Contract No. DC/2022/02 Drainage Improvement Works at Yuen Long

Pre-construction Survey and Translocation Report of CH.A 11.13 ~ CH.A 300.00 at Ha Che

Wing Tat Civil Engineering Co. Limited

Reference: P525672

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Document control record

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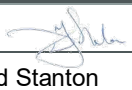
Author signature		Approver signature	
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1 Introduction

1.1 Background

1.1.1 The Contract No. DC/2022/02 Drainage Improvement Works at Yuen Long – Stage 2 (hereafter as "The Project") is carried out by the Drainage Services Department (DSD, the Project Proponent) to undertake drainage improvement works near four villages in Yuen Long, namely Sung Shan New Village, Tai Wo, Lin Fa Tei and Ha Che. The Project aims at enhancing the capacity of the existing drainage systems to lower the flood risk to these villages.

1.1.2 This Project is a Designated Project (DP) under the Environmental Impact Assessment Ordinance (EIAO) (Cap. 499), with an approved Environmental Impact Assessment (EIA) Report (Register No.: AEIAR-229/2021) and an Environmental Permit (EP-596/2021).

1.1.3 An ecological baseline survey was conducted for the Project, during which, two endemic freshwater crab species of conservation importance were recorded within the work sites. *Somanniathelphusa zanklon* was recorded at Lin Fa Tei and Ha Che, while *Cryptopotamon anacoluthon* was recorded in the upstream area at Ha Che. Both species are endemic to Hong Kong and considered to be "Endangered" and "Vulnerable" by the IUCN, respectively (IUCN 2023). The construction activities of the project will disturb their natural habitats thus potentially causing a direct loss of these two species due to their limited mobility.

1.1.4 To fulfil the conditions stipulated in Sections 25.32 of the Particular Specification of the Contract, Conditions 2.8 of the Environmental Permit (EP-596/2021) as well as sections 5.2.6 and 5.2.7 of the Environmental Monitoring and Audit Manual of the EIA, a Freshwater Crab Translocation Plan (FCTP) was prepared by the Environmental Team Ecologist such that aquatic species of conservation importance found within the works area will be translocated to selected receptor sites outside of the proposed works area in accordance with the FCTP .

1.1.5 Consequently, pre-construction surveys and translocation activities were carried out within the proposed drainage CH.A 11.13 ~ CH.A 300.00 works sections of Ha Che (**Figure 1**) in accordance with the approved FCTP, as construction in the section of drainage was scheduled to commence on 20 February 2024. Pre-construction survey for other sections will be carried out and reported prior to the commencement of proposed works.

1.1.6 As stipulated in Section 2.5 of the approved FCTP, a Pre-construction Survey and Translocation Report will be prepared within 2 weeks after the translocation activities. Accordingly, this Report is prepared to detail the findings of the capture and translocation activities in the affected works areas in proposed drainage CH.A 11.13 ~ CH.A 300.00 works sections of Ha Che.

2 Capture-Translocation Methodology

2.1 General

2.1.1 The capture and translocation scheme presented in this section is adopted from the FCTP. EPD approval of the methodology and approach detailed in the FCTP was sought prior to the pre-construction surveys and actual translocation activities.

2.2 Personnel

2.2.1 The pre-construction surveys and the translocation activities were carried out by a team of ecologists and supervised by the qualified ecologist with adequate relevant experience and whose credentials were certified by the Environmental Team (ET) Leader and verified by the Independent Environmental Checker (IEC).

2.3 Permit

2.3.1 A special permit (**Appendix B**) in compliance with Sections 7 and 15 of the Wild Animals Protection Ordinance (Cap. 170) was obtained from AFCD as the pre-construction survey and translocation works involved the use of "appliance" i.e., hand nets to collect freshwater fauna in the streams.

2.4 Capture Activities

Collection Site and Survey Timing

2.4.1 As confirmed by the Contractor, the proposed drainage works in section CH.A 11.13 ~ CH.A 300.00 of Ha Che is scheduled to commence on 20 February 2024. Consequently, the capture-translocation activities were carried out on 5 to 7 February 2024, 14 days before the actual commencement of the drainage works, to avoid the recolonisation of *S. zanklon* and *C. anacoluthon* in this section after the pre-construction survey.

2.4.2 Pre-construction surveys were scheduled at time with lower surface water, i.e., avoiding period of heavy rainfall and/ or during period of lower rainfall to maximise the survey extent.

Capture Methodology

2.4.3 Standard survey methodology as indicated in the approved FCTP were adopted during the pre-construction surveys.

2.4.4 Hand netting was used by actively sweeping the potential micro-habitats and hiding spaces that are favoured by the crabs (Stanton & Leven 2016, Stanton *et. al.* 2017) such as rocks, organic debris, leaf litter, and riparian vegetation. Any species of conservation importance flushed or caught by this practice were sorted and collected.

2.4.5 Kick-netting was also conducted moving parallel from downstream to upstream, where hand net opening was positioned facing the water current at suitable locations. Using the toe or heel, the streambed substrate in front of the net was disturbed by kicking such that aquatic species dislodged by the disturbance were trapped in the net. All species with captured conservation importance were identified, measured, and photographed.

Plate 1. Size measurement of the captured *C. anacoluthon*.

Marking

2.4.6 Using an ink marker, dorsal side of the carapace of the captured individuals of *S. zanklon* and *C. anacoluthon* were marked with their assigned individual number/code. Earlier laboratory and field trials had established that crab survival and behaviour was unaffected by paint marking on the carapace (Eaton et. al. 2001).

Plate 2. Marking the carapace of captured *C. anacoluthon*.

2.5 Translocation Activities

2.5.1 To avoid translocated individuals from re-entering the streams within the works area, suitable receptor sites outside and far from the affected sections were selected. To avoid stress and mortality, the collected *C. anacoluthon* and *S. zanklon* were immediately translocated shortly after capture. Translocation duration from the collection site to the receptor sites only took less than one hour as the receptor sites had accessible routes.

2.5.2 Captured *C. anacoluthon* were translocated to the section of shallow fast-flowing semi-natural watercourse south-east of Chuk Hang Village. As described in the approved FCTP, this proposed receptor site is within a shrubland at an altitude of around 50m and has both riffles and pools. The site has a comparable substrate type, width, water depth, water velocity, plant litter presence and riparian vegetation characteristics with the collection site. The proposed receptor site has rocky substratum with abundant riparian vegetation such as *Blechnopsis orientalis* and *Acorus gramineus.* This section was generally considered as a suitable receptor site for the *C. anacoluthon* considering the stream characteristics, which met the habitat requirements of the species.

2.5.3 *S. zanklon* collected were translocated to the section of shallow slow-flowing semi-natural channel characterised with silt sand and pebble substratum, similar to the collection site. The site is encompassed by a small patch of woodland and village houses. Riparian vegetation in the forms of native shrubs and trees such as *Sterculia lanceolata* and *Cinnamomum camphora* are sources of leaf litter that can be found in the stream bed. The soft soil stream substrate and the availability of riparian vegetation would be ideal for *S. zanklon* to inhabit.

2.5.4 Upon arrival to the receptor sites, acclimatisation was conducted by gradually mixing the water at receptor sites into the plastic containers. This would lower the risk of mortality due to temperature shock on the translocated *S. zanklon* and *C. anacoluthon.*

Plate 3. Releasing of *S. zanklon* to the receptor site.

3 Pre-construction Survey Results

3.1 Freshwater Crab Species and Abundance

3.1.1 A total of 11 freshwater crabs were collected, marked, and translocated from Ha Che. All these captured individuals were observed on the first (5 February 2024) and third (7 February 2024) nights of the three consecutive pre-construction surveys. No crabs were collected on 6 February 2024. The lack of crabs encountered on 6 February maybe be that the remaining individuals of crabs within the stream is simply active in other segments of the stream during the survey date or have not recolonized the site after the capture event of the previous date. Details of the captured individuals were summarized in **Table 1** below.

Species	ID No./ Code	Sex	Carapace Size (mm)	Date of Capture	Time of Capture	Remarks
C. anacoluthon	(AC) A	F	23.9	5-Feb-24	19:23	
C. anacoluthon	(AC) B	M	19.6	5-Feb-24	19:42	right pincer missing
S. zanklon	(AS) A	M	16.5	5-Feb-24	19:08	
S. zanklon	(AS) B	M	19.7	5-Feb-24	19:21	
S. zanklon	(AS) C	M	14.4	5-Feb-24	19:23	
C. anacoluthon	AC1	F	14.7	7-Feb-24	19:52	
C. anacoluthon	AC2	M	21.2	7-Feb-24	19:58	
C. anacoluthon	AC3	M	19.9	7-Feb-24	19:46	only one leg
C. anacoluthon	AC4	M	18.0	7-Feb-24	20:04	three legs missing
C. anacoluthon	AC5	F	19.1	7-Feb-24	20:12	
S. zanklon	AS1	M	17.3	7-Feb-24	20:06	

Table 1 Summary of Freshwater Crab Species captured during the Pre-construction Surveys

3.1.2 Seven *C. anacoluthon* (four males and three females) were found particularly on the upper section of the works area within rocky substratum and leaf-litters. Captured individuals were relatively mature with carapace size ranging from 14.7 mm to 23.9 mm. Albeit capture activities were carefully undertaken in such a manner that would not injure this species, three individuals were noted to have missing parts upon collection e.g., missing legs and pincer.

3.1.3 Meanwhile, four *S. zanklon* were also collected during the pre-construction surveys, majority of which were noted on sections with soft silty-muddy substrate. All the captured *S. zanklon* were males and were likewise noted as relatively mature which ranged from 14.4 to 19.7 mm.

3.1.4 Detailed findings and representative photographs of captured *C. anacoluthon* and *S. zanklon* are presented in **Appendix A**.

3.2 Incidental Catch/Sightings

3.2.1 Albeit the pre-construction surveys only targeted *S. zanklon* and *C. anacoluthon*, several fauna species were also unintentionally caught during the pre-construction surveys (**Appendix C**). Species of conservation importance recorded were also translocated to the proposed receptor sites. Species of conservation importance caught and translocated are summarized in **Table 2** below.

3.2.2 Three tadpoles of *Megophrys brachykolos* were caught in the upper section of the survey area in Ha Che. As this species inhabits forests, and breeds in hill streams, tadpoles were also translocated to the receptor site of *C. anacoluthon*.

3.2.3 Several aquatic invertebrates were also incidentally caught during the surveys. Among the observed aquatic invertebrates, larvae of species with conservation importance namely one *Macromia berlandi*, two *Macromia urania* and two *Zygonyx iris* were translocated to the proposed receptor sites. *M. urania* and *M. berlandi* were translocated to the receptor site for *S. zanklon* while *Z. iris* to the receptor site of *C. anacoluthon*.

Table 2 Other Species of Conservation Importance Captured during the Pre-construction Surveys

Species	Conservation and Protection Status[1]	Distribution and Rarity[2]
Herpetofauna		
Short-legged Toad *Megophrys brachykolos*	PGC; RLCV(VU); IUCN(EN)	Widely distributed in upland forest streams throughout Hong Kong.
Aquatic Invertebrates		
Angle-winged Cruiser (Larva) *Macromia berlandi*	LC	Uncommon
Club-tailed Cruiser (Larva) *Macromia urania*	GC	Common
Emerald Cascader (Larva) *Zygonyx iris*	PGC	Abundant

Notes:

1. Conservation and protection status refers to Fellowes *et al*. (2002), Red List of China's Vertebrates (Jiang *et al.* 2016), China Species Red List (Wang & Xie 2004), IUCN (2024), China State Major Protection Status, CITES (2024), Native fish of conservation concern in HK (KFBG 2019), BSAP Marine Fishes Sub-group (2014), Cap. 170 and Cap. 586.
   a. Conservation status by Fellowes *et al.* (2002): LC = Local Concern; PGC = Potential Global Concern, GC = Global Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence.
   b. Conservation status by Red List of China's Vertebrates (RLCV) (Jiang *et al.* 2016): VU = Vulnerable.
   c. Conservation status by IUCN (2024): EN = Endangered.
2. Distribution and rarity follow the data of the latest HKBIH (AFCD 2024).

3.2.4 Additionally, it was noted that no individuals of *Cryptopotamon anacoluthon* or *Somanniathelphusa zanklon* were recorded in the receptor site as well.

4 Post-translocation Monitoring

4.1.1 According to Section 5.2.5 of EM&A Manual for the Project, monthly post-translocation monitoring shall be conducted for at least 12 months after pre-construction surveys to monitor their establishment.

4.1.2 During the monitoring, active visual search by hand netting and kick sampling for aquatic fauna species would be performed at the respective receptor sites. Potential micro-habitats and hiding spaces that is favoured by the crabs such as rocks, organic debris, leaf litter, and riparian vegetation etc., will also be overturned or raked.

4.1.3 Upon discovery of any marked individuals from the pre-construction survey, date and time of capture, size and health condition of the individual will also be recorded once again.

4.1.4 The practice of mark and recapture of the translocated population of *S. zanklon* and *C. anacoluthon* at the receptor site can then be used to estimate population size, as well as inform the health and survival status of the translocated population.

5 Conclusion

5.1.1 To avoid/minimise potential direct impacts to the local population of the two endemic freshwater crab species, a total of seven *Cryptopotamon anacoluthon* and four *Somanniathelphusa zanklon* were captured, marked, and translocated during the pre-construction surveys in Ha Che on 5 to 7 February 2024.

5.1.2 The captured endemic freshwater crabs were translocated to the identified receptor sites indicated in the approved Freshwater Crab Translocation Plan. *Cryptopotamon anacoluthon* were translocated in the section of shallow fast-flowing semi-natural watercourse with rocky substratum located south-east of Chuk Hang Village. Meanwhile *Somanniathelphusa zanklon* were translocated to the section of shallow slow-flowing semi-natural channel characterised soft soil substrate encompassed by a small patch of woodland and village houses. The receptor sites have comparable characteristics with the collection site.

5.1.3 Post-translocation monitoring for at least 12 months to monitor the establishment and effectiveness of the measures given to the endemic freshwater crabs shall be conducted.

5.1.4 As a conservation measure, other aquatic fauna of conservation importance incidentally captured throughout the survey period were likewise translocated to the receptor sites.

6 References

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Wang & Xie. 2004. China Species Red List (CSRL). Higher Education Press.

Appendices

Appendix A

Photos of Collected *C. anacoluthon* and *S. zanklon*

Cryptopotamon anacoluthon (AC) A	
	
***Cryptopotamon anacoluthon* (AC) B**	
	
***Somanniathelphusa zanklon* (AS) A**	
	
***Somanniathelphusa zanklon* (AS) B**	
	

Somanniathelphusa zanklon (AS) C	
	
***Cryptopotamon anacoluthon* AC1**	
	
***Cryptopotamon anacoluthon* AC2**	
	
***Cryptopotamon anacoluthon* AC3**	
	

Cryptopotamon anacoluthon **AC4**	
	
***Cryptopotamon anacoluthon* AC5**	
	
***Somanniathelphusa zanklon* AS1**	
	

Appendices

Appendix B

Special Permit obtained from AFCD under Cap. 170

漁農自然護理署
九龍長沙灣道三〇三號
長沙灣政府合署五樓

覆函請寄交
「漁農自然護理署署長」
Please address all replies to
Director of Agriculture, Fisheries and Conservation

AGRICULTURE, FISHERIES AND CONSERVATION DEPARTMENT
Cheung Sha Wan Government Offices
5th floor, 303 Cheung Sha Wan Road
Kowloon, Hong Kong

本署檔號 Our Ref. : (111) in AF GR CON 09/51 Pt.9
來函檔號 Your Ref. :
電　　話 Tel. No. : / For enquiries: 2150 6921
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圖文傳真 Faxline No. : (852) 2311 3731

22 December 2023

Permission to Possess Hand Nets for the Surveys and Translocation of Aquatic Fauna

I hereby give permission to:

HUI, Chung Hong; CHAN, Lai Ying; CHAN, Lap Hang; CHEUNG, Hin Kit; HUNG, Pak Yam; LEE, Wing Yau; MA, Chun Ning; TAM, Hoi Yan and TAM, Sze Hon of Aurecon Hong Kong Limited to possess hand nets to capture freshwater macro-invertebrates for surveys and translocation, subject to the conditions on the reverse side of this permit.

The Special Permit is given in accordance with Section 15 of the Wild Animals Protection Ordinance (Cap.170).

This Special Permit expires on **31 December 2024**.

(Chan Kin Fung)
for Director of Agriculture, Fisheries and Conservation

Mr. Tommy HUI
Aurecon Hong Kong Limited
122-127 Commercial Centre,
Palm Springs,
Yuen Long,
New Territories,
Hong Kong

Conditions of Permission to Possess Hand Nets for the Surveys and Translocation of Aquatic Fauna

1. This permission is limited to the possession of hand nets by HUI, Chung Hong; CHAN, Lai Ying; CHAN, Lap Hang; CHEUNG, Hin Kit; HUNG, Pak Yam; LEE, Wing Yau; MA, Chun Ning; TAM, Hoi Yan and TAM, Sze Hon of Aurecon Hong Kong Limited to capture freshwater macro-invertebrates for surveys and translocation at Lin Fa Tei and Ha Che in Yuen Long under the project "Drainage Improvement Works at Yuen Long" (Contract No. DC/2022/02) as proposed to this department on 5 December 2023.
2. This permission does not exempt the permit holders from having to acquire any other necessary permission under the Laws of Hong Kong.
3. This permission does not authorise the entry to any leased land or licensed area or the collection or disturbance of the flora or fauna therein, in which case the prior approval of the lessees or the licence holders would be necessary.
4. The permit holders shall release the captured target species to the approved receptor sites.
5. The permit holders shall handle the animals humanely and in a manner that will avoid their suffering.
6. The permit holders shall release all the accidentally captured animals other than the target species on site immediately. The permit holders shall hand over any protected wild animals listed under Schedule 2 to the Wild Animals Protection Ordinance or scheduled species under the Protection of Endangered Species of Animals and Plants Ordinance accidentally hurt by the nets and deemed unsuitable for immediate release to this Department as soon as possible.
7. The permit holders shall produce a copy of this permit for inspection on demand by any officer of this Department or police officer.
8. The permit holders shall provide a report on the location, quantity and species of specimens surveyed to this Department upon request.
9. The Director of Agriculture, Fisheries and Conservation reserves the right to recall or cancel this permission at any time.

* End of Conditions *

December 2023
Agriculture, Fisheries and Conservation Department

Appendices

Appendix C

Incidental Catch/Sightings during the Pre-construction Surveys

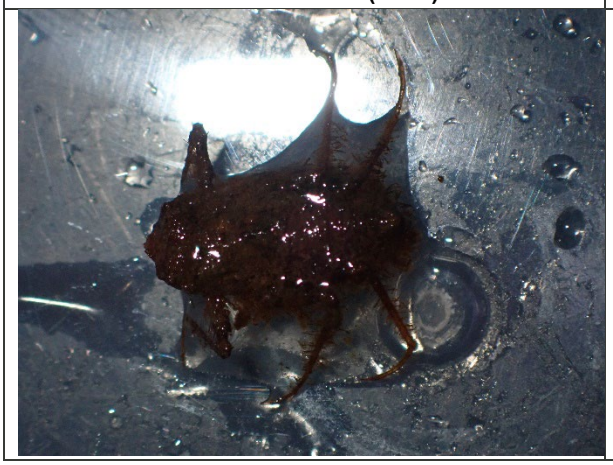
Table 1. Incidental Catch/Sightings during the Pre-construction Capture Surveys

Species Name	Conservation Status [1]	Hong Kong Status [2]	Abundance
Amphibians			
Short-legged Toad ***Megophrys brachykolos***	**PGC; RLCV(VU); IUCN(EN)**	**Widely distributed in upland forest streams throughout Hong Kong.**	**3 (tadpoles)**
Reptiles			
Chinese Waterside Skink *Tropidophorus sinicus*	-	Widely distributed in streams throughout Hong Kong.	1
Freshwater Fishes			
Predaceous Chub *Parazacco spilurus*	-	Common	1
White-cheeked Goby *Rhinogobius duospilus*	-	Common	2
Mosquito Fish *Gambusia affinis*	-	Common	~105
Guppy *Poecilia reticulata*	-	Common	~55
Swordtail *Xiphophorus hellerii*	-	Common	10
Aquatic Invertebrates			
Common Blue Jewel (Larva) *Rhinocypha perforata*	-	Abundant	20
Black-banded Gossamerwing (Larva) *Euphaea decorata*	-	Abundant	~40
Common Bluetail (Larva) *Ischnura senegalensis*	-	Abundant	~100
Hainan Clubtail (Larva) *Asiagomphus hainanensis*	-	Common	1
Angle-winged Cruiser (Larva) ***Macromia berlandi***	**LC**	**Uncommon**	**5**
Club-tailed Cruiser (Larva) ***Macromia urania***	**GC**	**Common**	**2**
Common Blue Skimmer (Larva) *Orthetrum glaucum*	-	Abundant	~170
Indigo Dropwing (Larva) *Trithemis festiva*	-	Abundant	10
Emerald Cascader (Larva) ***Zygonyx iris***	**PGC**	**Abundant**	**2**
Fishfly (Megaloptera) Larva *Neochauliodes sp.*	-	-	2
Cranefly Larva *Tipulidae sp.*	-	-	2
Beetle Larva *Coleoptera sp.*	-	-	1
Housefly Larva *Muscidae sp.*	-	-	20
Freshwater Snail *Angulyagra polyzonata*	-	-	~200
Freshwater Snail *Biomphalaria straminea*	-	-	~100

Apple Snail *Pomacea canaliculata*	-	-	1
Polychaete *Polycheata sp*	-	-	2

Notes:
1. Conservation and protection status refers to Fellowes et al. (2002), IUCN (2023), RLCV (Jiang et al., 2016), List of National Key Protected Wild Animal (2021), CITES (2023), Cap. 170 and Cap. 586.
   a. Conservation status by Fellowes et al. (2002): LC = Local Concern; GC = Global Concern PGC = Potential Global Concern; Letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence.
   b. Conservation status by IUCN (2023): EN = Endangered.
   c. Conservation status by RLCV (Jiang et al., 2016): VU = Vulnerable.
2. Distribution and rarity follow the data of the latest HKBIH (AFCD, 2024).

Table 2. Photos of captured aquatic species of conservation importance

Megophrys brachykolos **(tadpole)**	***Macromia berlandi*** **(larva)**
	
Macromia urania **(larva)**	***Zygonyx iris*** **(larva)**
	

Appendices

Appendix D

Site Photos of Capture and Receptor Sites

Collection Site

Receptor Sites (left: receptor site of *C. anacoluthon*, right: receptor site of *S. zanklon*)

Appendices

Appendix E

Survey Data Sheet

Pre-Construction Survey Data Sheet

Survey Details					
Date	5/2/2024	Start Time	18:55	Finish Time	20:59
Capture Site	Ha Che CH.All.13 ~ CHA300.00				
Recipient Site	Ha Che upstream CU) + Ha Che downstream CD)				
Weather	Cloudy				
Surveyor	NT, SR, MM, RChan				
Capture Site Condition	Focused on the northern most section, which has a rather undisturbed rocky bottom where most crabs were found. Further down stream, waste water is being discharge by households next to the stream and water depth increases.				
Recipient Site Condition	Good.				
Remarks					

Capture Record						
Species	ID no.	Capture Time	Sex	Width (~~cm~~ mm)	Remarks	S-tC
C. annandalei	A	19:23	F	23.9		U
C. annandalei	B	19:42	M	19.6	right pincer missing	U
S. zanklon	A	19:08	M	16.5		D
S. zanklon	B	19:21	M	19.7		D
S. zanklon	C	19:23	M	14.4		D
B. brachykolos	/	19:06	/	/		U
B. brachykolus	/	19:13	/	/		U
M. beelandi	/	19:26	/	/		D

Pre-Construction Survey Data Sheet

Survey Details					
Date	8/2/2024	Start Time	19:01	Finish Time	21:00
Capture Site	CH.A11_13 ~ CH.A300.00 Ha Che				
Recipient Site	Ha Che Downstream				
Weather	Cloudy				
Surveyor	IVT, CL, KT, RCheung				
Capture Site Condition	Entire capture site was covered. The channel section near ARBUTUS is ~~grassed~~ mostly too steep for * surveyors to enter, sampling was only done on dams and from channel walls.				
Recipient Site Condition	Good				
Remarks					

Capture Record						
Species	ID	Capture Time	Sex	Width (mm)	R-Site	Remarks
Asiagomphus hainanensis *	\	20:20	\	\	D	* no status.

Pre-Construction Survey Data Sheet

Survey Details					
Date	8/2/2024	Start Time	19:10	Finish Time	21:31
Capture Site	Ha Che CH.A11.13 ~ CH.A300.00 (A)				
Recipient Site	Ha Che upper (U) + Ha Che downstream (D)				
Weather	Cloudy				
Surveyor	INT, SR, AC, LH, JC				
Capture Site Condition	Focused on northern (upper) section. Northern end of section features larger pools of deep water with exotic fish species. 6 crabs were captured in total in more shallow sections.				
Recipient Site Condition	Good.				
Remarks					

Capture Record						
Species	ID	Capture Time	Sex	Width (mm)	R-Site	Remarks
C. annacoluthon	AC3	19:46	M	19.9	U	only one leg
C. annacoluthon	AC1	19:52	F	14.7	U	
C. annacoluthon	AC2	19:58	M	21.2	U	
C. annacoluthon	AC4	20:09	M	18.0	U	three legs missing.
S. zonklon	AS1	20:06	M	17.3	D	
C. annacoluthon	AC5	20:12	F	19.1	U	
B. brachykoles	/	19:36	/	/	U	
M. uranium	/	20:08	/	/	D	
M. uranium	/	20:13	/	/	D	

Figures

Figure 1

Collection and Receptor Sites of *C. anacoluthon* and *S. zanklon*

0 250 500 Meters

Section CH.A 11.13 ~ CH.A 300.00

Section CH.A 300.00 ~ CH.A 653.949

Section CH.A 653.949 ~ CH.A 905.63

Proposed Receptor Site for *Cryptopotamon anacoluthon* Captured at Ha Che

Proposed Receptor Site for *Somanniathelphusa zanklon* Captured at Ha Che

Watercourse

Project Title:
Contract No. DC/2022/02 Drainage Improvement Works at Yuen Long - Stage 2 (Subcontract No. DC/2022/02/SC/004 Provision, Operation and Maintenance of Environmental Services)

Figure Title:
Collection and Receptor Sites of C. anacoluthon and S. zanklon

ecology biodiversity landscape aec
Member of the Aurecon Group

Drawn by:	PC	Scale:	1:3,000 on A3
Checked By:	NT	Date:	20 Feb 2024
Approved by:	DJS		
Figure Number:	Figure 1	Revision:	0

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