

## **Appendix 12-7**

### **Methodology and Results of Investigations into the Distribution and Status of Eurasian Otter in the LMC Loop Area**

#### **Introduction**

Eurasian Otter *Lutra lutra* (歐亞水獺) is a mammal species native to Hong Kong, though it is rare and is considered to be of conservation concern (Shek 2006, Shek *et al.* 2007). It is listed as Near-threatened by IUCN (2010) and as Endangered in China (CSIS 2010). In the SAR, it is protected under the Wild Animals Protection Ordinance (Cap. 170) and Protection of Endangered Species of Animals and Plants Ordinance (Cap. 586).

In Hong Kong, the range of Eurasian Otter is highly restricted and mainly confined to the northwest New Territories. According to Shek (2006) and Shek *et al.* (2007), it primarily occurs in the Mai Po and Inner Deep Bay Area, and he reports one sighting near LMC Loop.

Surveys documented in Shek (2006) and Shek *et al.* (2007) were carried out from 2002 to 2006 and represent the most systematic mammal study carried out in HK. Although surveys were also conducted within and around the LMC Loop from March 2008 to February 2009, no Eurasian Otters were recorded (ENSR 2009). Since Eurasian Otter is rare in Hong Kong and is of high conservation value, a better understanding of its distribution in areas potentially affected by development in and near LMC Loop is important to assess impact on this species. Further surveys were thus considered necessary and this appendix documents the methodology and results of these.

#### **Literature Review**

Literature reviewed comprised published works such as Shek (2006) and Shek *et al.* (2007), accessible EIA and ecological baseline study reports conducted near or within the Project Area, as well as monitoring reports published for the LMC WMA. Scattered mammal sightings reported in the University of Hong Kong newsletter *Porcupine!* were also reviewed.

Ecological monitoring for the LMC WMA, which mainly consists of pond-like structures, has continuously been carried out since mid 2002, and Eurasian Otter was recorded inside the area from 2002 to 2003 and from 2005 to 2009 (for location of sightings, see **Figure 12-3**). In addition, a single Eurasian Otter was recorded in January 2009 at an abandoned fish pond near Sha Ling, just to the east of Ng Tung River, as part of fieldwork for LUP CAFS. Based on these and on mammal sighting data documented in *Porcupine!*, fish ponds undoubtedly constitute an important habitat for Eurasian Otter in Hong Kong (see also Reels *et al.* 1995).

The wetland at MPNR is also important to this species, and sightings of Eurasian Otter have frequently been made at this site (Reels 1996, Shek *et al.* 2006). Shek (2006) mentions a single observation made near LMC Loop (see **Figure 12-3**). Further, large channels such as the Shan Pui River may also provide habitats for this species (Reels 1996).

#### **Field Surveys**

Usually, mammal surveys are conducted simultaneously with surveys of other faunal groups, such as herpetofauna and odonata (during daytime and night-time). These surveys generally comprise a fixed transect passing through a variety of habitats within a study area. Eurasian Otter, however, is a secretive creature, and consequently very difficult to survey using standard techniques. In Hong Kong, its small population size and largely nocturnal or crepuscular habits make it even more difficult to survey than other wild animals. Even the use of remote-sensing camera-trapping in areas known to support a population of the species is

not very successful. Despite being in place for six years at times of otter presence in the LMC Spur Line WMA, fewer than five successful photographic records were obtained. In addition, during seven years of regular and fairly intensive monitoring of fauna and flora at the site, the species has been recorded on only 17 occasions.

In view of this situation, besides routine transect surveys for other fauna during which any records of Eurasian Otter were noted, a questionnaire survey was also conducted to obtain supplementary information. Interviewees of this survey were mainly fish pond farmers, pond owners and villagers living or working in and around the LMC Loop Area. In addition, local conservationists, ecologists and researchers were also contacted.

During the survey period, the high-pitched call of Eurasian Otter was heard once from the reedbed inside LMC Loop on 12<sup>th</sup> October 2009. In addition, on 19<sup>th</sup> January 2010 an individual was seen swimming in LMC Meander towards the southern margin of the Loop where it landed.

Results of the questionnaire survey indicate that otters utilise reed marsh and fish ponds within LMC Loop, the LMC Meander and Hoo Hok Wai (see **Table A12-16** and **Figure 12-3**). Within the ecological assessment area, apart from the single record to the south of LMC Loop (Shek 2006), no records were reported in areas near the LMC BCP, which is heavily disturbed by human activities.

**Table A12-16** Summary of Results of Questionnaire Survey

Name	Occupation	Location	Time	Other mammals
Mr. Tang	Fish farm worker.	Nil.	Nil.	Nil.
Mr. Au Yeung	Fish farm worker.	Nil.	Nil.	Wild Boar.
Mr. Au Yeung	Fish farm worker.	Nil.	Nil.	Wild Boar.
Mr. Chan	Fish farm worker.	Nil.	Nil.	Wild Boar.
Mr. Chan	Fish farm worker.	Nil.	Nil.	Wild Boar.
Mr. Wong	Pond owner.	Nil.	Nil.	Wild Boar, Small Asian Mongoose.
Mr. Au Yeung	Fish farm worker.	Nil.	Nil.	Wild Boar, Small Asian Mongoose.
Mr. Kwok	Pond owner.	Nil.	Nil.	Nil.
Mr. Chan	Fish farm worker.	Nil.	Nil.	Wild Boar.
Mr. Chan	Fish farm worker.	Nil.	Nil.	Wild Boar.
Ms. Chow	Pond owner.	Nil.	Nil.	Wild Boar.
Mr. Yip	Villager and pond owner.	Ponds at Hoo Hok Wai, bank of LMC Meander, ponds in LMC Loop.	Night.	Wild Boar, Leopard Cat, Burmese Python.
Mr. Kwok	Fish pond farmer.	Nil.	Nil.	Nil.
Mr. Leung	Fish pond farmer.	Two in fish pond next to Ngau Kok Shan.	8-9pm, winter 2008-09.	Wild Boar.
Asia Ecological Consultants staff	Ecologist	One in fish pond near Ngau Kok Shan.	10-11am on morning in	Leopard Cat, Small Asian Mongoose.

Name	Occupation	Location	Time	Other mammals
			1999.	
Asia Ecological Consultants staff	Ecologist	Two in marsh at Hoo Hok Wai.	Early morning, February 2004.	Leopard Cat, Small Asian Mongoose.