

SHEUNG SHUI TO LOK MA CHAU SPUR LINE

Environmental Committee Meeting

Minutes of Meeting No. 37 held at 9:30pm

on Thursday, 25th July 2019,

at Room 12A, 12/F, MTR Headquarters Building, Telford Plaza, Kowloon Bay

Present:		
Dr. Xianji Wen	WWF Hong Kong	Member (NGO)
Mr. Michael Kilburn	The Hong Kong Bird Watching Society	Member (NGO)
Ms. Karen Barretto	Friends of the Earth (Hong Kong)	Member (NGO)
Mr. C K Leung	Civil Engineer	Member (MTR)
Ms. Catherine Leung	Environmental Engineering Manager	Member (MTR)
Ms. Kenny Yiu	Manager-Environmental Engineering	Member (MTR)
Mr. Peter Choi	Environmental Engineer	Member (MTR)
Mr. Paul Leader	Ecological Consultant	Member (consultant)
Ms. Elizabeth Wu	Ecological Consultant	Member (consultant)
Absent with apology:		
Dr. Ng Cho-nam	The University of Hong Kong	Member (NGO)
Mr. Matthew Wong	Maintenance Manager	Member (MTR)
Attachments		
Annex A	Presentation Material of EC Meeting No. 37	

<u>Item/Description</u>	<u>Action By</u>
1. Welcomed Members to the EC Meeting No. 37.	Noted
<p><u>Confirmation of minutes of Meeting No. 36</u></p> <p>2. There were no comments on the minutes of Meeting No. 36 and the minutes were confirmed.</p>	Noted
<p><u>Ecological Enhancement Works and Monitoring – an Update on Management Works and Look Ahead</u></p> <p>3. <i>A member (consultant)</i> reported on the major habitat enhancement and modification works, ecological monitoring and management works undertaken from January to June 2019 at the LMC EEA (detailed in Annex A) as follows:</p> <p>3.1 <i>A member (consultant)</i> reported that the access to the eastern site was restricted during the beginning of May to early July to reduce the disturbance to Pheasant-tailed Jacanas. Breeding was not recorded this year, but there were two pairs displaying.</p> <p>3.2 <i>A member (consultant)</i> reported that about 400 Grass Carps were stocked into Ponds 3, 5 and 6 and that stocking of Grass Carp in Ponds 3 – 7 is to control the emergent vegetation. The remaining ponds were stocked in July, after the water quality was adjusted. <i>A member (NGO)</i> enquired the problem of the water quality. <i>A member (consultant)</i> replied that the ponds were drained in the winter and became acidic when re-filled.</p> <p>3.3 <i>A member (consultant)</i> reported that dogs were occasionally sighted on site but none were trapped in the past six months. A hundred and forty-eight Red Imported Fire Ant nests were treated.</p> <p>3.4 <i>A member (consultant)</i> reported that Camellia seed was used to control Apple Snails and had killed a large number of Snails. Camellia seed was applied to Ponds 20 – 22 in February and March, before the growing season of lily, when the ponds were drained. In addition, 62kg of Apple Snails were removed by hand in the past 6 months. <i>A member (NGO)</i> enquired the number of Apple Snails removed in the past years and <i>another member (NGO)</i> enquired if Camellia seed is effective. <i>A member (consultant)</i> replied that Camellia seed is effective and kills massive number of Apple Snail in a short time which also reduces disturbance that arise from hand removal. However, it should be noted that the Snails return when the effect of Camellia seed worn off. The number of Apple Snails removed since 2014 was emailed to the EC members on 26th July 2019.</p>	<p>Noted</p> <p>Noted</p> <p>Noted</p> <p>Noted</p>

<u>Item/Description</u>	<u>Action By</u>
<p>3.5 <u>A member (consultant)</u> reported on the performance of the numerical bird target species. Most of the target species met the target level in the reporting year. The density of Little Egret did not meet the target level, but mid-summer pond drain down was implemented again this year to attract this species after the breeding season. The density of Black-winged Stilt did not meet the target level, but this species seems to prefer newly reprofiled ponds and it is difficult to have ponds reprofiled frequently in the LMC EEA. <u>A member (NGO)</u> mentioned that Black-winged Stilt was recorded on bare bunds at San Tin area, shallow water and in area with poor water quality. <u>A member (consultant)</u> reported there is not much bare bund within the LMC EEA. <u>A Member (consultant)</u> reported that the stocking of Grass Carps at Ponds 3 to 7 may help, and Black-winged Stilt prefers blood worm ponds than fish ponds at Long Valley. <u>A member (NGO)</u> expressed that target levels were not achieved for this species is not a concern.</p>	Noted
<p>3.6 <u>A member (consultant)</u> further reported on the performance of the non-numerical bird target species. Little Grebe was recorded continuously. Yellow-breasted Bunting was attracted by the rice planting last year and rice will also be planted this year. <u>A member (NGO)</u> enquired the area of rice planting. <u>A member (consultant)</u> replied that the rice was planted in the western cell of Pond 17 last year, and will be planted in all three cells this year.</p>	Noted
<p>3.7 <u>A member (consultant)</u> reported the winter roost count data. The LMC EEA supported the or second biggest Great Cormorant roost in Hong Kong. <u>A member (NGO)</u> enquired the winter population of the Great Cormorants. <u>A member (consultant)</u> replied that there are roughly 8,000 Great Cormorant roosting in Hong Kong in recent winters. Great Cormorant number increased since the erection of boundary fence which is believed to reduce the disturbance and favour the establishment of the roost. <u>A member (consultant)</u> further reported different species roosted at the LMC EEA since 2014, with the maximum count of over 300 Chinese Pond Herons, nearly 100 Eastern Cattle Egrets, over 400 Great Egrets and over 200 Little Egrets recorded in different years. <u>A member (consultant)</u> reminded that the number of birds from the roost counts will be incorporated into calculating the target performance and will be implemented after the approval of the HCMP.</p>	Noted
<p>3.8 <u>A member (consultant)</u> reported nest boxes were provided on site. Most of the nest boxes were occupied by the White-shouldered Starlings but it is difficult to estimate the number of pairs breeding on site as it is may be that some pairs made more than one nest. <u>A member (NGO)</u> enquired if the chicks were ringed. <u>A member (consultant)</u> replied they were ringed.</p>	Noted
<p>3.9 <u>A member (consultant)</u> reported on breeding birds recorded in the LMC EEA. There were two pairs of Pheasant-tailed Jacanas displaying for 1 – 2 weeks.</p>	Noted
<p>3.10 <u>A member (consultant)</u> reported that Eurasian Otter were recorded on four</p>	Noted

<u>Item/Description</u>	<u>Action By</u>
<p>dates and good numbers of Leopard Cat. A video of a Eurasian Otter passing through a mammal pass installed at the bottom of the boundary fence was shown. This showed that the uPVC pipes installed, although cheap, are effective in maintaining the connectivity with the surrounding environment.</p> <p>3.11 <u>A member (consultant)</u> reported the target reptile species were not recorded in the past six months. These species are relatively difficult to detect.</p> <p>3.12 <u>A member (consultant)</u> reported the number of Red-eared Sliders increased in the last few years. <u>A member (NGO)</u> expressed that there are also many Red-eared Sliders at San Tin area and wondered if they spread to the LMC EEA. He enquired if discussion has been made with AFCD on the trapping issue. <u>A member (consultant)</u> replied that this will be done after the HCMP was approved. <u>A member (NGO)</u> expressed he had seen a Red-eared Slider preyed on an Asian Common Toad; an exotic species preying on native species.</p> <p>3.13 <u>A member (consultant)</u> reported the amphibian target species, Chinese Bullfrog, was recorded in this reporting period. It should be noted that amphibian surveys were stopped at most of the Compartment C in May and June due to the access restriction. <u>A member (NGO)</u> expressed that it was interesting to see Ornate Pigmy Frog recovered after a few years' disappearance. He enquired if the amphibian was surveyed by listening to the calls. <u>A member (consultant)</u> reported this is the case.</p> <p>3.14 <u>A member (consultant)</u> reported there were 22 dragonfly species recorded in this reporting period.</p> <p>3.15 <u>A member (NGO)</u> enquired the impact of ambient light to the LMC EEA. <u>A member (consultant)</u> replied that there was laser light beam at the Shenzhen side, but the light impact to the LMC EEA is generally low.</p> <p>3.16 <u>A member (NGO)</u> expressed that the management works were done successfully and hope that this will be continued. <u>A member (MTR)</u> thanked the EC members for their valuable suggestions and support to make the LMC EEA success.</p>	<p></p> <p>Noted</p> <p>Noted</p> <p>Noted</p> <p>Noted</p> <p>Noted</p> <p>Noted</p>
<p><u>Any Other Business</u></p> <p>4. <u>A member (MTR)</u> reported the feasibility of installing cameras at Pond 2 for recording trespassers, as suggested in the 36th EC Meeting, were under investigation by the maintenance team.</p> <p>[PMN: MTR considered that installing camera at Pond 2 is infeasible in consideration of the following factors:</p> <ul style="list-style-type: none"> • Telecom service provider has encountered difficulties to provide 4G for real time CCTV across border between Hong Kong and Mainland. • MTR has instructed the contractor to provide security guard and patrol during public holiday. 	<p>Noted</p>

<u>Item/Description</u>	<u>Action By</u>
<ul style="list-style-type: none"> • MTR’s contractor stationed at the site from Monday – Saturday with adequate security measures.] <p>5. <u>Members (NGO)</u> were invited to have a site visit to the LMC EEA in the autumn/early winter. MTR would arrange the site visit.</p> <p>6. <u>A member (NGO)</u> enquired the status of the revised 5-yearly HCMP (2012 – 2016). <u>A member (MTR)</u> reported that subsequent to no comment received from EPD and AFCD on the updated HCMP documents in October 2018, with reference to the practice of the 1st five-yearly review of the HCMP, MTR prepared and submitted the information paper with all the updated HCMP documents on the same month to EPD for circulation and consultation with ACE members. A few rounds of comments from EPD were received and EPD submitted the information paper to ACE in early May 2019. Minor comments received from ACE in late May 2019 and EPD submitted the respond-to-comment table and the revised HCMP information to ACE in July 2019. The HCMP is still pending for approval.</p> <p><u>A member (NGO)</u> replied that it took a long time to get the document approved, and when it would be approved, it would be nearly the time to prepare the next five-yearly review. <u>A member (MTR)</u> replied that MTR will share EC members’ comments with EPD and liaise with EPD on how to speed up the program in the next 5-yearly review.</p>	<p>MTR</p> <p>Noted</p>
<p><u>Date of Next Meeting</u></p> <p>8. The date of the next meeting is to be advised.</p>	<p>MTR</p>

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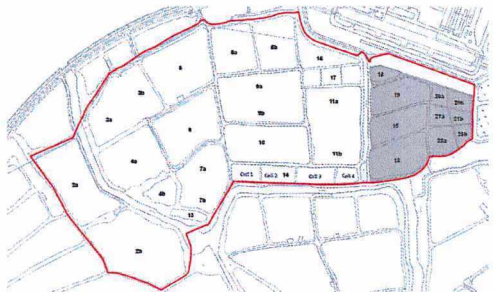
Report on Ecological Monitoring and Management, and Works Programme
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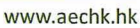

Management Works: Access Restriction

- From the beginning of May to early July



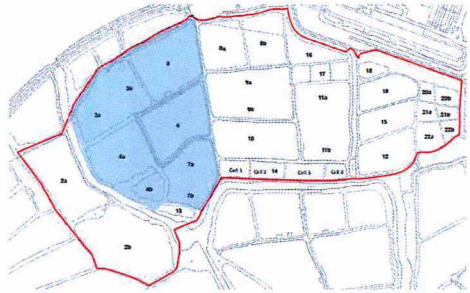



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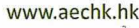
Management Works: Grass Carp Stocking

- 402 individuals were stocked into Ponds 3, 5 and 6





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Management Works: Pest Management

Dog Trapping


- Dog trapping – none.

Pest Management (Red Imported Fire Ant)

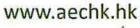
- 148 Red Imported Fire Ant nests were treated with the approved pesticide;
- Red Imported Fire Ant nest treatment using the approved pesticide will be continued.

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019 ^o
No. of Nests Treated	170	164	(n.a.)	315	790	1,760	1,211	1,333	939	969	269	148

^o Include data from January to June



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Management Works: Pest Management


Pest Management (Apple Snail – hand picking)

- A total of 600kg Camellia seed was applied in February and March when the Ponds were in low water level.
- Manual removal of Apple Snails in Compartment C continued;
- Apple Snails removed in Compartment C between January and June:

Month	Apple Snail Removed (kg)						Total
	Pond 15	Pond 16	Pond 17	Pond 18	Pond 19	Ponds 20 – 22	
January	-	-	-	-	-	-	0
February	-	-	-	-	-	-	0
March	-	-	-	-	3	51	54
April	-	-	-	-	-	8	8
May	-	-	-	-	-	-	0
June	-	-	-	-	-	-	0
Total	0	0	0	0	3	59	62



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Numerical Bird Target Performance in the Past 5 Years


	Year Jul 2014 – Jun 2015			Jul 2015 – Jun 2016			Jul 2016 – Jun 2017			Jul 2017 – Jun 2018			Jul 2018 – Jun 2019		
	LMC	CA	Ratio	LMC	CA	Ratio	LMC	CA	Ratio	LMC	CA	Ratio	LMC	CA	Ratio
Density (mean/ha)															
Japanese Quail	<0.1	nr	LMC	nr	nr	nr	nr	nr	nr	<0.1	nr	LMC	<0.1	nr	LMC
Eurasian Teal	1.1	10.1	22.1	1.9	10.1	719.9	1.9	10.1	120.8	0.5	<0.1	45.6	0.6	<0.1	144.7
Black-faced Spoonbill	0.5	<0.1	15.6	0.6	<0.1	16.8	0.5	0.1	10.3	0.8	0.1	15.1	0.3	<0.1	15.1
Chinese Pond Heron	0.9	0.4	2.7	0.8	0.5	1.5	0.9	0.7	1.4	1.3	0.7	2.0	1.6	0.6	2.8
Grey Heron	2.0	0.2	11.0	2.2	0.2	15.0	2.0	0.1	16.4	2.5	0.1	16.9	1.8	0.2	11.3
Great Egret	1.7	0.9	6.0	1.7	0.6	2.9	1.5	0.5	2.9	2.7	0.5	3.9	1.4	0.3	5.5
Little Egret	1.1	0.4	2.7	0.9	0.7	1.3	0.8	0.5	0.6	1.1	0.7	1.6	0.6	0.6	1.2
Great Cormorant	7.3	0.4	17.6	6.2	0.6	11.1	8.1	0.5	16.5	5.5	0.5	10.7	9.6	0.4	23.2
Greater Spotted Eagle	<0.1	<0.1	39.8	<0.1	0.0	LMC	<0.1	nr	LMC	<0.1	nr	LMC	<0.1	nr	LMC
Eastern Imperial Eagle	<0.1	<0.1	49.3	<0.1	0.0	LMC	<0.1	nr	LMC	<0.1	nr	LMC	<0.1	nr	LMC
Eurasian Coot	<0.1	<0.1	151.9	0.1	0.0	LMC	0.1	<0.1	249.1	<0.1	<0.1	24.7	<0.1	<0.1	16.9
Black-winged Stilt	0.5	0.1	4.1	0.2	<0.1	5.5	0.1	0.1	1.5	0.2	0.1	1.1	0.2	0.2	0.8
Greater Painted-snipe	<0.1	nr	LMC	<0.1	0.0	LMC	<0.1	nr	LMC	<0.1	nr	LMC	<0.1	nr	LMC
Pheasant-tailed Jacana	<0.1	nr	LMC	<0.1	<0.1	11.8	<0.1	<0.1	23.4	<0.1	nr	LMC	<0.1	<0.1	74.0
Pintail/Swinhoe's Snipe ¹	<0.1	<0.1	36.8	<0.1	<0.1	113.4	<0.1	<0.1	27.1	<0.1	<0.1	119.3	0.1	<0.1	71.5
Common Snipe	0.2	<0.1	13.6	0.1	<0.1	13.8	<0.1	<0.1	4.2	<0.1	<0.1	7.6	<0.1	<0.1	6.4
Pallas's Grasshopper Warbler	<0.1	<0.1	5.4	<0.1	<0.1	10.7	<0.1	<0.1	1.6	<0.1	<0.1	27.1	<0.1	<0.1	59.2
Zitting Cisticola	<0.1	<0.1	1.6	0.1	<0.1	1.6	<0.1	<0.1	0.6	0.1	0.1	1.0	0.1	<0.1	11.8
Red-billed Starling	0.4	0.3	1.9	3.9	0.7	4.4	3.2	0.4	6.0	1.9	0.3	6.7	3.5	0.1	41.6
Bluetthroat	<0.1	<0.1	8.6	<0.1	0.0	LMC	nr	<0.1	CA	<0.1	<0.1	0.9	<0.1	<0.1	3.3
Japanese Yellow Bunting	nr	<0.1	CA	nr	nr	nr	nr	nr	nr	nr	<0.1	CA	nr	nr	nr

1. Includes one species pair, Pinta/Swinhoe's Snipe, not distinguishable in the field
nr – Not recorded within LMC/EA or Control Areas during the period
LMC – only recorded in LMC/EA
CA – only recorded in the Control Areas

Blue – Target met (i.e. density in EA at least twice that in Control Areas)
Yellow – Target not met, although density higher than in Control Areas
Red – Target not met and density lower than in Control Areas



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Non-numerical Bird Target Performance in the Past 5 Years

Species/Density (mean/ha)	Year Jul 2014 – Jun 2015			Jul 2015 – Jun 2016			Jul 2016 – Jun 2017			Jul 2017 – Jun 2018			Jul 2017 – Jun 2018		
	LMC	CA	Ratio	LMC	CA	Ratio	LMC	CA	Ratio	LMC	CA	Ratio	LMC	CA	Ratio
Eurasian Wigeon	0.6	<0.1	44.1	2.0	<0.1	2888.1	0.5	nr							
Little Grebe	1.2	0.7	1.9	1.1	0.9	1.3	1.3	0.7	1.9	1.1	0.9	1.3	1.1	0.8	1.3
Cinnamon Bittern	<0.1	nr		LMC	<0.1	<0.1	13.6	<0.1	nr	LMC	<0.1	7.4	<0.1	<0.1	2.5
Black-crowned Night Heron	0.2	<0.1	11.7	0.1	<0.1	2.1	0.2	<0.1	15.5	0.3	<0.1	12.8	0.5	<0.1	11.3
Intermediate Egret	<0.1	<0.1	2.4	0.1	<0.1	17.0	0.1	<0.1	3.7	0.2	<0.1	34.5	0.1	<0.1	10.2
White-cheeked Starling	0.3	<0.1	15.3	0.6	<0.1	30.4	0.3	<0.1	9.0	0.2	0.1	2.8	0.5	<0.1	27.2
White-shouldered Starling	1.1	0.1	16.9	1.3	0.1	16.2	1.1	0.1	14.8	1.1	0.1	11.1	1.2	0.1	12.2
Yellow-breasted Bunting	nr	<0.1	CA	nr	<0.1	CA	<0.1	<0.1	27.1	<0.1	<0.1	0.8	<0.1	<0.1	23.4

The above species became target species from October 2014

nr – Not recorded within LMC/EA or Control Areas during the period
 LMC – only recorded in LMC/EA
 CA – only recorded in the Control Areas
 Blue – Density in LMC/EA is less than that in Control Areas
 Yellow – Density higher in LMC/EA than in Control Areas
 Red – Density in LMC/EA lower than in Control Areas

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Winter Roost Count in the Winter 2018/2019

- Winter roost is mainly located at Pond 2, including the island and the northern bund.

Bird Taxa	Nov-18	Dec-18	Jan-19	Feb-19	28-Mar
Black-crowned Night Heron	-	-	6	-	-
Chinese Pond Heron	33	7	62	19	16
Eastern Cattle Egret	4	35	61	101	72
Grey Heron	15	14	2	-	-
Great Egret	101	254	94	54	20
Intermediate Egret	-	1	4	2	-
Little Egret	39	162	210	136	43
Great Cormorant	1,655	1,944	1,921	1,935	-
Black-faced Spoonbill*	-	-	72	43	-
Starlings	-	-	-	-	164
Total of Large Waterbirds^	1,847	2,417	2,432	2,290	151

* The species were recorded dropping into Ponds 3 and/or 4 during the surveys.
 ^ Excluding starlings/mynas.

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Winter Roost Count since 2014

- Peak count during winter roost count in January to March and November to December.


Bird Taxa	2014	2015	2016	2017	2018	2019
Black-crowned Night Heron	-	-	-	-	-	6
Chinese Pond Heron	143	80	39	173	367	62
Eastern Cattle Egret	98	45	11	9	80	101
Grey Heron	16	35	52	21	18	2
Great Egret	123	225	418	454	254	94
Intermediate Egret	-	2	2	1	2	4
Little Egret	198	128	75	218	174	210
Great Cormorant	1,740	1,839	1,526	2,345	1,973	1,935

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Nest Box Occupation in April to June 2019

- 122 bird nest boxes are accessible for survey, in which three were missing;
- All of these 119 nest boxes were occupied: 84 with eggs/chicks (one was occupied by Oriental Magpie Robin and the others by White-shouldered Starlings), 35 with nesting materials only.



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Nest Box Occupation in April to June 2019



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Breeding Birds

- 2 pairs of Pheasant-tailed Jacana displaying at Ponds 20 – 22 in May. Maximum count 8 individuals
- Approx. 20 pairs of Little Grebe
- Approx. 10 pairs of White-breasted Waterhen
- Min. 3 pairs of Common Moorhen
- One pair of Little Ringed Plover

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Mammal Targets Recorded in the Past 10 Years

- Eurasian Otter was recorded on four days in this reporting period;
- Leopard Cat was recorded on 51 days with an OI of 44.9.

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019 [Ⓐ]
Eurasian Otter <i>Lutra lutra</i>											
Maximum Count	1	3 [*]	0	1	1	2	0	1	1	1	1
No. of Records ¹	1	2	0	1	13 [Ⓐ]	5 [Ⓐ]	0	1	2	5	4
Leopard Cat <i>Prionailurus bengalensis</i>											
No. of Records ¹ /OI ²	91	201	121	11	111	871	114 ^{1,5}	65 ^{1,5} / 25.2 ²	51 ¹ / 24.1 ²	54 ¹ / 22.6 ²	51 ¹ / 44.9 ²

Note:
 1. Number of dates recorded by all installed cameras plus direct observations.
 2. Occurrence index.
 Key:
 * Up to 3 individuals recorded between Ponds 1 and 2 by AICD
 # Including one dead individual found at LMC EEA
 Ⓐ Including direct observation of one individual at Pond 12
¹ % Reptiles were recorded
 Ⓒ Include data from January to June.

Other species in appendix for reference.

  www.aechk.hk 13

Mammal Targets



  www.aechk.hk 14

Mammal Targets



  www.aechk.hk 15


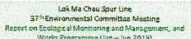
Reptile Targets Recorded in the past 10 years

- Burmese Python and Chinese Soft-shelled Turtle were not recorded in 2019 yet.

Species	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019 [Ⓐ]
Burmese Python <i>Python bivittatus</i>	0 (0)	0 (0)	0 (0)	0 (0)	1 (1)	3 (1)	1 [*] (1)	1 (1)	0 (0)	0 (0)	0 (0)
Chinese Soft-shelled Turtle <i>Pelodiscus sinensis</i>	2 [*] (1)	1 (1)	1 (1)	1 (1)	2 (1)	2 (1)	2 [*] (1)	*	3 (1)	1 (1)	0 (0)


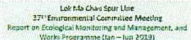
Number of surveys recorded is indicated in the table, whereas the numbers in brackets are the maximum count per survey.
 Key:
 * Sighting reported by the reprofiling contractor
 * Include one record of track
 # It was recorded in the Clean-up Reelbed
 Ⓒ Include data from January to June.

Other species in appendix for reference.

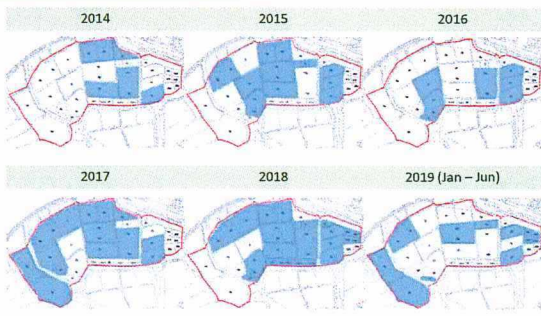
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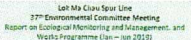
Red-eared Slider Recorded since 2014

- A maximum of 6 individuals were recorded on one day (in April);
- Recorded in all compartments;
- Maximum number recorded in the past three years:
 - 2018 – 19, egg laying also noted;
 - 2017 – 14, mating also noted;
 - 2016 – 2, egg laying also noted;
 - 2015 – 7;
 - 2014 – 4.

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Red-eared Slider Recorded since 2014



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Amphibian Findings since 2006

- Target species, Chinese Bullfrog, was recorded in June.

Species/ Maximum Total Number of Individuals Recorded in All Ponds in LMC EEA	2006 - 2010	2011	2012	2013	2014	2015	2016	2017	2018	2019*
Azul Common Toad <i>Bufo melanostictus</i>	3	4	3	1	2	7	1	7	15	6
Asiatic Painted Frog <i>Kaloula pulchra</i>	-	2	2	1	-	-	-	-	1	2
Butler's Pigmy Frog <i>Microhyla butleri</i>	2	-	-	2	-	-	-	-	45	-
Orange Pigmy Frog <i>Microhyla ornata</i>	128	25	5	7	4	-	-	-	20	18
Marbled Pigmy Frog <i>Microhyla pulchra</i>	-	-	-	-	1	-	-	-	50	-
Paddy Frog <i>Feljeryaya limoschani</i>	35	7	20	6	1	10	35	19	13	6
Chinese Bullfrog <i>Hoplobatrachus chinensis</i>	4 (9)	2 (5)	2 (8)	1 (2)	1 (2)	0 (0)	0 (0)	4 (9)	0 (0)	1 (1)
Gunther's Frog <i>Rana guentheri</i>	157	86	132	108	293	115	82	342	172	127
Two-striped Grass Frog <i>Rana topehensis</i>	2	1	1	1	-	2	-	-	-	-
Brown Tree Frog <i>Polypedates megacephalus</i>	33	33	12	14	7	3	6	6	1	2
Number of species recorded	8	8	8	9	7	5	8	5	8	7

Maximum count (per survey) is indicated in the table for Chinese Bullfrog, the number in brackets are the total number of individuals recorded in the year.
 * Include data from January to June.

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Dragonfly Findings since 2006


Dragonfly Recorded as Adults or Exuviae at LMC EEA	2006 - 2010	2011	2012	2013	2014	2015	2016*	2017*	2018	2019*
Number of Species Recorded	26	21	25	22	21	17	21	25	21	22
Total Number of Species Recorded	34									

Key: * A Midge species was also recorded.
 @ Include data from January to June.

Species recorded are presented in Appendix for reference.

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Thank You



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