MOTT MACDONALD

Installation of Proposed Cable Route from Cheung Sha to Tung Chung

Updated Vegetation Survey Report (for Sections 4, 10, 11 and 12)

November 2023

Mott MacDonald
3/F Manulife Place
348 Kwun Tong Road
Kwun Tong
Kowloon
Hong Kong

T +852 2828 5757
mottmac.hk

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Mott MacDonald Hong Kong Limited
registered in Hong Kong no. 236497

MOTT MACDONALD

Installation of Proposed Cable Route from Cheung Sha to Tung Chung

Certification and Verification Sheet

Environmental Permit No. EP-611/2022

Reference Document /Plan

Document/~~Plan~~ to be ~~Certified~~/ Verified:	Updated Vegetation Survey Report (for Sections 4, 10, 11 and 12)
Date of Report:	14 November 2023

Reference EP Condition

Environmental Permit (EP-611/2022) Condition:

Condition 2.2:
An ecologist shall be employed by the Permit Holder before commencement of construction of the Project. The ecologist shall conduct vegetation and fauna surveys as specified under Conditions 2.3 and 2.4 of this Permit, and certify the submissions under Conditions 2.3 and 2.4 of this Permit. The ecologist shall be a person who has at least 3 years of relevant experience. The qualification and experience of the ecologist shall be verified by the IEC.

Condition 2.3:
Before commencement of site clearance works at the concerned works areas, updated vegetation survey(s) along the proposed cable route within country park shall be conducted by the qualified ecologist appointed under Condition 2.2 above to confirm presence of any newly colonised flora species of conservation importance within and in the vicinity of the concerned works area. The Permit Holder shall, no later than 1 month before commencement of site clearance works at the concerned works areas, deposit with the Director 4 hard copies and 1 electronic copy of Updated Vegetation Survey Report(s) (UVSR(s)) prepared by the qualified ecologist appointed under Condition 2.2 above, and verified by the IEC. The UVSR(s) shall provide details and findings of the updated vegetation survey(s) including details of the mitigation measures required. The UVSR(s) shall include an implementation schedule in table form to clearly list out the mitigation measures to be implemented, the implementation party, location and timing. The mitigation measures recommended and requirements specified in the UVSR(s) shall be fully implemented.

Certification by the Qualified Ecologist

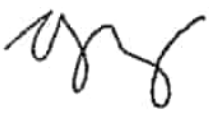
I hereby certify that the above referenced document/~~plan~~ complies with the above referenced conditions of EP-611/2022.

Ms Yusei LO,
Qualified Ecologist: 

Date: 14 November 2023

Verification by the Independent Environmental Checker

I hereby verify that the above referenced document/~~plan~~ complies with the above referenced conditions of EP-611/2022.

Ms Liz LO,
Independent Environmental Checker: 

Date: 14 November 2023

Contents

Figures

Appendices

1 Introduction

1.1 Background

In order to reinforce the electricity supply security at South Lantau Area and meet the future loading growth, CLP proposes to install an additional underground 132kV 150MVA cable circuit connecting the existing Cheung Sha substation to the existing Tung Chung Town substation.

A Project Profile (PP-641/2022) was prepared in support of the Application for permission to apply directly (DIR) for an EP for the Project under the provisions of Section 5(11) of the EIAO. The application was submitted to EPD in April 2022 with DIR permission (DIR-290/2022) and EP (EP-611/2022) granted by EPD on 17 May 2022 and 20 June 2022 respectively.

The alignment of the proposed cable route is shown in **Figure 1.1** and as indicated, part of the proposed cable route is located within the Lantau South Country Park, Lantau North Country Park and Lantau North Country Park (Extension) i.e. Sections 4-13, and part of it is outside the Country Parks (i.e. S1-S3 and S14-S22).

In accordance with the EP Conditions 2.2 and 2.3, before commencement of site clearance works at the concerned works area, updated vegetation survey(s) shall be conducted along the proposed cable route within country park by the qualified ecologist appointed under EP Condition 2.2 to confirm presence of any newly colonised flora species of conservation importance within and in the vicinity of the concerned works area.

The Permit Holder shall, no later than 1 month before commencement of site clearance works at the concerned works areas, deposit the Director the Updated Vegetation Survey Report(s) (UVSR(s)) prepared by the qualified ecologist appointed under EP Condition 2.2, and verified by the Independent Environmental Checker (IEC). The UVSR(s) shall provide details and findings of the updated vegetation survey(s) including details of the mitigation measures required. The UVSR(s) shall include an implementation schedule in table form to clearly list out the mitigation measures to be implemented, the implementation party, location and timing. The mitigation measures recommended and requirements specified in the UVSR(s) shall be fully implemented.

Mott MacDonald Hong Kong Limited (MMHK) was commissioned by CLP Power Hong Kong Limited (CLP) to provide the services of Independent Environmental Checker (IEC) for Section 4, 10, 11 & 12 and Pipe Bridge N305A, N307, N308, N309, N310 & N311A under the Environmental Permit (EP) (EP-611/2022).

Ms. Yusei Lo has been appointed as the qualified ecologist for Section 4, 10, 11 & 12 and Pipe Bridge N305A, N307, N308, N309, N310 & N311A, who has over 7 years of experience in the ecology field and has extensive experience in conducting field surveys for key flora and fauna groups. Relevant experience and qualifications of the qualified ecologist are presented in her brief CV attached in **Appendix A**. The qualification and experience of the qualified ecologist have been verified by the IEC.

1.2 Objective and Scope of the Plan

Updated vegetation survey along the proposed cable route Sections 10, 11 & 12 within country park was conducted on 25 July and 31 July 2023, while survey along Section 4 within country park was conducted on 18 October 2023. This Updated Vegetation Survey Report is prepared by the qualified ecologist appointed under Condition 2.2 of the EP No. EP-611/2022. The Updated Vegetation Survey Report provides details and findings of the vegetation survey including details of the mitigation measures required.

2 Survey Methodology

A set of updated vegetation survey was conducted by walking along the proposed cable routes Sections 10, 11 and 12 within country park on 25 July and 31 July 2023, and along Section 4 within country park on 18 October 2023. The survey focuses on confirming the presence of any newly colonised flora species of conservation importance within and in the vicinity of the concerned works area, particularly at the pipe-bridge works areas. All flora species of conservation importance encountered are recorded. Locations of Sections 4, 10, 11 and 12 are shown in **Figure 1.1**.

3 Survey Result

According to the Project Profile, five flora species of conservation importance including *Aquilaria sinensis*, *Cibotium barometz*, *Gnetum luofuense*, *Goodyera procera* and *Pavetta hongkongensis* were recorded along the proposed cable route Sections 10, 11 and 12, and no flora species of conservation importance was recorded along Section 4. All the flora species of conservation importance were recorded outside the works area.

During the updated vegetation survey, seven flora species of conservation importance, namely *Aquilaria sinensis, Cibotium barometz, Gnetum luofuense, Goodyera procera, Liparis nervosa, Pavetta hongkongensis and Pholidota chinensis,* were recorded in the woodland and watercourse outside the proposed cable route along Sections 10, 11 and 12. No flora species of conservation importance was recorded along Section 4.

A summary of the survey results is provided in **Table 3.1**. The locations of the flora species of conservation importance recorded are shown in **Figures 3.1** to **3.4**. Representative photos of the flora species of conservation importance recorded are provided in **Appendix B**.

Section 4

There was no flora species of conservation importance recorded. Location of Section 4 is shown in **Figure 3.1**.

Section 10

One individual of *Goodyera procera* was recorded in the watercourse and one individual of *Gnetum luofuense* was recorded in the woodland.

Two individuals of *Aquilaria sinensis*, three individuals of *Pavetta hongkongensis*, a patch of *Liparis nervosa* and one individual of *Pholidota chinensis* were newly recorded in the woodland.

An individual of *Aquilaria sinensis,* one individual of *Gnetum luofuense* and three individuals of *Pavetta hongkongensis,* which were recorded in the Project Profile at this section, were not found during the updated vegetation survey.

All the flora species of conservation importance were recorded outside the proposed cable route. No flora species of conservation importance will be affected by the proposed works.

The locations of the flora species of conservation importance recorded at Section 10 are shown in **Figure 3.2**.

Section 11

A total of three individuals of *Cibotium barometz* were recorded in the woodland close to pipe bridge N307. Amongst these, two of them were newly found during the updated vegetation survey.

An individual of *Gnetum luofuense*, which was recorded in the Project Profile at this section, was not found during the updated vegetation survey.

All flora species of conservation importance were recorded outside the proposed cable route. No flora species of conservation importance will be affected by the works.

The locations of the flora species of conservation importance recorded at Section 11 are shown in **Figure 3.3**.

Section 12

An individual of *Aquilaria sinensis* and an individual of *Gnetum luofuense* were found in the woodland.

A patch of *Gnetum luofuense* was newly recorded in the woodland during the updated vegetation survey.

An individual of *Cibotium barometz*, which was previously recorded at pipe bridge N305A at the Project Profile, was not found during the updated vegetation survey.

All flora species of conservation importance were recorded outside the proposed cable route. No flora species of conservation importance will be affected by the works.

The location of the flora species of conservation importance recorded at Section 12 are shown in **Figure 3.4**.

Table 3.1: Summary of Species of Conservation Importance Recorded

Scientific Name	Chinese Name	Conservation Status	Cumulative Abundance			
			S4	S10	S11	S12
Aquilaria sinensis	土沉香	Cap. 586; Rare and Precious Plants of Hong Kong (NT); CPRDB (V); IUCN (VU)		2		1
Cibotium barometz	金毛狗	Cap. 586; Rare and Precious Plant of Hong Kong (VU)			3	
Gnetum luofuense	羅浮買麻藤	IUCN(NT)		1		2
Goodyera procera	高斑葉蘭	Cap. 96; Cap. 586		1		
Liparis nervosa	見血青	Cap. 96; Cap. 586		1		
Pavetta hongkongensis	香港大沙葉	Cap. 96		3		
Pholidota chinensis	石仙桃	Cap. 96; Cap. 586		1		
Total no. of species of conservation importance recorded			**0**	**6**	**1**	**2**

Notes:

1. Cap. 96: Protected under the Forests and Countryside Ordinance.
2. Cap. 586: Protected under the Protection of Endangered Species of Animals and Plants Ordinance.
3. Rare and Precious Plants of Hong Kong (Hong Kong Herbarium, 2021): VU = Vulnerable, NT = Near Threatened
4. CPRDB – China Plant Red Data Book (Fu and Chin (1992)): V = Vulnerable
5. IUCN – The IUCN Red List of Threatened Species (2023): VU = Vulnerable, NT = Near Threatened

4 Review of Protective and Precautionary Measures

An updated Vegetation Survey has been conducted to confirm the presence of any newly colonised flora species of conservation importance within and in the vicinity of the concerned works area, particularly at the pipe-bridge works areas. All flora species of conservation importance were recorded outside the proposed cable route Sections 10, 11 and 12, and no flora species of conservation importance was recorded along Section 4. Therefore, no flora species of conservation importance is expected to be affected by the proposed works. Protective and/or precautionary measures of direct impact on flora species of conservation importance is considered not necessary.

Trampling by workers and indirect disturbance (e.g. dust caused by the construction activities) can potentially impact the flora species of conservation importance recorded near the proposed cable route. To minimise potential disturbances, work exclusion zone should be demarcated to protect these flora species of conservation importance from temporary works areas, storage areas and excessive human activities associated with the works. The locations of work exclusion zones are shown in **Figures 4.1** and **4.2**.

For the flora species of conservation importance at roadside, robust fencing will be erected to define the work exclusion zones around them. These work exclusion zones should be clearly indicated with warning signs to ensure that construction activities do not encroach into these areas (see **Figure 4.3**). However, for the flora species of conservation importance near pipe bridges, as confirmed by the Project Proponent, there will be no workers working at the slope under the pipe bridges and it is not feasible to install robust fencing at the slope under the pipe bridges due to safety concerns. In such case, setting a rope linking the robust fencing setting at pipe bridge footings with be used to indicate the work exclusion zone (see **Figure 4.4**). The type of robust fencing to be used is presented in **Figure 4.5**.

All the robust fencing will be equipped with warning signs to alert workers. Once the construction works are completed, the fencing will be removed.

In addition, to minimise potential disturbance to the surrounding habitat, it is recommended to adopt good site/ construction practice and housekeeping measures as outlined in Section 5.1.5 of the Project Profile and EP Condition 2.5 during the construction. The following specific mitigation measures and good site/ construction practices are recommended:

- Disturbance to adjacent natural streams and the riparian woodland or shrubland/ grassland habitats will be avoided, as the construction activities will be strictly restrained in the works areas;
- Prevent runoff to be generated from the construction works. In the event of rain or at any time when rainstorms are likely to happen, exposed surfaces should be covered by tarpaulin or by other means;
- Stream bed will not be disturbed under any circumstances;
- Temporary works areas, storage areas and excessive human activities associated with the construction works should be away from the flora species of conservation importance, to avoid loss of or damage to these individuals due to the construction works.
- Prohibit filling and dumping to the surrounding natural habitats and especially those within the Country Park;

- Regularly check the work site boundaries to ensure that they are not breached and that no damage occurs to surrounding areas/ Country Park, particularly any identified flora of conservation importance nearby;
- Prohibit and prevent open fires within the site boundary during in the work areas;
- Works site should be kept tidy at all times. Accumulation of construction waste and general refuse should not be allowed;
- Reinstate temporary work sites/ disturbed areas, immediately after completion of the construction works; and
- Good site practice should be enforced and effective mitigation measures are required. In particular, the Practice Note for Professional Persons (ProPECC Note PN1/94) on Construction Site Drainage provides guidelines for the handling and disposal of construction discharges. It should be followed strictly to control site runoff and wastewater generated during the construction phase.

5 Implementation Schedule

Under EP Condition 2.1, an Independent Environmental Checker (IEC) shall be employed by the Permit Holder before commencement of construction of the Project. The IEC shall audit the implementation of the environmental mitigation measures recommended in the Project Profile and required under the EP, and to confirm full compliance of the mitigation measures through a monthly audit report.

An implementation schedule is presented in **Table 5.1** to list out the mitigation measures to be implemented, the implementation party, location and timing. All mitigation measures recommended and requirements specified in the Updated Vegetation Survey Report shall be fully implemented.

Table 5.1: Implementation Schedule of Recommended Mitigation Measures during Installation of Proposed Cable Route (for Cable Routes Sections 4, 10, 11 and 12)

Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures	Implementation Parties	Location of the Measure	When to Implement the Measure	Relevant Requirements or Standards for the Measure to Achieve
PP B9.1	Measures to Minimise Disturbances to Adjacent Habitats and Associated Flora of Conservation Importance					
EP Condition 2.3	<u>Submission of Updated Vegetation Survey Report</u> • Before commencement of site clearance works at the concerned works areas, updated vegetation survey(s) along the proposed cable route within country park shall be conducted by the qualified ecologist appointed under Condition 2.2 above to confirm presence of any newly colonised flora species of conservation importance within and in the vicinity of the concerned works area. • The UVSR(s) shall provide details and findings of the updated vegetation survey(s) including details of the mitigation measures required. The UVSR(s) shall include an implementation schedule in table form to clearly list out the mitigation measures to be implemented, the implementation party, location and timing. The mitigation measures recommended and requirements specified in the UVSR(s) shall be fully implemented.	To avoid impact on flora species of conservation importance within and in the vicinity of the concerned works area.	Project Proponent	-	No later than 1 month before commencement of site clearance works at the concerned works areas	EP Condition 2.2
S5.1.5 of the PP, Section 4 of this report	<u>Measures to Minimise Disturbances to Adjacent Habitats and Associated Vegetation</u> • Work exclusion zone should be demarcated to protect these flora species of conservation importance from temporary works areas, storage areas and excessive human activities associated with the works. • For the flora species of conservation importance at roadside, robust fencing will be erected to define the work exclusion zones	To minimise disturbances to adjacent habitats and associated vegetation	Contractor	Construction works area	During construction	S5.1.5 of the PP, Section 4 of this report

Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures	Implementation Parties	Location of the Measure	When to Implement the Measure	Relevant Requirements or Standards for the Measure to Achieve
	around them. These work exclusion zones should be clearly indicated with warning signs to ensure that construction activities do not encroach into these areas. • For the flora species of conservation importance near pipe bridges, as confirmed by the Project Proponent, there will be no workers working at the slope under the pipe bridges and it is not feasible to install robust fencing at the slope under the pipe bridges due to safety concerns. In such case, setting a rope linking the robust fencing setting at pipe bridge footings with be used to indicate the work exclusion zone. • Disturbance to adjacent natural streams and the riparian woodland or shrubland/ grassland habitats will be avoided, as the construction activities will be strictly restrained in the works areas; • Prevent runoff to be generated from the construction works. In the event of rain or at any time when rainstorms are likely to happen, exposed surfaces should be covered by tarpaulin or by other means; • Stream bed will not be disturbed under any circumstances; • Temporary works areas, storage areas and excessive human activities associated with the construction works should be away from the flora species of conservation importance, to avoid loss of or damage to these individuals due to the construction works. • Prohibit filling and dumping to the surrounding natural habitats and especially those within the Country Park;					

Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures	Implementation Parties	Location of the Measure	When to Implement the Measure	Relevant Requirements or Standards for the Measure to Achieve
	• Regularly check the work site boundaries to ensure that they are not breached and that no damage occurs to surrounding areas/ Country Park, particularly any identified flora of conservation importance nearby; • Prohibit and prevent open fires within the site boundary during in the work areas; • Works site should be kept tidy at all times. Accumulation of construction waste and general refuse should not be allowed; • Reinstate temporary work sites/ disturbed areas, immediately after completion of the construction works; and • Good site practice should be enforced and effective mitigation measures are required. In particular, the Practice Note for Professional Persons (ProPECC Note PN1/94) on Construction Site Drainage provides guidelines for the handling and disposal of construction discharges. It should be followed strictly to control site runoff and wastewater generated during the construction phase.					

Figures

N

TUNG CHUNG TOWN
SUB STATION

22
21
20
19
18
17
16
15
14
13
N305A
12
N307
11
N308
10
N309
9
8
7
N310
6
5
4
N311A
3
2
1

CHEUNG SHA
SUB STATION

0 175 350 700 1,050 1,400
Meters

Key Plan

Note: All locations or extents presented are indicative only

Key to symbols:

LEGEND

- 500M FROM PROPOSED CONSTRUCTION WORKS
- 500M FROM PROPOSED CABLE ROUTE
- PIPE BRIDGE
- SECTION OF PROPOSED CABLE ROUTE (S1-S22)
- CABLE ROUTE OUTSIDE COUNTRY PARK
- PROPOSED CABLE ROUTE WITHIN COUNTRY PARK (LOCATION OF CONSTRUCTION WORKS)
- EXISTING SUB STATION
- COUNTRY PARK

Rev	Date	Drawn	Description	Ch'k'd	App'd
P1	AUG 2023	JUT		YL	GC

MOTT MACDONALD

Mott MacDonald
3/F Manulife Place
348 Kwun Tong Road
Kwun Tong, Kowloon
Hong Kong
T +852 2828 5757
F +852 2827 1823
W mottmac.com

Client

CLP POWER HONG KONG LIMITED

Project

INSTALLATION OF PROPOSED CABLE ROUTE FROM CHEUNG SHA TO TUNG CHUNG

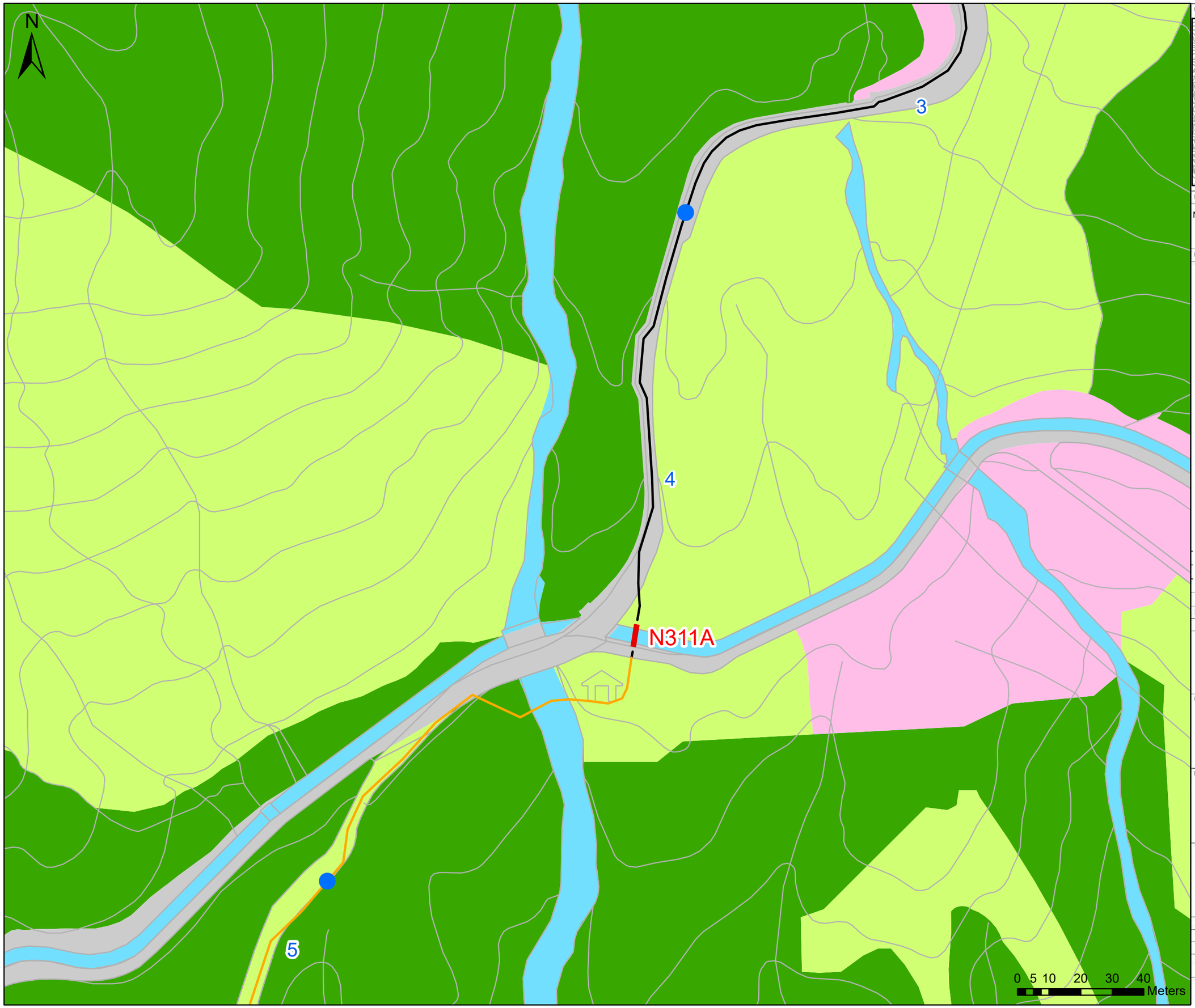
Title

ALIGNMENT OF THE PROPOSED CABLE ROUTE FROM CHEUNG SHA TO TUNG CHUNG TOWN

Designed	JUT		Eng check		YL
Drawn	JUT		Coordination		YL
Dwg check	YL		Approved		GC
Scale at A3: AS SHOWN		Status		Rev	P1

Drawing Number

FIGURE 1.1



Key Plan

Notes

Note: All locations or extents presented are indicative only

Key to symbols:

LEGEND

- PIPE BRIDGE
- SECTION OF PROPOSED CABLE ROUTE (S1-S22)
- CABLE ROUTE OUTSIDE COUNTRY PARK
- PROPOSED CABLE ROUTE WITHIN COUNTRY PARK (LOCATION OF CONSTRUCTION WORKS)

HABITAT

- WOODLAND
- PLANTATION
- SHRUBLAND / GRASSLAND
- WATERCOURSE
- DEVELOPED AREA

Rev	Date	Drawn	Description	Ch'k'd	App'd
P1	NOV 2023	JUT		YL	GC

MOTT MACDONALD

Mott MacDonald
3/F Manulife Place
348 Kwun Tong Road
Kwun Tong, Kowloon
Hong Kong
T +852 2828 5757
F +852 2827 1823
W mottmac.com

Client

CLP POWER HONG KONG LIMITED

Project

INSTALLATION OF PROPOSED CABLE ROUTE FROM CHEUNG SHA TO TUNG CHUNG

Title

FLORA SPECIES OF CONSERVATION IMPORTANCE RECORDED AT SECTION 4

Designed	JUT		Eng check		YL
Drawn	JUT		Coordination		YL
Dwg check	YL		Approved		GC
Scale at A3: AS SHOWN		Status		Rev	P1

Drawing Number

FIGURE 3.1

N

11

10

N308

N309

9

0 12.5 25 50 75 100 Meters

SPECIES OF CONSERVATION IMPORTANCE

- *Aquilaria sinensis*
- *Gnetum luofuense*
- *Goodyera procera*
- *Pavetta hongkongensis*
- *Pholidota chinensis*
- *Liparis nervosa*

Key Plan

Notes

Note: All locations or extents presented are indicative only

Key to symbols:

LEGEND

- PIPE BRIDGE
- SECTION OF PROPOSED CABLE ROUTE (S1-S22)
- PROPOSED CABLE ROUTE WITHIN COUNTRY PARK (LOCATION OF CONSTRUCTION WORKS)

HABITAT

- WOODLAND
- PLANTATION
- SHRUBLAND / GRASSLAND
- WATERCOURSE
- DEVELOPED AREA

Rev	Date	Drawn	Description	Ch'k'd	App'd
P1	SEP 2023	JUT		YL	GC

MOTT MACDONALD

Mott MacDonald
3/F Manulife Place
348 Kwun Tong Road
Kwun Tong, Kowloon
Hong Kong
T +852 2828 5757
F +852 2827 1823
W mottmac.com

Client

CLP POWER HONG KONG LIMITED

Project

INSTALLATION OF PROPOSED CABLE ROUTE FROM CHEUNG SHA TO TUNG CHUNG

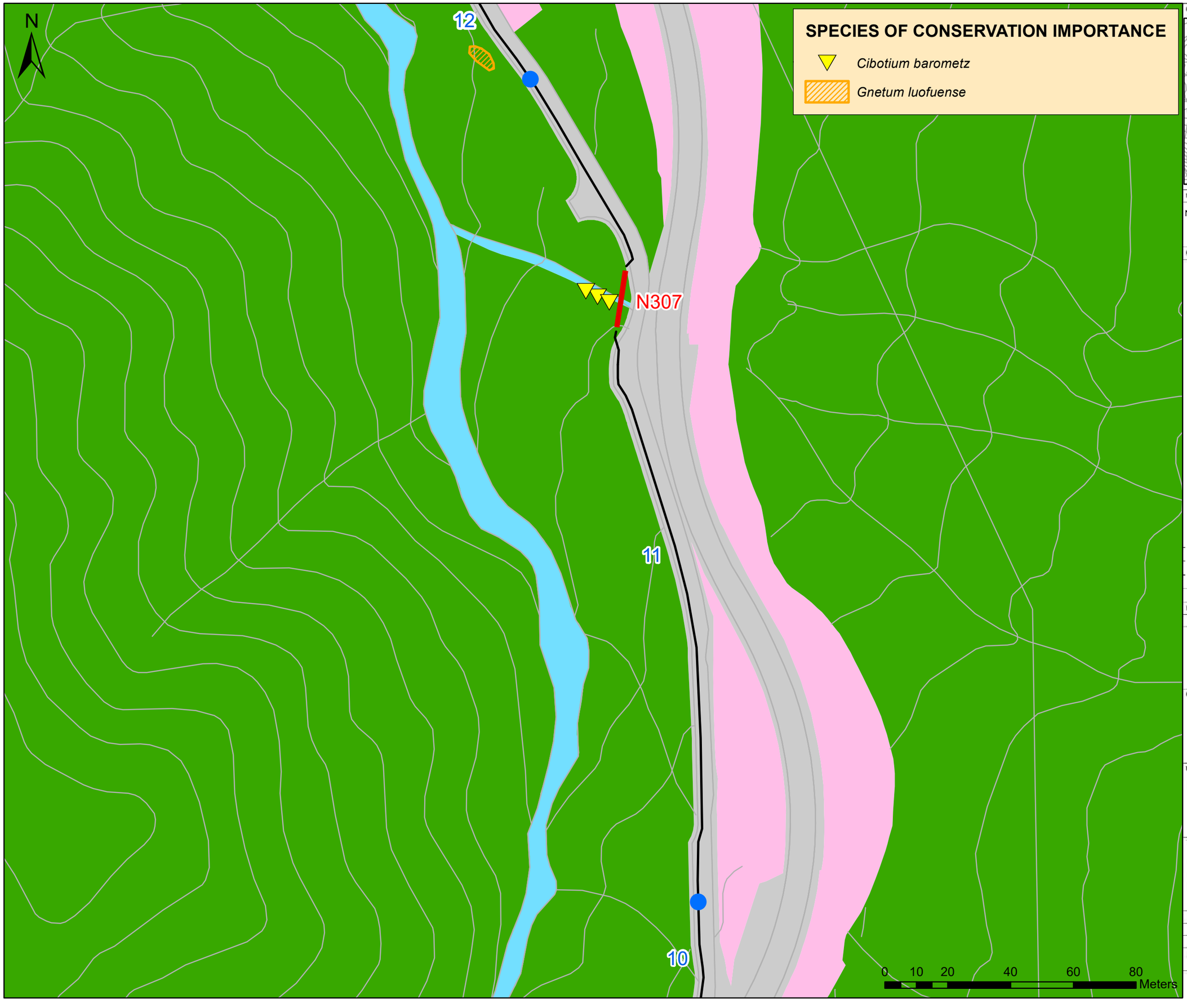
Title

FLORA SPECIES OF CONSERVATION IMPORTANCE RECORDED AT SECTION 10

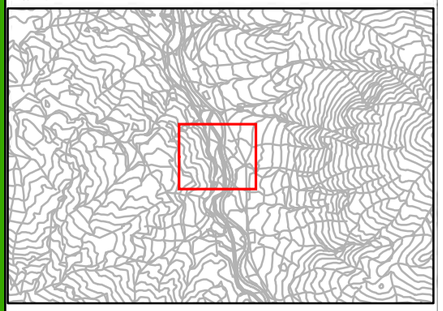
Designed	JUT		Eng check		YL
Drawn	JUT		Coordination		YL
Dwg check	YL		Approved		GC
Scale at A3 AS SHOWN		Status		Rev	P1

Drawing Number

FIGURE 3.2



Key Plan



Notes

Note: All locations or extents presented are indicative only

Key to symbols:

LEGEND

- PIPE BRIDGE
- SECTION OF PROPOSED CABLE ROUTE (S1-S22)
- PROPOSED CABLE ROUTE WITHIN COUNTRY PARK (LOCATION OF CONSTRUCTION WORKS)

HABITAT

- WOODLAND
- PLANTATION
- WATERCOURSE
- DEVELOPED AREA

Rev	Date	Drawn	Description	Ch'k'd	App'd
P1	AUG 2023	JUT		YL	GC

MOTT MACDONALD

Mott MacDonald
3/F Manulife Place
348 Kwun Tong Road
Kwun Tong, Kowloon
Hong Kong
T +852 2828 5757
F +852 2827 1823
W mottmac.com

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CLP POWER HONG KONG LIMITED

Project

INSTALLATION OF PROPOSED CABLE ROUTE FROM CHEUNG SHA TO TUNG CHUNG

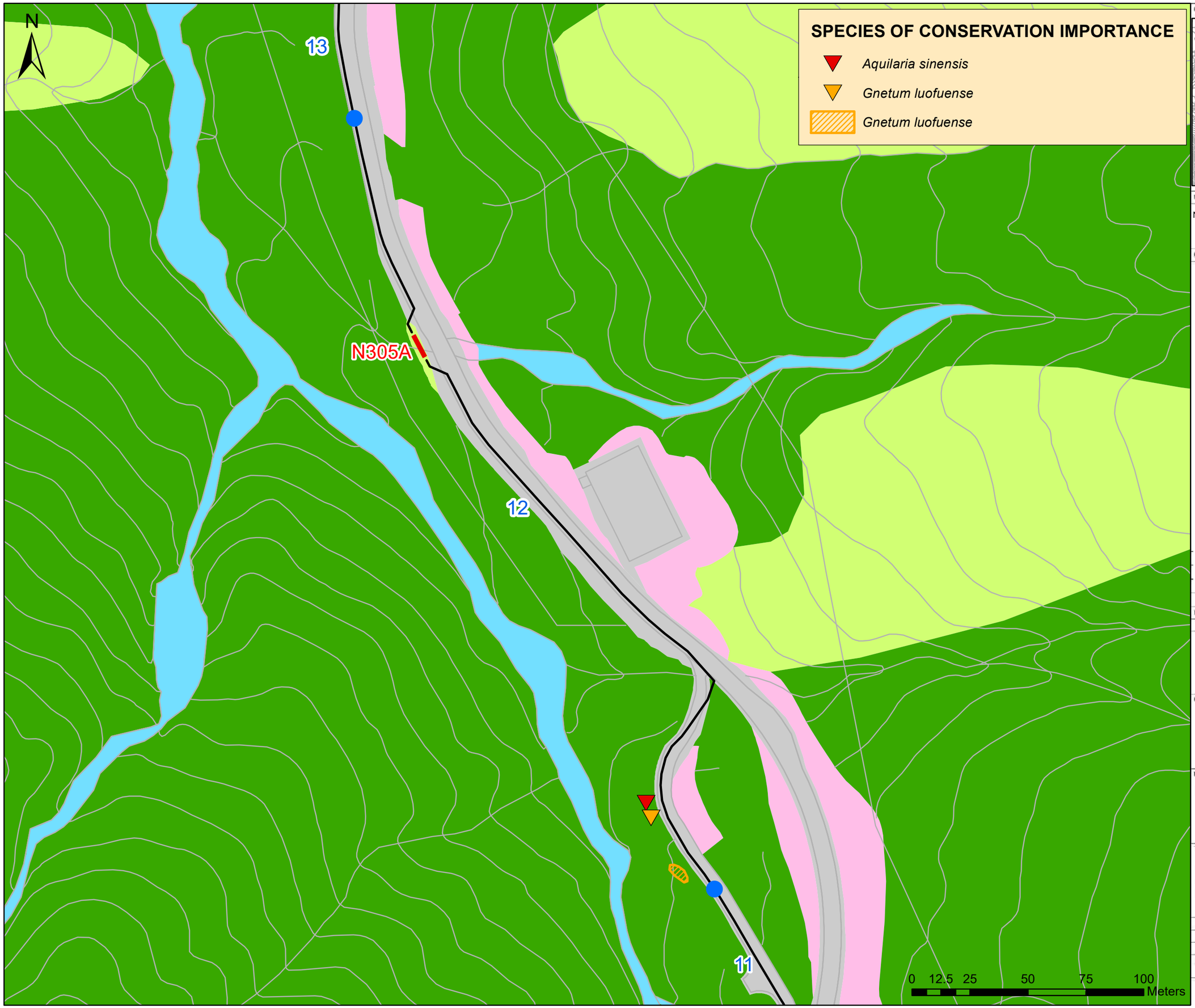
Title

FLORA SPECIES OF CONSERVATION IMPORTANCE RECORDED AT SECTION 11

Designed	JUT		Eng check		YL
Drawn	JUT		Coordination		YL
Dwg check	YL		Approved		GC
Scale at A3 AS SHOWN		Status		Rev	P1

Drawing Number

FIGURE 3.3



Key Plan

Notes

Note: All locations or extents presented are indicative only

Key to symbols:

LEGEND

- PIPE BRIDGE
- SECTION OF PROPOSED CABLE ROUTE (S1-S22)
- PROPOSED CABLE ROUTE WITHIN COUNTRY PARK (LOCATION OF CONSTRUCTION WORKS)

HABITAT

- WOODLAND
- PLANTATION
- SHRUBLAND / GRASSLAND
- WATERCOURSE
- DEVELOPED

Rev	Date	Drawn	Description	Ch'k'd	App'd
P1	AUG 2023	JUT		YL	GC

MOTT MACDONALD

Mott MacDonald
3/F Manulife Place
348 Kwun Tong Road
Kwun Tong, Kowloon
Hong Kong
T +852 2828 5757
F +852 2827 1823
W mottmac.com

Client

CLP POWER HONG KONG LIMITED

Project

INSTALLATION OF PROPOSED CABLE ROUTE FROM CHEUNG SHA TO TUNG CHUNG

Title

FLORA SPECIES OF CONSERVATION IMPORTANCE RECORDED AT SECTION 12

Designed	JUT		Eng check		YL
Drawn	JUT		Coordination		YL
Dwg check	YL		Approved		GC
Scale at A3 AS SHOWN		Status		Rev	P1

Drawing Number

FIGURE 3.4

N

SECTION 10

N308

N309

SPECIES OF CONSERVATION IMPORTANCE

- *Aquilaria sinensis*
- *Gnetum luofuense*
- *Goodyera procera*
- *Pavetta hongkongensis*
- *Pholidota chinensis*
- *Liparis nervosa*

0 5 10 20 30 40 Meters

Key Plan

Notes

Note: All locations or extents presented are indicative only

Key to symbols:

LEGEND

- ROBUST FENCING
- ROPE INDICATING WORK EXCLUSION ZONE
- WORK EXCLUSION ZONE
- PIPE BRIDGE
- PROPOSED CABLE ROUTE WITHIN COUNTRY PARK (LOCATION OF CONSTRUCTION WORKS)

HABITAT

- WOODLAND
- PLANTATION
- SHRUBLAND / GRASSLAND
- WATERCOURSE
- DEVELOPED AREA

Rev	Date	Drawn	Description	Ch'k'd	App'd
P1	OCT 2023	JUT		YL	GC

MOTT MACDONALD

Mott MacDonald
3/F Manulife Place
348 Kwun Tong Road
Kwun Tong, Kowloon
Hong Kong
T +852 2828 5757
F +852 2827 1823
W mottmac.com

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Project

INSTALLATION OF PROPOSED CABLE ROUTE FROM CHEUNG SHA TO TUNG CHUNG

Title

LOCATIONS OF WORK EXCLUSION ZONE AT SECTION 10

Designed	JUT		Eng check		YL
Drawn	JUT		Coordination		YL
Dwg check	YL		Approved		GC
Scale at A3: AS SHOWN		Status		Rev	P1

Drawing Number

FIGURE 4.1

N

SECTION 12

SECTION 11

N307

0 5 10 20 30 40 Meters

SPECIES OF CONSERVATION IMPORTANCE

- *Aquilaria sinensis*
- *Cibotium barometz*
- *Gnetum luofuense*
- Gnetum luofuense

Key Plan

Notes

Note: All locations or extents presented are indicative only

Key to symbols:

LEGEND

- ROBUST FENCING
- ROPE INDICATING WORK EXCLUSION ZONE
- WORK EXCLUSION ZONE
- PIPE BRIDGE
- SECTION OF PROPOSED CABLE ROUTE (S1-S22)
- PROPOSED CABLE ROUTE WITHIN COUNTRY PARK (LOCATION OF CONSTRUCTION WORKS)

HABITAT

- WOODLAND
- PLANTATION
- WATERCOURSE
- DEVELOPED AREA

Rev	Date	Drawn	Description	Ch'k'd	App'd
P1	OCT 2023	JUT		YL	GC

MOTT MACDONALD
Mott MacDonald
3/F Manulife Place
348 Kwun Tong Road
Kwun Tong, Kowloon
Hong Kong
T +852 2828 5757
F +852 2827 1823
W mottmac.com

Client

CLP POWER HONG KONG LIMITED

Project

INSTALLATION OF PROPOSED CABLE ROUTE FROM CHEUNG SHA TO TUNG CHUNG

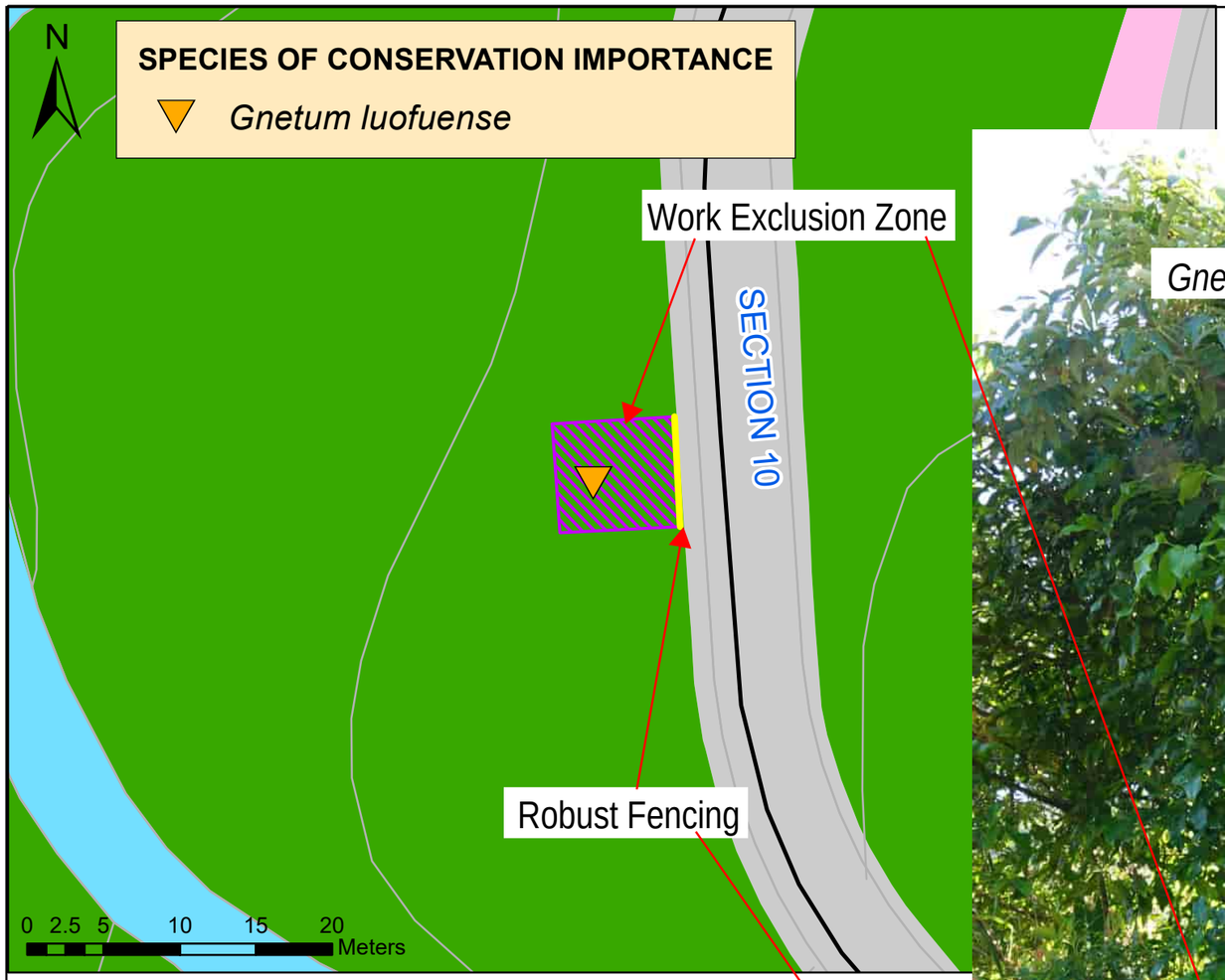
Title

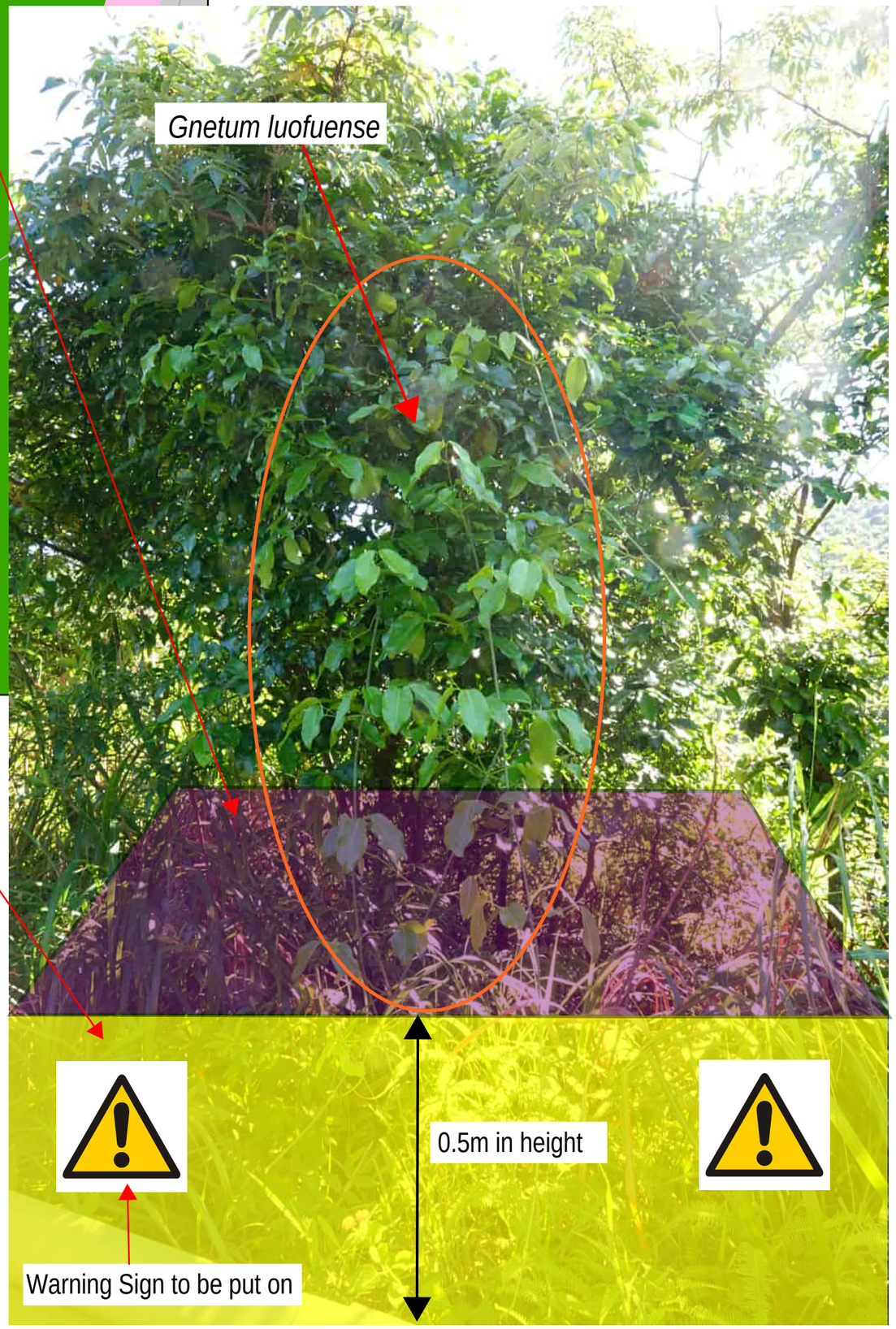
LOCATIONS OF WORK EXCLUSION ZONE AT SECTION 11 AND SECTION 12

Designed	JUT		Eng check		YL
Drawn	JUT		Coordination		YL
Dwg check	YL		Approved		GC
Scale at A3 AS SHOWN		Status		Rev	P1

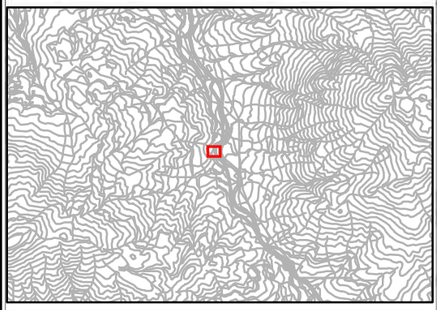
Drawing Number

FIGURE 4.2





Key Plan



Notes

Note: All locations or extents presented are indicative only

Key to symbols:

LEGEND

- ROBUST FENCING
- WORK EXCLUSION ZONE
- PROPOSED CABLE ROUTE WITHIN COUNTRY PARK (LOCATION OF CONSTRUCTION WORKS)

HABITAT

- WOODLAND
- PLANTATION
- WATERCOURSE
- DEVELOPED

Rev	Date	Drawn	Description	Ch'k'd	App'd
P1	OCT 2023	JUT		YL	GC

MOTT MACDONALD

Mott MacDonald
3/F Manulife Place
348 Kwun Tong Road
Kwun Tong, Kowloon
Hong Kong
T +852 2828 5757
F +852 2827 1823
W mottmac.com

Client

CLP POWER HONG KONG LIMITED

Project

INSTALLATION OF PROPOSED CABLE ROUTE FROM CHEUNG SHA TO TUNG CHUNG

Title

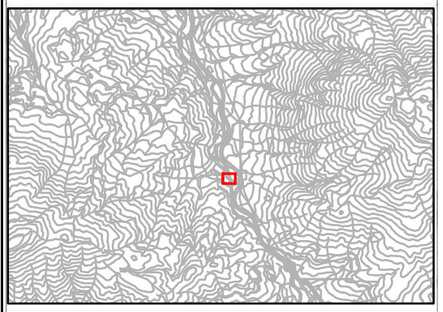
EXAMPLE ILLUSTRATING THE SET-UP OF FENCING AND WORK EXCLUSION ZONE AT THE ROADSIDE

Designed	JUT		Eng check		YL
Drawn	JUT		Coordination		YL
Dwg check	YL		Approved		GC
Scale at A3 AS SHOWN		Status		Rev	P1

Drawing Number

FIGURE 4.3

Key Plan



Notes

Note: All locations or extents presented are indicative only

Key to symbols:

LEGEND

- ROBUST FENCING
- ROPE INDICATING WORK EXCLUSION ZONE
- WORK EXCLUSION ZONE
- PIPE BRIDGE
- PROPOSED CABLE ROUTE WITHIN COUNTRY PARK (LOCATION OF CONSTRUCTION WORKS)

HABITAT

- WOODLAND
- WATERCOURSE
- DEVELOPED AREA

Rev	Date	Drawn	Description	Ch'k'd	App'd
P1	OCT 2023	JUT		YL	GC

MOTT MACDONALD

Mott MacDonald
3/F Manulife Place
348 Kwun Tong Road
Kwun Tong, Kowloon
Hong Kong
T +852 2828 5757
F +852 2827 1823
W mottmac.com

Client

CLP POWER HONG KONG LIMITED

Project

INSTALLATION OF PROPOSED CABLE ROUTE FROM CHEUNG SHA TO TUNG CHUNG

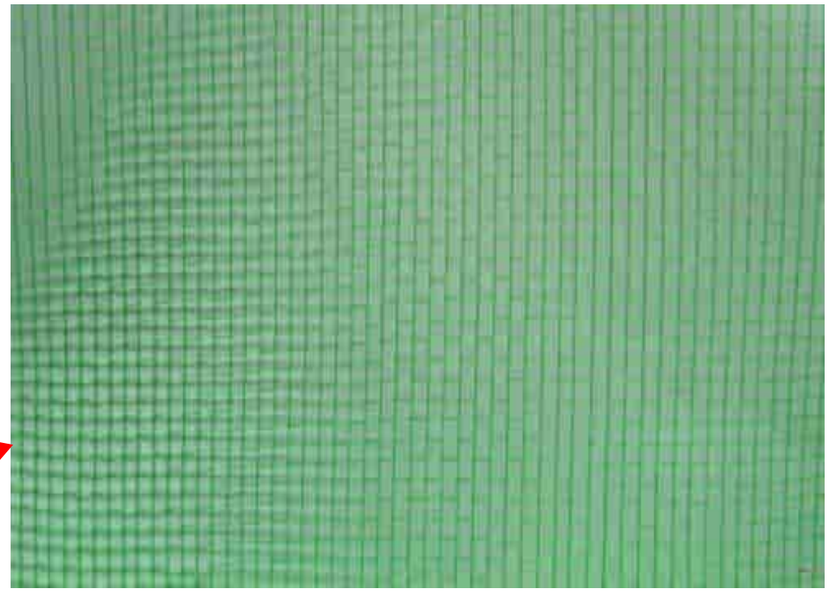
Title

EXAMPLE ILLUSTRATING THE SET-UP OF FENCING AND WORK EXCLUSION ZONE NEAR PIPE BRIDGES

Designed	JUT		Eng check		YL
Drawn	JUT		Coordination		YL
Dwg check	YL		Approved		GC
Scale at A3 AS SHOWN		Status		Rev	P1

Drawing Number

FIGURE 4.4



Key Plan

Notes

Note: All locations or extents presented are indicative only

Key to symbols:

Rev	Date	Drawn	Description	Ch'k'd	App'd
P1	OCT 2023	JUT		YL	GC

MOTT MACDONALD

Mott MacDonald
3/F Manulife Place
348 Kwun Tong Road
Kwun Tong, Kowloon
Hong Kong
T +852 2828 5757
F +852 2827 1823
W mottmac.com

Client

CLP POWER HONG KONG LIMITED

Project

INSTALLATION OF PROPOSED CABLE ROUTE FROM CHEUNG SHA TO TUNG CHUNG

Title

ROBUST FENCING TO BE ADOPTED

Designed	JUT		Eng check		YL
Drawn	JUT		Coordination		YL
Dwg check	YL		Approved		GC
Scale at A3: AS SHOWN		Status		Rev	P1

Drawing Number

FIGURE 4.5

Appendices

A. Curriculum Vitae of Qualified Ecologist
B. Representative Photos of Flora Species of Conservation Importance Recorded

A. Curriculum Vitae of Qualified Ecologist

MOTT MACDONALD

CV 04 Ecologist

Yusei LO

Personal summary

Present employment

Senior Environmental Consultant

Relevent experience

8 years professional experience

Education

- MSc (Arboriculture and Urban Forestry) (2021)
- BSc (Ecology and Biodiversity) (2014)

Professional registration

- MCIWEM (2021)
- Arborist, Tree Risk Assessor, Tree Work Supervisor, Registered Tree Management Personnel (2021)
- Tree Risk Assessment Qualification (2018)
- Supervision of Tree Works Course (2018)
- Certified Arborist (2017)

Yusei is a certified arborist with extensive experience in ecological monitoring of flora species and equipped with hands-on experience in preserving flora species of conservation importance. Extensive knowledge of conducting vegetation & tree surveys, and tree risk assessment for large scale infrastructural and development projects, and conversant in the preparation of related submissions.

Relevant projects

- **CEDD Agreement No. CE64/2020 (EP) Environmental Team for Tung Chung New Town Extension (West)** – **Qualified Botanist** for advising on the *Detailed Compensatory Woodland Planting Plan* and *Pre-construction Survey Report for Plant Species of Conservation* etc. Check the site practice of compensatory planting and recommend solutions. **Landscape and Visual Specialist** to provide technical input in baseline monitoring report on L&V aspects.
- **CEDD Agreement No. CE 56/2016 (CE) Hung Shui Kiu (HSK) New Development Area (NDA) Stage 1 Works – Design and Construction – Tree Specialist** responsible for arranging tree surveys for tree preservation and removal proposal, preparing tree-related deliverables such as *Tree Survey Reports*, *Tree Preservation and Removal Proposal*, tender document and technical specification for tree & landscape sections, providing technical support for tree and landscape related issues.
- **DSD Contract No. DP 05/2020 Ecological Survey for Drainage Improvement Works in Tai Po –** This project aims to study the ecological baseline conditions for assessment of potential impacts from the proposed drainage improvement works in Tai Po, Lam Tsuen Valley, Ting Kok and Ma On Shan. **Botanist** and **Ecologist** for conducting terrestrial and aquatic surveys, including habitat mapping, vegetation, avifauna, butterfly, odonate, herpetofauna, mammal and freshwater communities. Also responsible for preparing the submission of *Ecological Baseline Survey Report*.
- **DSD Contract No. 04/LD/2020 Ecological Survey at Wong Chuk Hang –** This project aims to undertake ecological field surveys to collect baseline information regarding the ecological characters of Staunton Creek Nullah prior to the revitalisation studies of river sections with high revitalisation potential in the territory. **Botanist** and **Ecologist** responsible for conducting terrestrial and aquatic surveys, including habitat mapping, vegetation, avifauna, butterfly, odonate, herpetofauna, mammal and freshwater communities. Also responsible for preparing the submission of *Ecological Baseline Survey Report*.
- **Section 16 and 12A Planning Applications for Residential Development in "Comprehensive Development Area (CDA)" Zone at Kam Tin South, Yuen Long** – **Botanist** and **Ecologist** responsible for conducting ecological field survey, including habitat mapping, vegetation, avifauna, butterfly, odonate, herpetofauna and mammal in both day and night, and ardeids flight path survey in early morning and evening to evaluate the potential impact of the proposed residential development in Kam Tin South. Duties also include preparing ecological related submission of the project.

- **CEDD Agreement No. CE61/2020 (SP) Ecological Surveys and Studies for San Tau to Sham Wat, Yi O and Shap Long – Feasibility Study – Sustainable Lantau Office** – **Project Manager** and **Ecologist** – This project aims to conduct a 12-month ecological survey for the selected sites in Lantau Islands to determine the ecological significance of various habitat and identify potential threat to the key ecological resource and recommend the conservation measures accordingly. **Project Manager** for overseeing and coordinating the ecological study and field surveys covering flora, terrestrial fauna, freshwater aquatic fauna and intertidal communities. Duties also includes preparing promotional materials such as video stories, eco-logs and photos for public education.
- **HyD Agreement No. CE 73/2021 (HY) Widening of T6 Bridge of Tate's Cairn Highway – Investigation, Design and Construction** – **Tree Specialist** and **Landscape and Visual Specialist** for providing specialist advice on landscape and tree aspects. Duties also include leading the team to carry out tree survey and *Landscape and Visual Impact Assessment* (LVIA), to prepare landscape related submissions such as *Tree Survey Reports*, *Tree Preservation and Removal Proposals (TPRP)* and *LVIA Reports*.
- **DSD Contract No. 02/LD/2019 Ecological Survey for Revitalisation of 11 Selected Rivers** – This project covers assessment of ecological baselines of different river channels managed by DSD. **Botanist** and **Ecologist** responsible for conducting ecological field surveys, including flora, terrestrial fauna and freshwater aquatic fauna for both day and night-time for 11 selected rivers.
- **DSD Agreement No. LD08/2015 Eco-hydraulics Study on Green Channels – Stage 3 –** This project covers assessment of ecological baselines of different river channels managed by DSD to update the baseline of the river channels that assessed in stage 2 study. **Ecologist** responsible for conducting terrestrial and aquatic fauna surveys for both day and night-time for 26 sites including Deep Water Bay Stream, Pui O River, Tai Tei Tong Stream, Pak Ngan Heung River, Tsui Ping River and Kai Tak River.
- **CEDD Agreement No. CE 33/2019 (EP) Independent Environmental Checker (IEC) for Environmental Monitoring & Audit (EM&A) Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas (NDA) – Investigation** – This NDA development included engineering infrastructure works, site formation, and implementation of environmental mitigation measures. **Ecology Specialist** responsible for conducting site audit for ecological monitoring, mitigation measures and translocation works for Rose Bitterling, and reviewing ecological submission such as *Detailed Vegetation Survey Report*.
- **ET Consultancy Services for Expansion of Hong Kong International Airport (HKIA) into a Three-Runway System (3RS) – Landscape and Visual Specialist** for conducting site audit to monitor the tree preservation and tree transplanting works under the EM&A programme and preparing tree inspection reports accordingly. Duties also include reviewing relevant submissions such as *Tree Survey Reports*, *Tree Risk Assessment (TRA) Reports*, *Tree Protection Plan* and method statement, *Landscape and Visual Plan* etc.
- **DSD Relocation of Sha Tin Sewage Treatment Works to Caverns – Site Preparation – Tree Specialist** and **Assistant Ecologist** of ET to conduct site audit to monitor the implementation of flora ecological mitigation measures e.g. tree preservation and tree transplanting works and monitored the post-transplantation preservation of flora species of conservation importance.

B. Representative Photos of Flora Species of Conservation Importance Recorded

Section 10

Aquilaria sinensis

Aquilaria sinensis

Gnetum luofuense

Liparis nervosa

Section 10

Pavetta hongkongensis

Pavetta hongkongensis

Pholidota chinensis

Section 11

Cibotium barometz

Cibotium barometz

Section 12

Aquilaria sinensis

Gnetum luofuense

Section 11

Gnetum luofuense

Gnetum luofuense