the Contractor and the maintenance will include watering, application of root activator and fertilizing. All the transplanted trees will be monitored once per month for their health condition until the expiry of the establishment period.
- 4.4 The transplanted seedlings will be monitored at least twice a month during the first year and once a month for the remaining of the planting period of the Woodland Compensation Area. The parameters to be monitored will include the health condition and survival rate of the transplanted species. Any observations and recommendations will be reported in periodic EM&A reports.

Euonymus kwangtungensis

- 4.5 The two *Euonymus kwangtungensis* plants will be transplanted before commencement of works at the subject location. The transplanted individual will be monitored twice a month during the first year and once a month for the remaining contract period.

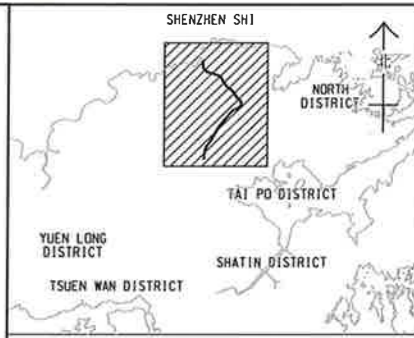
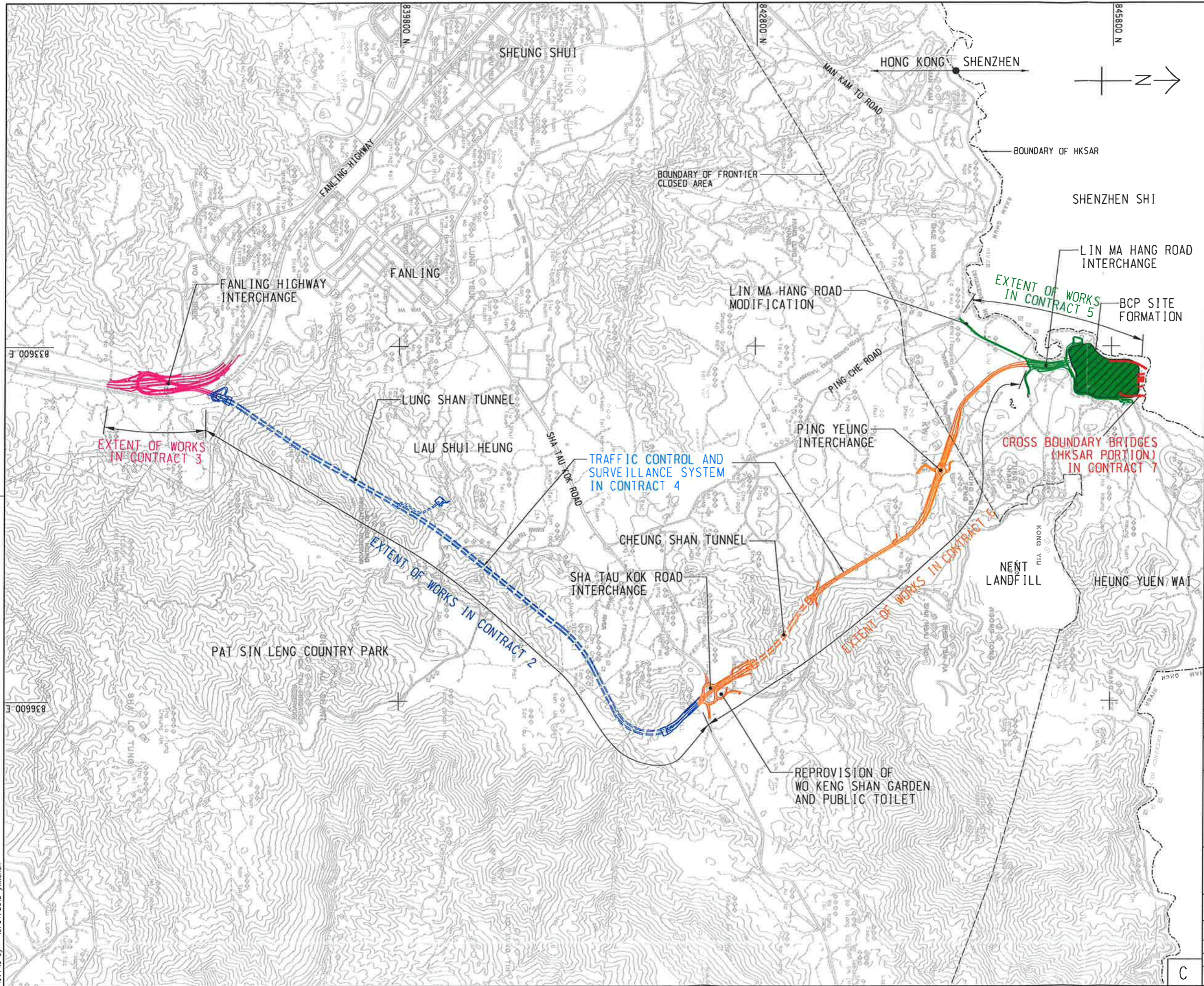
5 CONCLUSION

- 5.1 According to the EIA Report, two species of conservation interest *Euonymus kwangtungensis* and *Aquilaria sinensis* are required to be transplanted to undisturbed areas. As the condition of plants recorded in the EIA stage may be varied, a vegetation survey to confirm the condition of the plants was conducted in Contract 2, Contract 3, Contract 5 and Contract 6. Findings of the survey and proposed treatment are presented in this report.
- 5.2 Seedlings of *Aquilaria sinensis* were found and recommended to be transplanted to nursery and to Woodland Compensation Area proposed in the EIA Report when the Area is ready. Two numbers

of *Euonymus kwangtungensis* individuals were identified. It is recommended to transplant the individuals directly to a nearby suitable reception site within the Project limit with similar habitat where will not be affected by construction activities.

- 5.3 Trees of *Aquilaria sinensis* are retained in-situ where possible. For trees in conflict with construction works, transplantation is recommended if they are considered suitable for transplanting. Felling is recommended for trees which cannot be transplanted or not suitable for transplanting due to various reasons.

Figures



LOCATION PLAN
SCALE 1 : 30000

LEGEND:
 - - - - - UNDERGROUND WORKS

NO.	DESCRIPTION	DATE

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

LIANTANG/HEUNG YUEN WAI BOUNDARY CONTROL POINT AND ASSOCIATED WORKS (SITE FORMATION AND INFRASTRUCTURES) - DESIGN AND CONSTRUCTION

PROJECT LAYOUT PLAN

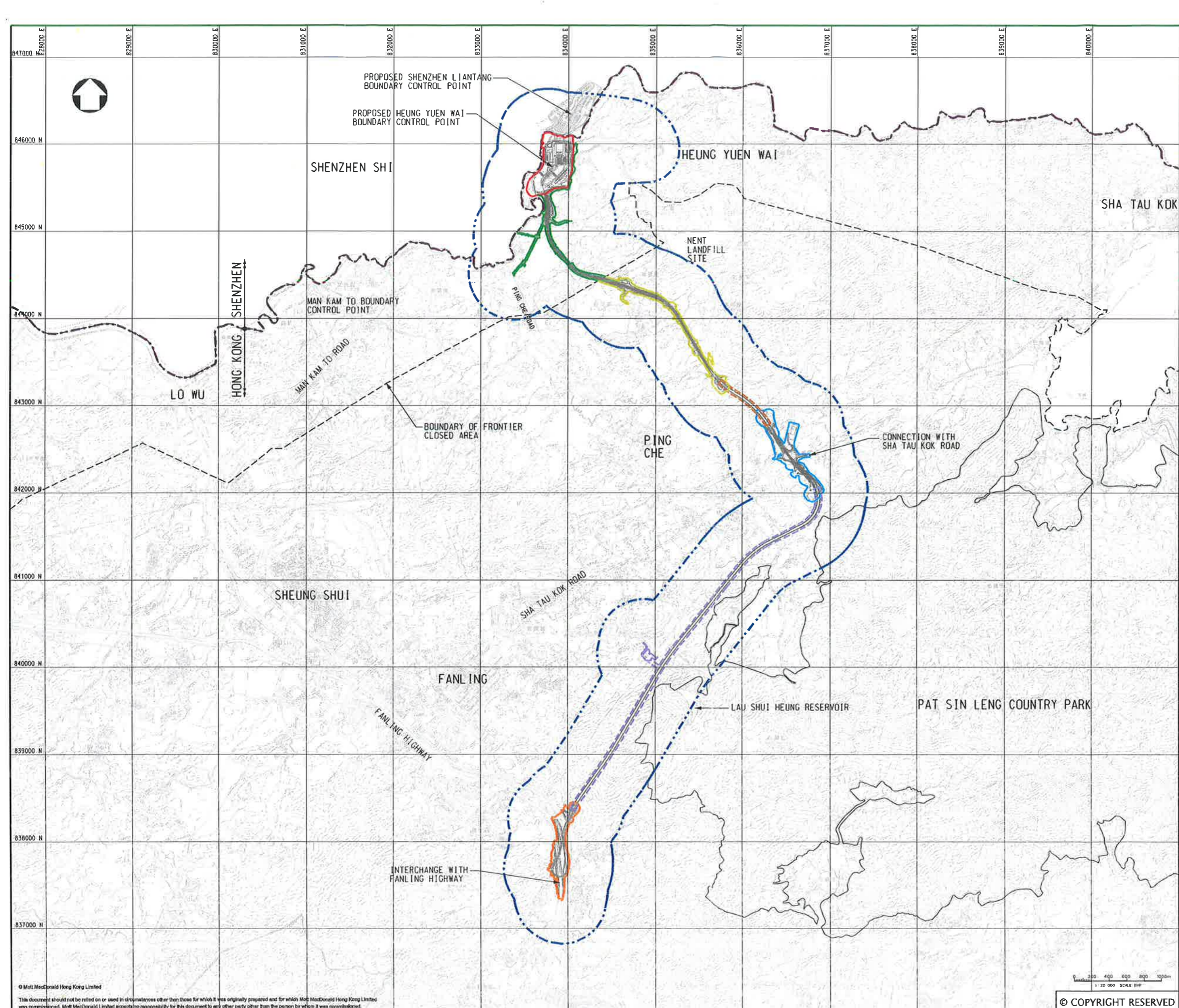
AECOM

DRGNO. 60212563/PLP/001
 圖紙編號

DESIGNED BY ZJ	CONTRACT NO. A3.1	P. OF. APPROVED R.A.
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 1 : 30000
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Plot File By : 10/04/2015 y.k.chan




- LEGEND:**
- BOUNDARY OF HKSAR
 - - - - - ECOLOGICAL ASSESSMENT AREA
 - SECTION 1 BCP (ABOVE GROUND)
 - SECTION 2 FRONTIER CLOSED AREA (ABOVE GROUND)
 - SECTION 3 PING YEUNG TO WO KENG SHAN AREA (ABOVE GROUND)
 - SECTION 4 CHEUNG SHAN AREA (TUNNEL)
 - SECTION 5 SHA TAU KOK ROAD AREA (ABOVE GROUND)
 - SECTION 6 LAU SHUI HEUNG (ABOVE GROUND)
 - SECTION 6 LAU SHUI HEUNG (TUNNEL)
 - SECTION 7 FANLING (ABOVE GROUND)

Rev	Date	Drawn	Description	Ch'k'd	App'd
P1	OCT 10	MING	FIRST ISSUE	ST	HT



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DEPARTMENT**

Project
**AGREEMENT NO. CE45/2008 (CE)
 LIANTANG/HEUNG YUEN WAI BOUNDARY
 CONTROL POINT AND ASSOCIATED WORKS**

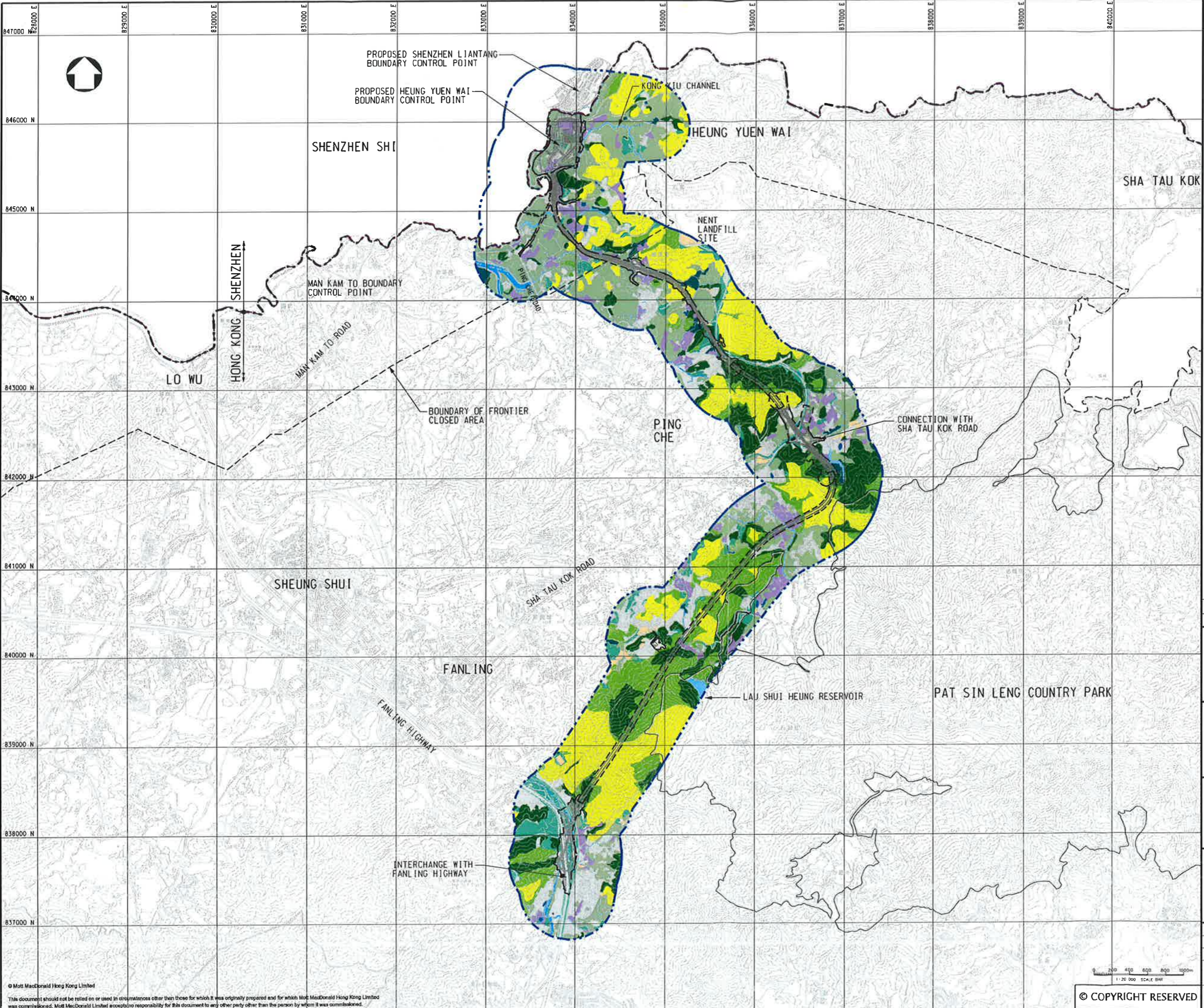
Title
SECTIONS OF WORKS AREA

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Drawn	MING	Coordination	EC
Dwg.Chk.	PI	Approved	HT
Scale of A1	1:20000	Project No.	255228
Drawing No.	FIGURE 9.1b	Status	PRE
		Rev	P1

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Appendix A –
Habitat Map in the EIA Report showing the Location of
Euonymus kwangtungensis and *Aquilaria sinensis*



- LEGEND:**
- BOUNDARY OF HKSAR
 - ECOLOGICAL ASSESSMENT AREA
 - WORKS AREA
 - WL WOODLAND
 - SL SHRUBLAND
 - PL PLANTATION
 - FW FRESHWATER WETLAND [NET AGRICULTURAL LAND (ACTIVE/ABANDONED)]
 - AL ACTIVE AGRICULTURAL LAND
 - AAL ABANDONED AGRICULTURAL LAND
 - HGL HILLSIDE GRASSLAND
 - PD POND
 - DC DRAINAGE CHANNEL
 - R WATERCOURSE
 - OF OPEN FIELD
 - DA DEVELOPED AREA

P1	NOV 10	MING	FIRST ISSUE	PW	HT
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Title
HABITAT MAP (KEY PLAN)

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Dwg.Chk.	ST	Approved	HT
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Drawing No	FIGURE 9.2a	Status	PRE
		Rev	P1



846500 N

813500 E

814000 E

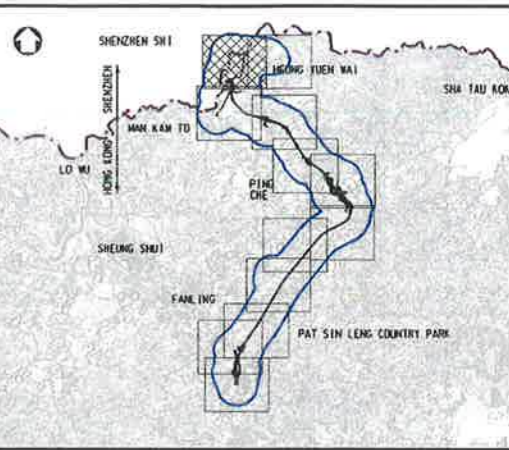
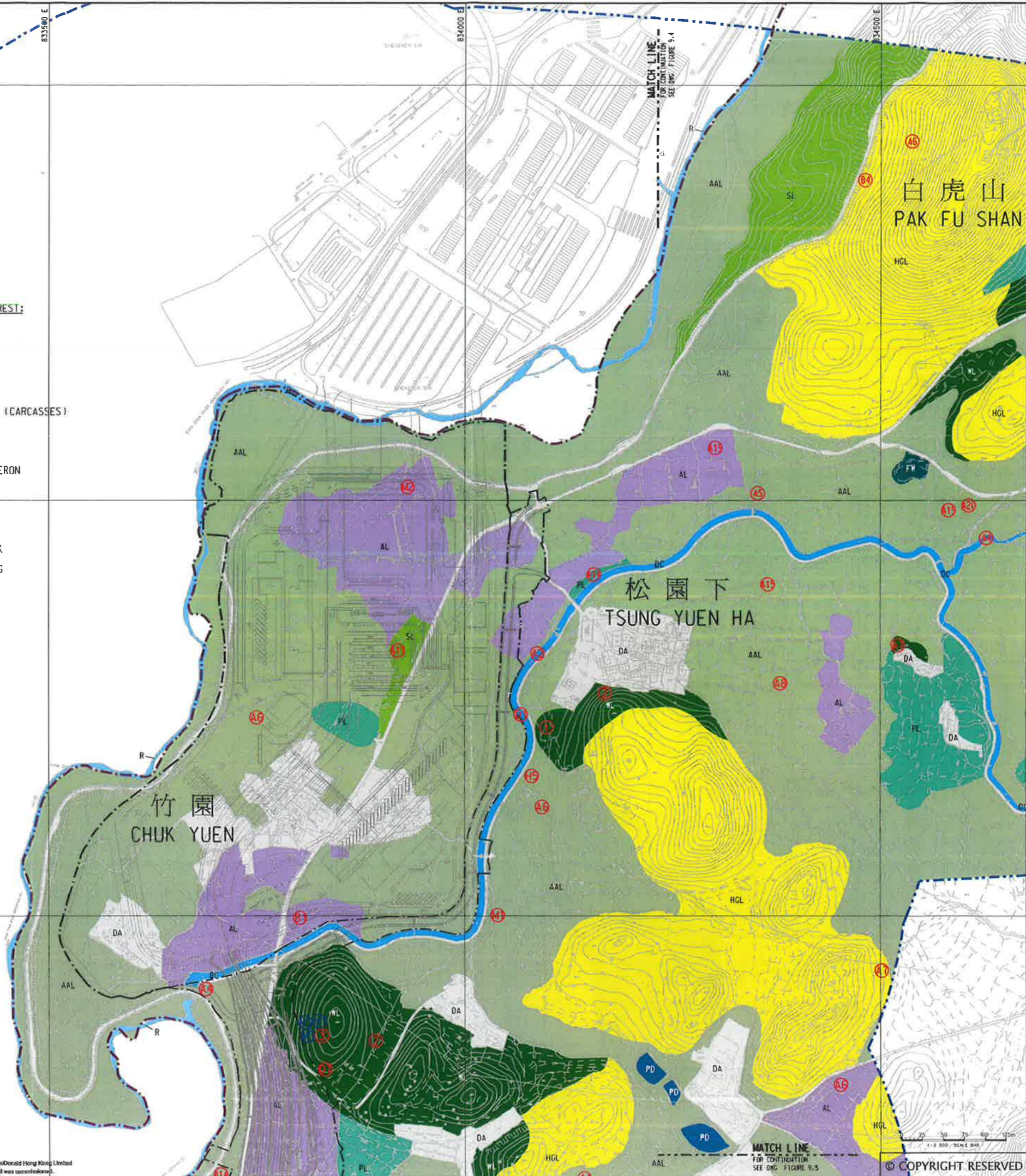
814500 E

846000 N

845500 N

SPECIES OF CONSERVATION INTEREST:

- ① XYLOSMA LONGIFOLIUM
- ② AQUILARIA SINENSIS
- ③ PAVETTA HONGKONGENSIS
- M1 RED MUNTJAC
- M2 SHORT-NOSED FRUIT BAT (CARCASSES)
- A2 LITTLE EGRET
- A4 CHINESE POND HERON
- A5 BLACK-CROWNED NIGHT HERON
- A6 BLACK KITE
- A7 CRESTED SERPENT EAGLE
- A8 PEREGRINE FALCON
- I1 YELLOW-BILLED GROSBEAK
- I5 WHITE-CHEEKED STARLING
- I9 GREATER COUCAL
- I20 LESSER COUCAL
- B1 PAINTED LADY
- D1 EMERALD CASCADER
- D7 ELUSIVE ADJUTANT
- H5 INDIAN FOREST SKINK
- M1 RED MUNTJAC
- M3 MALAYAN PORCUPINE
- M5 MASKED PALM CIVET



KEY PLAN
SCALE 1:100000

LEGEND:

- BOUNDARY OF HKSAR
- ECOLOGICAL ASSESSMENT AREA
- WORKS AREA
- WL WOODLAND
- SL SHRUBLAND
- PL PLANTATION
- FW FRESHWATER WETLAND [WET AGRICULTURAL LAND (ACTIVE/ABANDONED)]
- AL ACTIVE AGRICULTURAL LAND
- AAL ABANDONED AGRICULTURAL LAND
- HGL HILLSIDE GRASSLAND
- PD POND
- DC DRAINAGE CHANNEL
- R WATERCOURSE
- OF OPEN FIELD
- DA DEVELOPED AREA

P4	NOV 10	MING	GENERAL REVISION	HY	HT
P3	OCT 10	MING	GENERAL REVISION	ST	HT
P2	AUG 10	MING	GENERAL REVISION	ST	HT
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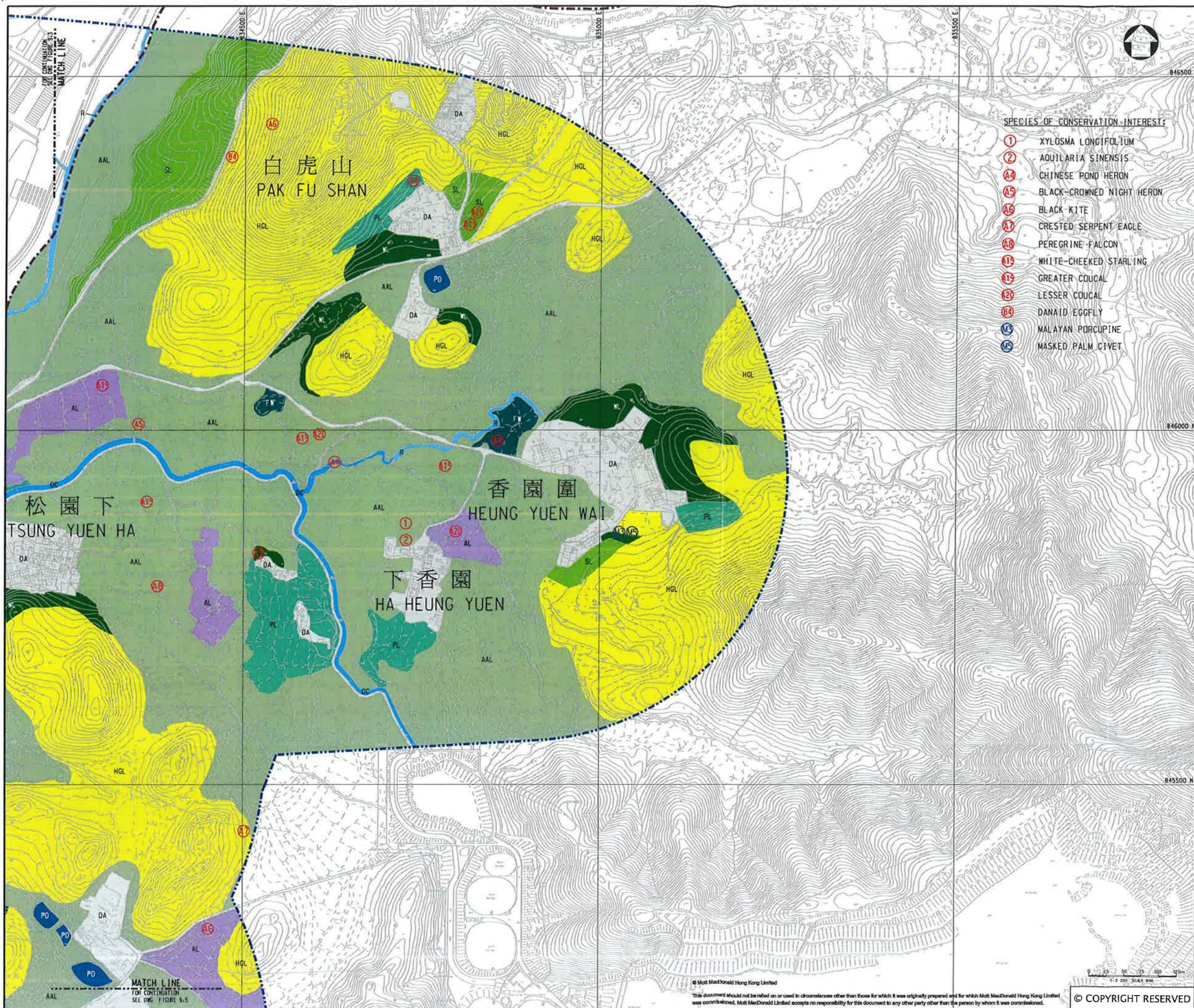
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Title

HABITAT MAP

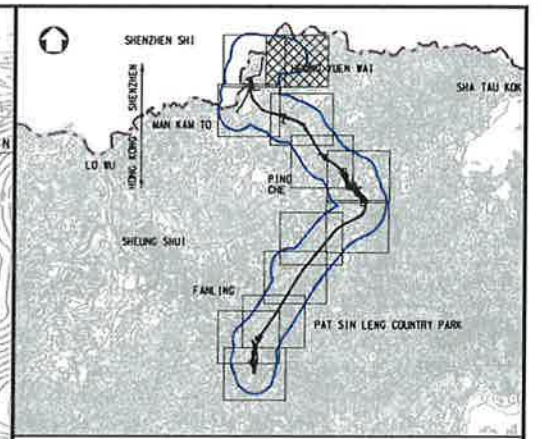
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Dwg.Chk.	ST	Approved	HT
Scale at A1	1:2500	Project	255228
Drawing No	FIGURE 9.3	Status	PRE
		Rev	P4



SPECIES OF CONSERVATION INTEREST:

- ① XYLOSMA LONGIFOLIUM
- ② AOULARIA SINENSIS
- A4 CHINESE POND HERON
- A5 BLACK-CROWNED NIGHT HERON
- A6 BLACK KITE
- A7 CRESTED SERPENT EAGLE
- A8 PEREGRINE FALCON
- A9 WHITE-CHEEKED STARLING
- B1 GREATER COUCAL
- B2 LESSER COUCAL
- B4 DANAID EGGFLY
- M3 MALAYAN PORCUPINE
- M5 MASKED PALM CIVET



KEY PLAN
SCALE 1:100000

LEGEND:

- BOUNDARY OF HKSAR
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- WORKS AREA
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- PL PLANTATION
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- AAL ABANDONED AGRICULTURAL LAND
- HGL HILLSIDE GRASSLAND
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P4	NOV 10	MING	GENERAL REVISION	HY	HT
P3	OCT 10	MING	GENERAL REVISION	ST	HT
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Title

HABITAT MAP

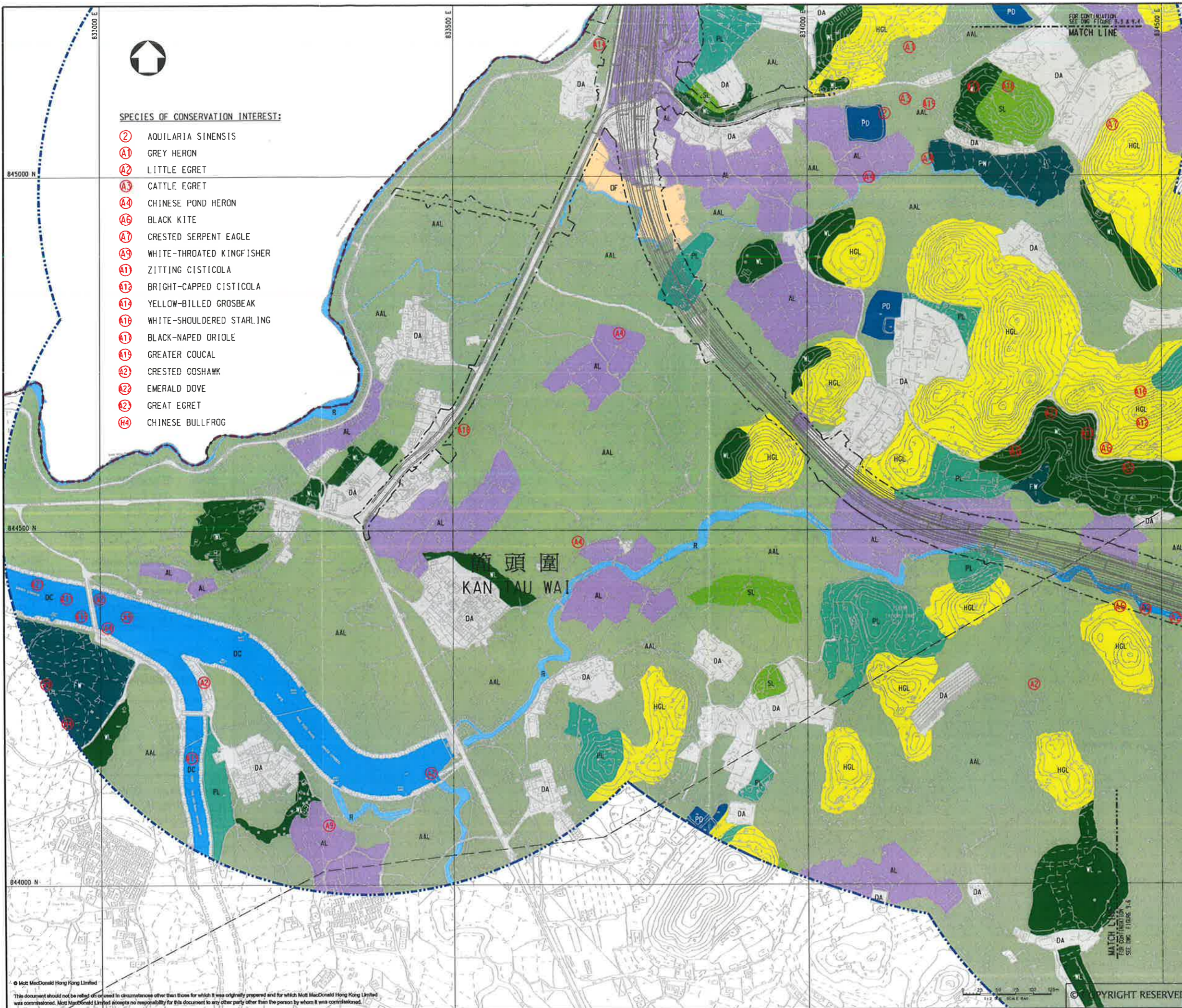
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Dwg.Chk.	ST	Approved	HT	
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Drawing No	FIGURE 9.4	Rev		P4

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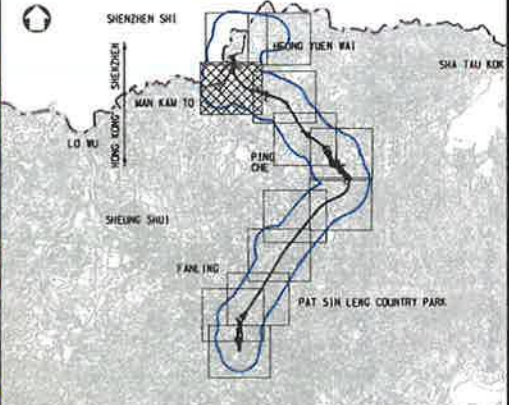
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SPECIES OF CONSERVATION INTEREST:

- (A2) AQUILARIA SINENSIS
- (A1) GREY HERON
- (A2) LITTLE EGRET
- (A3) CATTLE EGRET
- (A4) CHINESE POND HERON
- (A6) BLACK KITE
- (A7) CRESTED SERPENT EAGLE
- (A9) WHITE-THROATED KINGFISHER
- (A1) ZITTING CISTICOLA
- (A12) BRIGHT-CAPPED CISTICOLA
- (A14) YELLOW-BILLED GROSBEAK
- (A16) WHITE-SHOULDERED STARLING
- (A17) BLACK-NAPED ORIOLE
- (A19) GREATER COUCAL
- (A22) CRESTED GOSHAWK
- (A23) EMERALD DOVE
- (A23) GREAT EGRET
- (A4) CHINESE BULLFROG



KEY PLAN
SCALE 1:100000

LEGEND:

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- AL ACTIVE AGRICULTURAL LAND
- AAL ABANDONED AGRICULTURAL LAND
- HGL HILLSIDE GRASSLAND
- PD POND
- DC DRAINAGE CHANNEL
- R WATERCOURSE
- OF OPEN FIELD
- DA DEVELOPED AREA

Rev	Date	Drawn	Description	Ch'kd	App'd
P4	NOV 10	MING	GENERAL REVISION	HY	HT
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P2	AUG 10	MING	GENERAL REVISION	ST	HT
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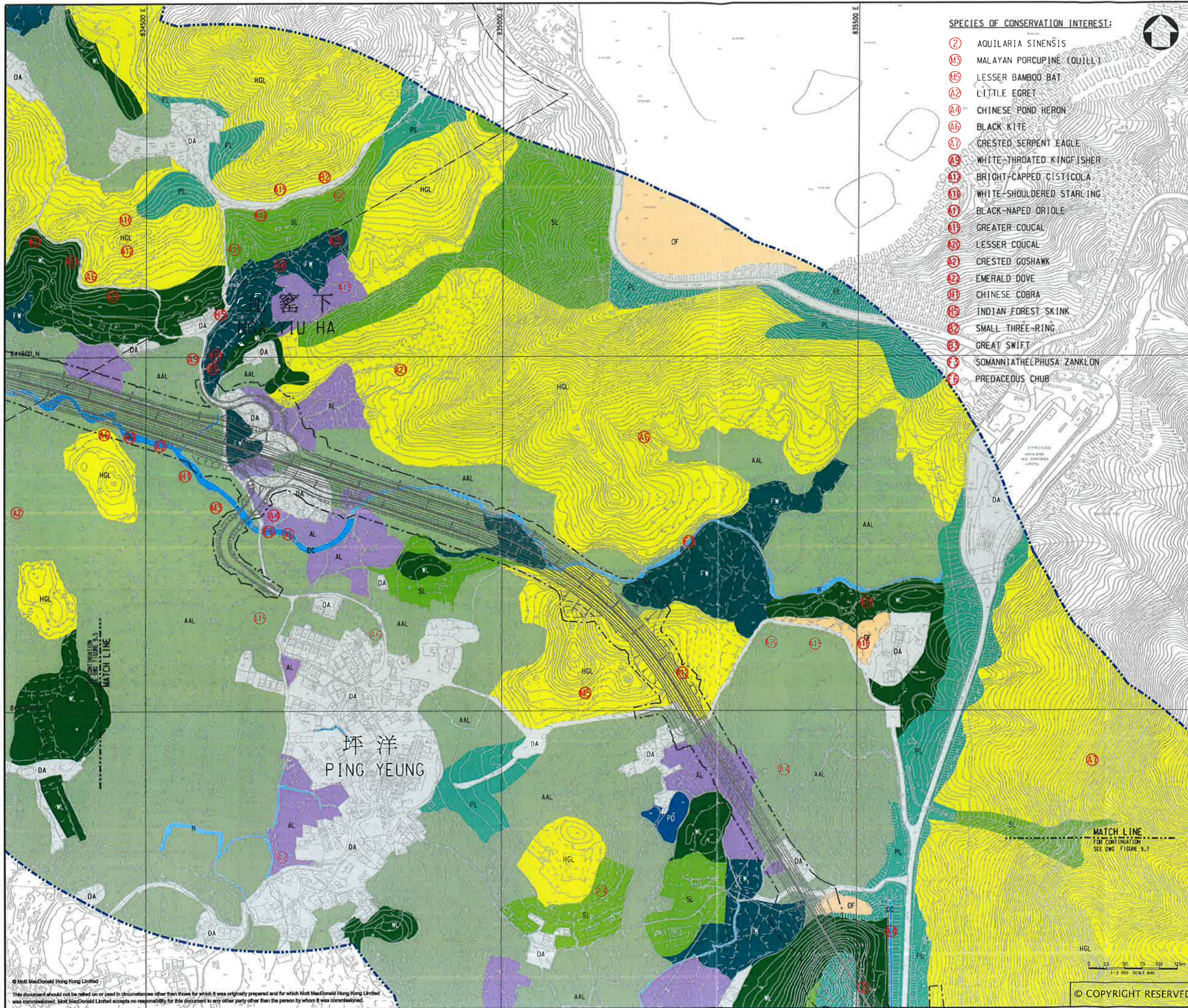
Project
AGREEMENT NO. CE45/2008(CE)
LIANTANG/HEUNG YUEN WAI BOUNDARY CONTROL POINT AND ASSOCIATED WORKS

Title
HABITAT MAP
(SHEET 3 OF 12)

Designed	ST	Eng.Chk.	EC	
Drawn	MING	Coordination	EC	
Dwg.Chk.	ST	Approved	HT	
Scale at A1	1:2500	Project	255228	Status
Drawing No	FIGURE 9.5	CAD file	1\255228\cadd\env\1\1085\FIG 9.5.dgn	PRE
				Rev
				P4

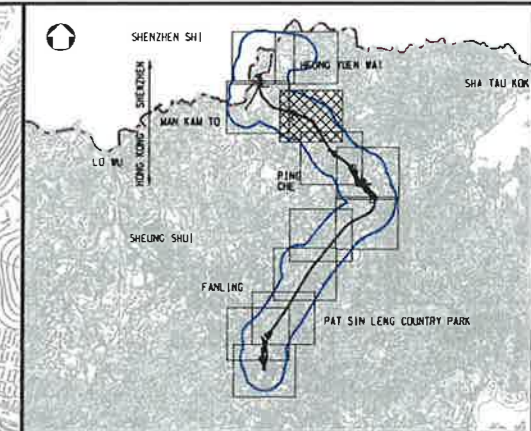
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SPECIES OF CONSERVATION INTEREST:

- ② AQUILARIA SINENSIS
- ③ MALAYAN PORCUPINE (QUILL)
- ④ LESSER BAMBOO BAT
- ⑤ LITTLE EGRET
- ⑥ CHINESE POND HERON
- ⑦ BLACK KITE
- ⑧ CRESTED SERPENT EAGLE
- ⑨ WHITE-THROATED KINGFISHER
- ⑩ BRIGHT-CAPPED CISTICOLA
- ⑪ WHITE-SHOULDERED STARLING
- ⑫ BLACK-NAPED ORIOLE
- ⑬ GREATER COUCAL
- ⑭ LESSER COUCAL
- ⑮ CRESTED GOSHAWK
- ⑯ EMERALD DOVE
- ⑰ CHINESE COBRA
- ⑱ INDIAN FOREST SKINK
- ⑲ SMALL THREE-RING
- ⑳ GREAT SWIFT
- ㉑ SOMANNIATHELPHUSA ZANKLON
- ㉒ PREDACEOUS CHUB



KEY PLAN
SCALE 1:100000

LEGEND:

- ECOLOGICAL ASSESSMENT AREA
- WORKS AREA
- W WOODLAND
- SL SHRUBLAND
- PL PLANTATION
- FW FRESHWATER WETLAND [WET AGRICULTURAL LAND (ACTIVE/ABANDONED)]
- AL ACTIVE AGRICULTURAL LAND
- AAL ABANDONED AGRICULTURAL LAND
- HGL HILLSIDE GRASSLAND
- PD POND
- DC DRAINAGE CHANNEL
- R WATERCOURSE
- OF OPEN FIELD
- DA DEVELOPED AREA

P4	NOV 10	NING	GENERAL REVISION	HY	HT
P3	OCT 10	MING	GENERAL REVISION	ST	HT
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P1	MAY 10	NING	FIRST ISSUE	ST	HT
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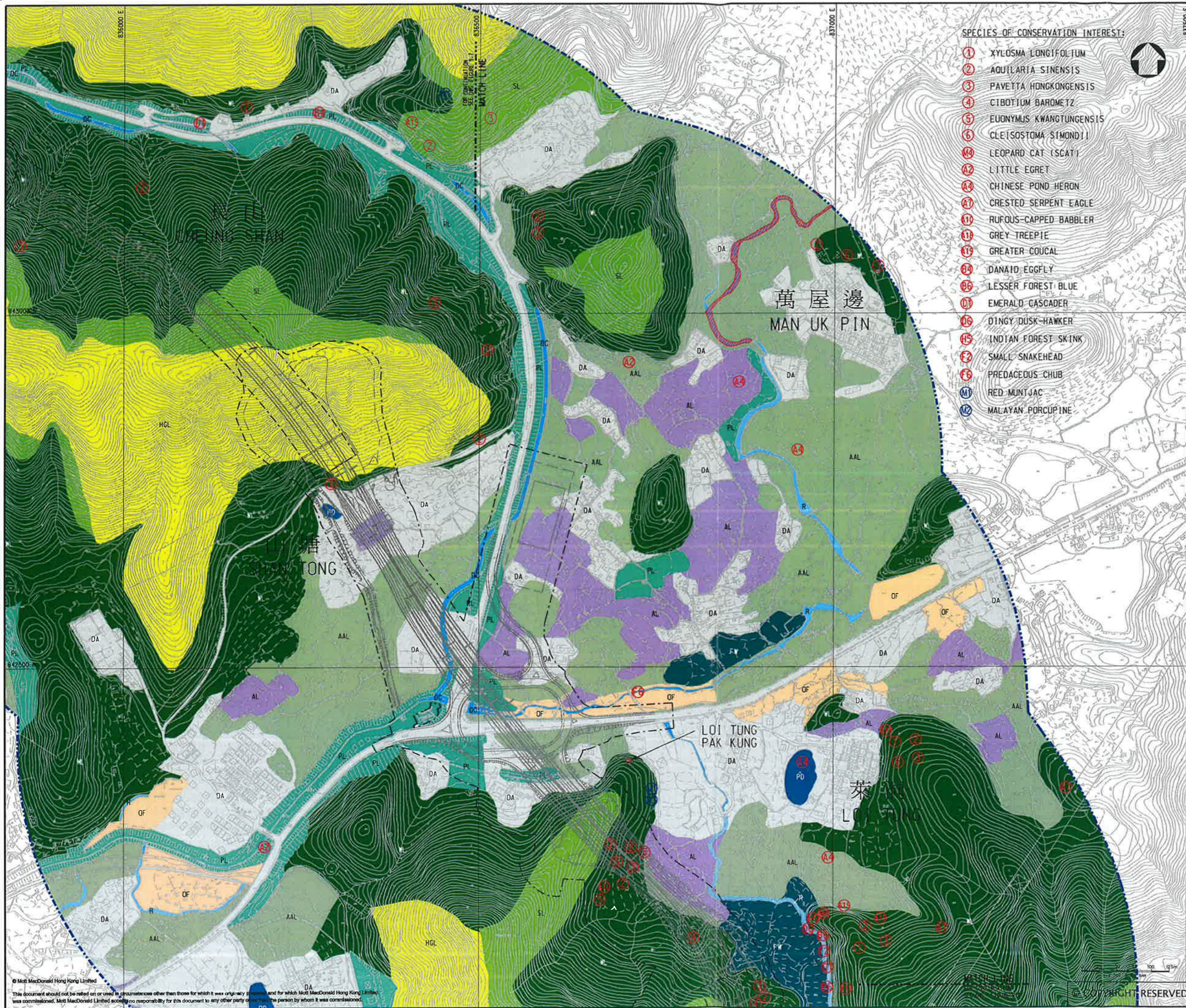
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Project
AGREEMENT NO. CE45/2008(CE)
LIANTANG/HEUNG YUEN WAI BOUNDARY CONTROL POINT AND ASSOCIATED WORKS

Title
HABITAT MAP
(SHEET 4 OF 12)

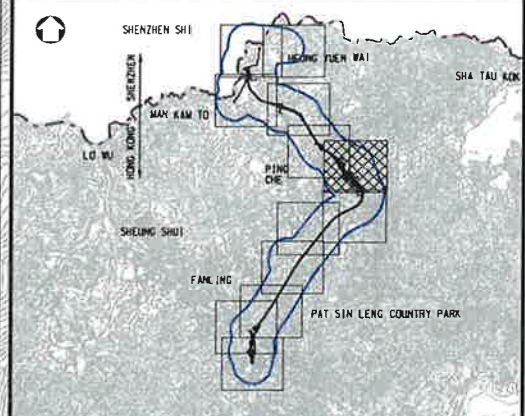
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Drawn	MING	Coordination	EC
Dwg.Chk.	ST	Approved	HT
Scale at A1	1:2500	Project	255228
Drawing No	FIGURE 9.6	CAD file	1:2500\report\hengyuenwai\fig 9.6.dgn
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SPECIES OF CONSERVATION INTEREST:

- ① XYLOSMA LONGIFOLIUM
- ② AGUILARTA SINENSIS
- ③ PAVETTA HONGKONGENSIS
- ④ CIBOTIUM BAROMETZ
- ⑤ EUONYMUS KWANGTUNGENSIS
- ⑥ CLEISTOSTOMA SIMONDI
- ⑭ LEOPARD CAT (SCAT)
- ⑫ LITTLE EGRET
- ⑬ CHINESE POND HERON
- ⑰ CRESTED SERPENT EAGLE
- ⑩ RUFOUS-CAPPED BABBLER
- ⑪ GREY TREEPIE
- ⑱ GREATER COUCAL
- ⑲ DANAIID-EGGFLY
- ⑲⑥ LESSER FOREST BLUE
- ⑲① EMERALD CASCADE
- ⑲⑥ DINGY DUSK-HAWKER
- ⑲⑤ INDIAN FOREST SKINK
- ⑲② SMALL SNAKEHEAD
- ⑲⑥ PREDACEOUS CHUB
- ⑲① RED MUNTJAC
- ⑲② MALAYAN PORCUPINE



KEY PLAN
SCALE 1:100000

LEGEND:

- ECOLOGICAL ASSESSMENT AREA
- WORKS AREA
- W WOODLAND
- SL SHRUBLAND
- PL PLANTATION
- FW FRESHWATER WETLAND [WET AGRICULTURAL LAND (ACTIVE/ABANDONED)]
- AL ACTIVE AGRICULTURAL LAND
- AAL ABANDONED AGRICULTURAL LAND
- HGL HILLSIDE GRASSLAND
- PD POND
- DC DRAINAGE CHANNEL
- R WATERCOURSE
- OF OPEN FIELD
- DA DEVELOPED AREA
- /// ECOLOGICALLY IMPORTANT STREAM

P4	NOV 10	MING	GENERAL REVISION	PW	HT
P3	OCT 10	MING	GENERAL REVISION	PW	HT
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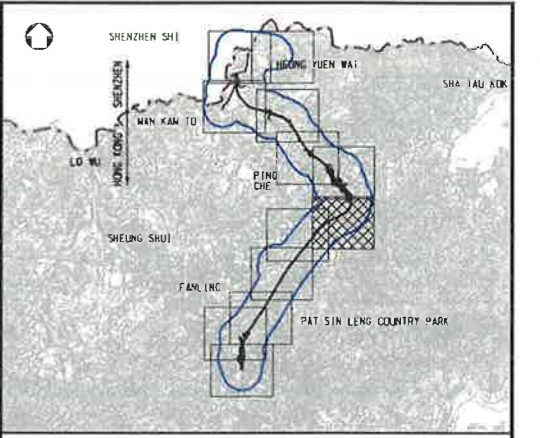
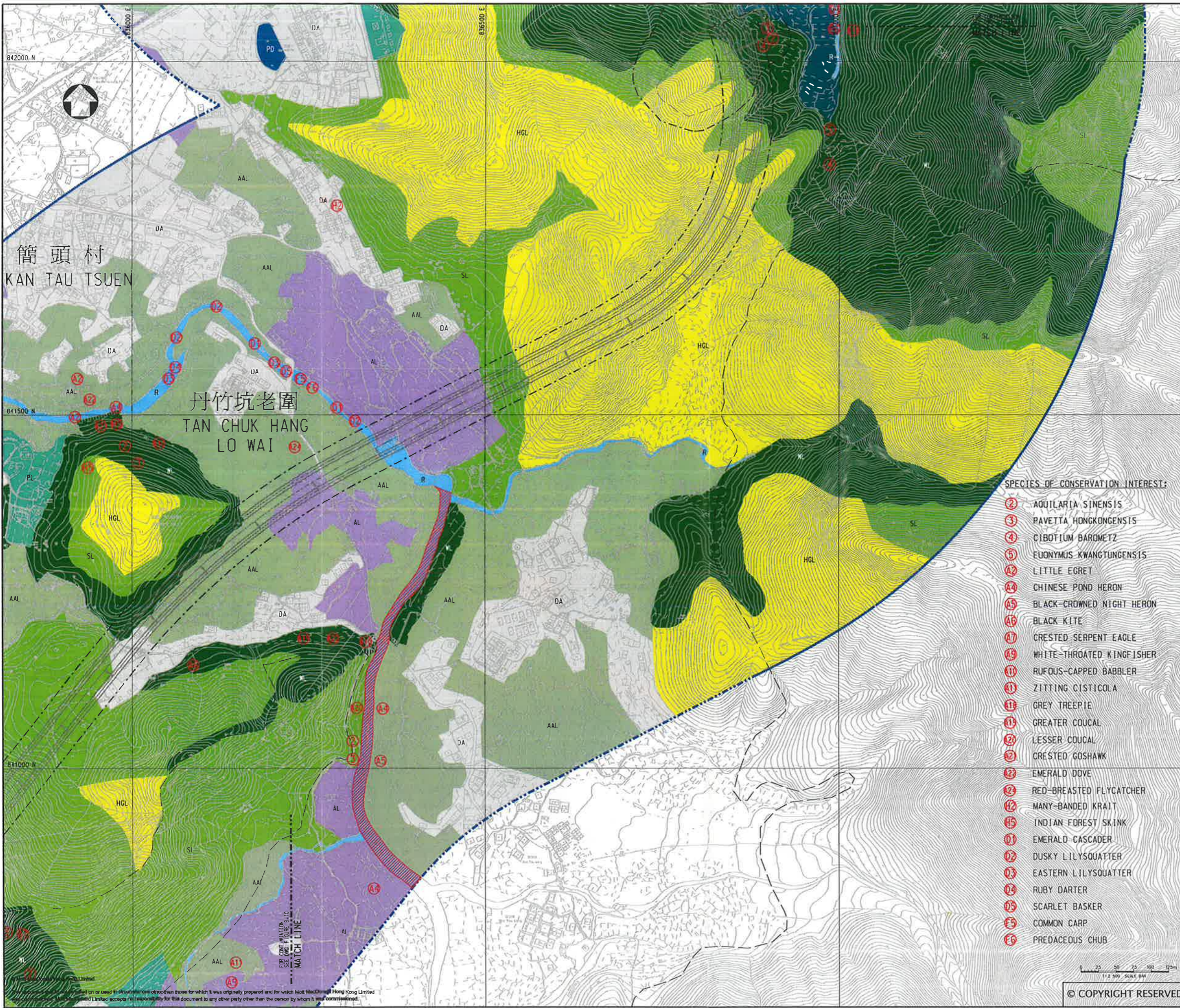
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LJANTANG/HEUNG YUEN WAI BOUNDARY CONTROL POINT AND ASSOCIATED WORKS

Title
HABITAT MAP
(SHEET 6 OF 12)

Designed	ST	Eng.Chk.	EC	
Drawn	MING	Coordination	EC	
Dwg.Chk.	ST	Approved	HT	
Scale at A1	Project		255228	Status
1:2500	CAD File		1/255228/Report/Man/Val/08/09/09/9_E.dwg	PRE
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- LEGEND:
- ECOLOGICAL ASSESSMENT AREA
 - WORKS AREA
 - WOODLAND
 - SHRUBLAND
 - PLANTATION
 - FRESHWATER WETLAND [WET AGRICULTURAL LAND (ACTIVE/ABANDONED)]
 - ACTIVE AGRICULTURAL LAND
 - ABANDONED AGRICULTURAL LAND
 - HILLSIDE GRASSLAND
 - POND
 - DRAINAGE CHANNEL
 - WATERCOURSE
 - OPEN FIELD
 - DEVELOPED AREA
 - ECOLOGICALLY IMPORTANT STREAM

SPECIES OF CONSERVATION INTEREST:

- ② AQUILARIA SINENSIS
- ③ PAVETTA HONGKONGENSIS
- ④ CIBOTIUM BAROMETZ
- ⑤ EUONYMUS KWANGTUNGENSIS
- ⑥ LITTLE EGRET
- ④ CHINESE POND HERON
- ⑤ BLACK-CROWNED NIGHT HERON
- ⑥ BLACK KITE
- ⑦ CRESTED SERPENT EAGLE
- ⑧ WHITE-THROATED KINGFISHER
- ⑩ RUFOUS-CAPPED BABBLER
- ⑪ ZITTING CISTICOLA
- ⑫ GREY TREEPIE
- ⑬ GREATER COUCAL
- ⑭ LESSER COUCAL
- ⑮ CRESTED GOSHAWK
- ⑯ EMERALD DOVE
- ⑰ RED-BREADED FLYCATCHER
- ⑱ MANY-BANDED KRAIT
- ⑲ INDIAN FOREST SKINK
- ⑲ EMERALD CASCADER
- ⑲ DUSKY LILYSQUATTER
- ⑲ EASTERN LILYSQUATTER
- ⑲ RUBY DARTER
- ⑲ SCARLET BASKER
- ⑲ COMMON CARP
- ⑲ PREDACEOUS CHUB

Rev	Date	Drawn	Description	Ch'kd	App'd
P4	NOV 10	MING	GENERAL REVISION	HY	HT
P3	OCT 10	MING	GENERAL REVISION	ST	HT
P2	AUG 10	MING	GENERAL REVISION	ST	HT
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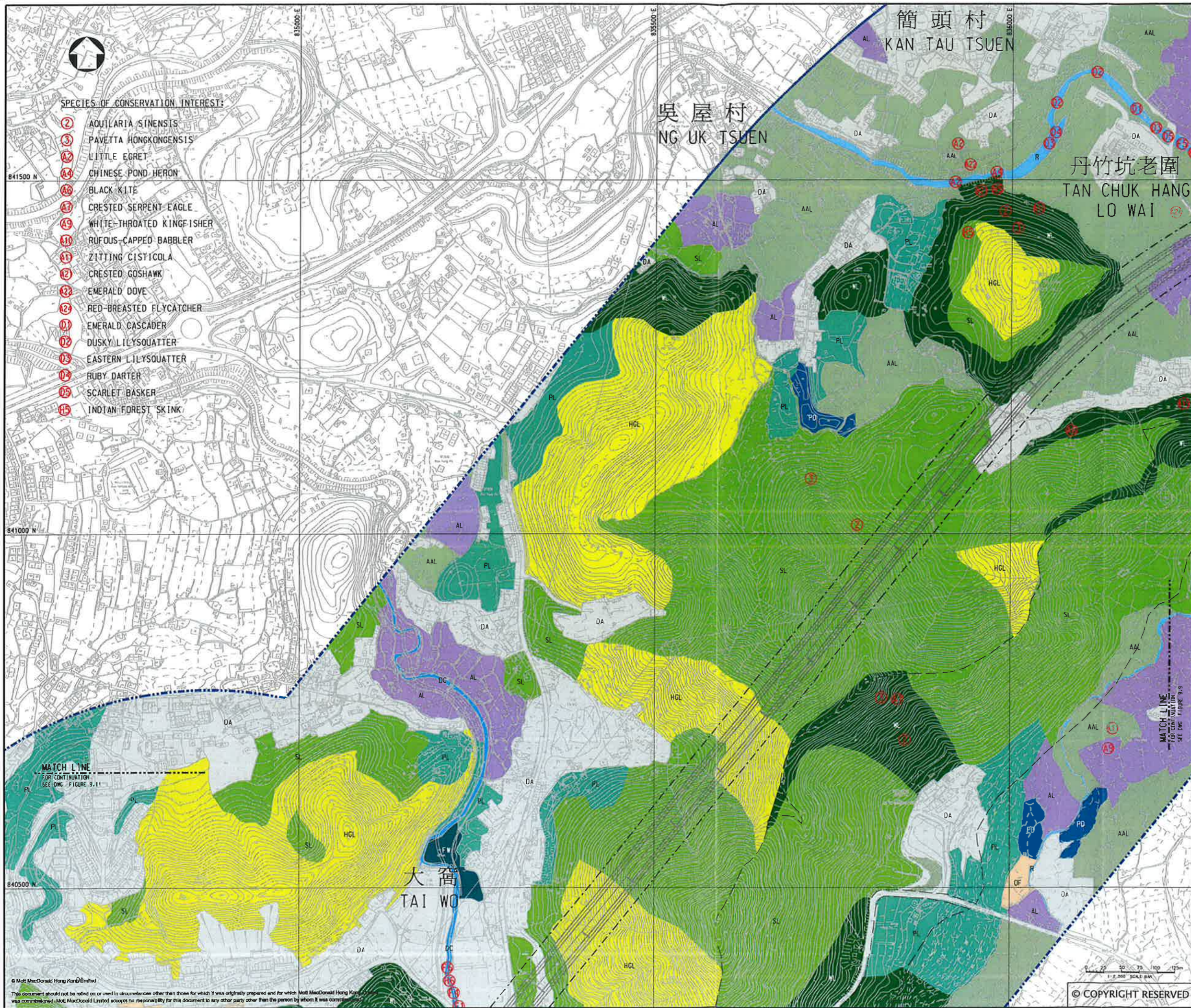
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LIANTANG/HEUNG YUEN WAI BOUNDARY
CONTROL POINT AND ASSOCIATED WORKS

Title:
HABITAT MAP

(SHEET 7 OF 12)

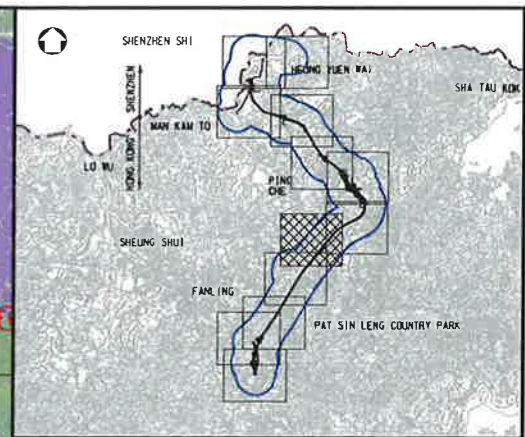
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Drawn	MING	Coordination	EC
Dwg.Chk.	ST	Approved	HT
Scale at A1	Project	255228	Status
1:2500	CAD file	1:500000	PRE
Drawing No	FIGURE 9.9	Rev	P4

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SPECIES OF CONSERVATION INTEREST:

- ② AOUILARIA SINENSIS
- ③ PAVETTA HONGKONGENSIS
- ④ LITTLE EGRET
- ④ CHINESE POND HERON
- ⑥ BLACK KITE
- ⑦ CRESTED SERPENT EAGLE
- ⑧ WHITE-THROATED KINGFISHER
- ⑩ RUFOUS-CAPPED BABBLER
- ⑪ ZITTING CISTICOLA
- ⑫ CRESTED GOSHAWK
- ⑫ EMERALD DOVE
- ⑫ RED-BREASTED FLYCATCHER
- ⑬ EMERALD CASCADER
- ⑬ DUSKY LILYSQUATTER
- ⑬ EASTERN LILYSQUATTER
- ⑭ RUBY DARTER
- ⑮ SCARLET BASKER
- ⑮ INDIAN FOREST SKINK



KEY PLAN
SCALE 1:100000

- LEGEND:
- ECOLOGICAL ASSESSMENT AREA
 - WORKS AREA
 - WOODLAND
 - SHRUBLAND
 - PLANTATION
 - FRESHWATER WETLAND (WET AGRICULTURAL LAND (ACTIVE/ABANDONED))
 - ACTIVE AGRICULTURAL LAND
 - ABANDONED AGRICULTURAL LAND
 - HILLSIDE GRASSLAND
 - POND
 - DRAINAGE CHANNEL
 - WATERCOURSE
 - OPEN FIELD
 - DEVELOPED AREA

Rev	Date	Drawn	Description	Chk'd	App'd
P4	NOV 10	NING	GENERAL REVISION	HY	HT
P3	OCT 10	NING	GENERAL REVISION	ST	HT
P2	AUG 10	NING	GENERAL REVISION	ST	HT
P1	MAY 10	NING	FIRST ISSUE	ST	HT

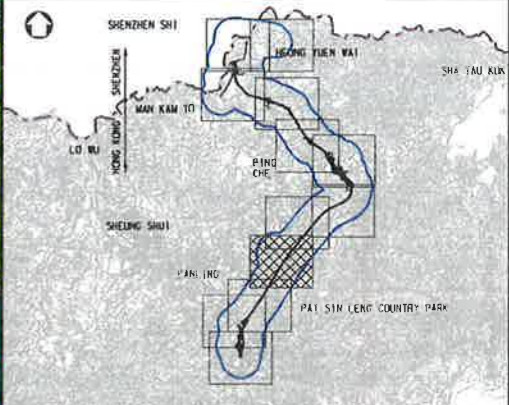
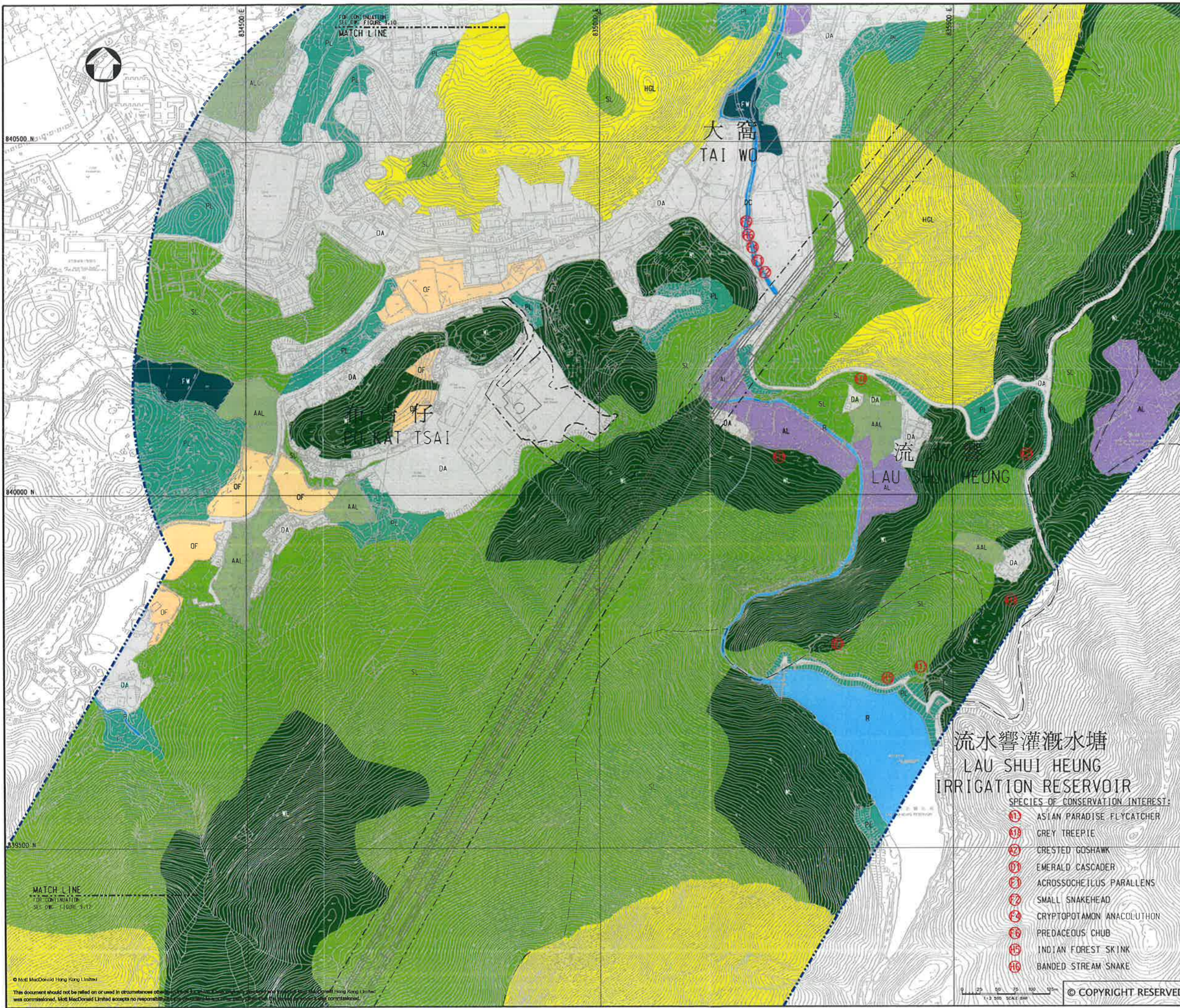
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Title:
 HABITAT MAP
 (SHEET 8 OF 12)

Designed	ST	Eng.Chk.	EC	
Drawn	MING	Coordination	EC	
Dwg.Chk.	ST	Approved	HT	
Scale at A1	1:2500	Project	255228	Status
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Drawing No	FIGURE 9.10	Rev		P4



KEY PLAN
SCALE 1:100000

LEGEND:

- ECOLOGICAL ASSESSMENT AREA
- WORKS AREA
- WOODLAND
- SHRUBLAND
- PLANTATION
- FRESHWATER WETLAND [WET AGRICULTURAL LAND (ACTIVE/ABANDONED)]
- ACTIVE AGRICULTURAL LAND
- ABANDONED AGRICULTURAL LAND
- HILLSIDE GRASSLAND
- POND
- DRAINAGE CHANNEL
- WATERCOURSE
- OPEN FIELD
- DEVELOPED AREA

Rev	Date	Drawn	Description	Ch'kd	App'd
P4	NOV 10	MING	GENERAL REVISION		HT
P3	OCT 10	MING	GENERAL REVISION		ST HT
P2	AUG 10	MING	GENERAL REVISION		ST HT
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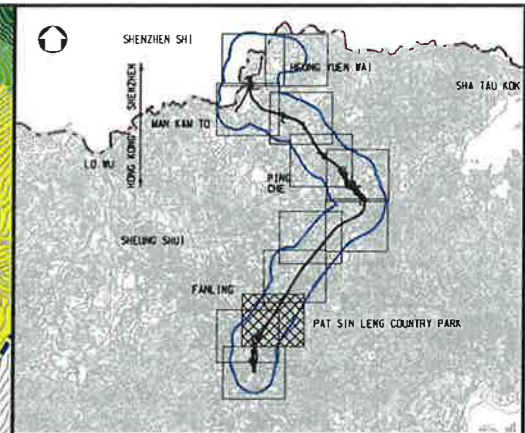
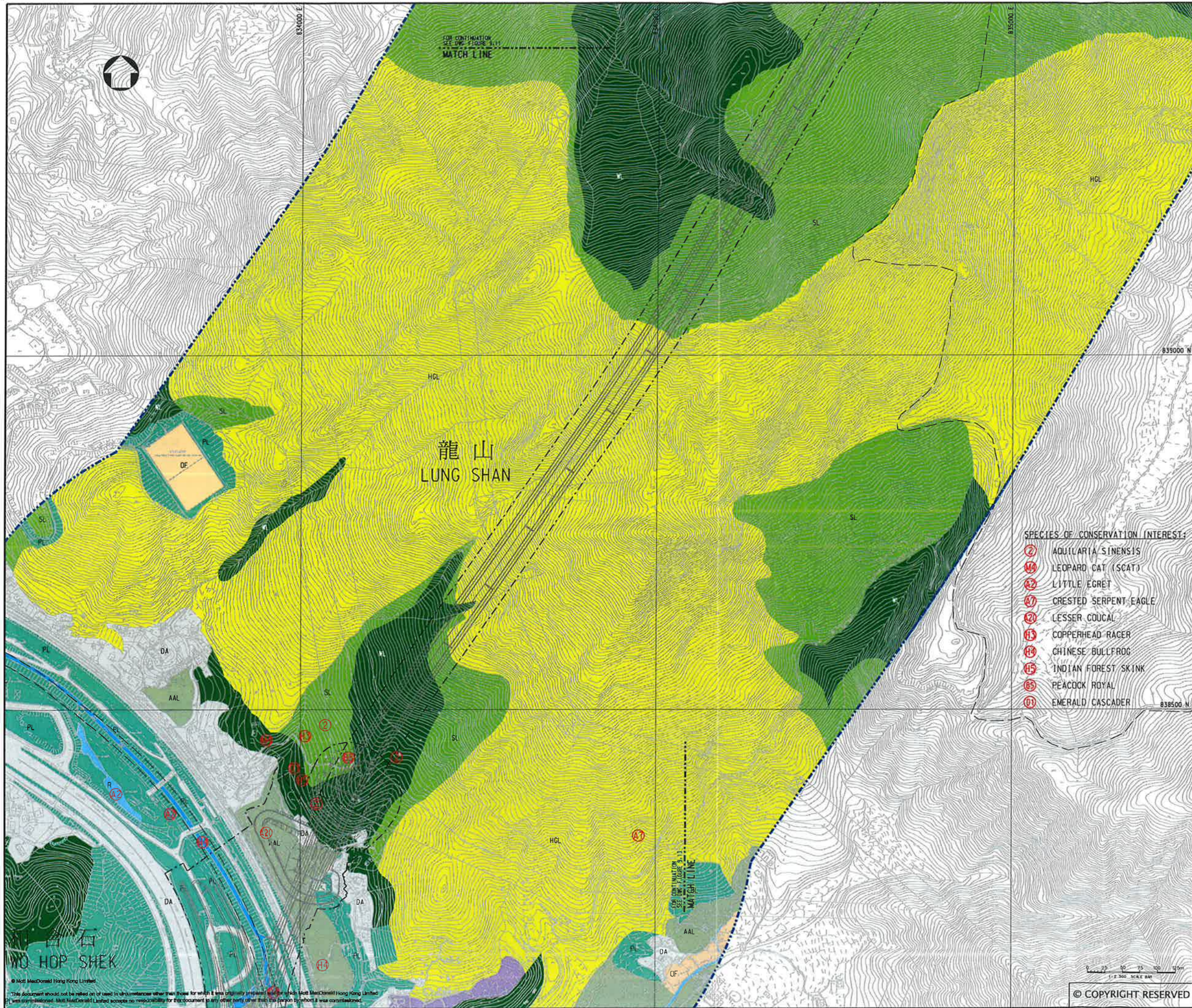
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Dwg.Chk.	ST	Approved	HT	
Scale at A1	1:2500	Project	255228	Status
		CAD File	1\255228\Project\Map\255228_Vic_9-12.dwg	PRE
Drawing No				Rev
				P4

- SPECIES OF CONSERVATION INTEREST:
- ① ASIAN PARADISE FLYCATCHER
 - ② GREY TREEPIE
 - ③ CRESTED GOSHAWK
 - ④ EMERALD CASCADE
 - ⑤ ACROSSOCHEILUS PARALLENS
 - ⑥ SMALL SNAKEHEAD
 - ⑦ CRYPTOPOTAMON ANACOLUTHON
 - ⑧ PREDACEOUS CHUB
 - ⑨ INDIAN FOREST SKINK
 - ⑩ BANDED STREAM SNAKE

MATCH LINE FOR CONTINUATION SEE DWG. FIGURE 9-12

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KEY PLAN
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- LEGEND:
- ECOLOGICAL ASSESSMENT AREA
 - WORKS AREA
 - WOODLAND
 - SHRUBLAND
 - PLANTATION
 - FRESHWATER WETLAND [WET AGRICULTURAL LAND (ACTIVE/ABANDONED)]
 - ACTIVE AGRICULTURAL LAND
 - ABANDONED AGRICULTURAL LAND
 - HILLSIDE GRASSLAND
 - POND
 - DRAINAGE CHANNEL
 - WATERCOURSE
 - OPEN FIELD
 - DEVELOPED AREA

SPECIES OF CONSERVATION INTEREST:

- AQUILARIA SINENSIS
- LEOPARD CAT (SCAT)
- LITTLE EGRET
- CRESTED SERPENT EAGLE
- LESSER COUCAL
- COPPERHEAD RACER
- CHINESE BULLFROG
- INDIAN FOREST SKINK
- PEACOCK ROYAL
- EMERALD CASCADER

Rev	Date	Drawn	Description	Chk'd	App'd
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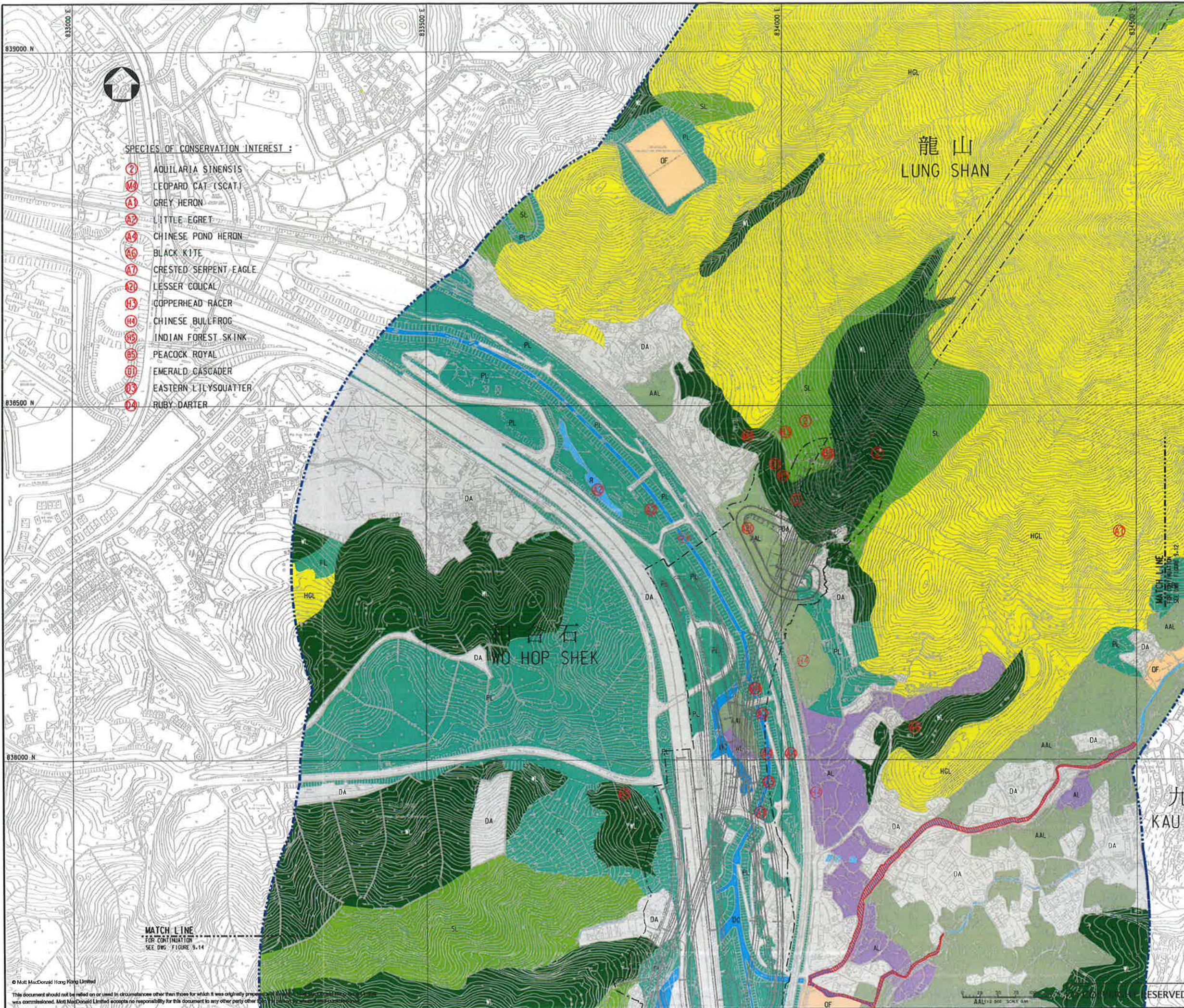
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Project
AGREEMENT NO. CE45/2008(CE)
LIANTANG/HEUNG YUEN WAI BOUNDARY
CONTROL POINT AND ASSOCIATED WORKS

Title
HABITAT MAP
(SHEET 10 OF 12)

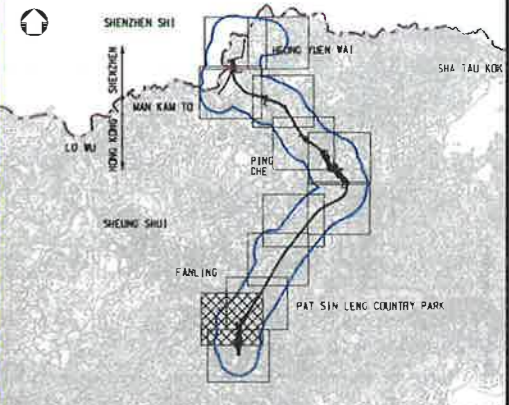
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Dwg.Chk.	ST	Approved	HT
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Drawing No	FIGURE 9.12	Status	PRE
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SPECIES OF CONSERVATION INTEREST :

- (2) AQUILARIA SINENSIS
- (M4) LEOPARD CAT (SCAT)
- (A1) GREY HERON
- (A2) LITTLE EGRET
- (A4) CHINESE POND HERON
- (A6) BLACK KITE
- (A7) CRESTED SERPENT EAGLE
- (A20) LESSER GOUCAL
- (H5) COPPERHEAD RACER
- (H4) CHINESE BULLFROG
- (H5) INDIAN FOREST SKINK
- (B5) PEACOCK ROYAL
- (B1) EMERALD CASCADER
- (B3) EASTERN LILYSQUATTER
- (D4) RUBY DARTER



KEY PLAN
SCALE 1:100000

- LEGEND:
- ECOLOGICAL ASSESSMENT AREA
 - WORKS AREA
 - WL WOODLAND
 - SL SHRUBLAND
 - PL PLANTATION
 - FW FRESHWATER WETLAND [WET AGRICULTURAL LAND (ACTIVE/ABANDONED)]
 - AL ACTIVE AGRICULTURAL LAND
 - AAL ABANDONED AGRICULTURAL LAND
 - HGL HILLSIDE GRASSLAND
 - PD POND
 - DC DRAINAGE CHANNEL
 - R WATERCOURSE
 - OF OPEN FIELD
 - DA DEVELOPED AREA
 - ECOLOGICALLY IMPORTANT STREAM

P4	NOV 10	MING	GENERAL REVISION	ST	HT
P3	OCT 10	MING	GENERAL REVISION	ST	HT
P2	AUG 10	MING	GENERAL REVISION	ST	HT
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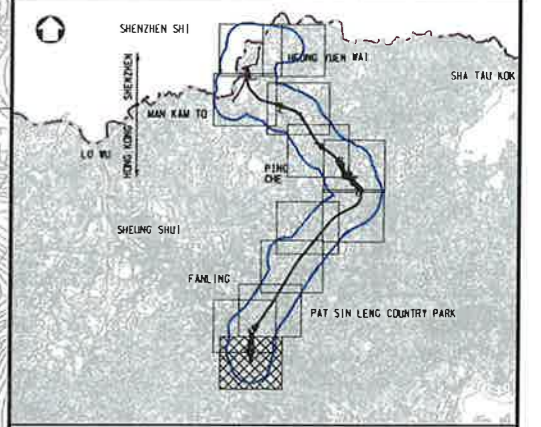
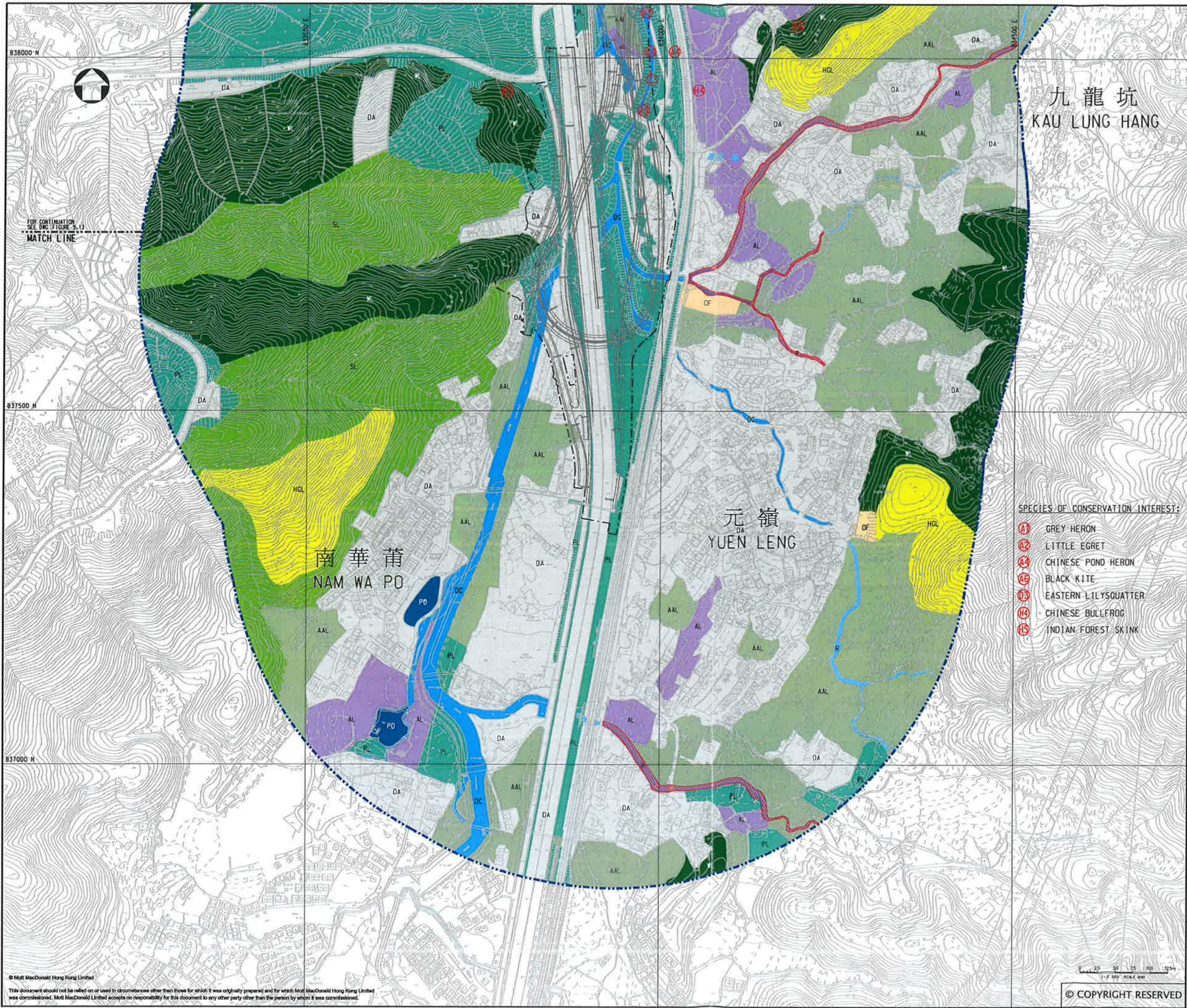
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Project
 AGREEMENT NO. CE45/2008(CE)
 LIANTANG/HUNG YUEN WAI BOUNDARY
 CONTROL POINT AND ASSOCIATED WORKS

Title
 HABITAT MAP
 (SHEET 11 OF 12)

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Drawn	MING	Coordination	EC
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Drawing No	FIGURE 9.13	Rev	P4

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KEY PLAN
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- LEGEND:**
- ECOLOGICAL ASSESSMENT AREA
 - WORKS AREA
 - WOODLAND
 - SHRUBLAND
 - PLANTATION
 - FRESHWATER WETLAND [WET AGRICULTURAL LAND (ACTIVE/ABANDONED)]
 - ACTIVE AGRICULTURAL LAND
 - ABANDONED AGRICULTURAL LAND
 - HILLSIDE GRASSLAND
 - POND
 - DRAINAGE CHANNEL
 - WATERCOURSE
 - OPEN FIELD
 - DEVELOPED AREA
 - ECOLOGICALLY IMPORTANT STREAM

- SPECIES OF CONSERVATION INTEREST:**
- A1 GREY HERON
 - A2 LITTLE EGRET
 - A3 CHINESE POND HERON
 - A6 BLACK KITE
 - A7 EASTERN LILYSQUATTER
 - A4 CHINESE BULLFROG
 - A5 INDIAN FOREST SKINK

P4	NOV 10	NING	GENERAL REVISION	ST	HT
P3	OCT 10	NING	GENERAL REVISION	ST	HT
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Title
 HABITAT MAP
 (SHEET 12 OF 12)

Designed	ST	Eng.Chk.	EC
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Dwg.Chk.	ST	Approved	HT
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Drawing No	FIGURE 9.14	Status	PRE
		Rev	P4

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Appendix B –
Photographs taken for *Aquilaria sinensis* Trees
Identified during Vegetation Survey

Photographs:



STK1834



STK1865



STK1887



STK2290

Photographs:



STK2291



STK2310



STK2322



STK2472

Photographs:



STK2479



STK2701



STK2876



STK2879

Photographs:



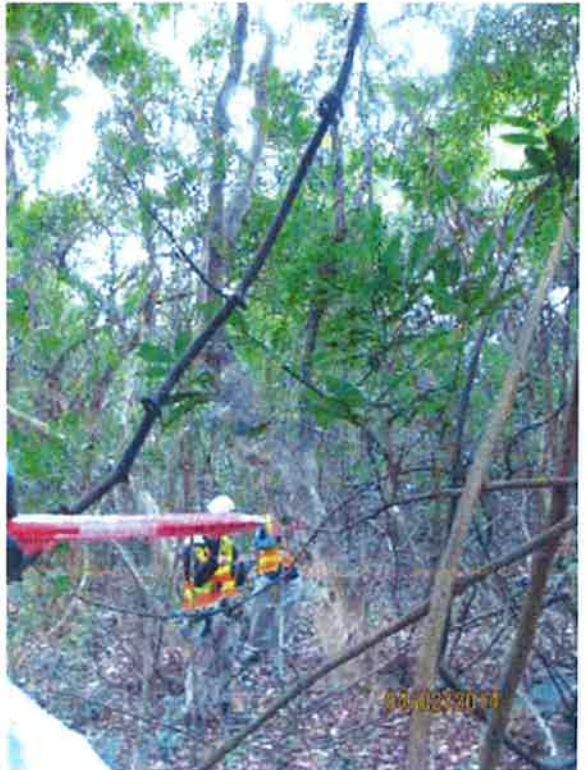
STK2900



STK2927



STK2935



STK2943

Photographs:



STK2974



STK2984



STK2991



STK3009

Photographs:



STK3013



STK3014



STK3107



STK3114

Photographs:



STK3134



STK3141



STK3323



STK3459

Photographs:



STK3542



STK3618



STK3630



STK3643

Photographs:



STK3691



STK3712



STK3736



STK3768

Photographs:



STK3882



STK4000



STK4017



STK4101

Photographs:



STK4251



STK4253



T306

Photographs:



T2163



T2413



U381



U415

Photographs:



U543



U649

Photographs:



AS01



AS02



AS03

Photographs:



STK1548



STK1603



STK1609



STK1679

Photographs:



STK1728



STK2091



STK2121



STK2140

Photographs:



STK2176



N251 N252

N252



N306



N316

N313

N313

Photographs:



N317



N318



N320



N326

Photographs:



N327



N330



N383



N384

Photographs:



N388



N471



N472



N498

Photographs:



T708



T1259A



T1268



T1284

Photographs:



T1344



T1346



T1489



T1503

Photographs:



T1505



T1577



T1579



T1586

Photographs:



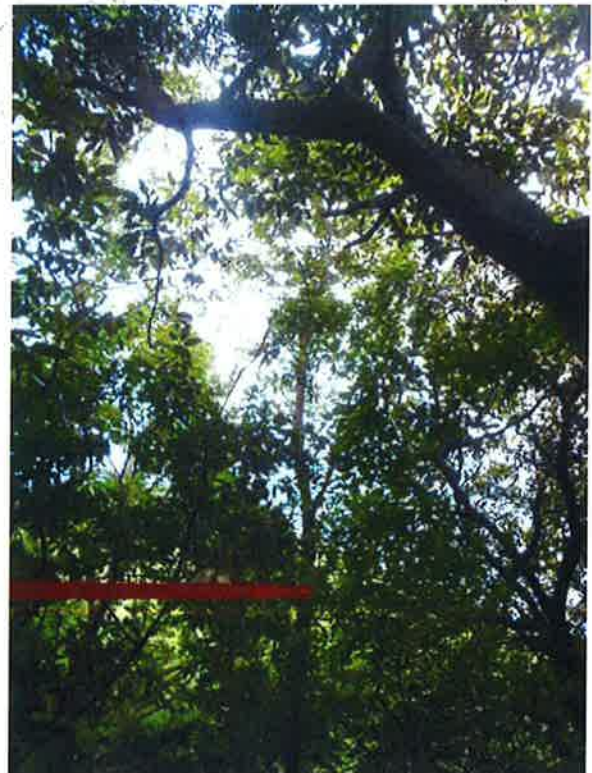
T1601



T1602



T1608



T1611

Photographs:



T1628



T1639



T1704



T1818

Photographs:



T1835



T1868



T1877



T1880

Photographs:



T1887



T1906



T1944



T1947

Photographs:



T1993



T2070



T2803



T2812

Photographs:



T2845



T2846



T2854



T2857

Photographs:



T2866



T2901



T2921



T2983

Photographs:



T3007



T3041



T3048



T3053

Photographs:



T3060



T3149



T3184

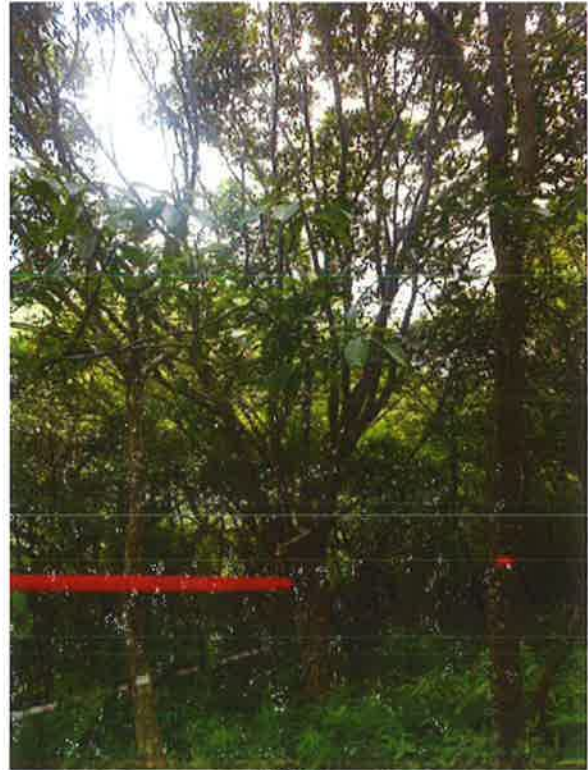


T3219

Photographs:



T3225



T3247



T3260



T3261A

Photographs:



T3262



T3282



T3287



T3318

Photographs:



T3330

Photographs:



AS04



AS05



AS06



AS07

Photographs



AS08

Appendix C –
Photographs taken for *Euonymus kwantungensis*
Identified during Vegetation Survey

Photographs:

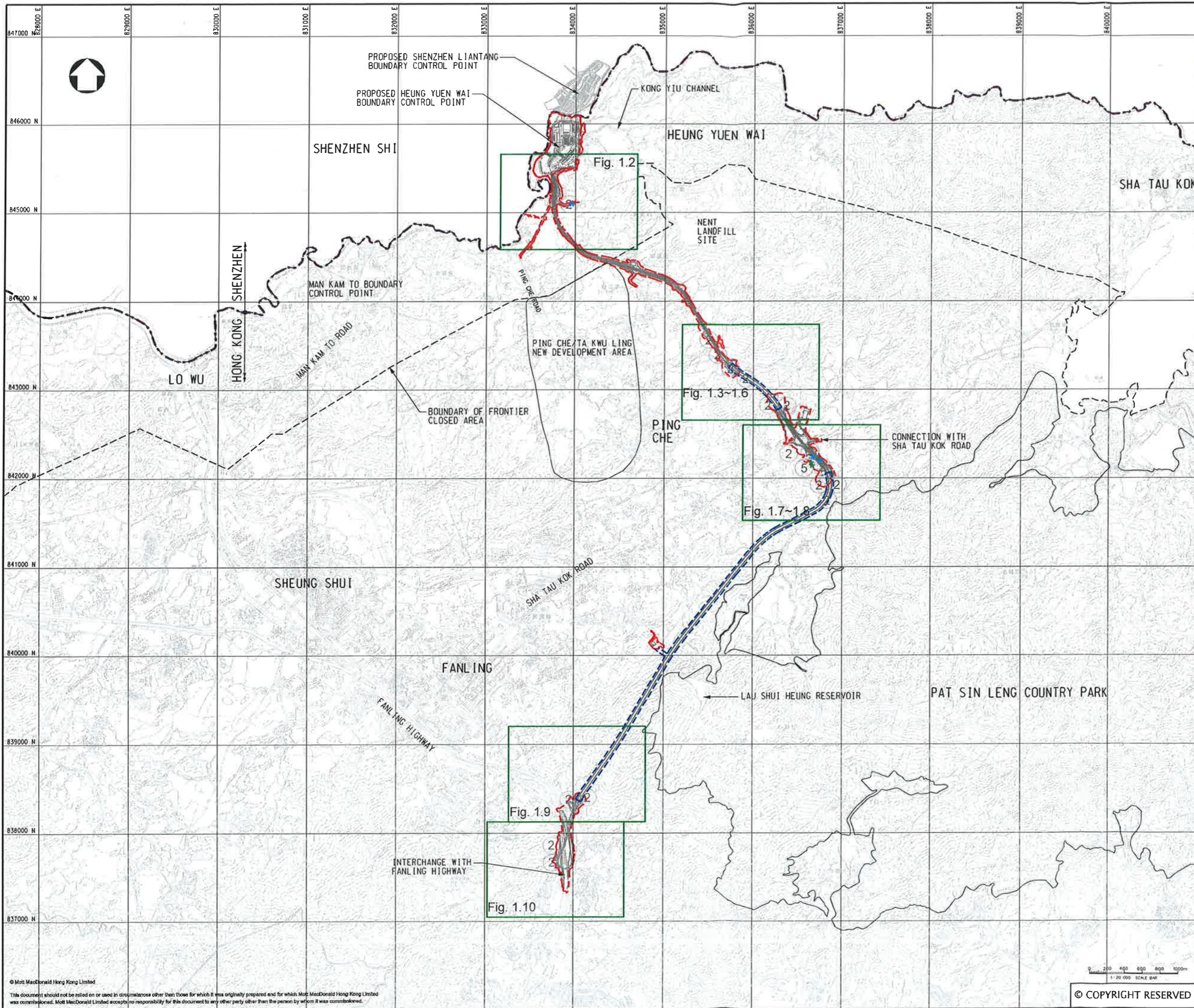


EK01



EK02

Appendix D –
Updated location plan of *Aquilaria sinensis* and
Euonymus kwangtungensis



- LEGEND:**
- BOUNDARY OF HKSAR
 - - - - - WORKS AREA (ABOVE GROUND)
 - - - - - WORKS AREA (TUNNEL)

- SPECIES OF CONSERVATION INTEREST:**
- ② AQUILARIA SINENSIS
 - ⑤ EUONYMUS KWANGTUNGENSIS
 - * Seedling of Euonymus kwangtungensis
 - * Seedling of Aquilaria sinensis

P3	AUG 10	MING	GENERAL REVISION	FY	HT
P2	MAY 10	MING	GENERAL REVISION	FY	HT
P1	APR 10	MING	FIRST ISSUE	FY	HT
Rev	Date	Drawn	Description	Ch'k'd	App'd

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Client

CEDD CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

Project

AGREEMENT NO. CE45/2008(CE)
LIANTANG/HEUNG YUEN WAI BOUNDARY CONTROL POINT AND ASSOCIATED WORKS

Title

PROJECT LAYOUT PLAN

Designed	DC	Eng. Chk.	EC
Drawn	MING	Coordination	EC
Dwg. Chk.	DC	Approved	HT
Scale at A1	1:20000	Project	255228
Drawing No	FIGURE 1.1	Status	PRE
		Rev	P3

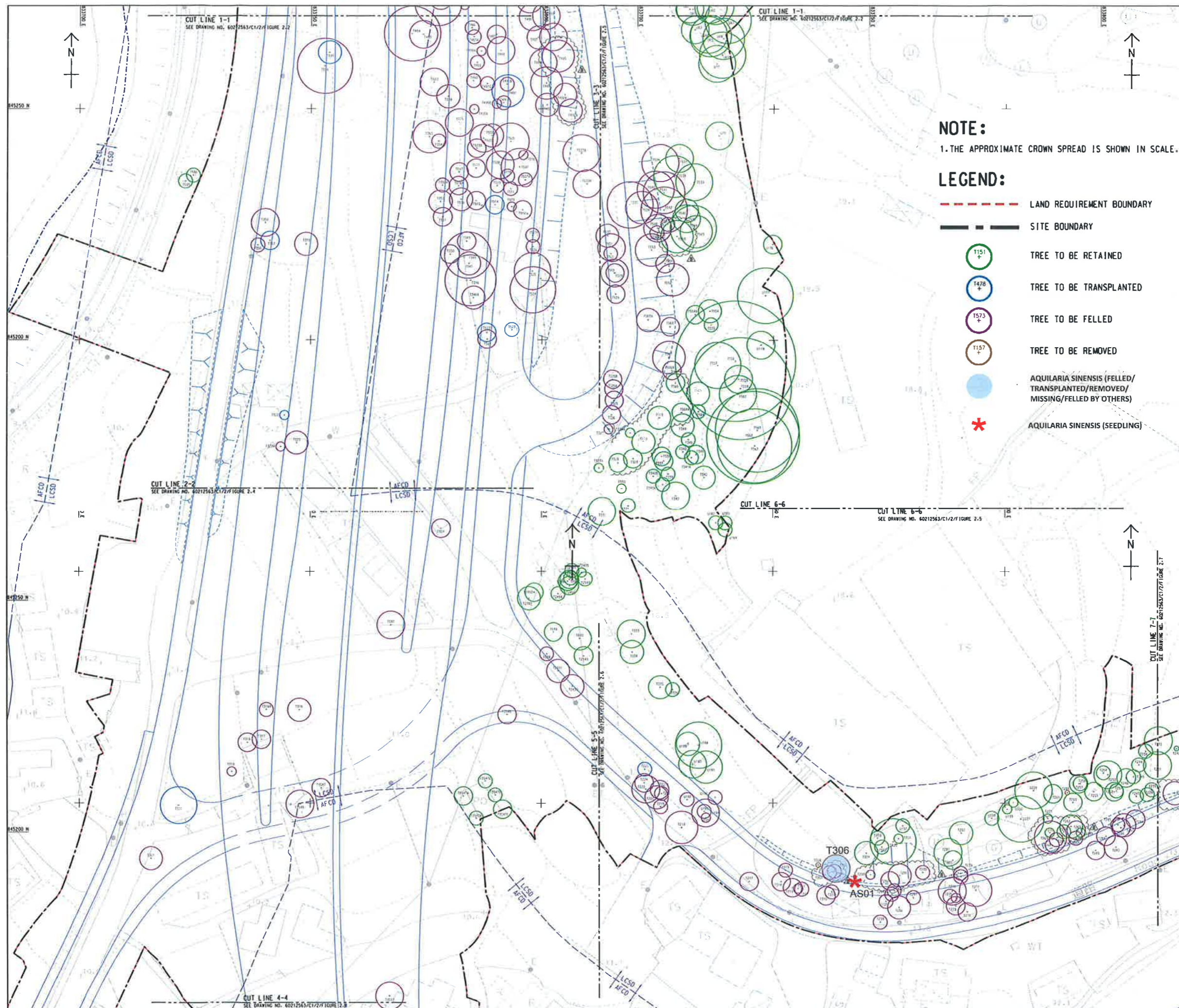


Figure 1.2

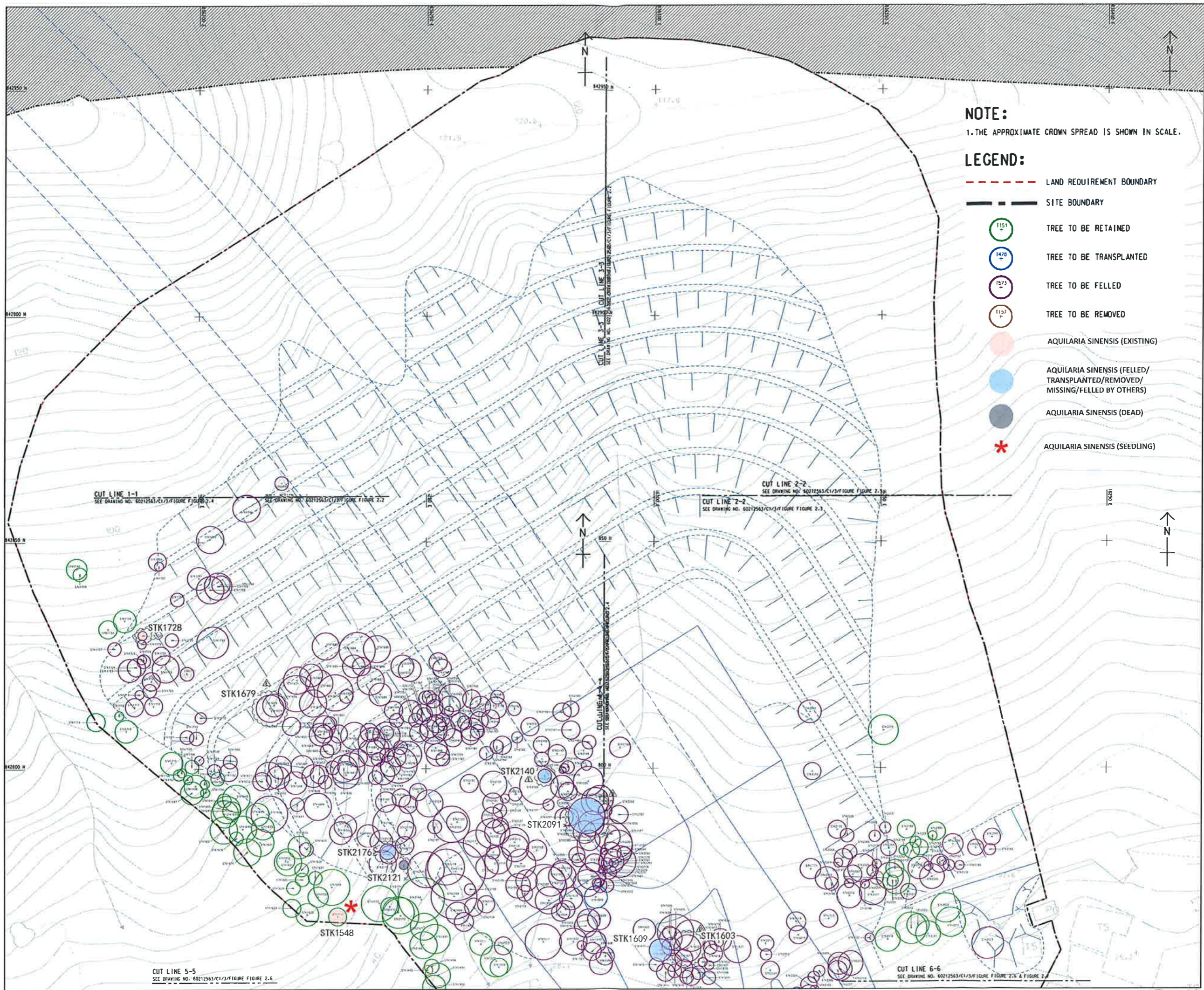
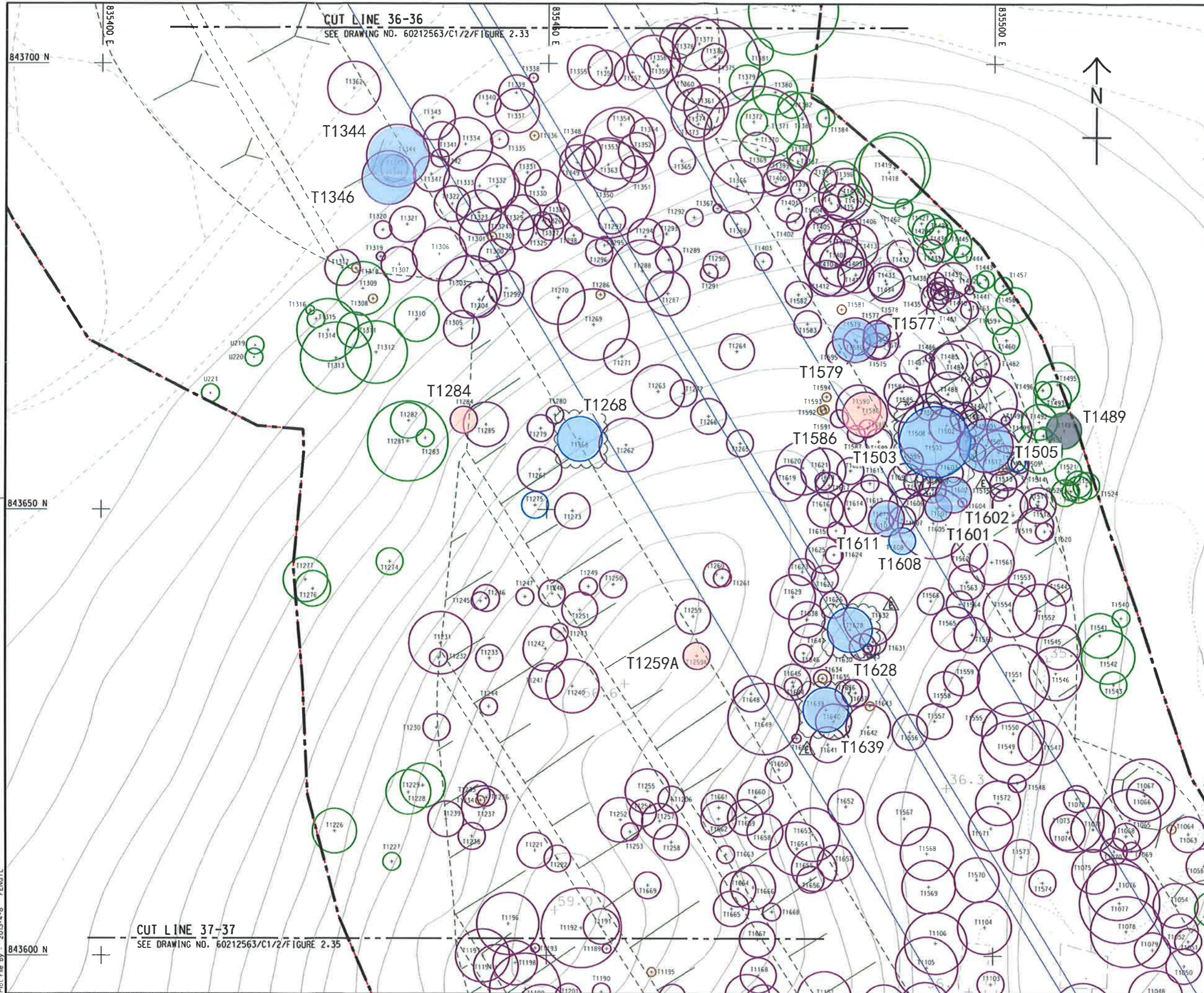


Figure 1.3



KEY PLAN
SCALE 1 : 4000

NOTE:
1. THE APPROXIMATE CROWN SPREAD IS SHOWN IN SCALE.

- LEGEND:**
- - - - - LAND REQUIREMENT BOUNDARY
 - SITE BOUNDARY
 - (Green circle) TREE TO BE RETAINED
 - (Blue circle) TREE TO BE TRANSPLANTED
 - (Purple circle) TREE TO BE FELLED
 - (Red circle) TREE TO BE REMOVED
 - (Orange circle) AQUILARIA SINENSIS (EXISTING)
 - (Light blue circle) AQUILARIA SINENSIS (FELLED/ TRANSPLANTED/REMOVED/ MISSING/FELLED BY OTHERS)
 - (Grey circle) AQUILARIA SINENSIS (DEAD)

E	TREES UPDATED	-	-	JAN-13
D	TREES UPDATED	-	-	SEP-12
C	TREATMENT OF TREES REVISED	-	-	MAY-12
B	TREES UPDATED	-	-	MAR-12
A	GENERAL REVISION	-	-	JAN-12

土木 工程 拓展 署
CEDD Civil Engineering and Development Department

LANTANG/HUING YUEN WAI BOUNDARY CONTROL POINT AND ASSOCIATED WORKS (SITE FORMATION AND INFRASTRUCTURES) - DESIGN AND CONSTRUCTION
NORTHERN SECTION TREE SURVEY AND TREATMENT PLAN
SHEET 33 OF 49

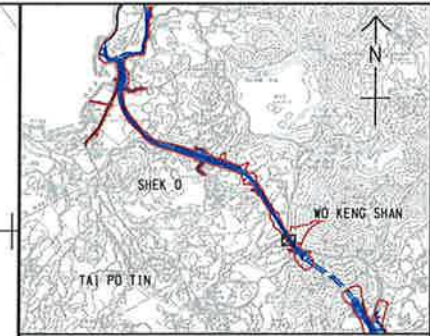
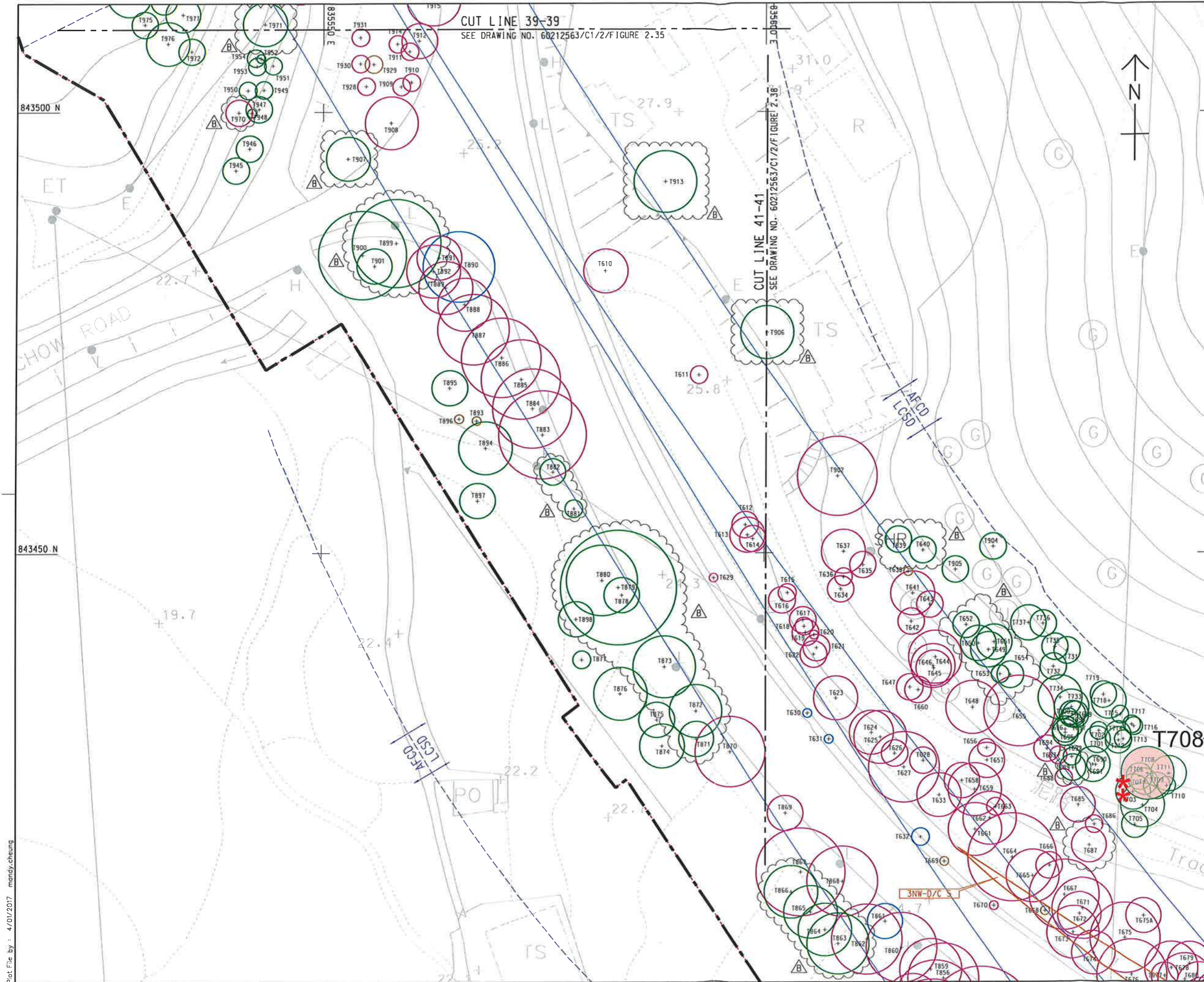


DRG.NO. 圖紙編號
Figure 1.4

DESIGNED BY 設計人	CONTRACT NO. 合約編號	P. BY 校對人
DRAWN BY 繪圖人	SCALE 比例	DATE 日期
SCALE 1:200	DATE	
DIMENSIONS ARE IN METRES 尺寸單位為公尺		

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Plot File by: 2013-4-8 FENGCTL



KEY PLAN
SCALE 1 : 40000

- NOTE:**
1. THE APPROXIMATE CROWN SPREAD IS SHOWN IN SCALE.
- LEGEND:**
- - - - - LAND REQUIREMENT BOUNDARY
 - - - - - SITE BOUNDARY
 - (green) TREE TO BE RETAINED
 - (blue) TREE TO BE TRANSPLANTED
 - (red) TREE TO BE FELLED
 - (pink) TREE TO BE REMOVED
 - ▭ SIMAR SLOPE UNDER HYD JURISDICTION
 - || AFCD || DEMARCATION LINE WITH JURISDICTION DEPARTMENTS SHOWN THUS
 - (orange) AQUILARIA SINENSIS (EXISTING)
 - * AQUILARIA SINENSIS (SEEDLING)

REV.	DESCRIPTION	DATE
B	TREES UPDATED	MAR-12
A	GENERAL REVISION	JAN-12

土木工程拓展署
 Civil Engineering and Development Department
 LIANTANG/HUANG YUEN WAI BOUNDARY CONTROL POINT AND ASSOCIATED WORKS (SITE FORMATION AND INFRASTRUCTURES) - DESIGN AND CONSTRUCTION
NORTHERN SECTION TREE SURVEY AND TREATMENT PLAN
 SHEET 36 OF 49

AECOM

DRGNO. 圖紙編號 Figure 1.5

DESIGNED BY 設計人: KH	CONTRACT NO. 合約編號	P. Dir. APPROVED 核准人
DRAWN BY 繪圖人: YJP	STATUS 狀況	
SCALE 比例尺: A1 1 : 200		
DIMENSIONS ARE IN METRES 尺寸單位: 公尺		

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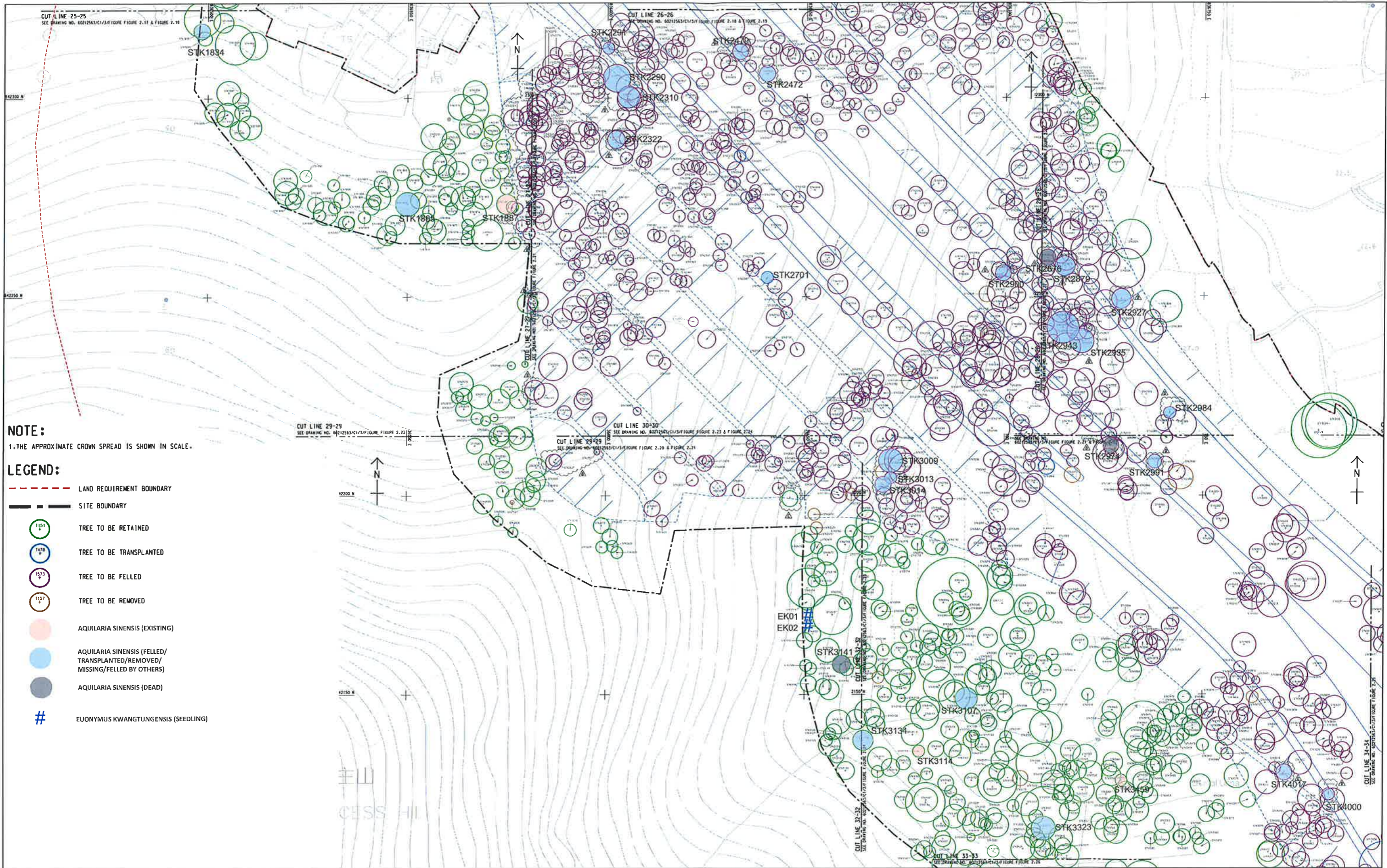


Figure 1.7

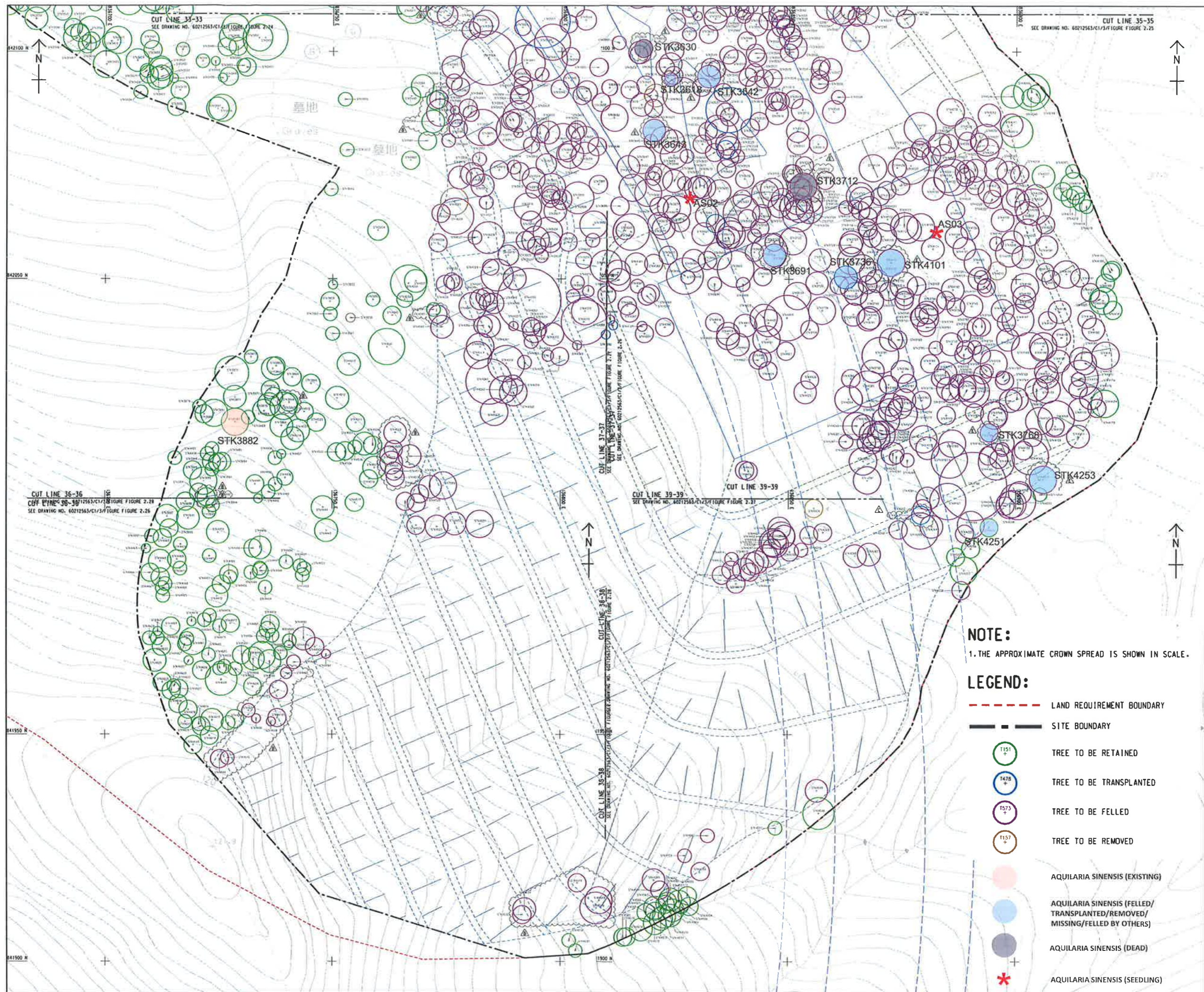








Figure 1.8


NOTE:

1. THE APPROXIMATE CROWN SPREAD IS SHOWN IN SCALE.

LEGEND:

-  LAND REQUIREMENT BOUNDARY
-  SITE BOUNDARY
-  TREE TO BE RETAINED
-  TREE TO BE TRANSPLANTED
-  TREE TO BE FELLED
-  TREE TO BE REMOVED

 AQUILARIA SINENSIS (EXISTING)

 AQUILARIA SINENSIS (FELLED/TRANSPLANTED/REMOVED/MISSING/FELLED BY OTHERS)

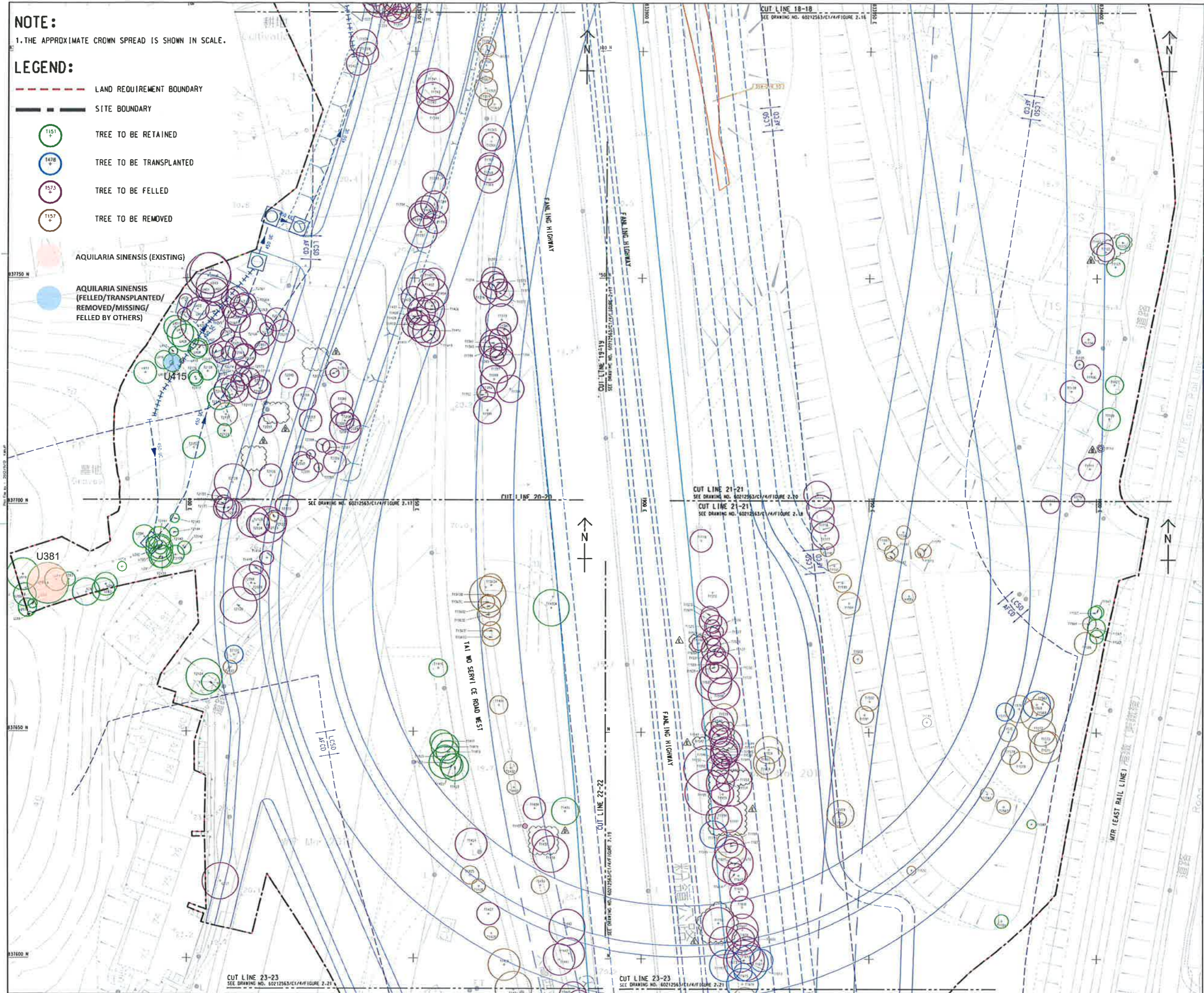
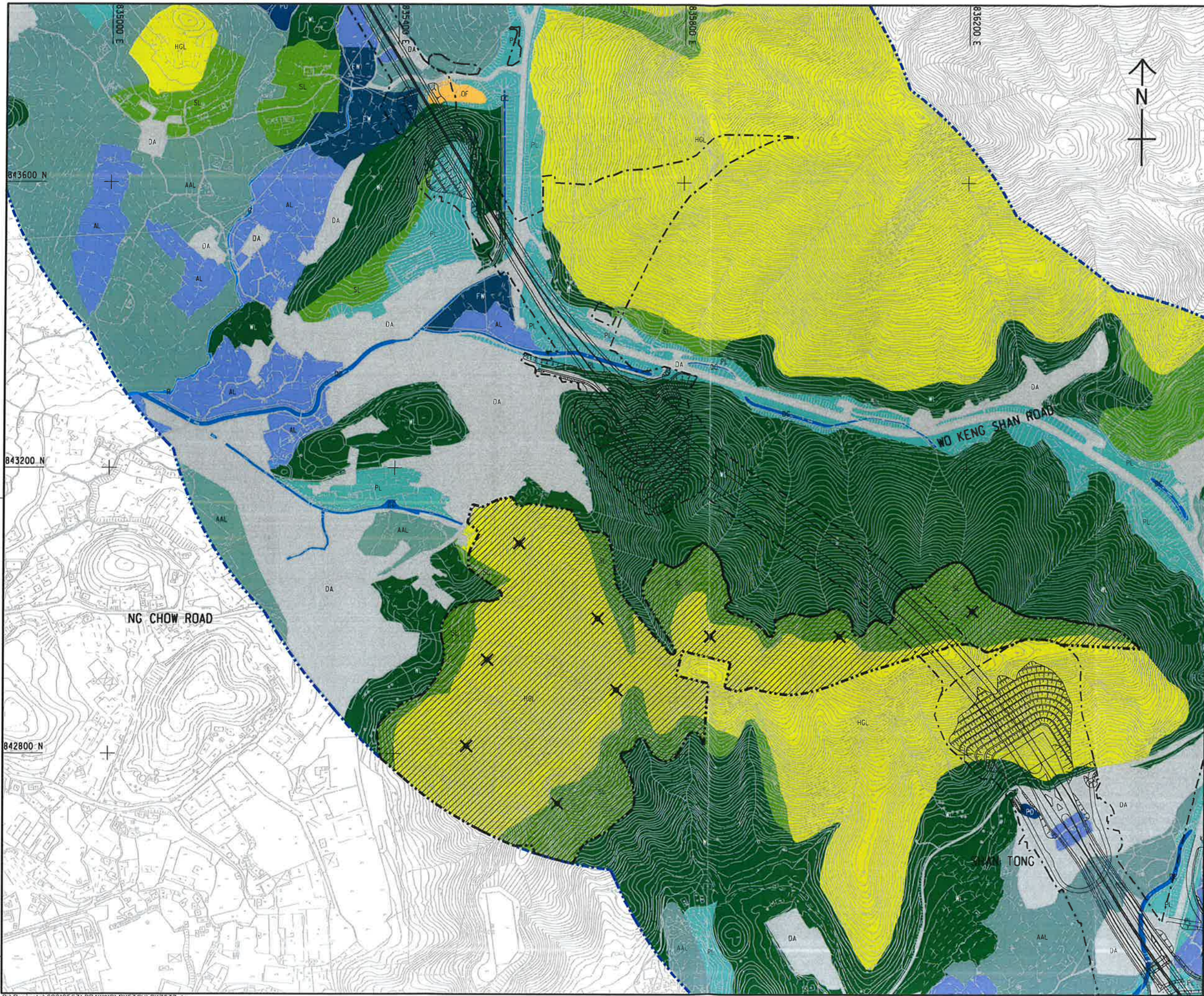


Figure 1.10

Appendix E – Proposed location of Woodland Compensation Area in EIA Report



KEY PLAN
SCALE 1 : 150000

- LEGEND:**
- 500m ASSESSMENT AREA
 - TENTATIVE WORKS AREA
 - TUNNEL SECTION
 - WOODLAND
 - SHRUBLAND
 - PLANTATION
 - FRESHWATER WETLAND [WET AGRICULTURAL LAND (ACTIVE/ABANDONED)]
 - ACTIVE AGRICULTURAL LAND
 - ABANDONED AGRICULTURAL LAND
 - HILLSIDE GRASSLAND
 - POND
 - DRAINAGE CHANNEL
 - WATERCOURSE
 - OPEN FIELD
 - DEVELOPED AREA
 - EXTENT OF WOODLAND COMPENSATION PLANTING AREA
 - X TENTATIVE WOODLAND MONITORING QUADRAT (THE EXACT LOCATION TO BE DETERMINED BY THE ENGINEER ON SITE)

REV.	DESCRIPTION	DATE

土木工務發展署
CEDD
Civil Engineering and Development Department

LIANTANG/HEUNG YUEN WAI BOUNDARY CONTROL POINT AND ASSOCIATED WORKS (SITE FORMATION AND INFRASTRUCTURES) - DESIGN AND CONSTRUCTION

PROPOSED WOODLAND COMPENSATION AREA

AECOM

DRG. NO. 60212563/SK 7037
圖紙編號

DESIGNED BY 設計人 KW	CONTRACT NO. 合約編號	DATE 日期
CHECKED BY 校核人 YJP	STATUS 狀況	

SCALE 1 : 2500
比例尺
METRES
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Plot File by : 2012/6/1 Xioh2

Appendix F – **Proposed Reception Site for *Euonymus kwangtungensis***

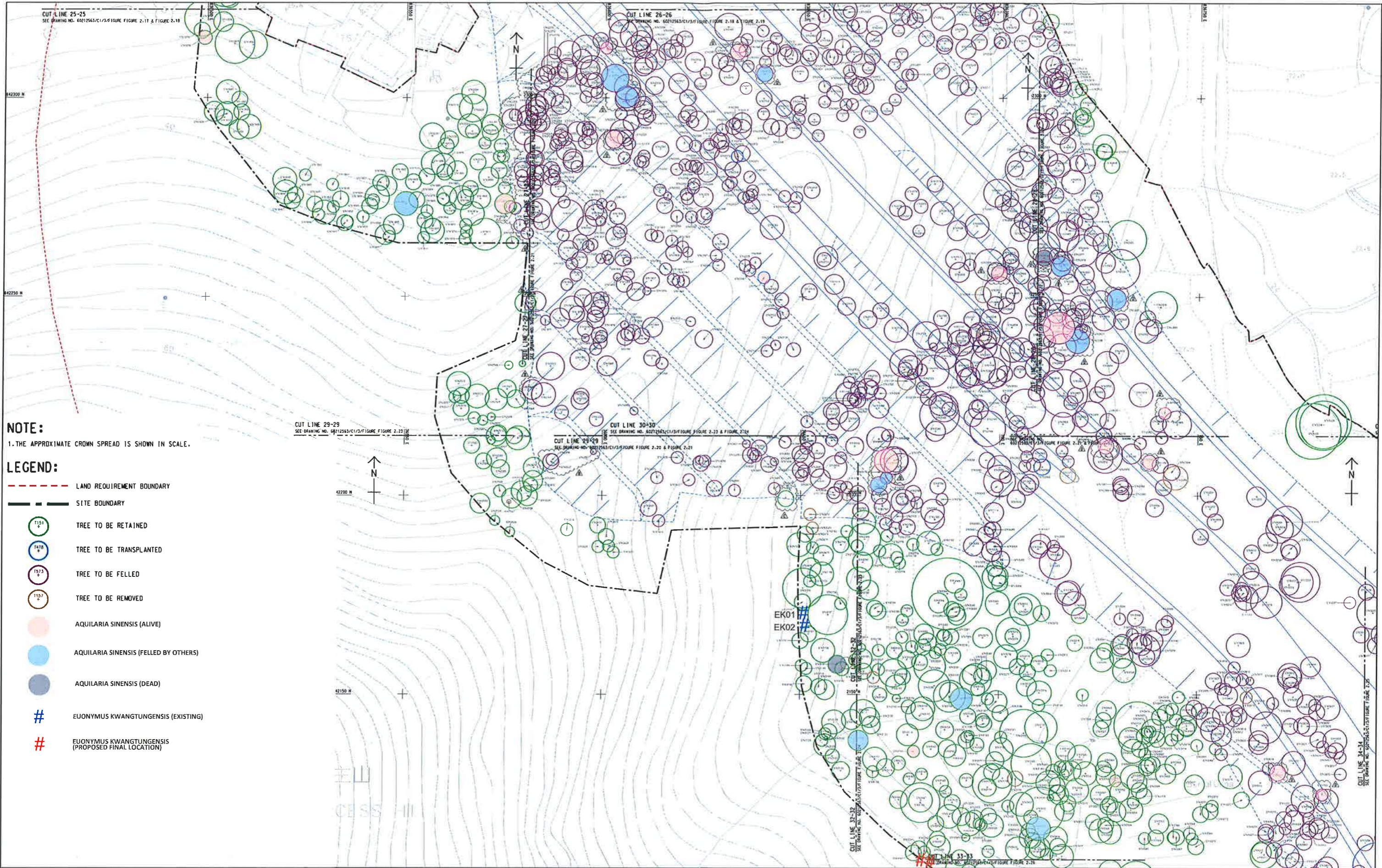




Photo of Reception Site for *Euonymus kwangtungensis*