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

**Environmental Committee**

Minutes of Meeting No. 26 held at 4:00pm

On Thursday, 12 December 2013,

at Room 12A, 23/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)
Mr. Michael Kilburn	The Hong Kong Bird Watching Society	Member (NGO)
Dr. Ng Cho-nam	The University of Hong Kong	Member (NGO)
Mr. Chan Kam-foon	Environmental Engineering Manager	Member (MTR)
Ms. Janice Choi	Maintenance Manager-Civil	Member (MTR)
Mr. Peter Choi	Environmental Engineer	Member (MTR)
Dr. Michael Leven	Ecological Consultant	Member (consultant)
Ms. Lai Nga-yee	Ecological Consultant	Member (consultant)
<b>Absent with apology:</b>		
Ms. Kenny Yiu	Manager - Environmental Engineering	Member (MTR)

<b>Attachments</b>	
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Annex A	Presentation Material of 26 <sup>th</sup> EC Meeting
Annex B	Distributions of amphibian species at EEA in 2010 and 2013



<u>Item/Description</u>	<u>Action By</u>
<p>channel although the number of snipes reported was lower and the channel is now more vegetated.</p>	
<ul style="list-style-type: none"> <li>• Bund maintenance work at Pond 3 and 4 was delayed due to the heavy rainfall in the wet season and typhoon in October 2013; the work was completed in early December 2013. These two ponds would be limed immediately and then re-filled with water. During the work, fine adjustments on the height of islands and bottoms of the ponds were made to allow good access of mobile pumps so that the ponds can be easily drained completely for waterbirds. <u>A Member (NGO)</u> enquired the ponds that still needed re-profiling. <u>A Member (consultant)</u> reported that bund maintenance work at Pond 7, 9 and 10 were completed in the last few years; re-profiling of Pond 5 and 8 were needed but there is no immediate crisis in these two ponds. <u>A Member (NGO)</u> expressed concerns on the pond drain-down problem reported in the last EC meeting and enquired whether the re-profile work would make pond drain- more effective as stated in the management review report. <u>A Member (consultant)</u> noted that this recommendation was considered in the pond maintenance work of Pond 3 and 4, but it is necessary to wait till the end of the wet season to see the results as the ponds would be drained at that time.</li> </ul>	Noted
<ul style="list-style-type: none"> <li>• Red Imported Fire Ant (RIFA) nest treatments were still on-going and 615 nests were treated between July and September 2013. <u>A Member (NGO)</u> noted that the number of RIFA nest treated was lower than before. <u>A Member (consultant)</u> noted that there were small RIFA nests on-site which were difficult to notice; grass would be needed to keep short if it is needed to check out these small nests. <u>A Member (consultant)</u> also noted that RIFA did not appear to seriously impact the local ecology; in California the species has been implicated in affecting grass species composition in natural grassland; such an impact would be of limited concern in Hong Kong where most of the grass species occurring in lowland grassland are exotic. <u>A Member (NGO)</u> enquired whether the red fire ants would affect the succession of grass and other species like Greater Painted-snipe. <u>A Member (consultant)</u> reported that there were no evidences on this and RIFA is seldom found in fish pond areas at EEA. <u>A Member (NGO)</u> noted that RIFA does not affect the ecology much in Hong Kong according to <u>Dr. John Fellowes</u>, but <u>A Member (NGO)</u> worried that if the species increases in numbers, it may start affecting the ecology. <u>A Member (NGO)</u> suggested showing the number of RIFA nests at EEA over the years in graphs in the next EC meeting to look at the trend and the ecological impact of the species.</li> </ul>	Noted
<ul style="list-style-type: none"> <li>• Vegetation management measures during the reporting period included routine grass cutting and weeding; removal of unwanted species; removal of reeds and sedges from Pond 17 and 19 and transplantation of lilies from Pond 22 to Pond 15. <u>A Member (NGO)</u> queried whether Parrot Feather was under control at LMC EEA. <u>A Member (consultant)</u> reported that there were no quantitative data on Parrot Feather at LMC EEA, but this species was easily seen if they are present on-site; only small patches of Parrot Feather were seen at Pond 21 previously and they were removed by hand; no Parrot Feather were seen at EEA in the reporting period and the control measures were considered to be very effective.</li> </ul>	Noted
<ul style="list-style-type: none"> <li>• Apple Snail Trap trial was on-going at Pond 21 in the reporting period but results were not very significant in September and October as the Apple Snails might not be very active in these two months; the study would continue and results will be reported in the next EC meeting.</li> </ul>	Noted
<ul style="list-style-type: none"> <li>• Black Carps were stocked at pond 15 to control the apple snails in the pond in order to allow lily to grow better and provide a suitable habitat for the target Pheasant-tailed Jacana to breed. <u>A Member (NGO)</u> enquired whether Black Carp</li> </ul>	Noted

<u>Item/Description</u>	<u>Action By</u>
<p>would affect the food source of breeding Pheasant-tailed Jacana; <i>A Member (NGO)</i> enquired whether Black Carp would affect the abundance of dragonflies and amphibians. <i>A Member (consultant)</i> noted that Black Carp are highly carnivorous but it is not clear whether they would affect the number of these two groups. Effects of the carp will be monitored and reviewed; this species will not breed in Hong Kong and can be removed if it is found that the net effect of its use is negative.</p>	Noted
<ul style="list-style-type: none"> <li>• Water quality management measures included lime and peanut residue adding; lime was stored on-site which allow a faster adjustment of water quality.</li> </ul>	Noted
<ul style="list-style-type: none"> <li>• Target bird species monitoring results were reported; it was noted that Chinese Pond Heron have reached the target for two consecutive years after providing more emergent vegetation in some ponds at EEA. <i>A Member (NGO)</i> noted a drop in density of Chinese Pond Heron in Control Areas while the density at EEA did not change much when compared with previous years. <i>A Member (consultant)</i> suggested keeping an eye on this for the next six months and reviewing at the next meeting.</li> </ul>	Noted
<ul style="list-style-type: none"> <li>• Great Egret did not reach the target this year mainly due to the extensive bund work at Pond 3 and 4. As the bund work was completed; with timely drain-down, close monitoring of fish stocking and on-going establishment of roost at Pond 2, it is believed the number of this species at EEA would increase gradually. Little Egret continues not to reach its target; the ability to fully drain the reprofiled ponds may help but establishing an egretty (or at least a regular roost) is probably the best long term solution.</li> </ul>	Noted
<ul style="list-style-type: none"> <li>• Infra-red triggering cameras without flash or glow were deployed at EEA since December 2012; thirteen records of Eurasian Otter (of which twelve records were obtained by the infra-red triggering cameras) were obtained at EEA since January 2013. This is the highest number of records of the species since establishment of EEA. <i>A Member (NGO)</i> enquired whether the high count of otter was due to the completion of the site boundary fence; <i>A Member (consultant)</i> reported that the site fence was not yet completed and dogs still get into the site through the gaps.</li> </ul>	Noted
<ul style="list-style-type: none"> <li>• The distribution of the four most common amphibian species (Brown Tree Frog, Günther's Frog, Ornate Pigmy Frog and Paddy Frog) in 2010 and 2013 were compared. Of these four species, Ornate Pigmy Frog was the only one found to be largely dependent on the marshy habitats in Compartment C; but appeared to be declining in numbers; further study is needed for understanding the reason behind this. <i>A Member (NGO)</i> requested for a copy of these maps.</li> </ul>	Noted
<ul style="list-style-type: none"> <li>• Upcoming major events included revision of HCMP based on findings in Management Review Report (MRR), VEP based on the revised HCMP and new contract for the ecological consultant in 2014. There will be new fauna targets, new monitoring items, particularly to evaluate the potential impacts of the site boundary fence on Eurasian Otter, and relocation or reed habitats and conversion pond 22 into marsh. <i>A Member (NGO)</i> enquired whether there are otter filters under the site boundary fence; <i>A Member (consultant)</i> reported that there will be uPVC pipes installed under the fence for otters to pass through in Compartment A; passages will be also be formed (no pipes) in Compartments B and C. These are designed to be too small to allow dogs to enter the EEA; the design was already approved by AFCD. However, dogs may still able to dig under the fence and get into EEA and therefore it is necessary to see how effective the design is.</li> </ul>	
<p><b>Item 3 - <u>Discuss the LMC Management Review Report</u></b></p>	

<u>Item/Description</u>	<u>Action By</u>
<p>4. <u>A Member (consultant)</u> reported on the revision of the target species and change in frequency of bird monitoring proposed in the Management Review Report. Discussion included the following:</p> <ul style="list-style-type: none"> <li>a) <u>A Member (NGO)</u> noted the management review report is a good record to show the works done at EEA and whether they worked well, and is a good plan to go forward.</li> <li>b) <u>A Member (NGO)</u> enquired whether it is necessary to present this document to ACE. <u>A Member (consultant)</u> reported that this should be a decision made by EPD, although the report has already gone through a review process by the EC.</li> <li>c) <u>A Member (NGO)</u> noted that the revision of target species can show that the EEA is fulfilling its function and can extend its function to more species, and the site has a function of ecological restoration rather than just ecological mitigation.</li> <li>d) <u>A Member (NGO)</u> enquired whether it is necessary to apply a VEP for the changes proposed in the 5-yearly review report. <u>A Member (consultant)</u> noted that it is needed to apply a VEP for the changes.</li> <li>e) <u>A Member (NGO)</u> noted that MRR is a good document for the revision of target species with data back up and valid reasons for the changes.</li> </ul>	Noted
<p><b>Item 4 - <u>Any Other Business</u></b></p> <p>5. <u>A Member (MTR)</u> reported on the management structure and water circulation system of LMC EEA.:</p> <ul style="list-style-type: none"> <li>a) <u>A Member (NGO)</u> enquired as to the party responsible for the pond re-profiling work. <u>A Member (MTR)</u> noted that if such work is needed, MTR would check whether the wetland maintenance contractor can do the work first. If the wetland maintenance contractor cannot do the work, MTR would find an external contractor for the work. It is noted that the current wetland maintenance contractor (Yee Sun Garden) has the pond re-profiling skill.</li> <li>b) <u>A Member (NGO)</u> enquired as to the minimum number of 6" water pumps on site. <u>A Member (MTR)</u> noted that only two 6" water pumps can operate on-site at the same time; there are a total of five 6' pumps on site and three of them are spare pumps.</li> <li>c) <u>A Member (NGO)</u> enquired whether the small water pumps at EEA were familiar to the local contractors in Hong Kong. <u>A Member (MTR)</u> noted that these small water pumps, different from those 6" pumps, were ordered in Hong Kong and they were familiar to local contractors.</li> </ul> <p>6. <u>A Member (NGO)</u> noted that although the monitoring data at LMC EEA showed that most targets were still meeting the target level set at the EP (i.e. double density of that if the Control Areas), the total number of species recorded at EEA seemed to be declined from the results shown in the last EC meeting; this could be due to the provision of fish and adjustment of water level. <u>A Member (NGO)</u> suggested showing the numerical trend of the species of EEA in the next EC meeting to identify whether there were absolute decline in waterbirds on-site. <u>A Member (consultant)</u> agreed this would be an useful exercise to look at the trend of the waterbirds at EEA; he further suggested to compare the data with results of the Mai Po Inner Deep Bay Ramsar Site Waterbird Monitoring Programme to understand whether the changes were just occur at EEA or in a Hong Kong context. <u>A</u></p>	<p>Noted</p> <p>Noted</p>


<u>Item/Description</u>	<u>Action By</u>
<p><u>Member (consultant)</u> further noted that reports from other organizations like Mai Po, Hong Kong Bird Watching Society and the Royal Society for the Protection of Birds in the UK showed that waterbird numbers declined slightly in aging wetlands; pond re-profiling can solve the problem and attract waterbirds effectively; therefore he suggested to see how the waterbird number change at the newly re-profiled Pond 3 and 4. <u>A Member (NGO)</u> noted that the newly re-profiled Gei Wai #11 at Mai Po Nature Reserve was effective in attracting waterbirds in particular ducks.</p> <p>7. <u>A Member (NGO)</u> enquired that whether it is possible to have some measures in the management system to make sure the landscape contractor would complete their work properly. <u>A Member (MTR)</u> noted that MTR had included some new terms in the new wetland maintenance contracts, for example if the contractor could not provide sufficient amount of fish for stocking, payments could be deducted. MTR also had meetings with the contractor to ensure that the contractor would be able to get sufficient quantity of fish every week. The three parties (MTR, Wetland Consultant and Wetland Maintenance Contractor) would have better co-operation and closer relationship in the new contract terms. <u>A Member (MTR)</u> also reported that YSG was able to meet the requirements in the first two months of the new contract, while close monitoring on their work would be continued. <u>A Member (MTR)</u> also noted that regular checking of water pumps at EEA was added as an item in the Landscape contract to ensure the pumps on-site would work properly.</p>	Noted
<p><b>Item 5 - <u>Date of Next Meeting</u></b></p> <p>8. The date of the next meeting is to be advised.</p>	Noted

**Annex A**

## Lok Ma Chau Spur Line 26<sup>th</sup> Environmental Committee Meeting

Report on Ecological Monitoring & Management & Works Programme  
Jul – Dec 2013

12<sup>th</sup> Dec 2013



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### Overview of Management Works Jul-Dec 2013

- Contract with City Landscaping Limited ended in end of September; contract was extended a month to the end of October 2013
- A new contractor --- Yee Sun Garden Limited on-site from November 2013





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26<sup>th</sup> Environmental Committee Meeting  
Report on Ecological Monitoring & Management & Works  
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### Overview of Management Works Jul-Dec 2013

#### Erection of Permanent Site Boundary Fence







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### Scheduled Management Works for 2013

- Erection of Permanent Site Boundary Fence (Progress as of November 2013)






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### Scheduled Management Works for 2013

#### Scheduled Bund Maintenance Works at Ponds 3 & 4

- Delayed from 2012
- Bund Maintenance Works at Ponds 3 and 4 started in Oct 2013
- Anticipated completion: Pond 3 and Pond 4 (This week)





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### Scheduled Management Works for 2013

#### Scheduled Bund Maintenance Works at Ponds 3 & 4





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Overview of Management Works Jul-Dec 2013

**Water level Adjustment**

- Pond 9 and 10 will be partially drained in the dry season
- Two large pumps are fixed and they are ready for pumping work






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Overview of Management Works Jul-Dec 2013

**Winter Fish Stocking**

- 1,000 kg of trash fish is scheduled to be stocked every week from November to March
- Fish stocked are Tilapia with mean size around 10 cm
- Stocking is undertaken as scheduled in Nov 2013




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Overview of Management Works Jul-Dec 2013

**General Site Management**

- Pest Control: Red Fire Ant nests and Apple Snail (ongoing)
- Water quality management (ongoing)
- Dog trapping (ongoing)
- Water level adjustment (ongoing)
- Nest box maintenance (routine check for damage etc.; pre-breeding season check in February);
- Repair of floating platforms (anchors) (completed);
- Bund leak repair (Pond 5, 8, 15) (completed).


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Overview of Management Works Jul-Dec 2013

**Pest Management**


- 615 Red Fire Ant nests were treated with the approved pesticide between July and September
- Red Fire Ant nests treatment will be continued using the approved pesticide


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Overview of Management Works Jul-Dec 2013

**Vegetation Management**

- Routine grass cutting & weeding
- Routine removal of unwanted species (*Phragmites*, *Typha*, *Mimosa*, *Mikania*, *Tung choi* etc.)
- Removal of reeds and sedges from Ponds 17 & 19
- Transplantation of lilies from Pond 22 to Pond 15


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Overview of Management Works Jul-Dec 2013

**Pest Management**

- Apple Snail Trap Trial
- Trap apple snails of all sizes
- Apple snails aggregate around the trap after baiting and make collection easier
- Required to check after one/two days after baiting




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### Amphibian Observations

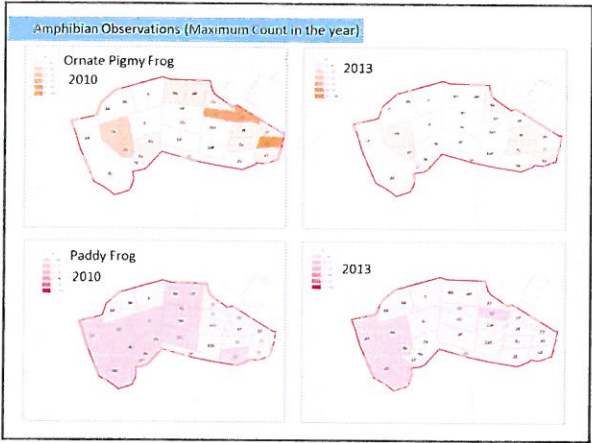
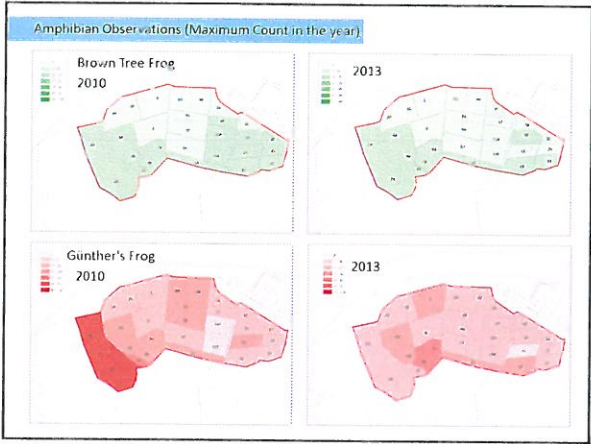
Maximum Total Number of Individuals recorded in all ponds in LMC EEA		2006	2007	2008	2009	2010	2011	2012	2013 <sup>A</sup>	
Asian Green Frog	<i>Rana maculipes</i>	0	3	3	5	2	4	2	2	
Asian Common Frog	<i>Rana sierrae</i>	0	0	0	0	0	0	0	0	
Spotted Frog	<i>Rana maculipes</i>	0	0	0	0	0	0	0	0	
Common Frog	<i>Rana sierrae</i>	0	0	15	49	126	20	5	7	
Spotted Frog	<i>Rana maculipes</i>	0	0	0	0	0	0	0	0	
Chinese Mudpuppy	<i>Ambystoma taeniopus</i>	0	1	2	0	0	0	0	0	
Spotted Frog	<i>Rana maculipes</i>	180	157	146	74	217	44	127	206	
Asian Common Frog	<i>Rana sierrae</i>	0	0	0	0	0	0	0	0	
Brown Tree Frog	<i>Rhombophryne maculata</i>	11	24	33	44	29	30	32	74	
<b>No. of species recorded</b>		<b>3</b>	<b>6</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>9</b>	
<b>Total No. of species recorded</b>		<b>9</b>								

Remarks: <sup>A</sup> Up to 9 Dec 2013



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### Reptile Observations

Maximum Total Number of Individuals recorded in all ponds in LMC EEA		2006	2007	2008	2009	2010	2011	2012	2013 <sup>A</sup>	
Red-spotted Salamander	<i>Pseudis sinuatis</i>	0	0	0	0	1	2	0	1	
Chinese Spotted Turtle	<i>Maemides sinensis</i>	1	1	1	1	1	1	1	1	
Asian Green Frog	<i>Rana maculipes</i>	0	0	0	0	0	0	0	0	
Asian Common Frog	<i>Rana sierrae</i>	0	0	0	0	0	0	0	0	
Chinese Mudpuppy	<i>Ambystoma taeniopus</i>	0	0	0	0	0	0	0	0	
Asian Green Frog	<i>Rana maculipes</i>	4	5	2	2	0	0	0	0	
Chinese Mudpuppy	<i>Ambystoma taeniopus</i>	0	0	1	0	0	0	0	0	
Asian Common Frog	<i>Rana sierrae</i>	0	0	0	0	1	0	0	0	
Asian Green Frog	<i>Rana maculipes</i>	0	0	0	0	0	0	0	0	
Asian Common Frog	<i>Rana sierrae</i>	1	1	1	0	0	0	0	0	
Asian Green Frog	<i>Rana maculipes</i>	1	1	0	1	0	1	0	1	
Asian Common Frog	<i>Rana sierrae</i>	0	0	0	1	1	0	0	0	
Asian Green Frog	<i>Rana maculipes</i>	1	1	0	0	0	0	0	0	
Asian Common Frog	<i>Rana sierrae</i>	1	1	0	0	1	1	1	1	
Asian Green Frog	<i>Rana maculipes</i>	1	1	1	2	6	3	1	1	
Asian Common Frog	<i>Rana sierrae</i>	0	1	0	0	0	0	0	0	
Asian Green Frog	<i>Rana maculipes</i>	0	0	0	0	0	0	0	0	
<b>No. of species recorded</b>		<b>7</b>	<b>8</b>	<b>6</b>	<b>7</b>	<b>10</b>	<b>6</b>	<b>6</b>	<b>10</b>	
<b>Total No. of species recorded</b>		<b>17</b>								

Remarks: <sup>A</sup> Up to 9 Dec 2013



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### Dragonfly Monitoring


**Species Diversity**


Dragonfly recorded as adults or exuviae at LMC EEA	2006	2007	2008	2009	2010	2011	2012	2013 <sup>A</sup>
No. of Species Recorded	22	23	23	22	24	21	25	22
Total No. of Species Recorded	<b>31</b>							

Remarks: <sup>A</sup> Up to 9 Dec 2013




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- ### Upcoming Events (Major)
- 5-yearly Review (Management Review Report) finalized
  - Revision of the HCMP based on findings of the MRR
    - New fauna targets
    - New monitoring items; particularly to evaluate the potential impact of the Site Boundary Fence on Eurasian Otter
    - Relocate reed habitat and convert Pond 22 into marsh
  - VEP based on the revised HCMP
    - Implementation of the revised HCMP
  - New contract for the ecological consultant on the project in 2014
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**Proposed Target Species in the 5-yearly Review**

**Target Species (Newly-added Species highlighted)**

Birds (30 species)	
Great Cormorant	Swinhoe's Snipe
Grey Heron	Common Snipe
Great Egret	Bluethroat
Little Egret	Palla's Grasshopper Warbler
Chinese Pond Heron	Zitting Cisticola
Black-faced Spoonbill	Japanese Yellow Bunting
Eurasian Teal	Red-billed Staring
Greater Spotted Eagle	Eurasian Vigeon
Eastern Imperial Eagle	Cinnamon Bittern
Japanese Quail	Little Grebe
Eurasian Coot	Black-crowned Night Heron
Plum-tailed Jacana	Intermediate Egret
Greater Painted Snipe	White-cheeked Starling
Black-winged Stilt	White-shouldered Starling
Pintail Snipe	Yellow-breasted Bunting

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**Proposed Target Species in the 5-yearly Review**

**Target Species going to be Removed**

**Birds (4 species)**

Eurasian Hobby
Richard's Pipit
Stejneger's Stonechat
Black-naped Oriole

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**Proposed Target Species in the 5-yearly Review**

**Target Species (Newly-added Species highlighted)**

Mammals
Eurasian Otter
Leopard Cat
Amphibian and Reptile
Burmese Python
Chinese Soft-shelled Turtle
Chinese Bullfrog
Dragonfly
Dragonfly Diversity

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**Change in Tower Count Frequency**

**Statistical Analysis of Tower Count Data 2007-2011**

Species	P-value of MW test (2-tailed) (Between 1 <sup>st</sup> and 2 <sup>nd</sup> Count)
Great Cormorant	0.517
Grey Heron	0.713
Great Egret	0.194
Little Egret	0.089
Black-faced Spoonbill	0.499
Greater Spotted Eagle	0.002
Eastern Imperial Eagle	0.119

For all species except Greater Spotted Eagle, there is no significant difference between the values obtained from the first and second count of the week (95% confidence).

For Greater Spotted Eagle, there was a significant difference between the first and second counts in each week.

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- Upcoming Events (Other)**
- Demolition of the tower at MPST
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**Annex B**

**Annex B** Distributions of amphibian species at EEA in 2010 and 2013

