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## **SHEUNG SHUI TO LOK MA CHAU SPUR LINE**

### **Environmental Committee**

Minutes of Meeting No. 24 held at 4:00pm

On Wednesday, 19 December 2012,

at Room 10A, 10/F, MTR Headquarters Building, Telford Plaza, Kowloon Bay

<b>Present:</b>		
Mr. John Allcock	WWF Hong Kong	Member (NGO)
Ms. Karen Barretto	Friends of the Earth (Hong Kong)	Member (NGO)
Dr. Ng Cho-nam	The University of Hong Kong	Member (NGO)
Ms. Janice Choi	Maintenance Manager-Civil	Member (MTR)
Ms. Kenny Yiu	Manager Environmental Engineering	Member (MTR)
Mr. Peter Choi	Environmental Engineer	Member (MTR)
Dr. Michael Leven	Ecological Consultant	Member (consultant)
Ms. Shirley Lam	Ecological Consultant	Member (consultant)
<b>Absent with apology:</b>		
Mr. Michael Kilburn	The Hong Kong Bird Watching Society	Member (NGO)
Dr. Chan Kam Foon	Environmental Engineering Manager	Member (MTR)

<b>Attachments</b>	
Figure 1	Buffer planting between EEA and Clean-up Reedbed
Annex A	Presentation Material of 24 <sup>th</sup> EC Meeting
Annex B	Hand-out Distributed at Meeting Regarding the Proposed Link between the LMC Loop and the LMC Station under the LMC Loop Project

<u>Item/Description</u>	<u>Action By</u>
1. Welcomed Members to the No. 24 EC meeting.	
<b>Item 1 - <u>Confirmation of minutes of Meeting No. 23</u></b>	
2. There were no comments on the minutes of Meeting No. 23 and the minutes were confirmed.	Noted
<b>Item 2 - <u>Ecological Enhancement Works and Monitoring - an Update on Management Works and Look Ahead</u></b>	
<p>3. <i>A Member (consultant)</i> reported on the ecological monitoring and management work undertaken between July and December 2012 at the LMC EEA (detailed in <b>Annex A</b>). It was noted that:</p> <ul style="list-style-type: none"> <li data-bbox="288 813 1257 904">• All management activities comprised routine management practices such as vegetation management, including grass cutting, weeding, and other micro-habitat management practices, pond drain down, fish stocking, and pest control.</li> <li data-bbox="288 936 1257 1028">• <i>A Member (consultant)</i> noted that sourcing of fish stocking supply as of December 2012 had been acceptable so far and the issue raised during the last EC meeting appeared to have been resolved.</li> <li data-bbox="288 1059 1257 1509">• Some queries on the new site boundary fence were raised by <i>EC Members</i>, including the reason for the need of the fence, necessity of providing bulky concrete blocks as base of the fence, control of <i>Mikania</i> along the fence, and management issue regarding the trees on either side of the fence. <i>A Member (consultant)</i> noted that whilst trespass to date was not an issue to the EEA, the FCA was opened in mid-Feb this year, and there was a need to control access. Further, informal &amp; small scale poaching activities was so far the biggest concern. <i>A Member (MTR)</i> noted that the concrete block design was used since no excavation work was allowed under planning. Further, since the concrete blocks were prefabricated, disturbance during the construction of the fence would be minimized. <i>A Member (consultant)</i> acknowledged that <i>Mikania</i> might need to be controlled more frequently. He further noted that management of the trees on either side of the fence would be undertaken though the maintenance of the channels belongs to the Drainage Services Department.</li> <li data-bbox="288 1541 1257 1865">• <i>A Member (consultant)</i> noted the ineffectiveness in using lime to raise the pH above the tolerance level of Apple Snail, to which <i>A Member (NGO)</i> questioned if there were known effective means in the removal of this pest. <i>A Member (consultant)</i> responded that apart from natural predators (such as Snail Kite, which is absent in most of the infected range), manual removal during periodic drain-down is known to be the most effective means. <i>A Member (NGO)</i> noted that a study on the effectiveness of using Black Carp to control Apple Snail was being undertaken at selected West Rail Land Parcels. <i>A Member (consultant)</i> noted that the study appeared to be still in progress and findings are yet to be concluded; but noted that he would confirm this from relevant staff.</li> </ul> <p data-bbox="336 1897 1257 1951"><i>[Post-meeting note: the study commenced in 2012 and is anticipated to finish in the summer of 2013. Results should be available by the end of the calendar year.]</i></p> <li data-bbox="288 1982 1257 2040">• <i>A Member (consultant)</i> reported that despite the lack of durability of the plastic decoys used this year, egrets were beginning to roost on the island, and that the</li>	<p>Noted</p> <p>Noted</p> <p>Noted</p> <p>Noted</p> <p>Noted</p> <p>Noted</p>

<u>Item/Description</u>	<u>Action By</u>
<p>roost appeared to persist after the decoys fell apart. <i>A Member (MTR)</i> noted that the procurement process for more sturdy decoys were being approved and should be able to order by the beginning of 2013.</p> <p><i>[Post-meeting note: the approval to purchase decoys was obtained in mid-January. The contractor is undertaking the purchase and installation of the decoys. More to report in the next EC meeting.]</i></p> <ul style="list-style-type: none"> <li>• <i>A Member (consultant)</i> reported that management measures taken for Chinese Pond Herons had proved to be effective in attracting the species, while the poor quality of fish stocked over the year had probably accounted for the drop in numbers for Little Egrets.</li> </ul>	Noted
<p>4. <i>A Member (consultant)</i> reported on the preliminary findings of the 5-yearly review (the Management Review Report) which is a requirement under the Environmental Permit. Particular attention was paid to the proposed removal and addition to the fauna target list. He further noted that some of the information regarding the proposed Management Compartments for the species was yet to be finalized and the information would be updated shortly.</p> <p>a) It is important to note that whether the target levels of the species is reached or not is not among the considerations behind the proposal to drop a target species; the consideration is solely based on the EIAO procedure in reviewing if the project had an impact on the species or not. Hence, species which were originally included due to predicted impact to Long Valley (which did not materialize), species which are no longer considered species of conservation importance in the light of more information on the species, and species which were included due to limited local breeding range (which are no longer breeding in the territory) but not the conservation status of the species as a whole, were the main species under review.</p> <p>b) As for species which are proposed to be added to the target list, it is important to note that these species are not species which were impacted by the project, but are now proposed to be added to the list purely on a conservation initiative, based on current data on their usage of the site and the overall population and the availability of their required habitats within the Deep Bay. Hence, the target level for these species should differ from the original list (which is double the density in the Control Areas). Subject to discussion with the relevant stakeholders, currently, the proposed target level is set as maintaining the current recorded density.</p> <p><i>EC Members</i> agreed in principle to the above overriding rationale. Summary of the discussion and conclusions reached at the meeting as follows:</p> <p>i) <u>Mammal target</u>: <i>EC Members</i> agreed to the addition of Leopard Cat as a new target species. <i>A Member (NGO)</i> noted that the Hong Kong Wetland Park is using a new otter holt design for Eurasian Otter and would worth checking with Shek concerning the design details at a later stage.</p> <p>ii) <u>Mammal monitoring method</u>: the proposal to use small mammal traps for a better understanding of the small mammal species and usage of the site was applauded by the <i>Members</i>.</p> <p>iii) <u>Bird target (proposed removal)</u>: <i>EC Members (NGO)</i> agreed to the proposed removal of the target species, Eurasian Hobby, Richard's Pipit, Stejneger's Stonechat and Black-naped Oriole; and have reservation on the removal of Japanese Quail and Japanese Yellow Bunting, both of which are globally-threatened species. <i>A Member (consultant)</i> noted the <i>Members'</i> concern and emphasized that the list is subject to discussion and agreement with relevant</p>	<p>Noted</p> <p>Noted</p> <p>Noted</p>

<u>Item/Description</u>	<u>Action By</u>
<p>stakeholders.</p> <p>iv) <u>Bird target (proposed addition):</u> <i>EC Members (NGO)</i> agreed to the proposed addition of these species as target species for the EEA: Eurasian Wigeon, Little Grebe, Black-crowned Night Heron, Intermediate Egret, White-cheeked Starling and White-shouldered Starling. <i>A Member (NGO)</i> expressed concern if proper management actions could be taken for species as rare as Falcated Duck. A proposal to include the species as a potential species which would benefit from management actions undertaken for Eurasian Wigeon would be more appropriate. <i>A Member (NGO)</i> further noted that active management actions to encourage the breeding of Red-billed Starling (a current target species) and White-cheeked Starling (which is known to breed nearby) at the EEA would add much ecological value of the site for these species. <i>A Member (consultant)</i> noted that an attempt to provide nest boxes with larger holes could be deployed though boxes with larger holes are readily used by other species such as Crested Myna and Oriental Magpie Robin.</p> <p>v) <i>EC Members</i> agreed that the following species do not meet the requirement to qualify as target species for the EEA: Northern Shoveller, Northern Pintail, Garganey, Eurasian Spoonbill, Cinnamon Bittern, Purple Heron, Western Osprey, and Chinese Penduline Tit based on the numbers recorded on site and the overall population in the Deep Bay area, while <i>A Member (NGO)</i> raised concern over Yellow-breasted Bunting, noting that with the numbers recorded, the EEA could be an important site for the species. <i>A Member (consultant)</i> noted that whilst that could be true, given the habitat requirements at the site and the habitat requirement of the species, actions which could be undertaken at the site for the species is very limited; this was agreed by the <i>Members</i>.</p> <p>vi) <u>Herpetofauna target:</u> <i>EC Members (NGO)</i> agreed to remove Burmese Python as a target species.</p> <p>vii) <u>Change in the Location of the Reedbed:</u> <i>A Member (consultant)</i> noted that this had been previously discussed with the <i>Members</i>. However, recent discussion with the EPD indicated that this action would very likely trigger a Variation to Environmental Permit, and the explicit support of the <i>EC Members</i> would be required to further pursue this proposal. <i>A Member (NGO)</i> applauded the proposal of merging the three northern ponds (i.e. Ponds 20, 21 and 22) into one large lily pond (when internal bunds are submerged in the wet season) and noted that this would be beneficial to Pheasant-tailed Jacana; hence, he was for the proposal to change the location of the reedbed (currently at Pond 22) to elsewhere within the Site. <i>A Member (NGO)</i> agreed with <i>Mr. Allcock</i> in his professional judgment on the benefit for the target species. She further noted that the disturbance from the adjacent Clean-up Reedbed and/or works associated with the LMC Loop would need to be addressed. <i>A Member (consultant)</i> responded that a layer of dense shrub was planted between the Clean-up Reedbed and these northern ponds specifically for the purpose (<b>Figure 1</b> refers), while the LMC Loop was yet to go through the EIAO process.</p>	<p>Noted</p> <p>Noted</p> <p>Noted</p>
<p>5. <i>A Member (consultant)</i> noted that due to time constraints, discussion on some of the items, particularly those on proposed changes to the monitoring and maintenance methodology etc., was limited. The items were summarized in the presentation material. <i>Members</i> were encouraged to ask any questions regarding these and the Review. The full</p>	<p>Noted</p>

<u>Item/Description</u>	<u>Action By</u>
Report will be circulated to the <i>EC Members</i> , relevant Government Departments, other stakeholders and the Advisory Council on the Environment.	
<p><b>Item 3 - <u>Any Other Business</u></b></p> <p>6. <i>A Member (MTR)</i> noted that the alignment of the proposed link bridge connecting the LMC Loop and the LMC Station had been modified such that the potential impact on the Clean-up Reedbed could be reduced to only one cell (<b>Annex B</b>). <i>A Member (NGO)</i> queried about the height of the viaduct, to which <i>A Member (MTR)</i> noted would be about the same height as the existing viaduct. <i>A Member (NGO)</i> further noted that the project was still under planning stage, and the alignment could be modified further between now and the actual EIAO stage. <i>A Member (NGO)</i> noted that MTR should ensure that wastewater cleaning treatment capacity would not be compromised and that the wastewater treatment capacity could be met.</p>	Noted
<p><b>Item 4 - <u>Date of Next Meeting</u></b></p> <p>7. The date of the next meeting is to be advised.</p>	Noted

**Figure 1.** Tree/Shrub buffer between the EEA and the Clean-up Reedbed.



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## **Annex A**

# Lok Ma Chau Spur Line 24<sup>th</sup> Environmental Committee Meeting

Report on Ecological Monitoring & Management & Works Programme  
Jun – Dec 2012

19<sup>th</sup> December 2012



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## Overview of Management Works Jun - Dec 2012

### Vegetation Management

- Routine grass cutting & weeding
- Routine removal of unwanted species (*Phragmites*, *Typha*, *Mimosa*, *Mikania* etc.)
- Tree trimming and maintenance for damaged trees after typhoon Vicente (July).
- Removal of reeds and sedges from Ponds 17 & 19



Lok Ma Chau Spur Line  
24<sup>th</sup> Environmental Committee Meeting  
Report on Ecological Monitoring & Management & Works  
Programme Jun - Dec 2012

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## Overview of Management Works Jun - Dec 2012

### Vegetation Management

- Removal of reed & sedge patches by removing 10cm top soil from Pond 17 and 19



Pond 17



Pond 19



Lok Ma Chau Spur Line  
24<sup>th</sup> Environmental Committee Meeting  
Report on Ecological Monitoring & Management & Works  
Programme Jun - Dec 2012

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## Overview of Management Works Jun - Dec 2012

### Trash Fish Stocking

Stocking Dates and Quantity Stocked between Jun and Dec 2012.

	Stocking Date	Quantity Stocked (kg)
Jun 2012	13-Jun-12	3,180
	14-Jun-12	3,010
Jul 2012	13-Jul-12	2,670
Oct 2012	27-Oct-12	7,378
Nov 2012	05-Nov-12	270
	12-Nov-12	1,200
	19-Nov-12	3,266



Lok Ma Chau Spur Line  
24<sup>th</sup> Environmental Committee Meeting  
Report on Ecological Monitoring & Management & Works  
Programme Jun - Dec 2012

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## Overview of Management Works Jun - Dec 2012

### Summer Fish Stocking

Quantity Instructed & Actual Stocked.

	Quantity Instructed	Stocked Quantity
Tilapia	11,000 kg	8,860 kg*
Grass Carp	1,100 no.	1,100 no.

\*Inadequate stocked quantity due to no stocking activities at Pond 3 and 5



Lok Ma Chau Spur Line  
24<sup>th</sup> Environmental Committee Meeting  
Report on Ecological Monitoring & Management & Works  
Programme Jun - Dec 2012

www.aeCHK.hk

## Overview of Management Works Jun - Dec 2012

### Winter Fish Stocking

- Fish stocked included Tilapia, Edible Goldfish, Silver Carp, Mud Carp, Common Carp and small carp sp.

	Pond 4	5	6	8	9	Total (kg)
27-Oct-12		1,028	665	3,447	2,238	7,378
05-Nov-12	270					270
12-Nov-12	1,200*					1,200*
19-Nov-12	1,270		1,028	968		3,266

\*All stocked fish on 12<sup>th</sup> Nov was small carp sp.



Lok Ma Chau Spur Line  
24<sup>th</sup> Environmental Committee Meeting  
Report on Ecological Monitoring & Management & Works  
Programme Jun - Dec 2012

www.aeCHK.hk

## Overview of Management Works Jun - Dec 2012

### General Site Management

- Bund maintenance at Ponds 3 and 5
- Provision of a big floating platform at Pond 10
- Construction of a deep trench at Pond 15 (near Pond 21's end)
- Erection of permanent site fence
- Pest Control: Red Fire Ant nests and Apple Snail
- Water quality management
- Dog trapping
- Water level adjustment
- Nest box maintenance
- MPST Tower hide maintenance (not undertaken due to accessibility issue)



Lok Ma Chau Spur Line  
24<sup>th</sup> Environmental Committee Meeting  
Report on Ecological Monitoring & Management & Works  
Programme Jun - Dec 2012

www.aeCHK.hk

## Scheduled Management Works for 2012 Wet Season

### Scheduled Bund Maintenance Works at Ponds 3 & 5

	Pond 3	Pond 5
Instruction to drain	Mar 2012 (for bird attraction) May 2012 (bund maintenance)	May 2012 (bund maintenance)
Water Level (mean)	cm	cm
March	51	170
April	38	122
May	39	125
Jun	25	9
July	26	23
August	0	62
September	0	52
October	0	59
November	73	71

- Hence, no fish was stocked in the ponds in summer.



Lok Ma Chau Spur Line  
24<sup>th</sup> Environmental Committee Meeting  
Report on Ecological Monitoring & Management & Works  
Programme Jun - Dec 2012

www.aeCHK.hk

Scheduled Management Works for 2012 Wet Season

Provision of a big floating platform at Pond 10



Scheduled Management Works for 2012 Wet Season

- Construction of a deep trench at Pond 15



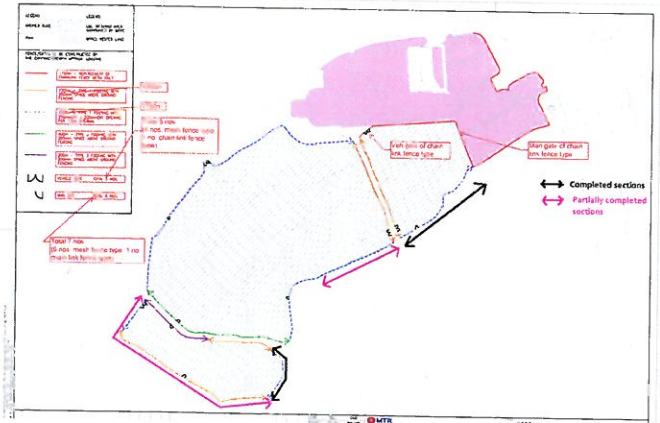
Scheduled Management Works for 2012 Wet Season

Erection of Permanent Site Boundary Fence (Pond 22)



Scheduled Management Works for 2012 Wet Season

- Erection of Permanent Site Boundary Fence (Progress as of 30 Nov 2012)



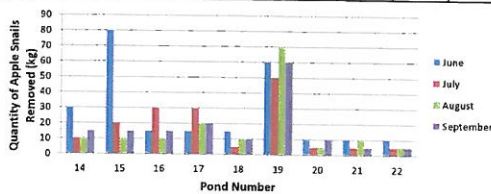
Overview of Management Works Jun - Dec 2012

Pest Management

- Golden Apple Snail removal at Ponds 14 – 22

Quantity (kg) of Apple Snail Removed by Contractor

Pond No.	14	15	16	17	18	19	20	21	22	TOTAL
June	30	80	15	15	15	60	10	10	10	245
July	10	20	30	30	5	50	5	5	5	160
August	10	10	10	20	10	70	5	10	5	150
September	15	15	15	20	10	60	10	5	5	155



Scheduled Management Works for 2012 Wet Season

Lime Trial for Killing Apple Snails at Two Heavily Infested Ponds

pH of Pond 15 and Pond 21 and quantity of lime added

Date	Pond	
	P15	P21
Lime Added	3,000 kg (29 Oct)	3,000 kg (mid-Sep) 2,000 kg (29 Oct)
16-Oct	6.49	6.88
9-Nov	7.13	9.1
23-Nov	7.12	7.95

\* pH values shown in the table are mean pH of 3 random points in the pond.

Overview of Management Works Jun - Dec 2012

Decoy Trial

- Trial Egret decoys (9 No.) at island on Pond 2 (photos taken on 8<sup>th</sup> March 2012)



Overview of Management Works Jun - Dec 2012

Decoy Trial

- Trial Egret decoys (9 No.) at island on Pond 2 (photos taken on 16<sup>th</sup> Oct 2012)







### Dragonfly Targets

- Three new dragonfly records observed in 2012, including Blue Sprite, Sapphire Flutterer and Crimson Drowning.
- Blue Sprite and Sapphire Flutterer are both considered as Local Concern\*.
- Two Blue Sprite were observed on 2<sup>nd</sup> May 2012 on Pond 16 and Pond 19.
- Two Sapphire Flutterers were observed on 21<sup>st</sup> Jun 2012 on Pond 12 and Pond 18.

\*Conservation status according to Fellowes et al. 2002



Loi Ma Chau Spur Line  
24<sup>th</sup> Environmental Committee Meeting  
Report on Ecological Monitoring & Management & Works  
Programme for Dec 2012

www.aechk.hk

### Mammal Targets

Species Name/Maximum Count	2006	2007	2008	2009	2010	2011	2012*
Eurasian Otter <i>Lutra lutra</i>	2	2	2	1	3*	0	1

Remarks: \*Up to Nov 2012  
\*Up to 3 individuals recorded between Pond 1 and 2 by AFCD.

### Herpetofauna Targets

Species Name/Maximum Count	2006	2007	2008	2009	2010	2011	2012
Chinese Bullfrog <i>Hoplobatrachus chinensis</i>	0	1	1	2	4	2	2
Burmese Python <i>Python bivittatus</i>	1	0	1	0	0	0	0
Chinese Soft-shelled Turtle <i>Pelodiscus sinensis</i>	1	1	1	1	1	1	1



Loi Ma Chau Spur Line  
24<sup>th</sup> Environmental Committee Meeting  
Report on Ecological Monitoring & Management & Works  
Programme for Dec 2012

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### Proposed Items in the Management Review Report

- Review of Target Species
- Review of Monitoring Items
- Review of Monitoring Frequency
- Review of Management Objectives
- Review of Reporting Frequency



Loi Ma Chau Spur Line  
24<sup>th</sup> Environmental Committee Meeting  
Report on Ecological Monitoring & Management & Works  
Programme for Dec 2012

www.aechk.hk

### Proposed Items in the Management Review Report

#### Review of Target Species (Mammals)

Taxa	Retained as Target	New Target	Management Compartment <sup>1</sup>	Additional Management Measures Proposed
<b>Mammal</b>				
Eurasian Otter	Y	-	A	• Provision of another otterholt after completion of site boundary fence and reduction of feral dog disturbance
Leopard Cat	-	Y	C	• Undertake small mammal (live) trapping
Total Dropped	0			
Total Added	1			
Total Number of Species	2			



Loi Ma Chau Spur Line  
24<sup>th</sup> Environmental Committee Meeting  
Report on Ecological Monitoring & Management & Works  
Programme for Dec 2012

www.aechk.hk

### Proposed Items in the Management Review Report

#### Review of Target Species (Birds)

Taxa	Retained as Target	New Target	Management Compartment <sup>1</sup>	Additional Management Measures Proposed
Great Cormorant	Y	-	A, B	• None proposed
Grey Heron	Y	-	A, B	• Minimisation of disturbance
Great Egret	Y	-	A, B, C	• Summer drain-down in Compartment B
Little Egret	Y	-	A, B, C	• Provision of decoys to encourage roosting/feeding
Black-faced Spoonbill	Y	-	a, b	• Minimisation of disturbance
Chinese Pond Heron	Y	-	A, B, C	• Summer drain-down in Compartment B; Provision of decoys to encourage roosting/feeding
Eurasian Teal	Y	-	A, b, c	• None proposed
Greater Spotted Eagle	Y	-	b, b, c	• Large isolated trees in Compartment B
Eastern Imperial Eagle	Y	-	a, b, c	• Large isolated trees in Compartment B
Eurasian Hobby	n	-	n/a	
Japanese Quail	n	-	n/a	
Eurasian Coot	Y	-	b, b, c	• Increase sily area
Phasant-tailed Jacana	Y	-	C	• Increase sily area; Restricted access before/during breeding season; Review vegetation/aesthetics management during wet season
Great Painted-trogon	Y	-	C	• Adjust vegetation management to avoid disturbance to breeding birds
Black-winged Stilt	Y	-	A, B, C	• Provision of floating islands with gravel; Partial drain-down if breeding is proved
Pintail / Swinhoe's Snipe	Y	-	C	• None proposed
Common Snipe	Y	-	b, C	• Provision of freshly cut reedbeds in dry season, particularly autumn
Richard's Pigeon	n	-	n/a	
Black-throat	Y	-	C	• None proposed
Clay-colored Sparrow	n	-	n/a	

1 of 2



Loi Ma Chau Spur Line  
24<sup>th</sup> Environmental Committee Meeting  
Report on Ecological Monitoring & Management & Works  
Programme for Dec 2012

www.aechk.hk

### Proposed Items in the Management Review Report

#### Review of Target Species (Birds)

Taxa	Retained as Target	New Target	Management Compartment <sup>1</sup>	Additional Management Measures Proposed
Pallas's Grasshopper	Y	-	b, C	• Move reedbed to Pond 12;
Warbler	Y	-	b, c	• Retaining long grass along bunds in autumn
Zitting Cisticola	Y	-	b, c	• Move reedbed to Pond 12
Japanese Yellow Bunting	n	-	n/a	
Red-billed Starling	Y	-	a, b	• None proposed
Black-naped Oriole	n	-	n/a	
Falcated Duck	-	Y	a, b, c	• Provision of short grass for grazing in winter
Eurasian Wigeon	-	Y	B, C	• Provision of short grass for grazing in winter
Northern Shoveler	-	n	-	n/a
Northern Pintail	-	n	-	n/a
Garganey	-	n	-	n/a
Little Grebe	-	Y	a, b, c	• None proposed
Eurasian Spoonbill	-	n	-	n/a
Cinnamon Bittern	-	n	-	n/a
Black-crowned Night Heron	-	Y	a, b	• Tree management
Purple Heron	-	n	-	n/a
Intermediate Egret	-	Y	a, b, c	• None proposed
Western Osprey	-	n	-	n/a
Chinese Penduline Tit	-	n	-	n/a
White-necked Stalling	-	Y	A, b	• None proposed
White-shouldered Starling	-	Y	A, B, C	• Provision and maintenance of nest boxes
Yellow-breasted Bunting	-	n	-	n/a
Total Dropped	6			
Total Added	7			
** Total Number of Species low to be discussed				

2 of 2



Loi Ma Chau Spur Line  
24<sup>th</sup> Environmental Committee Meeting  
Report on Ecological Monitoring & Management & Works  
Programme for Dec 2012

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### Proposed Items in the Management Review Report

#### Review of Target Species (Herpetofauna)

Taxa	Retained as Target	New Target	Management Compartment <sup>1</sup>	Additional Management Measures Proposed
<b>Herpetofauna</b>				
Chinese Bullfrog	Y	-	C	• Review habitat conditions in ponds where the species is noted and review findings for possible further actions
Burmese Python	n	-	-	n/a
Chinese Soft-shelled Turtle	Y	-	A, B	• Review habitat conditions in ponds where the species is noted and review findings for possible further actions
Total Dropped	1			
Total Added	0			
Total Number of Species	2			



Loi Ma Chau Spur Line  
24<sup>th</sup> Environmental Committee Meeting  
Report on Ecological Monitoring & Management & Works  
Programme for Dec 2012

www.aechk.hk

### Proposed Items in the Management Review Report

#### Review of Monitoring Items & Frequency

Monitoring Works	Review Management Report	Existing Monitoring Schedule	2006 HCMP
Tower Counts at EEA	Once per week	Twice per week	Twice per week
Tower Counts at MPST Control Areas	Unchanged	Once per week	Once per week
Site Transsects at EEA	Unchanged	Once per week	Once per week
Site Transsects at MPST and ST Control Areas	Unchanged	Once per week	Once per week
Site Transsects at Clean-up Reedbed	Unchanged	Once per week	Once per week
Bird Trapping – mist net	Unchanged (Optional)	Optional	EEA & Clean-up Reedbed – twice per month (Nov – Apr)
Mai Po to monitor Black-faced Spoonbills	Unchanged	Once per week (Oct – May)	Once per week (Oct – May)
Mammal at EEA	Conduct small mammal trapping	Camera checking once per two weeks minimum	check cameras once per week

1 of 5



Loi Ma Chau Spur Line  
24<sup>th</sup> Environmental Committee Meeting  
Report on Ecological Monitoring & Management & Works  
Programme for Dec 2012

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Proposed Items in the Management Review Report

Review of Monitoring Items & Frequency

Monitoring Works	Review Management Report	Existing Monitoring Schedule	2006 HCMP
Dragonflies at EEA	April to Aug - twice per month	Mar, Sept - Nov - once per month April to Aug - twice per month	Mar, Sept - Nov - once per month April to Aug - twice per month
Dragonflies Exuvia at EEA	Discontinue	Traps inspect twice per week	Traps inspect twice per week
Dragonflies at Control Areas	Discontinue	Mar, Sept - Nov - once per month April to Aug - twice per month	Mar, Sept - Nov - once per month April to Aug - twice per month
Butterflies at EEA	Discontinue	Mar, Sept to Nov - once per month April to Aug - twice per month	Mar, Sept - Nov - once per month April to Aug - twice per month
Butterflies at Control Areas	Discontinue	Mar, Sept to Nov - once per month April to Aug - twice per month	Mar, Sept - Nov - once per month April to Aug - twice per month

2 of 5



Proposed Items in the Management Review Report

Review of Monitoring Items & Frequency

Monitoring Works	Review Management Report	Existing Monitoring Schedule	2006 HCMP
Herpetofauna-reptile at EEA	Discontinue	April to Nov - twice (daytime) per month	April to Nov - twice (daytime) per month
Herpetofauna-reptile at Control Areas	Discontinue	April to Nov - twice (daytime) per month	April to Nov - twice (daytime) per month
Herpetofauna - amphibians at EEA	Unchanged	Mar to Aug - twice (nighttime) per month	Mar to Aug - twice (nighttime) per month
Herpetofauna - amphibians at Control Areas	Discontinue	Mar to Aug - twice (nighttime) per month	Mar to Aug - twice (nighttime) per month
Aquatic Invertebrates	Discontinue (Optional)	Water Pond - once per year	Water Pond - once per year
	Discontinue (Optional)	Marsh & reedbed - twice per year	Marsh & reedbed - twice per year
Benthic Invertebrates	Discontinue (Optional)	Water Pond - once per year	Water Pond - once per year
	Discontinue (Optional)	Marsh & reedbed - twice per year	Marsh & reedbed - twice per year

3 of 5



Proposed Items in the Management Review Report

Review of Monitoring Items & Frequency

Monitoring Works	Review Management Report	Existing Monitoring Schedule	2006 HCMP
Monitoring of Fish Stock	Unchanged	Once every two months	Once every two months
Monitoring of Habitats	Twice per year, Concurrent with vegetation cover monitoring	Twice per year	Twice per year
Monitoring of Vegetation Cover	Habitat and vegetation monitoring	Twice per year	Twice per year
Microhabitat Structure and Floristics of Marsh Areas (Compartment C)	Once per year	Twice per year	Twice per year
Pedology Monitoring	Discontinue (Optional)	Once per year	Once per year
Water Quality and Hydrology of Fishponds	In-situ: Once per month, exclude turbidity	In-situ: Once per month	In-situ: Once per month
	Lab: Discontinue (Optional)	Lab: twice per year	Lab: twice per year
	Water level: Twice per month	Water level: weekly	-

4 of 5



Proposed Items in the Management Review Report

Review of Monitoring Items & Frequency

Monitoring Works	Review Management Report	Existing Monitoring Schedule	2006 HCMP
Review site condition	Unchanged	Weekly	Weekly
Adaptive Management Supervision	Unchanged	Monthly	Monthly
Monthly EM&A Report	Discontinue	-	Monthly
Quarterly Report	Discontinue	Quarterly	-
Annual Report	Unchanged	Yearly	-
Annual Review of Tree Management	Once per year	-	-

5 of 5



Proposed Items in the Management Review Report

Review of Management Objectives

Item	Review Management Report	2006 HCMP
Overall Habitat Area	Area: Unchanged <sup>1</sup> Some amendment to location and micro-habitat :- • Increase area of lily; • Relocate reedbed (from Pond 22 to 14)	Follows EP requirement
Micro-habitat & disposition within Marsh area	• Increase area of lily; • Relocate reedbed (from Pond 22 to 14)**	• Micro-habitat within marsh not specified in EP; • Location of Reed appended in figures to the EP
Water Management	• Upgrade pipe & pump system; • Some minor reprofiling of ponds; • Reduce monitoring frequency to twice a month	A series of pipe & pump system
Water Quality Management	• Provide on-site storage for lime and peanut residue	Add lime & peanut residue as required
Water Budget	• Introduce dry season water capacity action limit	(Not specified)
Fish Stocking Regime	Unchanged	Once every two months

\*\* Might require a VEP, subject to discussion with MTRC and EPD.

1 of 2



Proposed Items in the Management Review Report

Review of Management Objectives

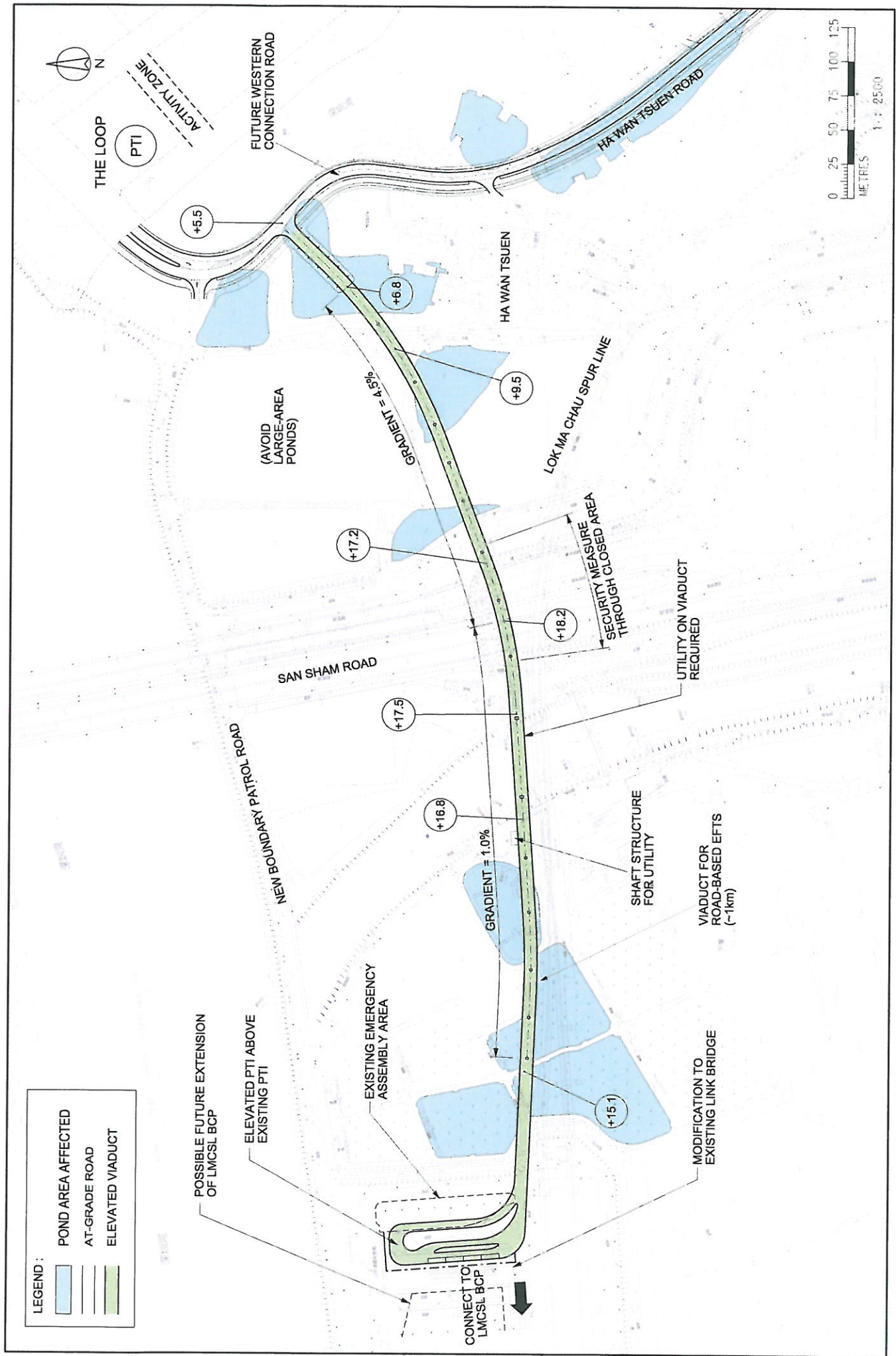
Item	Review Management Report	2006 HCMP
Undesired Flora Management	• Grass-cutting: Unchanged; • Weeding: twice per year	(Not specified)
Undesired Pest Management	• Apple Snail: Unchanged; • Fire Ants: Increase treatment frequency to once every two months	(Not specified)
Dog Management	Unchanged; Review effectiveness of fence	(Not specified)
Sick Bird Management	Unchanged	
Structural Maintenance	Unchanged	Monthly and after flood and typhoons

2 of 2



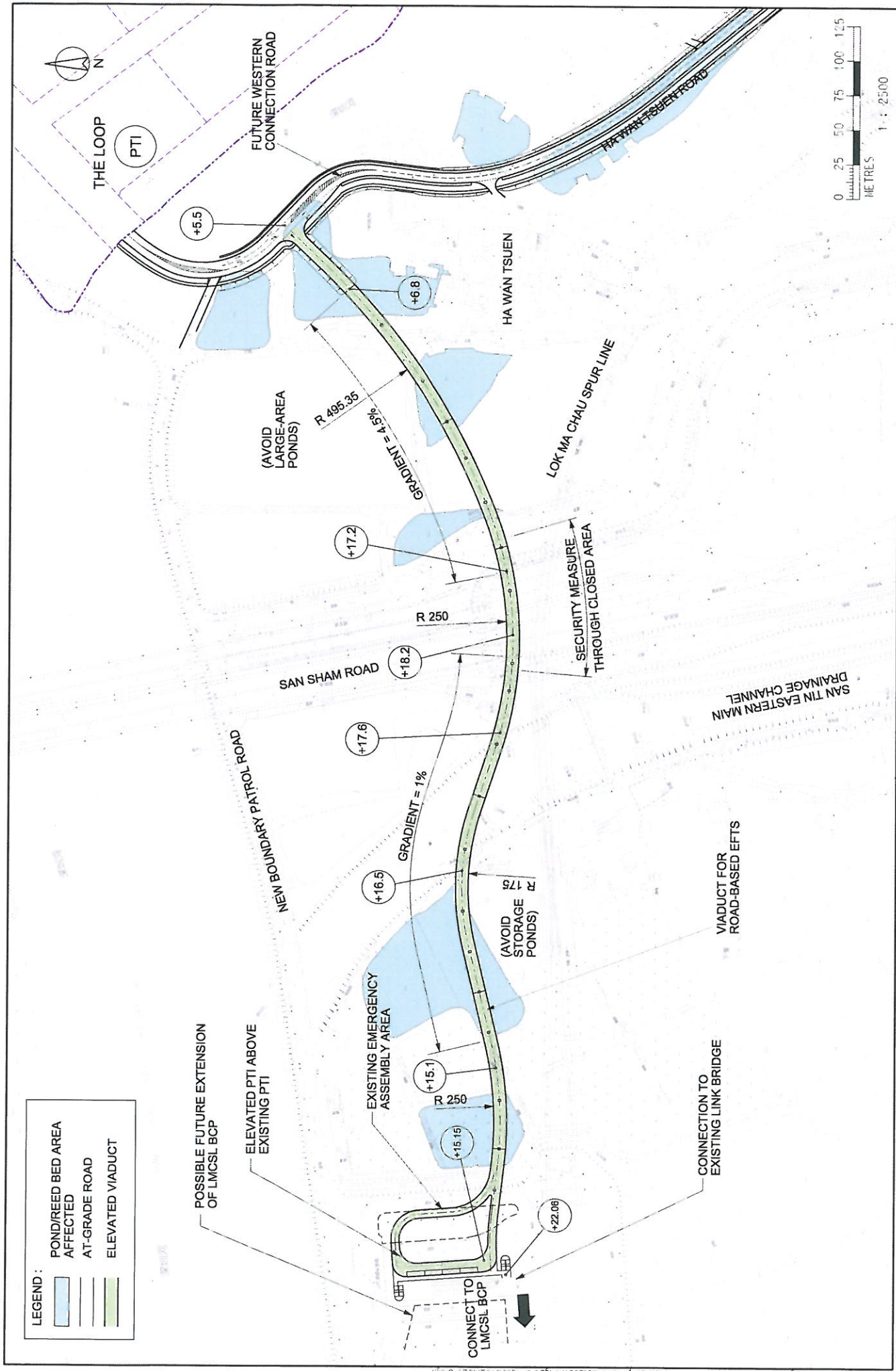
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## **Annex B**



 土木工程拓展處 CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT	 真雅納工程顧問 Ove Arup & Partners Hong Kong Limited	研究項目 Job Title <b>DIRECT CONNECTION TO LMCSL STATION -          ROAD-BASED EFTS LINKAGE OPTION</b>	圖則編號 Figure No. <b>6.3</b>
		合約編號 Agreement No. CE 53/2008 (CE) 落馬洲河套地區發展规划及工程研究 - 勘探研究 Planning and Engineering Study on Development of Lok Ma Chau Loop - Investigation	圖則比例 Scale 1:2500 DN A3 修改編號 Rev.

Option 1



圖則編號 Figure No. **6.3**  
 圖則名稱 Title: DIRECT CONNECTION TO LMCSL STATION - ROAD-BASED EFTS LINKAGE OPTION  
 日期 Date: 1:2500 ON A3  
 修訂編號 Rev.:

研究項目 Job Title: DIRECT CONNECTION TO LMCSL STATION - ROAD-BASED EFTS LINKAGE OPTION  
 合約編號 Agreement No. CE 53/2008 (CE)  
 落馬洲河套地區發展類別及工程研究 - 初步研究  
 Planning and Engineering Study on Development of Lok Ma Chau Loop - Investigation  
 ARUP  
 奧雅納工程顧問  
 Arup  
 Hong Kong Limited

土木工務發展署  
 CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT  
 規劃部  
 PLANNING DEPARTMENT

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(option 2)