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Issue Date : July 2018
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**AGREEMENT NO. CE 65/2013 (EP)
POST-CONSTRUCTION ECOLOGICAL
MONITORING OF RIVER IMPROVEMENT
WORKS IN UPPER LAM TSUEN RIVER
SHE SHAN RIVER AND UPPER TAI PO
RIVER – INVESTIGATION**

**POST-CONSTRUCTION ECOLOGICAL
MONITORING REPORT (No. 46)**

Prepared By:

ALLIED ENVIRONMENTAL CONSULTANTS LTD.

For:

Drainage Services Department

Allied Environmental Consultants Limited
Acousticians & Environmental Engineers

19/F., Kwan Chart Tower, 6 Tonnochy Road, Wan Chai, Hong Kong
Tel: (852) 2815 7028 Fax: (852) 2815 5399 Email: info@aechk.com



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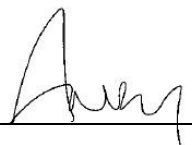
ALLIED ENVIRONMENTAL CONSULTANTS LTD.

For:

Drainage Services Department

Author: 

Joanne Ng
BSc MSc
MHKIEIA AMHKIOA

Checked: 

Andy Lai
Bsc(Hons) AMHKIOA, MSEE, CEEQUAL,
BEAM Pro

Approved: 

Grace Kwok
BEng(Hons) MHKIEIA MHKIOA
MISWA MIAIA MRAPA LEED AP
BEAM Pro CAP

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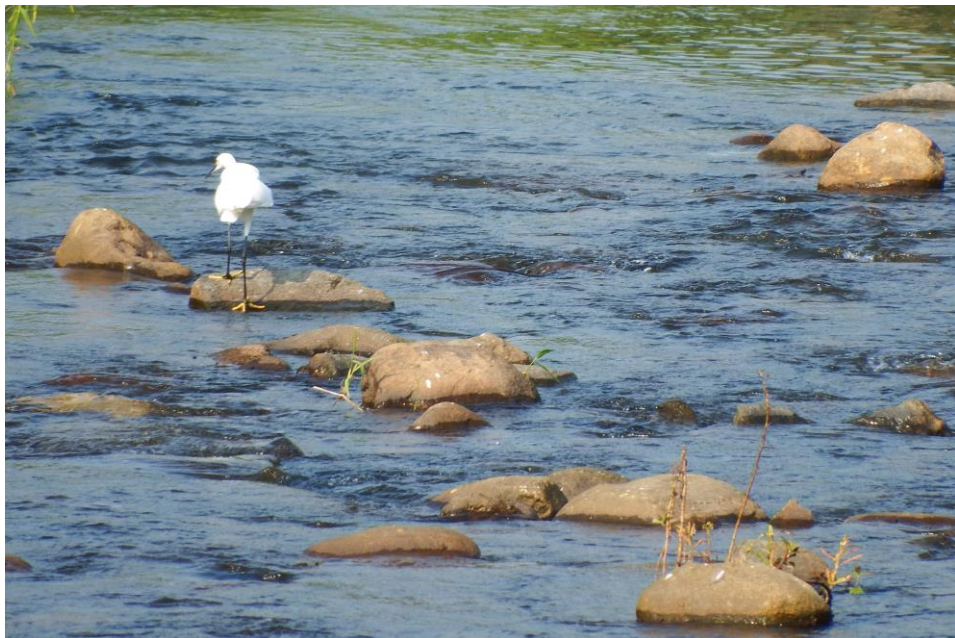
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**Agreement No. CE65/2013(EP)
Post-Construction Ecological Monitoring of River
Improvement Work in Upper Lam Tsuen River, She Shan
River and Upper Tai Po River – Investigation**

**Post-Construction Ecological Monitoring Report (No. 46)
Upper Lam Tsuen River**

October 2017



Prepared by: Mike pang



14 November, 2017

Validated by: Mark Shea



14 November, 2017

Ecology Team: China-Hong Kong Ecology Consultants

Post-Construction Ecological Monitoring Report (No. 46)

Upper Lam Tsuen River

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1 Introduction

- 1.1 Agreement No. CE65/2013(EP) Post-Construction Ecological Monitoring of River Improvement Work in Upper Lam Tsuen River, She Shan River and Upper Tai Po River – Investigation required a post-construction ecological monitoring programme when the project completed. The collected data are mainly used to assess ecological recovery process and effectiveness of ecological migration proposed and enforced during the construction period.
- 1.2 The scope of the ecological monitoring was detailed in EM & A Manual of the project. In brief, the survey aimed to collect data on abiotic factors such as water quality, substratum characteristics, water flow as well as flora and fauna.
- 1.3 China Hong Kong Ecology Consultants Ltd. was committed by Allied Environmental Consultants Ltd (AEC) to undertake the ecological monitoring tasks for the project for December 2014.
- 1.4 This is the number 46 post-construction ecological monitoring report for the project conducted **on 24th of October 2017**. It contains the following subsections:
- Summary of major points
 - Monitoring Methods and Results
 - Summary and Comments

2 Summary of Major Points

- Field ecological monitoring was undertaken on **24th of October 2017**;
- Fauna and flora along the drainage project sections are in a process of re-establishing or restoration; Plants on river bed were experiencing seasonal changes in abundance and phenological appearance;
- The species richness of odonata was lower than the record of last month;
- Bird diversity and abundance were in natural fluctuation;
- An adult Hong Kong Newt was recorded in the potential habitats along the Lam Tsuen River; and
- Fish abundance was similar to the record of last month.

3 Monitoring Methodology

3.1 Riparian Vegetation

Riparian vegetation, including aquatic and emergent, was sampled using line transects along the affected river channel and riparian habitat. Species, relative abundance and average heights were recorded. Vegetation surveys were conducted at four selected belt transects with two located at the lower portion (T3 and T4) of the river channel and another two at the upper section (T1 and T2) of the river respectively (**Figure 1**). The belt transects was run across the river channel in order to collect quantitative data of the vegetation, e.g., species inventory, height, percentage cover. Qualitative data of plants was collected by recording plant species, relative abundance along line transect. Nomenclature and protection status of the species followed those documented in Lai *et al.* (2004) and Hong Kong Herbarium (2015).

3.2 Avifauna

Avifauna survey was conducted during post construction monitoring period. Special attention was given to the river channel and corridor area which birds used as feeding and foraging habitat. Avifauna surveys were undertaken in the early morning plus species recorded in the rest of the day when conducting other taxonomic groups (benthic, fish, insect) monitoring. Numerical abundance was recorded at fixed count points within a radius of 30-50m according to landscape feature and visual penetration extent. The duration of the point count of birds was standardized for 10 minutes at each location in order to collect comparable data. Transect count along accessible section of river channel were used in order to collect qualitative data. Binoculars and digital camera were the main items of equipment used. Nomenclature and protection status of the species follows the AFCD website (www.hkbiodiversity.net) and Carey *et al.* (2001).

The point count was conducted at four locations with two located at the lower portion of the river channel (T3&T4) and the other two located at the upper section of the river (T1&T2). The point count and survey transect locations for the bird survey and sampling sites for surveys of other faunal groups and flora were presented in **Figure 1**.

3.3 Adult Odonata Survey

Adult Odonata survey was conducted along transects (**Figure 1**). Binoculars, digital camera and hand net were utilized to aid identification. Numerical abundance, species identity and other notable behavior were recorded. Nomenclature and protection status of the species followed those documented in the AFCD website (www.hkbiodiversity.net), Wilson *et al.* (2004) and Tam *et al.* (2011). Adult Odonata survey was conducted along line transects in parallel with river channel within the works area where access was permitted.

3.4 Aquatic Macro-invertebrates

Macro-invertebrates in the river channel were surveyed. Sampling was conducted at five sampling locations including two sites located at the lower portion (T3 and T4) of the river channel and another two sites at the upper section (T1 and T2) of the river, as well as the reference site. Those sampling sites covered major type of river habitats, e.g. river pool and riffle (**Figure 1**) Five replicates were taken at each sampling point and pool together for further sample sorting and identification. Kick sampling and hand netting were the survey methodologies for river organisms. Dissection microscope and digital camera were used to aid identification and enumeration. Numerical abundance and species identity were recorded. Nomenclature and protection status of the species has followed those documented in the AFCD website (www.hkbiodiversity.net) and other literatures such as Dudgeon (1994).

3.5 Fish and Newt

Fish community and Hong Kong Newt at the specified river channel was monitored by live trapping, hand netting and direct observation methods.

Sampling was conducted at five sampling locations including two sites located at the lower portion (T3 and T4) of the river channel and another two sites at the upper section (T1 and T2) of the river, as well as reference site. Those sampling sites covered major type of river habitats, e.g. river pool and riffle (**Figure 1**). The number of the observed fish and newt was estimated and recorded. Nomenclature and protection status of the species followed those documented in the AFCD website (www.hkbiodiversity.net) and Lee *et al.* (2004).

3.6 Abiotic Data Collection

3.6.1 Water Quality Monitoring

Dissolved oxygen level, pH value, conductivity, salinity, BOD and nutrient level (nitrate and ammonium) were measured and analyzed by conventional methods in situ or in laboratory. The instruments for measuring dissolved oxygen level, pH value, conductivity, salinity were model: DO-5510, AZ8685, AZ8361 and AZ8374 respectively. All the instruments were calibrated every monitoring month according to the operation manuals in order to obtain the precise result. BOD test took 5 days to complete within darkness incubator with stable temperature at 20°C and was performed using model: DO-5510 for measuring dissolved oxygen. Nutrient levels including nitrate and ammonia were performed in laboratory by applying the In-house method SOP056 (FIA) and SOP057 (FIA) respectively.

3.6.2 Sediment Characteristics

Sediment/substrate characteristics were recorded of sediment cover in percentage e.g. mud, sand, rock, boulder and cemented bottom in the river bed at sampling sites.

3.6.3 Water Flow

Water flow rates in river channel were measured by recording the time taken for a floating object (e.g. floating ball) to cover a measured distance.

The sampling locations for surveys were presented in **Figure 1**.

4 Monitoring Results

4.1 Vegetation

Vegetation has generally covered the gabion and river bed along Lam Tsuen River (Photos 1-3). In total, 75 flora species were recorded within the survey transects along the river course. Some of the vegetation at river bed has been washed out by flooding, especially vegetation in lower section of the river in this month. The recorded floras were generally in good health, and the height of the dominated riparian grass and herb species were in a range from 0.3m to 1.5m as observed along survey transect. Abundant flora species were shown in the **Table 4.1** marked with relative abundance sign “++”. Results of vegetation survey and belt transect survey were presented in **Table 4.1** and **Table 4.2**. **Figure 1** shows the transect line for the flora surveys.

4.2 Fauna

4.2.1 Avifauna

An avifauna survey was undertaken along survey transects and at four selected point count locations. In total, 14 species of birds were recorded during the bird survey and 5 of the total were wetland dependent species including *Alcedo atthis*, *Egretta garzetta* (Photo 4), *Ardeola bacchus*, *Motacilla alba* and *Motacilla cinerea*. They were commonly observed foraging in the river channel. *Pycnonotus jocosus* was a dominated species along the river. All the birds in Hong Kong are under protection of Wild Animals Protection Ordinance (Cap. 170). Among the recorded species, *Ardeola bacchus* and *Egretta garzetta* are classified as Regional Concern by Fellowes *et al.* (2002). Apart from species mentioned above, the others recorded in Lam Tsuen River were common species in Hong Kong. Transect and Point Count locations were shown on **Figure 1**. Result of bird survey was presented in the **Table 4.3**.

4.2.2 Adult Odonata Survey

Odonata survey was performed, and a list of recorded odonata species at Upper Lam Tsuen River is shown in **Table 4.4**. In total, 11 odonata species were recorded during the survey and the recorded species were common species and widely distributed in Hong Kong (Photo 5). The result obtained this month was similar to previous surveys conducted in approximate period of last year. Species richness in this month decreased in comparison with the record of last month. Most of the odonata species in Hong Kong has the peak emergence from spring to late summer. The decrease in abundance of odonata in this month was due to seasonality. It is expected that number of odonata will decrease in coming dry season (Wilson *et al.*, 2004 & Tam *et al.*, 2011). Sampling location was shown in **Figure 1**.

4.2.3 Aquatic Macro-invertebrates

Upper Lam Tsuen River was flowing with constant water during survey (Photo 6). The river benthic fauna collected was mainly comprised of insects, molluscs and crustaceans (Photos 8-9). *Pomacea canaliculata* was found abundant along

the river. Details of recorded of river benthic fauna refers to **Table 4.5**. Sampling location was shown on **Figure 1**.

4.2.4 Hong Kong Newt

Surveys of Hong Kong Newt were conducted (Photo 6) at Upper Lam Tsuen River. Adult Hong Kong Newt was captured at the Lam Tsuen River where the habitat consisted of riparian vegetation during the survey (Photo 7). Riparian vegetation grown along the channel especially along water margin could provide shelter and breeding habitat for Hong Kong Newt. Hong Kong Newt is listed in Wild Animals Protection Ordinance (Cap. 170) and classified as “Near Threatened” under IUCN Red List Status and as “Potential Global Concern” by Fellowes *et al.* (2002). Record of Hong Kong Newts can be referred to **Table 4.6**.

4.2.5 River Fish Fauna

Fish surveys were performed at Upper Lam Tsuen River during field monitoring. In total, 18 species of freshwater fish, including species recorded from reference site, were recorded. *Oreochromis niloticus*, *Zacco platypus* and *Rhinogobius* spp were the dominated species in the river. *Acrossocheilus parallens* is a rare freshwater fish that only recorded in few of reservoir catchments and streams in Hong Kong (Lee *et al.*, 2004) and listed as Global Concern by Fellowes (2002). It was observed along the surveyed river with pool. Except *Acrossocheilus parallens*, *Parazacco spilurus* is classified as Vulnerable in China Red Data Book and observed along the river with low abundance. Fish counting at 2 x 2 meter area were performed and number of fish individuals was similar to the record of last month. Details of recorded of fish fauna refers to **Table 4.6**. Sampling location was shown on **Figure 1**.

4.3 **Abiotic Data**

Data on water quality and major river hydrological feature (water flow and substratum) of the river were collected and are presented in the **Table 4.7**.

Generally, the water was not polluted and nutrient levels were generally low. Results of water test were presented in the **Table 4.7**.

The river substratum was comprised of over 75-93% stones or rocks in most of the river sections with moderate water flow (up to 0.2m/second at pool and 0.5m/second at riffle).

5 Summary and Commentary

Post construction ecological monitoring was carried out in October 2017 and relevant biotic and abiotic data was collected according to project specification and EM & A Manual. Benthic fauna was temporally de-faunated in river sections due to river bed engineering works during construction period between 2008 and early 2013 and is under recovery process after that period. Adult amphibian Hong Kong Newt was recorded at river channel where the river margin covered with riparian vegetation. *Acrossocheilus parallens*, a rare freshwater fish species in Hong Kong, was observed at a few locations in the river channel with pool. In addition to *Acrossocheilus parallens*, *Parazacco spilurus* recorded in the river is also considered with conservation interest and observed along the river with low abundance.

Aquatic and riparian vegetation along river channel was re-established. Vegetation has generally covered the gabion and covered the river bed along Upper Lam Tsuen River.

The water quality of the surveyed river was not polluted although the river receives low concentration of nutrients from the nearby agriculture lands and resident houses.

6 REFERENCES

Carey, G.J., Chalmers, M.L., Diskin, D.A., Kennerley, P.R., Leader, P.J., Leven, M.R., Lewthwaite, R.W., Melville, D.S., Turnbull, M. and Yung, L.(2001). *The Avifauna of Hong Kong*. Hong Kong Bird Watching Society.

Dudgeon, D. (2003). *Hillstreams*. The Department of Ecology & Biodiversity of The University of Hong Kong and Wan Li Book Co, Lte. Hong Kong.

Dudgeon, D. and Corlett, R. (1994). *Hills and Streams - An Ecology of Hong Kong*. Hong Kong University Press, Hong Kong.

Fellowes, J.R., Lau, M.W.N., Dudgeon, D., Reels, G., Ades, G.W.J., Carey, G.J., Chan, B.P.L., Kendrick, R.C., Lee, K.S., Leven, M.R., Wilson, K.D.P. & Yu, Y.T. (2002). Wild animals to watch: Terrestrial and freshwater fauna of conservation concern in Hong Kong. *Memoirs of the Hong Kong Natural History Society* 25: 123-159.

Hong Kong Biodiversity Website (2015) :

<http://www.afcd.gov.hk/english/conservation/hkbiodiversity/hkbiodiversity.html>

Hong Kong Herbarium (2015) :

<http://herbarium.gov.hk/>

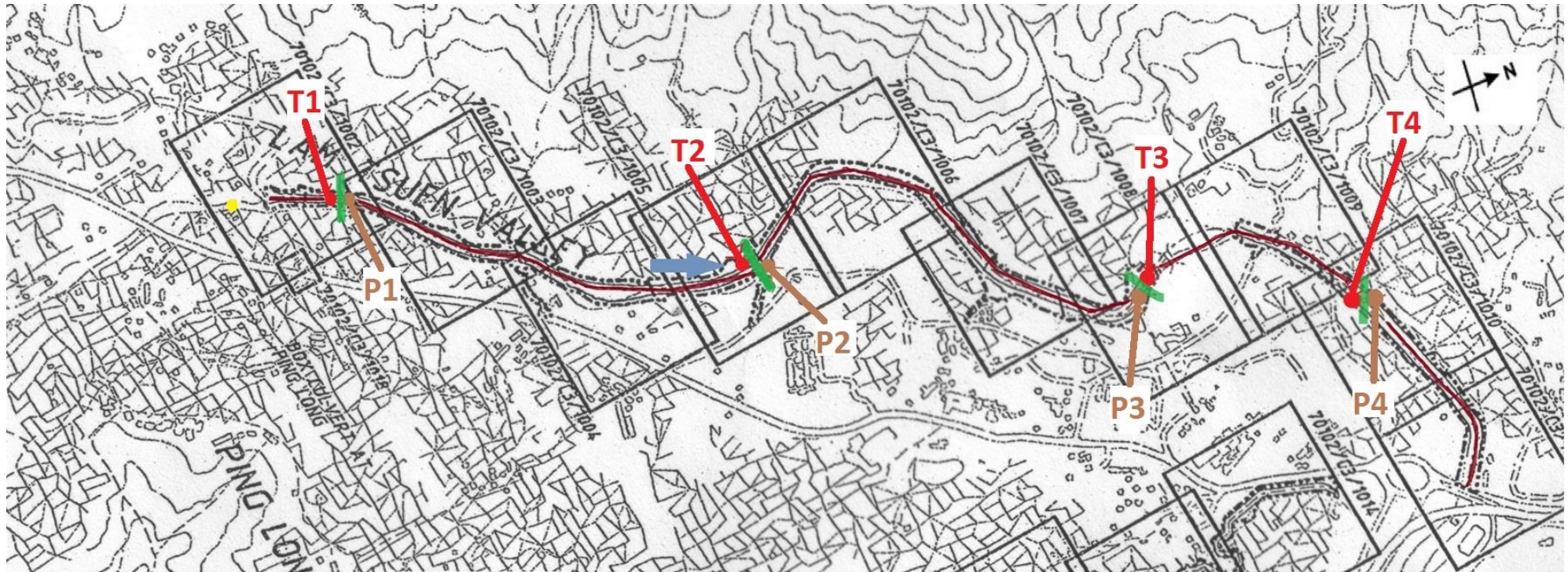
Lai, P.C.C., Lam, Y.W., So, P.S., Tam, K.Y., Wan, P.Y.M. and Yip, K.L. (2004). *Check List of Hong Kong Plants*, Agriculture, Fisheries and Conservation Department. Hong Kong.

Lee, V.L.F., Lam, S.K.S., NG, F.K.Y., Chan, T.K.T. and Young, M.L.C. (2004). *Field Guide to the Freshwater Fish of Hong Kong*, Friends of the Country Parks and Cosmos Books Ltd, Hong Kong.

Tam, T.W., Leung, K.K., Kwan, B.P. S., Wu, K. K. Y., Tang, S. S. H., So, I.W.Y., Cheng, J.C.Y., Yuen, E.F.M., Tsang, Y.M and Leung, H.W. (2011). *The Dragonflies of Hong Kong*. Agriculture, Fisheries and Conservation Department, Friends of the Country Parks and Cosmos Books Ltd., Hong Kong.

Wilson, K.D.P., Tam, K.W., Kwan, B.S.P., Wu, K.K.Y., Wong, B.S.F. and Wong, J.K. (2004). *Field guide to the dragonflies of Hong Kong (2nd Edition)*. Agriculture, Fisheries and Conservation Department, Friends of the Country Parks and Cosmos Books Ltd., Hong Kong.

FIGURES



Legend

- | | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> — Belt transect -Vegetation -Sediment characteristics | <ul style="list-style-type: none"> ● Sampling station -Fish -Aquatic macroinvertebrate -Water quality and flow rate | <ul style="list-style-type: none"> ● Point count location -Avifauna |
| <ul style="list-style-type: none"> ● Reference sample | | <ul style="list-style-type: none"> — Line transect -Avifauna -Adult Odonate -Vegetation |

Figure1. Sampling Location of Ecological Survey and Monitoring at Upper Lam Tsuen River, Tai Po.

PHOTOS



Photo 1 : General view of the river (Lower section)



Photo 2 : General view of the river (Middle section)



Photo 3 : General view of the river (Upper section)



Photo 4 : Avifauna – *Egretta garzetta*



Photo 5 : Odonata – *Neurobasis chinensis*



Photo 6 : Kick Sampling



Photo 7. Hong Kong Newt



Photo 8. Aquatic sample



Photo 9. Aquatic sample

TABLE

Table 4.1. Flora species recorded along the Lam Tsuen River including riparian habitat.

| Family | Species name | Species name in Chinese | Baseline monitoring | Impact monitoring | | | | | | Impact monitoring | | | | Post Construction monitoring | | | Post Construction monitoring | | | | | | |
|-----------------|---------------------------------------|-------------------------|---------------------|-------------------|--------|--------|--------|--------|--------|-------------------|--------|--------|--------|------------------------------|--------|--------|------------------------------|--------|--------|--------|--------|--------|--------|
| | | | Jul to Aug 08 | Jan-09 | Jul-09 | Jan-10 | Jul-10 | Jan-11 | Jul-11 | Jan-12 | Jul-12 | Aug-13 | Dec-13 | Jan-14 | Feb-14 | Mar-14 | Apr-14 | May-14 | Jun-14 | Jul-14 | Aug-14 | Sep-14 | Oct-14 |
| Caryophyllaceae | <i>Drymaria cordata</i> | 荷蓮豆 | | | | | | | | | | | | | | | + | + | + | + | + | + | + |
| Caryophyllaceae | <i>Myosoton aquaticum</i> | 鵝腸菜 | | | | | | | | | | | | | | | + | + | + | + | + | + | + |
| Commelinaceae | <i>Commelina diffusa</i> | 節節草 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | ++ | ++ | ++ |
| Convolvulaceae | <i>Ipomoea cairica</i> | 五爪金龍 | | + | + | + | + | + | + | + | + | + | + | + | + | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ |
| Convolvulaceae | <i>Pharbitis nil</i> | 牽牛 | | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Convolvulaceae | <i>Ipomoea aquatica</i> | 蕪菜 | | | | | | | | | | | | + | + | + | + | + | + | + | + | + | + |
| Cucurbitaceae | <i>Solena amplexicaulis</i> | 茅瓜 | | | | | | | | | | | | | | | + | + | + | + | + | + | + |
| Cuscutaceae | <i>Cuscuta australis</i> | 南方菟絲子 | | | | | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus flabelliformis</i> | 風車草 | | | | | | | | | | | | | | + | + | + | + | + | + | + | + |
| Cyperaceae | <i>Cyperus sp.</i> | 莎草 | | | | | | | | | | | | | | + | + | + | + | + | + | + | + |
| Euphorbiaceae | <i>Macaranga tanarius</i> | 血桐 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Euphorbiaceae | <i>Bischofia javanica</i> | 秋楓 | | | | | | | | | | | | | | | + | + | + | + | + | + | + |
| Fabaceae | <i>Pueraria lobata</i> | 野葛 | ++ | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Fabaceae | <i>Crotalaria pallida</i> | 豬屎豆 | | | | | | | | | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Fabaceae | <i>Sesbania cannabina</i> | 田菁 | | | | | | | | | | + | + | + | + | + | + | + | + | + | + | + | + |
| Fabaceae | <i>Dalbergia benthamii</i> | 兩廣黃檀 | | | | | | | | | | | | | | | | | | | | | |
| Fabaceae | <i>Pueraria lobata var. thomsonii</i> | 粉葛 | | | | | | | | | | | | | | | | | | | | | |
| Lauraceae | <i>Machilus brevipflora</i> | 短序潤楠 | | | | | | | | | | | | | | | | | | | | | |
| Lauraceae | <i>Machilus pauhoi</i> | 刨花潤楠 | | | | | | | | | | | | | | | | | | | | | |
| Magnoliaceae | <i>Michelia alba</i> | 白蘭 | + | + | + | + | + | + | | | | | | | + | + | + | + | + | + | + | + | + |
| Malvaceae | <i>Hibiscus rosa-sinensis</i> | 大紅花 | | | | | | | | | | | | | | | + | + | + | + | + | + | + |
| Mimosaceae | <i>Acacia confusa</i> | 台灣相思 | + | + | + | + | + | + | | | | | | | + | + | + | + | + | + | + | + | + |
| Mimosaceae | <i>Leucaena leucocephala</i> | 銀合歡 | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Mimosaceae | <i>Mimosa pudica</i> | 含羞草 | | | | | | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Mimosaceae | <i>Calliandra haematocephala</i> | 紅絨球 | | | | | | | | | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Moraceae | <i>Ficus hispida</i> | 對葉榕 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Moraceae | <i>Ficus variegata</i> | 青果榕 | | | | | | | | | | | | | | | | | | | | | |
| Moraceae | <i>Ficus subpisocarpa</i> | 筆管榕 | | | | | | | | | | | | | | | | | | | | | |
| Moraceae | <i>Ficus microcarpa</i> | 細葉榕 | | | | | | | | | | | | | | | | | | | | | |
| Musaceae | <i>Musa paradisiaca</i> | 大蕉 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Myrtaceae | <i>Cleistocalyx nervosum</i> | 水翁 | | | | | | | | | | | | | | | + | + | + | + | + | + | + |
| Nyctaginaceae | <i>Bougainvillea spectabilis</i> | 勒杜鵑 | + | + | + | + | + | + | | | | | | | | + | + | + | + | + | + | + | + |
| Oleaceae | <i>Ligustrum sinense</i> | 山指甲 | | | | | | | | | | | | | | | | | | | | | |
| Onagraceae | <i>Ludwigia erecta</i> | 美洲水丁香 | | | | | | | | | | | | | | | ++ | ++ | + | + | + | + | ++ |
| Oxalidaceae | <i>Oxalis corniculata</i> | 酢漿草 | | | | | | | | | | | | | | | + | + | + | + | + | + | + |

Table 4.1. Flora species recorded along the Lam Tsuen River including riparian habitat.

| Family | Species name | Species name in Chinese | Baseline monitoring | Impact monitoring | | | | | | Impact monitoring | | | | Post Construction monitoring | | | Post Construction monitoring | | | | | | | |
|------------------|------------------------------------|-------------------------|---------------------|-------------------|--------|--------|--------|--------|--------|-------------------|--------|--------|--------|------------------------------|--------|--------|------------------------------|--------|--------|--------|--------|--------|--------|-----|
| | | | Jul to Aug 08 | Jan-09 | Jul-09 | Jan-10 | Jul-10 | Jan-11 | Jul-11 | Jan-12 | Jul-12 | Aug-13 | Dec-13 | Jan-14 | Feb-14 | Mar-14 | Apr-14 | May-14 | Jun-14 | Jul-14 | Aug-14 | Sep-14 | Oct-14 | |
| Plantaginaceae | <i>Plantago major</i> | 車前草 | | | | | | | | | | | | | | | + | + | + | + | + | + | + | |
| Poaceae | <i>Panicum repens</i> | 枯骨草 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Poaceae | <i>Pennisetum purpureum</i> | 象草 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Poaceae | <i>Pennisetum alopecuroides</i> | 狼尾草 | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Rhynchelytrum repens</i> | 紅毛草 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Poaceae | <i>Microstegium ciliatum</i> | 剛秀竹 | ++ | ++ | ++ | ++ | ++ | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Poaceae | <i>Brachiaria mutica</i> | 巴拉草 | ++ | + | ++ | ++ | ++ | ++ | + | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | +++ | +++ | +++ | +++ |
| Poaceae | <i>Miscanthus floridulus</i> | 五節芒 | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Poaceae | <i>Arundinella nepalensis</i> | 石珍芒 | | + | + | + | + | + | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Poaceae | <i>Panicum maximum</i> | 大黍 | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Poaceae | <i>Coix lacryma-jobi</i> | 薏苡 | | | | + | + | + | | | | | | + | + | + | + | + | + | + | + | + | + | |
| Poaceae | <i>Arundo donax</i> | 蘆竹 | | | | | | | | | | | | | | | + | + | + | + | + | + | + | |
| Poaceae | <i>Chloris virgata</i> | 虎尾草 | | | | | | | | | | | | | | | + | + | + | + | + | + | + | |
| Poaceae | <i>Setaria palmifolia</i> | 棕葉狗尾草 | | | | | | | | | | | | | | | | | | | | | | |
| Polygonaceae | <i>Rumex trisetifer</i> | 假菠菜 | | + | + | + | + | + | | + | | | | | + | + | ++ | ++ | ++ | ++ | ++ | ++ | ++ | |
| Polygonaceae | <i>Polygonum chinense</i> | 火炭母 | | | | | | | | | | | | | | | + | + | + | + | + | + | + | |
| Polygonaceae | <i>Polygonum hydropiper</i> | 水蓼 | | | | | | | | | | | | | | | + | + | + | + | + | + | + | |
| Polygonaceae | <i>Polygonum glabrum</i> | 光蓼 | | | | | | | | | | | | | | | | | | | | | | |
| Polygonaceae | <i>Polygonum perfoliatum</i> | 杠板歸 | | | | | | | | | | | | | | | + | + | + | + | + | + | + | |
| Polygonaceae | <i>Polygonum lapathifolium</i> | 大馬蓼 | | | | | | | | | | | | | | | + | + | + | + | + | + | + | |
| Portulacaceae | <i>Portulaca oleracea</i> | 馬齒莧 | | | | | | | + | + | + | | | | | | | | | + | + | + | + | |
| Ranunculaceae | <i>Ranunculus sceleratus</i> | 石龍芮 | | | | | | | | | | | | | | | + | ++ | + | + | | + | + | |
| Rubiaceae | <i>Adina pilulifera</i> | 水團花 | | | | | | | | | | | | | | | + | + | + | + | + | + | + | |
| Sapindaceae | <i>Dimocarpus longan</i> | 龍眼 | | + | + | + | + | + | | | | | | | + | + | + | + | + | + | + | + | + | |
| Scrophulariaceae | <i>Scoparia dulcis</i> | 野甘草 | | | | | | | | | | | | | | | + | + | + | + | + | + | + | |
| Scrophulariaceae | <i>Lindernia anagallis</i> | 長蒴母草 | | | | | | | | | | | | | | | + | + | + | + | + | + | + | |
| Solanaceae | <i>Solanum nigrum</i> | 龍葵 | | | | + | + | + | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Solanaceae | <i>Lycopersicon esculentum</i> | 番茄 | | | | | | | | | | | + | + | + | + | + | | | | | | | |
| Solanaceae | <i>Solanum torvum</i> | 水茄 | | | | | | | | | | | | | | | + | + | + | + | + | + | + | |
| Sterculiaceae | <i>Sterculia lanceolata</i> | 假蘋婆 | | | | | | | | | | | | | | | + | + | + | + | + | + | + | |
| Sterculiaceae | <i>Byttneria aspera</i> | 刺果藤 | | | | | | | | | | | | | | | + | + | + | + | + | + | + | |
| Thelypteridaceae | <i>Cyclosorus parasiticus</i> | 華南毛蕨 | | | | | | | | | | | | | | | + | + | + | + | + | + | + | |
| Thelypteridaceae | <i>Macrothelypteris torresiana</i> | 普通針毛蕨 | | | | | | | | | | | | | | | + | + | + | + | + | + | + | |
| Tiliaceae | <i>Microcos nervosa</i> | 布渣葉 | | | | | | | | | | | | | | | | | | | | | | |
| Ulmaceae | <i>Celtis sinensis</i> | 朴樹 | + | + | + | + | + | + | | | | | | | | | + | + | + | + | + | + | + | |

Table 4.1. Flora species recorded along the Lam Tsuen River including riparian habitat.

| Family | Species name | Species name in Chinese | Baseline monitoring | Impact monitoring | | | | | | Impact monitoring | | | | Post Construction monitoring | | | Post Construction monitoring | | | | | | |
|------------------------|------------------------------|-------------------------|---------------------|-------------------|--------|--------|--------|--------|--------|-------------------|--------|--------|--------|------------------------------|--------|--------|------------------------------|--------|--------|--------|--------|--------|--------|
| | | | Jul to Aug 08 | Jan-09 | Jul-09 | Jan-10 | Jul-10 | Jan-11 | Jul-11 | Jan-12 | Jul-12 | Aug-13 | Dec-13 | Jan-14 | Feb-14 | Mar-14 | Apr-14 | May-14 | Jun-14 | Jul-14 | Aug-14 | Sep-14 | Oct-14 |
| Ulmaceae | <i>Trema orientalis</i> | 異色山黃麻 | | | | | | | | | | | | | | | | + | + | + | + | + | + |
| Ulmaceae | <i>Trema tomentosa</i> | 山黃麻 | | | | | | | | | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Urticaceae | <i>Pilea microphylla</i> | 透明草 | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Verbenaceae | <i>Duranta erecta</i> | 假連翹 | | | | | | | | | | | | | | | | | | | | | |
| Urticaceae | <i>Boehmeria nivea</i> | 苧麻 | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Verbenaceae | <i>Lantana camara</i> | 馬纓丹 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Vitaceae | <i>Cayratia corniculata</i> | 角花烏蘘莓 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Floating Plant | | | | | | | | | | | | | | | | | | | | | | | |
| Lemnaceae | <i>Lemna minor</i> | 浮萍 | | + | | | | | | | | | | | | | | + | + | + | + | + | + |
| Submerged Plant | | | | | | | | | | | | | | | | | | | | | | | |
| Hydrocharitaceae | <i>Hydrilla verticillata</i> | 黑藻 | | | | | | | | | | | | | | | | + | + | + | + | + | + |
| No. of species | | | 22 | 38 | 40 | 44 | 44 | 42 | 34 | 40 | 37 | 39 | 47 | 49 | 56 | 62 | 91 | 92 | 93 | 94 | 94 | 94 | 94 |

Note:

+, occurred; ++, common; +++, Species abundant in the the study area

Table 4.1. Flora species recorded along the Lam Tsuen River including riparian habitat.

| Family | Species name | Species name in Chinese | Post Construction monitoring | | | | | Post Construction monitoring | | | | | Post Construction monitoring | | |
|------------------------|------------------------------|-------------------------|------------------------------|--------|--------|--------|--------|------------------------------|--------|--------|--------|--------|------------------------------|--------|--------|
| | | | Nov-14 | Dec-14 | Jan-15 | Feb-15 | Mar-15 | Apr-15 | May-15 | Jun-15 | Jul-15 | Aug-15 | Sep-15 | Oct-15 | Nov-15 |
| Ulmaceae | <i>Trema orientalis</i> | 異色山黃麻 | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Ulmaceae | <i>Trema tomentosa</i> | 山黃麻 | + | + | | | | | | | | | | | |
| Urticaceae | <i>Pilea microphylla</i> | 透明草 | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Verbenaceae | <i>Duranta erecta</i> | 假連翹 | | | + | + | + | + | + | + | + | + | + | + | + |
| Urticaceae | <i>Boehmeria nivea</i> | 苧麻 | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Verbenaceae | <i>Lantana camara</i> | 馬纓丹 | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Vitaceae | <i>Cayratia corniculata</i> | 角花烏蘅莓 | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Floating Plant | | | | | | | | | | | | | | | |
| Lemnaceae | <i>Lemna minor</i> | 浮萍 | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Submerged Plant | | | | | | | | | | | | | | | |
| Hydrocharitaceae | <i>Hydrilla verticillata</i> | 黑藻 | + | + | + | + | + | + | + | + | + | + | + | + | + |
| No. of species | | | 94 | 96 | 63 | 64 | 64 | 66 | 64 | 64 | 63 | 63 | 63 | 65 | 65 |

Note:

+, occurred; ++, common; +++, Species abundant in the the study area

Table 4.1. Flora species recorded along the Lam Tsuen River including riparian habitat.

| Family | Species name | Species name in Chinese | Post Construction monitoring | | | | | | | | | |
|-----------------------|------------------------------------|-------------------------|------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | | | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Apr-16 | May-16 | Jun-16 | Jul-16 | Aug-16 | Sep-16 |
| Riparian Plant | | | | | | | | | | | | |
| Acanthaceae | <i>Ruellia coerulea</i> | 蘭花草 | | | | | | | | | | |
| Acanthaceae | <i>Dicliptera chinensis</i> | 狗肝菜 | + | + | + | + | + | + | + | + | + | + |
| Amaranthaceae | <i>Celosia argentea</i> | 青葙 | + | + | + | + | + | + | + | + | + | + |
| Amaranthaceae | <i>Amaranthus viridis</i> | 野苋 | + | + | + | + | + | + | + | + | + | + |
| Amaranthaceae | <i>Alternanthera philoxeroides</i> | 空心蓮子草 | + | + | + | + | + | + | + | + | + | + |
| Amaranthaceae | <i>Alternanthera sessilis</i> | 蓮子草 | | | | | | | | | | |
| Anacardiaceae | <i>Rhus hypoleuca</i> | 白背漆 | | | | | | | | | | |
| Annonaceae | <i>Uvaria macrophylla</i> | 紫玉盤 | | | | | | | | | | |
| Apiaceae | <i>Oenanthe javanica</i> | 水芹 | + | + | + | + | + | + | + | + | + | + |
| Apiaceae | <i>Centella asiatica</i> | 崩大碗 | + | + | + | | | | | | | |
| Araceae | <i>Alocasia odora</i> | 海芋 | + | + | + | + | + | + | + | + | + | + |
| Araceae | <i>Colocasia esculenta</i> | 芋 | + | + | + | + | + | + | + | + | + | + |
| Araceae | <i>Pistia stratiotes</i> | 大藻 | | | | | | | | | | |
| Arecaceae | <i>Rhapis excelsa</i> | 棕竹 | | | | | | | | | | |
| Asteraceae | <i>Bidens alba</i> | 白花鬼針草 | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ |
| Asteraceae | <i>Mikania micrantha</i> | 薇甘菊 | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ |
| Asteraceae | <i>Ageratum conyzoides</i> | 勝紅薊 | + | + | + | + | + | + | + | + | + | + |
| Asteraceae | <i>Emilia sonchifolia</i> | 一點紅 | + | + | + | + | + | + | + | + | + | + |
| Asteraceae | <i>Wedelia chinensis</i> | 蟛蜞菊 | + | + | + | + | + | + | + | + | + | + |
| Asteraceae | <i>Erechtites hieracifolia</i> | 革命菜 | | | | + | + | + | + | + | + | + |
| Asteraceae | <i>Conyza canadensis</i> | 小蓬草 | + | + | + | + | + | + | + | + | + | + |
| Asteraceae | <i>Youngia japonica</i> | 黃鹌菜 | + | + | + | + | + | + | + | + | + | + |
| Asteraceae | <i>Eclipta prostrata</i> | 鱧腸 | + | + | + | + | + | + | + | + | + | + |
| Asteraceae | <i>Spilanthes paniculata</i> | 金鈕扣 | + | + | + | + | + | + | + | + | + | + |
| Asteraceae | <i>Wedelia trilobata</i> | 三裂葉蟛蜞菊 | | | | + | + | + | + | + | + | + |
| Asteraceae | <i>Sonchus arvensis</i> | 莧菜 | | | | + | + | + | + | + | + | + |
| Athyriaceae | <i>Calliperis esculenta</i> | 菜蕨 | | | | + | + | + | + | + | + | + |
| Blechnaceae | <i>Blechnum orientale</i> | 烏毛蕨 | | | | | | | | | | |
| Brassicaceae | <i>Cardamine flexuosa</i> | 碎米薺 | + | + | + | + | + | + | + | + | + | + |
| Brassicaceae | <i>Nasturtium officinale</i> | 西洋菜 | ++ | + | + | + | + | + | + | + | + | + |
| Brassicaceae | <i>Rorippa indica</i> | 塘葛菜 | + | + | + | | | | | | | |
| Brassicaceae | <i>Capsella bursa-pastoris</i> | 薺菜 | + | + | + | + | + | + | + | + | + | + |
| Buddlejaceae | <i>Buddleja asiatica</i> | 白背楓 | | | | + | + | + | + | + | + | + |
| Caesalpiniaceae | <i>Cassia alata</i> | 翅英決明 | + | + | + | | | | | | | |

Table 4.1. Flora species recorded along the Lam Tsuen River including riparian habitat.

| Family | Species name | Species name in Chinese | Post Construction monitoring | | | | | | | | | |
|------------------------|------------------------------|-------------------------|------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | | | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Apr-16 | May-16 | Jun-16 | Jul-16 | Aug-16 | Sep-16 |
| Ulmaceae | <i>Trema orientalis</i> | 異色山黃麻 | + | + | + | + | + | + | + | + | + | + |
| Ulmaceae | <i>Trema tomentosa</i> | 山黃麻 | | | | + | + | + | + | + | + | + |
| Urticaceae | <i>Pilea microphylla</i> | 透明草 | + | + | + | + | + | + | + | + | + | + |
| Verbenaceae | <i>Duranta erecta</i> | 假連翹 | + | + | + | + | + | + | + | + | + | + |
| Urticaceae | <i>Boehmeria nivea</i> | 苧麻 | + | + | + | + | + | + | + | + | + | + |
| Verbenaceae | <i>Lantana camara</i> | 馬纓丹 | + | + | + | + | + | + | + | + | + | + |
| Vitaceae | <i>Cayratia corniculata</i> | 角花烏蘞莓 | + | + | + | + | + | + | + | + | + | + |
| Floating Plant | | | | | | | | | | | | |
| Lemnaceae | <i>Lemna minor</i> | 浮萍 | + | + | + | + | + | + | + | + | + | + |
| Submerged Plant | | | | | | | | | | | | |
| Hydrocharitaceae | <i>Hydrilla verticillata</i> | 黑藻 | + | + | + | + | + | + | + | + | + | + |
| No. of species | | | 65 | 65 | 65 | 74 | 74 | 74 | 74 | 74 | 74 | 75 |

Note:

+, occurred; ++, common; +++, Species abundant in the the study area

Table 4.1. Flora species recorded along the Lam Tsuen River including riparian habitat.

| | | | Post Construction monitoring | | | | | | | | | | | | | |
|------------------------|------------------------------|-------------------------|------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Family | Species name | Species name in Chinese | Oct-16 | Nov-16 | Dec-16 | Jan-17 | Feb-17 | Mar-17 | Apr-17 | May-17 | May-17 | Jun-17 | Jul-17 | Aug-17 | Sep-17 | Oct-17 |
| Ulmaceae | <i>Trema orientalis</i> | 異色山黃麻 | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Ulmaceae | <i>Trema tomentosa</i> | 山黃麻 | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Urticaceae | <i>Pilea microphylla</i> | 透明草 | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Verbenaceae | <i>Duranta erecta</i> | 假連翹 | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Urticaceae | <i>Boehmeria nivea</i> | 苧麻 | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Verbenaceae | <i>Lantana camara</i> | 馬纓丹 | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Vitaceae | <i>Cayratia corniculata</i> | 角花烏蘅莓 | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Floating Plant | | | | | | | | | | | | | | | | |
| Lemnaceae | <i>Lemna minor</i> | 浮萍 | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Submerged Plant | | | | | | | | | | | | | | | | |
| Hydrocharitaceae | <i>Hydrilla verticillata</i> | 黑藻 | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| No. of species | | | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 |

Note:

+, occurred; ++, common; +++, Species abundant in the the study area

Table 4.2. Flora species recorded from belt transect survey at the Upper Lam Tsuen River

(T1 - located at upper river channel sampling site to T4 - located at lower river Channel sampling site)

| Family | Species | Chinese name | Baseline monitoring | | | | | | | | Impact monitoring | | | | Impact monitoring | | | | Impact monitoring | | | | | | | |
|------------------|---------------------------------|--------------|---------------------|----|-----------|----|-----------|----|-----------|----|-------------------|----|-----------|----|-------------------|----|-----------|----|-------------------|----|-----------|-----|-----------|----|----|--|
| | | | Stream | | | | Stream | | | | Jan-09 | | | | Jan-09 | | | | Jul-09 | | | | | | | |
| | | | Jul-08 | | Aug-08 | | Jan-09 | | Jan-09 | | T1 | | T2 | | T3 | | T4 | | T1 | | T2 | | T3 | | T4 | |
| Transect | P1 | P4 | P1 | P4 | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | | | | | | |
| | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | | |
| Poaceae | <i>Microstegium ciliatum</i> | 剛秀竹 | 0.4 | 40 | | | 0.4 | 40 | | | 0.4 | 30 | 0.5 | 5 | 1.5 | 5 | 1 | 15 | | | | | | | | |
| Fabaceae | <i>Pueraria lobata</i> | 野葛 | 0.5 | 30 | | | 0.5 | 30 | | | | | | | 0.2 | 5 | | | 0.5 | 50 | | | 0.5 | 20 | | |
| Poaceae | <i>Pennisetum purpureum</i> | 象草 | 3 | 20 | | | 3 | 20 | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Alocasia odora</i> | 海芋 | 1 | 10 | | | 1 | 10 | | | 0.5 | 2 | | | | | 0.3 | <1 | | | | | | | | |
| Caesalpiniaceae | <i>Cassia alata</i> | 翅葉決明 | | | 1.2 | 10 | | | 1.2 | 10 | | | | | | | | | | | | | | | | |
| Magnoliaceae | <i>Michelia alba</i> | 白蘭 | | | 6 | 10 | | | 6 | 10 | | | | | | | | | | | | | | | | |
| Poaceae | <i>Brachiaria mutica</i> | 巴拉草 | | | 1.2 | 70 | | | 1.2 | 70 | 1.5 | 30 | | | | | | | 0.5 | 20 | | | 1.2 | 5 | | |
| Moraceae | <i>Ficus hispida</i> | 對葉榕 | | | | | | | | | 1.5 | 5 | | | | | | | 1.5 | 5 | 4 | 5 | | | | |
| Asteraceae | <i>Mikania micrantha</i> | 薇甘菊 | | | | | | | | | 0.4 | 20 | | | | | 0.5 | 1 | 0.5 | 5 | 0.3 | 15 | 0.5 | 30 | | |
| Musaceae | <i>Musa paradisiaca</i> | 大蕉 | | | | | | | | | | | | 3 | 5 | | | | | | | 1.5 | 5 | | | |
| Ulmaceae | <i>Celtis sinensis</i> | 朴樹 | | | 6 | 10 | | | 6 | 10 | | | | | | | 4 | 10 | | | | | | 6 | | |
| Araceae | <i>Pistia stratiotes L.</i> | 大漂 | | | | | | | | | | | | | | | | | | | | | | | | |
| Urticaceae | <i>Boehmeria nivea</i> | 苧麻 | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Bidens alba</i> | 白花鬼針草 | | | | | | | | | 0.5 | 5 | | | | | | | | | | | | | | |
| Poaceae | <i>Coix lacryma-jobi</i> | 薏苡 | | | | | | | | | | | | | | | | | | | | | | | | |
| Solanaceae | <i>Solanum nigrum</i> | 龍葵 | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus flabelliformis</i> | 風車草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Miscanthus floridulus</i> | 五節芒 | | | | | | | | | | | | | | | | | | | | 1.2 | 2 | | | |
| Euphorbiaceae | <i>Macaranga tanarius</i> | 血桐 | | | | | | | | | 3 | 5 | | | | | | | | | | | | | | |
| Asteraceae | <i>Wedelia chinensis</i> | 鯉眼菊 | | | | | | | | | | | | | | | 0.2 | 10 | | | | | | | | |
| Commelinaceae | <i>Commelina diffusa</i> | 節節草 | | | | | | | | | | | | | | | 0.2 | <1 | | | | | | | | |
| Asteraceae | <i>Erechtites hieracifolia</i> | 革命菜 | | | | | | | | | | | | | | | 0.5 | <1 | | | | | | | | |
| Thelypteridaceae | <i>Cyclosorus parasiticus</i> | 華南毛蕨 | | | | | | | | | | | | | | | | | | | | | | | | |
| Convolvulaceae | <i>Pharbitis nil</i> | 牽牛 | | | | | | | | | | | | | | | | | | | | | | | | |
| Verbenaceae | <i>Lantana camara</i> | 馬纒丹 | | | | | | | | | | | | | | | | | | | | | | | | |
| Mimosaceae | <i>Leucaena leucocephala</i> | 銀合歡 | | | | | | | | | | | | | | | | | | | | | | | | |
| Brassicaceae | <i>Nasturtium officinale</i> | 西洋菜 | | | | | | | | | | | | | | | | | | | | | | | | |
| Onagraceae | <i>Ludwigia erecta</i> | 美洲水丁香 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum alopecuroides</i> | 狼尾草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Amaranthaceae | <i>Celosia argentea</i> | 青葙 | | | | | | | | | | | | | | | | | | | | | | | | |
| Bare Gound | | | | | | | | | | | 13 | | 85 | | 85 | | 64 | | 20 | | 80 | | 38 | 10 | | |

P1 – Point count location 1; P4 – Point count location 4

Table 4.2. Flora species recorded from belt transect survey at the Upper Lam Tsuen River

(T1 - located at upper river channel sampling site to T4 - located at lower river Channel sampling site)

| Family | Species | Chinese name | Impact monitoring | | | | | | | | Impact monitoring | | | | Impact monitoring | | | | Impact monitoring | | | | | | | |
|------------------|---------------------------------|--------------|-------------------|-----------|-----|-----------|-----|-----------|----|-----------|-------------------|-----------|-----|-----------|-------------------|-----------|----|-----------|-------------------|-----------|-----|-----------|-----|-----|----|--|
| | | | Jan-10 | | | | | | | | Jul-10 | | | | Jul-10 | | | | Jan-11 | | | | | | | |
| | | | T1 | | T2 | | T3 | | T4 | | T1 | | T2 | | T3 | | T4 | | T1 | | T2 | | T3 | | T4 | |
| Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | | | |
| Poaceae | <i>Microstegium ciliatum</i> | 剛秀竹 | | | | | | | | | | | | | | | | | | | | | 0.8 | 5 | | |
| Fabaceae | <i>Pueraria lobata</i> | 野葛 | | 0.5 | 5 | | | 0.5 | 2 | | 0.5 | 5 | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum purpureum</i> | 象草 | | | | | | 2 | 5 | | | | | | | 1.2 | 10 | | | | | | | | | |
| Araceae | <i>Alocasia odora</i> | 海芋 | | | | | | 1 | 5 | | | | | 1 | 10 | | | | | | | | 0.5 | 3 | | |
| Caesalpiniaceae | <i>Cassia alata</i> | 翅菜決明 | | | | | | | | | | | | | | | | | | | | | | | | |
| Magnoliaceae | <i>Michelia alba</i> | 白蘭 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Brachiaria mutica</i> | 巴拉草 | 0.8 | 40 | 0.9 | 50 | 1 | 15 | | 0.8 | 20 | 0.9 | 30 | 1 | 60 | 1.5 | 30 | 0.8 | 5 | | | 1 | 30 | 1 | 15 | |
| Moraceae | <i>Ficus hispida</i> | 對葉榕 | | | | 4 | 5 | 0.5 | 30 | | | | | 4 | 5 | | | | | | | 4 | 5 | | | |
| Asteraceae | <i>Mikania micrantha</i> | 薇甘菊 | | 0.5 | 30 | 0.3 | 25 | | | | 0.5 | 20 | 0.3 | 5 | | | | 0.4 | 10 | 0.5 | 5 | 0.3 | 5 | 0.4 | 8 | |
| Musaceae | <i>Musa paradisiaca</i> | 大蕉 | | | | | | 0.5 | 2 | | | | | | | | | | | | | | | | | |
| Ulmaceae | <i>Celtis sinensis</i> | 朴樹 | | | | | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Pistia stratiotes L.</i> | 大漂 | | 0.05 | 5 | | | | 2 | | | | | | | | | | | | | | | | | |
| Urticaceae | <i>Boehmeria nivea</i> | 苧麻 | | | | 0.3 | 5 | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Bidens alba</i> | 白花鬼針草 | 0.4 | 50 | | | 0.3 | 5 | | 0.4 | 20 | | | | 0.5 | 10 | | 0.4 | 10 | 0.4 | 20 | 0.5 | 5 | | | |
| Poaceae | <i>Coix lacryma-jobi</i> | 薏苡 | | | | 1.5 | 2 | | | | | | | | | | | | | | | | | | | |
| Solanaceae | <i>Solanum nigrum</i> | 龍葵 | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus flabelliformis</i> | 風車草 | | | | | | | 1 | 30 | | | | | | | | | | | | | 1 | 5 | | |
| Poaceae | <i>Miscanthus floridulus</i> | 五節芒 | | | | | | | | | | | | | | | | | | | | | | | | |
| Euphorbiaceae | <i>Macaranga tanarius</i> | 血桐 | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Wedelia chinensis</i> | 鯉魚菊 | | | | | | | | | | | | | | | | | | | | | 0.5 | 5 | | |
| Commelinaceae | <i>Commelina diffusa</i> | 節節草 | | | | | | | | | | | | 0.5 | 20 | | | | | | 0.4 | 10 | | | | |
| Asteraceae | <i>Erechtites hieracifolia</i> | 革命菜 | | | | | | | | | | | | | | | | | | | | | | | | |
| Thelypteridaceae | <i>Cyclosorus parasiticus</i> | 華南毛蕨 | | | | | | | | | | | | | | | | | | | | | 0.5 | 5 | | |
| Convolvulaceae | <i>Pharbitis nil</i> | 牽牛 | | | | | | | | | | | | 0.5 | 10 | | | | | | | | | | | |
| Verbenaceae | <i>Lantana camara</i> | 馬纓丹 | | | | | | | | | | | | | | | | | | | | | | | | |
| Mimosaceae | <i>Leucaena leucocephala</i> | 銀合歡 | | | | | | | | | | | | | | | | | | | | | | | | |
| Brassicaceae | <i>Nasturtium officinale</i> | 西洋菜 | | | | | | | | | | | | | | | | | | | | | | | | |
| Onagraceae | <i>Ludwigia erecta</i> | 美洲水丁香 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum alopecuroides</i> | 狼尾草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Amaranthaceae | <i>Celosia argentea</i> | 青葙 | | | | | | | | | | | | | | | | | | | | | | | | |
| Bare Ground | | | | 50 | | 10 | | 43 | | 24 | | 60 | | 45 | | 20 | | 30 | | 75 | | 65 | | 45 | 54 | |

P1 – Point count location 1; P4 – Point count location 4

Table 4.2. Flora species recorded from belt transect survey at the Upper Lam Tsuen River

(T1 - located at upper river channel sampling site to T4 - located at lower river Channel sampling site)

| Family | Species | Chinese name | Impact monitoring | | | | | | | | Impact monitoring | | | | | | | | Impact monitoring | | | | | | | |
|------------------|---------------------------------|--------------|-------------------|-----------|--------|-----------|--------|-----------|--------|-----------|-------------------|-----------|--------|-----------|--------|-----------|--------|-----------|-------------------|-----------|--------|-----------|--------|-----------|--------|---|
| | | | Stream | | | | Stream | | | | Stream | | | | Stream | | | | Stream | | | | | | | |
| | | | Jul-11 | | Jul-11 | | Jul-11 | | Jul-11 | | Jan-12 | | Jan-12 | | Jan-12 | | Jan-12 | | Jul-12 | | Jul-12 | | Jul-12 | | Jul-12 | |
| T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | | | |
| Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | |
| Poaceae | <i>Microstegium ciliatum</i> | 剛秀竹 | | | | | | | | | | | | | | | | | | | | | | | | |
| Fabaceae | <i>Pueraria lobata</i> | 野葛 | 0.3 | 10 | | | | | | 0.3 | 10 | | | | | | 0.3 | 5 | | | | | | | | |
| Poaceae | <i>Pennisetum purpureum</i> | 象草 | | | 1.2 | 2 | 2.5 | 10 | | | | 2.5 | 5 | 2.5 | 5 | | | | | 2 | 5 | | | | | |
| Araceae | <i>Alocasia odora</i> | 海芋 | | | | | | | | | | | | | | | | | | | | | | | | |
| Caesalpiniaceae | <i>Cassia alata</i> | 翅菜決明 | | | | | | | | | | | | | | | | | | | | | | | | |
| Magnoliaceae | <i>Michelia alba</i> | 白蘭 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Brachiaria mutica</i> | 巴拉草 | 0.8 | 10 | 1 | 5 | | | | 0.8 | 10 | 1 | 2 | 1.5 | 60 | | 0.8 | 10 | 1 | 5 | 1.5 | 20 | | | | |
| Moraceae | <i>Ficus hispida</i> | 對葉榕 | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Mikania micrantha</i> | 薇甘菊 | 0.4 | 5 | 0.5 | 3 | | 0.4 | 2 | 0.4 | 5 | 0.5 | 3 | | 0.4 | 2 | 0.4 | 5 | 0.5 | 3 | 0.5 | 15 | 0.4 | 1 | | |
| Musaceae | <i>Musa paradisiaca</i> | 大蕉 | | | | | | | | | | | | | | | | | | | | | | | | |
| Ulmaceae | <i>Celtis sinensis</i> | 朴樹 | | | | | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Pistia stratiotes L.</i> | 大漂 | | | | | | | | | | | | | | | | | | | | | | | | |
| Urticaceae | <i>Boehmeria nivea</i> | 苧麻 | | | | 1.5 | 10 | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Bidens alba</i> | 白花鬼針草 | 0.4 | 2 | 0.4 | 5 | 0.5 | 2 | 0.5 | 10 | 0.4 | 2 | 0.4 | 5 | 0.5 | 2 | 0.5 | 10 | 0.4 | 5 | 0.4 | 5 | 0.5 | 5 | 0.5 | 2 |
| Poaceae | <i>Coix lacryma-jobi</i> | 薏苡 | | | | | | | | | | | | | | | | | | | | | | | | |
| Solanaceae | <i>Solanum nigrum</i> | 龍葵 | | | | 2 | 3 | | | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus flabelliformis</i> | 風車草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Miscanthus floridulus</i> | 五節芒 | | | | | | | | | | | | | | | | | | | | | | | | |
| Euphorbiaceae | <i>Macaranga tanarius</i> | 血桐 | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Wedelia chinensis</i> | 鯉眼菊 | | | | | | | | | | | | | | | | | | | | | | | | |
| Commelinaceae | <i>Commelina diffusa</i> | 節節草 | | | 0.4 | 10 | | | | | | 0.3 | 3 | 0.4 | 5 | | | | | 0.4 | 2 | 0.3 | 5 | | | |
| Asteraceae | <i>Erechtites hieracifolia</i> | 革命菜 | | | | | | | | | | | | | | | | | | | | | | | | |
| Thelypteridaceae | <i>Cyclosorus parasiticus</i> | 華南毛蕨 | | | | | | | | | | | | | | | | | | | | | | | | |
| Convolvulaceae | <i>Pharbitis nil</i> | 牽牛 | | | | | | | | | | | | | | | | | | | | | | | | |
| Verbenaceae | <i>Lantana camara</i> | 馬纒丹 | | | | 0.5 | 2 | | | | | | | | | | | | | | | | | | | |
| Mimosaceae | <i>Leucaena leucocephala</i> | 銀合歡 | | | | | | | | | | | | | | | | | | | | | | | | |
| Brassicaceae | <i>Nasturtium officinale</i> | 西洋菜 | | | | | | | | | | | | | | | | | | | | | | | | |
| Onagraceae | <i>Ludwigia erecta</i> | 美洲水丁香 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum alopecuroides</i> | 狼尾草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Amaranthaceae | <i>Celosia argentea</i> | 青葙 | | | | | | | | | | | | | | | | | | | | | | | | |
| Bare Gound | | | 73 | | 85 | | 65 | | 88 | 73 | | 82 | | 28 | | 88 | 75 | | 82 | | 58 | | 92 | | | |

P1 – Point count location 1; P4 – Point count location 4

Table 4.2. Flora species recorded from belt transect survey at the Upper Lam Tsuen River

(T1 - located at upper river channel sampling site to T4 - located at lower river Channel sampling site)

| Family | Species | Chinese name | Impact monitoring | | | | | | | | Impact monitoring | | | | | | | | Post construction monitoring | | | | | | | |
|------------------|---------------------------------|--------------|-------------------|-----------|-----|-----------|--------|-----------|-----|-----------|-------------------|-----------|-----|-----------|-----|-----------|-----|-----------|------------------------------|-----------|-----|-----------|-----|----|-----|----|
| | | | Aug-13 | | | | Dec-13 | | | | Jan-14 | | | | | | | | | | | | | | | |
| | | | T1 | | T2 | | T3 | | T4 | | T1 | | T2 | | T3 | | T4 | | T1 | | T2 | | T3 | | T4 | |
| Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | | | |
| Poaceae | <i>Microstegium ciliatum</i> | 剛秀竹 | | | 0.5 | 5 | | | | | | | | | | | | | | | | | | | | |
| Fabaceae | <i>Pueraria lobata</i> | 野葛 | 0.3 | 15 | 0.3 | 5 | | | 0.3 | 10 | | | | | 0.3 | 10 | | | | | | | 0.3 | 10 | | |
| Poaceae | <i>Pennisetum purpureum</i> | 象草 | | | | | | | | | | | | 1.5 | 5 | | | | | | | | 1.5 | 5 | | |
| Araceae | <i>Alocasia odora</i> | 海芋 | | | | | | | | | | | | | | | | | | | | | | | | |
| Caesalpiniaceae | <i>Cassia alata</i> | 翅葉決明 | | | | | | | | | | | | | | | | | | | | | | | | |
| Magnoliaceae | <i>Michelia alba</i> | 白蘭 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Brachiaria mutica</i> | 巴拉草 | 0.8 | 5 | 0.8 | 5 | 1 | 10 | 1 | 15 | 0.8 | 10 | 0.8 | 10 | | | 0.8 | 10 | 0.8 | 10 | | | | | | |
| Moraceae | <i>Ficus hispida</i> | 對葉榕 | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Mikania micrantha</i> | 薇甘菊 | 0.5 | 25 | 0.5 | 10 | 0.5 | 10 | 0.4 | 3 | 0.5 | 10 | 0.5 | 5 | 0.5 | 10 | 0.4 | 10 | 0.5 | 10 | 0.5 | 5 | 0.5 | 10 | 0.4 | 10 |
| Musaceae | <i>Musa paradisiaca</i> | 大蕉 | | | | | | | | | | | | | | | | | | | | | | | | |
| Ulmaceae | <i>Celtis sinensis</i> | 朴樹 | | | | | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Pistia stratiotes L.</i> | 大漂 | | | | | | | | | | | | | | | | | | | | | | | | |
| Urticaceae | <i>Boehmeria nivea</i> | 苧麻 | | | | | 0.8 | 2 | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Bidens alba</i> | 白花鬼針草 | 0.4 | 5 | 0.4 | 20 | 0.5 | 10 | 0.5 | 2 | 0.4 | 5 | | | 0.5 | 10 | | | 0.4 | 5 | | | 0.5 | 10 | | |
| Poaceae | <i>Coix lacryma-jobi</i> | 薏苡 | | | | | | | | | | | | | | | | | | | | | | | | |
| Solanaceae | <i>Solanum nigrum</i> | 龍葵 | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus flabelliformis</i> | 風車草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Miscanthus floridulus</i> | 五節芒 | | | | | | | | | | | | | | | | | | | | | | | | |
| Euphorbiaceae | <i>Macaranga tanarius</i> | 血桐 | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Wedelia chinensis</i> | 鯉眼菊 | | | | | | | | | | | | | | | | | | | | | | | | |
| Commelinaceae | <i>Commelina diffusa</i> | 節節草 | | | | | | | | | | | 0.3 | 5 | | | | | | | 0.3 | 5 | | | | |
| Asteraceae | <i>Erechtites hieracifolia</i> | 革命菜 | | | | | | | | | | | | | | | | | | | | | | | | |
| Thelypteridaceae | <i>Cyclosorus parasiticus</i> | 華南毛蕨 | | | | | | | | | | | | | | | | | | | | | | | | |
| Convolvulaceae | <i>Pharbitis nil</i> | 牽牛 | | | | | | | | | | | | | | | | | | | | | | | | |
| Verbenaceae | <i>Lantana camara</i> | 馬纒丹 | | | | | | | | | | | | | | | | | | | | | | | | |
| Mimosaceae | <i>Leucaena leucocephala</i> | 銀合歡 | | | | | | | 1.2 | 5 | | | | | | | | | | | | | | | | |
| Brassicaceae | <i>Nasturtium officinale</i> | 西洋菜 | | | | | | | | | | | | | | | | | | | | | | | | |
| Onagraceae | <i>Ludwigia erecta</i> | 美洲水丁香 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum alopecuroides</i> | 狼尾草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Amaranthaceae | <i>Celosia argentea</i> | 青葙 | | | | | | | | | | | 1 | 2 | | | | | | | | 1 | 2 | | | |
| Bare Gound | | | | 50 | | 55 | | 68 | | 70 | | 75 | | 85 | | 73 | | 75 | | 75 | | 85 | | 73 | 75 | |

P1 – Point count location 1; P4 – Point count location 4

Table 4.2. Flora species recorded from belt transect survey at the Upper Lam Tsuen River

(T1 - located at upper river channel sampling site to T4 - located at lower river Channel sampling site)

| Family | Species | Chinese name | Post construction monitoring | | | | | | | | Post construction monitoring | | | | | | | | Post construction monitoring | | | | | | | |
|------------------|---------------------------------|--------------|------------------------------|-----------|-----|-----------|--------|-----------|-----|-----------|------------------------------|-----------|-----|-----------|-----|-----------|-----|-----------|------------------------------|-----------|-----|-----------|-----|-----|-----|----|
| | | | Feb-14 | | | | Mar-14 | | | | Apr-14 | | | | | | | | | | | | | | | |
| | | | T1 | | T2 | | T3 | | T4 | | T1 | | T2 | | T3 | | T4 | | T1 | | T2 | | T3 | | T4 | |
| Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | | | |
| Poaceae | <i>Microstegium ciliatum</i> | 剛秀竹 | | | | | | | | | | | | | | | | 0.3 | 2 | | | | | | | |
| Fabaceae | <i>Pueraria lobata</i> | 野葛 | | | | | | 0.3 | 10 | | | | | | | | | | | | 0.3 | 5 | 0.3 | 5 | | |
| Poaceae | <i>Pennisetum purpureum</i> | 象草 | | | | | | 1.5 | 5 | | | | | | | | | | | | | | | | | |
| Araceae | <i>Alocasia odora</i> | 海芋 | | | | | | | | | | | | | | | | | | | | | | | | |
| Caesalpiniaceae | <i>Cassia alata</i> | 翅菜決明 | | | | | | | | | | | | | | | | | | | | | | | | |
| Magnoliaceae | <i>Michelia alba</i> | 白蘭 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Brachiaria mutica</i> | 巴拉草 | 0.8 | 10 | 0.8 | 10 | | | | 1 | 13 | 1 | 13 | | | | | 0.5 | 5 | 0.6 | 10 | | | 0.6 | 10 | |
| Moraceae | <i>Ficus hispida</i> | 對葉榕 | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Mikania micrantha</i> | 薇甘菊 | 0.5 | 10 | 0.5 | 5 | 0.5 | 10 | 0.4 | 10 | 0.5 | 10 | 0.5 | 5 | 0.5 | 10 | 0.4 | 10 | | | 0.3 | 5 | 0.3 | 15 | 0.3 | 5 |
| Musaceae | <i>Musa paradisiaca</i> | 大蕉 | | | | | | | | | | | | | | | | | | | | | | | | |
| Ulmaceae | <i>Celtis sinensis</i> | 朴樹 | | | | | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Pistia stratiotes L.</i> | 大漂 | | | | | | | | | | | | | | | | | | | | | | | | |
| Urticaceae | <i>Boehmeria nivea</i> | 苧麻 | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Bidens alba</i> | 白花鬼針草 | 0.4 | 5 | | | 0.5 | 10 | | | 0.4 | 5 | | | 0.5 | 10 | | | 0.5 | 20 | 0.5 | 10 | 0.7 | 15 | 0.6 | 10 |
| Poaceae | <i>Coix lacryma-jobi</i> | 薏苡 | | | | | | | | | | | | | | | | | | | | | | | | |
| Solanaceae | <i>Solanum nigrum</i> | 龍葵 | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus flabelliformis</i> | 風車草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Miscanthus floridulus</i> | 五節芒 | | | | | | | | | | | | | | | | | | | | | | | | |
| Euphorbiaceae | <i>Macaranga tanarius</i> | 血桐 | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Wedelia chinensis</i> | 錦雞菊 | | | | | | | | | | | | | | | | | | | | | | | | |
| Commelinaceae | <i>Commelina diffusa</i> | 節節草 | | | 0.3 | 5 | | | | | | | 0.3 | 5 | | | | 0.2 | 10 | | | 0.3 | 3 | | | |
| Asteraceae | <i>Erechtites hieracifolia</i> | 革命菜 | | | | | | | | | | | | | | | | | | | | | | | | |
| Thelypteridaceae | <i>Cyclosorus parasiticus</i> | 華南毛蕨 | | | | | | | | | | | | | | | | | | | | | | | | |
| Convolvulaceae | <i>Pharbitis nil</i> | 牽牛 | | | | | | | | | | | | | | | | | | | | | | | | |
| Verbenaceae | <i>Lantana camara</i> | 馬纒丹 | | | | | | | | | | | | | | | | | | | | | | | | |
| Mimosaceae | <i>Leucaena leucocephala</i> | 銀合歡 | | | | | | | | | | | | | | | | | | | | | | | | |
| Brassicaceae | <i>Nasturtium officinale</i> | 西洋菜 | | | | | | | | | | | | | | | | | | | 0.2 | 5 | 0.2 | 50 | 0.2 | 5 |
| Onagraceae | <i>Ludwigia erecta</i> | 美洲水丁香 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum alopecuroides</i> | 狼尾草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Amaranthaceae | <i>Celosia argentea</i> | 青葙 | | | | 1 | 2 | | | | | | | 1 | 2 | | | | | | | | | | | |
| Bare Gound | | | | 75 | | 85 | | 73 | 75 | | 72 | | 82 | | 73 | | 75 | | 63 | | 70 | | 12 | | 65 | |

P1 – Point count location 1; P4 – Point count location 4

Table 4.2. Flora species recorded from belt transect survey at the Upper Lam Tsuen River

(T1 - located at upper river channel sampling site to T4 - located at lower river Channel sampling site)

| Family | Species | Chinese name | Post construction monitoring | | | | | | | | Post construction monitoring | | | | | | | | Post construction monitoring | | | | | | | |
|------------------|---------------------------------|--------------|------------------------------|----|-----------|-----|-----------|-----|-----------|-----|------------------------------|-----|-----------|-----|-----------|----|-----------|----|------------------------------|----|-----------|-----|-----|-----|-----|----|
| | | | Stream | | May-14 | | | | Jun-14 | | | | Jul-14 | | | | Jul-14 | | | | | | | | | |
| | | | Transect | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | | | | | | | |
| | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | | | | |
| Poaceae | <i>Microstegium ciliatum</i> | 剛秀竹 | 0.3 | 2 | | | | | | 0.3 | 2 | | | | | | | | 0.5 | 4 | | | | | | |
| Fabaceae | <i>Pueraria lobata</i> | 野葛 | | | | 0.3 | 5 | | 0.3 | 5 | | | | 0.3 | 5 | | 0.3 | 5 | | | | 0.3 | 5 | 0.3 | 5 | |
| Poaceae | <i>Pennisetum purpureum</i> | 象草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Alocasia odora</i> | 海芋 | | | | | | | | | | | | | | | | | | | | | | | | |
| Caesalpiniaceae | <i>Cassia alata</i> | 翅葉決明 | | | | | | | | | | | | | | | | | | | | | | | | |
| Magnoliaceae | <i>Michelia alba</i> | 白蘭 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Brachiaria mutica</i> | 巴拉草 | 0.5 | 5 | 0.6 | 6 | | 0.6 | 6 | 0.5 | 5 | 0.6 | 8 | | 0.6 | 6 | 0.6 | 10 | 0.8 | 10 | | | 0.8 | 6 | | |
| Moraceae | <i>Ficus hispida</i> | 對葉榕 | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Mikania micrantha</i> | 薇甘菊 | | | 0.3 | 5 | 0.3 | 15 | 0.3 | 5 | | | 0.3 | 6 | 0.3 | 15 | 0.3 | 8 | | | 0.3 | 6 | 0.3 | 15 | 0.3 | 8 |
| Musaceae | <i>Musa paradisiaca</i> | 大蕉 | | | | | | | | | | | | | | | | | | | | | | | | |
| Ulmaceae | <i>Celtis sinensis</i> | 朴樹 | | | | | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Pistia stratiotes L.</i> | 大漂 | | | | | | | | | | | | | | | | | | | | | | | | |
| Urticaceae | <i>Boehmeria nivea</i> | 苧麻 | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Bidens alba</i> | 白花鬼針草 | 0.5 | 20 | 0.5 | 10 | 0.7 | 15 | 0.6 | 10 | 0.5 | 20 | 0.5 | 10 | 0.7 | 15 | 0.6 | 10 | 0.5 | 20 | 0.5 | 12 | 0.7 | 18 | 0.6 | 10 |
| Poaceae | <i>Coix lacryma-jobi</i> | 薏苡 | | | | | | | | | | | | | | | | | | | | | | | | |
| Solanaceae | <i>Solanum nigrum</i> | 龍葵 | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus flabelliformis</i> | 風車草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Miscanthus floridulus</i> | 五節芒 | | | | | | | | | | | | | | | | | | | | | | | | |
| Euphorbiaceae | <i>Macaranga tanarius</i> | 血桐 | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Wedelia chinensis</i> | 鯉眼菊 | | | | | | | | | | | | | | | | | | | | | | | | |
| Commelinaceae | <i>Commelina diffusa</i> | 節節草 | 0.2 | 8 | | | 0.3 | 3 | | | 0.2 | 8 | | | 0.3 | 3 | | | 0.2 | 8 | | | 0.3 | 3 | | |
| Asteraceae | <i>Erechtites hieracifolia</i> | 革命菜 | | | | | | | | | | | | | | | | | | | | | | | | |
| Thelypteridaceae | <i>Cyclosorus parasiticus</i> | 華南毛蕨 | | | | | | | | | | | | | | | | | | | | | | | | |
| Convolvulaceae | <i>Pharbitis nil</i> | 牽牛 | | | | | | | | | | | | | | | | | | | | | | | | |
| Verbenaceae | <i>Lantana camara</i> | 馬纒丹 | | | | | | | | | | | | | | | | | | | | | | | | |
| Mimosaceae | <i>Leucaena leucocephala</i> | 銀合歡 | | | | | | | | | | | | | | | | | | | | | | | | |
| Brassicaceae | <i>Nasturtium officinale</i> | 西洋菜 | | | 0.2 | 2 | 0.2 | 2 | 0.2 | 1 | | | 0.2 | 2 | 0.2 | 2 | 0.2 | 1 | | | 0.3 | 1 | 0.3 | 1 | 0.3 | 1 |
| Onagraceae | <i>Ludwigia erecta</i> | 美洲水丁香 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum alopecuroides</i> | 狼尾草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Amaranthaceae | <i>Celosia argentea</i> | 青葙 | | | | | | | | | | | | | | | | | | | | | | | | |
| Bare Ground | | | | 65 | | 77 | | 60 | | 73 | | 65 | | 74 | | 60 | | 70 | | 58 | | 71 | | 58 | 70 | |

P1 – Point count location 1; P4 – Point count location 4

Table 4.2. Flora species recorded from belt transect survey at the Upper Lam Tsuen River

(T1 - located at upper river channel sampling site to T4 - located at lower river Channel sampling site)

| Family | Species | Chinese name | Post construction monitoring | | | | | | | | Post construction monitoring | | | | | | | | Post construction monitoring | | | | | | | | Post construction monitoring | | | | | | | |
|------------------|---------------------------------|--------------|------------------------------|-----------|-----|-----------|--------|-----------|-----|-----------|------------------------------|-----------|-----|-----------|--------|-----------|-----|-----------|------------------------------|-----------|-----|-----------|-----|-----|----|--|------------------------------|--|--|--|--|--|--|--|
| | | | Aug-14 | | | | Sep-14 | | | | Oct-14 | | | | Nov-14 | | | | | | | | | | | | | | | | | | | |
| | | | T1 | | T2 | | T3 | | T4 | | T1 | | T2 | | T3 | | T4 | | T1 | | T2 | | T3 | | T4 | | | | | | | | | |
| Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | | | | | | | | | | | |
| Poaceae | <i>Microstegium ciliatum</i> | 剛秀竹 | 0.7 | 5 | | | | | | 0.7 | 5 | | | | | | | | | | | | | | | | | | | | | | | |
| Fabaceae | <i>Pueraria lobata</i> | 野葛 | | | 0.3 | 5 | 0.3 | 5 | | | | | 0.3 | 5 | 0.3 | 5 | | | | | | | 0.6 | 10 | | | | | | | | | | |
| Poaceae | <i>Pennisetum purpureum</i> | 象草 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Alocasia odora</i> | 海芋 | | | | | | | | | | | | | | | | | | | | | 1.8 | 1 | | | | | | | | | | |
| Caesalpiniaceae | <i>Cassia alata</i> | 翅葉決明 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Magnoliaceae | <i>Michelia alba</i> | 白蘭 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Brachiaria mutica</i> | 巴拉草 | 0.6 | 10 | 0.8 | 12 | | | 0.8 | 8 | 0.6 | 10 | 0.8 | 12 | | | 0.8 | 8 | 1 | 10 | 1.5 | 15 | 1.3 | 30 | | | | | | | | | | |
| Moraceae | <i>Ficus hispida</i> | 對葉榕 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Mikania micrantha</i> | 薇甘菊 | | | 0.3 | 6 | 0.3 | 15 | 0.3 | 8 | | | 0.3 | 8 | 0.3 | 15 | 0.3 | 10 | 0.3 | 15 | 0.3 | 15 | 0.3 | 15 | | | | | | | | | | |
| Musaceae | <i>Musa paradisiaca</i> | 大蕉 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ulmaceae | <i>Celtis sinensis</i> | 朴樹 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Pistia stratiotes L.</i> | 大漂 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Urticaceae | <i>Boehmeria nivea</i> | 苧麻 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Bidens alba</i> | 白花鬼針草 | 0.5 | 20 | 0.6 | 12 | 0.7 | 15 | 0.6 | 10 | 0.5 | 20 | 0.6 | 12 | 0.7 | 15 | 0.6 | 10 | 0.5 | 5 | 0.8 | 12 | 0.7 | 10 | | | | | | | | | | |
| Poaceae | <i>Coix lacryma-jobi</i> | 薏苡 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Solanaceae | <i>Solanum nigrum</i> | 龍葵 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus flabelliformis</i> | 風車草 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Miscanthus floridulus</i> | 五節芒 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Euphorbiaceae | <i>Macaranga tanarius</i> | 血桐 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Wedelia chinensis</i> | 鯉眼菊 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Commelinaceae | <i>Commelina diffusa</i> | 節節草 | 0.3 | 10 | | | 0.3 | 5 | | | 0.3 | 10 | | | 0.3 | 5 | | | 0.3 | 10 | 0.8 | 20 | | 0.3 | 20 | | | | | | | | | |
| Asteraceae | <i>Erechtites hieracifolia</i> | 革命菜 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Thelypteridaceae | <i>Cyclosorus parasiticus</i> | 華南毛蕨 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Convolvulaceae | <i>Pharbitis nil</i> | 牽牛 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Verbenaceae | <i>Lantana camara</i> | 馬纓丹 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mimosaceae | <i>Leucaena leucocephala</i> | 銀合歡 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Brassicaceae | <i>Nasturtium officinale</i> | 西洋菜 | | | 0.3 | 1 | 0.3 | 1 | 0.3 | 1 | | | 0.3 | 1 | 0.3 | 2 | 0.3 | 1 | | | | | 0.3 | 2 | | | | | | | | | | |
| Onagraceae | <i>Ludwigia erecta</i> | 美洲水丁香 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum alopecuroides</i> | 狼尾草 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Amaranthaceae | <i>Celosia argentea</i> | 青葙 | | | | | | | | | | | | | | | | | | | | | 1.5 | 15 | | | | | | | | | | |
| Bare Gound | | | | 55 | | 69 | | 59 | | 68 | | 55 | | 67 | | 58 | | 66 | | 25 | | 23 | | 18 | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | 43 | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | 25 | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | 20 | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | 15 | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | 40 | | | | | | | | | | |

P1 – Point count location 1; P4 – Point count location 4

Table 4.2. Flora species recorded from belt transect survey at the Upper Lam Tsuen River

(T1 - located at upper river channel sampling site to T4 - located at lower river Channel sampling site)

| Family | Species | Chinese name | Post construction monitoring | | | | | | | | Post construction monitoring | | | | | | | | Post construction monitoring | | | | | | | |
|------------------|---------------------------------|--------------|------------------------------|-----------|-----|-----------|--------|-----------|-----|-----------|------------------------------|-----------|-----|-----------|-----|-----------|-----|-----------|------------------------------|-----------|-----|-----------|-----|-----|-----|----|
| | | | Dec-14 | | | | Jan-15 | | | | Feb-15 | | | | | | | | | | | | | | | |
| | | | T1 | | T2 | | T3 | | T4 | | T1 | | T2 | | T3 | | T4 | | T1 | | T2 | | T3 | | T4 | |
| Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | | | |
| Poaceae | <i>Microstegium ciliatum</i> | 剛秀竹 | | | | | | | | | | | | | | | | | | | | | | | | |
| Fabaceae | <i>Pueraria lobata</i> | 野葛 | | | | | 0.6 | 10 | | | | | | | 0.6 | 10 | | | | | | | 0.6 | 10 | | |
| Poaceae | <i>Pennisetum purpureum</i> | 象草 | | | | | | | | | | 3 | 15 | | | | | | | | | 3 | 15 | | | |
| Araceae | <i>Alocasia odora</i> | 海芋 | | | | | 1.8 | 1 | | | | | | 1.8 | 1 | | | | | | | | 1.8 | 1 | | |
| Caesalpiniaceae | <i>Cassia alata</i> | 翅菜決明 | | | | | | | | | | | | | | | | | | | | | | | | |
| Magnoliaceae | <i>Michelia alba</i> | 白蘭 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Brachiaria mutica</i> | 巴拉草 | 1 | 10 | 1.5 | 15 | 1.3 | 30 | 1 | 5 | 1 | 20 | 1 | 20 | 1.3 | 20 | 1 | 10 | 1 | 20 | 1.3 | 20 | 1 | 10 | | |
| Moraceae | <i>Ficus hispida</i> | 對葉榕 | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Mikania micrantha</i> | 薇甘菊 | 0.3 | 18 | 0.3 | 18 | 0.3 | 18 | 0.3 | 18 | 0.4 | 10 | 0.4 | 15 | 0.3 | 5 | 0.3 | 20 | 0.4 | 10 | 0.4 | 15 | 0.3 | 5 | 0.3 | 20 |
| Musaceae | <i>Musa paradisiaca</i> | 大蕉 | | | | | | | | | | | | | | | | | | | | | | | | |
| Ulmaceae | <i>Celtis sinensis</i> | 朴樹 | | | | | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Pistia stratiotes L.</i> | 大漂 | | | | | | | | | | | | | | | | | | | | | | | | |
| Urticaceae | <i>Boehmeria nivea</i> | 苧麻 | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Bidens alba</i> | 白花鬼針草 | 0.5 | 5 | 0.8 | 12 | 0.7 | 10 | | | 1 | 10 | 0.4 | 15 | 1 | 15 | | | 1 | 10 | 0.7 | 15 | 1 | 15 | | |
| Poaceae | <i>Coix lacryma-jobi</i> | 薏苡 | 2 | 5 | | | | | | | | | | | | | | | | | | | | | | |
| Solanaceae | <i>Solanum nigrum</i> | 龍葵 | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus flabelliformis</i> | 風車草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Miscanthus floridulus</i> | 五節芒 | | | | | | | | | | | | | | | | | | | | | | | | |
| Euphorbiaceae | <i>Macaranga tanarius</i> | 血桐 | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Wedelia chinensis</i> | 鯉魚菊 | | | | | | | | | | | | | | | | | | | | | | | | |
| Commelinaceae | <i>Commelina diffusa</i> | 節節草 | 0.3 | 12 | 0.8 | 22 | | | 0.3 | 20 | 0.4 | 10 | 0.4 | 20 | | | 0.3 | 20 | 0.5 | 10 | 0.5 | 20 | | | 0.3 | 20 |
| Asteraceae | <i>Erechtites hieracifolia</i> | 革命菜 | | | | | | | | | | | | | | | | | | | | | | | | |
| Thelypteridaceae | <i>Cyclosorus parasiticus</i> | 華南毛蕨 | | | | | | | | | | | | | | | | | | | | | | | | |
| Convolvulaceae | <i>Pharbitis nil</i> | 牽牛 | | | | | | | | | | | | | | | | | | | | | | | | |
| Verbenaceae | <i>Lantana camara</i> | 馬纒丹 | | | | | | | | | | | | | | | | | | | | | | | | |
| Mimosaceae | <i>Leucaena leucocephala</i> | 銀合歡 | | | | | | | | | | | | | | | | | | | | | | | | |
| Brassicaceae | <i>Nasturtium officinale</i> | 西洋菜 | | | 0.3 | 2 | 0.1 | 1 | | | | | 0.3 | 10 | 0.1 | 15 | | | | | | 0.3 | 10 | 0.2 | 15 | |
| Onagraceae | <i>Ludwigia erecta</i> | 美洲水丁香 | 2 | 25 | 2 | 13 | 2 | 10 | 1.8 | 5 | 2 | 30 | 2 | 10 | 2 | 5 | 1.8 | 5 | 2 | 30 | 2 | 10 | 2 | 5 | 2 | 5 |
| Poaceae | <i>Pennisetum alopecuroides</i> | 狼尾草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Amaranthaceae | <i>Celosia argentea</i> | 青葙 | | | | 1.5 | 15 | | | | | | | | | | | | | | | | | | | |
| Bare Gound | | | | 25 | | 20 | | 15 | | 40 | | 20 | | 20 | | 30 | | 19 | | 20 | | 20 | | 30 | | 19 |

P1 – Point count location 1; P4 – Point count location 4

Table 4.2. Flora species recorded from belt transect survey at the Upper Lam Tsuen River

(T1 - located at upper river channel sampling site to T4 - located at lower river Channel sampling site)

| Family | Species | Chinese name | Post construction monitoring | | | | | | | | | | | | | | | | | | | | | | | |
|------------------|---------------------------------|--------------|------------------------------|-----------|-----|-----------|-----|-----------|-----|-----------|--------|-----------|-----|-----------|-----|-----------|-----|-----------|--------|-----------|-----|-----------|-----|-----|-----|----|
| | | | Mar-15 | | | | | | | | Apr-15 | | | | | | | | May-15 | | | | | | | |
| | | | T1 | | T2 | | T3 | | T4 | | T1 | | T2 | | T3 | | T4 | | T1 | | T2 | | T3 | | T4 | |
| Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | | | |
| Poaceae | <i>Microstegium ciliatum</i> | 剛秀竹 | | | | | | | | | | | | | | | | | | | | | | | | |
| Fabaceae | <i>Pueraria lobata</i> | 野葛 | | | | | | 0.6 | 10 | | | | | | | 0.6 | 10 | | | | | | | 0.3 | 5 | |
| Poaceae | <i>Pennisetum purpureum</i> | 象草 | | | | 3 | 15 | | | | | | | 3 | 15 | | | | | | | 2 | 15 | | | |
| Araceae | <i>Alocasia odora</i> | 海芋 | | | | | | 1.8 | 1 | | | | | | | 1.8 | 1 | | | | | | | 0.8 | 1 | |
| Caesalpinaceae | <i>Cassia alata</i> | 翅菜決明 | | | | | | | | | | | | | | | | | | | | | | | | |
| Magnoliaceae | <i>Michelia alba</i> | 白蘭 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Brachiaria mutica</i> | 巴拉草 | 1 | 20 | 1.2 | 20 | 1.4 | 20 | 1 | 10 | 1.1 | 20 | 1.2 | 20 | 1.4 | 20 | 1 | 10 | 0.9 | 15 | 1 | 18 | 0.8 | 20 | 1 | 10 |
| Moraceae | <i>Ficus hispida</i> | 對葉榕 | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Mikania micrantha</i> | 薇甘菊 | 0.4 | 10 | 0.4 | 15 | 0.3 | 5 | 0.3 | 20 | 0.4 | 10 | 0.4 | 15 | 0.3 | 5 | 0.3 | 20 | 0.3 | 5 | 0.4 | 10 | 0.3 | 5 | 0.3 | 10 |
| Musaceae | <i>Musa paradisiaca</i> | 大蕉 | | | | | | | | | | | | | | | | | | | | | | | | |
| Ulmaceae | <i>Celtis sinensis</i> | 朴樹 | | | | | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Pistia stratiotes L.</i> | 大漂 | | | | | | | | | | | | | | | | | | | | | | | | |
| Urticaceae | <i>Boehmeria nivea</i> | 苧麻 | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Bidens alba</i> | 白花鬼針草 | 1 | 10 | 0.7 | 15 | 1 | 15 | | 1 | 10 | 0.7 | 15 | 1 | 15 | | | 0.8 | 5 | 0.7 | 10 | 0.8 | 15 | | | |
| Poaceae | <i>Coix lacryma-jobi</i> | 薏苡 | | | | | | | | | | | | | | | | | | | | | | | | |
| Solanaceae | <i>Solanum nigrum</i> | 龍葵 | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus flabelliformis</i> | 風車草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Miscanthus floridulus</i> | 五節芒 | | | | | | | | | | | | | | | | | | | | | | | | |
| Euphorbiaceae | <i>Macaranga tanarius</i> | 血桐 | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Wedelia chinensis</i> | 鯉眼菊 | | | | | | | | | | | | | | | | | | | | | | | | |
| Comelinaceae | <i>Commelina diffusa</i> | 節節草 | 0.5 | 10 | 0.4 | 20 | | | 0.3 | 20 | 0.5 | 10 | 0.4 | 20 | | | 0.3 | 20 | 0.5 | 5 | 0.4 | 10 | | | 0.3 | 10 |
| Asteraceae | <i>Erechtites hieracifolia</i> | 革命菜 | | | | | | | | | | | | | | | | | | | | | | | | |
| Thelypteridaceae | <i>Cyclosorus parasiticus</i> | 華南毛蕨 | | | | | | | | | | | | | | | | | | | | | | | | |
| Convolvulaceae | <i>Pharbitis nil</i> | 牽牛 | | | | | | | | | | | | | | | | | | | | | | | | |
| Verbenaceae | <i>Lantana camara</i> | 馬纒丹 | | | | | | | | | | | | | | | | | | | | | | | | |
| Mimosaceae | <i>Leucaena leucocephala</i> | 銀合歡 | | | | | | | | | | | | | | | | | | | | | | | | |
| Brassicaceae | <i>Nasturtium officinale</i> | 西洋菜 | | | | 0.3 | 10 | | 0.2 | 15 | | | | 0.3 | 10 | | 0.2 | 15 | | | | | | | | |
| Onagraceae | <i>Ludwigia erecta</i> | 美洲水丁香 | 2 | 30 | 2 | 10 | 2 | 5 | 2 | 5 | 2 | 30 | 2 | 10 | 2 | 5 | 2 | 5 | 1.2 | 10 | 1.1 | 5 | 1.4 | 5 | 1.3 | 5 |
| Poaceae | <i>Pennisetum alopecuroides</i> | 狼尾草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Amaranthaceae | <i>Celosia argentea</i> | 青葙 | | | | | | | | | | | | | | | | | | | | | | | | |
| Bare Gound | | | | 20 | | 20 | | 30 | | 19 | | 20 | | 20 | | 30 | | 19 | | 60 | | 47 | | 40 | | 59 |

P1 – Point count location 1; P4 – Point count location 4

Table 4.2. Flora species recorded from belt transect survey at the Upper Lam Tsuen River

(T1 - located at upper river channel sampling site to T4 - located at lower river Channel sampling site)

| Family | Species | Chinese name | Post construction monitoring | | | | | | | | Post construction monitoring | | | | | | | | Post construction monitoring | | | | | | | |
|------------------|---------------------------------|--------------|------------------------------|-----------|--------|-----------|--------|-----------|--------|-----------|------------------------------|-----------|--------|-----------|--------|-----------|--------|-----------|------------------------------|-----------|--------|----|--|--|--|--|
| | | | Stream | | | | Stream | | | | Stream | | | | Stream | | | | Stream | | | | | | | |
| | | | Jun-15 | | Jun-15 | | Jul-15 | | Jul-15 | | Aug-15 | | Aug-15 | | Aug-15 | | Aug-15 | | Aug-15 | | Aug-15 | | | | | |
| Transect | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | | | | | | |
| | | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | | | | | |
| Poaceae | <i>Microstegium ciliatum</i> | 剛秀竹 | | | | | | | | | | | | | | | | | | | | | | | | |
| Fabaceae | <i>Pueraria lobata</i> | 野葛 | | | | | | 0.3 | 5 | 0.5 | 10 | | | | | 0.4 | 5 | 0.5 | 10 | | | | | | | |
| Poaceae | <i>Pennisetum purpureum</i> | 象草 | | | 2 | 15 | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Alocasia odora</i> | 海芋 | | | | | | 0.8 | 1 | | | | | | | | | | | | | | | | | |
| Caesalpiniaceae | <i>Cassia alata</i> | 翅葉決明 | | | | | | | | | | | | | | | | | | | | | | | | |
| Magnoliaceae | <i>Michelia alba</i> | 白蘭 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Brachiaria mutica</i> | 巴拉草 | 0.9 | 15 | 1 | 18 | 0.8 | 20 | 1 | 10 | 0.9 | 30 | 1.5 | 30 | 0.5 | 70 | 1 | 15 | 1 | 30 | 1.5 | 30 | | | | |
| Moraceae | <i>Ficus hispida</i> | 對葉榕 | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Mikania micrantha</i> | 薇甘菊 | 0.3 | 5 | 0.4 | 10 | 0.3 | 5 | 0.3 | 10 | 0.3 | 5 | 0.2 | 5 | 0.3 | 5 | 0.4 | 5 | 0.3 | 5 | 0.2 | 5 | | | | |
| Musaceae | <i>Musa paradisiaca</i> | 大蕉 | | | | | | | | | | | | | | | | | | | | | | | | |
| Ulmaceae | <i>Celtis sinensis</i> | 朴樹 | | | | | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Pistia stratiotes L.</i> | 大漂 | | | | | | | | | | | | | | | | | | | | | | | | |
| Urticaceae | <i>Boehmeria nivea</i> | 苧麻 | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Bidens alba</i> | 白花鬼針草 | 0.8 | 5 | 0.7 | 10 | 0.8 | 15 | | | | | | 0.3 | 5 | | | | | 0.4 | 5 | | | | | |
| Poaceae | <i>Coix lacryma-jobi</i> | 薏苡 | | | | | | | | | | | | | | | | | | | | | | | | |
| Solanaceae | <i>Solanum nigrum</i> | 龍葵 | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus flabelliformis</i> | 風車草 | | | | | | | | | | | | 0.6 | 2 | | | | | 0.6 | 2 | | | | | |
| Poaceae | <i>Miscanthus floridulus</i> | 五節芒 | | | | | | | | | | | | | | | | | | | | | | | | |
| Euphorbiaceae | <i>Macaranga tanarius</i> | 血桐 | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Wedelia chinensis</i> | 鯉眼菊 | | | | | | | | 0.3 | 20 | 0.2 | 10 | | | | | 0.4 | 20 | 0.2 | 10 | | | | | |
| Commelinaceae | <i>Commelina diffusa</i> | 節節草 | 0.5 | 5 | 0.4 | 10 | | | 0.3 | 10 | 0.3 | 20 | 0.2 | 20 | 0.2 | 5 | 0.4 | 20 | 0.3 | 20 | 0.2 | 20 | | | | |
| Asteraceae | <i>Erechtites hieracifolia</i> | 革命菜 | | | | | | | | | | | | | | | | | | | | | | | | |
| Thelypteridaceae | <i>Cyclosorus parasiticus</i> | 華南毛蕨 | | | | | | | | | | | | | | | | | | | | | | | | |
| Convolvulaceae | <i>Pharbitis nil</i> | 牽牛 | | | | | | | | | | | | | | | | | | | | | | | | |
| Verbenaceae | <i>Lantana camara</i> | 馬纒丹 | | | | | | | | | | | | | | | | | | | | | | | | |
| Mimosaceae | <i>Leucaena leucocephala</i> | 銀合歡 | | | | | | | | | | | | | | | | | | | | | | | | |
| Brassicaceae | <i>Nasturtium officinale</i> | 西洋菜 | | | | | | | | | | | | | | | | | | | | | | | | |
| Onagraceae | <i>Ludwigia erecta</i> | 美洲水丁香 | 1.2 | 10 | 1.1 | 5 | 1.4 | 5 | 1.3 | 5 | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum alopecuroides</i> | 狼尾草 | | | | | | | | | | | | 0.5 | 5 | 2 | 5 | | | 0.8 | 5 | 2 | | | | |
| Amaranthaceae | <i>Celosia argentea</i> | 青葙 | | | | | | | | | | | | | | | | | | | | | | | | |
| Bare Gound | | | 60 | | 47 | | 40 | | 59 | 15 | | 35 | | 13 | | 55 | 15 | 35 | | 13 | 55 | | | | | |

P1 – Point count location 1; P4 – Point count location 4

(Continous) Table 4.2. Flora species recorded from belt transect survey at the Upper Lam Tsuen River

(T1- located at upper river channel sampling site to T4 - located at lower river Channel sampling site)

| Family | Species | Chinese name | Post construction monitoring | | | | | | | | Post construction monitoring | | | | | | | | Post construction monitoring | | | | | | | | | |
|------------------|---------------------------------|--------------|------------------------------|----|-----------|-----|-----------|----|-----------|-----|------------------------------|----|-----------|-----|-----------|----|-----------|-----|------------------------------|----|-----------|-----|-----------|-----|-----------|----|----|--|
| | | | Stream | | Sep-15 | | | | Oct-15 | | | | Nov-15 | | | | | | | | | | | | | | | |
| | | | Transect | | T1 | | T2 | | T3 | | T4 | | T1 | | T2 | | T3 | | T4 | | T1 | | T2 | | T3 | | T4 | |
| | | | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | | |
| Poaceae | <i>Microstegium ciliatum</i> | 剛秀竹 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fabaceae | <i>Pueraria lobata</i> | 野葛 | 0.5 | 10 | | | | | 0.4 | 5 | 0.5 | 10 | | | | | 0.4 | 5 | 0.5 | 10 | | | | 0.4 | 5 | | | |
| Poaceae | <i>Pennisetum purpureum</i> | 象草 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Alocasia odora</i> | 海芋 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Caesalpinaceae | <i>Cassia alata</i> | 翅莢決明 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Magnoliaceae | <i>Michelia alba</i> | 白蘭 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Bracharia mutica</i> | 巴拉草 | 1.1 | 30 | 1.5 | 35 | 1 | 70 | 1.2 | 15 | 0.7 | 5 | 1.5 | 30 | 1 | 60 | 1.2 | 15 | 0.7 | 5 | 1.5 | 35 | 1 | 60 | 1.2 | 20 | | |
| Moraceae | <i>Ficus hispida</i> | 對菜榕 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Mikania micrantha</i> | 薇甘菊 | 0.3 | 5 | 0.2 | 5 | 0.3 | 5 | 0.4 | 5 | 0.3 | 5 | 0.2 | 5 | 0.3 | 5 | 0.4 | 5 | 0.3 | 5 | 0.2 | 5 | 0.3 | 5 | 0.4 | 5 | | |
| Musaceae | <i>Musa paradisiaca</i> | 大蕉 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ulmaceae | <i>Celtis sinensis</i> | 朴樹 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Pistia stratiotes L.</i> | 大漂 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Urticaceae | <i>Boehmeria nivea</i> | 苧麻 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Bidens alba</i> | 白花鬼針草 | | | | | 0.4 | 5 | | | | | 0.4 | 10 | | | | | | | | 0.4 | 10 | | | | | |
| Poaceae | <i>Coix lacryma-jobi</i> | 薏苡 | | | | | | | | 1 | 5 | | | | | | | | 1 | 5 | | | | | | | | |
| Solanaceae | <i>Solanum nigrum</i> | 龍葵 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus flabelliformis</i> | 風車草 | | | | 0.6 | 2 | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Miscanthus floridulus</i> | 五節芒 | | | | | | | | 1 | 10 | | | | | | | | 1 | 10 | | | | | | | | |
| Euphorbiaceae | <i>Macaranga tanarius</i> | 血桐 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Wedelia chinensis</i> | 蟛蜞菊 | 0.4 | 20 | 0.2 | 10 | | | | 0.4 | 5 | | | | | | | 0.4 | 5 | | | | | | | | | |
| Commelinaceae | <i>Commelina diffusa</i> | 節節草 | 0.3 | 20 | 0.2 | 20 | 0.2 | 5 | 0.4 | 20 | 0.3 | 10 | 0.2 | 20 | 0.2 | 5 | 0.4 | 20 | 0.3 | 10 | 0.2 | 20 | 0.2 | 5 | 0.4 | 25 | | |
| Asteraceae | <i>Erechthites hieracifolia</i> | 革命菜 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Thelypteridaceae | <i>Cyclosorus parasiticus</i> | 華南毛蕨 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Convolvulaceae | <i>Pharbitis nil</i> | 牽牛 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Verbenaceae | <i>Lantana camara</i> | 馬纓丹 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mimosaceae | <i>Leucaena leucocephala</i> | 銀合歡 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Brassicaceae | <i>Nasturtium officinale</i> | 西洋菜 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Onagraceae | <i>Ludwigia erecta</i> | 美洲水丁香 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum alopecuroides</i> | 狼尾草 | | | | 0.8 | 5 | 2 | 5 | | | | | 1.5 | 10 | 2 | 5 | | | | | 1.5 | 10 | 2 | 5 | | | |
| Amaranthaceae | <i>Celosia argentea</i> | 青葙 | | | | | | | | | | | | 0.4 | 5 | | | | | | | 0.4 | 5 | | | | | |
| Acanthaceae | <i>Dicliptera chinensis</i> | 狗肝菜 | | | | | | | | 0.3 | 20 | | | | | | | 0.3 | 20 | | | | | | | | | |
| Bare Gound | | | | 15 | | 30 | | 13 | | 55 | | 30 | | 45 | | 20 | | 55 | | 30 | | 40 | | 20 | | 45 | | |

P1 – Point count location 1; P4 – Point count location 4

(Continous) Table 4.2. Flora species recorded from belt transect survey at the Upper Lam Tsuen River

(T1- located at upper river channel sampling site to T4 - located at lower river Channel sampling site)

| Family | Species | Chinese name | Post construction monitoring | | | | | | | | Post construction monitoring | | | | | | | | Post construction monitoring | | | | | | | | | |
|------------------|---------------------------------|--------------|------------------------------|----|-----------|-----|-----------|-----|-----------|-----|------------------------------|----|-----------|-----|-----------|-----|-----------|-----|------------------------------|----|-----------|-----|-----------|-----|-----------|----|----|--|
| | | | Stream | | Dec-15 | | | | Jan-16 | | | | Feb-16 | | | | | | | | | | | | | | | |
| | | | Transect | | T1 | | T2 | | T3 | | T4 | | T1 | | T2 | | T3 | | T4 | | T1 | | T2 | | T3 | | T4 | |
| | | | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | | |
| Poaceae | <i>Microstegium ciliatum</i> | 剛秀竹 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fabaceae | <i>Pueraria lobata</i> | 野葛 | 0.5 | 10 | | | | | 0.4 | 5 | 0.5 | 10 | | | | | 0.4 | 5 | 0.5 | 10 | | | | 0.4 | 5 | | | |
| Poaceae | <i>Pennisetum purpureum</i> | 象草 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Alocasia odora</i> | 海芋 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Caesalpinaceae | <i>Cassia alata</i> | 翅荑決明 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Magnoliaceae | <i>Michelia alba</i> | 白蘭 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Bracharia mutica</i> | 巴拉草 | 0.8 | 5 | 1.5 | 35 | 1.2 | 60 | 1.2 | 20 | 0.3 | 5 | 0.3 | 20 | 0.3 | 30 | 0.3 | 10 | 0.3 | 5 | 0.3 | 20 | 0.3 | 30 | 0.3 | 10 | | |
| Moraceae | <i>Ficus hispida</i> | 對菜榕 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Mikania micrantha</i> | 薇甘菊 | 0.3 | 5 | 0.2 | 5 | 0.3 | 5 | 0.4 | 5 | 0.3 | 5 | 0.2 | 5 | 0.3 | 5 | 0.4 | 5 | 0.3 | 5 | 0.2 | 5 | 0.3 | 5 | 0.4 | 5 | | |
| Musaceae | <i>Musa paradisiaca</i> | 大蕉 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ulmaceae | <i>Celtis sinensis</i> | 朴樹 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Pistia stratiotes L.</i> | 大漂 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Urticaceae | <i>Boehmeria nivea</i> | 苧麻 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Bidens alba</i> | 白花鬼針草 | | | | 0.4 | 10 | | | | | | | 0.4 | 10 | | | | | | | 0.4 | 10 | | | | | |
| Poaceae | <i>Coix lacryma-jobi</i> | 薏苡 | 1 | 5 | | | | | | 1 | 5 | | | | | | | 1 | 5 | | | | | | | | | |
| Solanaceae | <i>Solanum nigrum</i> | 龍葵 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus flabelliformis</i> | 風車草 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Miscanthus floridulus</i> | 五節芒 | 1 | 10 | | | | | | 1 | 10 | | | | | | | 1 | 10 | | | | | | | | | |
| Euphorbiaceae | <i>Macaranga tanarius</i> | 血桐 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Wedelia chinensis</i> | 蟛蜞菊 | 0.4 | 5 | | | | | | 0.4 | 5 | | | | | | | 0.4 | 5 | | | | | | | | | |
| Commelinaceae | <i>Commelina diffusa</i> | 節節草 | 0.3 | 10 | 0.2 | 20 | 0.2 | 5 | 0.4 | 25 | 0.3 | 10 | 0.2 | 20 | 0.2 | 5 | 0.4 | 25 | 0.3 | 10 | 0.2 | 20 | 0.2 | 5 | 0.4 | 25 | | |
| Asteraceae | <i>Erechites hieracifolia</i> | 革命菜 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Thelypteridaceae | <i>Cyclosorus parasiticus</i> | 華南毛蕨 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Convolvulaceae | <i>Pharbitis nil</i> | 牽牛 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Verbenaceae | <i>Lantana camara</i> | 馬纓丹 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mimosaceae | <i>Leucaena leucocephala</i> | 銀合歡 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Brassicaceae | <i>Nasturtium officinale</i> | 西洋菜 | | | | | | 0.2 | 10 | | | | | | | 0.2 | 10 | | | | | | | 0.2 | 10 | | | |
| Onagraceae | <i>Ludwigia erecta</i> | 美洲水丁香 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum alopecuroides</i> | 狼尾草 | | | | 1.5 | 10 | 2 | 5 | | | | | 1.5 | 10 | 2 | 5 | | | | | 1.5 | 10 | 2 | 5 | | | |
| Amaranthaceae | <i>Celosia argentea</i> | 青葙 | | | | 0.4 | 5 | | | | | | | 0.4 | 5 | | | | | | | 0.4 | 5 | | | | | |
| Acanthaceae | <i>Dicliptera chinensis</i> | 狗肝菜 | 0.3 | 20 | | | | | | 0.3 | 20 | | | | | | | 0.3 | 20 | | | | | | | | | |
| Bare Gound | | | | 30 | | 40 | | 20 | | 35 | | 30 | | 55 | | 50 | | 45 | | 30 | | 55 | | 50 | | 45 | | |

P1 – Point count location 1; P4 – Point count location 4

(Continous) Table 4.2. Flora species recorded from belt transect survey at the Upper Lam Tsuen River

(T1- located at upper river channel sampling site to T4 - located at lower river Channel sampling site)

| Family | Species | Chinese name | Post construction monitoring | | | | | | | | Post construction monitoring | | | | | | | | Post construction monitoring | | | | | | | |
|------------------|---------------------------------|--------------|------------------------------|----|-----------|----|-----------|-----|-----------|-----|------------------------------|----|-----------|-----|-----------|-----|-----------|----|------------------------------|----|-----------|----|-----|-----|-----|----|
| | | | Stream | | Mar-16 | | | | Apr-16 | | | | May-16 | | | | | | | | | | | | | |
| | | | Transect | | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | | | | | | | | | | |
| | | | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | | | | |
| Poaceae | <i>Microstegium ciliatum</i> | 剛秀竹 | | | | | | | | | | | | | | | | | | | | | | | | |
| Fabaceae | <i>Pueraria lobata</i> | 野葛 | 0.5 | 10 | | | | 0.4 | 5 | 0.5 | 8 | | | | 0.4 | 5 | 0.5 | 5 | | | | | | 0.4 | 5 | |
| Poaceae | <i>Pennisetum purpureum</i> | 象草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Alocasia odora</i> | 海芋 | | | | | | | | | | | | | | | | | | | | | | | | |
| Caesalpinaceae | <i>Cassia alata</i> | 翅荚决明 | | | | | | | | | | | | | | | | | | | | | | | | |
| Magnoliaceae | <i>Michelia alba</i> | 白蘭 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Bracharia mutica</i> | 巴拉草 | 0.4 | 10 | 0.4 | 25 | 0.4 | 35 | 0.4 | 15 | 0.4 | 8 | 0.4 | 25 | 0.4 | 35 | 0.4 | 10 | 0.4 | 7 | 0.4 | 20 | 0.4 | 25 | 0.4 | 5 |
| Moraceae | <i>Ficus hispida</i> | 對葉榕 | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Mikania micrantha</i> | 薇甘菊 | 0.3 | 5 | 0.2 | 5 | 0.3 | 5 | 0.4 | 5 | 0.3 | 5 | 0.2 | 5 | 0.3 | 5 | 0.4 | 5 | 0.3 | 5 | 0.2 | 5 | 0.3 | 5 | 0.4 | 5 |
| Musaceae | <i>Musa paradisiaca</i> | 大蕉 | | | | | | | | | | | | | | | | | | | | | | | | |
| Ulmaceae | <i>Celtis sinensis</i> | 朴樹 | | | | | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Pistia stratiotes L.</i> | 大漂 | | | | | | | | | | | | | | | | | | | | | | | | |
| Urticaceae | <i>Boehmeria nivea</i> | 苧麻 | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Bidens alba</i> | 白花鬼針草 | | | | | 0.4 | 10 | | | | | | 0.4 | 10 | | | | | | | | 0.4 | 5 | | |
| Poaceae | <i>Coix lacryma-jobi</i> | 薏苡 | 1 | 5 | | | | | | | 1 | 5 | | | | | | | 1 | 5 | | | | | | |
| Solanaceae | <i>Solanum nigrum</i> | 龍葵 | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus flabelliformis</i> | 風車草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Miscanthus floridulus</i> | 五節芒 | 1 | 10 | | | | | | | 1 | 8 | | | | | | | 1 | 7 | | | | | | |
| Euphorbiaceae | <i>Macaranga tanarius</i> | 血桐 | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Wedelia chinensis</i> | 蟛蜞菊 | 0.4 | 5 | | | | | | | 0.4 | 5 | | | | | | | 0.4 | 5 | | | | | | |
| Commelinaceae | <i>Commelina diffusa</i> | 節節草 | 0.3 | 10 | 0.2 | 20 | 0.2 | 5 | 0.4 | 25 | 0.3 | 8 | 0.2 | 20 | 0.2 | 5 | 0.4 | 20 | 0.3 | 7 | 0.2 | 15 | 0.2 | 5 | 0.4 | 15 |
| Asteraceae | <i>Erechtites hieracifolia</i> | 革命菜 | | | | | | | | | | | | | | | | | | | | | | | | |
| Thelypteridaceae | <i>Cyclosorus parasiticus</i> | 華南毛蕨 | | | | | | | | | | | | | | | | | | | | | | | | |
| Convolvulaceae | <i>Pharbitis nil</i> | 牽牛 | | | | | | | | | | | | | | | | | | | | | | | | |
| Verbenaceae | <i>Lantana camara</i> | 馬纓丹 | | | | | | | | | | | | | | | | | | | | | | | | |
| Mimosaceae | <i>Leucaena leucocephala</i> | 銀合歡 | | | | | | | | | | | | | | | | | | | | | | | | |
| Brassicaceae | <i>Nasturtium officinale</i> | 西洋菜 | | | | | | 0.2 | 5 | | | | | | | 0.2 | 5 | | | | | | | | 0.2 | 5 |
| Onagraceae | <i>Ludwigia erecta</i> | 美洲水丁香 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum alopecuroides</i> | 狼尾草 | | | | | 1.5 | 10 | | | | | | 1.5 | 10 | | | | | | | | 1.5 | 10 | | |
| Amaranthaceae | <i>Celosia argentea</i> | 青葙 | | | | | 0.4 | 5 | | | | | | 0.4 | 5 | | | | | | | | 0.4 | 5 | | |
| Acanthaceae | <i>Dicliptera chinensis</i> | 狗肝菜 | 0.3 | 20 | | | | | | | 0.3 | 15 | | | | | | | 0.3 | 5 | | | | | | |
| Bare Gound | | | | 25 | | 50 | | 45 | | 45 | | 38 | | 50 | | 45 | | 55 | | 54 | | 60 | | 60 | | 65 |

P1 – Point count location 1; P4 – Point count location 4

(Continous) Table 4.2. Flora species recorded from belt transect survey at the Upper Lam Tsuen River

(T1- located at upper river channel sampling site to T4 - located at lower river Channel sampling site)

| Family | Species | Chinese name | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | | | | | | | | | | | | |
|------------------|---------------------------------|--------------|------------------------------|----|-----|-----|------------------------------|-----|-----|-----|------------------------------|----|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|-----|-----|-----|----|
| | | | Jun-16 | | | | Jul-16 | | | | Aug-16 | | | | | | | | | | | | | | | |
| | | | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | | | | | | | | | | | | |
| Poaceae | <i>Microstegium ciliatum</i> | 剛秀竹 | | | | | | | | | | | | | | | | | | | | | | | | |
| Fabaceae | <i>Pueraria lobata</i> | 野葛 | 0.5 | 5 | | | | 0.4 | 5 | 0.5 | 5 | | | | | 0.4 | 5 | 0.5 | 5 | | | | | 0.4 | 5 | |
| Poaceae | <i>Pennisetum purpureum</i> | 象草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Alocasia odora</i> | 海芋 | | | | | | | | | | | | | | | | | | | | | | | | |
| Caesalpinaceae | <i>Cassia alata</i> | 翅荚决明 | | | | | | | | | | | | | | | | | | | | | | | | |
| Magnoliaceae | <i>Michelia alba</i> | 白蘭 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Bracharia mutica</i> | 巴拉草 | 0.4 | 7 | 0.4 | 20 | 0.4 | 25 | 0.4 | 5 | 0.4 | 7 | 0.4 | 15 | 0.4 | 20 | 0.4 | 5 | 0.4 | 7 | 0.4 | 15 | 0.4 | 20 | 0.4 | 5 |
| Moraceae | <i>Ficus hispida</i> | 對葉榕 | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Mikania micrantha</i> | 薇甘菊 | 0.3 | 5 | 0.2 | 5 | 0.3 | 5 | 0.4 | 5 | 0.3 | 5 | 0.2 | 5 | 0.3 | 5 | 0.4 | 5 | 0.3 | 5 | 0.2 | 5 | 0.3 | 5 | 0.4 | 5 |
| Musaceae | <i>Musa paradisiaca</i> | 大蕉 | | | | | | | | | | | | | | | | | | | | | | | | |
| Ulmaceae | <i>Celtis sinensis</i> | 朴樹 | | | | | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Pistia stratiotes L.</i> | 大漂 | | | | | | | | | | | | | | | | | | | | | | | | |
| Urticaceae | <i>Boehmeria nivea</i> | 苧麻 | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Bidens alba</i> | 白花鬼針草 | | | | 0.4 | 5 | | | | | | | 0.4 | 5 | | | | | | | 0.4 | 5 | | | |
| Poaceae | <i>Coix lacryma-jobi</i> | 薏苡 | 1 | 5 | | | | | | 1 | 5 | | | | | | | | 1 | 5 | | | | | | |
| Solanaceae | <i>Solanum nigrum</i> | 龍葵 | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus flabelliformis</i> | 風車草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Miscanthus floridulus</i> | 五節芒 | 1 | 7 | | | | | | 1 | 7 | | | | | | | | 1 | 7 | | | | | | |
| Euphorbiaceae | <i>Macaranga tanarius</i> | 血桐 | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Wedelia chinensis</i> | 蟛蜞菊 | 0.4 | 5 | | | | | | 0.4 | 5 | | | | | | | | 0.4 | 5 | | | | | | |
| Commelinaceae | <i>Commelina diffusa</i> | 節節草 | 0.3 | 7 | 0.2 | 15 | 0.2 | 5 | 0.4 | 15 | 0.3 | 7 | 0.2 | 10 | 0.2 | 5 | 0.4 | 10 | 0.3 | 10 | 0.2 | 15 | 0.2 | 10 | 0.4 | 15 |
| Asteraceae | <i>Erechites hieracifolia</i> | 革命菜 | | | | | | | | | | | | | | | | | | | | | | | | |
| Thelypteridaceae | <i>Cyclosorus parasiticus</i> | 華南毛蕨 | | | | | | | | | | | | | | | | | | | | | | | | |
| Convolvulaceae | <i>Pharbitis nil</i> | 牽牛 | | | | | | | | | | | | | | | | | | | | | | | | |
| Verbenaceae | <i>Lantana camara</i> | 馬纓丹 | | | | | | | | | | | | | | | | | | | | | | | | |
| Mimosaceae | <i>Leucaena leucocephala</i> | 銀合歡 | | | | | | | | | | | | | | | | | | | | | | | | |
| Brassicaceae | <i>Nasturtium officinale</i> | 西洋菜 | | | | | | 0.2 | 5 | | | | | | | 0.2 | 5 | | | | | | | 0.2 | 5 | |
| Onagraceae | <i>Ludwigia erecta</i> | 美洲水丁香 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum alopecuroides</i> | 狼尾草 | | | | 1.5 | 10 | | | | | | | 1.5 | 10 | | | | | | | | 1.5 | 10 | | |
| Amaranthaceae | <i>Celosia argentea</i> | 青葙 | | | | 0.4 | 5 | | | | | | | 0.4 | 5 | | | | | | | | 0.4 | 5 | | |
| Acanthaceae | <i>Dicliptera chinensis</i> | 狗肝菜 | 0.3 | 5 | | | | | | 0.3 | 5 | | | | | | | | 0.3 | 5 | | | | | | |
| Bare Gound | | | | 54 | | 60 | | 60 | | 65 | | 70 | | 65 | | 70 | | 51 | | 65 | | 60 | | 65 | | |

P1 – Point count location 1; P4 – Point count location 4

(Continous) Table 4.2. Flora species recorded from belt transect survey at the Upper Lam Tsuen River

(T1- located at upper river channel sampling site to T4 - located at lower river Channel sampling site)

| Family | Species | Chinese name | Post construction monitoring | | | | | | | | Post construction monitoring | | | | | | | | Post construction monitoring | | | | | | | | | |
|------------------|---------------------------------|--------------|------------------------------|----|-----------|----|-----------|-----|-----------|-----|------------------------------|----|-----------|-----|-----------|----|-----------|----|------------------------------|----|-----------|----|-----------|----|-----------|----|----|--|
| | | | Stream | | Sep-16 | | | | Oct-16 | | | | Nov-16 | | | | | | | | | | | | | | | |
| | | | Transect | | T1 | | T2 | | T3 | | T4 | | T1 | | T2 | | T3 | | T4 | | T1 | | T2 | | T3 | | T4 | |
| | | | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | | |
| Poaceae | <i>Microstegium ciliatum</i> | 剛秀竹 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fabaceae | <i>Pueraria lobata</i> | 野葛 | 0.5 | 5 | | | | | 0.4 | 5 | 0.5 | 5 | | | | | 0.4 | 5 | 0.5 | 5 | | | | | 0.4 | 5 | | |
| Poaceae | <i>Pennisetum purpureum</i> | 象草 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Alocasia odora</i> | 海芋 | 0.3 | 5 | 0.2 | 5 | 0.3 | 5 | 0.3 | 5 | 0.3 | 5 | 0.2 | 5 | 0.3 | 5 | 0.3 | 5 | 0.4 | 5 | 0.2 | 5 | 0.3 | 5 | 0.4 | 5 | | |
| Caesalpiniaceae | <i>Cassia alata</i> | 翅荚决明 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Magnoliaceae | <i>Michelia alba</i> | 白蘭 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Bracharia mutica</i> | 巴拉草 | 0.5 | 10 | 0.5 | 20 | 0.5 | 25 | 0.5 | 5 | 0.5 | 10 | 0.5 | 20 | 0.5 | 25 | 0.5 | 5 | 0.5 | 10 | 0.5 | 20 | 0.5 | 25 | 0.5 | 5 | | |
| Moraceae | <i>Ficus hispida</i> | 對葉榕 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Mikania micrantha</i> | 薇甘菊 | 0.3 | 5 | 0.3 | 5 | 0.3 | 10 | 0.4 | 5 | 0.4 | 5 | 0.4 | 5 | 0.4 | 10 | 0.4 | 5 | 0.4 | 5 | 0.4 | 5 | 0.4 | 10 | 0.4 | 5 | | |
| Musaceae | <i>Musa paradisiaca</i> | 大蕉 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ulmaceae | <i>Celtis sinensis</i> | 朴樹 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Pistia stratiotes L.</i> | 大漂 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Urticaceae | <i>Boehmeria nivea</i> | 苧麻 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Bidens alba</i> | 白花鬼針草 | | | 0.3 | 5 | 0.4 | 5 | | | | | 0.5 | 5 | 0.4 | 5 | | | | | 0.5 | 5 | 0.4 | 5 | | | | |
| Poaceae | <i>Coix lacryma-jobi</i> | 薏苡 | 1 | 5 | | | | | | 1 | 5 | | | | | | | | 1.1 | 5 | | | | | | | | |
| Solanaceae | <i>Solanum nigrum</i> | 龍葵 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus flabelliformis</i> | 風車草 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Miscanthus floridulus</i> | 五節芒 | 1 | 7 | | | | | | 1 | 7 | | | | | | | | 1.1 | 7 | | | | | | | | |
| Euphorbiaceae | <i>Macaranga tanarius</i> | 血桐 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Wedelia chinensis</i> | 蟛蜞菊 | 0.4 | 5 | | | | | | 0.4 | 5 | | | | | | | | 0.4 | 5 | | | | | | | | |
| Commelinaceae | <i>Commelina diffusa</i> | 節節草 | 0.3 | 10 | 0.2 | 15 | 0.2 | 10 | 0.4 | 15 | 0.3 | 10 | 0.2 | 15 | 0.2 | 10 | 0.4 | 15 | 0.3 | 10 | 0.2 | 15 | 0.2 | 10 | 0.4 | 15 | | |
| Asteraceae | <i>Erechtites hieracifolia</i> | 革命菜 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Thelypteridaceae | <i>Cyclosorus parasiticus</i> | 華南毛蕨 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Convolvulaceae | <i>Pharbitis nil</i> | 牽牛 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Verbenaceae | <i>Lantana camara</i> | 馬纓丹 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mimosaceae | <i>Leucaena leucocephala</i> | 銀合歡 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Brassicaceae | <i>Nasturtium officinale</i> | 西洋菜 | | | | | | 0.2 | 5 | | | | | | | | | | | | | | | | | | | |
| Onagraceae | <i>Ludwigia erecta</i> | 美洲水丁香 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum alopecuroides</i> | 狼尾草 | | | | | 1.5 | 10 | | | | | | 1.5 | 10 | | | | | | | | 1.5 | 10 | | | | |
| Amaranthaceae | <i>Celosia argentea</i> | 青葙 | | | | | 0.4 | 5 | | | | | | 0.4 | 5 | | | | | | | | 0.4 | 5 | | | | |
| Acanthaceae | <i>Dicliptera chinensis</i> | 狗肝菜 | 0.3 | 5 | | | | | | 0.3 | 5 | | | | | | | | 0.3 | 5 | | | | | | | | |
| Bare Gound | | | | 43 | | 50 | | 45 | | 60 | | 43 | | 50 | | 45 | | 65 | | 43 | | 50 | | 45 | | 65 | | |

P1 – Point count location 1; P4 – Point count location 4

(Continous) Table 4.2. Flora species recorded from belt transect survey at the Upper Lam Tsuen River

(T1- located at upper river channel sampling site to T4 - located at lower river Channel sampling site)

| Family | Species | Chinese name | Post construction monitoring | | | | | | | | Post construction monitoring | | | | | | | | Post construction monitoring | | | | | | | |
|------------------|---------------------------------|--------------|------------------------------|----|-----------|-----|-----------|----|-----------|-----|------------------------------|----|-----------|-----|-----------|----|-----|-----|------------------------------|----|-----|-----|-----|-----|-----|----|
| | | | Stream | | Dec-16 | | | | Jan-17 | | | | Feb-17 | | | | | | | | | | | | | |
| | | | Transect | | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | | | | | | | | | | |
| | | | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | | | | | | | | | | |
| Poaceae | <i>Microstegium ciliatum</i> | 剛秀竹 | | | | | | | | | | | | | | | | | | | | | | | | |
| Fabaceae | <i>Pueraria lobata</i> | 野葛 | 0.5 | 5 | | | | | 0.4 | 5 | 0.5 | 5 | | | | | 0.4 | 5 | 0.5 | 5 | | | | 0.4 | 5 | |
| Poaceae | <i>Pennisetum purpureum</i> | 象草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Alocasia odora</i> | 海芋 | 0.4 | 5 | 0.2 | 5 | 0.3 | 5 | 0.4 | 5 | 0.4 | 5 | 0.2 | 5 | 0.3 | 5 | 0.4 | 5 | 0.4 | 5 | 0.2 | 5 | 0.3 | 5 | 0.4 | 5 |
| Caesalpinaceae | <i>Cassia alata</i> | 翅葉決明 | | | | | | | | | | | | | | | | | | | | | | | | |
| Magnoliaceae | <i>Michelia alba</i> | 白蘭 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Bracharia mutica</i> | 巴拉草 | 0.5 | 10 | 0.5 | 20 | 0.5 | 25 | 0.5 | 5 | 0.5 | 10 | 0.5 | 20 | 0.5 | 25 | 0.5 | 5 | 0.5 | 10 | 0.5 | 20 | 0.6 | 25 | 0.5 | 5 |
| Moraceae | <i>Ficus hispida</i> | 對葉榕 | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Mikania micrantha</i> | 薇甘菊 | 0.4 | 5 | 0.4 | 5 | 0.4 | 10 | 0.4 | 5 | 0.4 | 5 | 0.4 | 5 | 0.4 | 10 | 0.4 | 5 | 0.4 | 5 | 0.5 | 5 | 0.5 | 10 | 0.5 | 5 |
| Musaceae | <i>Musa paradisiaca</i> | 大蕉 | | | | | | | | | | | | | | | | | | | | | | | | |
| Ulmaceae | <i>Celtis sinensis</i> | 朴樹 | | | | | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Pistia stratiotes L.</i> | 大漂 | | | | | | | | | | | | | | | | | | | | | | | | |
| Urticaceae | <i>Boehmeria nivea</i> | 苧麻 | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Bidens alba</i> | 白花鬼針草 | | | 0.5 | 5 | 0.4 | 5 | | | | | 0.5 | 5 | 0.4 | 5 | | | | | 0.5 | 5 | 0.4 | 5 | | |
| Poaceae | <i>Coix lacryma-jobi</i> | 薏苡 | 1.1 | 5 | | | | | | 1.1 | 5 | | | | | | | 1.1 | 5 | | | | | | | |
| Solanaceae | <i>Solanum nigrum</i> | 龍葵 | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus flabelliformis</i> | 風車草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Miscanthus floridulus</i> | 五節芒 | 1.1 | 7 | | | | | | 1.1 | 7 | | | | | | | 1.1 | 7 | | | | | | | |
| Euphorbiaceae | <i>Macaranga tanarius</i> | 血桐 | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Wedelia chinensis</i> | 蟛蜞菊 | 0.4 | 5 | | | | | | 0.4 | 5 | | | | | | | 0.4 | 5 | | | | | | | |
| Commelinaceae | <i>Commelina diffusa</i> | 節節草 | 0.3 | 10 | 0.2 | 15 | 0.2 | 10 | 0.4 | 15 | 0.3 | 10 | 0.2 | 15 | 0.2 | 10 | 0.4 | 15 | 0.3 | 10 | 0.2 | 15 | 0.2 | 10 | 0.4 | 15 |
| Asteraceae | <i>Erechthites hieracifolia</i> | 革命菜 | | | | | | | | | | | | | | | | | | | | | | | | |
| Thelypteridaceae | <i>Cyclosorus parasiticus</i> | 華南毛蕨 | | | | | | | | | | | | | | | | | | | | | | | | |
| Convolvulaceae | <i>Pharbitis nil</i> | 牽牛 | | | | | | | | | | | | | | | | | | | | | | | | |
| Verbenaceae | <i>Lantana camara</i> | 馬纓丹 | | | | | | | | | | | | | | | | | | | | | | | | |
| Mimosaceae | <i>Leucaena leucocephala</i> | 銀合歡 | | | | | | | | | | | | | | | | | | | | | | | | |
| Brassicaceae | <i>Nasturtium officinale</i> | 西洋菜 | | | | | | | | | | | | | | | | | | | | | | | | |
| Onagraceae | <i>Ludwigia erecta</i> | 美洲水丁香 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum alopecuroides</i> | 狼尾草 | | | | 1.5 | 10 | | | | | | | 1.5 | 10 | | | | | | | 1.5 | 10 | | | |
| Amaranthaceae | <i>Celosia argentea</i> | 青葙 | | | | 0.4 | 5 | | | | | | | 0.4 | 5 | | | | | | | 0.4 | 5 | | | |
| Acanthaceae | <i>Dicliptera chinensis</i> | 狗肝菜 | 0.3 | 5 | | | | | | 0.3 | 5 | | | | | | | 0.3 | 5 | | | | | | | |
| Bare Gound | | | | 43 | | 50 | | 45 | | 65 | | 43 | | 50 | | 45 | | 65 | | 43 | | 50 | | 45 | | 65 |

P1 – Point count location 1; P4 – Point count location 4

(Continous) Table 4.2. Flora species recorded from belt transect survey at the Upper Lam Tsuen River

(T1- located at upper river channel sampling site to T4 - located at lower river Channel sampling site)

| | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | | | | |
|------------------|---------------------------------|------------------------------|-----------|----|-----------|------------------------------|-----------|----|-----------|------------------------------|-----------|-----|-----------|----|----|--|----|
| | | Mar-17 | | | | Apr-17 | | | | May-17 | | | | | | | |
| Stream | | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | | | | |
| Family | Species | Chinese name | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | | | |
| Poaceae | <i>Microstegium ciliatum</i> | 剛秀竹 | | | | | | | | | | | | | | | |
| Fabaceae | <i>Pueraria lobata</i> | 野葛 | 0.5 | 5 | | | | | 0.4 | 5 | 0.5 | 5 | | | | | |
| Poaceae | <i>Pennisetum purpureum</i> | 象草 | | | | | | | | | | | 0.4 | 5 | | | |
| Araceae | <i>Alocasia odora</i> | 海芋 | 0.4 | 5 | 0.2 | 10 | 0.3 | 10 | 0.4 | 5 | 0.4 | 5 | 0.2 | 10 | | | |
| Caesalpiniaceae | <i>Cassia alata</i> | 翅荚决明 | | | | | | | | | | | | | | | |
| Magnoliaceae | <i>Michelia alba</i> | 白蘭 | | | | | | | | | | | | | | | |
| Poaceae | <i>Bracharia mutica</i> | 巴拉草 | 0.6 | 10 | 0.6 | 25 | 0.6 | 25 | 0.6 | 10 | 0.5 | 10 | 0.7 | 35 | | | |
| Moraceae | <i>Ficus hispida</i> | 對葉榕 | | | | | | | | | | | | | | | |
| Asteraceae | <i>Mikania micrantha</i> | 薇甘菊 | 0.4 | 5 | 0.5 | 5 | 0.5 | 10 | 0.5 | 5 | 0.4 | 5 | 0.5 | 5 | | | |
| Musaceae | <i>Musa paradisiaca</i> | 大蕉 | | | | | | | | | | | | | | | |
| Ulmaceae | <i>Celtis sinensis</i> | 朴樹 | | | | | | | | | | | | | | | |
| Araceae | <i>Pistia stratiotes L.</i> | 大漂 | | | | | | | | | | | | | | | |
| Urticaceae | <i>Boehmeria nivea</i> | 苧麻 | | | | | | | | | | | | | | | |
| Asteraceae | <i>Bidens alba</i> | 白花鬼針草 | | | 0.5 | 10 | 0.4 | 10 | | | 0.5 | 10 | 0.4 | 10 | | | |
| Poaceae | <i>Coix lacryma-jobi</i> | 薏苡 | 1.1 | 5 | | | | | | 1.1 | 5 | | | | | | |
| Solanaceae | <i>Solanum nigrum</i> | 龍葵 | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus flabelliformis</i> | 風車草 | | | | | | | | | | | | | | | |
| Poaceae | <i>Miscanthus floridulus</i> | 五節芒 | 1.1 | 7 | | | | | | 1.1 | 7 | | | | | | |
| Euphorbiaceae | <i>Macaranga tanarius</i> | 血桐 | | | | | | | | | | | | | | | |
| Asteraceae | <i>Wedelia chinensis</i> | 蟛蜞菊 | 0.4 | 5 | | | | | | 0.4 | 5 | | | | | | |
| Commelinaceae | <i>Commelina diffusa</i> | 節節草 | 0.3 | 10 | 0.2 | 15 | 0.2 | 10 | 0.4 | 15 | 0.3 | 10 | 0.3 | 15 | | | |
| Asteraceae | <i>Erechtites hieracifolia</i> | 革命菜 | | | | | | | | | | | | | | | |
| Thelypteridaceae | <i>Cyclosorus parasiticus</i> | 華南毛蕨 | | | | | | | | | | | | | | | |
| Convolvulaceae | <i>Pharbitis nil</i> | 牽牛 | | | | | | | | | | | | | | | |
| Verbenaceae | <i>Lantana camara</i> | 馬纓丹 | | | | | | | | | | | | | | | |
| Mimosaceae | <i>Leucaena leucocephala</i> | 銀合歡 | | | | | | | | | | | | | | | |
| Brassicaceae | <i>Nasturtium officinale</i> | 西洋菜 | | | | | | | | | | | | | | | |
| Onagraceae | <i>Ludwigia erecta</i> | 美洲水丁香 | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum alopecuroides</i> | 狼尾草 | | | | 1.5 | 10 | | | | | 1.5 | 10 | | | | |
| Amaranthaceae | <i>Celosia argentea</i> | 青葙 | | | | 0.4 | 5 | | | | | 0.4 | 5 | | | | |
| Acanthaceae | <i>Dicliptera chinensis</i> | 狗肝菜 | 0.3 | 5 | | | | | | 0.3 | 5 | | | | | | |
| Bare Gound | | | 43 | | 35 | | 35 | | 60 | | 43 | | 25 | | 25 | | 60 |

P1 – Point count location 1; P4 – Point count location 4

(Continous) Table 4.2. Flora species recorded from belt transect survey at the Upper Lam Tsuen River

(T1- located at upper river channel sampling site to T4 - located at lower river Channel sampling site)

| Family | Species | Chinese name | Post construction monitoring | | | | | | | | Post construction monitoring | | | | | | | | Post construction monitoring | | | | | | | | | | | | | |
|------------------|---------------------------------|--------------|------------------------------|----|-----------|----|-----------|----|-----------|----|------------------------------|----|-----------|-----|-----------|----|-----------|----|------------------------------|----|-----------|----|-----------|----|-----------|----|-----------|---|----|--|--|--|
| | | | Stream | | Jun-17 | | | | Jul-17 | | | | Aug-17 | | | | T1 | | | | T2 | | | | T3 | | | | T4 | | | |
| | | | Transect | | T1 | | T2 | | T3 | | T4 | | T1 | | T2 | | T3 | | T4 | | T1 | | T2 | | T3 | | T4 | | | | | |
| | | | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | | | | |
| Poaceae | <i>Microstegium ciliatum</i> | 剛秀竹 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fabaceae | <i>Pueraria lobata</i> | 野葛 | 0.5 | 5 | | | | | 0.4 | 5 | 0.5 | 5 | | | | | 0.5 | 5 | 0.5 | 5 | | | | | 0.5 | 5 | | | | | | |
| Poaceae | <i>Pennisetum purpureum</i> | 象草 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Alocasia odora</i> | 海芋 | 0.4 | 5 | 0.2 | 5 | 0.3 | 5 | 0.4 | 5 | 0.4 | 5 | 0.3 | 5 | 0.4 | 5 | 0.5 | 5 | 0.4 | 5 | 0.3 | 5 | 0.4 | 5 | 0.5 | 5 | | | | | | |
| Caesalpiniaceae | <i>Cassia alata</i> | 翅荚决明 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Magnoliaceae | <i>Michelia alba</i> | 白蘭 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Bracharia mutica</i> | 巴拉草 | 0.6 | 5 | 0.8 | 20 | 0.7 | 20 | 0.7 | 10 | 0.6 | 5 | 0.8 | 20 | 0.7 | 20 | 0.7 | 10 | 0.7 | 5 | 0.8 | 20 | 0.7 | 20 | 0.7 | 10 | | | | | | |
| Moraceae | <i>Ficus hispida</i> | 對葉榕 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Mikania micrantha</i> | 薇甘菊 | 0.4 | 5 | 0.6 | 5 | 0.6 | 10 | 0.6 | 5 | 0.4 | 5 | 0.6 | 5 | 0.6 | 10 | 0.6 | 5 | 0.5 | 5 | 0.6 | 5 | 0.6 | 10 | 0.6 | 5 | | | | | | |
| Musaceae | <i>Musa paradisiaca</i> | 大蕉 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ulmaceae | <i>Celtis sinensis</i> | 朴樹 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Pistia stratiotes L.</i> | 大漂 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Urticaceae | <i>Boehmeria nivea</i> | 苧麻 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Bidens alba</i> | 白花鬼針草 | | | 0.5 | 8 | 0.4 | 5 | | | | | 0.5 | 8 | 0.4 | 5 | | | | | 0.5 | 8 | 0.4 | 5 | | | | | | | | |
| Poaceae | <i>Coix lacryma-jobi</i> | 薏苡 | 1.3 | 5 | | | | | | | 1.3 | 5 | | | | | | | 1.3 | 5 | | | | | | | | | | | | |
| Solanaceae | <i>Solanum nigrum</i> | 龍葵 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus flabelliformis</i> | 風車草 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Miscanthus floridulus</i> | 五節芒 | 1.3 | 7 | | | | | | | 1.3 | 7 | | | | | | | 1.3 | 7 | | | | | | | | | | | | |
| Euphorbiaceae | <i>Macaranga tanarius</i> | 血桐 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Wedelia chinensis</i> | 蟛蜞菊 | 0.4 | 5 | | | | | | | 0.4 | 5 | | | | | | | 0.4 | 5 | | | | | | | | | | | | |
| Commelinaceae | <i>Commelina diffusa</i> | 節節草 | 0.3 | 10 | 0.3 | 15 | 0.3 | 10 | 0.4 | 15 | 0.3 | 10 | 0.5 | 15 | 0.5 | 10 | 0.4 | 15 | 0.3 | 10 | 0.5 | 15 | 0.5 | 10 | 0.4 | 15 | | | | | | |
| Asteraceae | <i>Erechites hieracifolia</i> | 革命菜 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Thelypteridaceae | <i>Cyclosorus parasiticus</i> | 華南毛蕨 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Convolvulaceae | <i>Pharbitis nil</i> | 牽牛 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Verbenaceae | <i>Lantana camara</i> | 馬纓丹 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mimosaceae | <i>Leucaena leucocephala</i> | 銀合歡 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Brassicaceae | <i>Nasturtium officinale</i> | 西洋菜 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Onagraceae | <i>Ludwigia erecta</i> | 美洲水丁香 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum alopecuroides</i> | 狼尾草 | | | | | 1.5 | 10 | | | | | | 1.5 | 10 | | | | | | | | 1.5 | 10 | | | | | | | | |
| Amaranthaceae | <i>Celosia argentea</i> | 青葙 | | | | | 0.4 | 5 | | | | | | 0.4 | 5 | | | | | | | | 0.5 | 5 | | | | | | | | |
| Acanthaceae | <i>Dicliptera chinensis</i> | 狗肝菜 | 0.3 | 5 | | | | | | | 0.3 | 5 | | | | | | | 0.3 | 5 | 0.2 | 5 | | | | | | | | | | |
| Bare Gound | | | | 48 | | 47 | | 50 | | 60 | | 48 | | 47 | | 50 | | 60 | | 48 | | 47 | | 50 | | 60 | | | | | | |

P1 – Point count location 1; P4 – Point count location 4

(Continous) Table 4.2. Flora species recorded from belt transect survey at the Upper Lam Tsuen River

(T1- located at upper river channel sampling site to T4 - located at lower river Channel sampling site)

| Family | Species | Chinese name | Post construction monitoring | | | | | | | | Post construction monitoring | | | | | | | | | | | |
|------------------|---------------------------------|--------------|------------------------------|----|-----------|----|-----------|----|-----------|----|------------------------------|----|-----------|----|-----------|-----|-----------|-----|-----------|----|--|--|
| | | | Stream | | Sep-17 | | | | Oct-17 | | | | Stream | | Sep-17 | | | | Oct-17 | | | |
| | | | Transect | | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | | |
| | | | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | | |
| Poaceae | <i>Microstegium ciliatum</i> | 剛秀竹 | | | | | | | | | | | | | | | | | | | | |
| Fabaceae | <i>Pueraria lobata</i> | 野葛 | 0.6 | 5 | | | | | 0.6 | 5 | 0.6 | 5 | | | | | | 0.6 | 5 | | | |
| Poaceae | <i>Pennisetum purpureum</i> | 象草 | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Alocasia odora</i> | 海芋 | 0.5 | 5 | 0.3 | 5 | 0.5 | 5 | 0.6 | 5 | 0.5 | 5 | 0.4 | 5 | | | | 0.6 | 5 | | | |
| Caesalpiniaceae | <i>Cassia alata</i> | 翅莢決明 | | | | | | | | | | | | | | | | | | | | |
| Magnoliaceae | <i>Michelia alba</i> | 白蘭 | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Bracharia mutica</i> | 巴拉草 | 0.7 | 5 | 0.8 | 20 | 0.7 | 20 | 0.7 | 10 | 0.7 | 5 | 0.8 | 20 | 0.7 | 20 | 0.7 | 10 | | | | |
| Moraceae | <i>Ficus hispida</i> | 對葉榕 | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Mikania micrantha</i> | 薇甘菊 | 0.5 | 5 | 0.6 | 5 | 0.7 | 10 | 0.6 | 5 | 0.5 | 5 | 0.6 | 5 | 0.7 | 10 | 0.6 | 5 | | | | |
| Musaceae | <i>Musa paradisiaca</i> | 大蕉 | | | | | | | | | | | | | | | | | | | | |
| Ulmaceae | <i>Celtis sinensis</i> | 朴樹 | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Pistia stratiotes L.</i> | 大漂 | | | | | | | | | | | | | | | | | | | | |
| Urticaceae | <i>Boehmeria nivea</i> | 苧麻 | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Bidens alba</i> | 白花鬼針草 | | | 0.5 | 8 | 0.5 | 5 | | | | | 0.5 | 8 | 0.5 | 5 | | | | | | |
| Poaceae | <i>Coix lacryma-jobi</i> | 薏苡 | 1.3 | 5 | | | | | | | 1.3 | 5 | | | | | | | | | | |
| Solanaceae | <i>Solanum nigrum</i> | 龍葵 | | | | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus flabelliformis</i> | 風車草 | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Miscanthus floridulus</i> | 五節芒 | 1.3 | 7 | | | | | | | 1.3 | 7 | | | | | | | | | | |
| Euphorbiaceae | <i>Macaranga tanarius</i> | 血桐 | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Wedelia chinensis</i> | 蟛蜞菊 | 0.4 | 5 | | | | | | | 0.4 | 5 | | | | | | | | | | |
| Commelinaceae | <i>Commelina diffusa</i> | 節節草 | 0.3 | 10 | 0.5 | 15 | 0.5 | 10 | 0.4 | 15 | 0.5 | 10 | 0.6 | 15 | 0.6 | 10 | 0.4 | 15 | | | | |
| Asteraceae | <i>Erechites hieracifolia</i> | 革命菜 | | | | | | | | | | | | | | | | | | | | |
| Thelypteridaceae | <i>Cyclosorus parasiticus</i> | 華南毛蕨 | | | | | | | | | | | | | | | | | | | | |
| Convolvulaceae | <i>Pharbitis nil</i> | 牽牛 | | | | | | | | | | | | | | | | | | | | |
| Verbenaceae | <i>Lantana camara</i> | 馬纓丹 | | | | | | | | | | | | | | | | | | | | |
| Mimosaceae | <i>Leucaena leucocephala</i> | 銀合歡 | | | | | | | | | | | | | | | | | | | | |
| Brassicaceae | <i>Nasturtium officinale</i> | 西洋菜 | | | | | | | | | | | | | | | | | | | | |
| Onagraceae | <i>Ludwigia erecta</i> | 美洲水丁香 | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum alopecuroides</i> | 狼尾草 | | | | | 1.5 | 10 | | | | | | | | 1.5 | 10 | | | | | |
| Amaranthaceae | <i>Celosia argentea</i> | 青葙 | | | | | 0.5 | 5 | | | | | | | | 0.5 | 5 | | | | | |
| Acanthaceae | <i>Dicliptera chinensis</i> | 狗肝菜 | 0.3 | 5 | 0.2 | 5 | | | | | 0.3 | 5 | 0.3 | 5 | | | | | | | | |
| Bare Gound | | | | 48 | | 47 | | 50 | | 60 | | 48 | | 47 | | 55 | | 60 | | | | |

P1 – Point count location 1; P4 – Point count location 4

Table 4.3 Avifauna recorded along survey transects and at four selected point count locations of Lam Tsuen River.

(T1- located at upper river channel sampling site to T4 - located at lower river Channel sampling site)

| Common Name | Species name | Chinese name | Status | Commonness | Baseline monitoring | | | Impact monitoring | | | | | Impact monitoring | | | | | Impact monitoring | | | | | | | | | |
|---------------------------|--------------------------------|--------------|--------|------------|---------------------|----|----|-------------------|----|----|-----------|----|-------------------|-----|----|-----------|----|-------------------|----|----|-----------|----|----|----|----|---|---|
| | | | | | Jul-08 | | | Aug-08 | | | Jan-09 | | | | | Jul-09 | | | | | Jan-10 | | | | | | |
| | | | | | Abundance | | | Abundance | | | Abundance | | | | | Abundance | | | | | Abundance | | | | | | |
| | | | | | C | P1 | P4 | C | P1 | P4 | C | T1 | T2 | T3 | T4 | C | T1 | T2 | T3 | T4 | C | T1 | T2 | T3 | T4 | | |
| Northern Shoveler | <i>Anas clypeata</i> | 琵嘴鴨 | WV | C | | | | | | | | | | | | | | | | | | | | | | | |
| Olive Backed Pipit | <i>Anthus hodgsoni</i> | 樹鵲 | WV | C | + | | 1 | | | | | | | | | | | | | | | | | 2 | | | |
| Oriental Dollarbird | <i>Eurystomus orientalis</i> | 三寶鳥 | PM | U | | | | | | | | | | | | | | | | | | | | | | | |
| Plaintive Cuckoo | <i>Cacomantis merulinus</i> | 八聲杜鵑 | SV | U | | | | | | | | | | | | | | | | | | | | | | | |
| Red-billed Blue Magpie | <i>Urocissa erythrorhyncha</i> | 紅咀藍鶇 | R | C | | | | | | | | | | | | | | | | | | | | | | | |
| Red-flanked Bluetail | <i>Tarsiger cyanurus</i> | 紅脇藍尾鶇 | PM&WV | C | | | | | | | | | | | | | | | | | | | | | | | |
| Rufous Turtle Dove | <i>Streptopelia orientalis</i> | 山斑鳩 | R | C | | | | | | | | | | + | | 1 | | | | | | | | | | | |
| Rufous-backed Shrike | <i>Lanius schach</i> | 棕背伯勞 | R | C | | | | + | | | | | | + | 1 | 1 | | | | | | + | | 1 | | | |
| Rufous-capped Babbler | <i>Stachyridopsis ruficeps</i> | 紅頭穗鶇 | R | C | | | | | | | | | | | | | | | | | | | | | | | |
| Scarlet Minivet | <i>Pericrocotus flammeus</i> | 赤紅山椒鳥 | R | C | | | | | | | | | | | | | | | | | | | | | | | |
| Siberian Stonechat | <i>Saxicola maurus</i> | 黑喉石鶇 | WV | C | | | | | | | | | | + | | | | | | | | | | | | | |
| Sooty-headed Bulbul | <i>Pycnonotus aurigaster</i> | 白喉紅臀鶇 | R | U | | | | | | | | | | | | | | | | | | | | | | | |
| Spotted Dove | <i>Streptopelia chinensis</i> | 珠頸斑鳩 | R | C | + | | 1 | 1 | + | | 1 | | | +++ | | 3 | 1 | ++ | 2 | | 1 | 3 | ++ | 3 | 4 | 4 | 2 |
| Spotted Munia | <i>Lonchura punctulata</i> | 斑文鳥 | R | C | | | | | | | | | | | | | | + | | 2 | | | + | | 3 | | |
| Velvet-fronted Nuthatch | <i>Sitta frontalis</i> | 絨額鶇 | R | C | | | | | | | | | | | | | | | | | | | | | | | |
| White Wagtail | <i>Motacilla alba</i> | 白鶇鶇 | WV | C | | | | + | | | | | + | 1 | | 1 | 1 | + | 1 | | 1 | | + | 1 | 2 | 2 | 1 |
| White-breasted Waterhen | <i>Amauromis phoenicurus</i> | 白胸苦惡鳥 | R | C | + | | | + | | | | | | + | | | | | | | 1 | | + | | | 1 | |
| White-throated Kingfisher | <i>Halcyon smyrnensis</i> | 白胸翡翠 | R, LC | C | | | | | | | | | | | | | | | | | 1 | | + | | | 1 | |
| White-rumped Munia | <i>Lonchura striata</i> | 白腰文鳥 | R | C | | | | | | | | | | | | | | | | | | | | | | | |
| Yellow Bellid Prinia | <i>Prinia flaviventris</i> | 黃腹鶇鶇 | R | C | + | | | 1 | + | | | | | + | | | | | | | 1 | | + | 1 | | 3 | 1 |
| Yellow Wagtail | <i>Motacilla flava</i> | 黃鶇鶇 | WV&PM | U | | | | | | | | | | + | | 1 | 1 | | | | | | + | 1 | | 2 | |
| Zitting cisticola | <i>Cisticola juncidis</i> | 棕扇尾鶇 | WV&PM | C | | | | | | | | | | | | | | | | | | | | | | | |
| Number of birds | | | | | | 19 | 12 | | 20 | 13 | | 6 | 5 | 14 | 12 | | 9 | 14 | 13 | 17 | | 50 | 14 | 28 | 10 | | |
| No. of species | | | | | | 18 | 12 | 8 | 19 | 9 | 5 | 24 | 3 | 4 | 8 | 5 | 23 | 5 | 7 | 9 | 11 | 23 | 9 | 6 | 10 | 5 | |

Note: R – Resident; WV – Winter visitor; PM – Passage migrant; C – Common; U – Uncommon

SpM – Spring migrant; Sv–Summer Visitor ; C – transect survey;

P1 – Point count location 1; P4 – Point count location 4

+, occurred; ++, common; +++, abundant/dominant species in the the study area

Commonness and status were decided according to AFCD biodiversity website (www.hkbiobiodiversity.net)

All bird species are under protection of Wild Animals Protection Ordinance (Cap. 170)

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Table 4.3 Avifauna recorded along survey transects and at four selected point count locations of Lam Tsuen River.

(T1- located at upper river channel sampling site to T4 - located at lower river Channel sampling site)

| Common Name | Species name | Chinese name | Status | Commonness | Impact monitoring | | | | | Impact monitoring | | | | | Impact monitoring | | | | | Impact monitoring | | | | | | | | | |
|---------------------------|--------------------------------|--------------|--------|------------|-------------------|----|----|----|----|-------------------|----|----|----|----|-------------------|----|----|----|----|-------------------|----|----|----|----|---|----|----|----|----|
| | | | | | Jul-10 | | | | | Jan-11 | | | | | Jul-11 | | | | | Jan-12 | | | | | | | | | |
| | | | | | Abundance | | | | | Abundance | | | | | Abundance | | | | | Abundance | | | | | | | | | |
| | | | | | C | T1 | T2 | T3 | T4 | C | T1 | T2 | T3 | T4 | C | T1 | T2 | T3 | T4 | C | T1 | T2 | T3 | T4 | C | T1 | T2 | T3 | T4 |
| Northern Shoveler | <i>Anas clypeata</i> | 琵嘴鴨 | WV | C | | | | | | | | | | | | | | | | | | | | | | | | | |
| Olive Backed Pipit | <i>Anthus hodgsoni</i> | 樹鷓 | WV | C | + | | | | | + | | | | | | | | | | + | 1 | 1 | | | | | | | |
| Oriental Dollarbird | <i>Eurystomus orientalis</i> | 三寶鳥 | PM | U | | | | | | | | | | | | | | | | | | | | | | | | | |
| Plaintive Cuckoo | <i>Cacomantis merulinus</i> | 八聲杜鵑 | SV | U | | | | | | | | | | | | | | | | | | | | | | | | | |
| Red-billed Blue Magpie | <i>Urocissa erythrorhyncha</i> | 紅咀藍鶇 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | |
| Red-flanked Bluetail | <i>Tarsiger cyanurus</i> | 紅脇藍尾鶇 | PM&WV | C | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rufous Turtle Dove | <i>Streptopelia orientalis</i> | 山斑鳩 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rufous-backed Shrike | <i>Lanius schach</i> | 棕背伯勞 | R | C | + | | | 1 | | + | | | | | + | | | | | + | | | | | | | | | |
| Rufous-capped Babbler | <i>Stachyridopsis ruficeps</i> | 紅頭穗鶇 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | |
| Scarlet Minivet | <i>Pericrocotus flammeus</i> | 赤紅山椒鳥 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | |
| Siberian Stonechat | <i>Saxicola maurus</i> | 黑喉石鶇 | WV | C | | | | | | | | | | | | | | | | + | | | | | | | | | |
| Sooty-headed Bulbul | <i>Pycnonotus aurigaster</i> | 白喉紅臀鶇 | R | U | | | | | | | | | | | + | 1 | | | | + | | | | | | | | | |
| Spotted Dove | <i>Streptopelia chinensis</i> | 珠頸斑鳩 | R | C | ++ | 1 | 2 | 2 | 1 | +3 | | 2 | | 1 | + | 1 | 2 | 1 | 1 | + | | | | 12 | | | | | |
| Spotted Munia | <i>Lonchura punctulata</i> | 斑文鳥 | R | C | | | | | | + | | | | | + | | | | | ++ | | | | | | | | | |
| Velvet-fronted Nuthatch | <i>Sitta frontalis</i> | 絨額鶇 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | |
| White Wagtail | <i>Motacilla alba</i> | 白鶇鶇 | WV | C | + | 1 | | 1 | 1 | +1 | | 1 | | 2 | + | | | | | + | 1 | | | | | | | | |
| White-breasted Waterhen | <i>Amaurornis phoenicurus</i> | 白胸苦惡鳥 | R | C | + | | | 1 | 2 | +1 | | | | | + | | | | | + | | | | | | | | | |
| White-throated Kingfisher | <i>Halcyon smyrnensis</i> | 白胸翡翠 | R, LC | C | + | | | | | | | | | | | | | | | | | | | | | | | | |
| White-rumped Munia | <i>Lonchura striata</i> | 白腰文鳥 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | |
| Yellow Bellid Prinia | <i>Prinia flaviventris</i> | 黃腹鶇鶇 | R | C | + | | | 1 | 1 | +1 | | 1 | | 2 | + | | | 1 | | + | | | | | | | | | |
| Yellow Wagtail | <i>Motacilla flava</i> | 黃鶇鶇 | WV&PM | U | | | | | | + | | | | | | | | | | | | | | | | | | | |
| Zitting cisticola | <i>Cisticola juncidis</i> | 棕扇尾鶇 | WV&PM | C | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of birds | | | | | | 31 | 21 | 24 | 27 | | 30 | 14 | 8 | 13 | | 14 | 8 | 24 | 9 | | 15 | 9 | 21 | 17 | | | | | |
| No. of species | | | | | | 25 | 10 | 10 | 12 | 13 | 28 | 13 | 9 | 7 | 7 | 19 | 7 | 6 | 12 | 8 | 26 | 8 | 6 | 7 | 9 | | | | |

Note: R – Resident; WV – Winter visitor; PM – Passage migrant; C – Common; U – Uncommon

SpM – Spring migrant; Sv–Summer Visitor ; C – transect survey;

P1 – Point count location 1; P4 – Point count location 4

+, occurred; ++, common; +++, abundant/dominant species in the the study area

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(T1- located at upper river channel sampling site to T4 - located at lower river Channel sampling site)

| Common Name | Species name | Chinese name | Status | Commonness | Impact monitoring | | | | | Impact monitoring | | | | | Impact monitoring | | | | | Post construction monitoring | | | | |
|---------------------------|--------------------------------|--------------|--------|------------|-------------------|----|----|----|----|-------------------|----|----|----|----|-------------------|----|----|----|----|------------------------------|----|----|----|----|
| | | | | | Jul-12 | | | | | Aug-13 | | | | | Dec-13 | | | | | Jan-14 | | | | |
| | | | | | Abundance | | | | | Abundance | | | | | Abundance | | | | | Abundance | | | | |
| | | | | | C | T1 | T2 | T3 | T4 | C | T1 | T2 | T3 | T4 | C | T1 | T2 | T3 | T4 | C | T1 | T2 | T3 | T4 |
| Northern Shoveler | <i>Anas clypeata</i> | 琵嘴鴨 | WV | C | | | | | | | | | | | | | | | | | | | | |
| Olive Backed Pipit | <i>Anthus hodgsoni</i> | 樹鵲 | WV | C | + | | | | | | | | | | ++ | | 3 | 2 | 3 | ++ | 2 | 1 | | 2 |
| Oriental Dollarbird | <i>Eurystomus orientalis</i> | 三寶鳥 | PM | U | | | | | | | | | | | | | | | | | | | | |
| Plaintive Cuckoo | <i>Cacomantis merulinus</i> | 八聲杜鵑 | SV | U | | | | | | | | | | | | | | | | | | | | |
| Red-billed Blue Magpie | <i>Urocissa erythrorhyncha</i> | 紅咀藍鶇 | R | C | | | | | | | | | | | | | | | | | | | | |
| Red-flanked Bluetail | <i>Tarsiger cyanurus</i> | 紅脇藍尾鶇 | PM&WV | C | | | | | | | | | | | + | | | | | + | | 1 | | 1 |
| Rufous Turtle Dove | <i>Streptopelia orientalis</i> | 山斑鳩 | R | C | | | | | | | | | | | | | | | | | | | | |
| Rufous-backed Shrike | <i>Lanius schach</i> | 棕背伯勞 | R | C | + | 1 | | | | + | | | | | + | | | | | + | | | | |
| Rufous-capped Babbler | <i>Stachyridopsis ruficeps</i> | 紅頭穗鶇 | R | C | | | | | | | | | | | + | | | | | + | | | | |
| Scarlet Minivet | <i>Pericrocotus flammeus</i> | 赤紅山椒鳥 | R | C | | | | | | | | | | | + | | | | | | | | | |
| Siberian Stonechat | <i>Saxicola maurus</i> | 黑喉石鶇 | WV | C | | | | | | | | | | | + | | | | | + | | 1 | | |
| Sooty-headed Bulbul | <i>Pycnonotus aurigaster</i> | 白喉紅臀鶇 | R | U | + | | | 1 | | | | | | | | | | | | | | | | |
| Spotted Dove | <i>Streptopelia chinensis</i> | 珠頸斑鳩 | R | C | ++ | 2 | 1 | 3 | | ++ | 1 | 2 | 2 | | ++ | 1 | 3 | 1 | 2 | ++ | 3 | 2 | 3 | 4 |
| Spotted Munia | <i>Lonchura punctulata</i> | 斑文鳥 | R | C | + | | | | | + | | | | | + | | | | | ++ | | | | |
| Velvet-fronted Nuthatch | <i>Sitta frontalis</i> | 絨額鶇 | R | C | | | | | | | | | | | + | | | | | | | | | |
| White Wagtail | <i>Motacilla alba</i> | 白鶇鶇 | WV | C | ++ | 1 | 2 | | | + | | | | | ++ | 1 | 2 | 2 | 3 | ++ | | 2 | 1 | 2 |
| White-breasted Waterhen | <i>Anaouornis phoenicurus</i> | 白胸苦惡鳥 | R | C | + | | | | | + | | | | | + | | | | | + | | | | |
| White-throated Kingfisher | <i>Halcyon smymensis</i> | 白胸翡翠 | R, LC | C | | | | | | | | | | | | | | | | + | | | | |
| White-rumped Munia | <i>Lonchura striata</i> | 白腰文鳥 | R | C | | | | | | | | | | | | | | | | | | | | |
| Yellow Bellid Prinia | <i>Prinia flaviventris</i> | 黃腹鶇鶇 | R | C | + | 1 | | 1 | | + | | | | | + | | 1 | 1 | | + | | 1 | 2 | 1 |
| Yellow Wagtail | <i>Motacilla flava</i> | 黃鶇鶇 | WV&PM | U | | | | | | | | | | | | | | | | | | | | |
| Zitting cisticola | <i>Cisticola juncidis</i> | 棕扇尾鶇 | WV&PM | C | | | | | | | | | | | | | | | | | | | | |
| Number of birds | | | | | | 27 | 19 | 36 | 13 | | 16 | 10 | 14 | 10 | | 23 | 36 | 34 | 27 | | 25 | 33 | 41 | 37 |
| No. of species | | | | | | 23 | 10 | 9 | 13 | | 7 | 37 | 9 | 6 | | 7 | 6 | 7 | 6 | | 48 | 11 | 15 | 14 |

Note: R – Resident; WV – Winter visitor; PM – Passage migrant; C – Common; U – Uncommon

SpM – Spring migrant; Sv – Summer Visitor ; C – transect survey;

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(T1- located at upper river channel sampling site to T4 - located at lower river Channel sampling site)

| Common Name | Species name | Chinese name | Status | Commonness | Post construction monitoring | | | | | Post construction monitoring | | | | | Post construction monitoring | | | | | Post construction monitoring | | | | | Post construction monitoring | | | | |
|---------------------------|--------------------------------|--------------|--------|------------|------------------------------|----|----|----|----|------------------------------|----|----|----|----|------------------------------|----|----|----|----|------------------------------|----|----|----|----|------------------------------|----|----|----|----|
| | | | | | Feb-14 | | | | | Mar-14 | | | | | Apr-14 | | | | | May-14 | | | | | Jun-14 | | | | |
| | | | | | Abundance | | | | | Abundance | | | | | Abundance | | | | | Abundance | | | | | Abundance | | | | |
| | | | | | C | T1 | T2 | T3 | T4 | C | T1 | T2 | T3 | T4 | C | T1 | T2 | T3 | T4 | C | T1 | T2 | T3 | T4 | C | T1 | T2 | T3 | T4 |
| Northern Shoveler | <i>Anas clypeata</i> | 琵嘴鴨 | WV | C | | | | | | | | | | | | | | | | | | | | | | | | | |
| Olive Backed Pipit | <i>Anthus hodgsoni</i> | 樹鷄 | WV | C | + | | | 1 | | + | | 1 | 2 | | + | | | 2 | | + | | | | | | | | | |
| Oriental Dollarbird | <i>Eurystomus orientalis</i> | 三寶鳥 | PM | U | | | | | | | | | | | | | | | | | | | | | | | | | |
| Plaintive Cuckoo | <i>Cacomantis merulinus</i> | 八聲杜鵑 | SV | U | | | | | | | | | | | | | | | | + | | | | | + | | | | |
| Red-billed Blue Magpie | <i>Urocissa erythrorhyncha</i> | 紅咀藍鶇 | R | C | + | | | | | + | | | | | | | | | | | | | | | | | | | |
| Red-flanked Bluetail | <i>Tarsiger cyanurus</i> | 紅脇藍尾鶇 | PM&WV | C | + | | | | 1 | + | | | | | | | | | | | | | | | | | | | |
| Rufous Turtle Dove | <i>Streptopelia orientalis</i> | 山斑鳩 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rufous-backed Shrike | <i>Lanius schach</i> | 棕背伯勞 | R | C | + | | | | | + | | | | | + | | | 1 | | + | | | | | + | | | | |
| Rufous-capped Babbler | <i>Stachyridopsis ruficeps</i> | 紅頭穗鶇 | R | C | + | | | | | + | | | | | + | | | | | + | | | | | | | | | |
| Scarlet Minivet | <i>Pericrocotus flammeus</i> | 赤紅山椒鳥 | R | C | + | | | | | | | | | | | | | | | | | | | | | | | | |
| Siberian Stonechat | <i>Saxicola auratus</i> | 黑喉石鶇 | WV | C | + | | | | | + | | | 1 | | | | | | | | | | | | | | | | |
| Sooty-headed Bulbul | <i>Pycnonotus aurigaster</i> | 白喉紅臀鶇 | R | U | | | | | | | | | | | | | | | | | | | | | | | | | |
| Spotted Dove | <i>Streptopelia chinensis</i> | 珠頸斑鳩 | R | C | ++ | 3 | 4 | 3 | 2 | ++ | 2 | 3 | 4 | 3 | ++ | 3 | 2 | 2 | 1 | ++ | 2 | 3 | 5 | 2 | ++ | 3 | 1 | 3 | 2 |
| Spotted Munia | <i>Lonchura punctulata</i> | 斑文鳥 | R | C | ++ | | | | | ++ | | | | | ++ | | | 4 | | ++ | | | | | ++ | | | | |
| Velvet-fronted Nuthatch | <i>Sitta frontalis</i> | 絨額鶇 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | |
| White Wagtail | <i>Motacilla alba</i> | 白鶇鶇 | WV | C | ++ | 1 | 2 | 3 | 2 | ++ | 1 | 2 | 2 | 1 | ++ | 1 | 2 | 1 | 2 | + | | | | | + | | | | |
| White-breasted Waterhen | <i>Amaurornis phoeniceus</i> | 白胸苦惡鳥 | R | C | + | | | | | + | | | 2 | | + | | | | 1 | + | | | 1 | 1 | + | | 1 | | |
| White-throated Kingfisher | <i>Halcyon smyrnensis</i> | 白胸翡翠 | R, LC | C | + | | | | | | | | | | + | | | | | + | | | | | | | | | |
| White-rumped Munia | <i>Lonchura striata</i> | 白腰文鳥 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | |
| Yellow Bellid Prinia | <i>Prinia flaviventris</i> | 黃腹鶇鶇 | R | C | + | | | 1 | 2 | + | | 1 | 2 | 1 | + | 1 | 1 | 1 | | + | | | 1 | 1 | + | 1 | | | 1 |
| Yellow Wagtail | <i>Motacilla flava</i> | 黃鶇鶇 | WV&PM | U | | | | | | | | | | | | | | | | | | | | | | | | | |
| Zitting cisticola | <i>Cisticola juncidis</i> | 棕扇尾鶇 | WV&PM | C | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of birds | | | | | | 25 | 25 | 42 | 35 | | 22 | 32 | 66 | 33 | | 23 | 23 | 36 | 14 | | 18 | 19 | 41 | 21 | | 19 | 16 | 32 | 16 |
| No. of species | | | | | | 40 | 12 | 14 | 19 | | 18 | 41 | 13 | 18 | | 26 | 16 | | | | 12 | 14 | 18 | 11 | | 11 | 10 | 19 | 14 |

Note: R – Resident; WV – Winter visitor; PM – Passage migrant; C – Common; U – Uncommon

SpM – Spring migrant; Sv–Summer Visitor ; C – transect survey;

P1 – Point count location 1; P4 – Point count location 4

+, occurred; ++, common; +++, abundant/dominant species in the the study area

Commonness and status were decided according to AFCD biodiversity website (www.hkbiobiodiversity.net)

All bird species are under protection of Wild Animals Protection Ordinance (Cap. 170)

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Table 4.3 Avifauna recorded along survey transects and at four selected point count locations of Lam Tsuen River.

(T1- located at upper river channel sampling site to T4 - located at lower river Channel sampling site)

| Common Name | Species name | Chinese name | Status | Commonness | Post construction monitoring | | | | | Post construction monitoring | | | | | Post construction monitoring | | | | | Post construction monitoring | | | | | Post construction monitoring | | | | | | | | | | | | | | |
|---------------------------|--------------------------------|--------------|--------|------------|------------------------------|----|----|----|----|------------------------------|----|----|----|----|------------------------------|----|----|----|----|------------------------------|----|----|----|----|------------------------------|----|----|----|----|---|----|----|----|----|--|--|--|---|---|
| | | | | | Jul-14 | | | | | Aug-14 | | | | | Sep-14 | | | | | Oct-14 | | | | | Nov-14 | | | | | | | | | | | | | | |
| | | | | | Abundance | | | | | Abundance | | | | | Abundance | | | | | Abundance | | | | | Abundance | | | | | | | | | | | | | | |
| | | | | | C | T1 | T2 | T3 | T4 | C | T1 | T2 | T3 | T4 | C | T1 | T2 | T3 | T4 | C | T1 | T2 | T3 | T4 | C | T1 | T2 | T3 | T4 | C | T1 | T2 | T3 | T4 | | | | | |
| Northern Shoveler | <i>Anas clypeata</i> | 琵嘴鴨 | WV | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Olive Backed Pipit | <i>Anthus hodgsoni</i> | 樹鵲 | WV | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Oriental Dollarbird | <i>Eurystomus orientalis</i> | 三寶鳥 | PM | U | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Plaintive Cuckoo | <i>Cacomantis merulinus</i> | 八聲杜鵑 | SV | U | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Red-billed Blue Magpie | <i>Urocissa erythrorhyncha</i> | 紅咀藍鶇 | R | C | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Red-flanked Bluetail | <i>Tarsiger cyanurus</i> | 紅脇藍尾鶇 | PM&WV | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rufous Turtle Dove | <i>Streptopelia orientalis</i> | 山斑鳩 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rufous-backed Shrike | <i>Lanius schach</i> | 棕背伯勞 | R | C | + | | | 1 | 1 | + | | | 1 | | + | | 1 | 1 | | + | 1 | | 1 | | + | | | | | | | | | | | | | 1 | |
| Rufous-capped Babbler | <i>Stachyridopsis ruficeps</i> | 紅頭穗鶇 | R | C | | | | | | | | | | | | | | | | + | | | | | + | | | | | | | | | | | | | | |
| Scarlet Minivet | <i>Pericrocotus flammeus</i> | 赤紅山椒鳥 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Siberian Stonechat | <i>Saxicola maurus</i> | 黑喉石鶇 | WV | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | |
| Sooty-headed Bulbul | <i>Pycnonotus aurigaster</i> | 白喉紅臀鶇 | R | U | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Spotted Dove | <i>Streptopelia chinensis</i> | 珠頸斑鳩 | R | C | ++ | 2 | 3 | 5 | 1 | ++ | 1 | 2 | 4 | 2 | ++ | 3 | 2 | 4 | 3 | ++ | 4 | 2 | 3 | 2 | ++ | 3 | 3 | 5 | 3 | | | | | | | | | | |
| Spotted Munia | <i>Lonchura punctulata</i> | 斑文鳥 | R | C | + | | | | | + | | | 2 | | + | | | 5 | | ++ | 5 | | 8 | | ++ | | 4 | 5 | | | | | | | | | | | |
| Velvet-fronted Nuthatch | <i>Sitta frontalis</i> | 絨額鶇 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| White Wagtail | <i>Motacilla alba</i> | 白鶇鶇 | WV | C | ++ | 1 | 2 | 3 | 1 | ++ | 2 | 1 | 2 | 2 | ++ | 3 | 2 | 3 | 4 | ++ | 2 | 1 | 2 | 1 | ++ | 1 | 2 | 1 | 2 | | | | | | | | | | |
| White-breasted Waterhen | <i>Amaurornis phoenicurus</i> | 白胸苦惡鳥 | R | C | + | | | 1 | 1 | + | | 1 | 1 | | + | | 1 | 2 | 1 | + | | | 1 | 1 | + | | | 1 | 1 | | | | | | | | | 1 | 1 |
| White-throated Kingfisher | <i>Halcyon smyrnensis</i> | 白胸翡翠 | R, LC | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| White-rumped Munia | <i>Lonchura striata</i> | 白腰文鳥 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Yellow Bellid Prinia | <i>Prinia flaviventris</i> | 黃腹鶇鶇 | R | C | + | 1 | 2 | 1 | 1 | + | 1 | 2 | 2 | 1 | + | 1 | 1 | 2 | 2 | + | 1 | | 1 | | + | | 1 | 1 | 1 | | | | | | | | | | |
| Yellow Wagtail | <i>Motacilla flava</i> | 黃鶇鶇 | WV&PM | U | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Zitting cisticola | <i>Cisticola juncidis</i> | 棕扇尾鶇 | WV&PM | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of birds | | | | | | 28 | 24 | 44 | 18 | | 19 | 21 | 43 | 24 | | 22 | 28 | 46 | 25 | | 34 | 21 | 39 | 17 | | 25 | 23 | 39 | 19 | | | | | | | | | | |
| No. of species | | | | | | 14 | 12 | 18 | 14 | | 11 | 12 | 20 | 14 | | 11 | 17 | 18 | 14 | | 15 | 13 | 18 | 12 | | 12 | 13 | 17 | 12 | | | | | | | | | | |

Note: R – Resident; WV – Winter visitor; PM – Passage migrant; C – Common; U – Uncommon

SpM – Spring migrant; Sv–Summer Visitor ; C – transect survey;

P1 – Point count location 1; P4 – Point count location 4

+, occurred; ++, common; +++, abundant/dominant species in the the study area

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Table 4.3 Avifauna recorded along survey transects and at four selected point count locations of Lam Tsuen River.

(T1- located at upper river channel sampling site to T4 - located at lower river Channel sampling site)

| Common Name | Species name | Chinese name | Status | Commonness | Post construction monitoring | | | | | Post construction monitoring | | | | | Post construction monitoring | | | | | Post construction monitoring | | | | | Post construction monitoring | | | | | Post construction monitoring | | | | |
|---------------------------|--------------------------------|--------------|--------|------------|------------------------------|----|----|----|----|------------------------------|----|----|----|----|------------------------------|----|----|----|----|------------------------------|----|----|----|----|------------------------------|----|----|----|----|------------------------------|----|----|----|----|
| | | | | | Dec-14 | | | | | Jan-15 | | | | | Feb-15 | | | | | Mar-15 | | | | | Apr-15 | | | | | May-15 | | | | |
| | | | | | Abundance | | | | | Abundance | | | | | Abundance | | | | | Abundance | | | | | Abundance | | | | | Abundance | | | | |
| | | | | | C | T1 | T2 | T3 | T4 | C | T1 | T2 | T3 | T4 | C | T1 | T2 | T3 | T4 | C | T1 | T2 | T3 | T4 | C | T1 | T2 | T3 | T4 | C | T1 | T2 | T3 | T4 |
| Northern Shoveler | <i>Anas clypeata</i> | 琵嘴鴨 | WV | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Olive Backed Pipit | <i>Anthus hodgsoni</i> | 樹鷓 | WV | C | + | | | | | + | | | 1 | | | | | | | | | | | | | | | | | | | | | |
| Oriental Dollarbird | <i>Eurystomus orientalis</i> | 三寶鳥 | PM | U | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Plaintive Cuckoo | <i>Cacomantis merulinus</i> | 八聲杜鵑 | SV | U | | | | | | | | | | | | | | | | + | | | | | | | | | | | | | | |
| Red-billed Blue Magpie | <i>Urocissa erythrorhyncha</i> | 紅咀藍鶇 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Red-flanked Bluetail | <i>Tarsiger cyanurus</i> | 紅脇藍尾鶇 | PM&WV | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rufous Turtle Dove | <i>Streptopelia orientalis</i> | 山斑鳩 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rufous-backed Shrike | <i>Lanius schach</i> | 棕背伯勞 | R | C | + | 1 | | 1 | | + | | 1 | 1 | | + | | | | | + | | | 1 | | | | | | | | | | | |
| Rufous-capped Babbler | <i>Stachyridopsis ruficeps</i> | 紅頭穗鶇 | R | C | + | | | | | ++ | | | | | ++ | | | | | + | | | | | | | | | | + | | | | |
| Scarlet Minivet | <i>Pericrocotus flammeus</i> | 赤紅山椒鳥 | R | C | | | | | | | | | | | | | | | | + | | | | | | | | | | | | | | |
| Siberian Stonechat | <i>Saxicola maurus</i> | 黑喉石鶇 | WV | C | ++ | | 1 | | 1 | ++ | | 1 | 1 | | + | | 1 | | | ++ | | 1 | 1 | | | | | | | | | | | |
| Sooty-headed Bulbul | <i>Pycnonotus aurigaster</i> | 白喉紅臀鶇 | R | U | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Spotted Dove | <i>Streptopelia chinensis</i> | 珠頸斑鳩 | R | C | +++ | 2 | 3 | 3 | 2 | +++ | 2 | 3 | 5 | 2 | ++ | 3 | 2 | 4 | 3 | ++ | 2 | 3 | 2 | 2 | ++ | 4 | 2 | 3 | 2 | ++ | 3 | 3 | 3 | 2 |
| Spotted Munia | <i>Lonchura punctulata</i> | 斑文鳥 | R | C | +++ | 5 | | 7 | | ++ | 5 | | 8 | | + | | | | | | | | | | + | | | 2 | | + | | | | |
| Velvet-fronted Nuthatch | <i>Sitta frontalis</i> | 絨額鶇 | R | C | | | | | | | | | | | | | | | | + | | | | | + | | 1 | | | + | | 1 | | |
| White Wagtail | <i>Motacilla alba</i> | 白鶇鶇 | WV | C | ++ | 1 | 1 | 2 | 1 | ++ | 1 | 2 | 3 | 2 | + | 1 | 1 | 2 | | ++ | 2 | 1 | 2 | 2 | + | 1 | 2 | 1 | 2 | ++ | 1 | 1 | 1 | 2 |
| White-breasted Waterhen | <i>Amauromis phoenicurus</i> | 白胸苦惡鳥 | R | C | + | | | 1 | | + | | | | | + | | | 1 | 1 | + | | | 1 | | + | | 1 | | | + | | 1 | | |
| White-throated Kingfisher | <i>Halcyon smyrnensis</i> | 白胸翡翠 | R, LC | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| White-rumped Munia | <i>Lonchura striata</i> | 白腰文鳥 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Yellow Bellid Prinia | <i>Prinia flaviventris</i> | 黃腹鶇鶇 | R | C | + | 1 | | 1 | | | | | | | | | | | | + | | 1 | 1 | 1 | + | | 1 | 1 | 1 | + | | 1 | 1 | 1 |
| Yellow Wagtail | <i>Motacilla flava</i> | 黃鶇鶇 | WV&PM | U | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Zitting cisticola | <i>Cisticola juncidis</i> | 棕扇尾鶇 | WV&PM | C | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of birds | | | | | | 29 | 26 | 49 | 17 | | 27 | 23 | 42 | 14 | | 18 | 18 | 39 | 15 | | 21 | 21 | 36 | 20 | | 28 | 29 | 32 | 27 | | 28 | 30 | 35 | 28 |
| No. of species | | | | | | 15 | 15 | 18 | 12 | 29 | 14 | 13 | 15 | 9 | 29 | 12 | 11 | 17 | 10 | 31 | 12 | 13 | 18 | 12 | 31 | 12 | 16 | 18 | 14 | 30 | 12 | 15 | 20 | 15 |

Note: R – Resident; WV – Winter visitor; PM – Passage migrant; C – Common; U – Uncommon

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|----------------------------|------------------------------------|--------------|----------------|------------|------------------------------|----|----|----|----|------------------------------|----|----|----|----|------------------------------|----|----|----|----|------------------------------|----|----|----|----|------------------------------|----|----|----|----|-----------|----|----|----|----|
| | | | | | Jun-15 | | | | | Jul-15 | | | | | Aug-15 | | | | | Sep-15 | | | | | Oct-15 | | | | | Nov-15 | | | | |
| | | | | | Abundance | | | | | Abundance | | | | | Abundance | | | | | Abundance | | | | | Abundance | | | | | Abundance | | | | |
| | | | | | C | T1 | T2 | T3 | T4 | C | T1 | T2 | T3 | T4 | C | T1 | T2 | T3 | T4 | C | T1 | T2 | T3 | T4 | C | T1 | T2 | T3 | T4 | C | T1 | T2 | T3 | T4 |
| Barn Swallow | <i>Hirundo rustica</i> | 家燕 | PM | C | ++ | 3 | 3 | 2 | 3 | ++ | | | 3 | 3 | ++ | 3 | 2 | 4 | | ++ | | 3 | 2 | | ++ | | | | 5 | ++ | | | | 5 |
| Black Drongo | <i>Dicrurus macrocerus</i> | 黑卷尾 | Sv | C | | | | | | + | | | 1 | | | | | | | | | | | | | | | | | | | | | |
| Black Kite | <i>Milvus lineatus</i> | 麻鷹 | R, RC, Cap.586 | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Black-faced bunting | <i>Emberiza spodocephala</i> | 灰頭鷓 | WV&PM | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Black-necked Starling | <i>Sturnus nigricollis</i> | 黑領椋鳥 | R | C | ++ | 2 | | 1 | 2 | ++ | 2 | 2 | | 2 | ++ | 4 | 3 | 3 | | ++ | | 3 | 3 | | ++ | | 2 | 3 | | ++ | | 2 | 3 | |
| Black-winged Cuckoo-shrike | <i>Coracina melaschistos</i> | 暗灰鶇鶇 | PM | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Blue Whistling Thrush | <i>Myophonus caeruleus</i> | 紫嘯鶇 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Brown Shrike | <i>Lanius cristatus</i> | 紅尾伯勞 | PM | C | | | | | | | | | | | | | | | | | | | | | + | | | | | | | | | |
| Buzzard (Common Buzzard) | <i>Buteo buteo</i> | 普通鵟 | WV,Cap.586 | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | + |
| Chinese Bulbul | <i>Pycnonotus sinensis</i> | 白頭鵲 | R | C | ++ | | 1 | 3 | 2 | ++ | | 2 | 1 | 2 | ++ | 3 | | 2 | 2 | ++ | 2 | | 2 | 4 | 3 | ++ | | 3 | 3 | ++ | | 3 | 3 | |
| Chinese Pond Heron | <i>Ardeola bacchus</i> | 池鵟 | R,RC | C | + | 1 | | | | + | 1 | | | | + | | | | | 1 | + | | | | 1 | + | | | 2 | + | | | | 2 |
| Common Kingfisher | <i>Alcedo atthis</i> | 普通翠鳥 | R | C | + | 1 | | | | | | | | | + | | | 1 | | + | | | 1 | | + | | | | 2 | + | | | | 2 |
| Common Koel | <i>Eudynamys scolopacea</i> | 噪鶇 | R | C | + | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Common Sandpiper | <i>Actitis hypoleucos</i> | 磯鶇 | WV&PM | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Common Tailorbird | <i>Orthotomus sutorius</i> | 長尾縫葉鶇 | R | C | + | 1 | | 2 | | ++ | 2 | | 2 | | ++ | 1 | 2 | 2 | | ++ | | 1 | | 1 | ++ | 2 | | | 2 | ++ | 2 | | | 2 |
| Crested bulbul | <i>Pycnonotus jocosus</i> | 紅耳鵲 | R | C | +++ | 5 | 3 | 5 | 4 | +++ | 8 | 3 | 3 | 5 | +++ | 7 | 5 | 5 | 5 | +++ | 3 | 6 | 5 | 20 | +++ | 3 | 5 | 5 | 10 | +++ | 3 | 5 | 5 | 10 |
| Crested Goshawk | <i>Accipiter trivirgatus</i> | 鳳頭鷹 | R, CR, Cap.586 | U | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Crested Myna | <i>Acridotheres cristatellus</i> | 八哥 | R | C | ++ | 2 | 3 | 2 | 2 | ++ | 3 | 2 | 3 | 3 | ++ | | 2 | 4 | | ++ | | 2 | | 3 | ++ | | 3 | | | ++ | | 3 | | |
| Crested Serpent Eagle | <i>Spilornis cheela</i> | 蛇鵟 | R, VU, LC | U | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Daurian redstart | <i>Phoenicurus auroreus</i> | 北紅尾鶇 | WV | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Domestic pigeon | <i>Columba sp.</i> | 鴿 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dusky Warbler | <i>Phylloscopus fuscatus</i> | 褐柳鶇 | WV | C | + | | 1 | 1 | | + | | 1 | 1 | | + | 1 | 1 | | | + | | | 1 | | + | | | | | + | | | | |
| Eurasian tree sparrow | <i>Passer montanus</i> | 麻雀 | R | C | ++ | 3 | 2 | 2 | 2 | ++ | 3 | | 2 | 3 | ++ | 3 | 2 | 2 | 3 | ++ | 4 | 4 | 2 | 2 | ++ | | | 7 | ++ | | | | 7 | |
| Great Coucal | <i>Centropus sinensis</i> | 褐翅鴉鶇 | R,VU | C | + | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | + |
| Great Tit | <i>Parus major(commixtus)</i> | 大山雀 | R | C | + | 2 | | | | | | | | | + | | | 2 | | | | | | | | | | | | | | | | |
| Green Sandpiper | <i>Tringa ochropus</i> | 白腰草鶇 | PM&WV | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Grey Heron | <i>Ardea cinerea</i> | 蒼鶇 | WV,PRC | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Grey Wagtail | <i>Motacilla cinerea</i> | 灰鶇鶇 | WV | C | ++ | | 1 | 1 | 1 | + | | 1 | | | + | 1 | 1 | | | + | | | | | + | | 1 | | | + | | 1 | | 1 |
| Japanese White Eye | <i>Zosterops japonica(simplex)</i> | 暗綠繡眼鳥 | R | C | ++ | 3 | 3 | 2 | 3 | ++ | 3 | 3 | 2 | 5 | ++ | 4 | 2 | 3 | 2 | ++ | 3 | 3 | 2 | 4 | ++ | | | | 4 | ++ | | 3 | | 4 |
| Jungle Crow | <i>Corvus macrorhynchus</i> | 大咀烏鴉 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Large Hawk Cuckoo | <i>Cuculus sparveroides</i> | 鷹鵲 | SV | C | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lesser Coucal | <i>Centropus bengalensis</i> | 小鴉鶇 | R, VU | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Little Egret | <i>Egretta garzetta</i> | 小白鶇 | R, RC | C | + | 1 | 1 | 1 | | + | 1 | 1 | 1 | | + | | 1 | 1 | + | | | 1 | | 1 | + | 1 | | 1 | | + | | 1 | | 1 |
| Great Egret | <i>Ardea alba</i> | 大白鶇 | R,WV, RC | C | + | 1 | | | | + | | 1 | | | | | | | | | | | | | | | | | | | | | | |
| Little Swift | <i>Apus affinis</i> | 小白腰雨燕 | R,SpM | C | | | | | | | | | | | + | | 4 | | | + | | 3 | | | ++ | 5 | | | | ++ | | 5 | | |
| Magpie | <i>Pica pica</i> | 喜鵲 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Magpie Robin | <i>Copsychus saularis</i> | 鶇鶇 | R | C | ++ | 2 | | 2 | | ++ | 2 | 1 | 1 | 2 | ++ | | 2 | 2 | | ++ | | 2 | 2 | | ++ | | 2 | 2 | | ++ | | 2 | | 1 |
| Mandarin Duck | <i>Aix galericulata</i> | 鴛鴦 | WV | U | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Masked Laughing Thrush | <i>Garrulax perspicillatus</i> | 黑臉噪鶇 | R | C | ++ | 2 | | | | ++ | | | 3 | | ++ | | | 4 | | ++ | | 3 | | | | | | | | + | | | | 4 |
| Night Heron | <i>Nycticorax nycticorax</i> | 夜鶇 | R&WV, LC | C | | | | | | | | | | | + | | | 1 | + | | | | | 1 | + | | | | 2 | | | | | |

Table 4.3 Avifauna recorded along survey transects and at four selected point count locations of Lam Tsuen River.

(T1- located at upper river channel sampling site to T4 - located at lower river Channel sampling site)

| Common Name | Species name | Chinese name | Status | Commonness | Post construction monitoring | | | | | Post construction monitoring | | | | | Post construction monitoring | | | | | Post construction monitoring | | | | | Post construction monitoring | | | | | | | | | |
|---------------------------|--------------------------------|--------------|--------|------------|------------------------------|----|----|----|----|------------------------------|----|----|----|----|------------------------------|----|----|----|----|------------------------------|----|----|----|----|------------------------------|----|----|----|----|-----------|----|----|----|----|
| | | | | | Jun-15 | | | | | Jul-15 | | | | | Aug-15 | | | | | Sep-15 | | | | | Oct-15 | | | | | Nov-15 | | | | |
| | | | | | Abundance | | | | | Abundance | | | | | Abundance | | | | | Abundance | | | | | Abundance | | | | | Abundance | | | | |
| | | | | | C | T1 | T2 | T3 | T4 | C | T1 | T2 | T3 | T4 | C | T1 | T2 | T3 | T4 | C | T1 | T2 | T3 | T4 | C | T1 | T2 | T3 | T4 | C | T1 | T2 | T3 | T4 |
| Northern Shoveler | <i>Anas clypeata</i> | 琵嘴鴨 | WV | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Olive Backed Pipit | <i>Anthus hodgsoni</i> | 樹鷓 | WV | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Oriental Dollarbird | <i>Eurystomus orientalis</i> | 三寶鳥 | PM | U | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Plaintive Cuckoo | <i>Cacomantis merulinus</i> | 八聲杜鵑 | SV | U | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Red-billed Blue Magpie | <i>Urocissa erythrorhyncha</i> | 紅咀藍鶇 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Red-flanked Bluetail | <i>Tarsiger cyanurus</i> | 紅脇藍尾鶇 | PM&WV | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rufous Turtle Dove | <i>Streptopelia orientalis</i> | 山斑鳩 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rufous-backed Shrike | <i>Lanius schach</i> | 棕背伯勞 | R | C | | | | | | | | | | | + | | | | | | | | | | | | | | | | | | | |
| Rufous-capped Babbler | <i>Stachyridopsis ruficeps</i> | 紅頭穗鶇 | R | C | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Scarlet Minivet | <i>Pericrocotus flammeus</i> | 赤紅山椒鳥 | R | C | | | | | | | | | | | ++ | | | | | | | | | | | | | | | | | | | |
| Siberian Stonechat | <i>Saxicola aurus</i> | 黑喉石鶇 | WV | C | | | | | | | | | | | | | | | | | | | | | + | | | | | | | | | |
| Sooty-headed Bulbul | <i>Pycnonotus aurigaster</i> | 白喉紅臀鶇 | R | U | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Spotted Dove | <i>Streptopelia chinensis</i> | 珠頸斑鳩 | R | C | | | | | | | | | | | ++ | | | | | | | | | | | | | | | | | | | |
| Spotted Munia | <i>Lonchura punctulata</i> | 斑文鳥 | R | C | | | | | | | | | | | | | | | | | | | | | ++ | | | | | | | | | |
| Velvet-fronted Nuthatch | <i>Sitta frontalis</i> | 絨額鶇 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| White Wagtail | <i>Motacilla alba</i> | 白鶇鶇 | WV | C | | | | | | | | | | | ++ | | | | | | | | | | | | | | | | | | | |
| White-breasted Waterhen | <i>Amaurornis phoeniceus</i> | 白胸苦惡鳥 | R | C | | | | | | | | | | | + | | | | | | | | | | | | | | | | | | | |
| White-throated Kingfisher | <i>Halcyon smyrnensis</i> | 白胸翡翠 | R, LC | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| White-rumped Munia | <i>Lonchura striata</i> | 白腰文鳥 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Yellow Bellid Prinia | <i>Prinia flaviventris</i> | 黃腹鶇鶇 | R | C | | | | | | | | | | | + | | | | | | | | | | | | | | | | | | | |
| Yellow Wagtail | <i>Motacilla flava</i> | 黃鶇鶇 | WV&PM | U | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Zitting cisticola | <i>Cisticola juncidis</i> | 棕扇尾鶇 | WV&PM | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of birds | | | | | | 32 | 21 | 25 | 27 | | 27 | 19 | 38 | 34 | | 14 | 27 | 36 | 26 | | 16 | 36 | 25 | 38 | | 13 | 13 | 25 | 41 | | | | | |
| No. of species | | | | | | 25 | 17 | 11 | 15 | 13 | | 21 | 10 | 11 | 16 | 11 | | 23 | 10 | 14 | 14 | 11 | 21 | 6 | | 13 | 11 | 10 | 23 | | | | | |

Note: R – Resident; WV – Winter visitor; PM – Passage migrant; C – Common; U – Uncommon

SpM – Spring migrant; Sv–Summer Visitor ; C – transect survey;

P1 – Point count location 1; P4 – Point count location 4

+, occurred; ++, common; +++, abundant/dominant species in the the study area

Commonness and status were decided according to AFCD biodiversity website (www.hkbiobiodiversity.net)

All bird species are under protection of Wild Animals Protection Ordinance (Cap. 170)

Endangered Species of Animals and Plants Ordinance (Cap. 586)

RC : Regional concern Fellowes *et al* (2002)

LC : Local Concern Fellowes *et al* (2002)

PRC: Potential Regional onver Fellowes *et al* (2002)

CR: Rare in China Red Data Book Status

VU: Vulnerable in China Red Data Book Status

Table 4.3 Avifauna recorded along survey transects and at four selected point count locations of Lam Tsuen River.

(T1- located at upper river channel sampling site to T4 - located at lower river Channel sampling site)

| Common Name | Species name | Chinese name | Status | Commonness | Post construction monitoring | | | | | Post construction monitoring | | | | | Post construction monitoring | | | | | Post construction monitoring | | | | | Post construction monitoring | | | | | | | | | |
|---------------------------|--------------------------------|--------------|--------|------------|------------------------------|----|----|----|----|------------------------------|----|----|----|----|------------------------------|----|----|----|----|------------------------------|----|----|----|----|------------------------------|----|----|----|----|----|---|---|----|----|
| | | | | | Dec-15 | | | | | Jan-16 | | | | | Feb-16 | | | | | Mar-16 | | | | | Apr-16 | | | | | | | | | |
| | | | | | Abundance | | | | | Abundance | | | | | Abundance | | | | | Abundance | | | | | Abundance | | | | | | | | | |
| | | | | | C | T1 | T2 | T3 | T4 | C | T1 | T2 | T3 | T4 | C | T1 | T2 | T3 | T4 | C | T1 | T2 | T3 | T4 | C | T1 | T2 | T3 | T4 | | | | | |
| Northern Shoveler | <i>Anas clypeata</i> | 琵嘴鴨 | WV | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Olive Backed Pipit | <i>Anthus hodgsoni</i> | 樹鷓 | WV | C | + | | | | | + | | | | | | | | | | | | | | | | | | | | | | | | |
| Oriental Dollarbird | <i>Eurystomus orientalis</i> | 三寶鳥 | PM | U | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Plaintive Cuckoo | <i>Cacomantis merulinus</i> | 八聲杜鵑 | SV | U | | | | | | | | | | | | | | | | | | | | | + | | | | | | | | | |
| Red-billed Blue Magpie | <i>Urocissa erythrorhyncha</i> | 紅咀藍鶇 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Red-flanked Bluetail | <i>Tarsiger cyanurus</i> | 紅臉藍尾鶇 | PM&WV | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rufous Turtle Dove | <i>Streptopelia orientalis</i> | 山斑鳩 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rufous-backed Shrike | <i>Lanius schach</i> | 棕背伯勞 | R | C | + | | | | | + | | | | | + | | | 1 | 1 | + | | | 1 | | | | | | | | | | | |
| Rufous-capped Babbler | <i>Stachyridopsis ruficeps</i> | 紅頭穗鶇 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Scarlet Minivet | <i>Pericrocotus flammeus</i> | 赤紅山椒鳥 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Siberian Stonechat | <i>Saxicola maurus</i> | 黑喉石鶇 | WV | C | + | | 1 | 1 | | + | | 1 | | | + | | 1 | | | + | | 1 | | | | | | | | | | | | |
| Sooty-headed Bulbul | <i>Pycnonotus aurigaster</i> | 白喉紅臀鶇 | R | U | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Spotted Dove | <i>Streptopelia chinensis</i> | 珠頸斑鳩 | R | C | ++ | 3 | 3 | | 2 | ++ | 2 | | 3 | 2 | ++ | 1 | 2 | 1 | 6 | ++ | 1 | 2 | 1 | 6 | ++ | 2 | 3 | 3 | 4 | | | | | |
| Spotted Munia | <i>Lonchura punctulata</i> | 斑文鳥 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Velvet-fronted Nuthatch | <i>Sitta frontalis</i> | 絨額鶇 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| White Wagtail | <i>Motacilla alba</i> | 白鶇鶇 | WV | C | ++ | | 1 | | 2 | ++ | 1 | 1 | 1 | 2 | + | 1 | 1 | 1 | | + | 1 | 1 | 1 | | + | | 1 | 1 | 2 | | | | | |
| White-breasted Waterhen | <i>Anaouromis phoenicurus</i> | 白胸苦惡鳥 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| White-throated Kingfisher | <i>Halcyon smyrnensis</i> | 白胸翡翠 | R, LC | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| White-rumped Munia | <i>Lonchura striata</i> | 白腰文鳥 | R | C | + | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Yellow Bellid Prinia | <i>Prinia flaviventris</i> | 黃腹鶇鶇 | R | C | + | | | | | + | | | | | + | | | | | + | | | | | | | | | | | | | | |
| Yellow Wagtail | <i>Motacilla flava</i> | 黃鶇鶇 | WV&PM | U | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Zitting cisticola | <i>Cisticola juncidis</i> | 棕扇尾鶇 | WV&PM | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of birds | | | | | | 17 | 21 | 17 | 35 | | 15 | 23 | 23 | 24 | | 18 | 21 | 19 | 39 | | 12 | 22 | 23 | 41 | | 14 | 17 | 25 | 32 | | | | | |
| No. of species | | | | | | 24 | 4 | 10 | 8 | 11 | | 24 | 6 | 10 | 10 | 9 | | 22 | 10 | 11 | 9 | 12 | | 24 | 7 | 10 | 10 | 14 | | 21 | 6 | 5 | 10 | 13 |

Note: R – Resident; WV – Winter visitor; PM – Passage migrant; C – Common; U – Uncommon

SpM – Spring migrant; Sv–Summer Visitor ; C – transect survey;

P1 – Point count location 1; P4 – Point count location 4

+, occurred; ++, common; +++, abundant/dominant species in the the study area

Commonness and status were decided according to AFCD biodiversity website (www.hkbbiodiversity.net)

All bird species are under protection of Wild Animals Protection Ordinance (Cap. 170)

Endangered Species of Animals and Plants Ordinance (Cap. 586)

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CR: Rare in China Red Data Book Status

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Table 4.3 Avifauna recorded along survey transects and at four selected point count locations of Lam Tsuen River.

(T1- located at upper river channel sampling site to T4 - located at lower river Channel sampling site)

| Common Name | Species name | Chinese name | Status | Commonness | Post construction monitoring | | | | | Post construction monitoring | | | | | Post construction monitoring | | | | | Post construction monitoring | | | | |
|---------------------------|--------------------------------|--------------|--------|------------|------------------------------|----|----|----|----|------------------------------|----|----|----|----|------------------------------|----|----|----|----|------------------------------|----|----|----|----|
| | | | | | May-16 | | | | | Jun-16 | | | | | Jul-16 | | | | | Aug-16 | | | | |
| | | | | | Abundance | | | | | Abundance | | | | | Abundance | | | | | Abundance | | | | |
| | | | | | C | T1 | T2 | T3 | T4 | C | T1 | T2 | T3 | T4 | C | T1 | T2 | T3 | T4 | C | T1 | T2 | T3 | T4 |
| Northern Shoveler | <i>Anas clypeata</i> | 琵嘴鴨 | WV | C | | | | | | | | | | | | | | | | | | | | |
| Olive Backed Pipit | <i>Anthus hodgsoni</i> | 樹鷓 | WV | C | | | | | | | | | | | | | | | | | | | | |
| Oriental Dollarbird | <i>Eurystomus orientalis</i> | 三寶鳥 | PM | U | | | | | | | | | | | | | | | | | | | | |
| Plaintive Cuckoo | <i>Cacomantis merulinus</i> | 八聲杜鵑 | SV | U | + | | | | | + | | | | | + | | | | | | | | | |
| Red-billed Blue Magpie | <i>Urocissa erythrorhyncha</i> | 紅咀藍鶇 | R | C | | | | | | | | | | | | | | | | | | | | |
| Red-flanked Bluetail | <i>Tarsiger cyanurus</i> | 紅脇藍尾鶇 | PM&WV | C | | | | | | | | | | | | | | | | | | | | |
| Rufous Turtle Dove | <i>Streptopelia orientalis</i> | 山斑鳩 | R | C | | | | | | | | | | | | | | | | | | | | |
| Rufous-backed Shrike | <i>Lanius schach</i> | 棕背伯勞 | R | C | + | | | 1 | | + | | | 1 | | | | | | | + | | | | |
| Rufous-capped Babbler | <i>Stachyridopsis ruficeps</i> | 紅頭穗鶇 | R | C | | | | | | | | | | | | | | | | | | | | |
| Scarlet Minivet | <i>Pericrocotus flammeus</i> | 赤紅山椒鳥 | R | C | | | | | | | | | | | | | | | | | | | | |
| Siberian Stonechat | <i>Saxicola maurus</i> | 黑喉石鶇 | WV | C | | | | | | | | | | | | | | | | | | | | |
| Sooty-headed Bulbul | <i>Pycnonotus aurigaster</i> | 白喉紅臀鶇 | R | U | | | | | | | | | | | | | | | | | | | | |
| Spotted Dove | <i>Streptopelia chinensis</i> | 珠頸斑鳩 | R | C | ++ | 3 | 3 | 3 | 4 | ++ | 2 | 1 | 1 | 2 | ++ | 3 | 2 | 3 | 3 | ++ | 4 | 5 | 2 | 4 |
| Spotted Munia | <i>Lonchura punctulata</i> | 斑文鳥 | R | C | | | | | | | | | | | | | | | | | | | | |
| Velvet-fronted Nuthatch | <i>Sitta frontalis</i> | 絨額鶇 | R | C | | | | | | | | | | | | | | | | | | | | |
| White Wagtail | <i>Motacilla alba</i> | 白鶇鶇 | WV | C | + | | 1 | 1 | | + | | | 1 | 1 | + | | | | 1 | + | | 1 | | 1 |
| White-breasted Waterhen | <i>Amaurornis phoenicurus</i> | 白胸苦惡鳥 | R | C | | | | | | | | | | | | | | | | | | | | |
| White-throated Kingfisher | <i>Halcyon smyrnensis</i> | 白胸翡翠 | R, LC | C | | | | | | | | | | | | | | | | | | | | |
| White-rumped Munia | <i>Lonchura striata</i> | 白腰文鳥 | R | C | + | | | | | | | | | | | | | | | | | | | |
| Yellow Bellid Prinia | <i>Prinia flaviventris</i> | 黃腹鷦鶯 | R | C | + | | | | | + | | | | | + | | | | | + | | | | |
| Yellow Wagtail | <i>Motacilla flava</i> | 黃鶇鶇 | WV&PM | U | | | | | | | | | | | | | | | | | | | | |
| Zitting cisticola | <i>Cisticola juncidis</i> | 棕扇尾鶯 | WV&PM | C | | | | | | | | | | | | | | | | | | | | |
| Number of birds | | | | | | 16 | 16 | 16 | 32 | | 13 | 23 | 21 | 16 | | 16 | 18 | 28 | 30 | | 21 | 35 | 28 | 21 |
| No. of species | | | | | 24 | 6 | 8 | 8 | 11 | 22 | 4 | 10 | 10 | 7 | 19 | 4 | 7 | 11 | 10 | 19 | 5 | 12 | 10 | 10 |

Note: R – Resident; WV – Winter visitor; PM – Passage migrant; C – Common; U – Uncommon

SpM – Spring migrant; Sv–Summer Visitor ; C – transect survey;

P1 – Point count location 1; P4 – Point count location 4

+, occurred; ++, common; +++, abundant/dominant species in the the study area

Commonness and status were decided according to AFCD biodiversity website (www.hk biodiversity.net)

All bird species are under protection of Wild Animals Protection Ordinance (Cap. 170)

Endangered Species of Animals and Plants Ordinance (Cap. 586)

RC : Regional concern Fellowes *et al* (2002)

LC : Local Concern Fellowes *et al* (2002)

PRC: Potential Regional onver Fellowes *et al* (2002)

CR: Rare in China Red Data Book Status

VU: Vulnerable in China Red Data Book Status

Table 4.3 Avifauna recorded along survey transects and at four selected point count locations of Lam Tsuen River.

(T1- located at upper river channel sampling site to T4 - located at lower river Channel sampling site)

| Common Name | Species name | Chinese name | Status | Commonness | Post construction monitoring | | | | | Post construction monitoring | | | | | Post construction monitoring | | | | | Post construction monitoring | | | | | Post construction monitoring | | | | | Post construction monitoring | | | | | | | | | |
|---------------------------|--------------------------------|--------------|--------|------------|------------------------------|----|----|----|----|------------------------------|----|----|----|----|------------------------------|----|----|----|----|------------------------------|----|----|----|----|------------------------------|----|----|----|----|------------------------------|----|----|----|----|--------|----|----|----|----|
| | | | | | Sep-16 | | | | | Oct-16 | | | | | Nov-16 | | | | | Dec-16 | | | | | Jan-17 | | | | | Feb-17 | | | | | Mar-17 | | | | |
| | | | | | Abundance | | | | | Abundance | | | | | Abundance | | | | | Abundance | | | | | Abundance | | | | | Abundance | | | | | | | | | |
| | | | | | C | T1 | T2 | T3 | T4 | C | T1 | T2 | T3 | T4 | C | T1 | T2 | T3 | T4 | C | T1 | T2 | T3 | T4 | C | T1 | T2 | T3 | T4 | C | T1 | T2 | T3 | T4 | C | T1 | T2 | T3 | T4 |
| Northern Shoveler | <i>Anas clypeata</i> | 琵嘴鴨 | WV | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Olive Backed Pipit | <i>Anthus hodgsoni</i> | 樹鷄 | WV | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Oriental Dollarbird | <i>Eurystomus orientalis</i> | 三寶鳥 | PM | U | + | | | | | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Plaintive Cuckoo | <i>Cacomantis merulinus</i> | 八聲杜鵑 | SV | U | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Red-billed Blue Magpie | <i>Urocissa erythrorhyncha</i> | 紅咀藍鶇 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Red-flanked Bluetail | <i>Tarsiger cyanurus</i> | 紅臉藍尾鶇 | PM&WV | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rufous Turtle Dove | <i>Streptopelia orientalis</i> | 山斑鳩 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rufous-backed Shrike | <i>Lanius schach</i> | 棕背伯勞 | R | C | + | | | | | | | | | | + | | | | | + | | | | | + | | | | | + | | | | | | | | | |
| Rufous-capped Babbler | <i>Stachyridopsis ruficeps</i> | 紅頭穗鶇 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Scarlet Minivet | <i>Pericrocotus flammeus</i> | 赤紅山椒鳥 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | + | | | | | | | | | |
| Siberian Stonechat | <i>Saxicola maurus</i> | 黑喉石鶇 | WV | C | | | | | | | | | | | + | | | | | | | | | | | | | | | | | | | | | | | | |
| Sooty-headed Bulbul | <i>Pycnonotus aurigaster</i> | 白喉紅臀鶇 | R | U | | | | | | | | | | | | | | | | | | | | | | | | | | + | | | 1 | | | | | | |
| Spotted Dove | <i>Streptopelia chinensis</i> | 珠頸斑鳩 | R | C | ++ | 4 | 5 | 2 | 4 | ++ | 5 | | 4 | | ++ | 3 | 3 | 3 | 2 | ++ | 5 | 4 | 3 | 2 | ++ | 2 | 4 | 3 | 5 | ++ | 5 | 2 | 3 | 2 | ++ | 6 | 2 | 3 | 1 |
| Spotted Munia | <i>Lonchura punctulata</i> | 斑文鳥 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Velvet-fronted Nuthatch | <i>Sitta frontalis</i> | 絨額鶇 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | + | | | | | | | | | |
| White Wagtail | <i>Motacilla alba</i> | 白鶇鶇 | WV | C | + | | 1 | | 1 | + | 2 | 1 | | | + | 1 | 1 | 2 | 1 | + | 1 | 1 | | 1 | + | | 1 | 1 | 1 | + | | 2 | 1 | | + | | 1 | 1 | |
| White-breasted Waterhen | <i>Amauromis phoenicurus</i> | 白胸苦惡鳥 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| White-throated Kingfisher | <i>Halcyon smymensis</i> | 白胸翡翠 | R, LC | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| White-rumped Munia | <i>Lonchura striata</i> | 白腰文鳥 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Yellow Bellid Prinia | <i>Prinia flaviventris</i> | 黃腹鶇鶇 | R | C | + | | | | | + | | | | | | | | | | | | | | | | | | | | + | | | | | | | | | |
| Yellow Wagtail | <i>Motacilla flava</i> | 黃鶇鶇 | WV&PM | U | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Zitting cisticola | <i>Cisticola juncidis</i> | 棕扇尾鶇 | WV&PM | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of birds | | | | | | 24 | 39 | 17 | 19 | | 26 | 20 | 29 | 6 | | 20 | 29 | 26 | 10 | | 20 | 26 | 25 | 17 | | 14 | 41 | 29 | 20 | | 20 | 29 | 30 | 18 | | 19 | 27 | 25 | 10 |
| No. of species | | | | | 20 | 6 | 14 | 9 | 7 | 19 | 9 | 9 | 11 | 3 | 19 | 7 | 12 | 13 | 6 | 20 | 5 | 12 | 10 | 10 | 20 | 6 | 12 | 12 | 8 | 22 | 5 | 10 | 13 | 8 | 23 | 4 | 10 | 11 | 7 |

Note: R – Resident; WV – Winter visitor; PM – Passage migrant; C – Common; U – Uncommon

SpM – Spring migrant; Sv–Summer Visitor ; C – transect survey;

P1 – Point count location 1; P4 – Point count location 4

+, occurred; ++, common; +++, abundant/dominant species in the the study area

Commonness and status were decided according to AFCD biodiversity website (www.hkbiobiodiversity.net)

All bird species are under protection of Wild Animals Protection Ordinance (Cap. 170)

Endangered Species of Animals and Plants Ordinance (Cap. 586)

RC : Regional concern Fellowes *et al* (2002)

LC : Local Concern Fellowes *et al* (2002)

PRC: Potential Regional onver Fellowes *et al* (2002)

CR: Rare in China Red Data Book Status

VU: Vulnerable in China Red Data Book Status

Table 4.3 Avifauna recorded along survey transects and at four selected point count locations of Lam Tsuen Riv

(T1- located at upper river channel sampling site to T4 - located at lower river Channel sampling site)

| Common Name | Species name | Chinese name | Status | Commonness | Post construction monitoring | | | | |
|----------------------------|------------------------------------|--------------|----------------|------------|------------------------------|---|---|---|---|
| | | | | | Oct-17 | | | | |
| | | | | | Abundance | | | | |
| C | T1 | T2 | T3 | T4 | | | | | |
| Barn Swallow | <i>Hirundo rustica</i> | 家燕 | PM | C | | | | | |
| Black Drongo | <i>Dicrurus macrocercus</i> | 黑卷尾 | Sv | C | | | | | |
| Black Kite | <i>Milvus lineatus</i> | 麻鷹 | R, RC, Cap.586 | C | + | | | | |
| Black-faced bunting | <i>Emberiza spodocephala</i> | 灰頭鷄 | WV&PM | C | | | | | |
| Black-necked Starling | <i>Sturnus nigricollis</i> | 黑領棕鳥 | R | C | ++ | | 4 | 2 | |
| Black-winged Cuckoo-shrike | <i>Coracina melaschistos</i> | 暗灰鶇鶇 | PM | C | | | | | |
| Blue Whistling Thrush | <i>Myophonus caeruleus</i> | 紫嘯鶇 | R | C | | | | | |
| Brown Shrike | <i>Lanius cristatus</i> | 紅尾伯勞 | PM | C | | | | | |
| Buzzard (Common Buzzard) | <i>Buteo buteo</i> | 普通鵟 | WV,Cap.586 | C | | | | | |
| Chinese Bulbul | <i>Pycnonotus sinensis</i> | 白頭鶇 | R | C | + | 4 | 2 | 2 | 2 |
| Chinese Pond Heron | <i>Ardeola bacchus</i> | 池鶯 | R,RC | C | + | 1 | 2 | 1 | |
| Common Kingfisher | <i>Alcedo atthis</i> | 普通翠鳥 | R | C | + | | 2 | | |
| Common Koel | <i>Eudynamys scolopacea</i> | 噪鶇 | R | C | | | | | |
| Common Sandpiper | <i>Actitis hypoleucos</i> | 磯鶇 | WV&PM | C | | | | | |
| Common Tailorbird | <i>Orthotomus sutorius</i> | 長尾縫葉鶇 | R | C | + | | | 1 | 1 |
| Crested bulbul | <i>Pycnonotus jocosus</i> | 紅耳鶇 | R | C | +++ | 8 | 5 | 4 | 3 |
| Crested Goshawk | <i>Accipiter trivirgatus</i> | 鳳頭鷹 | R, CR, Cap.5 | U | | | | | |
| Crested Myna | <i>Acridotheres cristatellus</i> | 八哥 | R | C | ++ | | 3 | 3 | |
| Crested Serpent Eagle | <i>Spilornis cheela</i> | 蛇鶇 | R, VU, LC | U | | | | | |
| Daurian redstart | <i>Phoenicurus aureus</i> | 北紅尾鶇 | WV | C | | | | | |
| Domestic pigeon | <i>Columba sp.</i> | 鴿 | R | C | | | | | |
| Dusky Warbler | <i>Phylloscopus fuscatus</i> | 褐柳鶇 | WV | C | | | | | |
| Eurasian tree sparrow | <i>Passer montanus</i> | 麻雀 | R | C | ++ | 3 | 2 | 3 | 3 |
| Great Coucal | <i>Centropus sinensis</i> | 褐翅鴉鶇 | R,VU | C | | | | | |
| Great Tit | <i>Parus major(commixtus)</i> | 大山雀 | R | C | | | | | |
| Green Sandpiper | <i>Tringa ochropus</i> | 白腰草鶇 | PM&WV | C | | | | | |
| Grey Heron | <i>Ardea cinerea</i> | 蒼鶯 | WV,PRC | C | | | | | |
| Grey Wagtail | <i>Motacilla cinerea</i> | 灰鶇鶇 | WV | C | + | | 2 | 1 | |
| Japanese White Eye | <i>Zosterops japonica(simples)</i> | 暗綠繡眼鳥 | R | C | | | | | |
| Jungle Crow | <i>Corvus macrorhynchus</i> | 大咀烏鶇 | R | C | | | | | |
| Large Hawk Cuckoo | <i>Cuculus sparveroides</i> | 鷹鶇 | SV | C | | | | | |
| Lesser Coucal | <i>Centropus bengalensis</i> | 小鴉鶇 | R, VU | C | | | | | |
| Little Egret | <i>Egretta garzetta</i> | 小白鶯 | R, RC | C | + | 1 | 2 | 1 | |
| Great Egret | <i>Ardea alba</i> | 大白鶯 | R,WV, RC | C | | | | | |
| Little Swift | <i>Apus affinis</i> | 小白腰雨燕 | R,SpM | C | | | | | |
| Magpie | <i>Pica pica</i> | 喜鶇 | R | C | | | | | |
| Magpie Robin | <i>Copsychus saularis</i> | 鶇鶇 | R | C | + | | 2 | 2 | 1 |
| Mandarin Duck | <i>Aix galericulata</i> | 鴛鴦 | WV | U | | | | | |
| Masked Laughing Thrush | <i>Garrulax perspicillatus</i> | 黑臉噪鶇 | R | C | | | | | |
| Night Heron | <i>Nycticorax nycticorax</i> | 夜鶯 | R&WV, LC | C | | | | | |
| Northern Shoveler | <i>Anas clypeata</i> | 琵嘴鶇 | WV | C | | | | | |
| Olive Backed Pipit | <i>Anthus hodgsoni</i> | 樹鶇 | WV | C | | | | | |
| Oriental Dollarbird | <i>Eurystomus orientalis</i> | 三寶鳥 | PM | U | | | | | |
| Plaintive Cuckoo | <i>Cacomantis merulinus</i> | 八聲杜鶇 | SV | U | | | | | |

Table 4.3 Avifauna recorded along survey transects and at four selected point count locations of Lam Tsuen Riv

(T1- located at upper river channel sampling site to T4 - located at lower river Channel sampling site)

| Common Name | Species name | Chinese name | Status | Commonness | Post construction monitoring | | | | |
|---------------------------|--------------------------------|--------------|--------|------------|------------------------------|----|----|----|----|
| | | | | | Oct-17 | | | | |
| | | | | | Abundance | | | | |
| C | T1 | T2 | T3 | T4 | | | | | |
| Red-billed Blue Magpie | <i>Urocissa erythrorhyncha</i> | 紅咀藍鶺鴒 | R | C | | | | | |
| Red-flanked Bluetail | <i>Tarsiger cyanurus</i> | 紅脇藍尾鶺鴒 | PM&WV | C | | | | | |
| Rufous Turtle Dove | <i>Streptopelia orientalis</i> | 山斑鳩 | R | C | | | | | |
| Rufous-backed Shrike | <i>Lanius schach</i> | 棕背伯勞 | R | C | | | | | |
| Rufous-capped Babbler | <i>Stachyridopsis ruficeps</i> | 紅頭穗鶺鴒 | R | C | | | | | |
| Scarlet Minivet | <i>Pericrocotus flammeus</i> | 赤紅山椒鳥 | R | C | | | | | |
| Siberian Stonechat | <i>Saxicola maurus</i> | 黑喉石鶺鴒 | WV | C | | | | | |
| Sooty-headed Bulbul | <i>Pycnonotus aurigaster</i> | 白喉紅臀鶺鴒 | R | U | | | | | |
| Spotted Dove | <i>Streptopelia chinensis</i> | 珠頸斑鳩 | R | C | ++ | 5 | 2 | 3 | |
| Spotted Munia | <i>Lonchura punctulata</i> | 斑文鳥 | R | C | | | | | |
| Velvet-fronted Nuthatch | <i>Sitta frontalis</i> | 絨額鶺鴒 | R | C | | | | | |
| White Wagtail | <i>Motacilla alba</i> | 白鶺鴒 | WV | C | + | | 2 | 1 | |
| White-breasted Waterhen | <i>Amaurornis phoeniceus</i> | 白胸苦惡鳥 | R | C | | | | | |
| White-throated Kingfisher | <i>Halcyon smyrnensis</i> | 白胸翡翠 | R, LC | C | | | | | |
| White-rumped Munia | <i>Lonchura striata</i> | 白腰文鳥 | R | C | | | | | |
| Yellow Bellid Prinia | <i>Prinia flaviventris</i> | 黃腹鶺鴒 | R | C | | | | | |
| Yellow Wagtail | <i>Motacilla flava</i> | 黃鶺鴒 | WV&PM | U | | | | | |
| Zitting cisticola | <i>Cisticola juncidis</i> | 棕扇尾鶺鴒 | WV&PM | C | | | | | |
| Number of birds | | | | | | 22 | 30 | 24 | 10 |
| No. of species | | | | | 14 | 6 | 12 | 12 | 5 |

Note: R – Resident; WV – Winter visitor; PM – Passage migrant; C – Common; U – Uncommon

SpM – Spring migrant; Sv–Summer Visitor ; C – transect survey;

P1 – Point count location 1; P4 – Point count location 4

+, occurred; ++, common; +++, abundant/dominant species in the the study area

Commonness and status were decided according to AFCD biodiversity website (www.hkbiodiversity.net)

All bird species are under protection of Wild Animals Protection Ordinance (Cap. 170)

Endangered Species of Animals and Plants Ordinance (Cap. 586)

RC : Regional concern Fellowes *et al* (2002)LC : Local Concern Fellowes *et al* (2002)PRC: Potential Regional over Fellowes *et al* (2002)

CR: Rare in China Red Data Book Status

VU: Vulnerable in China Red Data Book Status

Table 4.4. Odonate species recorded at the Upper Lam Tsuen River

| Species name | Common name | Chinese name | Status | Commonness | Post construction monitoring | | | | | | | | |
|----------------------------------------|---------------------------|--------------|--------|------------|------------------------------|--------|--------|--------|--------|--------|--------|--------|---|
| | | | | | Sep-14 | Oct-14 | Nov-14 | Dec-14 | Jan-15 | Feb-15 | Mar-15 | Apr-15 | |
| <i>Acisoma panorpoides panorpoides</i> | Asian Pintail | 錐腹蜻 | NP | VC | | | | | | | | | |
| <i>Brachythemis contaminata</i> | Asian Amberwing | 黃翅蜻 | NP | VC | | | | | | | | | |
| <i>Ceragrion auranticum ryukyuanum</i> | Orange-tailed Sprite | 琉球橘黃蟳 | NP | VC | + | + | + | | + | | | | + |
| <i>Coeliccia cyanomelas</i> | Blue Forest Damselfly | 黃紋長腹蟳 | NP | VC | | | | | | | | | |
| <i>Copera marginipes</i> | Yellow Featherlegs | 黃狹扇蟳 | NP | VC | + | + | | | | | | | + |
| <i>Crocothemis servilia servilia</i> | Crimson Dart | 紅蜻 | NP | VC | | + | + | + | + | + | + | + | + |
| <i>Euphaea decorata</i> | Black-banded Gossamerwing | 方帶幽蟳 | NP | VC | | | | | | | | | |
| <i>Ictinogomphus pertinax</i> | Common Flangetail | 箭士渠春蟳 | NP | C | | | | | | | | | |
| <i>Ichnura senegalensis</i> | Common Blue Jewel | 褐斑異痣蟳 | NP | VC | | | | | | | | | |
| <i>Mnais lacteola</i> | Indochinese Copperwing | 煙翅綠色蟳 | P, LC | C | | | | | | | | | |
| <i>Nannophya pygmaea</i> | Scarlet Dwarf | 侏紅小蜻 | P, LC | C | | | | | | | | | |
| <i>Neurobasis chinensis</i> | Chinese Greenwing | 華麗色蟳 | NP | VC | + | + | + | + | | | + | | + |
| <i>Neurothemis fulvia</i> | Russet Percher | 網脈蜻 | NP | VC | + | + | | | | | | | + |
| <i>Neurothemis tullia tullia</i> | Pied Percher | 截斑脈蜻 | NP | C | | | | | | | | | |
| <i>Orthetrum chrysis</i> | Red-faced Skimmer | 華麗灰蜻 | NP | VC | | | | | | | | | |
| <i>Orthetrum glaucum</i> | Common blue skimmer | 黑尾灰蜻 | NP | VC | | | | | | | | | + |
| <i>Orthetrum luzonicum</i> | Marsh Skimmer | 呂宋灰蜻 | NP | VC | | | | | | | | | |
| <i>Orthetrum pruinosum neglectum</i> | Common Red Skimmer | 赤褐灰蜻 | NP | VC | + | + | | | | | | | |
| <i>Orthetrum sabina sabina</i> | Green Skimmer | 狹腹灰蜻 | NP | VC | | | | | | | | | |
| <i>Pantala flavescens</i> | Wandering Glider | 黃蜻 | NP | VC | | + | + | + | | | + | | + |
| <i>Paracercion calamorum duyeri</i> | Dusky Lilysquatter | 蒼尾蟳 | P, LC | C | | | | | | | | | |
| <i>Prodasineura autumnalis</i> | Black Threadtail | 烏齒原蟳 | NP | VC | + | + | | | | | | | + |
| <i>Pseudagrion rubriceps rubriceps</i> | Orange-faced Sprite | 丹頂斑蟳 | NP | UC | + | + | + | | | | | | |
| <i>Rhinocypha perforata perforata</i> | Common Blue Jewel | 三斑鼻蟳 | NP | VC | + | + | + | | | | | | |
| <i>Rhyothemis variegata arria</i> | Variegated Flutterer | 斑麗翅蟳 | NP | C | + | + | + | | | | | | |
| <i>Trithemis aurora</i> | Crimson Dropwing | 曉靄蜻 | NP | VC | + | + | + | + | + | + | + | + | + |
| <i>Trithemis festiva</i> | Indigo Dropwing | 靄靄蜻 | NP | VC | + | + | + | | | | | | |
| <i>Zygonyx iris insignis</i> | Emerald Cascader | 彩紅蜻 | P,PGC | VC | | | | | | | | | |
| No. of species | | | | | 11 | 13 | 9 | 4 | 3 | 2 | 4 | | 9 |

Note: NP – Not protected in Hong Kong; P-Protection in Hong Kong

“VC” – Very Common; “UC” – Uncommon; “C” - Common

“+” – Species exists in the study area

“++” – Species common in the study area

“+++” – Species abundant/dominant in study area

Commonness and status were decided according to AFCD biodiversity website (www.hkbiodiversity.net)

LC- Local Concern - Fellowes *et al* (2002)

PGC - Potential Global Concern - Fellowes *et al* (2002)

Table 4.4. Odonate species recorded at the Upper Lam Tsuen River

| Species name | Common name | Chinese name | Status | Commonness | Post construction monitoring | | | | | | | | | | | | |
|-----------------------------------------|---------------------------|--------------|--------|------------|------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | | | | | May-15 | Jun-15 | Jul-15 | Aug-15 | Sep-15 | Oct-15 | Nov-15 | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Apr-16 | May-16 |
| <i>Acisoma panorpoides panorpoides</i> | Asian Pintail | 錐腹蜻 | NP | VC | | | + | | | | | | | | | | |
| <i>Brachythemis contaminata</i> | Asian Amberwing | 黃翅蜻 | NP | VC | | | | | | | | | | | | | |
| <i>Ceragrion aurantiacum ryukyuanum</i> | Orange-tailed Sprite | 琉球橘黃蟳 | NP | VC | + | + | + | + | + | | | | | | | + | + |
| <i>Coeliccia cyanomelas</i> | Blue Forest Damselfly | 黃紋長腹蟳 | NP | VC | | | | | | | | | | | | | |
| <i>Copera marginipes</i> | Yellow Featherlegs | 黃狹扇蟳 | NP | VC | + | + | + | + | + | | | | | | | | + |
| <i>Crocothemis servilia servilia</i> | Crimson Darter | 紅蜻 | NP | VC | + | + | + | + | + | + | + | | | | | | |
| <i>Euphaea decorata</i> | Black-banded Gossamerwing | 方帶幽蟳 | NP | VC | | | | + | | | | | | | | | + |
| <i>Ictinogomphus pertinax</i> | Common Flangetail | 箭士渠春蟳 | NP | C | + | + | + | + | + | + | | | | | | | + |
| <i>Ischnura senegalensis</i> | Common Blue Jewel | 褐斑異痣蟳 | NP | VC | | | | | | | | | | | | | |
| <i>Mnais lacteola</i> | Indochinese Copperwing | 煙翅綠色蟳 | P, LC | C | | | | | | | | | | | | | |
| <i>Nannophya pygmaea</i> | Scarlet Dwarf | 侏紅小蜻 | P, LC | C | | | | | | | | | | | | | |
| <i>Neurobasis chinensis</i> | Chinese Greenwing | 華麗色蟳 | NP | VC | + | + | + | + | + | + | + | | | | | + | + |
| <i>Neurothemis fulvia</i> | Russet Percher | 網脈蜻 | NP | VC | | + | + | + | + | | | | | | | | |
| <i>Neurothemis tullia tullia</i> | Pied Percher | 截斑脈蜻 | NP | C | | | | | | | | | | | | | |
| <i>Orthetrum chrysis</i> | Red-faced Skimmer | 華麗灰蜻 | NP | VC | | | | + | + | + | + | | | | + | + | + |
| <i>Orthetrum glaucum</i> | Common blue skimmer | 黑尾灰蜻 | NP | VC | | | | | | | | | | | | | |
| <i>Orthetrum luzonicum</i> | Marsh Skimmer | 呂宋灰蜻 | NP | VC | | | + | + | + | + | | | | | | | |
| <i>Orthetrum pruinosum neglectum</i> | Common Red Skimmer | 赤褐灰蜻 | NP | VC | + | + | + | + | | | | | + | | | + | + |
| <i>Orthetrum sabina sabina</i> | Green Skimmer | 狹腹灰蜻 | NP | VC | | | | | | | + | | | | | | |
| <i>Pantala flavescens</i> | Wandering Glider | 黃蜻 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Paracercion calamorum duyeri</i> | Dusky Lilysquatter | 蒼尾蟳 | P, LC | C | | | | | | | | | | | | | |
| <i>Prodasineura autumnalis</i> | Black Threadtail | 烏齒原蟳 | NP | VC | + | + | + | + | + | | | | | | | | |
| <i>Pseudagrion rubriceps rubriceps</i> | Orange-faced Sprite | 丹頂斑蟳 | NP | UC | + | + | | | | | | | | | | | |
| <i>Rhincocypha perforata perforata</i> | Common Blue Jewel | 三斑鼻蟳 | NP | VC | | + | + | + | + | + | | | | | | | + |
| <i>Rhyothemis variegata arria</i> | Variegated Flutterer | 斑麗翅蜻 | NP | C | | | | | | | | | | | | | |
| <i>Trithemis aurora</i> | Crimson Dropwing | 曉靄蜻 | NP | VC | + | + | + | + | + | + | + | | | | | + | + |
| <i>Trithemis festiva</i> | Indigo Dropwing | 靄靄蜻 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Zygonyx iris insignis</i> | Emerald Cascader | 彩紅蜻 | P,PGC | VC | | | | | | | | | | | | | |
| No. of species | | | | | 11 | 13 | 14 | 15 | 13 | 9 | 7 | 2 | 3 | 1 | 3 | 7 | 11 |

Note: NP – Not protected in Hong Kong; P-Protection in Hong Kong

“VC” – Very Common; “UC” – Uncommon; “C” - Common

“+” – Species exists in the study area

“++” – Species common in the study area

“+++” – Species abundant/dominant in study area

Commonness and status were decided according to AFCD biodiversity website (www.hkbiodiversity.net)LC- Local Concern - Fellowes *et al* (2002)PGC - Potential Global Concern - Fellowes *et al* (2002)

Table 4.4. Odonate species recorded at the Upper Lam Tsuen River

| Species name | Common name | Chinese name | Status | Commonness | Post construction monitoring | | | | | | | | | | | |
|----------------------------------------|---------------------------|--------------|--------|------------|------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--|
| | | | | | Jun-16 | Jul-16 | Aug-16 | Sep-16 | Oct-16 | Nov-16 | Dec-16 | Jan-17 | Feb-17 | Mar-17 | Apr-17 | |
| <i>Acisoma panorpoides panorpoides</i> | Asian Pintail | 錐腹蜻 | NP | VC | | | | | | | | | | | | |
| <i>Brachythemis contaminata</i> | Asian Amberwing | 黃翅蜻 | NP | VC | | | | | | | | | | | | |
| <i>Ceragrion auranticum ryukyuanum</i> | Orange-tailed Sprite | 琉球橘黃蟳 | NP | VC | + | + | + | + | + | | | | | | + | |
| <i>Coeliccia cyanomelas</i> | Blue Forest Damselfly | 黃紋長腹蟳 | NP | VC | | | | | | | | | | | | |
| <i>Copera marginipes</i> | Yellow Featherlegs | 黃狹扇蟳 | NP | VC | + | + | + | + | | | | | | | | |
| <i>Crocothemis servilia servilia</i> | Crimson Dart | 紅蜻 | NP | VC | + | + | + | + | + | + | | | | | | |
| <i>Euphaea decorata</i> | Black-banded Gossamerwing | 方帶幽蟳 | NP | VC | + | + | | | | | | | | | | |
| <i>Ictinogomphus pertinax</i> | Common Flangetail | 霸王渠春蟳 | NP | C | + | + | + | + | | | | | | | | |
| <i>Ischnura senegalensis</i> | Common Blue Jewel | 褐斑異痣蟳 | NP | VC | | | | | | | | | | | | |
| <i>Mnais lacteola</i> | Indochinese Copperwing | 煙翅綠色蟳 | P, LC | C | | | | | | | | | | | | |
| <i>Nannophya pygmaea</i> | Scarlet Dwarf | 侏紅小蜻 | P, LC | C | | | | | | | | | | | | |
| <i>Neurobasis chinensis</i> | Chinese Greenwing | 華麗色蟳 | NP | VC | + | + | + | + | + | + | | | | | + | |
| <i>Neurothemis fulvia</i> | Russet Percher | 網脈蜻 | NP | VC | + | + | + | + | + | | | | | | | |
| <i>Neurothemis tullia tullia</i> | Pied Percher | 截斑脈蜻 | NP | C | + | + | + | + | | | | | | | | |
| <i>Orthetrum chrysis</i> | Red-faced Skimmer | 華麗灰蜻 | NP | VC | + | + | + | + | + | + | | | | + | + | |
| <i>Orthetrum glaucum</i> | Common blue skimmer | 黑尾灰蜻 | NP | VC | | | | | | | | | | | | |
| <i>Orthetrum luzonicum</i> | Marsh Skimmer | 呂宋灰蜻 | NP | VC | + | + | + | + | + | + | | | | | + | |
| <i>Orthetrum pruinosum neglectum</i> | Common Red Skimmer | 赤褐灰蜻 | NP | VC | | | | | | | | | | | | |
| <i>Orthetrum sabina sabina</i> | Green Skimmer | 狹腹灰蜻 | NP | VC | | | | | | | | | | | | |
| <i>Pantala flavescens</i> | Wandering Glider | 黃蜻 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Paracercion calamorum duyeri</i> | Dusky Lilysquatter | 蕙尾蟳 | P, LC | C | | | | | | | | | | | | |
| <i>Prodasineura autumnalis</i> | Black Threadtail | 烏齒原蟳 | NP | VC | | | | | | | | | | | + | |
| <i>Pseudagrion rubriceps rubriceps</i> | Orange-faced Sprite | 丹頂斑蟳 | NP | UC | | | | | | | | | | | | |
| <i>Rhinocypha perforata perforata</i> | Common Blue Jewel | 三斑鼻蟳 | NP | VC | + | + | + | + | + | | | | | | | |
| <i>Rhyothemis variegata arria</i> | Variegated Flutterer | 斑麗翅蜻 | NP | C | | | | | | | | | | | | |
| <i>Trithemis aurora</i> | Crimson Dropwing | 曉靄蜻 | NP | VC | + | + | + | + | + | + | | | | + | + | |
| <i>Trithemis festiva</i> | Indigo Dropwing | 靄靄蜻 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Zygonyx iris insignis</i> | Emerald Cascader | 彩虹蜻 | P,PGC | VC | | | | | | | | | | | | |
| No. of species | | | | | 14 | 14 | 13 | 13 | 10 | 7 | 2 | 2 | 2 | 4 | 8 | |

Note: NP – Not protected in Hong Kong; P-Protection in Hong Kong

“VC” – Very Common; “UC” – Uncommon; “C” - Common

“+” – Species exists in the study area

“++” – Species common in the study area

“+++” – Species abundant/dominant in study area

Commonness and status were decided according to AFCD biodiversity website (www.hkbiodiversity.net)LC- Local Concern - Fellowes *et al* (2002)PGC - Potential Global Concern - Fellowes *et al* (2002)

Table 4.4. Odonate species recorded at the Upper Lam Tsuen River

| Species name | Common name | Chinese name | Status | Commonness | Post construction monitoring | | | | | |
|----------------------------------------|---------------------------|--------------|--------|------------|------------------------------|--------|--------|--------|--------|--------|
| | | | | | May-17 | Jun-17 | Jul-17 | Aug-17 | Sep-17 | Oct-17 |
| <i>Acisoma panorpoides panorpoides</i> | Asian Pintail | 錐腹蜻 | NP | VC | | | | | | |
| <i>Brachythemis contaminata</i> | Asian Amberwing | 黃翅蜻 | NP | VC | | | | | | |
| <i>Ceragrion auranticum ryukyuanum</i> | Orange-tailed Sprite | 琉球橘黃蟬 | NP | VC | + | + | + | + | + | |
| <i>Coelicia cyanomelas</i> | Blue Forest Damselfly | 黃紋長腹蟬 | NP | VC | | | | | | |
| <i>Copera marginipes</i> | Yellow Featherlegs | 黃狹扇蟬 | NP | VC | + | + | + | + | | |
| <i>Crocothemis servilia servilia</i> | Crimson Darter | 紅蜻 | NP | VC | + | + | + | + | + | + |
| <i>Euphaea decorata</i> | Black-banded Gossamerwing | 方帶幽蟬 | NP | VC | | | + | + | + | |
| <i>Ictinogomphus pertinax</i> | Common Flangetail | 箭士渠春蟬 | NP | C | | | | | | |
| <i>Ischnura senegalensis</i> | Common Blue Jewel | 褐斑異痣蟬 | NP | VC | | | | | | |
| <i>Mnais lacteola</i> | Indochinese Copperwing | 煙翅綠色蟬 | P, LC | C | | | | | | |
| <i>Nannophya pygmaea</i> | Scarlet Dwarf | 侏紅小蜻 | P, LC | C | | | | | | |
| <i>Neurobasis chinensis</i> | Chinese Greenwing | 華藍色蟬 | NP | VC | + | + | + | + | + | + |
| <i>Neurothemis fulvia</i> | Russet Percher | 網脈蜻 | NP | VC | + | + | + | + | + | + |
| <i>Neurothemis tullia tullia</i> | Pied Percher | 截斑脈蜻 | NP | C | | | | | | |
| <i>Orthetrum chrysis</i> | Red-faced Skimmer | 華羅灰蜻 | NP | VC | + | + | + | + | + | + |
| <i>Orthetrum glaucum</i> | Common blue skimmer | 黑尾灰蜻 | NP | VC | | + | + | + | + | + |
| <i>Orthetrum luzonicum</i> | Marsh Skimmer | 呂宋灰蜻 | NP | VC | + | + | + | + | + | + |
| <i>Orthetrum pruinosum neglectum</i> | Common Red Skimmer | 赤褐灰蜻 | NP | VC | | | | | | |
| <i>Orthetrum sabina sabina</i> | Green Skimmer | 狹腹灰蜻 | NP | VC | | + | + | + | + | |
| <i>Pantala flavescens</i> | Wandering Glider | 黃蜻 | NP | VC | + | + | + | + | + | + |
| <i>Paracercion calamorum duyeri</i> | Dusky Lilysquatter | 蕙尾蟬 | P, LC | C | | | | | | |
| <i>Prodasineura autumnalis</i> | Black Threadtail | 烏齒原蟬 | NP | VC | + | + | + | + | + | + |
| <i>Pseudagrion rubriceps rubriceps</i> | Orange-faced Sprite | 丹頂斑蟬 | NP | UC | | | | | | |
| <i>Rhinocypha perforata perforata</i> | Common Blue Jewel | 三斑鼻蟬 | NP | VC | + | + | + | + | + | + |
| <i>Rhyothemis variegata arria</i> | Variegated Flutterer | 斑麗翅蟬 | NP | C | | | | | | |
| <i>Trithemis aurora</i> | Crimson Dropwing | 曉靄蜻 | NP | VC | + | + | + | + | + | + |
| <i>Trithemis festiva</i> | Indigo Dropwing | 靄靄蜻 | NP | VC | + | + | + | + | + | + |
| <i>Zygonyx iris insignis</i> | Emerald Cascader | 彩虹蜻 | P,PGC | VC | | | | | | |
| No. of species | | | | | 12 | 14 | 15 | 15 | 14 | 11 |

Note: NP – Not protected in Hong Kong; P-Protection in Hong Kong

“VC” – Very Common; “UC” – Uncommon; “C” - Common

“+” – Species exists in the study area

“++” – Species common in the study area

“+++” – Species abundant/dominant in study area

Commonness and status were decided according to AFCD biodiversity website (www.hkbiodiversity.net)

LC- Local Concern - Fellowes *et al* (2002)

PGC - Potential Global Concern - Fellowes *et al* (2002)

Table 4.5 Aquatic Macro invertebrates recorded at Lam Tsuen River

(T1- located at upper river channel sampling site to T4 - located at lower river Channel sampling site)

| Species name | Chinese name | Status | Commonness | Baseline monitoring | | | | Impact monitoring | | | | Impact monitoring | | | | Impact monitoring | | | | Impact monitoring | | | | Impact monitoring | | | | | | | | | | | | | |
|----------------------------------|--------------|--------|------------|---------------------|--------------|--------------|--------------|-------------------|----|----|----|-------------------|-----------------|----|----|-------------------|----|-----------------|----|-------------------|----|----|-----------------|-------------------|----|----|----|-----------------|----|----|----|----|----|---|---|---|---|
| | | | | Jul-08 | | Aug-08 | | Jan-09 | | | | Jul-09 | | | | Jan-10 | | | | Jul-10 | | | | Jan-11 | | | | Jul-11 | | | | | | | | | |
| | | | | Upper stream | Lower stream | Upper stream | Lower stream | Reference point | T1 | T2 | T3 | T4 | Reference point | T1 | T2 | T3 | T4 | Reference point | T1 | T2 | T3 | T4 | Reference point | T1 | T2 | T3 | T4 | Reference point | T1 | T2 | T3 | T4 | | | | | |
| Molluscs | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Biomphalaria sp.</i> | -- | NP | VC | + | + | + | + | | | | + | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Brotia hainanensis</i> | -- | NP | VC | +++ | ++ | ++ | ++ | + | + | + | + | + | | | + | + | + | ++ | ++ | | | + | ++ | ++ | + | + | + | + | + | | | | | | | | |
| <i>Melanooides tuberculata</i> | 縮螺 | NP | VC | | + | | + | | | | | | | | | | | + | | | | | | | | | | | | | | | | | | | |
| <i>Pomacea canaliculata</i> | 福果螺 | NP | VC | | + | | + | + | + | | + | | | + | + | | | + | | | | | | | | | | | | | | | | | | | |
| <i>Radix plicatulus</i> | 羅白螺 | NP | VC | | + | + | + | + | + | | + | | | + | + | | | + | | | | | | | | | | | | | | | | | | | |
| <i>Sinoitaia quadrata</i> | 田螺 | NP | VC | | + | | + | + | + | + | + | | | + | + | | | + | | | | | | | | | | | | | | | | | | | |
| Insects | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Baetis sp.</i> | -- | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Caenis sp.</i> | -- | NP | VC | | | | | | | + | + | + | + | | | | | + | | | | | | | | | | | | | | | | | | | |
| <i>Chironomus sp.</i> | 蠓幼虫 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Electrogenas sp.</i> | -- | NP | VC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Hydropsyche sp.</i> | -- | NP | VC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Indobaetis sp.</i> | -- | NP | VC | + | + | + | + | + | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Mnais sp.</i> | -- | NP | VC | | | | | + | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Orthetrum sp.</i> | -- | NP | VC | + | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Crustaceans | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Caridina cantanensis</i> | 廣東米蝦 | NP | VC | + | + | + | + | + | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Cryptopotamon anacolutum</i> | 鱗刺溪蟹 | NP | VC | + | | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Macrobrachium hainanense</i> | 海南沼蝦 | NP | VC | + | + | + | + | + | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Somanniathelphusa zankton</i> | 束腰蟹 | NP | VC | + | | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| No. of species | | | | 9 | 12 | 10 | 11 | 10 | 11 | 3 | 2 | 9 | 10 | 3 | 3 | 2 | 9 | 12 | 5 | 3 | 2 | 7 | 12 | 5 | 4 | 2 | 7 | 15 | 13 | 11 | 13 | 15 | 16 | 4 | 1 | 1 | 2 |

Note: NP – Not protected in Hong Kong; P - Protected in Hong Kong
 “VC” – Very Common; “UC” – Uncommon; “C” - Common; “R” - Rare
 +, occurred; ++, common; +++, abundant/dominant Species in the the study area

Reference point was the sampling location outside the works area.

Table 4.5 Aquatic Macro invertebrates recorded at Lam Tsuen River

(T1- located at upper river channel sampling site to T4 - located at lower river Channel sampling site)

| Species name | Chinese name | Status | Commonness | Impact monitoring | | | | Impact monitoring | | | | Impact monitoring | | | | Impact monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|-----------------|--------|------------|-------------------|----|-----------------|----|-------------------|----|----|-----------------|-------------------|----|----|----|-------------------|----|----|----|------------------------------|-----------------|----|----|------------------------------|----|-----------------|----|------------------------------|----|----|-----------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|--|
| | | | | Jan-12 | | | | Jul-12 | | | | Aug-13 | | | | Dec-13 | | | | Jan-14 | | | | Feb-14 | | | | Mar-14 | | | | | | | | | | | | | | | | | | | | | | | | |
| Sampling point | Reference point | T1 | T2 | T3 | T4 | Reference point | T1 | T2 | T3 | T4 | Reference point | T1 | T2 | T3 | T4 | Reference point | T1 | T2 | T3 | T4 | Reference point | T1 | T2 | T3 | T4 | Reference point | T1 | T2 | T3 | T4 | Reference point | T1 | T2 | T3 | T4 | | | | | | | | | | | | | | | | | |
| Molluscs | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Biomphalaria sp.</i> | -- | NP | VC | | | + | | + | | | + | + | | | + | + | | | + | + | | | + | + | | | + | + | | | + | + | | | + | + | | | + | + | | | | | | | | | | | | |
| <i>Brotia hainanensis</i> | -- | NP | VC | + | + | | | ++ | | | ++ | + | + | | | ++ | + | + | | | ++ | + | + | | | ++ | + | + | | | ++ | + | + | | | ++ | + | + | | | ++ | + | + | | | | | | | | | |
| <i>Melanoides tuberculata</i> | 縮艇黑螺 | NP | VC | + | + | + | + | + | + | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | | | | | |
| <i>Pomacea canaliculata</i> | 福果螺 | NP | VC | + | + | + | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | | | |
| <i>Radix plicatulus</i> | 羅白螺 | NP | VC | + | + | | + | + | + | | + | + | + | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | | | |
| <i>Sinoaita quadrata</i> | 田螺 | NP | VC | + | + | | + | + | + | | + | + | + | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | | | |
| Insects | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Baetis sp.</i> | -- | NP | VC | + | | | | + | | | + | | | | + | | | | | + | | | | + | | | | | | | | | | | | + | | | | | | | | | | | | | | | | |
| <i>Caenis sp.</i> | -- | NP | VC | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Chironomus sp.</i> | 蠓幼虫 | NP | VC | + | + | + | | + | + | + | + | + | + | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| <i>Electrogenus sp.</i> | -- | NP | VC | + | | | | + | | | + | | | | + | | | | | + | | | | + | | | | + | + | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Hydropsyche sp.</i> | -- | NP | VC | + | | | | + | | | + | | | | + | + | | | | + | + | | | + | + | | | + | + | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Indobaetis sp.</i> | -- | NP | VC | + | | | | + | | | + | | | | + | | | | | + | | | | + | | | | + | + | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Mnais sp.</i> | -- | NP | VC | + | + | + | | + | + | + | + | + | + | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Orithetrum sp.</i> | -- | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Crustaceans | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Caridina cantanensis</i> | 廣東米蝦 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Cryptopotamon anacoluthon</i> | 鱗刺溪蟹 | NP | VC | + | | | | + | + | + | + | + | + | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Macrobrachium hainanense</i> | 海南沼蝦 | NP | VC | + | | | | + | | | + | + | | | + | | | | | + | | | | + | | | | + | + | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Somanniathelphusa zankton</i> | 束腰蟹 | NP | VC | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| No. of species | | | | 17 | 9 | 6 | 5 | 0 | 15 | 10 | 8 | 5 | 1 | 16 | 12 | 11 | 7 | 3 | 15 | 11 | 9 | 8 | 7 | 15 | 11 | 9 | 10 | 8 | 16 | 13 | 13 | 11 | 8 | 16 | 14 | 14 | 12 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | | |

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“VC” – Very Common; “UC” – Uncommon; “C” - Common; “R” - Rare
+, occurred; ++, common; +++, abundant/dominant Species in the the
study area

Reference point was the sampling location outside the works area.

Table 4.5 Aquatic Macro invertebrates recorded at Lam Tsuen River

(T1- located at upper river channel sampling site to T4 - located at lower river Channel sampling site)

| | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | | | | | | | | | | | | | | | |
|---------------------------------|--------------|------------------------------|------------|-----------------|----|------------------------------|----|----|-----------------|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|-----------------|----|----|------------------------------|----|-----------------|----|------------------------------|----|----|-----------------|-----------------|----|----|----|-----------------|----|----|----|----|----|----|----|----|----|----|
| | | Apr-14 | | | | May-14 | | | | Jun-14 | | | | Jul-14 | | | | Aug-14 | | | | Sep-14 | | | | Oct-14 | | | | Nov-14 | | | | | | | | | | | | | | |
| | | Reference point | | | | Reference point | | | | Reference point | | | | Reference point | | | | Reference point | | | | Reference point | | | | Reference point | | | | Reference point | | | | | | | | | | | | | | |
| | | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | | | | | | | |
| Species name | Chinese name | Status | Commonness | Reference point | T1 | T2 | T3 | T4 | Reference point | T1 | T2 | T3 | T4 | Reference point | T1 | T2 | T3 | T4 | Reference point | T1 | T2 | T3 | T4 | Reference point | T1 | T2 | T3 | T4 | Reference point | T1 | T2 | T3 | T4 | Reference point | T1 | T2 | T3 | T4 | | | | | | |
| Molluscs | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Biomphalaria sp.</i> | -- | NP | VC | + | + | | | + | + | | | | | + | + | | | + | + | | | | | | | + | + | | | + | + | | | + | + | | | | | | | | | |
| <i>Brotia hainanensis</i> | -- | NP | VC | ++ | + | + | + | + | ++ | + | + | + | + | ++ | + | + | + | + | ++ | + | + | + | + | ++ | + | + | + | + | ++ | + | + | + | + | ++ | + | + | + | + | ++ | | | | | |
| <i>Melanooides tuberculata</i> | 縮擬黑螺 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | | | |
| <i>Pomacea canaliculata</i> | 福果螺 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | | | |
| <i>Radix plicatulus</i> | 羅白螺 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | | | |
| <i>Sinoitaia quadrata</i> | 田螺 | NP | VC | + | + | | + | + | + | + | + | + | + | + | + | + | | + | + | + | + | + | | + | + | + | + | + | | + | + | + | + | + | | + | + | + | | | | | | |
| Insects | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Baetis sp.</i> | -- | NP | VC | + | | + | | | | | + | | | | | + | | | | | + | | | | | + | | | | | + | | | | | + | | | | | | | | |
| <i>Caenis sp.</i> | -- | NP | VC | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Chironomus sp.</i> | 蠓幼虫 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | | | |
| <i>Electrogenas sp.</i> | -- | NP | VC | + | + | | | + | + | + | | | | + | + | | | | + | + | | | | + | + | | | | + | + | | | | + | + | | | | + | | | | | |
| <i>Hydropsyche sp.</i> | -- | NP | VC | + | + | + | | | + | + | | | | + | + | + | + | | | + | + | + | + | | | + | + | + | + | | | + | + | + | + | | | + | | | | | | |
| <i>Indobaetis sp.</i> | -- | NP | VC | + | + | + | | + | + | + | | | + | + | + | + | + | | | + | + | + | + | | | + | + | + | + | | | + | + | + | + | | | + | | | | | | |
| <i>Mnais sp.</i> | -- | NP | VC | + | + | + | + | + | + | + | | | + | + | + | + | + | | | + | + | + | + | | | + | + | + | + | | | + | + | + | + | | | + | | | | | | |
| <i>Orthetrum sp.</i> | -- | NP | VC | + | + | + | + | + | + | + | + | + | | | + | + | + | + | | | + | + | + | + | | | + | + | + | + | | | + | + | + | + | | | + | | | | | |
| Crustaceans | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Caridina cantanensis</i> | 廣東米蝦 | NP | VC | + | ++ | ++ | ++ | ++ | + | ++ | ++ | ++ | ++ | + | ++ | ++ | ++ | ++ | + | ++ | ++ | ++ | ++ | + | ++ | ++ | ++ | ++ | + | ++ | ++ | ++ | ++ | + | ++ | ++ | ++ | ++ | + | | | | | |
| <i>Cryptopotamon anacolutum</i> | 鯉刺溪蟹 | NP | VC | + | + | + | | | + | + | | | | + | + | | | | + | + | | | | + | + | | | | + | + | | | | + | + | | | | + | | | | | |
| <i>Macrobrachium hainanense</i> | 海南沼蝦 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | | | |
| <i>Somamiathelphusa zankton</i> | 束腰蟹 | NP | VC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| No. of species | | | | 17 | 15 | 16 | 13 | 12 | | 13 | 15 | 10 | 10 | 10 | 11 | 12 | 11 | 10 | 9 | 13 | 11 | 13 | 13 | 10 | 13 | 13 | 15 | 15 | 9 | 13 | 14 | 16 | 14 | 12 | 13 | 14 | 16 | 15 | 11 | 13 | 14 | 15 | 14 | 12 |

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|----------------------------------|--------------|--------|------------|------------------------------|----|----|----|------------------------------|-----------------|----|----|------------------------------|----|-----------------|----|------------------------------|----|----|-----------------|------------------------------|----|----|----|------------------------------|----|----|----|--------|-----------------|----|----|----|----|----|----|----|----|----|----|----|---|----|----|----|
| | | | | Dec-14 | | | | Jan-15 | | | | Feb-15 | | | | Mar-15 | | | | Apr-15 | | | | May-15 | | | | Jun-15 | | | | | | | | | | | | | | | | |
| | | | | Reference point | T1 | T2 | T3 | T4 | Reference point | T1 | T2 | T3 | T4 | Reference point | T1 | T2 | T3 | T4 | Reference point | T1 | T2 | T3 | T4 | Reference point | T1 | T2 | T3 | T4 | Reference point | T1 | T2 | T3 | T4 | | | | | | | | | | | |
| Molluscs | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Biomphalaria sp.</i> | -- | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | | | | |
| <i>Brotia hainanensis</i> | -- | NP | VC | ++ | ++ | + | + | + | + | ++ | ++ | + | + | + | ++ | ++ | + | + | + | ++ | ++ | + | + | + | ++ | ++ | + | + | + | + | ++ | ++ | + | + | + | + | + | | | | | | | |
| <i>Melanooides tuberculata</i> | 縮艇黑螺 | NP | VC | | | | + | | | | + | + | + | | | | | | + | + | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Pomacea canaliculata</i> | 福果螺 | NP | VC | + | + | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | | | | |
| <i>Radix plicatulus</i> | 羅白螺 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | | | | |
| <i>Sinoitaia quadrata</i> | 田螺 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | | | | |
| Insects | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Baetis sp.</i> | -- | NP | VC | + | + | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | | | | |
| <i>Caenis sp.</i> | -- | NP | VC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Chironomus sp.</i> | 蠓幼虫 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | | | | |
| <i>Electrogenus sp.</i> | -- | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | | | | |
| <i>Hydropsyche sp.</i> | -- | NP | VC | + | | | | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Indobaetis sp.</i> | -- | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | | | | |
| <i>Mnais sp.</i> | -- | NP | VC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Orthetrum sp.</i> | -- | NP | VC | + | + | | | + | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Crustaceans | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Caridina cantanensis</i> | 廣東米蝦 | NP | VC | + | ++ | ++ | ++ | ++ | + | ++ | ++ | ++ | ++ | + | ++ | ++ | ++ | ++ | + | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | | | | | |
| <i>Cryptopotamon anacolutum</i> | 鯉刺溪蟹 | NP | VC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Macrobrachium hainanense</i> | 海南沼蝦 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | | | | |
| <i>Somanniathelphusa zankton</i> | 束腰蟹 | NP | VC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| No. of species | | | | 13 | 12 | 12 | 13 | 11 | | 13 | 11 | 11 | 13 | 12 | | 11 | 12 | 12 | 11 | 11 | | 11 | 13 | 13 | 12 | 12 | | 11 | 9 | 12 | 15 | 12 | | 11 | 9 | 11 | 13 | 12 | | 11 | 9 | 11 | 13 | 12 |

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|----------------------------------|--------------|--------|------------|------------------------------|----|----|----|------------------------------|-----------------|----|----|------------------------------|----|-----------------|----|------------------------------|----|----|-----------------|------------------------------|----|----|----|------------------------------|----|----|----|----|-----------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| | | | | Jul-15 | | | | Aug-15 | | | | Sep-15 | | | | Oct-15 | | | | Nov-15 | | | | Dec-15 | | | | | | | | | | | | | | | | | | | |
| | | | | Reference point | T1 | T2 | T3 | T4 | Reference point | T1 | T2 | T3 | T4 | Reference point | T1 | T2 | T3 | T4 | Reference point | T1 | T2 | T3 | T4 | Reference point | T1 | T2 | T3 | T4 | Reference point | T1 | T2 | T3 | T4 | | | | | | | | | | |
| Molluscs | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Biomphalaria sp.</i> | -- | NP | VC | | | | + | | | | + | | | | + | | | | + | | | | + | | | | + | | | | + | | | | + | | | | + | | | | |
| <i>Brotia hainanensis</i> | -- | NP | VC | ++ | ++ | ++ | + | ++ | ++ | ++ | + | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | | | |
| <i>Melanoides tuberculata</i> | 縮螺黑螺 | NP | VC | | | | + | + | | | + | + | | | + | + | | | + | + | | | + | + | | | + | + | | | + | + | | | + | + | | | + | | | | |
| <i>Pomacea canaliculata</i> | 福果螺 | NP | VC | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | | | |
| <i>Radix plicatulus</i> | 羅白螺 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| <i>Sinoita quadrata</i> | 田螺 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| Insects | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Baetis sp.</i> | -- | NP | VC | + | | | + | + | + | | | + | + | + | | | + | + | + | | | + | + | + | | | + | + | | | + | + | | | + | + | | | + | | | | |
| <i>Caenis sp.</i> | -- | NP | VC | | | | | | | | | + | + | + | | | | | | | | | | | | | | | | | | | | | | | | | | + | | | |
| <i>Chironomus sp.</i> | 蠓幼虫 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| <i>Electrogena sp.</i> | -- | NP | VC | + | + | + | + | | | + | + | + | + | | | + | + | + | + | | | + | + | + | + | | | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| <i>Hydropsyche sp.</i> | -- | NP | VC | + | + | + | | | | + | + | + | | | + | + | + | | | | | + | + | + | | | + | + | + | | | + | + | + | + | + | + | + | + | + | | | |
| <i>Indobaetis sp.</i> | -- | NP | VC | + | + | + | | | + | + | + | | | + | + | + | | | + | + | + | | | + | + | + | | | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| <i>Mnais sp.</i> | -- | NP | VC | | | | + | | | | | + | | | | | + | | | | | | | + | | | | | | | | + | + | + | + | + | + | + | + | + | | | |
| <i>Orthetrum sp.</i> | -- | NP | VC | | | + | + | + | -- | | | + | + | + | | | + | + | + | | | | + | + | + | | | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| Crustaceans | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Caridina cantanensis</i> | 廣東米蝦 | NP | VC | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | | | |
| <i>Cryptopotamon anacoluthon</i> | 鯽刺溪蟹 | NP | VC | | | | + | | | | | + | | | | | + | | | | | + | | | | | + | | | | | | | | | | | | + | | | | |
| <i>Macrobrachium hainanense</i> | 海南沼蝦 | NP | VC | + | | + | + | + | + | | | + | + | + | + | | | + | + | + | + | | | + | + | + | | | + | + | + | + | + | + | + | + | + | + | + | | | | |
| <i>Somanniathelphusa zanklon</i> | 束腰蟹 | NP | VC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| No. of species | | | | 11 | 9 | 11 | 13 | 12 | | 12 | 9 | 11 | 13 | 12 | | 11 | 9 | 11 | 13 | 12 | | 11 | 9 | 11 | 13 | 13 | | 11 | 9 | 11 | 13 | 13 | | 11 | 9 | 11 | 13 | 13 | 12 | 10 | 11 | 13 | 13 |

Note: NP – Not protected in Hong Kong; P - Protected in Hong Kong
 “VC” – Very Common; “UC” – Uncommon; “C” - Common; “R” - Rare
 +, occurred; ++, common; +++, abundant/dominant Species in the the study area

Reference point was the sampling location outside the works area.

Table 4.5 Aquatic Macro invertebrates recorded at Lam Tsuen River

(T1- located at upper river channel sampling site to T4 - located at lower river Channel sampling site)

| Species name | Chinese name | Status | Commonness | Post construction monitoring | | | | | Post construction monitoring | | | | | Post construction monitoring | | | | | Post construction monitoring | | | | | Post construction monitoring | | | | | | | | | | | | | | | | |
|----------------------------------|--------------|--------|------------|------------------------------|----|----|----|-----|------------------------------|----|----|-----|-----|------------------------------|----|----|-----|-----|------------------------------|----|-----|-----|----|------------------------------|-----|-----|----|----|-----------------|-----|----|----|-----|-----|----|----|-----|-----|----|----|
| | | | | Jan-16 | | | | | Feb-16 | | | | | Mar-16 | | | | | Apr-16 | | | | | May-16 | | | | | Jun-16 | | | | | | | | | | | |
| | | | | Reference point | T1 | T2 | T3 | T4 | Reference point | T1 | T2 | T3 | T4 | Reference point | T1 | T2 | T3 | T4 | Reference point | T1 | T2 | T3 | T4 | Reference point | T1 | T2 | T3 | T4 | Reference point | T1 | T2 | T3 | T4 | | | | | | | |
| Molluscs | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Biomphalaria sp.</i> | -- | NP | VC | | | | | + | | | | | + | | | | | + | | | | | + | | | | | | | | | | | | | | | | | |
| <i>Brotia hainanensis</i> | -- | NP | VC | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | |
| <i>Melanooides tuberculata</i> | 縮擬黑螺 | NP | VC | | | | | + | ++ | | | | + | ++ | | | | + | ++ | | | + | ++ | + | | | | | | | | | | | | | | + | | |
| <i>Pomacea canaliculata</i> | 福果螺 | NP | VC | ++ | ++ | ++ | ++ | +++ | ++ | ++ | ++ | +++ | +++ | ++ | ++ | ++ | +++ | +++ | ++ | ++ | +++ | +++ | ++ | ++ | +++ | +++ | ++ | ++ | +++ | +++ | ++ | ++ | +++ | +++ | ++ | ++ | +++ | +++ | ++ | |
| <i>Radix plicatulus</i> | 羅白螺 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| <i>Sinoitaia quadrata</i> | 田螺 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Insects | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Baetis sp.</i> | -- | NP | VC | + | | | + | + | + | | | + | + | + | | | + | + | + | | | + | + | + | | | | | | | | | | | | | | + | | |
| <i>Caenis sp.</i> | -- | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Chironomus sp.</i> | 蠓幼虫 | NP | VC | + | + | + | + | | | + | + | + | | | + | + | + | | | + | + | + | | | + | + | + | | | | | | | | | | + | + | | |
| <i>Electrogenus sp.</i> | -- | NP | VC | + | + | + | | | | + | + | | | | + | + | | | | | | + | + | | | | + | + | | | | | | | | | + | + | | |
| <i>Hydropsyche sp.</i> | -- | NP | VC | + | + | + | | + | | + | + | | | + | + | | | + | + | | | + | + | | | + | + | | | | | | | | | | + | + | | |
| <i>Indobaetis sp.</i> | -- | NP | VC | | | | | + | | | | | | | | | + | | | | | | | | | | | | | | | | | | | | | + | | |
| <i>Mnais sp.</i> | -- | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Orithetrum sp.</i> | -- | NP | VC | | | + | + | + | | | + | + | + | | | + | + | + | | | + | + | + | | | + | + | + | | | | | | | | | + | + | | |
| Crustaceans | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Caridina cantanensis</i> | 廣東米蝦 | NP | VC | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ |
| <i>Cryptopotamon anacoluthon</i> | 鱾刺溪蟹 | NP | VC | | | | + | + | | | | | + | + | | | | + | + | | | + | + | | | + | + | | | | | | | | | | + | + | | |
| <i>Macrobrachium hainanense</i> | 海南沼蝦 | NP | VC | + | | + | + | + | + | | | + | + | + | + | | | + | + | + | + | | | + | + | + | + | | | | | | | | | + | + | | | |
| <i>Somanniathelphusa zanklon</i> | 束腰蟹 | NP | VC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| No. of species | | | | 12 | 10 | 11 | 13 | 13 | 12 | 10 | 11 | 13 | 13 | 12 | 10 | 11 | 13 | 13 | 12 | 10 | 11 | 13 | 13 | 13 | 10 | 11 | 13 | 13 | 13 | 10 | 11 | 13 | 13 | 13 | 10 | 11 | 13 | 13 | | |

Note: NP – Not protected in Hong Kong; P - Protected in Hong Kong
 “VC” – Very Common; “UC” – Uncommon; “C” - Common; "R" - Rare
 +, occurred; ++, common; +++, abundant/dominant Species in the the study area

Reference point was the sampling location outside the works area.

Table 4.5 Aquatic Macro invertebrates recorded at Lam Tsuen River

(T1- located at upper river channel sampling site to T4 - located at lower river Channel sampling site)

| | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | | | | | | | | | | | | |
|----------------------------------|--------------|------------------------------|------------|----------------|-----------------|------------------------------|-----|-----|-----|------------------------------|----|----|-----|------------------------------|-----------------|----|-----|------------------------------|-----|-----------------|----|--------|-----|-----|-----------------|----|-----|-----|-----|-----|-----|-----|----|
| | | Jul-16 | | | | Aug-16 | | | | Sep-16 | | | | Oct-16 | | | | Nov-16 | | | | Dec-16 | | | | | | | | | | | |
| Species name | Chinese name | Status | Commonness | Sampling point | Reference point | T1 | T2 | T3 | T4 | Reference point | T1 | T2 | T3 | T4 | Reference point | T1 | T2 | T3 | T4 | Reference point | T1 | T2 | T3 | T4 | Reference point | T1 | T2 | T3 | T4 | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Molluscs | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Biomphalaria sp.</i> | -- | NP | VC | | | | | | + | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Brotia hainanensis</i> | -- | NP | VC | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | |
| <i>Melanooides tuberculata</i> | 瘤擬黑螺 | NP | VC | + | | | | | + | + | + | + | + | | | | | | | + | + | + | + | | | | | | | | | | |
| <i>Pomacea canaliculata</i> | 福果螺 | NP | VC | ++ | ++ | ++ | +++ | +++ | +++ | ++ | ++ | ++ | +++ | +++ | ++ | ++ | +++ | +++ | +++ | ++ | ++ | +++ | +++ | +++ | ++ | ++ | +++ | +++ | +++ | +++ | +++ | +++ | |
| <i>Radix plicatulus</i> | 羅白螺 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Sinoitaia quadrata</i> | 田螺 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Insects | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Baetis sp.</i> | -- | NP | VC | + | | | | | + | + | + | + | + | | | | | | | + | + | + | + | | | | | | | | | | |
| <i>Caenis sp.</i> | -- | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Chironomus sp.</i> | 蠓幼虫 | NP | VC | + | + | + | | | + | + | + | | | + | + | + | | | + | + | + | | | + | + | + | | | | | | | |
| <i>Electrogenus sp.</i> | -- | NP | VC | + | + | | | | + | + | + | | | + | + | + | | | + | + | + | | | + | + | + | | | | | | | |
| <i>Hydropsyche sp.</i> | -- | NP | VC | + | + | | | | + | + | + | | | + | + | + | | | + | + | + | | | + | + | + | | | | | | | |
| <i>Indobaetis sp.</i> | -- | NP | VC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Mnais sp.</i> | -- | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Orithetrum sp.</i> | -- | NP | VC | | + | + | + | | | + | + | + | + | | | + | + | + | | | + | + | + | | | + | + | + | | | | | |
| Crustaceans | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Caridina cantanensis</i> | 廣東米蝦 | NP | VC | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ |
| <i>Cryptopotamon anacoluthon</i> | 鯽刺溪蟹 | NP | VC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Macrobrachium hainanense</i> | 海南沼蝦 | NP | VC | + | | | | | + | + | + | + | | | | | | | | + | + | + | + | | | | | | | | | | |
| <i>Somamiathelphusa zanklon</i> | 束腰蟹 | NP | VC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| No. of species | | | | | 13 | 10 | 12 | 14 | 14 | | 13 | 10 | 12 | 14 | 14 | | 13 | 10 | 12 | 14 | 14 | | 13 | 10 | 12 | 14 | 14 | | 13 | 10 | 12 | 14 | 14 |

Note: NP – Not protected in Hong Kong; P - Protected in Hong Kong
 “VC” – Very Common; “UC” – Uncommon; “C” - Common; “R” - Rare
 +, occurred; ++, common; +++, abundant/dominant Species in the the study area

Reference point was the sampling location outside the works area.

Table 4.5 Aquatic Macro invertebrates recorded at Lam Tsuen River

(T1- located at upper river channel sampling site to T4 - located at lower river Channel sampling site)

| Species name | Chinese name | Status | Commonness | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | | | |
|----------------------------------|--------------|--------|------------|------------------------------|----|----|-----|------------------------------|-----------------|----|----|------------------------------|-----|-----------------|----|-----|-----|----|
| | | | | Jan-17 | | | | Feb-17 | | | | Mar-17 | | | | | | |
| | | | | Reference point | T1 | T2 | T3 | T4 | Reference point | T1 | T2 | T3 | T4 | Reference point | T1 | T2 | T3 | T4 |
| Molluscs | | | | | | | | | | | | | | | | | | |
| <i>Biomphalaria sp.</i> | -- | NP | VC | | | | | + | | | | | + | | | | + | |
| <i>Brotia hainanensis</i> | -- | NP | VC | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | |
| <i>Melanoides tuberculata</i> | 縮螺黑螺 | NP | VC | + | | | | + | ++ | + | | | + | ++ | + | | + | |
| <i>Pomacea canaliculata</i> | 福果螺 | NP | VC | ++ | ++ | ++ | +++ | +++ | ++ | ++ | ++ | +++ | +++ | ++ | ++ | +++ | +++ | |
| <i>Radix plicatulus</i> | 羅白螺 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Sinoitaia quadrata</i> | 田螺 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Insects | | | | | | | | | | | | | | | | | | |
| <i>Baetis sp.</i> | -- | NP | VC | + | | | | + | + | | | | + | + | | | + | + |
| <i>Caenis sp.</i> | -- | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Chironomus sp.</i> | 蠓幼虫 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Electrogenas sp.</i> | -- | NP | VC | + | + | + | | + | + | + | + | + | + | + | + | + | + | + |
| <i>Hydropsyche sp.</i> | -- | NP | VC | + | + | + | | + | + | + | + | + | + | + | + | + | + | + |
| <i>Indobaetis sp.</i> | -- | NP | VC | | | | | | | | | | + | | | | | + |
| <i>Mnais sp.</i> | -- | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Orthetrum sp.</i> | -- | NP | VC | | | | | + | + | + | + | + | | | | | + | + |
| Crustaceans | | | | | | | | | | | | | | | | | | |
| <i>Caridina cantanensis</i> | 廣東米蝦 | NP | VC | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ |
| <i>Cryptopotamon anacoluthon</i> | 鯽刺溪蟹 | NP | VC | | | | + | + | | | | | + | + | | | + | + |
| <i>Macrobrachium hainanense</i> | 海南沼蝦 | NP | VC | + | | | + | + | + | | | | + | + | + | + | + | + |
| <i>Somanniathelphusa zanklon</i> | 束腰蟹 | NP | VC | | | | | | | | | | | | | | | |
| No. of species | | | | 13 | 10 | 12 | 14 | 14 | 13 | 10 | 12 | 14 | 14 | 13 | 10 | 12 | 14 | 14 |

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Reference point was the sampling location outside the works area.

Table 4.5 Aquatic Macro invertebrates recorded at Lam Tsuen River

(T1 - located at upper river channel sampling site to T4 - located at lower river Channel sampling site)

| | | | | Post construction monitoring | | | | | Post construction monitoring | | | | | Post construction monitoring | | | | | |
|---------------------------------|------|--------------|--------|------------------------------|-----------------|----|----|-----|------------------------------|-----------------|----|----|-----|------------------------------|-----------------|----|----|----|----|
| | | | | Apr-17 | | | | | May-17 | | | | | Jun-17 | | | | | |
| Species name | | Chinese name | Status | Commonness | Reference point | T1 | T2 | T3 | T4 | Reference point | T1 | T2 | T3 | T4 | Reference point | T1 | T2 | T3 | T4 |
| Molluscs | | | | | | | | | | | | | | | | | | | |
| <i>Biomphalaria sp.</i> | -- | | NP | VC | | | | | + | | | | | + | | | | | + |
| <i>Brotia hainanensis</i> | -- | | NP | VC | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ |
| <i>Melanooides tuberculata</i> | 瘤擬黑螺 | | NP | VC | + | | | + | ++ | + | | | + | ++ | + | | | + | ++ |
| <i>Pomacea canaliculata</i> | 蘋果螺 | | NP | VC | ++ | ++ | ++ | +++ | +++ | ++ | ++ | ++ | +++ | +++ | ++ | ++ | ++ | ++ | ++ |
| <i>Radix plicatulus</i> | 羅白螺 | | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Sinotaia quadrata</i> | 田螺 | | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Insects | | | | | | | | | | | | | | | | | | | |
| <i>Baetis sp.</i> | -- | | NP | VC | + | | | + | + | + | | | + | + | + | | | + | + |
| <i>Caenis sp.</i> | -- | | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Chironomus sp.</i> | 蠓幼虫 | | NP | VC | + | + | + | + | | + | + | + | + | | + | + | + | + | |
| <i>Electrogenas sp.</i> | -- | | NP | VC | + | + | + | | | + | + | + | | | + | + | + | | |
| <i>Hydropsyche sp.</i> | -- | | NP | VC | + | + | + | | + | + | + | | + | | + | + | + | | + |
| <i>Indobaetis sp.</i> | -- | | NP | VC | | | | + | | | | | + | | | | | | + |
| <i>Mnais sp.</i> | -- | | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Orthetrum sp.</i> | -- | | NP | VC | | | + | + | + | | | + | + | + | | | + | + | + |
| Crustaceans | | | | | | | | | | | | | | | | | | | |
| <i>Caridina cantanensis</i> | 廣東米蝦 | | NP | VC | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ |
| <i>Cryptopotamon anacolutum</i> | 鯉刺溪蟹 | | NP | VC | | | | + | + | | | | + | + | | | | + | + |
| <i>Macrobrachium hainanense</i> | 海南沼蝦 | | NP | VC | + | | + | + | + | | | + | + | + | + | | + | + | + |
| <i>Somaniathelphusa zanklon</i> | 束腰蟹 | | NP | VC | | | | | | | | | | | | | | | |
| No. of species | | | | | 13 | 10 | 12 | 14 | 14 | 13 | 10 | 12 | 14 | 14 | 13 | 10 | 12 | 14 | 14 |

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(T1 - located at upper river channel sampling site to T4 - located at lower river Channel sampling site)

| | | | | Post construction monitoring | | | | | Post construction monitoring | | | | | Post construction monitoring | | | | |
|---------------------------------|--------------|----------------|------------|------------------------------|----|----|----|----|------------------------------|----|----|----|----|------------------------------|----|----|----|----|
| | | | | Jul-17 | | | | | Aug-17 | | | | | Sep-17 | | | | |
| | | Sampling point | | Reference point | T1 | T2 | T3 | T4 | Reference point | T1 | T2 | T3 | T4 | Reference point | T1 | T2 | T3 | T4 |
| Species name | Chinese name | Status | Commonness | | | | | | | | | | | | | | | |
| Molluscs | | | | | | | | | | | | | | | | | | |
| <i>Biomphalaria sp.</i> | -- | NP | VC | | | | | + | | | | | + | | | | | + |
| <i>Brotia hainanensis</i> | -- | NP | VC | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ |
| <i>Melanooides tuberculata</i> | 瘤擬黑螺 | NP | VC | + | | | | + | ++ | + | | | + | ++ | + | | | ++ |
| <i>Pomacea canaliculata</i> | 蘋果螺 | NP | VC | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ |
| <i>Radix plicatulus</i> | 羅白螺 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Sinotaia quadrata</i> | 田螺 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Insects | | | | | | | | | | | | | | | | | | |
| <i>Baetis sp.</i> | -- | NP | VC | + | | | | + | + | + | | | + | + | + | | | + |
| <i>Caenis sp.</i> | -- | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Chironomus sp.</i> | 蠓幼虫 | NP | VC | + | + | + | + | | + | + | + | + | | + | + | + | + | |
| <i>Electrogenas sp.</i> | -- | NP | VC | + | + | + | | | + | + | + | | | + | + | + | | |
| <i>Hydropsyche sp.</i> | -- | NP | VC | + | + | + | | + | + | + | | | + | + | + | | | + |
| <i>Indobaetis sp.</i> | -- | NP | VC | | | | | + | | | | | + | | | | | + |
| <i>Mnais sp.</i> | -- | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Orthetrum sp.</i> | -- | NP | VC | | | + | + | + | | | + | + | + | | | + | + | + |
| Crustaceans | | | | | | | | | | | | | | | | | | |
| <i>Caridina cantanensis</i> | 廣東米蝦 | NP | VC | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ |
| <i>Cryptopotamon anacolutho</i> | 鯽刺溪蟹 | NP | VC | | | | + | + | | | | + | + | | | | + | + |
| <i>Macrobrachium hainanense</i> | 海南沼蝦 | NP | VC | + | | | + | + | + | | | + | + | + | | | + | + |
| <i>Somaniathelphusa zanklon</i> | 束腰蟹 | NP | VC | | | | | | | | | | | | | | | |
| No. of species | | | | 13 | 10 | 12 | 14 | 14 | 13 | 10 | 12 | 14 | 14 | 13 | 10 | 12 | 14 | 14 |

Note: NP – Not protected in Hong Kong; P - Protected in Hong Kong

“VC” – Very Common; “UC” – Uncommon; “C” - Common; “R” - Rare

+, occurred; ++, common; +++, abundant/dominant Species in the the study area

Reference point was the sampling location outside the works area.

Table 4.5 Aquatic Macro invertebrates recorded at Lam Tsuen River

(T1 - located at upper river channel sampling site to T4 - located at lower river Channel sampling site)

| | | | | Post construction monitoring | | | | |
|---------------------------------|--------------|----------------|------------|------------------------------|----|----|----|----|
| | | | | Oct-17 | | | | |
| | | Sampling point | | Reference point | T1 | T2 | T3 | T4 |
| Species name | Chinese name | Status | Commonness | | | | | |
| Molluscs | | | | | | | | |
| <i>Biomphalaria sp.</i> | -- | NP | VC | | | | | + |
| <i>Brotia hainanensis</i> | -- | NP | VC | ++ | ++ | ++ | ++ | ++ |
| <i>Melanooides tuberculata</i> | 瘤擬黑螺 | NP | VC | + | | | + | ++ |
| <i>Pomacea canaliculata</i> | 蘋果螺 | NP | VC | ++ | ++ | ++ | ++ | ++ |
| <i>Radix plicatulus</i> | 羅白螺 | NP | VC | + | + | + | + | + |
| <i>Sinotaia quadrata</i> | 田螺 | NP | VC | + | + | + | + | + |
| Insects | | | | | | | | |
| <i>Baetis sp.</i> | -- | NP | VC | + | | | + | + |
| <i>Caenis sp.</i> | -- | NP | VC | + | + | + | + | + |
| <i>Chironomus sp.</i> | 蠓幼虫 | NP | VC | + | + | + | + | |
| <i>Electrogenas sp.</i> | -- | NP | VC | + | + | + | | |
| <i>Hydropsyche sp.</i> | -- | NP | VC | + | + | + | | + |
| <i>Indobaetis sp.</i> | -- | NP | VC | | | | + | |
| <i>Mnais sp.</i> | -- | NP | VC | + | + | + | + | + |
| <i>Orthetrum sp.</i> | -- | NP | VC | | | + | + | + |
| Crustaceans | | | | | | | | |
| <i>Caridina cantanensis</i> | 廣東米蝦 | NP | VC | ++ | ++ | ++ | ++ | ++ |
| <i>Cryptopotamon anacolutho</i> | 鯽刺溪蟹 | NP | VC | | | | + | + |
| <i>Macrobrachium hainanense</i> | 海南沼蝦 | NP | VC | + | | + | + | + |
| <i>Somaniathelphusa zanklon</i> | 束腰蟹 | NP | VC | | | | | |
| No. of species | | | | 13 | 10 | 12 | 14 | 14 |

Note: NP – Not protected in Hong Kong; P - Protected in Hong Kong

“VC” – Very Common; “UC” – Uncommon; “C” - Common; “R” - Rare

+, occurred; ++, common; +++, abundant/dominant Species in the the study area

Reference point was the sampling location outside the works area.

Table 4.6 Fish species and amphibians at Upper Lam Tsuen River

(T1- located at upper river channel sampling site to T4 - located at lower river Channel sampling site)

| Species | Chinese name | Status | Sampling point | Baseline monitoring | | | | Impact monitoring | | | | Impact monitoring | | | | | Impact monitoring | | | | | Impact monitoring | | | | | | | | | | | | | | | | |
|---------------------------------------------|--------------|----------------------|----------------|---------------------|--------------|--------------|--------------|-------------------|----|-----|-----|-------------------|-----------|----|----|----|-------------------|-----------|----|----|----|-------------------|-----------|----|----|----|----|--|--|--|--|--|--|--|--|--|--|--|
| | | | | Jul-08 | | Aug-08 | | Jan-09 | | | | Jul-09 | | | | | Jan-10 | | | | | Jul-10 | | | | | | | | | | | | | | | | |
| | | | | Upper stream | Lower stream | Upper stream | Lower stream | Reference | T1 | T2 | T3 | T4 | Reference | T1 | T2 | T3 | T4 | Reference | T1 | T2 | T3 | T4 | Reference | T1 | T2 | T3 | T4 | | | | | | | | | | | |
| Fish | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Arossocheilus parallens</i> | 側條光唇魚 | P, PGC | R | | + | | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Channa maculate</i> | 斑鱧 | NP | C | | | | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Cirrhina molitorella</i> | 鱈魚 | NP | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Clarias fuscus</i> | 胡子鯪 | NP | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Cyprinus carpio var. viridiviolaceus</i> | 錦鯉 | NP | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Gambusia affinis</i> | 食蚊魚 | NP | VC | | | + | + | + | | | | + | + | | | | + | | | | | | | | | | | | | | | | | | | | | |
| <i>Limnparhamaloptera disparis</i> | 擬平鰾 | NP | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Misgurnus anguillicaudatus</i> | 泥鰻 | NP | C | + | | | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Oreochromis niloticus</i> | 尼羅口鯪非鯡 | NP | C | | + | | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Parazacco spilurus</i> | 異鰾 | V and | C | | + | | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Poecilia reticulata</i> | 孔雀花魚將 | NP | VC | | | | + | | | | | | | | | | + | | | | | | | | | | | | | | | | | | | | | |
| <i>Pseudogastromyzon myersi</i> | 麥氏擬腹吸鰾 | NP | C | | + | | + | | + | ++ | ++ | ++ | + | ++ | ++ | + | + | + | ++ | ++ | | | | | | | | | | | | | | | | | | |
| <i>Perocryptis cochinchinensis</i> | 黃鰮 | NP | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Puntius semifasciolatus</i> | 七星魚 | NP | C | ++ | + | ++ | + | | + | + | | ++ | | | | + | ++ | | | | | | | | | | | | | | | | | | | | | |
| <i>Rhinogobius spp.</i> | 鰕虎魚 | NP | C/UN/R | | + | | + | | + | + | | + | | | | + | | | | | | | | | | | | | | | | | | | | | | |
| <i>Schistura fasciolata</i> | 橫紋南鰾 | NP | C | | + | | + | | + | + | | + | | | | + | | | | | | | | | | | | | | | | | | | | | | |
| <i>Xiphophorus hellerii</i> | 劍尾魚 | NP | C | | + | | + | | + | + | | ++ | | | | ++ | + | | + | | | | | | | | | | | | | | | | | | | |
| <i>Xiphophorus variatus</i> | 雜色劍尾魚 | NP | C | | | | + | | + | + | | + | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Zacco platypus</i> | 寬鰭鱔 | NP | C | | + | | ++ | | ++ | +++ | +++ | +++ | + | ++ | ++ | | ++ | ++ | ++ | + | ++ | ++ | | | | | | | | | | | | | | | | |
| 2x2m fish counting | | No. of fish | | 70 | 60 | 75 | 60 | 38 | 45 | 40 | 40 | 8 | 38 | 20 | 5 | 15 | 7 | 38 | 20 | 5 | 15 | 7 | 32 | 12 | 6 | 10 | 20 | | | | | | | | | | | |
| No. of species | | | | 5 | 8 | 11 | 12 | 7 | 7 | 4 | 8 | 2 | 5 | 3 | 3 | 5 | 6 | 5 | 3 | 2 | 2 | 2 | 9 | 8 | 10 | 13 | 9 | | | | | | | | | | | |
| Amphibian | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Paramesotriton hongkongensis</i> | 香港瘰螈 | P (Cap 170, NT, PGC) | R | | + | | + | | + | | | | | | | | | + | + | | | | | | | | | | | | | | | | | | | |
| <i>Fejervarya limnocharis</i> | 澤蛙 | NP | VC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| No. of species | | | | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | | | | | | | | | | | |

Note: NP – Not protected in Hong Kong

“VC” – Very Common; “UC” – Uncommon; “C” – Common; “R” – Rare

+, occurred; ++, common; +++, abundant/dominant Species in the the study area

-V – Listed as vulnerable in China Fish Red Data Book

-Reference point was the sampling location outside the works area used to compare the with the data within works area.

“Cap 170” – List in Wild Animals Protection Ordinance (Cap.170)

“NT” – Near Threatened in IUCN Red List Status

“PGC”-Potential Global Concern by Fellowes *et al* (2002)

Table 4.6 Fish species and amphibians at Upper Lam Tsuen River

(T1- located at upper river channel sampling site to T4 - located at lower river Channel sampling site)

| Species | Chinese name | Status | Sampling point | Impact monitoring | | | | | Impact monitoring | | | | | Impact monitoring | | | | | Impact monitoring | | | | | Impact monitoring | | | | | | | | | | | | | | | |
|---------------------------------------------|--------------|----------------------|----------------|-------------------|----|----|----|----|-------------------|----|----|----|----|-------------------|----|----|----|----|-------------------|----|----|----|----|-------------------|----|----|----|----|-----------|----|----|----|----|---|---|---|---|---|--|
| | | | | Jan-11 | | | | | Jul-11 | | | | | Jan-12 | | | | | Jul-12 | | | | | Aug-13 | | | | | Dec-13 | | | | | | | | | | |
| | | | | Reference | T1 | T2 | T3 | T4 | Reference | T1 | T2 | T3 | T4 | Reference | T1 | T2 | T3 | T4 | Reference | T1 | T2 | T3 | T4 | Reference | T1 | T2 | T3 | T4 | Reference | T1 | T2 | T3 | T4 | | | | | | |
| Fish | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Acrossocheilus parallens</i> | 側條光唇魚 | P, PGC | R | | + | + | | | | | + | + | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Channa maculate</i> | 斑鱧 | NP | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Cirrhina molitorella</i> | 鯪魚 | NP | C | | | | | | | + | | + | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Clarias fuscus</i> | 胡子鯰 | NP | C | | | | | | | | | | | | | | | | | | + | | + | | | | | | | | | | | | | | | | |
| <i>Cyprinus carpio var. viridiviolaceus</i> | 錦鯉 | NP | C | | | | | | | | | | | | | | | | | | + | | + | | | | | | | | | | | | | | | | |
| <i>Gambusia affinis</i> | 食蚊魚 | NP | VC | + | | | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Liniparomaloptera disparis</i> | 擬平鰈 | NP | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Misgurnus anguillicaudatus</i> | 泥鰌 | NP | C | + | + | | | | | + | | | | | | | | | | | + | | | | | | | | | | | | | | | | | | |
| <i>Oreochromis niloticus</i> | 尼羅口鯪非鯽 | NP | C | | | + | + | + | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Parazacco spilurus</i> | 異鰻 | V and | C | + | + | | | | | + | | | | | | | | | | | + | + | + | | | | | | | | | | | | | | | | |
| <i>Poecilia reticulata</i> | 孔雀石魚將 | NP | VC | | | | | + | | | + | + | + | | | | | | | | + | + | + | | | | | | | | | | | | | | | | |
| <i>Pseudogastromyzon myersi</i> | 麥氏擬腹吸鰈 | NP | C | ++ | + | | | | | ++ | + | | | | | | | | | | + | | | | | | | | | | | | | | | | | | |
| <i>Prerocryptis cochinchinensis</i> | 黃鯪 | NP | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Puntius semifasciolatus</i> | 七星魚 | NP | C | + | | | | | + | | + | | | | | | | | | | + | + | + | | | | | | | | | | | | | | | | |
| <i>Rhinogobius spp.</i> | 鰓虎魚 | NP | C/UN/R | + | + | + | + | + | | + | + | | | | | | | | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Schistura fasciolata</i> | 橫紋南鰈 | NP | C | + | + | | | | | + | + | | | | | | | | | | + | + | + | | | | | | | | | | | | | | | | |
| <i>Xiphophorus hellerii</i> | 劍尾魚 | NP | C | + | | | | + | + | | + | + | | | | | | | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Xiphophorus variatus</i> | 雜色劍尾魚 | NP | C | | | | | | | | + | + | + | | | | | | | | + | + | + | | | | | | | | | | | | | | | | |
| <i>Zacco platypus</i> | 寬鰭鱮 | NP | C | + | + | + | + | + | + | ++ | ++ | | | | | | | | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| 2x2m fish counting | | No. of fish | | 30 | 22 | 10 | 7 | 5 | 10 | 4 | 2 | 0 | 0 | 6 | 3 | 1 | 0 | 0 | 8 | 5 | 2 | 0 | 0 | 5 | 2 | 3 | 2 | 3 | 5 | 2 | 3 | 2 | 3 | 5 | 2 | 3 | 2 | 3 | |
| No. of species | | | | 9 | 7 | 4 | 4 | 8 | 10 | 8 | 9 | 5 | 3 | 12 | 8 | 6 | 4 | 3 | 14 | 10 | 10 | 4 | 3 | 14 | 11 | 11 | 6 | 4 | 14 | 9 | 12 | 8 | 8 | 6 | | | | | |
| Amphibian | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Paramesotriton hongkongensis</i> | 香港瘰螈 | P (Cap 170, NT, PGC) | R | + | | | | | | | | | | | | | | | | | + | | | | | | | | | | | | | | | | | | |
| <i>Fejervarya limnocharis</i> | 澤蛙 | NP | VC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| No. of species | | | | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |

Note: NP – Not protected in Hong Kong

“VC” – Very Common; “UC” – Uncommon; “C” - Common; “R” - Rare

+, occurred; ++, common; +++, abundant/dominant Species in the the study area

-V - Listed as vulnerable in China Fish Red Data Book

-Reference point was the sampling location outside the works area used to compare the with the data within works area.

“Cap 170” - List in Wild Animals Protection Ordinance (Cap.170)

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“PGC”-Potential Global Concern by Fellowes *et al* (2002)

Table 4.6 Fish species and amphibians at Upper Lam Tsuen River

(T1- located at upper river channel sampling site to T4 - located at lower river Channel sampling site)

| Species | Chinese name | Status | Sampling point | Post construction monitoring | | | | | Post construction monitoring | | | | | Post construction monitoring | | | | | Post construction monitoring | | | | | Post construction monitoring | | | | |
|---------------------------------------------|--------------|----------------------|----------------|------------------------------|----|----|-----|----|------------------------------|----|-----|-----|----|------------------------------|----|-----|-----|----|------------------------------|-----|----|-----|----|------------------------------|----|----|-----|----|
| | | | | Jan-14 | | | | | Feb-14 | | | | | Mar-14 | | | | | Apr-14 | | | | | May-14 | | | | |
| | | | | Reference | T1 | T2 | T3 | T4 | Reference | T1 | T2 | T3 | T4 | Reference | T1 | T2 | T3 | T4 | Reference | T1 | T2 | T3 | T4 | Reference | T1 | T2 | T3 | T4 |
| Fish | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Acrossocheilus parallens</i> | 側條光唇魚 | P, PGC | R | + | + | + | + | + | + | ++ | +++ | + | + | ++ | ++ | +++ | ++ | ++ | ++ | +++ | ++ | + | + | + | + | + | | |
| <i>Channa maculate</i> | 斑鱧 | NP | C | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Cirrhina molitorella</i> | 鯪魚 | NP | C | | | | | | | | | | | | | | | | + | | | | | | | | | |
| <i>Clarias fuscus</i> | 胡子鯪 | NP | C | + | | + | | | + | | + | | | + | | + | | | + | | + | | | | | + | | |
| <i>Cyprinus carpio var. viridiviolaceus</i> | 錦鯉 | NP | C | | | + | | | | | + | | | + | | | | | + | | | | | | | | | |
| <i>Gambusia affinis</i> | 食蚊魚 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| <i>Liniparhomaloptera disparis</i> | 擬平鰈 | NP | C | | | | | | | | | | | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| <i>Misgurnus anguillicaudatus</i> | 泥鰌 | NP | C | + | | | | | + | | + | | | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| <i>Oreochromis niloticus</i> | 尼羅口鯪非鯪 | NP | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| <i>Parazacco spilurus</i> | 異鰾 | V and | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| <i>Poecilia reticulata</i> | 孔雀石魚將 | NP | VC | | | + | + | | | + | + | | | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| <i>Pseudogastromyzon myersi</i> | 麥氏擬腹吸鰈 | NP | C | + | | | | | + | + | + | | | + | + | + | | | + | + | + | | | | | | | |
| <i>Prerocypris cochinchinensis</i> | 黃鯪 | NP | C | + | | | + | | + | | + | | | + | | + | | | + | | + | | | | | | | |
| <i>Puntius semifasciolatus</i> | 七星魚 | NP | C | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| <i>Rhinogobius spp.</i> | 鰻虎魚 | NP | C/UN/R | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| <i>Schistura fasciolata</i> | 橫紋南鰈 | NP | C | + | + | + | | | + | + | + | | | + | + | + | | | + | + | + | | | | | | | |
| <i>Xiphophorus hellerii</i> | 劍尾魚 | NP | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| <i>Xiphophorus variatus</i> | 雜色劍尾魚 | NP | C | + | + | + | | | + | | + | | | + | | + | | | + | | + | | | | | | | |
| <i>Zacco platypus</i> | 寬鰭鱈 | NP | C | + | + | ++ | +++ | ++ | + | + | ++ | +++ | ++ | + | + | ++ | +++ | ++ | + | + | ++ | +++ | ++ | + | + | ++ | +++ | |
| 2x2m fish counting | | No. of fish | | 6 | 20 | 60 | 20 | 10 | 16 | 40 | 70 | 40 | 30 | 60 | 70 | 80 | 90 | 80 | 40 | 50 | 60 | 60 | 50 | 20 | 30 | 30 | 20 | 20 |
| No. of species | | | | 14 | 10 | 13 | 11 | 6 | 14 | 10 | 15 | 11 | 7 | 15 | 11 | 16 | 14 | 11 | 11 | 12 | 16 | 14 | 12 | 13 | 13 | 13 | 12 | 11 |
| Amphibian | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Paramesotriton hongkongensis</i> | 香港瘰螈 | P (Cap 170, NT, PGC) | R | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| <i>Fejervarya limnocharis</i> | 澤蛙 | NP | VC | | | | | | | | | | | | | | | | | | | | | | | | | |
| No. of species | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |

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Table 4.6 Fish species and amphibians at Upper Lam Tsuen River

(T1- located at upper river channel sampling site to T4 - located at lower river Channel sampling site)

| Species | Chinese name | Status | Sampling point | Post construction monitoring | | | | | Post construction monitoring | | | | | Post construction monitoring | | | | | Post construction monitoring | | | | | |
|---------------------------------------------|--------------|----------------------|----------------|------------------------------|----|----|----|----|------------------------------|----|----|----|----|------------------------------|----|----|----|----|------------------------------|----|----|----|----|---|
| | | | | Jun-14 | | | | | Jul-14 | | | | | Aug-14 | | | | | Sep-14 | | | | | |
| | | | | Reference | T1 | T2 | T3 | T4 | Reference | T1 | T2 | T3 | T4 | Reference | T1 | T2 | T3 | T4 | Reference | T1 | T2 | T3 | T4 | |
| Fish | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Acrossocheilus parallens</i> | 側條光唇魚 | P, PGC | R | | + | + | + | + | | + | ++ | ++ | + | | ++ | ++ | ++ | + | | ++ | ++ | ++ | + | |
| <i>Channa maculate</i> | 斑鱧 | NP | C | | | | | | | | | | | | | | | | | | | | | |
| <i>Cirrhina molitorella</i> | 鯪魚 | NP | C | | | | | | | | | | | | | | | | | | | | | |
| <i>Clarias fuscus</i> | 胡子鯰 | NP | C | | | | | + | | | | | + | | | | | | | | | | + | |
| <i>Cyprinus carpio var. viridiviolaceus</i> | 錦鯉 | NP | C | | | | | | | | | | | | | | | | | | | | | |
| <i>Gambusia affinis</i> | 食蚊魚 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Liniparhomaloptera disparis</i> | 擬平鰈 | NP | C | + | + | + | | | + | + | + | | | + | + | + | | | + | + | + | | | |
| <i>Misgurnus anguillicaudatus</i> | 泥鰌 | NP | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Oreochromis niloticus</i> | 尼羅口鯪非鯽 | NP | C | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Parazacco spilurus</i> | 異鰾 | V and | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Poecilia reticulata</i> | 孔雀石魚將 | NP | VC | | | + | | + | | | | + | | | + | | + | | | + | | + | + | |
| <i>Pseudogastromyzon myersi</i> | 麥氏擬腹吸鰈 | NP | C | + | + | | | | + | + | | | | + | + | + | | | + | + | + | | | |
| <i>Prerocryptis cochinchinensis</i> | 黃鯪 | NP | C | + | | | | | + | | | + | | + | | + | | | + | + | + | | | |
| <i>Puntius semifasciolatus</i> | 七星魚 | NP | C | + | + | + | + | + | + | + | + | + | + | + | + | ++ | ++ | + | + | + | + | ++ | ++ | + |
| <i>Rhinogobius spp.</i> | 鰕虎魚 | NP | C/UN/R | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Schistura fasciolata</i> | 橫紋南鰈 | NP | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Xiphophorus hellerii</i> | 劍尾魚 | NP | C | | + | + | + | + | | + | + | + | + | | + | ++ | ++ | + | | + | ++ | ++ | + | |
| <i>Xiphophorus variatus</i> | 雜色劍尾魚 | NP | C | | | + | + | | | + | + | | | | | + | | | | | | + | + | |
| <i>Zacco platypus</i> | 寬鰭鱈 | NP | C | + | + | + | + | + | + | + | + | + | + | + | ++ | ++ | + | + | + | + | ++ | ++ | + | + |
| 2x2m fish counting | | No. of fish | | 6 | 12 | 10 | 6 | 8 | 8 | 16 | 15 | 5 | 10 | 10 | 12 | 18 | 10 | 12 | 20 | 30 | 30 | 20 | 20 | |
| No. of species | | | | 10 | 12 | 13 | 11 | 11 | 11 | 12 | 13 | 12 | 11 | 10 | 12 | 13 | 13 | 11 | 11 | 13 | 14 | 15 | 13 | |
| Amphibian | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Paramesotriton hongkongensis</i> | 香港瘰螈 | P (Cap 170, NT, PGC) | R | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Fejervarya limnocharis</i> | 澤蛙 | NP | VC | | | | | | | | | | | | | | | | | | | | | |
| No. of species | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |

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Table 4.6 Fish species and amphibians at Upper Lam Tsuen River

(T1- located at upper river channel sampling site to T4 - located at lower river Channel sampling site)

| Species | Chinese name | Status | Sampling point | Post construction monitoring | | | | | Post construction monitoring | | | | | Post construction monitoring | | | | | Post construction monitoring | | | | |
|---------------------------------------------|--------------|----------------------|----------------|------------------------------|----|----|----|----|------------------------------|----|----|----|----|------------------------------|----|----|----|----|------------------------------|----|----|----|----|
| | | | | Oct-14 | | | | | Nov-14 | | | | | Dec-14 | | | | | Jan-15 | | | | |
| | | | | Reference | T1 | T2 | T3 | T4 | Reference | T1 | T2 | T3 | T4 | Reference | T1 | T2 | T3 | T4 | Reference | T1 | T2 | T3 | T4 |
| Fish | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Acrossocheilus parallens</i> | 側條光唇魚 | P, PGC | R | | ++ | ++ | ++ | + | | ++ | ++ | ++ | ++ | | ++ | ++ | ++ | ++ | | ++ | ++ | ++ | ++ |
| <i>Channa maculate</i> | 斑鱧 | NP | C | | | | | | | | | | | | | | | | | | | | |
| <i>Cirrhina molitorella</i> | 鯪魚 | NP | C | | | | | | | | | | | | | | | | | | | | |
| <i>Clarias fuscus</i> | 胡子鯪 | NP | C | | | | | + | | | | | + | | | | | + | | | | | + |
| <i>Cyprinus carpio var. viridiviolaceus</i> | 錦鯉 | NP | C | | | | | | | | | | | | | | | | | | | | |
| <i>Gambusia affinis</i> | 食蚊魚 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Liniparhomaloptera disparis</i> | 擬平鰈 | NP | C | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Misgurnus anguillicaudatus</i> | 泥鰌 | NP | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Oreochromis niloticus</i> | 尼羅口鯪非鯽 | NP | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Parazacco spilurus</i> | 異鰈 | V and | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Poecilia reticulata</i> | 孔雀石魚將 | NP | VC | | + | + | + | + | | + | + | + | + | | + | + | + | + | | + | + | + | + |
| <i>Pseudogastromyzon myersi</i> | 麥氏擬腹吸鰈 | NP | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Prerocypris cochinchinensis</i> | 黃鯪 | NP | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Puntius semifasciolatus</i> | 七星魚 | NP | C | + | + | ++ | ++ | + | + | + | ++ | ++ | + | + | + | ++ | ++ | + | + | + | ++ | ++ | + |
| <i>Rhinogobius spp.</i> | 鰻虎魚 | NP | C/UN/R | + | + | + | + | + | + | ++ | ++ | ++ | + | + | ++ | ++ | ++ | + | + | ++ | ++ | ++ | ++ |
| <i>Schistura fasciolata</i> | 橫紋南鰈 | NP | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Xiphophorus hellerii</i> | 劍尾魚 | NP | C | | + | ++ | ++ | + | | + | ++ | ++ | + | | + | ++ | ++ | + | | + | ++ | ++ | + |
| <i>Xiphophorus variatus</i> | 雜色劍尾魚 | NP | C | | | | + | + | | | | + | + | | | | + | + | | | | + | + |
| <i>Zacco platypus</i> | 寬鰭鱮 | NP | C | + | ++ | ++ | + | + | + | ++ | ++ | + | + | + | ++ | ++ | + | + | + | ++ | ++ | + | + |
| 2x2m fish counting | | No. of fish | | 30 | 40 | 40 | 30 | 30 | 50 | 70 | 70 | 60 | 60 | 60 | 60 | 60 | 50 | 50 | 50 | 50 | 60 | 60 | 60 |
| No. of species | | | | 11 | 13 | 14 | 15 | 12 | 11 | 13 | 14 | 13 | 11 | 11 | 13 | 14 | 14 | 11 | 10 | 11 | 12 | 13 | 10 |
| Amphibian | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Paramesotriton hongkongensis</i> | 香港瘰螈 | P (Cap 170, NT, PGC) | R | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Fejervarya limnocharis</i> | 澤蛙 | NP | VC | | | | | | | | | | | | | | | | | | | | |
| No. of species | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

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|---------------------------------------------|--------------|----------------------|----------------|------------------------------|----|----|----|----|------------------------------|----|----|----|----|------------------------------|----|----|----|----|------------------------------|----|----|----|----|
| | | | | Reference | T1 | T2 | T3 | T4 | Reference | T1 | T2 | T3 | T4 | Reference | T1 | T2 | T3 | T4 | Reference | T1 | T2 | T3 | T4 |
| Species | Chinese name | Status | Commonnes | | | | | | | | | | | | | | | | | | | | |
| Fish | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Acrossocheilus parallens</i> | 側條光唇魚 | P, PGC | R | | ++ | ++ | ++ | ++ | | ++ | ++ | ++ | ++ | | ++ | ++ | ++ | ++ | | + | + | ++ | ++ |
| <i>Channa maculate</i> | 斑鱧 | NP | C | | | | | | | | | | | | | | | | | | | | + |
| <i>Cirrhina molitorella</i> | 鯪魚 | NP | C | | | | | | | | | | | | | | | | | | | | |
| <i>Clarias fuscus</i> | 胡子鯪 | NP | C | | | | | + | | | | | + | | | | | + | | | | | + |
| <i>Cyprinus carpio var. viridiviolaceus</i> | 錦鯉 | NP | C | | | | | | | | | | | | | | | | | | | + | |
| <i>Gambusia affinis</i> | 食蚊魚 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Liniparhomaloptera disparis</i> | 擬平鰼 | NP | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Misgurnus anguillicaudatus</i> | 泥鰱 | NP | C | + | | | | + | + | + | | | + | + | + | + | + | + | + | + | + | + | + |
| <i>Oreochromis niloticus</i> | 尼羅口鯪非鯡 | NP | C | | + | + | + | + | | + | + | + | + | | + | + | + | + | | + | + | + | + |
| <i>Parazacco spilurus</i> | 異鰼 | V and | C | + | + | + | + | + | + | + | ++ | + | + | + | + | ++ | + | + | + | + | + | + | + |
| <i>Poecilia reticulata</i> | 孔雀石魚將 | NP | VC | | | | + | | | | + | + | | | | + | + | | | | + | + | |
| <i>Pseudogastromyzon myersi</i> | 麥氏擬腹吸鰼 | NP | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| <i>Prerocypris cochinchinensis</i> | 黃鯪 | NP | C | + | | + | + | | + | + | + | + | | + | + | + | + | | + | | | | |
| <i>Puntius semifasciolatus</i> | 七星魚 | NP | C | + | + | ++ | ++ | + | + | + | ++ | ++ | + | + | + | ++ | ++ | + | + | + | ++ | ++ | + |
| <i>Rhinogobius spp.</i> | 鰓虎魚 | NP | C/UN/R | + | ++ | ++ | ++ | ++ | + | ++ | ++ | ++ | ++ | + | ++ | ++ | ++ | ++ | + | ++ | ++ | ++ | ++ |
| <i>Schistura fasciolata</i> | 橫紋南鰼 | NP | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Xiphophorus hellerii</i> | 劍尾魚 | NP | C | | + | ++ | ++ | + | | + | ++ | ++ | + | | + | ++ | ++ | + | | + | ++ | ++ | + |
| <i>Xiphophorus variatus</i> | 雜色劍尾魚 | NP | C | | | | + | | | | | + | | | | | + | | | | | + | |
| <i>Zacco platypus</i> | 寬鰭鰼 | NP | C | + | ++ | ++ | ++ | + | + | ++ | ++ | ++ | + | + | ++ | ++ | ++ | + | + | ++ | ++ | ++ | + |
| 2x2m fish counting | | No. of fish | | 50 | 60 | 60 | 60 | 40 | 50 | 60 | 60 | 60 | 40 | 40 | 50 | 55 | 50 | 40 | 20 | 30 | 30 | 20 | 20 |
| No. of species | | | | 10 | 11 | 12 | 14 | 10 | 10 | 13 | 13 | 14 | 11 | 13 | 12 | 14 | 15 | 11 | 13 | 12 | 14 | 12 | 13 |
| Amphibian | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Paramesotriton hongkongensis</i> | 香港瘰螈 | P (Cap 170, NT, PGC) | R | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Fejervarya limnocharis</i> | 澤蛙 | NP | VC | | | | | | | | | | | | | | | | | | | | |
| No. of species | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

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| | | | | Jun-15 | | | | | Jul-15 | | | | | Aug-15 | | | | | Sep-15 | | | | | | |
| | | | | Reference | T1 | T2 | T3 | T4 | Reference | T1 | T2 | T3 | T4 | Reference | T1 | T2 | T3 | T4 | Reference | T1 | T2 | T3 | T4 | | |
| Fish | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Acrossocheilus parallens</i> | 側條光唇魚 | P, PGC | R | | + | + | ++ | ++ | | + | + | + | + | | + | + | + | + | | | + | + | + | | |
| <i>Channa maculate</i> | 斑鱧 | NP | C | | | | | + | | | | | | + | | | | | | | | | + | | |
| <i>Cirrhina molitorella</i> | 鱮魚 | NP | C | | | | | | | | | | | | | | | | | | | | | | |
| <i>Clarias fuscus</i> | 胡子鯰 | NP | C | | | | | + | | | | | | + | | | | | | | | | | + | |
| <i>Cyprinus carpio var. viridiviolaceus</i> | 錦鯉 | NP | C | | | | | + | | | | + | | | | | | | | | | | | + | |
| <i>Gambusia affinis</i> | 食蚊魚 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Liniparhomaloptera disparis</i> | 擬平鰈 | NP | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Misgurnus anguillicaudatus</i> | 泥鰌 | NP | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Oreochromis niloticus</i> | 尼羅口鯪非鯪 | NP | C | + | + | ++ | ++ | + | + | + | ++ | ++ | ++ | ++ | + | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ |
| <i>Parazacco spilurus</i> | 異鰻 | V and | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Poecilia reticulata</i> | 孔雀石魚將 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
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| <i>Prerocryptis cochinchinensis</i> | 黃鰷 | NP | C | + | | | | | | + | | | | | + | | | | | | + | | | | |
| <i>Puntius semifasciolatus</i> | 七星魚 | NP | C | + | + | ++ | ++ | + | + | + | ++ | ++ | + | + | + | ++ | ++ | + | + | + | ++ | ++ | ++ | + | |
| <i>Rhinogobius spp.</i> | 鰕虎魚 | NP | C/UN/R | + | ++ | ++ | ++ | ++ | + | + | ++ | ++ | ++ | ++ | + | ++ | ++ | ++ | ++ | + | ++ | ++ | ++ | ++ | |
| <i>Schistura fasciolata</i> | 橫紋南鰈 | NP | C | + | + | + | | | | + | ++ | ++ | | | + | ++ | ++ | | | + | ++ | ++ | | | |
| <i>Xiphophorus hellerii</i> | 劍尾魚 | NP | C | + | + | ++ | + | + | + | + | + | ++ | + | + | + | + | ++ | + | + | + | + | ++ | + | + | |
| <i>Xiphophorus variatus</i> | 雜色劍尾魚 | NP | C | + | | + | + | | | + | | + | + | | + | | + | + | | + | | + | + | | |
| <i>Zacco platypus</i> | 寬鰭鱮 | NP | C | + | ++ | ++ | + | + | + | + | ++ | ++ | + | + | + | ++ | ++ | + | + | + | + | ++ | ++ | + | |
| 2x2m fish counting | | No. of fish | | 20 | 30 | 30 | 20 | 20 | 12 | 15 | 18 | 8 | 7 | 15 | 12 | 16 | 10 | 10 | 18 | 15 | 20 | 15 | 15 | | |
| No. of species | | | | 12 | 13 | 13 | 13 | 12 | 12 | 12 | 13 | 13 | 12 | 12 | 12 | 13 | 13 | 12 | 12 | 10 | 13 | 13 | 12 | | |
| Amphibian | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Paramesotriton hongkongensis</i> | 香港瘰螈 | P (Cap 170, NT, PGC) | R | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| <i>Fejervarya limmocharis</i> | 澤蛙 | NP | VC | | | | | | | | | | | | | | | | | | | | | | |
| No. of species | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | |

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Table 4.6 Fish species and amphibians at Upper Lam Tsuen River

(T1- located at upper river channel sampling site to T4 - located at lower river Channel sampling site)

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|---------------------------------------------|--------------|----------------------|----------------|------------------------------|----|----|----|----|------------------------------|----|----|----|----|------------------------------|----|----|----|----|------------------------------|----|----|----|----|------------------------------|----|----|----|----|
| | | | | Oct-15 | | | | | Nov-15 | | | | | Dec-15 | | | | | Jan-16 | | | | | Feb-16 | | | | |
| | | | | Reference | T1 | T2 | T3 | T4 | Reference | T1 | T2 | T3 | T4 | Reference | T1 | T2 | T3 | T4 | Reference | T1 | T2 | T3 | T4 | Reference | T1 | T2 | T3 | T4 |
| Fish | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Acrossocheilus parallens</i> | 側條光唇魚 | P, PGC | R | | | + | + | + | | | | | | | | | | | | | | | | | | | | |
| <i>Channa maculate</i> | 斑鱧 | NP | C | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Cirrhina molitorella</i> | 鯪魚 | NP | C | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Clarias fuscus</i> | 胡子鯰 | NP | C | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Cyprinus carpio var. viridiviolaceus</i> | 錦鯉 | NP | C | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Gambusia affinis</i> | 食蚊魚 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| <i>Liniparhomaloptera disparis</i> | 擬平鰈 | NP | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| <i>Misgurnus anguillicaudatus</i> | 泥鰌 | NP | C | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Oreochromis niloticus</i> | 尼羅口鯪非鯪 | NP | C | + | + | ++ | ++ | ++ | + | + | + | ++ | ++ | ++ | + | + | + | ++ | ++ | ++ | + | + | + | ++ | ++ | ++ | | |
| <i>Parazacco spilurus</i> | 異鰾 | V and | C | + | | + | + | + | + | + | | + | + | + | + | + | | + | + | + | + | | + | + | + | | | |
| <i>Poecilia reticulata</i> | 孔雀石魚將 | NP | VC | | | + | + | + | | | | + | + | + | + | | | + | + | + | | | + | + | + | | | |
| <i>Pseudogastromyzon myersi</i> | 麥氏擬腹吸鰈 | NP | C | + | + | | | | | | | + | + | | | | | + | + | | | | + | + | | | | |
| <i>Prerocryptis cochinchinensis</i> | 黃鰱 | NP | C | + | | | | | | | | + | | | | | | + | | | | | + | | | | | |
| <i>Puntius semifasciolatus</i> | 七星魚 | NP | C | + | + | ++ | ++ | + | + | + | ++ | ++ | + | + | + | ++ | ++ | + | + | + | ++ | ++ | + | + | ++ | ++ | | |
| <i>Rhinogobius spp.</i> | 鰻虎魚 | NP | C/UN/R | + | ++ | ++ | ++ | ++ | + | ++ | ++ | ++ | ++ | + | ++ | ++ | ++ | ++ | + | ++ | ++ | ++ | ++ | + | ++ | ++ | | |
| <i>Schistura fasciolata</i> | 縐紋南鰈 | NP | C | + | ++ | ++ | + | + | + | ++ | ++ | + | + | + | ++ | ++ | + | + | + | ++ | ++ | + | + | ++ | ++ | + | | |
| <i>Xiphophorus hellerii</i> | 劍尾魚 | NP | C | + | + | ++ | + | + | + | ++ | ++ | + | + | + | ++ | ++ | + | + | + | ++ | ++ | + | + | ++ | ++ | + | | |
| <i>Xiphophorus variatus</i> | 雜色劍尾魚 | NP | C | | | + | + | | | | | + | + | | | | | + | + | | | | + | + | | | | |
| <i>Zacco platypus</i> | 寬鰾鰻 | NP | C | + | + | ++ | ++ | + | + | + | ++ | ++ | + | + | + | ++ | ++ | + | + | + | ++ | ++ | + | + | ++ | ++ | | |
| 2x2m fish counting | | No. of fish | | 25 | 20 | 22 | 18 | 20 | 40 | 35 | 40 | 35 | 40 | 55 | 40 | 45 | 45 | 40 | 60 | 50 | 50 | 50 | 40 | 65 | 55 | 55 | 40 | |
| No. of species | | | | 12 | 10 | 13 | 13 | 12 | 12 | 10 | 13 | 13 | 12 | 12 | 10 | 13 | 12 | 12 | 12 | 10 | 14 | 13 | 10 | 12 | 10 | 14 | 13 | 10 |
| Amphibian | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Paramesotriton hongkongensis</i> | 香港瘰螈 | P (Cap 170, NT, PGC) | R | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| <i>Fejervarya limnocharis</i> | 澤蛙 | NP | VC | | | | | | | | | | | | | | | | | | | | | | | | | |
| No. of species | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | |

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(T1- located at upper river channel sampling site to T4 - located at lower river Channel sampling site)

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|---------------------------------------------|--------------|----------------------|----------------|------------------------------|----|----|----|----|------------------------------|----|----|----|----|------------------------------|----|----|----|----|------------------------------|----|----|----|----|------------------------------|----|----|----|----|
| | | | | Mar-16 | | | | | Apr-16 | | | | | May-16 | | | | | Jun-16 | | | | | Jul-16 | | | | |
| | | | | Reference | T1 | T2 | T3 | T4 | Reference | T1 | T2 | T3 | T4 | Reference | T1 | T2 | T3 | T4 | Reference | T1 | T2 | T3 | T4 | Reference | T1 | T2 | T3 | T4 |
| Fish | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Acrossocheilus parallens</i> | 側條光唇魚 | P, PGC | R | | | + | + | ++ | | | | + | + | ++ | | | | + | + | ++ | | | | | + | + | ++ | |
| <i>Channa maculate</i> | 斑鱧 | NP | C | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Cirrhina molitorella</i> | 鯪魚 | NP | C | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Clarias fuscus</i> | 胡子鯪 | NP | C | | | | + | | | | | | | + | | | | | | + | | | | | | | + | |
| <i>Cyprinus carpio var. viridiviolaceus</i> | 錦鯉 | NP | C | | | | + | | | | | | | + | | | | | | + | | | | | | | + | |
| <i>Gambusia affinis</i> | 食蚊魚 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Liniparhomaloptera disparis</i> | 擬平鰈 | NP | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Misgurnus anguillicaudatus</i> | 泥鰌 | NP | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Oreochromis niloticus</i> | 尼羅口鯪非鯪 | NP | C | + | + | ++ | ++ | ++ | + | + | + | ++ | ++ | ++ | + | + | + | ++ | ++ | ++ | + | + | + | ++ | ++ | ++ | ++ | ++ |
| <i>Parazacco spilurus</i> | 異鰾 | V and | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Poecilia reticulata</i> | 孔雀石魚將 | NP | VC | | | + | + | + | | | | + | + | + | | | | + | + | + | | | | + | + | + | + | + |
| <i>Pseudogastromyzon myersi</i> | 麥氏擬腹吸鰈 | NP | C | + | + | | | | | + | + | | | | | + | + | | | | | | | + | + | | | |
| <i>Perocryptis cochinchinensis</i> | 黃鯪 | NP | C | + | | | | | | + | | | | | | + | | | | | | | | + | | | | |
| <i>Puntius semifasciolatus</i> | 七星魚 | NP | C | + | + | ++ | ++ | + | + | + | ++ | ++ | + | + | + | ++ | ++ | + | + | + | ++ | ++ | + | + | + | ++ | ++ | + |
| <i>Rhinogobius spp.</i> | 鰕虎魚 | NP | C/UN/R | + | ++ | ++ | ++ | ++ | + | ++ | ++ | ++ | ++ | + | ++ | ++ | ++ | ++ | + | ++ | ++ | ++ | ++ | + | ++ | ++ | ++ | ++ |
| <i>Schistura fasciolata</i> | 橫紋南鰈 | NP | C | + | ++ | ++ | | | | + | ++ | ++ | | | | + | ++ | ++ | | | | + | ++ | ++ | | | | |
| <i>Xiphophorus hellerii</i> | 劍尾魚 | NP | C | + | + | ++ | + | + | + | + | ++ | + | + | + | + | + | ++ | + | + | + | + | + | + | + | + | + | + | + |
| <i>Xiphophorus variatus</i> | 雜色劍尾魚 | NP | C | | | + | + | | | | + | + | | | | + | + | | | | + | + | | | + | + | + | |
| <i>Zacco platypus</i> | 寬鰭鱈 | NP | C | + | + | ++ | ++ | ++ | + | + | ++ | ++ | ++ | + | + | ++ | ++ | ++ | + | + | ++ | ++ | ++ | + | + | ++ | ++ | ++ |
| 2x2m fish counting | | No. of fish | | 60 | 60 | 60 | 55 | 40 | 45 | 45 | 45 | 40 | 30 | 45 | 25 | 25 | 20 | 15 | 40 | 30 | 25 | 25 | 20 | 30 | 20 | 15 | 20 | 25 |
| No. of species | | | | 12 | 10 | 14 | 13 | 10 | 12 | 10 | 14 | 13 | 10 | 12 | 10 | 14 | 13 | 10 | 12 | 10 | 14 | 13 | 10 | 12 | 10 | 14 | 13 | 10 |
| Amphibian | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Paramesotriton hongkongensis</i> | 香港瘰螈 | P (Cap 170, NT, PGC) | R | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Fejervarya limnocharis</i> | 澤蛙 | NP | VC | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | | | Aug-16 | | | | | Sep-16 | | | | | Oct-16 | | | | | Nov-16 | | | | | |
| | | | | Reference | T1 | T2 | T3 | T4 | Reference | T1 | T2 | T3 | T4 | Reference | T1 | T2 | T3 | T4 | Reference | T1 | T2 | T3 | T4 | |
| Fish | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Acrossocheilus parallens</i> | 側條光唇魚 | P, PGC | R | | | + | + | ++ | | | + | + | ++ | | | + | + | ++ | | | + | + | ++ | |
| <i>Channa maculate</i> | 斑鱧 | NP | C | | | | | | | | | | | | | | | | | | | | | |
| <i>Cirrhina molitorella</i> | 鯪魚 | NP | C | | | | | | | | | | | | | | | | | | | | | |
| <i>Clarias fuscus</i> | 胡子鯪 | NP | C | | | | + | | | | | | + | | | | | + | | | | + | | |
| <i>Cyprinus carpio var. viridiviolaceus</i> | 錦鯉 | NP | C | | | | + | | | | | | + | | | | | + | | | | + | | |
| <i>Gambusia affinis</i> | 食蚊魚 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Liniparhomaloptera disparis</i> | 擬平鰈 | NP | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Misgurnus anguillicaudatus</i> | 泥鰌 | NP | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Oreochromis niloticus</i> | 尼羅口鯪非鯽 | NP | C | + | + | ++ | ++ | ++ | + | + | + | ++ | ++ | ++ | + | + | ++ | ++ | ++ | + | + | ++ | ++ | ++ |
| <i>Parazacco spilurus</i> | 異鰮 | V and | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Poecilia reticulata</i> | 孔雀石魚將 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Pseudogastromyzon myersi</i> | 麥氏擬腹吸鰈 | NP | C | + | + | | | | | + | + | | | | | + | + | | | | + | + | | |
| <i>Prerocryptis cochinchinensis</i> | 黃鯪 | NP | C | + | | | | | | + | | | | | | + | | | | | + | | | |
| <i>Puntius semifasciolatus</i> | 七星魚 | NP | C | + | + | ++ | ++ | + | + | + | ++ | ++ | + | + | + | ++ | ++ | + | + | + | ++ | ++ | + | |
| <i>Rhinogobius spp.</i> | 鰓虎魚 | NP | C/UN/R | + | ++ | ++ | ++ | ++ | + | + | ++ | ++ | ++ | ++ | + | ++ | ++ | ++ | ++ | + | ++ | ++ | ++ | |
| <i>Schistura fasciolata</i> | 橫紋南鰈 | NP | C | + | ++ | ++ | ++ | ++ | + | + | ++ | ++ | ++ | ++ | + | ++ | ++ | ++ | ++ | + | ++ | ++ | ++ | |
| <i>Xiphophorus hellerii</i> | 劍尾魚 | NP | C | + | + | ++ | + | + | + | + | ++ | + | + | + | + | ++ | + | + | + | + | ++ | + | + | |
| <i>Xiphophorus variatus</i> | 雜色劍尾魚 | NP | C | + | + | + | + | | | + | + | + | | | + | + | + | | | + | + | | | |
| <i>Zacco platypus</i> | 寬鰮鱮 | NP | C | + | + | ++ | ++ | ++ | + | + | ++ | ++ | ++ | + | + | ++ | ++ | ++ | + | + | ++ | ++ | ++ | |
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| | | | | Dec-16 | | | | | Jan-17 | | | | | Feb-17 | | | | | Mar-17 | | | | | |
| | | | | Reference | T1 | T2 | T3 | T4 | Reference | T1 | T2 | T3 | T4 | Reference | T1 | T2 | T3 | T4 | Reference | T1 | T2 | T3 | T4 | |
| Fish | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Acrossocheilus parallens</i> | 側條光唇魚 | P, PGC | R | | | + | + | ++ | | | + | + | ++ | | | + | + | ++ | | | + | + | ++ | |
| <i>Channa maculate</i> | 斑鱧 | NP | C | | | | | | | | | | | | | | | | | | | | | |
| <i>Cirrhina molitorella</i> | 鯪魚 | NP | C | | | | | | | | | | | | | | | | | | | | | |
| <i>Clarias fuscus</i> | 胡子鯰 | NP | C | | | | + | | | | | | + | | | | | | | | | + | | |
| <i>Cyprinus carpio var. viridiviolaceus</i> | 錦鯉 | NP | C | | | | + | | | | | | + | | | | | | | | | + | | |
| <i>Gambusia affinis</i> | 食蚊魚 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Liniparhomaloptera disparis</i> | 擬平鰈 | NP | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Misgurnus anguillicaudatus</i> | 泥鰌 | NP | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Oreochromis niloticus</i> | 尼羅口鯪非鯪 | NP | C | + | + | ++ | ++ | ++ | + | + | + | ++ | ++ | ++ | + | + | + | ++ | ++ | ++ | + | + | ++ | ++ |
| <i>Parazacco spilurus</i> | 異鰾 | V and | C | + | | + | + | + | + | + | | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Poecilia reticulata</i> | 孔雀石魚將 | NP | VC | + | | + | + | + | + | + | | + | + | + | + | + | + | + | + | + | + | + | + | |
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| <i>Prerocryptis cochinchinensis</i> | 黃魮 | NP | C | + | | | | | | + | | | | | | + | | | | | + | | | |
| <i>Puntius semifasciolatus</i> | 七星魚 | NP | C | + | + | ++ | ++ | + | + | + | ++ | ++ | + | + | + | ++ | ++ | + | + | + | ++ | ++ | + | |
| <i>Rhinogobius spp.</i> | 鰩虎魚 | NP | C/UN/R | + | ++ | ++ | ++ | ++ | + | + | ++ | ++ | ++ | ++ | + | + | ++ | ++ | ++ | ++ | + | ++ | ++ | ++ |
| <i>Schistura fasciolata</i> | 橫紋南鰈 | NP | C | + | ++ | ++ | + | | | + | ++ | ++ | + | | | + | ++ | ++ | + | | + | ++ | ++ | |
| <i>Xiphophorus hellerii</i> | 劍尾魚 | NP | C | + | + | ++ | + | + | + | + | ++ | + | + | + | + | + | ++ | + | + | + | + | ++ | + | |
| <i>Xiphophorus variatus</i> | 雜色劍尾魚 | NP | C | | | + | + | | | | + | + | | | | + | + | | | | + | + | | |
| <i>Zacco platypus</i> | 寬鰭鱈 | NP | C | + | + | ++ | ++ | ++ | + | + | ++ | ++ | ++ | + | + | ++ | ++ | ++ | + | + | ++ | ++ | ++ | |
| 2x2m fish counting | | No. of fish | | 45 | 40 | 40 | 35 | 35 | 50 | 45 | 45 | 35 | 35 | 55 | 50 | 50 | 40 | 40 | 60 | 55 | 55 | 50 | 50 | |
| No. of species | | | | 12 | 10 | 14 | 13 | 10 | 12 | 10 | 14 | 13 | 10 | 12 | 10 | 14 | 13 | 10 | 12 | 10 | 14 | 13 | 10 | |
| Amphibian | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Paramesotriton hongkongensis</i> | 香港瘰螈 | P (Cap 170, NT, PGC) | R | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Fejervarya limnocharis</i> | 澤蛙 | NP | VC | | | | | | | | | | | | | | | | | | | | | |
| No. of species | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |

Note: NP – Not protected in Hong Kong

“VC” – Very Common; “UC” – Uncommon; “C” – Common; “R” – Rare

+, occurred; ++, common; +++, abundant/dominant Species in the the study area

-V – Listed as vulnerable in China Fish Red Data Book

-Reference point was the sampling location outside the works area used to compare the with the data within works area.

“Cap 170” - List in Wild Animals Protection Ordinance (Cap.170)

“NT” - Near Threatened in IUCN Red List Status

“PGC”-Potential Global Concern by Fellowes *et al* (2002)

Table 4.6 Fish species and amphibians at Upper Lam Tsuen River
(T1- located at upper river channel sampling site to T4 - located at lower river Channel

| Species | Chinese name | Status | Sampling point | Post construction monitoring | | | | | Post construction monitoring | | | | | Post construction monitoring | | | | | | | | | | | |
|-------------------------------------|--------------|-----------------|----------------|------------------------------|----|----|----|----|------------------------------|----|----|----|----|------------------------------|----|----|----|----|----|----|----|----|----|----|----|
| | | | | Apr-17 | | | | | May-17 | | | | | Jun-17 | | | | | | | | | | | |
| | | | | Reference | T1 | T2 | T3 | T4 | Reference | T1 | T2 | T3 | T4 | Reference | T1 | T2 | T3 | T4 | | | | | | | |
| Fish | | | Commonness | | | | | | | | | | | | | | | | | | | | | | |
| <i>Acrossocheilus parrellens</i> | 側條光唇魚 | P, PGC | R | | + | | + | | ++ | | | + | | + | | ++ | | | + | | + | | ++ | | |
| <i>Channa maculate</i> | 斑鱧 | NP | C | | | | | | | | | | | | | | | | | | | | | | |
| <i>Cirrhina molitorella</i> | 鯪魚 | NP | C | | | | | | | | | | | | | | | | | | | | | | |
| <i>Clarias fuscus</i> | 胡子鯪 | NP | C | | | | | | | | | | | | | | | | | | | | | | |
| <i>Cyprinus carpio var.</i> | 錦鯉 | NP | C | | | | | | | | | | | | | | | | | | | | | | |
| <i>Gambusia affinis</i> | 食蚊魚 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Limparhomaloptera disparis</i> | 擬平鰕 | NP | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Misgurnus anguillicaudatus</i> | 泥鰕 | NP | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Oreochromis niloticus</i> | 尼羅口孵非鯽 | NP | C | + | + | ++ | ++ | ++ | ++ | + | + | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ |
| <i>Parazacco spilurus</i> | 異鱸 | V and NP | C | + | | + | + | + | + | + | | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Poecilota reticulata</i> | 孔雀花魚將 | NP | VC | | | + | + | + | + | | | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Pseudogastromyzon myersi</i> | 麥氏擬腹吸鰕 | NP | C | + | + | | | | | + | + | | | | | | | | | + | + | | | | |
| <i>Pterocryptis cochinchinensis</i> | 黃鰔 | NP | C | + | | | | | | + | | | | | | | | | | + | | | | | |
| <i>Puntius semifasciolatus</i> | 七星魚 | NP | C | + | + | ++ | ++ | ++ | ++ | + | + | ++ | ++ | ++ | + | + | ++ | ++ | ++ | + | + | ++ | ++ | ++ | |
| <i>Rhinogobius spp.</i> | 鰕虎魚 | NP | C/UN/R | + | ++ | ++ | ++ | ++ | ++ | + | ++ | ++ | ++ | ++ | + | ++ | ++ | ++ | ++ | + | ++ | ++ | ++ | ++ | |
| <i>Schistura fasciolata</i> | 橫紋南鰕 | NP | C | + | ++ | ++ | ++ | ++ | ++ | + | ++ | ++ | ++ | ++ | + | ++ | ++ | ++ | ++ | + | ++ | ++ | ++ | ++ | |
| <i>Xiphophorus hellerii</i> | 劍尾魚 | NP | C | + | + | ++ | + | + | + | + | + | ++ | + | + | + | + | ++ | + | + | + | + | ++ | + | + | |
| <i>Xiphophorus variatus</i> | 雜色劍尾魚 | NP | C | | | + | + | + | + | | | + | + | + | + | + | + | + | + | | | + | + | + | |
| <i>Zacco platypus</i> | 寬鰭鱈 | NP | C | + | + | ++ | ++ | ++ | ++ | + | + | ++ | ++ | ++ | + | + | ++ | ++ | ++ | + | + | ++ | ++ | ++ | |
| 2x2m fish counting | | No. of fish | | 55 | 50 | 50 | 45 | 40 | 50 | 40 | 40 | 40 | 30 | 30 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | |
| No. of species | | | | 12 | 10 | 14 | 13 | 10 | 12 | 10 | 14 | 13 | 10 | 12 | 10 | 14 | 13 | 10 | 10 | 12 | 10 | 14 | 13 | 10 | |
| Amphibian | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Paramesotriton hongkongensis</i> | 香港瘰螈 | P (Cap 170, NT, | R | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Fejervarya limnocharis</i> | 澤蛙 | NP | VC | | | | | | | | | | | | | | | | | | | | | | |
| No. of species | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |

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“VC” – Very Common; “UC” – Uncommon; “C” - Common; “R” - Rare

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Table 4.6 Fish species and amphibians at Upper Lam Tsuen River
(T1- located at upper river channel sampling site to T4 - located at lower river Channel

| Species | Chinese name | Status | Sampling point | Post construction monitoring | | | | | Post construction monitoring | | | | | Post construction monitoring | | | | |
|-------------------------------------|--------------|-----------------|----------------|------------------------------|----|----|----|----|------------------------------|----|----|----|----|------------------------------|----|----|----|----|
| | | | | Jul-17 | | | | | Aug-17 | | | | | Sep-17 | | | | |
| | | | | Reference | T1 | T2 | T3 | T4 | Reference | T1 | T2 | T3 | T4 | Reference | T1 | T2 | T3 | T4 |
| Fish | | | Commonness | | | | | | | | | | | | | | | |
| <i>Acrossocheilus parrellens</i> | 側條光唇魚 | P, PGC | R | | | + | + | ++ | | | + | + | ++ | | | + | + | ++ |
| <i>Channa maculate</i> | 斑鱧 | NP | C | | | | | | | | | | | | | | | |
| <i>Cirrhina molitorella</i> | 鱧魚 | NP | C | | | | | | | | | | | | | | + | ++ |
| <i>Clarias fuscus</i> | 胡子鯰 | NP | C | | | | | + | | | | | + | | | | | + |
| <i>Cyprinus carpio var.</i> | 錦鯉 | NP | C | | | + | | | | | | + | | | | + | | |
| <i>Gambusia affinis</i> | 食蚊魚 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Limparhomaloptera disparis</i> | 擬平鰕 | NP | C | + | + | + | + | | + | + | + | + | | + | + | + | + | |
| <i>Misgurnus anguillicaudatus</i> | 泥鰕 | NP | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Oreochromis niloticus</i> | 尼羅口孵非鯽 | NP | C | + | + | ++ | ++ | ++ | + | + | ++ | ++ | ++ | + | + | ++ | ++ | ++ |
| <i>Parazacco spilurus</i> | 異鱸 | V and NP | C | + | | + | + | + | + | | + | + | + | + | | + | + | + |
| <i>Poecilia reticulata</i> | 孔雀花魚將 | NP | VC | | | + | + | + | | | + | + | + | | | + | + | + |
| <i>Pseudogastromyzon myersi</i> | 麥氏擬腹吸鰕 | NP | C | + | + | | | | + | + | | | | + | + | | | |
| <i>Pterocryptis cochinchinensis</i> | 黃鯰 | NP | C | + | | | | | + | | | | | + | | | | |
| <i>Puntius semifasciolatus</i> | 七星魚 | NP | C | + | + | ++ | ++ | + | + | + | ++ | ++ | + | + | + | ++ | ++ | + |
| <i>Rhinogobius spp.</i> | 鰕虎魚 | NP | C/UN/R | + | ++ | ++ | ++ | ++ | + | ++ | ++ | ++ | ++ | + | ++ | ++ | ++ | ++ |
| <i>Schistura fasciolata</i> | 橫紋南鰕 | NP | C | + | ++ | ++ | | | + | ++ | ++ | | | + | ++ | ++ | | |
| <i>Xiphophorus hellerii</i> | 劍尾魚 | NP | C | + | + | ++ | + | + | + | + | ++ | + | + | + | + | ++ | + | + |
| <i>Xiphophorus variatus</i> | 雜色劍尾魚 | NP | C | | | + | + | | | | + | + | | | + | + | | |
| <i>Zacco platypus</i> | 寬鰭鱈 | NP | C | + | + | ++ | ++ | ++ | + | + | ++ | ++ | ++ | + | + | ++ | ++ | ++ |
| 2x2m fish counting | | No. of fish | | 20 | 15 | 15 | 15 | 20 | 20 | 20 | 20 | 20 | 25 | 30 | 30 | 30 | 25 | 25 |
| No. of species | | | | 12 | 10 | 14 | 13 | 10 | 12 | 10 | 14 | 13 | 10 | 12 | 10 | 14 | 14 | 11 |
| Amphibian | | | | | | | | | | | | | | | | | | |
| <i>Paramesotriton hongkongensis</i> | 香港瘰螈 | P (Cap 170, NT, | R | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Fejervarya limnocharis</i> | 澤蛙 | NP | VC | | | | | | | | | | | | | | | |
| No. of species | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

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Table 4.6 Fish species and amphibians at Upper Lam Tsuen River
(T1- located at upper river channel sampling site to T4 - located at lower river Channel

| Species | Chinese name | Status | Sampling point Commonness | Post construction monitoring | | | | |
|-------------------------------------|--------------|-----------------|------------------------------|------------------------------|----|----|----|----|
| | | | | Oct-17 | | | | |
| | | | | Reference | T1 | T2 | T3 | T4 |
| Fish | | | | | | | | |
| <i>Acrossocheilus parallens</i> | 側條光唇魚 | P, PGC | R | | | + | + | ++ |
| <i>Channa maculate</i> | 斑鱧 | NP | C | | | | | |
| <i>Cirrhina molitorella</i> | 鱧魚 | NP | C | | | | + | ++ |
| <i>Clarias fuscus</i> | 胡子鯰 | NP | C | | | | + | |
| <i>Cyprinus carpio var.</i> | 錦鯉 | NP | C | | | + | | |
| <i>Gambusia affinis</i> | 食蚊魚 | NP | VC | + | + | + | + | + |
| <i>Limiparhomaloptera disparis</i> | 擬平鰕 | NP | C | + | + | + | + | |
| <i>Misgurnus anguillicaudatus</i> | 泥鰕 | NP | C | + | + | + | + | + |
| <i>Oreochromis niloticus</i> | 尼羅口孵非鯽 | NP | C | + | + | ++ | ++ | ++ |
| <i>Parazacco spilurus</i> | 異鱺 | V and NP | C | + | | + | + | + |
| <i>Poecilia reticulata</i> | 孔雀花魚將 | NP | VC | | | + | + | + |
| <i>Pseudogastromyzon myersi</i> | 麥氏擬腹吸鰕 | NP | C | + | + | | | |
| <i>Pterocryptis cochinchinensis</i> | 黃鯰 | NP | C | + | | | | |
| <i>Puntius semifasciolatus</i> | 七星魚 | NP | C | + | + | ++ | ++ | + |
| <i>Rhinogobius spp.</i> | 鰕虎魚 | NP | C/UN/R | + | ++ | ++ | ++ | ++ |
| <i>Schistura fasciolata</i> | 橫紋南鰕 | NP | C | + | ++ | ++ | | |
| <i>Xiphophorus hellerii</i> | 劍尾魚 | NP | C | + | + | ++ | + | + |
| <i>Xiphophorus variatus</i> | 雜色劍尾魚 | NP | C | | | + | + | |
| <i>Zacco platypus</i> | 寬鰭鱺 | NP | C | + | + | ++ | ++ | ++ |
| 2x2m fish counting | | No. of fish | | 35 | 35 | 35 | 25 | 25 |
| No. of species | | | | 12 | 10 | 14 | 14 | 11 |
| Amphibian | | | | | | | | |
| <i>Paramesotriton hongkongensis</i> | 香港瘰螈 | P (Cap 170, NT, | R | + | + | + | + | + |
| <i>Fejervarya limnocharis</i> | 澤蛙 | NP | VC | | | | | |
| No. of species | | | | 1 | 1 | 1 | 1 | 1 |

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“VC” – Very Common; “UC” – Uncommon; “C” - Common; “R” - Rare

+, occurred; ++, common; +++, abundant/dominant Species in the the study area

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"PGC"-Potential Global Concern by Fellowes *et al* (2002)

Table 4.7 Abotic data for Upper Lam Tsuen River

(T1- located at upper river channel sampling site
to T4 - located at lower river Channel sampling
site)

| Parameter / date | Baseline monitoring | Impact monitoring | | | | Impact monitoring | | | | Impact monitoring | | | | Impact monitoring | | | |
|-----------------------------------|---------------------|----------------------|------|------|------|-------------------|------|------|------|-------------------|------|------|------|-------------------|-----|-----|-----|
| | 8-Aug | Jan-09 | | | | Jul-09 | | | | Jan-10 | | | | Jul-10 | | | |
| | | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 |
| Replicate | | | | | | | | | | | | | | | | | |
| DO (mg/L) | 9.2 | 9.8 | 9.9 | 9.4 | 9.1 | 6.4 | 6.4 | 6.5 | 6.8 | 9.7 | 9.5 | 9.5 | 9.3 | 8.3 | 8.5 | 8.5 | 8.7 |
| pH | 7.49 | 7.24 | 7.36 | 7.53 | 7.44 | 7.1 | 7.25 | 7 | 7.05 | 7.9 | 8.1 | 8.1 | 8.2 | 7.4 | 7.5 | 7.3 | 7.4 |
| Nitrate (mg N/L) | 0.36 | 0.79 | 1.1 | 1.2 | 1.2 | 0.31 | 0.48 | 0.48 | 0.59 | 0.56 | 1.11 | 1.13 | 1.33 | 0.1 | 0.2 | 0.2 | 0.3 |
| Ammonia (mg/L) | <0.01 | PO4-P (µg P/L): <100 | | | | 0.02 | 0.02 | 0.02 | 0.03 | 0.01 | 0.16 | 0.17 | 0.07 | 0.2 | 0.4 | 0.2 | 0.2 |
| Salinity (ppt) | <0.1 | <0.1 | 0.1 | 0.1 | 0.1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Conductivity (µS/cm) | 60 | 80 | 100 | 120 | 120 | 45 | 51 | 52 | 63 | 62 | 96 | 98 | 114 | 84 | 100 | 460 | 54 |
| BOD (mg/L) | <2 | <2 | <2 | <2 | 3 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| Water flow at pool (m/s) | 0.1-0.3 | 0.01-0.2 | | | | 0.01-0.2 | | | | 0.01-0.2 | | | | 0.01-0.2 | | | |
| Water flow at riffle (m/s) | 0.4-0.7 | 0.2-0.5 | | | | 0.2-0.5 | | | | 0.2-0.6 | | | | 0.2-0.6 | | | |
| Sand (%) | 15 | 15 | 10 | 10 | 10 | 10 | 10 | 10 | 15 | 8 | 8 | 8 | 15 | 8 | 8 | 8 | 15 |
| Stone (%) | 80 | 80 | 88 | 88 | 88 | 88 | 88 | 88 | 70 | 90 | 90 | 90 | 70 | 90 | 90 | 90 | 70 |
| Mud (%) | 5 | 5 | 2 | 2 | 2 | 2 | 2 | 2 | 5 | 2 | 2 | 2 | 5 | 2 | 2 | 2 | 5 |

Table 4.7 Abotic data for Upper Lam Tsuen River

(T1- located at upper river channel sampling site
to T4 - located at lower river Channel sampling
site)

| Parameter / date | Impact monitoring | | | | Impact monitoring | | | | Impact monitoring | | | | Impact monitoring | | | | Impact monitoring | | | |
|-----------------------------------|-------------------|------|------|-----|-------------------|------|------|------|-------------------|------|------|-----|-------------------|------|------|------|-------------------|------|------|------|
| | Jan-11 | | | | Jul-11 | | | | Jan-12 | | | | Jul-12 | | | | Aug-13 | | | |
| Replicate | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 |
| DO (mg/L) | 9.6 | 9.5 | 9.5 | 9.1 | 9.5 | 9.6 | 9.4 | 9.3 | 9.4 | 9.2 | 9.4 | 9.2 | 8.2 | 8 | 7.8 | 7.3 | 8.9 | 8.5 | 8.7 | 8.8 |
| pH | 7.1 | 7.2 | 7.2 | 7.1 | 7.3 | 7.1 | 7.1 | 7.1 | 7.2 | 6.9 | 6.8 | 6.7 | 6.8 | 7.1 | 7.3 | 7.6 | 6.5 | 6.8 | 6.8 | 7.1 |
| Nitrate (mg N/L) | 0.1 | 0.2 | 0.4 | 0.5 | 0.1 | 0.2 | 0.3 | 0.45 | 0.2 | 0.3 | 0.5 | 0.6 | 0.13 | 0.67 | 0.62 | 0.82 | 0.74 | 0.72 | 0.83 | 0.79 |
| Ammonia (mg/L) | 0.05 | 0.07 | 0.07 | 0.1 | 0.06 | 0.05 | 0.08 | 0.1 | 0.04 | 0.05 | 0.06 | 0.2 | 0.01 | 0.02 | 0.04 | 0.03 | 0.02 | 0.03 | 0.03 | 0.04 |
| Salinity (ppt) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Conductivity (µS/cm) | 90 | 87 | 93 | 120 | 93 | 90 | 90 | 100 | 92 | 84 | 96 | 110 | 41 | 38 | 73 | 86 | 67 | 77 | 74 | 75 |
| BOD (mg/L) | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| Water flow at pool (m/s) | 0.01-0.2 | | | | 0.01-0.2 | | | | 0.01-0.2 | | | | 0.01-0.2 | | | | 0.01-0.2 | | | |
| Water flow at riffle (m/s) | 0.2-0.6 | | | | 0.2-0.6 | | | | 0.2-0.6 | | | | 0.2-0.6 | | | | 0.2-0.6 | | | |
| Sand (%) | 8 | 8 | 8 | 15 | 8 | 8 | 8 | 15 | 10 | 15 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Stone (%) | 90 | 90 | 90 | 70 | 90 | 90 | 90 | 70 | 80 | 70 | 80 | 70 | 60 | 60 | 60 | 60 | 75 | 75 | 75 | 75 |
| Mud (%) | 2 | 2 | 2 | 5 | 2 | 2 | 2 | 5 | 10 | 15 | 10 | 20 | 30 | 30 | 30 | 30 | 15 | 15 | 15 | 15 |

Table 4.7 Abotic data for Upper Lam Tsuen River

(T1- located at upper river channel sampling site
to T4 - located at lower river Channel sampling
site)

| Parameter / date | Impact monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | |
|-----------------------------------|-------------------|-------|-------|-------|------------------------------|-----|------|------|------------------------------|------|-----|------|------------------------------|------|------|-----|------------------------------|-----|-----|-----|
| | Dec-13 | | | | Jan-14 | | | | Feb-14 | | | | Mar-14 | | | | Apr-14 | | | |
| Replicate | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 |
| DO (mg/L) | 9.3 | 8.6 | 8.8 | 8.7 | 9.1 | 9.0 | 8.6 | 8.5 | 7.8 | 8.7 | 9.8 | 9.8 | 7.5 | 7.8 | 8.2 | 8.1 | 7.7 | 7.6 | 7.8 | 8.0 |
| pH | 6.2 | 6.9 | 7.1 | 7.1 | 6.2 | 6.9 | 7.1 | 7.1 | 8.2 | 8.5 | 8 | 7.8 | 8.3 | 8.2 | 7.6 | 7.2 | 7.6 | 7.8 | 8.2 | 7.8 |
| Nitrate (mg N/L) | 0.48 | 0.57 | 0.77 | 0.89 | 0.9 | 0.8 | 1.3 | 1.26 | 1.3 | 1.8 | 1.6 | 2.1 | 1.2 | 1.4 | 1.1 | 1.3 | 1.5 | 1.5 | 1.3 | 1.2 |
| Ammonia (mg/L) | <0.01 | <0.01 | <0.01 | <0.01 | 0.04 | 0.1 | 0.12 | 0.15 | 0.05 | 0.04 | 0.1 | 0.12 | 0.06 | 0.04 | 0.04 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Salinity (ppt) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Conductivity (µS/cm) | 62 | 64 | 90 | 110 | 72 | 78 | 88 | 108 | 78 | 87 | 118 | 119 | 120 | 123 | 125 | 123 | 96 | 114 | 120 | 122 |
| BOD (mg/L) | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| Water flow at pool (m/s) | 0.01-0.2 | | | | 0.01-0.2 | | | | 0.01-0.2 | | | | 0.01-0.2 | | | | 0.01-0.2 | | | |
| Water flow at riffle (m/s) | 0.2-0.6 | | | | 0.2-0.6 | | | | 0.2-0.6 | | | | 0.2-0.6 | | | | 0.2-0.6 | | | |
| Sand (%) | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 10 |
| Stone (%) | 90 | 85 | 85 | 85 | 90 | 85 | 85 | 85 | 90 | 85 | 85 | 85 | 90 | 85 | 85 | 80 | 90 | 85 | 85 | 75 |
| Mud (%) | 5 | 10 | 10 | 10 | 5 | 10 | 10 | 10 | 5 | 10 | 10 | 10 | 5 | 10 | 10 | 15 | 5 | 10 | 10 | 15 |

Table 4.7 Abotic data for Upper Lam Tsuen River

(T1- located at upper river channel sampling site
to T4 - located at lower river Channel sampling
site)

| Parameter / date | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | |
|-----------------------------------|------------------------------|------|------|------|------------------------------|------|------|------|------------------------------|------|------|------|------------------------------|------|------|------|------------------------------|------|------|------|
| | May-14 | | | | Jun-14 | | | | Jul-14 | | | | Aug-14 | | | | Sep-14 | | | |
| Replicate | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 |
| DO (mg/L) | 8.2 | 7.8 | 8.1 | 8.2 | 7.6 | 7.8 | 7.4 | 7.2 | 7.6 | 7.2 | 7.6 | 7.5 | 7.6 | 7.4 | 7.3 | 7.6 | 8.7 | 8.7 | 8.4 | 8.6 |
| pH | 7.7 | 7.8 | 7.9 | 8.2 | 7.6 | 7.8 | 7.8 | 8.1 | 7.6 | 7.7 | 7.8 | 8 | 7.8 | 7.5 | 7.6 | 7.8 | 8.4 | 8.1 | 8.4 | 8.0 |
| Nitrate (mg N/L) | 0.9 | 0.7 | 0.6 | 0.7 | 0.8 | 0.8 | 0.9 | 0.9 | 0.8 | 1.1 | 1.1 | 0.8 | 1.2 | 1.1 | 0.9 | 1.1 | 1.2 | 1.3 | 1.2 | 1.2 |
| Ammonia (mg/L) | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Salinity (ppt) | 0.02 | 0.02 | 0.03 | 0.03 | 0.01 | 0.02 | 0.03 | 0.03 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Conductivity (µS/cm) | 82 | 80 | 72 | 66 | 39 | 58 | 69 | 70 | 43 | 85 | 72 | 75 | 75 | 78 | 82 | 86 | 73 | 77 | 74 | 72 |
| BOD (mg/L) | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| Water flow at pool (m/s) | 0.01-0.2 | | | | 0.03-0.2 | | | | 0.03-0.2 | | | | 0.03-0.2 | | | | 0.03-0.2 | | | |
| Water flow at riffle (m/s) | 0.2-0.6 | | | | 0.2-0.6 | | | | 0.2-0.6 | | | | 0.2-0.6 | | | | 0.2-0.6 | | | |
| Sand (%) | 5 | 5 | 5 | 10 | 5 | 5 | 5 | 10 | 5 | 5 | 5 | 10 | 5 | 5 | 8 | 10 | 5 | 5 | 8 | 10 |
| Stone (%) | 90 | 85 | 85 | 75 | 93 | 90 | 90 | 75 | 93 | 90 | 90 | 75 | 93 | 90 | 90 | 75 | 93 | 90 | 90 | 75 |
| Mud (%) | 5 | 10 | 10 | 15 | 2 | 5 | 5 | 15 | 2 | 5 | 5 | 15 | 2 | 5 | 2 | 15 | 2 | 5 | 2 | 15 |

Table 4.7 Abotic data for Upper Lam Tsuen River

(T1- located at upper river channel sampling site
to T4 - located at lower river Channel sampling
site)

| Parameter / date | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | |
|-----------------------------------|------------------------------|------|------|------|------------------------------|------|------|------|------------------------------|------|------|------|------------------------------|------|------|------|------------------------------|------|------|------|
| | Oct-14 | | | | Nov-14 | | | | Dec-14 | | | | Jan-15 | | | | Mar-15 | | | |
| Replicate | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 |
| DO (mg/L) | 7.2 | 7.3 | 8.1 | 7.6 | 7.3 | 7.3 | 8.2 | 7.8 | 7.2 | 8.1 | 8.2 | 8.2 | 8.9 | 9.2 | 9.3 | 9.2 | 9.2 | 9.1 | 9 | 9.3 |
| pH | 8.4 | 8.2 | 8.1 | 8.0 | 8.1 | 8.3 | 8.1 | 8.3 | 8.5 | 8.4 | 8.2 | 8.2 | 7.9 | 8.2 | 8.3 | 7.9 | 7.9 | 8.2 | 8.1 | 7.8 |
| Nitrate (mg N/L) | 0.9 | 1 | 0.9 | 1 | 1 | 1 | 0.9 | 0.9 | 0.9 | 1 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |
| Ammonia (mg/L) | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Salinity (ppt) | 0.01 | 0.01 | 0.02 | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 | 0.02 | 0.02 | 0.02 | 0.02 | 0.03 | 0.03 | 0.03 | 0.03 | 0.01 | 0.02 | 0.02 | 0.02 |
| Conductivity (µS/cm) | 47 | 50 | 80 | 88 | 52 | 56 | 82 | 84 | 112 | 92 | 86 | 67 | 156 | 153 | 152 | 163 | 45 | 89 | 92 | 94 |
| BOD (mg/L) | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| Water flow at pool (m/s) | 0.03-0.2 | | | | 0.03-0.2 | | | | 0.03-0.2 | | | | 0.03-0.2 | | | | 0.03-0.2 | | | |
| Water flow at riffle (m/s) | 0.2-0.6 | | | | 0.2-0.6 | | | | 0.2-0.5 | | | | 0.2-0.5 | | | | 0.2-0.5 | | | |
| Sand (%) | 5 | 5 | 8 | 10 | 5 | 5 | 8 | 10 | 5 | 5 | 8 | 10 | 5 | 5 | 8 | 10 | 5 | 5 | 8 | 10 |
| Stone (%) | 93 | 90 | 90 | 75 | 93 | 90 | 90 | 75 | 93 | 90 | 90 | 75 | 93 | 90 | 90 | 75 | 93 | 90 | 90 | 75 |
| Mud (%) | 2 | 5 | 2 | 15 | 2 | 5 | 2 | 15 | 2 | 5 | 2 | 15 | 2 | 5 | 2 | 15 | 2 | 5 | 2 | 15 |

Table 4.7 Abotic data for Upper Lam Tsuen River

(T1- located at upper river channel sampling site
to T4 - located at lower river Channel sampling
site)

| Parameter / date | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | | | | |
|-----------------------------------|------------------------------|------|------|------|------------------------------|------|------|------|------------------------------|------|------|------|------------------------------|------|------|------|------------------------------|------|------|------|------------------------------|------|------|------|----|----|----|----|
| | Nov-15 | | | | Dec-15 | | | | Jan-16 | | | | Feb-16 | | | | Mar-16 | | | | Apr-16 | | | | | | | |
| Replicate | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 |
| DO (mg/L) | 7.9 | 8.0 | 8.0 | 8.1 | 8.0 | 8.1 | 7.9 | 8.1 | 7.9 | 7.8 | 8.2 | 8.1 | 8.1 | 8.0 | 8.2 | 8.2 | 8.3 | 8.1 | 8.1 | 8.2 | 8.4 | 8.3 | 8.3 | 8.2 | | | | |
| pH | 7.6 | 7.5 | 7.6 | 7.7 | 7.7 | 7.5 | 7.6 | 7.6 | 7.8 | 7.9 | 7.7 | 7.7 | 7.7 | 7.8 | 7.7 | 7.6 | 7.8 | 7.7 | 7.7 | 7.7 | 7.6 | 7.7 | 7.6 | 7.7 | | | | |
| Nitrate (mg N/L) | 0.8 | 0.8 | 0.8 | 0.9 | 0.8 | 0.8 | 0.8 | 0.9 | 0.8 | 0.8 | 0.8 | 0.9 | 0.8 | 0.8 | 0.8 | 0.9 | 0.8 | 0.8 | 0.8 | 0.9 | 0.8 | 0.8 | 0.8 | 0.9 | | | | |
| Ammonia (mg/L) | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | | | | |
| Salinity (ppt) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | | | | |
| Conductivity (µS/cm) | 34.0 | 32.0 | 37.0 | 40.0 | 36.0 | 33.0 | 42.0 | 62.0 | 32.0 | 36.0 | 40.0 | 45.0 | 34.0 | 32.0 | 42.0 | 43.0 | 32.0 | 34.0 | 45.0 | 42.0 | 26.0 | 32.0 | 44.0 | 35.0 | | | | |
| BOD (mg/L) | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | | | | |
| Water flow at pool (m/s) | 0.03-0.2 | | | | 0.03-0.2 | | | | 0.03-0.2 | | | | 0.03-0.2 | | | | 0.03-0.2 | | | | 0.03-0.2 | | | | | | | |
| Water flow at riffle (m/s) | 0.2-0.5 | | | | 0.2-0.5 | | | | 0.2-0.5 | | | | 0.2-0.5 | | | | 0.2-0.5 | | | | 0.2-0.5 | | | | | | | |
| Sand (%) | 5 | 5 | 8 | 10 | 5 | 5 | 8 | 10 | 5 | 5 | 8 | 10 | 5 | 5 | 8 | 10 | 5 | 5 | 8 | 10 | 5 | 5 | 8 | 10 | | | | |
| Stone (%) | 93 | 90 | 90 | 75 | 93 | 90 | 90 | 75 | 93 | 90 | 90 | 75 | 93 | 90 | 90 | 75 | 93 | 90 | 90 | 75 | 93 | 90 | 90 | 75 | | | | |
| Mud (%) | 2 | 5 | 2 | 15 | 2 | 5 | 2 | 15 | 2 | 5 | 2 | 15 | 2 | 5 | 2 | 15 | 2 | 5 | 2 | 15 | 2 | 5 | 2 | 15 | | | | |

Table 4.7 Abotic data for Upper Lam Tsuen River

(T1- located at upper river channel sampling site
to T4 - located at lower river Channel sampling
site)

| Parameter / date | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | |
|-----------------------------------|------------------------------|------|------|------|------------------------------|------|------|------|------------------------------|------|------|------|------------------------------|------|------|------|------------------------------|------|------|------|
| | May-16 | | | | Jun-16 | | | | Jul-16 | | | | Aug-16 | | | | Sep-16 | | | |
| | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 |
| Replicate | | | | | | | | | | | | | | | | | | | | |
| DO (mg/L) | 8.1 | 8.3 | 8.3 | 8.2 | 7.9 | 8.0 | 8.0 | 7.9 | 7.8 | 7.9 | 7.9 | 7.9 | 8.0 | 8.1 | 8.0 | 8.0 | 8.0 | 8.1 | 8.1 | 8.0 |
| pH | 7.7 | 7.7 | 7.5 | 7.6 | 7.6 | 7.7 | 7.6 | 7.7 | 7.7 | 7.7 | 7.6 | 7.6 | 7.7 | 7.7 | 7.6 | 7.7 | 7.7 | 7.6 | 7.6 | 7.7 |
| Nitrate (mg N/L) | 0.8 | 0.8 | 0.8 | 0.9 | 0.8 | 0.8 | 0.8 | 0.9 | 0.8 | 0.8 | 0.8 | 0.9 | 0.8 | 0.8 | 0.8 | 0.9 | 0.8 | 0.8 | 0.8 | 0.9 |
| Ammonia (mg/L) | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Salinity (ppt) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Conductivity (µS/cm) | 33.0 | 34.0 | 32.0 | 31.0 | 32.0 | 33.0 | 34.0 | 33.0 | 29.0 | 32.0 | 31.0 | 39.0 | 32.0 | 39.0 | 40.0 | 42.0 | 33.0 | 34.0 | 39.0 | 43.0 |
| BOD (mg/L) | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| Water flow at pool (m/s) | 0.03-0.2 | | | | 0.03-0.2 | | | | 0.03-0.2 | | | | 0.03-0.2 | | | | 0.03-0.2 | | | |
| Water flow at riffle (m/s) | 0.2-0.5 | | | | 0.2-0.5 | | | | 0.2-0.5 | | | | 0.2-0.5 | | | | 0.2-0.5 | | | |
| Sand (%) | 5 | 5 | 8 | 10 | 5 | 5 | 8 | 10 | 5 | 5 | 8 | 10 | 5 | 5 | 8 | 10 | 5 | 5 | 8 | 10 |
| Stone (%) | 93 | 90 | 90 | 75 | 93 | 90 | 90 | 75 | 93 | 90 | 90 | 75 | 93 | 90 | 90 | 75 | 93 | 90 | 90 | 75 |
| Mud (%) | 2 | 5 | 2 | 15 | 2 | 5 | 2 | 15 | 2 | 5 | 2 | 15 | 2 | 5 | 2 | 15 | 2 | 5 | 2 | 15 |

Table 4.7 Abotic data for Upper Lam Tsuen River

(T1- located at upper river channel sampling site
to T4 - located at lower river Channel sampling
site)

| Parameter / date | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | |
|-----------------------------------|------------------------------|-------|-------|-------|------------------------------|-------|-------|-------|------------------------------|-------|-------|-------|
| | Oct-16 | | | | Nov-16 | | | | Dec-16 | | | |
| Replicate | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 |
| DO (mg/L) | 7.9 | 7.9 | 8.0 | 8.0 | 7.9 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 |
| pH | 7.7 | 7.7 | 7.6 | 7.7 | 7.6 | 7.7 | 7.6 | 7.7 | 7.6 | 7.7 | 7.6 | 7.6 |
| Nitrate (mg N/L) | 0.8 | 0.8 | 0.8 | 0.9 | 0.8 | 0.8 | 0.8 | 0.9 | 0.8 | 0.8 | 0.8 | 0.9 |
| Ammonia (mg/L) | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Salinity (ppt) | 0.01 | 0.01 | 0.01 | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Conductivity (µS/cm) | 29.0 | 32.0 | 34.0 | 45.0 | 28.0 | 31.0 | 31.0 | 32.0 | 32.0 | 32.0 | 34.0 | 36.0 |
| BOD (mg/L) | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| Water flow at pool (m/s) | 0.03-0.2 | | | | 0.03-0.2 | | | | 0.03-0.2 | | | |
| Water flow at riffle (m/s) | 0.2-0.5 | | | | 0.2-0.5 | | | | 0.2-0.5 | | | |
| Sand (%) | 5 | 5 | 8 | 10 | 5 | 5 | 8 | 10 | 5 | 5 | 8 | 10 |
| Stone (%) | 93 | 90 | 90 | 75 | 93 | 90 | 90 | 75 | 93 | 90 | 90 | 75 |
| Mud (%) | 2 | 5 | 2 | 15 | 2 | 5 | 2 | 15 | 2 | 5 | 2 | 15 |

Table 4.7 Abotic data for Upper Lam Tsuen River

(T1- located at upper river channel sampling site
to T4 - located at lower river Channel sampling
site)

| Parameter / date | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | |
|-----------------------------------|------------------------------|-------|-------|-------|------------------------------|-------|-------|-------|------------------------------|-------|-------|-------|------------------------------|-------|-------|-------|
| | Jan-17 | | | | Feb-17 | | | | Mar-17 | | | | Apr-17 | | | |
| Replicate | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 |
| DO (mg/L) | 7.9 | 7.9 | 8.0 | 8.0 | 7.9 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 7.9 | 7.9 | 8.0 | 8.0 |
| pH | 7.6 | 7.6 | 7.6 | 7.6 | 7.6 | 7.7 | 7.6 | 7.7 | 7.6 | 7.7 | 7.7 | 7.7 | 7.6 | 7.7 | 7.6 | 7.7 |
| Nitrate (mg N/L) | 0.8 | 0.8 | 0.8 | 0.9 | 0.8 | 0.8 | 0.8 | 0.9 | 0.8 | 0.8 | 0.8 | 0.9 | 0.8 | 0.8 | 0.8 | 0.9 |
| Ammonia (mg/L) | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Salinity (ppt) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Conductivity (µS/cm) | 33.0 | 32.0 | 35.0 | 36.0 | 29.0 | 29.0 | 32.0 | 35.0 | 33.0 | 34.0 | 32.0 | 33.0 | 29.0 | 29.0 | 34.0 | 35.0 |
| BOD (mg/L) | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| Water flow at pool (m/s) | 0.03-0.2 | | | | 0.03-0.2 | | | | 0.03-0.2 | | | | 0.03-0.2 | | | |
| Water flow at riffle (m/s) | 0.2-0.5 | | | | 0.2-0.5 | | | | 0.2-0.5 | | | | 0.2-0.5 | | | |
| Sand (%) | 5 | 5 | 8 | 10 | 5 | 5 | 8 | 10 | 5 | 5 | 8 | 10 | 5 | 5 | 8 | 10 |
| Stone (%) | 93 | 90 | 90 | 75 | 93 | 90 | 90 | 75 | 93 | 90 | 90 | 75 | 93 | 90 | 90 | 75 |
| Mud (%) | 2 | 5 | 2 | 15 | 2 | 5 | 2 | 15 | 2 | 5 | 2 | 15 | 2 | 5 | 2 | 15 |

Table 4.7 Abotic data for Upper Lam Tsuen River

(T1- located at upper river channel sampling site
to T4 - located at lower river Channel sampling
site)

| Parameter / date | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | |
|-----------------------------------|------------------------------|------|------|------|------------------------------|------|------|------|------------------------------|------|------|------|
| | May-17 | | | | Jun-17 | | | | Jul-17 | | | |
| Replicate | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 |
| DO (mg/L) | 8.0 | 7.9 | 8.0 | 7.9 | 7.9 | 8.0 | 8.0 | 7.9 | 8.0 | 8.0 | 8.0 | 7.9 |
| pH | 7.8 | 7.7 | 7.6 | 7.7 | 7.6 | 7.7 | 7.6 | 7.7 | 7.8 | 7.7 | 7.6 | 7.7 |
| Nitrate (mg N/L) | 0.8 | 0.8 | 0.8 | 0.9 | 0.8 | 0.8 | 0.8 | 0.9 | 0.8 | 0.8 | 0.8 | 0.9 |
| Ammonia (mg/L) | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Salinity (ppt) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Conductivity (µS/cm) | 32.0 | 33.0 | 31.0 | 29.0 | 22.0 | 25.0 | 28.0 | 32.0 | 12.0 | 18.0 | 17.0 | 18.0 |
| BOD (mg/L) | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| Water flow at pool (m/s) | 0.03-0.2 | | | | 0.03-0.2 | | | | 0.03-0.2 | | | |
| Water flow at riffle (m/s) | 0.2-0.5 | | | | 0.2-0.5 | | | | 0.2-0.5 | | | |
| Sand (%) | 5 | 5 | 8 | 10 | 5 | 5 | 8 | 10 | 5 | 5 | 8 | 10 |
| Stone (%) | 93 | 90 | 90 | 75 | 93 | 90 | 90 | 75 | 93 | 90 | 90 | 75 |
| Mud (%) | 2 | 5 | 2 | 15 | 2 | 5 | 2 | 15 | 2 | 5 | 2 | 15 |

Table 4.7 Abotic data for Upper Lam Tsuen River



(T1- located at upper river channel sampling site
to T4 - located at lower river Channel sampling
site)

| Parameter / date | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | |
|-----------------------------------|------------------------------|------|------|------|------------------------------|------|------|------|------------------------------|------|------|------|
| | Aug-17 | | | | Sep-17 | | | | Oct-17 | | | |
| Replicate | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 |
| DO (mg/L) | 8.0 | 8.1 | 7.9 | 7.9 | 8.0 | 8.0 | 7.9 | 7.9 | 7.9 | 7.8 | 7.9 | 7.9 |
| pH | 7.7 | 7.6 | 7.6 | 7.7 | 7.7 | 7.6 | 7.7 | 7.7 | 7.7 | 7.6 | 7.6 | 7.7 |
| Nitrate (mg N/L) | 0.8 | 0.8 | 0.8 | 0.9 | 0.8 | 0.8 | 0.8 | 0.9 | 0.8 | 0.8 | 0.8 | 0.9 |
| Ammonia (mg/L) | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Salinity (ppt) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Conductivity (µS/cm) | 22.0 | 23.0 | 28.0 | 32.0 | 23.0 | 23.0 | 25.0 | 32.0 | 22.0 | 23.0 | 25.0 | 28.0 |
| BOD (mg/L) | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| Water flow at pool (m/s) | 0.03-0.2 | | | | 0.03-0.2 | | | | 0.03-0.2 | | | |
| Water flow at riffle (m/s) | 0.2-0.5 | | | | 0.2-0.5 | | | | 0.2-0.5 | | | |
| Sand (%) | 5 | 5 | 8 | 10 | 5 | 5 | 8 | 10 | 5 | 5 | 8 | 10 |
| Stone (%) | 93 | 90 | 90 | 75 | 93 | 90 | 90 | 75 | 93 | 90 | 90 | 75 |
| Mud (%) | 2 | 5 | 2 | 15 | 2 | 5 | 2 | 15 | 2 | 5 | 2 | 15 |

Agreement No. CE65/2013(EP)
Post-Construction Ecological Monitoring of River
Improvement Work in Upper Lam Tsuen River, She Shan
River and Upper Tai Po River – Investigation
Post-Construction Ecological Monitoring Report (No.46)
She Shan River

October 2017



| | | | |
|---------------------------------------------------|-----------|-------------------------------------------------------------------------------------|-------------------|
| Prepared by: | Mike Pang |  | 14 November, 2017 |
| Validated by: | Mark Shea |  | 14 November, 2017 |
| Ecology Team: China Hong Kong Ecology Consultants | | | |

Post-Construction Ecological Monitoring of River Improvement Work in Upper Lam Tsuen River, She Shan River and Upper Tai Po River – Investigation

Agreement No. CE65/2013(EP) Post-Construction Ecological Monitoring Report (No.46) She Shan River

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Photo 6: Avifauna – *Ardeola bacchus*

Photo 7: Avifauna – *Lanius bucephalus*

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Photo 9: Odonata – *Trithemis aurora*

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Table 4.6: Fish species and Hong Kong Newt recorded at She Shan River.

Table 4.7: Abiotic data for She Shan River.

1 Introduction

- 1.1 Agreement No. CE65/2013(EP) Post-Construction Ecological Monitoring of River Improvement Work in Upper Lam Tsuen River, She Shan River and Upper Tai Po River – Investigation required a post-construction ecological monitoring programme when the project completed. The collected data are mainly used to assess ecological recovery process and effectiveness of ecological migration proposed and enforced during the construction period.
- 1.2 The scope of the ecological monitoring was detailed in EM & A Manual of the project. In brief, the survey aimed to collect data on abiotic factors such as water quality, substratum characteristics, water flow as well as flora and fauna.
- 1.3 China Hong Kong Ecology Consultants Ltd. was committed by Allied Environmental Consultants Ltd (AEC) to undertake the ecological monitoring tasks for the project from December 2014.
- 1.4 This is the number 46 post-construction ecological monitoring report for the project conducted **on 25th of October 2017**. It contains the following subsections:
 - Summary of major points
 - Monitoring Methods and Results
 - Summary and Comments

2 Summary of Major Points

- Field ecological monitoring was undertaken **on 25th of October 2017**;
- Fauna and flora along the drainage project sections are in a process of re-establishing or restoration;
- Fish's abundance was similar to the record of last month ;
- Bird diversity and abundance were in natural fluctuation;
- Odonata abundance was decreasing; and
- Hong Kong Newt was not found during the survey.

3 Monitoring Methodology

3.1 Riparian Vegetation

Riparian vegetation, including aquatic and emergent, was sampled using line transects along the affected river channel and riparian habitat. Species, relative abundance and average heights were recorded. Vegetation survey was conducted at three selected belt transects located at the upper (T1), middle (T2) and lower portion (T3) of the river channel respectively (**Figure 1**). The belt transects was run across the river channel in order to collect quantitative data of vegetation, e.g., species inventory, height, percentage cover. Qualitative data of plants was collected by recording plant species along line transect, e.g., species inventory, relative abundance. Nomenclature and protection status of the species has followed those documented in the Lai *et al.* (2004) and Hong Kong Herbarium (2015).

3 Avifauna

Avifauna survey was conducted during the post construction monitoring period. Special attention was given to those stream channel area which birds used as feeding and foraging habitat. Avifauna surveys were undertaken in the early morning plus species recorded in the rest of the day when conducting other taxonomic groups (benthic, fish, insect) monitoring. Numerical abundance was recorded at fixed count points within a radius of 30 to 50m according to landscape feature and visual penetration extent. The duration of the point count of birds was standardized for 10 minutes at each location in order to collect comparable data. Transect count along accessible section of river channel were used in order to collect qualitative data. Binoculars and digital camera were the main items of equipment used. Nomenclature and protection status of the species has followed in the AFCD website (www.hkbiodiversity.net) and Carey *et al.* (2001).

The point count was conducted at three locations located at the lower (T3), middle (T2) and upper (T1) portion of the river channel respectively. The point count and survey transect locations for the bird survey and sampling sites for surveys of other faunal groups and flora were presented in **Figure 1**.

3.3 Adult Odonata Survey

Adult Odonata survey was conducted along transects (**Figure 1**). Binoculars, digital camera and hand net were utilized to aid identification. Numerical abundance, species identity and other notable behavior were recorded. Nomenclature and protection status of the species has followed those documented in the AFCD website (www.hkbiodiversity.net), Wilson *et al.* (2004) and Tam *et al.* (2011). Adult Odonata survey was conducted along line transects in parallel with river channel within the works area where access was permitted.

3.4 Aquatic Macro-invertebrates

Macro-invertebrates in the riverbed were surveyed. Four sampling sites were selected to collect necessary macro-invertebrate fauna for ecological monitoring information, which covered upper (T1), middle (T2) and lower (T3) sections of the river respectively, as well as reference site (**Figure 1**). Five replicates were taken at each sampling point and pool together for further sample process. Kick sampling and hand netting were the survey methodologies for stream organisms. Dissection microscope and digital camera were used to aid identification and enumeration. Numerical abundance, species identity was recorded. Nomenclature and protection status of the species has followed those documented in the AFCD website (www.hkbiodiversity.net), and other literatures such as Dudgeon (1994).

3.5 Fish Population and Hong Kong Newt

Fish community at the specified river channel was monitored by live trapping, hand netting and direct observation methods. Hong Kong newt was surveyed by direct observation and hand netting as well.

Sampling was conducted at four proposed sampling locations at upper (T1), middle (T2), lower (T3) sections and reference site respectively. Those

sampling sites covered major type of stream habitats, e.g. river pool and riffle (**Figure 1**). The number of the observed fish was estimated and recorded. Nomenclature and protection status of the species has followed those documented in the AFCD website (www.hkbiobiodiversity.net) and Lee *et al.* (2004).

3.6 Abiotic Data Collection

3.6.1 Water Quality Monitoring

Dissolved oxygen level, pH value, conductivity, salinity, BOD and nutrient level (nitrate and ammonium) were sampled and analyzed by conventional methods in situ or in laboratory. The instruments for measuring dissolved oxygen level, pH value, conductivity, salinity were model: DO-5510, AZ8685, AZ8361 and AZ8374 respectively. All the instruments were calculated every monitoring month according to the operation manuals in order to obtain the precise result. BOD test took 5 days to complete within darkness incubator with stable temperature at 20°C and was performed using model: DO-5510 for measuring dissolved oxygen. Nutrient levels including nitrate and ammonia were performed in laboratory by applying the In-house method SOP056 (FIA) and SOP057 (FIA) respectively.

3.6.2 Sediment Characteristics

Sediment/substrate characteristics were recorded of sediment cover in percentage e.g. mud, sand, rock, boulder and cemented bottom in the stream bed at sampling sites.

3.6.3 Water Flow

Water flow rates in river channel were measured by recording the time taken for a floating object (e.g. floating ball) in a measured distance. The sampling locations for surveys were presented in **Figure 1**.

4 Monitoring Results

4.1 Vegetation

In total, 79 flora species was recorded within the survey transects along the river course. The recorded floras were generally common wetland species. The height of the dominated riparian grass and herb species were in a range from 0.2m to 0.4m as observed along survey transect. Abundant flora species were shown in the **Table 4.1** marked with relative abundance sign “+++”. Aquatic plants and riparian vegetation were cleared in the lower and middle sections (Photo 1-2). Vegetation has sparsely covered the riverbed and gabion in upper section and partially covered the rest portion of the river (photo 3). Aquatic plants *Brachiaria mutica* was the most abundant plants found along the river channel. *Mucuna championii* and *Cibotium barometz* are classified as endangered and vulnerable in China respectively, and were recorded in the woodland adjacent to She Shan River. *Cibotium barometz* is also classified as category II in wild plant under state protection. Results of vegetation survey and belt transect survey were presented in **Table 4.1** and **Table 4.2**. **Figure 1** shows the transect line for the flora surveys.

4.2 Fauna

4.2.1 Avifauna

An avifauna survey was undertaken along survey transects and at three selected point count locations. In total, 17 species of birds were recorded during the bird surveys within project area. 5 recorded species were wetland dependant birds and observed foraging in the river channel including *Motacilla alba* (Photo 4), *Egretta garzetta* (Photo 5), *Ardeola bacchus* (Photo 6), *Tringa ochropus* and *Motacilla cinerea*. The dominant species of the river was a common species *Pycnonotus jocosus*. An uncommon species *Lanius bucephalus*, which is a rare passage migrant, was firstly recorded in this survey (Photo 7). All the birds in Hong Kong are under protection of Wild Animals Protection Ordinance (Cap. 170). Some of wetland dependent species with conservation interest including *Ardeola bacchus* and *Egretta garzetta* were observed foraging in the river. *Ardeola bacchus* and *Egretta garzetta* are considered as Regional Concern by Fellowes *et al.* (2002) respectively. Except foraging and roosting behaviour of some birds were observed, no other remarkable behaviour was noticed. Transect and Point Count locations were shown on **Figure 1**. Result of bird survey was presented in the **Table 4.3**.

4.2.2 Adult Odonata Survey

Odonata survey was performed and a list of recorded odonata species at She Shan River is shown in **Table 4.4**. The number of odonata is lower than the abundance recorded in last month. Most of the odonata species in Hong Kong has the peak emergence from spring to late summer. It is expected that the number of odonata will keep decreasing in the following months during dry season (Wilson *et al.*, 2004 & Tam *et al.*, 2011). A total of 13 species were recorded; those recorded species were mostly common species in Hong Kong (Photos 8-10). The result of this month was similar to approximate period of last year. Mating behavior was noticed during the survey. Sampling location was shown on **Figure 1**.

4.2.3 Aquatic Macro-invertebrates

Survey of aquatic macro-invertebrates was carried out (Photo 11). The river benthic fauna collected was mainly comprised of insects, mollusks and crustaceans (Photos 12). Details of recorded benthic fauna refer to **Table 4.5**. Sampling location was shown on **Figure 1**.

4.2.4 Hong Kong Newt

Survey of Hong Kong Newt was performed (Photo 11). Hong Kong Newt was not recorded in this month. Hong Kong Newt is listed in Wild Animals Protection Ordinance (Cap. 170) and classified as “Near Threatened” under IUCN Red List Status and as “Potential Global Concern” by Fellowes *et al.* (2002). Record of Hong Kong Newts can be referred to **Table 4.6**.

4.2.5 Fish Fauna

Fish surveys were performed at She Shan River and total 14 species of freshwater fish were recorded. Native fish *Zacco platypus* and *Oreochromis niloticus* were abundant species dominating in the river channel. Among the recorded fish, *Parazacco spilurus* is classified as “Vulnerable” in Red China Data Book, it was commonly observed along the river with low abundance. The current fish’s abundance increased comparing with last month. Two species were first recorded including *Tilapia joka* and *Hemiculter leucisculus*. *Tilapia joka* is classified as “Vulnerable” in IUCN Red List and *Hemiculter leucisculus* is an uncommon species in Hong Kong. These two species were recorded with low abundance at the middle section of the river. Details of recorded of fish fauna refers to **Table 4.6**. Sampling location was shown on **Figure 1**.

4.3 **Abiotic Data**

Data on water quality and major stream hydrological feature (water flow and substratum) of the stream were collected and are presented in the **Table 4.7**.

Generally, the water was not polluted and nutrient levels were low even though there were cultivation activities observed nearby the river. The water colour has turned into yellowish because of increase in suspended solid as a result of flooding. Results of water test are presented in the **Table 4.7**.

The river substratum was comprised of over 30-80% stones or rocks in large proportion of the river sections with slow water flow (up to 0.2m/second at pool and 0.5m/second at riffle).

5 **Summary and Commentary**

Ecological monitoring was carried out in current months and relevant biotic and abiotic data were collected according to project specification and EM & A Manual. An uncommon avifauna *Lanius bucephalus*, which is a rare passage migrant, was firstly recorded in this survey. Hong Kong Newt was not recorded during the survey. The lower abundance of odonata was observed in this month due to seasonality. Fish’s abundance was similar to the record of last month. The rest of fauna was in a natural fluctuation.

Aquatic plants and riparian vegetation were cleared at new drainage channel. Vegetation has sparsely cover the riverbed and gabion in upper section and partially covered the rest portion of the river.

Water was not polluted and nutrient levels were low to moderate.

6 REFERENCES

Carey, G.J., Chalmers, M.L., Diskin, D.A., Kennerley, P.R., Leader, P.J., Leven, M.R., Lewthwaite, R.W., Melville, D.S., Turnbull, M. and Yung, L.(2001). *The Avifauna of Hong Kong*. Hong Kong Bird Watching Society.

Dudgeon, D. and Corlett, R. (1994). *Hills and Streams - An Ecology of Hong Kong*. Hong Kong University Press, Hong Kong.

Dudgeon, D. (2003). *Hillstreams*. The Department of Ecology & Biodiversity of The University of Hong Kong and Wan Li Book Co, Ltd. Hong Kong.

Fellowes, J.R., Lau, M.W.N., Dudgeon, D., Reels, G., Ades, G.W.J., Carey, G.J., Chan, B.P.L., Kendrick, R.C., Lee, K.S., Leven, M.R., Wilson, K.D.P. & Yu, Y.T. (2002). Wild animals to watch: Terrestrial and freshwater fauna of conservation concern in Hong Kong. *Memoirs of the Hong Kong Natural History Society* 25: 123-159.

Hong Kong Herbarium (2015) :
<http://herbarium.gov.hk/>

Hong Kong Biodiversity Website (2015) :
<http://www.afcd.gov.hk/english/conservation/hkbiodiversity/hkbiodiversity.html>

Lai, P.C.C., Lam, Y.W., So, P.S., Tam, K.Y., Wan, P.Y.M. and Yip, K.L. (2004). *Check List of Hong Kong Plants*, Agriculture, Fisheries and Conservation Department. Hong Kong.

Lee, V.L.F., Lam, S.K.S., NG, F.K.Y., Chan, T.K.T. and Young, M.L.C. (2004). *Field Guide to the Freshwater Fish of Hong Kong*, Friends of the Country Parks and Cosmos Books Ltd, Hong Kong.

Tam, T.W., Leung, K.K., Kwan, B.P. S., Wu, K. K. Y., Tang, S. S. H., So, I.W.Y., Cheng, J.C.Y., Yuen, E.F.M., Tsang, Y.M and Leung, H.W. (2011). *The Dragonflies of Hong Kong*. Agriculture, Fisheries and Conservation Department, Friends of the Country Parks and Cosmos Books Ltd., Hong Kong.

Wilson, K.D.P., Tam, K.W., Kwan, B.S.P., Wu, K.K.Y., Wong, B.S.F. and Wong, J.K. (2004). *Field guide to the dragonflies of Hong Kong (2nd Edition)*. Agriculture, Fisheries and Conservation Department, Friends of the Country Parks and Cosmos Books Ltd., Hong Kong.

FIGURE

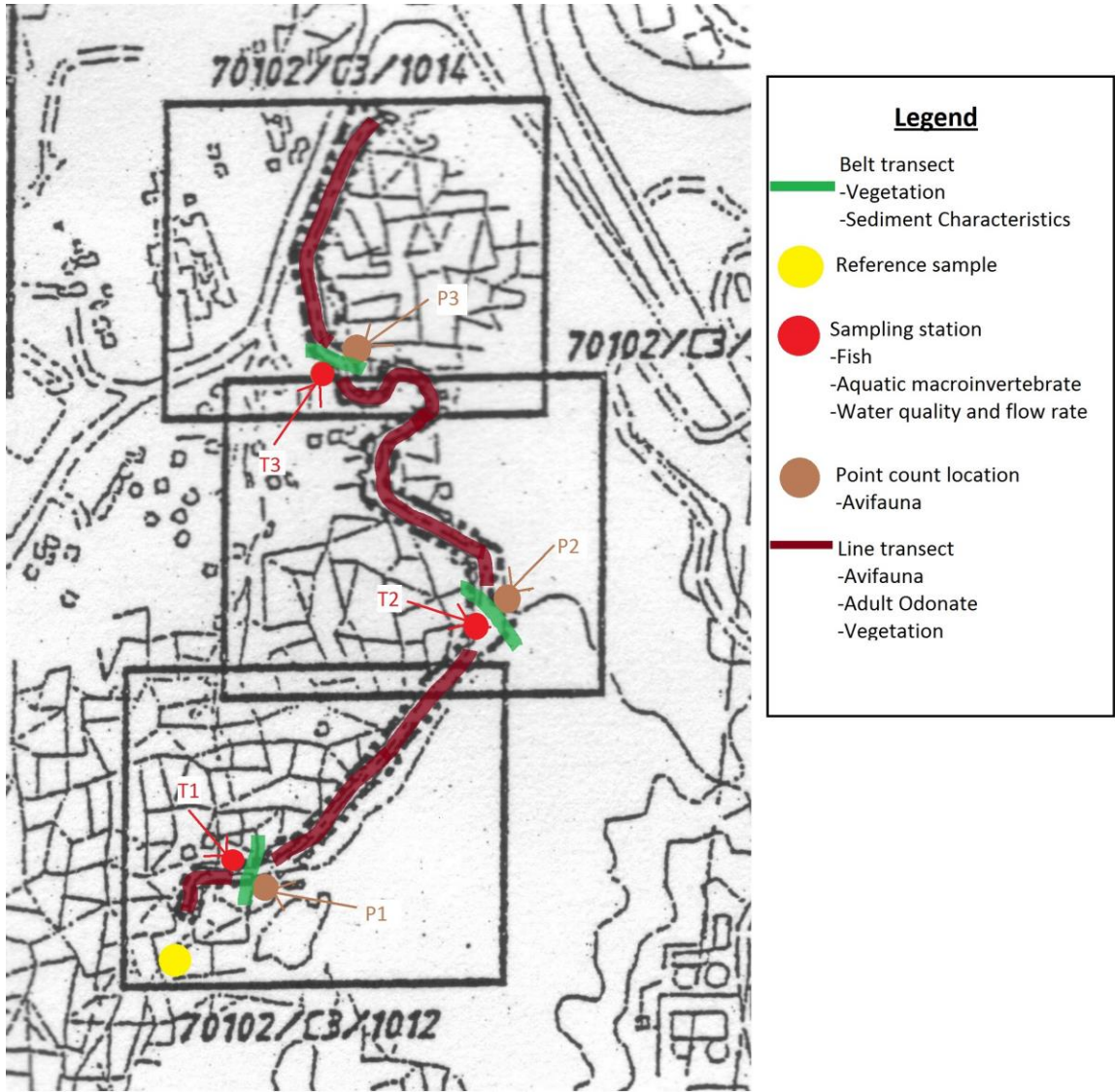


Figure 1. Sampling Location of Ecological Survey and Monitoring at She Shan River, Tai Po.

PHOTOS



Photo 1: General view of the river habitat
(Lower section)



Photo 2: General view of the river habitat
(Middle section)



Photo 3 : General view of the river habitat
(Upper section)



Photo 4 : Avifauna – *Motacilla alba*



Photo 5 : Avifauna – *Egretta garzetta*



Photo 6: Avifauna – *Ardeola bacchus*



Photo 7 : Avifauna – *Lanius bucephalus*



Photo 8 : Odonata – *Orthetrum pruinosum neglectum*



Photo 9 : Odonata – *Trithemis aurora*



Photo 10 : Odonata – *Trithemis festiva*



Photo 11 : Kick Sampling



Photo 12 : Aquatic sample

TABLE

Table 4.1. Flora species recorded along the She Shan River including riparian habitat.

| Family | Species name | Chinese name | Conservation Status | Baseline monitoring | Impact monitoring | | | | | Impact monitoring | | | | | Post construction monitoring | | | | |
|------------------------|-------------------------------|--------------|---------------------|---------------------|-------------------|--------|--------|--------|--------|-------------------|--------|--------|--------|--------|------------------------------|--------|--------|--------|--------|
| | | | | Jul to Aug 08 | Jan-09 | Jul-09 | Jan-10 | Jul-10 | Jan-11 | Jul-11 | Jan-12 | Jul-12 | Jul-13 | Dec-13 | Jan-14 | Feb-14 | Mar-14 | Apr-14 | May-14 |
| Thelypteridaceae | <i>Cyclosorus parasiticus</i> | 華南毛蕨 | | | | | | | | | | | | | | | | | |
| Ulmaceae | <i>Celtis sinensis</i> | 朴樹 | | + | + | + | + | + | | | | | | | + | + | + | + | |
| Ulmaceae | <i>Celtis timorensis</i> | 樟葉朴 | | + | + | + | + | + | + | | | | | | | | | | |
| Ulmaceae | <i>Trema orientalis</i> | 異色山黃麻 | | | | | | | | | | | | | | | | + | |
| Ulmaceae | <i>Trema tomentosa</i> | 山黃麻 | | | | | | | | + | + | + | + | + | + | + | + | + | |
| Urticaceae | <i>Boehmeria nivea</i> | 苧麻 | | + | + | + | + | + | | | | | + | + | + | + | + | + | |
| Urticaceae | <i>Pilea microphylla</i> | 透明草 | | + | + | + | + | + | + | | | | | + | + | + | + | + | |
| Urticaceae | <i>Pouzolzia zeylanica</i> | 霧水葛 | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Verbenaceae | <i>Vitex quinata</i> | 山牡荊 | | + | + | + | + | + | | | | | | | | | | | |
| Polygonaceae | <i>Polygonum perfoliatum</i> | 杠板歸 | | | | | | | | | | | | | | | + | + | |
| Verbenaceae | <i>Lantana camara</i> | 馬纓丹 | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Floating Plant | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Pistia stratiotes</i> | 大藻 | | | | | | | | | | | | | | | | | |
| Lemnaceae | <i>Lemna minor</i> | 浮萍 | | | + | + | + | + | + | | | | | + | + | + | + | + | |
| Submerged Plant | | | | | | | | | | | | | | | | | | | |
| Hydrocharitaceae | <i>Hydrilla verticillata</i> | 黑藻 | | | | | | | | | | | | | | | + | + | + |
| No. of Species | | | | 48 | 54 | 54 | 54 | 57 | 46 | 23 | 36 | 36 | 36 | 40 | 41 | 51 | 54 | 67 | 69 |

Note:

“+” – Species exists in the study area

“++” – Species common in the study area

“+++” – Species abundant in study area

EN- Endangered in China

VU- Vulnerable in China

CII- Wild plant under State protection (category II)

Table 4.1. Flora species recorded along the She Shan River including riparian habitat.

| Family | Species name | Chinese name | Conservation Status | Post construction monitoring | | | | | Post construction monitoring | | | | | Post construction monitoring | | | | Post construction monitoring | | | |
|------------------------|-------------------------------|--------------|---------------------|------------------------------|--------|--------|--------|--------|------------------------------|--------|--------|--------|--------|------------------------------|--------|--------|--------|------------------------------|--------|--------|--------|
| | | | | Jun-14 | Jul-14 | Aug-14 | Sep-14 | Oct-14 | Nov-14 | Dec-14 | Jan-15 | Feb-15 | Mar-15 | Apr-15 | May-15 | Jun-15 | Jul-15 | Aug-15 | Sep-15 | Oct-15 | Nov-15 |
| Thelypteridaceae | <i>Cyclosorus parasiticus</i> | 華南毛蕨 | | | | | | | | | + | + | + | + | + | + | + | + | + | + | + |
| Ulmaceae | <i>Celtis sinensis</i> | 朴樹 | | + | + | + | + | + | + | + | | + | + | + | + | + | + | + | + | + | + |
| Ulmaceae | <i>Celtis timorensis</i> | 樟葉朴 | | | | | | | | | | | | | | | | | | | |
| Ulmaceae | <i>Trema orientalis</i> | 異色山黃麻 | | + | + | + | + | + | + | + | | | | | | | | | | | |
| Ulmaceae | <i>Trema tomentosa</i> | 山黃麻 | | + | + | + | + | + | + | + | | | | | | | | | | | |
| Urticaceae | <i>Boehmeria nivea</i> | 苧麻 | | + | + | + | + | + | + | + | | | | | | | | | | | |
| Urticaceae | <i>Pilea microphylla</i> | 透明草 | | + | + | + | + | + | + | + | | | | | | + | + | + | + | + | + |
| Urticaceae | <i>Pouzolzia zeylanica</i> | 霧水葛 | | + | + | + | + | + | + | + | | | | | | | | | | | |
| Verbenaceae | <i>Vitex quinata</i> | 山牡荊 | | | | | | | | | | | | | | | | | | | |
| Polygonaceae | <i>Polygonum perfoliatum</i> | 杠板歸 | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Verbenaceae | <i>Lantana camara</i> | 馬纓丹 | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Floating Plant | | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Pistia stratiotes</i> | 大藻 | | | | | | | | | | | | | | | | | | + | + |
| Lemnaceae | <i>Lemna minor</i> | 浮萍 | | + | + | + | + | + | + | + | | | | | | | | | | | |
| Submerged Plant | | | | | | | | | | | | | | | | | | | | | |
| Hydrocharitaceae | <i>Hydrilla verticillata</i> | 黑藻 | | + | + | + | + | + | + | + | | | | + | + | + | + | + | + | + | + |
| No. of Species | | | | 69 | 73 | 74 | 74 | 74 | 74 | 74 | 42 | 46 | 46 | 51 | 57 | 57 | 59 | 59 | 59 | 61 | 61 |

Note:

“+” – Species exists in the study area

“++” – Species common in the study area

“+++” – Species abundant in study area

EN- Endangered in China

VU- Vulnerable in China

CII- Wild plant under State protection (category II)

Table 4.1. Flora species recorded along the She Shan River including riparian habitat.

| Family | Species name | Chinese name | Conservation Status | Post construction monitoring | | | | Post construction monitoring | | | | | | | |
|------------------------|-------------------------------|--------------|---------------------|------------------------------|--------|--------|--------|------------------------------|--------|--------|--------|--------|--------|--------|--------|
| | | | | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Apr-16 | May-16 | Jun-16 | Jul-16 | Aug-16 | Sep-16 | Oct-16 | Nov-16 |
| Thelypteridaceae | <i>Cyclosorus parasiticus</i> | 華南毛蕨 | | + | + | + | + | + | + | + | + | + | + | + | + |
| Ulmaceae | <i>Celtis sinensis</i> | 朴樹 | | + | + | + | + | + | + | + | + | + | + | + | + |
| Ulmaceae | <i>Celtis timorensis</i> | 樟葉朴 | | | | | | | | | | | | | |
| Ulmaceae | <i>Trema orientalis</i> | 異色山黃麻 | | | | | | | | | | | | | |
| Ulmaceae | <i>Trema tomentosa</i> | 山黃麻 | | | | | | | | | | | | | |
| Urticaceae | <i>Boehmeria nivea</i> | 苧麻 | | | | + | + | + | + | + | + | + | + | + | + |
| Urticaceae | <i>Pilea microphylla</i> | 透明草 | | + | + | + | | | | | | | | | |
| Urticaceae | <i>Pouzolzia zeylanica</i> | 霧水葛 | | | | | | | | | | | | | |
| Verbenaceae | <i>Vitex quinata</i> | 山牡荊 | | | | | | | | | | | | | |
| Polygonaceae | <i>Polygonum perfoliatum</i> | 杠板歸 | | + | + | + | | | | | | | | | |
| Verbenaceae | <i>Lantana camara</i> | 馬纓丹 | | + | + | + | + | + | + | + | + | + | + | + | + |
| Floating Plant | | | | | | | | | | | | | | | |
| Araceae | <i>Pistia stratiotes</i> | 大藻 | | + | + | + | + | + | + | + | + | + | + | + | + |
| Lemnaceae | <i>Lemna minor</i> | 浮萍 | | | | | | | | | | | | | |
| Submerged Plant | | | | | | | | | | | | | | | |
| Hydrocharitaceae | <i>Hydrilla verticillata</i> | 黑藻 | | + | + | + | + | + | + | + | + | + | + | + | + |
| No. of Species | | | | 61 | 62 | 62 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 80 | 80 |

Note:

“+” – Species exists in the study area

“++” – Species common in the study area

“+++” – Species abundant in study area

EN- Endangered in China

VU- Vulnerable in China

CII- Wild plant under State protection (category II)

Table 4.1. Flora species recorded along the She Shan River including riparian habitat.

| Family | Species name | Chinese name | Conservation Status | Post construction monitoring | | | | | | | | | | | |
|------------------------|-------------------------------|--------------|---------------------|------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--|
| | | | | Dec-16 | Jan-17 | Feb-17 | Mar-17 | Apr-17 | May-17 | Jun-17 | Jul-17 | Aug-17 | Sep-17 | Oct-17 | |
| Thelypteridaceae | <i>Cyclosorus parasiticus</i> | 華南毛蕨 | | + | + | + | + | + | + | + | + | + | + | + | |
| Ulmaceae | <i>Celtis sinensis</i> | 朴樹 | | + | + | + | + | + | + | + | + | + | + | + | |
| Ulmaceae | <i>Celtis timorensis</i> | 樟葉朴 | | | | | | | | | | | | | |
| Ulmaceae | <i>Trema orientalis</i> | 異色山黃麻 | | | | | | | | | | | | | |
| Ulmaceae | <i>Trema tomentosa</i> | 山黃麻 | | | | | | | | | | | | | |
| Urticaceae | <i>Boehmeria nivea</i> | 苧麻 | | + | + | + | + | + | + | + | + | + | + | + | |
| Urticaceae | <i>Pilea microphylla</i> | 透明草 | | | | | | | | | | | | | |
| Urticaceae | <i>Pouzolzia zeylanica</i> | 霧水葛 | | | | | | | | | | | | | |
| Verbenaceae | <i>Vitex quinata</i> | 山牡荊 | | | | | | | | | | | | | |
| Polygonaceae | <i>Polygonum perfoliatum</i> | 杠板歸 | | | | | | | | | | | | | |
| Verbenaceae | <i>Lantana camara</i> | 馬纓丹 | | + | + | + | + | + | + | + | + | + | + | + | |
| Floating Plant | | | | | | | | | | | | | | | |
| Araceae | <i>Pistia stratiotes</i> | 大藻 | | + | + | + | + | + | + | + | + | + | + | + | |
| Lemnaceae | <i>Lemna minor</i> | 浮萍 | | | | | | + | + | + | + | + | + | + | |
| Submerged Plant | | | | | | | | | | | | | | | |
| Hydrocharitaceae | <i>Hydrilla verticillata</i> | 黑藻 | | + | + | + | + | + | + | + | + | + | + | + | |
| No. of Species | | | | 80 | 80 | 78 | 78 | 79 | 79 | 79 | 79 | 79 | 79 | 79 | |

Note:

“+” – Species exists in the study area

“++” – Species common in the study area

“+++” – Species abundant in study area

EN- Endangered in China

VU- Vulnerable in China

CII- Wild plant under State protection (category II)

Table 4.2. Flora species recorded from belt transect survey at the She Shan River
(T1- Upper stream section, T2 - middle stream section and T3 - Lower stream section)

| Family | Species | Stream Transsect | Baseline monitoring | | | | | | | | Impact monitoring | | | | | | Impact monitoring | | | | | | Impact monitoring | | | | | |
|----------------|------------------------------------|---------------------|---------------------|----|-----------|----|-----------|-----|------------|----|-------------------|-----|------------|----|------------|----|-------------------|---|------------|-----|-----------|----|-------------------|-----|-----------|----|----|--|
| | | | Jul-08 | | | | Aug-08 | | | | Jan-09 | | | | | | Jul-09 | | | | | | Jan-10 | | | | | |
| | | | P1 | | P3 | | P1 | | P3 | | T1 | | T2 | | T3 | | T1 | | T2 | | T3 | | T1 | | T2 | | T3 | |
| Chinese name | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(cm) | % | Height(cm) | % | Height(cm) | % | Height(cm) | % | Height(cm) | % | Height(cm) | % | Height(m) | % | Height(m) | % | Height(m) | % | | |
| Commelinaceae | <i>Commelina diffusa</i> | 箭筈草 | | | 0.2 | 20 | | | 10 | 6 | 0.2 | 2 | 0.1 | 5 | 0.2 | 5 | | | 0.2 | 10 | 0.3 | 60 | | | | | | |
| Poaceae | <i>Panicum repens</i> | 枯骨草 | 0.3 | 5 | | | | | | | | | | | 0.2 | 5 | 0.6 | 5 | | | | | | | 0.6 | 25 | | |
| Asteraceae | <i>Mikania micrantha</i> | 微甘菊 | | | | | | 0.2 | 7 | | | | | | | | | | | | | | | 0.2 | 5 | | | |
| Brassicaceae | <i>Nasturtium officinale</i> | 西洋菜 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Moraceae | <i>Ficus microcarpa</i> | 細葉榕 | | | 0.7 | 5 | | | 0.6 | 7 | | | | | | | | | | | | | | | | | | |
| Moraceae | <i>Ficus hispida</i> | 對葉榕 | | | 3 | 10 | | | 3 | 10 | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Microstegium ciliatum</i> | 剛秀竹 | 0.5 | 5 | | | 0.5 | 3 | | | | | | | | | | | | | | | | | | | | |
| Fabaceae | <i>Pueraria lobata</i> | 野葛 | | | 0.3 | 5 | 0.5 | 3 | 0.3 | 5 | | | 0.2 | 5 | 0.2 | 5 | | | | | | | | | | | | |
| Araceae | <i>Colocasia esculenta</i> | 芋 | | | | | | 0.2 | 5 | | | | | | | | | | | | | | | | | | | |
| Urticaceae | <i>Boehmeria nivea</i> | 苧麻 | 1.5 | 30 | | | 2 | 7 | | | | | | | | | | | | 2 | 5 | | | | | | | |
| Asteraceae | <i>Bidens alba</i> | 白花鬼針草 | | | | | | | | | | | | | | | | | | 0.3 | 5 | 1 | 5 | | | | | |
| Poaceae | <i>Pennisetum purpureum</i> | 象草 | 3 | 50 | 1 | 60 | 3 | 80 | 2 | 60 | | | | | 4 | 40 | | | | 2 | 50 | | | | | | | |
| Poaceae | <i>Coix lacryma-jobi</i> | 薏苡 | | | | | | | | | | | | | | | | | | | 1.5 | 20 | | | | | | |
| Amaranthaceae | <i>Alternanthera philoxeroides</i> | 空心蓮子草 | 0.2 | 10 | | | 0.2 | 7 | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Panicum maximum</i> | 大黍 | | | | | | | | | | 0.5 | 5 | | | | | | | | | | | | | | | |
| Moraceae | <i>Broussonetia papyrifera</i> | 構樹 | | | | | | | | | | | | | 6 | 5 | | | | | | | | | | | | |
| Polygonaceae | <i>Polygonum chinense</i> | 火炭母 | | | | | | | | | | 0.1 | 10 | | | | | | | | | | | | | | | |
| Onagraceae | <i>Ludwigia hyssopifolia</i> | 草龍 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus sp.</i> | 莎草 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Miscanthus floridulus</i> | 五節芒 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Brachiaria mutica</i> | 巴拉草 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Blechnaceae | <i>Blechnum orientale</i> | 烏毛蕨 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum alopecuroides</i> | 狼尾草 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Alocasia macrorrhizos</i> | 海芋 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lemnaceae | <i>Lemna minor</i> | 浮萍 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Polygonaceae | <i>Polygonum hydropiper</i> | 水蓼 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus involucratus</i> | 風車草 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Onagraceae | <i>Ludwigia erecta</i> | 美洲水丁香 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Convolvulaceae | <i>Ipomoea cairica</i> | 五爪金龍 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bare Gound | | | | | | | | | | 98 | | 75 | | 30 | ## | | 95 | | 10 | | 15 | | 70 | | | ## | | |

P1 – Point count location 1; P3 – Point count location 3

Table 4.2. Flora species recorded from belt transect survey at the She Shan River
(T1 - Upper stream section, T2 - middle stream section and T3 - Lower stream section)

| Family | Species | Stream Transsect | Impact monitoring | | | | | | Impact monitoring | | | | | | Impact monitoring | | | | | | Impact monitoring | | | | | |
|----------------|------------------------------------|---------------------|-------------------|-----|-----------|-----|-----------|-----|-------------------|-----|-----------|----|-----------|-----|-------------------|-----|-----------|-------------|-----------|-----|-------------------|-----|-----------|-------------|----|-----|
| | | | Jul-10 | | | | | | Jan-11 | | | | | | Jul-11 | | | | | | Jan-12 | | | | | |
| | | | T1 | | T2 | | T3 | | T1 | | T2 | | T3 | | T1 | | T2 | | T3 | | T1 | | T2 | | T3 | |
| Chinese name | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | | |
| Commelinaceae | <i>Commelina diffusa</i> | 箭筈草 | | 0.5 | 50 | 0.5 | 50 | 0.2 | 45 | 0.2 | 10 | | | 0.2 | 5 | 0.8 | 40 | | | 0.3 | 25 | 0.3 | 40 | | | |
| Poaceae | <i>Panicum repens</i> | 枯骨草 | | | | | | 0.3 | 30 | | | | | 0.5 | 20 | | | | | | | | | | | |
| Asteraceae | <i>Mikania micrantha</i> | 微甘菊 | | | 1 | 20 | 0.3 | 5 | | | | | | 0.3 | 30 | | | | | 0.2 | 15 | | | | | |
| Brassicaceae | <i>Nasturtium officinale</i> | 西洋菜 | | | | | | 0.2 | 5 | | | | | | | | | | | | | | | | | |
| Moraceae | <i>Ficus microcarpa</i> | 細葉榕 | | | | | | | | | | | | | | | | | | | | | | | | |
| Moraceae | <i>Ficus hispida</i> | 對葉榕 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Microstegium ciliatum</i> | 剛秀竹 | | 1.5 | 30 | | | | 1.5 | 30 | | | | | 1.5 | 15 | | | | 1 | 45 | 0.8 | 5 | | | |
| Fabaceae | <i>Pueraria lobata</i> | 野葛 | | | | | | | | | 0.3 | 2 | | | | | | | | | | | | | | |
| Araceae | <i>Colocasia esculenta</i> | 芋 | | | | | | | | | | | | | | | | | | | | | | | | |
| Urticaceae | <i>Boehmeria nivea</i> | 苧麻 | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Bidens alba</i> | 白花鬼針草 | 0.5 | 5 | | | | | | | 0.5 | 2 | | | | | | Channelised | | 1 | 5 | | | Channelised | | |
| Poaceae | <i>Pennisetum purpureum</i> | 象草 | | | | | | | 1.5 | 20 | | | | | 1.5 | 15 | | | | 2.5 | 5 | 2.5 | 25 | | | |
| Poaceae | <i>Coix lacryma-jobi</i> | 薏苡 | | | | | | | | | 1 | 1 | | | | | | | | 2.5 | 2 | | | | | |
| Amaranthaceae | <i>Alternanthera philoxeroides</i> | 空心蓮子草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Panicum maximum</i> | 大黍 | 0.4 | 5 | | 1.5 | 5 | | | | 0.4 | 2 | | 1 | 15 | | | | | | | | | | | |
| Moraceae | <i>Broussonetia papyrifera</i> | 構樹 | | | | | | | | | | | | | | | | | | | | | | | | |
| Polygonaceae | <i>Polygonum chinense</i> | 火炭母 | | | | | | | | | | | | | | | | | | | | | | | | |
| Onagraceae | <i>Ludwigia hyssopifolia</i> | 草龍 | 0.4 | 5 | | | | | | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus sp.</i> | 莎草 | 0.5 | 5 | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Miscanthus floridulus</i> | 五節芒 | | 1.5 | 5 | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Brachiaria mutica</i> | 巴拉草 | | | | | | | | | | | | 1.5 | 20 | | | | | | | | 1 | 15 | | |
| Blechnaceae | <i>Blechnum orientale</i> | 烏毛蕨 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum alopecuroides</i> | 狼尾草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Alocasia macrorrhizos</i> | 海芋 | | | | | | | | | | | | | | | | | | | | | | | | |
| Lemnaceae | <i>Lemna minor</i> | 浮萍 | | | | | | | | | | | | | | | | | | | | | | | | |
| Polygonaceae | <i>Polygonum hydropiper</i> | 水蓼 | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus involucratus</i> | 風車草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Onagraceae | <i>Ludwigia erecta</i> | 美洲水丁香 | | | | | | | | | | | | | | | | | | | | | | | | |
| Convolvulaceae | <i>Ipomoea cairica</i> | 五爪金龍 | | | | | | | | | | | | | | | | | | | | | | | | |
| Bare Gound | | | | 80 | | 15 | | 25 | | 15 | | 40 | | 93 | | 30 | | 10 | | ## | | 3 | | 15 | | 100 |

P1 – Point count location 1; P3 – Point count location 3

Table 4.2. Flora species recorded from belt transect survey at the She Shan River
(T1- Upper stream section, T2 - middle stream section and T3 - Lower stream section)

| Family | Species | Stream Transsect | Impact monitoring | | | | | | Impact monitoring | | | | | | Impact monitoring | | | | | | Post construction monitoring | | | | | |
|----------------|------------------------------------|---------------------|-------------------|----|-----------|-----|-----------|----|-------------------|----|-----------|----|-----------|-----|-------------------|----|-----------|----|-----------|-----|------------------------------|----|-----|----|----|----|
| | | | Jul-12 | | | | | | Jul-13 | | | | | | Dec-13 | | | | | | Jan-14 | | | | | |
| | | | T1 | | T2 | | T3 | | T1 | | T2 | | T3 | | T1 | | T2 | | T3 | | T1 | | T2 | | T3 | |
| Chinese name | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | | | | |
| Commelinaceae | <i>Commelina diffusa</i> | 箭筈草 | 0.3 | 2 | 0.3 | 30 | 0.3 | 20 | 0.3 | 15 | 0.3 | 5 | 0.1 | 10 | 0.5 | 30 | 0.1 | 1 | 0.2 | 15 | 0.5 | 30 | 0.2 | 1 | | |
| Poaceae | <i>Panicum repens</i> | 枯骨草 | | | | | | | | | | | | | | | 0.2 | 1 | | | | | 0.2 | 1 | | |
| Asteraceae | <i>Mikania micrantha</i> | 微甘菊 | 0.2 | 2 | | | | | | | | | 0.1 | 10 | | | 0.2 | 1 | 0.1 | 10 | | | 0.2 | 1 | | |
| Brassicaceae | <i>Nasturtium officinale</i> | 西洋菜 | | | | | | | | | | | | | | | | | | | | | | | | |
| Moraceae | <i>Ficus microcarpa</i> | 細葉榕 | | | | | | | | | | | | | | | | | | | | | | | | |
| Moraceae | <i>Ficus hispida</i> | 對葉榕 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Microstegium ciliatum</i> | 剛秀竹 | | | 0.8 | 30 | | | | | 0.8 | 35 | | | | | | | | | | | | | | |
| Fabaceae | <i>Pueraria lobata</i> | 野葛 | | | | | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Colocasia esculenta</i> | 芋 | | | | | | | | | | | | | | | | | | | | | | | | |
| Urticaceae | <i>Boehmeria nivea</i> | 苧麻 | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Bidens alba</i> | 白花鬼針草 | | | | | 0.3 | 10 | | | | | | | | | 0.3 | 1 | | | | | 0.3 | 1 | | |
| Poaceae | <i>Pennisetum purpureum</i> | 象草 | 2.5 | 1 | 2.5 | 5 | | | 2.5 | 5 | | | 1.5 | 10 | 1.5 | 10 | | | 1.5 | 10 | 1.5 | 10 | | | | |
| Poaceae | <i>Coix lacryma-jobi</i> | 薏苡 | | | | | | | | | | | | | | | | | | | | | | | | |
| Amaranthaceae | <i>Alternanthera philoxeroides</i> | 空心蓮子草 | | | | 0.1 | 5 | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Panicum maximum</i> | 大黍 | | | | | | | | | | | | | | | | | | | | | | | | |
| Moraceae | <i>Broussonetia papyrifera</i> | 構樹 | | | | | | | | | | | | | | | | | | | | | | | | |
| Polygonaceae | <i>Polygonum chinense</i> | 火炭母 | 0.2 | 2 | | | | | | | | | | | | | | | | | | | | | | |
| Onagraceae | <i>Ludwigia hyssopifolia</i> | 草龍 | | | | | | | | | | | | | | | 0.3 | 2 | | | | | 0.3 | 2 | | |
| Cyperaceae | <i>Cyperus sp.</i> | 莎草 | | | | 1 | 5 | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Miscanthus floridulus</i> | 五節芒 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Brachiaria mutica</i> | 巴拉草 | | | 1 | 15 | 1 | 10 | 1 | 20 | 1 | 50 | 1.5 | 60 | 0.8 | 20 | | | 1.5 | 60 | 0.8 | 20 | | | | |
| Blechnaceae | <i>Blechnum orientale</i> | 烏毛蕨 | | | | | | | | | | | 0.3 | 1 | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum alopecuroides</i> | 狼尾草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Alocasia macrorrhizos</i> | 海芋 | | | | | | | | | | | | | | | | | | | | | | | | |
| Lemnaceae | <i>Lemna minor</i> | 浮萍 | | | | | | | | | | | | | | | | | | | | | | | | |
| Polygonaceae | <i>Polygonum hydropiper</i> | 水蓼 | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus involucratus</i> | 風車草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Onagraceae | <i>Ludwigia erecta</i> | 美洲水丁香 | | | | | 0.8 | 3 | | | 0.5 | 5 | | 0.8 | 30 | | | | | 0.8 | 30 | | | | | |
| Convolvulaceae | <i>Ipomoea cairica</i> | 五爪金龍 | | | | | | | | | | | | | | | | | | | | | | | | |
| Bare Gound | | | | 93 | | 20 | | 50 | | 65 | | 5 | | 94 | | 10 | | 10 | | 94 | | 5 | | 10 | | 94 |

P1 – Point count location 1; P3 – Point count location 3

Table 4.2. Flora species recorded from belt transect survey at the She Shan River (T1 - Upper stream section, T2 - middle stream section and T3 - Lower stream section)

| Family | Species | Chinese name | Post construction monitoring | | | | | | Post construction monitoring | | | | | | Post construction monitoring | | | | | | Post construction monitoring | | | | | |
|----------------|------------------------------------|--------------|------------------------------|-----------|--------|-----------|-----|-----------|------------------------------|-----------|-----|-----------|-----|-----------|------------------------------|-----------|-----|-----------|-----|-----------|------------------------------|-----------|-----|-----------|-----|----|
| | | | Stream | | Feb-14 | | T3 | | T1 | | T2 | | T3 | | T1 | | T2 | | T3 | | T1 | | T2 | | T3 | |
| | | | Transsect | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Commelinaceae | <i>Commelina diffusa</i> | 箭筈草 | 0.2 | 20 | 0.5 | 30 | 0.2 | 5 | 0.3 | 20 | 0.5 | 35 | 0.3 | 6 | 0.5 | 30 | | | 0.5 | 20 | | | | | | |
| Poaceae | <i>Panicum repens</i> | 枯骨草 | | | | | 0.2 | 1 | | | | | 0.4 | 1 | | | | | | | | | | | | |
| Asteraceae | <i>Mikania micrantha</i> | 薇甘菊 | 0.1 | 10 | | | 0.2 | 1 | 0.1 | 10 | | | 0.2 | 1 | 0.3 | 10 | 0.3 | 10 | 0.3 | 1 | 0.3 | 10 | 0.3 | 10 | 0.3 | 1 |
| Brassicaceae | <i>Nasturtium officinale</i> | 西洋菜 | | | | | | | | | | | | | 0.3 | 20 | | | 0.3 | 5 | 0.3 | 5 | | | 0.3 | 5 |
| Moraceae | <i>Ficus microcarpa</i> | 細葉榕 | | | | | | | | | | | | | | | | | | | | | | | | |
| Moraceae | <i>Ficus hispida</i> | 對葉榕 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Microstegium ciliatum</i> | 剛秀竹 | | | | | | | | | | | | | | | | | | | | | | | | |
| Fabaceae | <i>Pueraria lobata</i> | 野葛 | | | | | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Colocasia esculenta</i> | 芋 | | | | | | | | | | | | | | | | | | | | | | | | |
| Urticaceae | <i>Boehmeria nivea</i> | 苧麻 | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Bidens alba</i> | 白花鬼針草 | | | | | 0.4 | 1 | | | | | 0.4 | 1 | | | 0.3 | 5 | 0.8 | 1 | | | 0.3 | 5 | 0.8 | 1 |
| Poaceae | <i>Pennisetum purpureum</i> | 象草 | 1.5 | 10 | 1.5 | 10 | | | 1.5 | 5 | 1.5 | 5 | | | | | | | | | | | | | | |
| Poaceae | <i>Coix lacryma-jobi</i> | 薏苡 | | | | | | | | | | | | | | | 0.8 | 1 | | | | | 0.8 | 1 | | |
| Amaranthaceae | <i>Alternanthera philoxeroides</i> | 空心蓮子草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Panicum maximum</i> | 大黍 | | | | | | | | | | | | | | | | | | | | | | | | |
| Moraceae | <i>Broussonetia papyrifera</i> | 構樹 | | | | | | | | | | | | | | | | | | | | | | | | |
| Polygonaceae | <i>Polygonum chinense</i> | 火炭母 | | | | | | | | | | | | | | | | | | | | | | | | |
| Onagraceae | <i>Ludwigia hyssopifolia</i> | 草龍 | | | | | 0.4 | 1 | | | | | 0.4 | 1 | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus sp.</i> | 莎草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Miscanthus floridulus</i> | 五節芒 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Brachiaria mutica</i> | 巴拉草 | 1.5 | 55 | 0.8 | 25 | | | 1.5 | 60 | 0.8 | 30 | | | 1.5 | 50 | 1 | 50 | | | 1.5 | 40 | 1 | 40 | | |
| Blechnaceae | <i>Blechnum orientale</i> | 烏毛蕨 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum alopecuroides</i> | 狼尾草 | | | | | | | | | | | | | 2 | 20 | | | | 2 | 15 | | | | | |
| Araceae | <i>Alocasia macrorrhizos</i> | 海芋 | | | | | | | | | | | | | | | | | 0.8 | 1 | | | | 0.8 | 1 | |
| Lemnaceae | <i>Lemna minor</i> | 浮萍 | | | | | | | | | | | | | | | N.A | 5 | | | | | N.A | 5 | | |
| Polygonaceae | <i>Polygonum hydropiper</i> | 水蓼 | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus involucratus</i> | 風車草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Onagraceae | <i>Ludwigia erecta</i> | 美洲水丁香 | | | 0.8 | 30 | | | | | 0.8 | 25 | | | | | | | | 1 | 2 | | | 1 | 2 | |
| Convolvulaceae | <i>Ipomoea cairica</i> | 五爪金龍 | | | | | | | | | | | | | | | | | | | | | | | | |
| Bare Gound | | | | 5 | | 5 | | 91 | | 5 | | 5 | | 90 | | 0 | | 5 | | 84 | | 30 | | 25 | | 84 |

P1 – Point count location 1; P3 – Point count location 3

Table 4.2. Flora species recorded from belt transect survey at the She Shan River

(T1 - Upper stream section, T2 - middle stream section and T3 - Lower stream section)

| Family | Species | Stream Transsect | Post construction monitoring | | | | | | Post construction monitoring | | | | | | Post construction monitoring | | | | | | Post construction monitoring | | | | | |
|----------------|------------------------------------|---------------------|------------------------------|----|-----------|----|-----------|----|------------------------------|----|-----------|----|-----------|----|------------------------------|----|-----------|----|-----------|----|------------------------------|----|-----------|----|-----|----|
| | | | Jun-14 | | | | | | Jul-14 | | | | | | Aug-14 | | | | | | Sep-14 | | | | | |
| | | | T1 | | T2 | | T3 | | T1 | | T2 | | T3 | | T1 | | T2 | | T3 | | T1 | | T2 | | T3 | |
| Chinese name | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | | |
| Commelinaceae | <i>Commelina diffusa</i> | 箭筈草 | | | 0.5 | 25 | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Panicum repens</i> | 枯骨草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Mikania micrantha</i> | 薇甘菊 | 0.3 | 10 | 0.3 | 10 | 0.3 | 1 | 0.3 | 10 | 0.3 | 10 | 0.3 | 2 | 0.3 | 12 | 0.3 | 12 | 0.3 | 5 | 0.3 | 12 | 0.3 | 12 | 0.3 | 5 |
| Brassicaceae | <i>Nasturtium officinale</i> | 西洋菜 | 0.3 | 5 | | | 0.3 | 5 | 0.3 | 2 | | | 0.3 | 2 | 0.3 | 1 | | | 0.3 | 1 | 0.3 | 1 | | | 0.3 | 1 |
| Moraceae | <i>Ficus microcarpa</i> | 細葉榕 | | | | | | | | | | | | | | | | | | | | | | | | |
| Moraceae | <i>Ficus hispida</i> | 對葉榕 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Microstegium ciliatum</i> | 剛秀竹 | | | | | | | | | | | | | | | | | | | | | | | | |
| Fabaceae | <i>Pueraria lobata</i> | 野葛 | | | | | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Colocasia esculenta</i> | 芋 | | | | | | | | | | | | | | | | | | | | | | | | |
| Urticaceae | <i>Boehmeria nivea</i> | 苧麻 | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Bidens alba</i> | 白花鬼針草 | | | 0.3 | 5 | 0.8 | 1 | | | 0.3 | 5 | 0.8 | 2 | | | 0.3 | 5 | 0.8 | 5 | | | 0.5 | 5 | 0.8 | 5 |
| Poaceae | <i>Pennisetum purpureum</i> | 象草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Coix lacryma-jobi</i> | 薏苡 | | | | | 0.8 | 1 | | | | | 0.8 | 1 | | | | | 1.2 | 1 | | | | | 1.5 | 1 |
| Amaranthaceae | <i>Alternanthera philoxeroides</i> | 空心蓮子草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Panicum maximum</i> | 大黍 | | | | | | | | | | | | | | | | | | | | | | | | |
| Moraceae | <i>Broussonetia papyrifera</i> | 構樹 | | | | | | | | | | | | | | | | | | | | | | | | |
| Polygonaceae | <i>Polygonum chinense</i> | 火炭母 | | | | | | | | | | | | | | | | | | | | | | | | |
| Onagraceae | <i>Ludwigia hyssopifolia</i> | 草龍 | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus sp.</i> | 莎草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Miscanthus floridulus</i> | 五節芒 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Brachiaria mutica</i> | 巴拉草 | 1.5 | 45 | 1 | 45 | | | 1.5 | 45 | 1 | 45 | | | 1.5 | 50 | 1 | 50 | | | 1.5 | 50 | 1 | 50 | | |
| Blechnaceae | <i>Blechnum orientale</i> | 烏毛蕨 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum alopecuroides</i> | 狼尾草 | 2 | 15 | | | | | 2 | 12 | | | | | 2 | 10 | | | | | 2 | 10 | | | | |
| Araceae | <i>Alocasia macrorrhizos</i> | 海芋 | | | | | 0.8 | 1 | | | | | 0.8 | 1 | | | | | 0.8 | 1 | | | | | 0.8 | 1 |
| Lemnaceae | <i>Lemna minor</i> | 浮萍 | | | | | N.A | 5 | | | | | N.A | 1 | | | | | N.A | 1 | | | | | N.A | 1 |
| Polygonaceae | <i>Polygonum hydropiper</i> | 水蓼 | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus involucratus</i> | 風車草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Onagraceae | <i>Ludwigia erecta</i> | 美洲水丁香 | | | | | 1 | 2 | | | | | 1 | 4 | | | | | 1 | 6 | | | | | 1 | 6 |
| Convolvulaceae | <i>Ipomoea cairica</i> | 五爪金龍 | | | | | | | | | | | | | | | | | | | | | | | | |
| Bare Gound | | | | 25 | | 15 | | 84 | | 31 | | 15 | | 87 | | 27 | | 8 | | 80 | | 27 | | 8 | | 80 |

P1 – Point count location 1; P3 – Point count location 3

Table 4.2. Flora species recorded from belt transect survey at the She Shan River
(T1- Upper stream section,T2 - middle stream section and T3 - Lower stream section)

| Family | Species | Stream Transect | Post construction monitoring | | | | | | | | | Post construction monitoring | | | | | | | | | Post construction monitoring | | | | | | | | | Post construction monitoring | | | | | | | | |
|----------------|------------------------------------|--------------------|------------------------------|----|-----------|--------|-----------|----|-----------|----|-----------|------------------------------|-----------|----|-----------|-----|-----------|--------|-----------|----|------------------------------|----|-----------|--------|-----------|----|-----------|----|----|------------------------------|--|--|--|--|--|--|--|--|
| | | | Oct-14 | | | Nov-14 | | | Dec-14 | | | Jan-15 | | | Jan-15 | | | Jan-15 | | | Jan-15 | | | Jan-15 | | | Jan-15 | | | | | | | | | | | |
| | | | T1 | T2 | T3 | T1 | T2 | T3 | T1 | T2 | T3 | T1 | T2 | T3 | T1 | T2 | T3 | T1 | T2 | T3 | T1 | T2 | T3 | T1 | T2 | T3 | T1 | T2 | T3 | | | | | | | | | |
| Chinese name | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | | | | | | | | | | |
| Commelinaceae | <i>Commelina diffusa</i> | 箭筈草 | 1 | 10 | 1 | 50 | 0.1 | 2 | 1 | 10 | 1 | 50 | 0.1 | 2 | 1 | 10 | 1 | 50 | 0.1 | 2 | 0.5 | 10 | 0.8 | 70 | 0.3 | 40 | | | | | | | | | | | | |
| Poaceae | <i>Panicum repens</i> | 枯骨草 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Mikania micrantha</i> | 微甘菊 | 0.3 | 5 | 1 | 15 | 0.3 | 2 | 0.3 | 5 | 1 | 15 | 0.3 | 2 | 0.3 | 5 | 1 | 15 | 0.3 | 2 | 0.4 | 10 | 0.5 | 15 | | | | | | | | | | | | | | |
| Brassicaceae | <i>Nasturtium officinale</i> | 西洋菜 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Moraceae | <i>Ficus microcarpa</i> | 細葉榕 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Moraceae | <i>Ficus hispida</i> | 對葉榕 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Microstegium ciliatum</i> | 剛秀竹 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fabaceae | <i>Pueraria lobata</i> | 野葛 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Colocasia esculenta</i> | 芋 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Urticaceae | <i>Boehmeria nivea</i> | 苧麻 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Bidens alba</i> | 白花鬼針草 | 1 | 2 | 0.5 | 5 | 0.8 | 10 | 1 | 2 | 0.5 | 5 | 0.8 | 10 | 1 | 2 | 0.5 | 5 | 0.8 | 10 | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum purpureum</i> | 象草 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Coix lacryma-jobi</i> | 薏苡 | | | | 1.5 | 1 | | | | 1.5 | 1 | | | | 1.5 | 1 | | | | | | | | | | | | | | | | | | | | | |
| Amaranthaceae | <i>Alternanthera philoxeroides</i> | 空心蓮子草 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Panicum maximum</i> | 大黍 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Moraceae | <i>Broussonetia papyrifera</i> | 構樹 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Polygonaceae | <i>Polygonum chinense</i> | 火炭母 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Onagraceae | <i>Ludwigia hyssopifolia</i> | 草龍 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus sp.</i> | 莎草 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Miscanthus floridulus</i> | 五節芒 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Brachiaria mutica</i> | 巴拉草 | 1.8 | 65 | 1.8 | 20 | 1.5 | 5 | 1.8 | 70 | 1.8 | 25 | 1.5 | 8 | 1.8 | 70 | 1.8 | 25 | 1.5 | 8 | 1.5 | 80 | 1 | 5 | 1 | 25 | | | | | | | | | | | | |
| Blechnaceae | <i>Blechnum orientale</i> | 烏毛蕨 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum alopecuroides</i> | 狼尾草 | 2 | 15 | 3 | 5 | | | 2 | 10 | 3 | 2 | | | 2 | 10 | 3 | 2 | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Alocasia macrorrhizos</i> | 海芋 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lemnaceae | <i>Lemna minor</i> | 浮萍 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Polygonaceae | <i>Polygonum hydropiper</i> | 水蓼 | | | 1 | 3 | | | | | 1 | 1 | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus involucratus</i> | 風車草 | | | 1.7 | 2 | | | | | 1.7 | 1 | | | | | 1.7 | 1 | | | | | 1.5 | 5 | | | | | | | | | | | | | | |
| Onagraceae | <i>Ludwigia erecta</i> | 美洲水丁香 | 1.5 | 1 | | | 2 | 5 | 1.5 | 1 | | | 2 | 5 | 1.5 | 1 | | | 2 | 5 | | | | | 2 | 10 | | | | | | | | | | | | |
| Convolvulaceae | <i>Ipomoea cairica</i> | 五爪金龍 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bare Gound | | | | 2 | | 0 | | 75 | | 2 | | 1 | | 72 | | 2 | | 1 | | 72 | | 0 | | 5 | | | 25 | | | | | | | | | | | |

P1 – Point count location 1; P3 – Point count location 3

Table 4.2. Flora species recorded from belt transect survey at the She Shan River
(T1- Upper stream section, T2 - middle stream section and T3 - Lower stream section)

| Family | Species | Stream Transsect Chinese name | Post construction monitoring | | | | | | Post construction monitoring | | | | | | Post construction monitoring | | | | | | Post construction monitoring | | | | | |
|----------------|------------------------------------|-------------------------------------|------------------------------|-----------|-----|-----------|-----|-----------|------------------------------|-----------|-----|-----------|-----|-----------|------------------------------|-----------|-----|-----------|-----|-----------|------------------------------|-----------|-----|----|-----|----|
| | | | Feb-15 | | | | | | Mar-15 | | | | | | Apr-15 | | | | | | May-15 | | | | | |
| | | | T1 | | T2 | | T3 | | T1 | | T2 | | T3 | | T1 | | T2 | | T3 | | T1 | | T2 | | T3 | |
| Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | | | |
| Commelinaceae | <i>Commelina diffusa</i> | 箭筈草 | 0.6 | 10 | 1 | 70 | 0.4 | 40 | 0.6 | 10 | 1 | 70 | 0.5 | 40 | 0.6 | 10 | 1 | 70 | 0.5 | 40 | 0.3 | 5 | 0.7 | 50 | 0.5 | 25 |
| Poaceae | <i>Panicum repens</i> | 枯骨草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Mikania micrantha</i> | 薇甘菊 | 0.4 | 10 | 0.5 | 15 | | | 0.4 | 10 | 0.5 | 15 | | | 0.4 | 10 | 0.5 | 15 | | | 0.3 | 5 | 0.5 | 10 | | |
| Brassicaceae | <i>Nasturtium officinale</i> | 西洋菜 | | | | | | | | | | | | | | | | | | | | | | | | |
| Moraceae | <i>Ficus microcarpa</i> | 細葉榕 | | | | | | | | | | | | | | | | | | | | | | | | |
| Moraceae | <i>Ficus hispida</i> | 對葉榕 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Microstegium ciliatum</i> | 剛秀竹 | | | | | | | | | | | | | | | | | | | | | | | | |
| Fabaceae | <i>Pueraria lobata</i> | 野葛 | | | | | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Colocasia esculenta</i> | 芋 | | | | | | | | | | | | | | | | | | | | | | | | |
| Urticaceae | <i>Boehmeria nivea</i> | 苧麻 | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Bidens alba</i> | 白花鬼針草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum purpureum</i> | 象草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Coix lacryma-jobi</i> | 薏苡 | | | | | | | | | | | | | | | | | | | | | | | | |
| Amaranthaceae | <i>Alternanthera philoxeroides</i> | 空心蓮子草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Panicum maximum</i> | 大黍 | | | | | | | | | | | | | | | | | | | | | | | | |
| Moraceae | <i>Broussonetia papyrifera</i> | 構樹 | | | | | | | | | | | | | | | | | | | | | | | | |
| Polygonaceae | <i>Polygonum chinense</i> | 火炭母 | | | | | | | | | | | | | | | | | | | | | | | | |
| Onagraceae | <i>Ludwigia hyssopifolia</i> | 草龍 | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus sp.</i> | 莎草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Miscanthus floridulus</i> | 五節芒 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Brachiaria mutica</i> | 巴拉草 | 1.5 | 80 | 1.3 | 5 | 1.3 | 25 | 1.5 | 80 | 1.3 | 5 | 1.3 | 25 | 1.5 | 80 | 1.4 | 5 | 1.4 | 25 | 1.5 | 40 | 1.2 | 5 | 1.2 | 15 |
| Blechnaceae | <i>Blechnum orientale</i> | 烏毛蕨 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum alopecuroides</i> | 狼尾草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Alocasia macrorrhizos</i> | 海芋 | | | | | | | | | | | | | | | | | | | | | | | | |
| Lemnaceae | <i>Lemna minor</i> | 浮萍 | | | | | | | | | | | | | | | | | | | | | | | | |
| Polygonaceae | <i>Polygonum hydropiper</i> | 水蓼 | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus involucratus</i> | 風車草 | | | 1.5 | 5 | | | | | 1.5 | 5 | | | 1.5 | 5 | | | | | 1.4 | 5 | | | | |
| Onagraceae | <i>Ludwigia erecta</i> | 美洲水丁香 | | | | | 2 | 10 | | | | | 2 | 10 | | | | | 2 | 10 | | | | | 1.6 | 5 |
| Convolvulaceae | <i>Ipomoea cairica</i> | 五爪金龍 | | | | | | | | | | | | | | | | | | | | | | | | |
| Bare Gound | | | | 0 | | 5 | | 25 | | 0 | | 5 | | 25 | | 0 | | 5 | | 25 | | 50 | | 30 | | 55 |

P1 – Point count location 1; P3 – Point count location 3

Table 4.2. Flora species recorded from belt transect survey at the She Shan River
(T1- Upper stream section, T2 - middle stream section and T3 - Lower stream section)

| Family | Species | Stream Transsect | Post construction monitoring | | | | | | | | Post construction monitoring | | | | | | | | Post construction monitoring | | | | | | | | Post construction monitoring | | | | | | | |
|----------------|------------------------------------|---------------------|------------------------------|----|-----------|----|-----------|----|-----------|----|------------------------------|----|-----------|----|-----------|----|-----------|----|------------------------------|----|-----------|----|-----------|----|-----|----|------------------------------|--|--|--|--|--|--|--|
| | | | Jun-15 | | | | Jul-15 | | | | Aug-15 | | | | Sep-15 | | | | | | | | | | | | | | | | | | | |
| | | | T1 | | T2 | | T3 | | T1 | | T2 | | T3 | | T1 | | T2 | | T3 | | T1 | | T2 | | T3 | | | | | | | | | |
| Chinese name | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | | | | | | | | | | |
| Commelinaceae | <i>Commelina diffusa</i> | 箭筈草 | 0.3 | 5 | 0.7 | 50 | 0.5 | 25 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Panicum repens</i> | 枯骨草 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Mikania micrantha</i> | 微甘菊 | 0.3 | 5 | 0.5 | 10 | | | 0.4 | 10 | 0.4 | 10 | | | 0.5 | 10 | 0.4 | 5 | | | 0.5 | 10 | 0.4 | 5 | | | | | | | | | | |
| Brassicaceae | <i>Nasturtium officinale</i> | 西洋菜 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Moraceae | <i>Ficus microcarpa</i> | 細葉榕 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Moraceae | <i>Ficus hispida</i> | 對葉榕 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Microstegium ciliatum</i> | 剛秀竹 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fabaceae | <i>Pueraria lobata</i> | 野葛 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Colocasia esculenta</i> | 芋 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Urticaceae | <i>Boehmeria nivea</i> | 苧麻 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Bidens alba</i> | 白花鬼針草 | | | | | | | 0.9 | 15 | | | 0.3 | 2 | 0.9 | 15 | | | 0.5 | 2 | 0.9 | 15 | | | 0.5 | 2 | | | | | | | | |
| Poaceae | <i>Pennisetum purpureum</i> | 象草 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Coix lacryma-jobi</i> | 薏苡 | | | | | | | 1 | 2 | | | | | 1 | 2 | | | | | 1 | 2 | | | | | | | | | | | | |
| Amaranthaceae | <i>Alternanthera philoxeroides</i> | 空心蓮子草 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Panicum maximum</i> | 大黍 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Moraceae | <i>Broussonetia papyrifera</i> | 構樹 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Polygonaceae | <i>Polygonum chinense</i> | 火炭母 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Onagraceae | <i>Ludwigia hyssopifolia</i> | 草龍 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus sp.</i> | 莎草 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Miscanthus floridulus</i> | 五節芒 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Brachiaria mutica</i> | 巴拉草 | 1.5 | 45 | 1.2 | 10 | 1.2 | 20 | 0.8 | 60 | 1 | 50 | 0.8 | 10 | 0.9 | 60 | 1 | 35 | 0.9 | 10 | 0.9 | 60 | 1 | 38 | 0.9 | 10 | | | | | | | | |
| Blechnaceae | <i>Blechnum orientale</i> | 烏毛蕨 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum alopecuroides</i> | 狼尾草 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Alocasia macrorrhizos</i> | 海芋 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lemnaceae | <i>Lemna minor</i> | 浮萍 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Polygonaceae | <i>Polygonum hydropiper</i> | 水蓼 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus involucratus</i> | 風車草 | | | 1.4 | 5 | | | | | 1.2 | 5 | | | 1.2 | 5 | | | | | 1.2 | 5 | | | | | | | | | | | | |
| Onagraceae | <i>Ludwigia erecta</i> | 美洲水丁香 | | | | | 1.6 | 5 | | | | | 1.5 | 50 | | | 1.5 | 50 | | | | | 1.5 | 50 | | | | | | | | | | |
| Convolvulaceae | <i>Ipomoea cairica</i> | 五爪金龍 | | | | | | | | | 0.3 | 5 | | | 0.3 | 5 | | | | | 0.3 | 5 | | | | | | | | | | | | |
| Bare Gound | | | | 45 | | 25 | | 50 | | 13 | | 10 | | 38 | | 13 | | 40 | | 38 | | 13 | | 35 | | 38 | | | | | | | | |

P1 – Point count location 1; P3 – Point count location 3

Table 4.2. Flora species recorded from belt transect survey at the She Shan River
(T1- Upper stream section, T2 - middle stream section and T3 - Lower stream section)

| Family | Species | Chinese name | Post construction monitoring | | | | | | Post construction monitoring | | | | | | Post construction monitoring | | | | | | Post construction monitoring | | | | | |
|----------------|------------------------------------|--------------|------------------------------|----|-----------|----|-----------|----|------------------------------|----|-----------|----|-----------|----|------------------------------|----|-----------|----|-----------|-----|------------------------------|-----|-----------|----|-----------|----|
| | | | Stream | | Oct-15 | | T3 | | T1 | | T2 | | T3 | | T1 | | T2 | | T3 | | T1 | | T2 | | T3 | |
| | | | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % |
| Commelinaceae | <i>Commelina diffusa</i> | 箭筈草 | | | 0.3 | 17 | 0.2 | 10 | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Panicum repens</i> | 枯骨草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Mikania micrantha</i> | 薇甘菊 | 0.5 | 10 | 0.4 | 20 | | | 0.5 | 10 | 0.4 | 20 | | | 0.5 | 10 | 0.5 | 10 | | | 0.5 | 10 | 0.5 | 5 | | |
| Brassicaceae | <i>Nasturtium officinale</i> | 西洋菜 | | | | | | | | | | | | | | | | | | | | | 0.3 | 10 | | |
| Moraceae | <i>Ficus microcarpa</i> | 細葉榕 | | | | | | | | | | | | | | | | | | | | | | | | |
| Moraceae | <i>Ficus hispida</i> | 對葉榕 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Microstegium ciliatum</i> | 剛秀竹 | | | | | | | | | | | | | | | | | | | | | | | | |
| Fabaceae | <i>Pueraria lobata</i> | 野葛 | | | | | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Colocasia esculenta</i> | 芋 | | | | | | | | | | | | | | | | | | | | | | | | |
| Urticaceae | <i>Boehmeria nivea</i> | 苧麻 | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Bidens alba</i> | 白花鬼針草 | 0.9 | 30 | | | | | 0.9 | 30 | | | | | 1 | 30 | | | | | 1 | 30 | | | | |
| Poaceae | <i>Pennisetum purpureum</i> | 象草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Coix lacryma-jobi</i> | 薏苡 | 1 | 2 | | | | | 1 | 2 | | | | | 1 | 2 | | | | | 1 | 2 | | | | |
| Amaranthaceae | <i>Alternanthera philoxeroides</i> | 空心蓮子草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Panicum maximum</i> | 大黍 | | | | | | | | | | | | | | | | | | | | | | | | |
| Moraceae | <i>Broussonetia papyrifera</i> | 構樹 | | | | | | | | | | | | | | | | | | | | | | | | |
| Polygonaceae | <i>Polygonum chinense</i> | 火炭母 | | | | | | | | | | | | | | | | | | | | | | | | |
| Onagraceae | <i>Ludwigia hyssopidolia</i> | 草龍 | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus sp.</i> | 莎草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Miscanthus floridulus</i> | 五節芒 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Brachiaria mutica</i> | 巴拉草 | 0.3 | 30 | 1 | 15 | 0.9 | 1 | 0.3 | 30 | 1 | 15 | 0.9 | 1 | 0.3 | 30 | 1 | 5 | 1 | 1 | 0.3 | 15 | 1 | 5 | 1 | 5 |
| Blechnaceae | <i>Blechnum orientale</i> | 烏毛蕨 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum alopecuroides</i> | 狼尾草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Alocasia macrorrhizos</i> | 海芋 | | | | | | | | | | | | | | | | | | | | | | | | |
| Lemnaceae | <i>Lemna minor</i> | 浮萍 | | | | | | | | | | | | | | | | | | | | | | | | |
| Polygonaceae | <i>Polygonum hydropiper</i> | 水蓼 | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus involucratus</i> | 風車草 | | | 1.2 | 5 | 0.4 | 2 | | | 1.2 | 5 | 0.4 | 2 | | | 1.2 | 5 | 0.4 | 2 | | | 1.2 | 5 | 0.4 | 2 |
| Onagraceae | <i>Ludwigia erecta</i> | 美洲水丁香 | | | | | 0.3 | 15 | | | | | 0.3 | 15 | | | | | | 0.3 | 5 | | | | 0.3 | 5 |
| Convolvulaceae | <i>Ipomoea cairica</i> | 五爪金龍 | | | 0.3 | 5 | | | | | 0.3 | 5 | | | | | 0.3 | 5 | | | | 0.3 | 5 | | | |
| Bare Gound | | | | 28 | | 43 | | 72 | | 28 | | 43 | | 72 | | 28 | | 70 | | 87 | | 43 | | 70 | | 83 |

P1 – Point count location 1; P3 – Point count location 3

Table 4.2. Flora species recorded from belt transect survey at the She Shan River

(T1- Upper stream section, T2 - middle stream section and T3 - Lower stream section)

| Family | Species | Stream Transsect | Post construction monitoring | | | | | | Post construction monitoring | | | | | | Post construction monitoring | | | | | | Post construction monitoring | | | | | |
|----------------|------------------------------------|---------------------|------------------------------|----|-----------|----|-----------|----|------------------------------|----|-----------|----|-----------|----|------------------------------|----|-----------|----|-----------|----|------------------------------|----|-----------|-----|-----|----|
| | | | Feb-16 | | | | | | Mar-16 | | | | | | Apr-16 | | | | | | May-16 | | | | | |
| | | | T1 | | T2 | | T3 | | T1 | | T2 | | T3 | | T1 | | T2 | | T3 | | T1 | | T2 | | T3 | |
| Chinese name | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | | |
| Commelinaceae | <i>Commelina diffusa</i> | 箭筈草 | | | 0.3 | 5 | 0.2 | 5 | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Panicum repens</i> | 枯骨草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Mikania micrantha</i> | 薇甘菊 | 0.5 | 10 | 0.5 | 5 | | | 0.5 | 10 | 0.5 | 5 | | | 0.5 | 10 | 0.5 | 10 | | | 0.5 | 10 | 0.5 | 8 | | |
| Brassicaceae | <i>Nasturtium officinale</i> | 西洋菜 | | | 0.3 | 10 | | | | | 0.3 | 10 | | | | | 0.3 | 10 | | | | | 0.3 | 8 | | |
| Moraceae | <i>Ficus microcarpa</i> | 細葉榕 | | | | | | | | | | | | | | | | | | | | | | | | |
| Moraceae | <i>Ficus hispida</i> | 對葉榕 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Microstegium ciliatum</i> | 剛秀竹 | | | | | | | | | | | | | | | | | | | | | | | | |
| Fabaceae | <i>Pueraria lobata</i> | 野葛 | | | | | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Colocasia esculenta</i> | 芋 | | | | | | | | | | | | | | | | | | | | | | | | |
| Urticaceae | <i>Boehmeria nivea</i> | 苧麻 | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Bidens alba</i> | 白花鬼針草 | 1 | 30 | | | | | 1 | 35 | | | | | 1 | 35 | | | | | 1 | 15 | | | | |
| Poaceae | <i>Pennisetum purpureum</i> | 象草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Coix lacryma-jobi</i> | 薏苡 | 1 | 2 | | | | | 1 | 2 | | | | | 1 | 2 | | | | | 1 | 10 | | | | |
| Amaranthaceae | <i>Alternanthera philoxeroides</i> | 空心蓮子草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Panicum maximum</i> | 大黍 | | | | | | | | | | | | | | | | | | | | | | | | |
| Moraceae | <i>Broussonetia papyrifera</i> | 構樹 | | | | | | | | | | | | | | | | | | | | | | | | |
| Polygonaceae | <i>Polygonum chinense</i> | 火炭母 | | | | | | | | | | | | | | | | | | | | | | | | |
| Onagraceae | <i>Ludwigia hyssopifolia</i> | 草龍 | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus sp.</i> | 莎草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Miscanthus floridulus</i> | 五節芒 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Brachiaria mutica</i> | 巴拉草 | 0.3 | 15 | 1 | 5 | 1 | 5 | 0.3 | 15 | 1 | 5 | 1 | 5 | 0.3 | 15 | 1 | 5 | 1 | 5 | 0.3 | 15 | 1 | 5 | 1 | 10 |
| Blechnaceae | <i>Blechnum orientale</i> | 烏毛蕨 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum alopecuroides</i> | 狼尾草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Alocasia macrorrhizos</i> | 海芋 | | | | | | | | | | | | | | | | | | | | | | | | |
| Lemnaceae | <i>Lemna minor</i> | 浮萍 | | | | | | | | | | | | | | | | | | | | | | | | |
| Polygonaceae | <i>Polygonum hydropiper</i> | 水蓼 | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus involucratus</i> | 風車草 | | | 1.2 | 5 | 0.4 | 2 | | | 1.2 | 5 | 0.4 | 2 | | | 1.2 | 5 | 0.4 | 2 | | | 1.2 | 5 | 0.4 | 5 |
| Onagraceae | <i>Ludwigia erecta</i> | 美洲水丁香 | | | | | 0.3 | 5 | | | | | 0.3 | 5 | | | | | 0.3 | 5 | | | | 0.3 | 5 | |
| Convolvulaceae | <i>Ipomoea cairica</i> | 五爪金龍 | | | 0.3 | 5 | | | | | 0.3 | 5 | | | | | 0.3 | 5 | | | | | 0.3 | 5 | | |
| Bare Gound | | | | 43 | | 70 | | 83 | | 38 | | 70 | | 83 | | 38 | | 60 | | 83 | | 50 | | 69 | | 72 |

P1 – Point count location 1; P3 – Point count location 3

Table 4.2. Flora species recorded from belt transect survey at the She Shan River

(T1- Upper stream section, T2 - middle stream section and T3 - Lower stream section)

| | | Post construction monitoring | | | | | | |
|----------------|------------------------------------|------------------------------|-----------|----|-----------|----|-----------|----|
| | | Stream | Jun-16 | | | | | |
| | | Transect | T1 | | T2 | | T3 | |
| Family | Species | Chinese name | Height(m) | % | Height(m) | % | Height(m) | % |
| Commelinaceae | <i>Commelina diffusa</i> | 箭筈草 | | | 0.3 | 5 | 0.2 | 8 |
| Poaceae | <i>Panicum repens</i> | 枯骨草 | | | | | | |
| Asteraceae | <i>Mikania micrantha</i> | 薇甘菊 | 0.5 | 10 | 0.5 | 8 | | |
| Brassicaceae | <i>Nasturtium officinale</i> | 西洋菜 | | | 0.3 | 8 | | |
| Moraceae | <i>Ficus microcarpa</i> | 細葉榕 | | | | | | |
| Moraceae | <i>Ficus hispida</i> | 對葉榕 | | | | | | |
| Poaceae | <i>Microstegium ciliatum</i> | 剛秀竹 | | | | | | |
| Fabaceae | <i>Pueraria lobata</i> | 野葛 | | | | | | |
| Araceae | <i>Colocasia esculenta</i> | 芋 | | | | | | |
| Urticaceae | <i>Boehmeria nivea</i> | 苧麻 | | | | | | |
| Asteraceae | <i>Bidens alba</i> | 白花鬼針草 | 1 | 15 | | | | |
| Poaceae | <i>Pennisetum purpureum</i> | 象草 | | | | | | |
| Poaceae | <i>Coix lacryma-jobi</i> | 薏苡 | 1 | 10 | | | | |
| Amaranthaceae | <i>Alternanthera philoxeroides</i> | 空心蓮子草 | | | | | | |
| Poaceae | <i>Panicum maximum</i> | 大黍 | | | | | | |
| Moraceae | <i>Broussonetia papyrifera</i> | 構樹 | | | | | | |
| Polygonaceae | <i>Polygonum chinense</i> | 火炭母 | | | | | | |
| Onagraceae | <i>Ludwigia hyssopifolia</i> | 草龍 | | | | | | |
| Cyperaceae | <i>Cyperus sp.</i> | 莎草 | | | | | | |
| Poaceae | <i>Miscanthus floridulus</i> | 五節芒 | | | | | | |
| Poaceae | <i>Brachiaria mutica</i> | 巴拉草 | 0.3 | 15 | 1 | 5 | 1 | 10 |
| Blechnaceae | <i>Blechnum orientale</i> | 烏毛蕨 | | | | | | |
| Poaceae | <i>Pennisetum alopecuroides</i> | 狼尾草 | | | | | | |
| Araceae | <i>Alocasia macrorrhizos</i> | 海芋 | | | | | | |
| Lemnaceae | <i>Lemna minor</i> | 浮萍 | | | | | | |
| Polygonaceae | <i>Polygonum hydropiper</i> | 水蓼 | | | | | | |
| Cyperaceae | <i>Cyperus involucratus</i> | 風車草 | | | 1.2 | 5 | 0.4 | 5 |
| Onagraceae | <i>Ludwigia erecta</i> | 美洲水丁香 | | | | | 0.3 | 5 |
| Convolvulaceae | <i>Ipomoea cairica</i> | 五爪金龍 | | | 0.3 | 5 | | |
| Bare Gound | | | | 50 | | 69 | | 72 |

P1 – Point count location 1; P3 – Point count location 3

Table 4.2 (Continuous). Flora species recorded from belt transect survey at the She Shan River

(T1- Upper stream section, T2 - middle stream section and T3 - Lower stream section)

| Family | Species | Chinese name | Post construction monitoring | | | | | | | | | Post construction monitoring | | | | | | | | | |
|----------------|------------------------------------|--------------|------------------------------|----|-----|-----------|-----|-----|-----------|-----|-----|------------------------------|-----|-----|-----------|----|-----|-----------|-----|----|----|
| | | | Transect | | | Jul-16 | | | Aug-16 | | | Sep-16 | | | T3 | | | | | | |
| | | | Height(m) | % | | Height(m) | % | | Height(m) | % | | Height(m) | % | | Height(m) | % | | Height(m) | % | | |
| Commelinaceae | <i>Commelina diffusa</i> | 節節草 | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Panicum repens</i> | 枯骨草 | | | 0.3 | 5 | 0.2 | 8 | | | 0.3 | 5 | 0.2 | 8 | | | 0.5 | 15 | 0.3 | 8 | |
| Asteraceae | <i>Mikania micrantha</i> | 薇甘菊 | | | | | | | | | | | | | | | | | | | |
| Brassicaceae | <i>Nasturtium officinale</i> | 西洋菜 | | | | | | 0.5 | 3 | 0.5 | 5 | | | | | | | | | | |
| Moraceae | <i>Ficus microcarpa</i> | 細葉榕 | | | 0.3 | 5 | | | | 0.3 | 5 | | | | | | | | | | |
| Moraceae | <i>Ficus hispida</i> | 對葉榕 | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Microstegium ciliatum</i> | 剛秀竹 | | | 0.3 | 5 | 0.3 | 15 | | | 0.3 | 5 | 0.3 | 15 | | | 0.4 | 10 | 0.4 | 15 | |
| Fabaceae | <i>Pueraria lobata</i> | 野葛 | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Colocasia esculenta</i> | 芋 | | | | | | | | | | | | | | | | | | | |
| Urticaceae | <i>Boehmeria nivea</i> | 芋麻 | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Bidens alba</i> | 白花鬼針草 | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum purpureum</i> | 象草 | 1 | 15 | | | | 1 | 15 | | | | | 1.3 | 15 | | | | | | |
| Poaceae | <i>Coix lacryma-jobi</i> | 薏苡 | | | | | | | | | | | | | | | | | | | |
| Amaranthaceae | <i>Alternanthera philoxeroides</i> | 空心蓮子草 | 1 | 10 | | | | 1 | 10 | | | | | 1 | 10 | | | | | | |
| Poaceae | <i>Panicum maximum</i> | 大黍 | | | | | | | | | | | | | | | | | | | |
| Moraceae | <i>Broussonetia papyrifera</i> | 構樹 | | | | | | | | | | | | | | | | | | | |
| Polygonaceae | <i>Polygonum chinense</i> | 火炭母 | | | | | | | | | | | | | | | | | | | |
| Onagraceae | <i>Ludwigia hyssopifolia</i> | 草龍 | | | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus sp.</i> | 莎草 | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Miscanthus floridulus</i> | 五節芒 | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Brachiaria mutica</i> | 巴拉草 | | | 0.4 | 10 | 0.5 | 25 | | | 0.4 | 15 | 0.5 | 20 | | | 0.4 | 15 | 0.5 | 20 | |
| Blechnaceae | <i>Blechnum orientale</i> | 烏毛蕨 | 0.3 | 15 | 1 | 5 | 1 | 10 | 0.3 | 15 | 1 | 10 | 1 | 10 | 0.3 | 15 | 1 | 10 | 1 | 10 | |
| Poaceae | <i>Pennisetum alopecuroides</i> | 狼尾草 | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Alocasia macrorrhizos</i> | 海芋 | | | | | | | | | | | | | | | | | | | |
| Lemnaceae | <i>Lemna minor</i> | 浮萍 | | | | | | | | | | | | | | | | | | | |
| Polygonaceae | <i>Polygonum hydropiper</i> | 水蓼 | | | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus involucratus</i> | 風車草 | | | | | | | | | | | | | | | | | | | |
| Onagraceae | <i>Ludwigia erecta</i> | 美洲水丁香 | | | | | | | | | | | | | | | | | | | |
| Convolvulaceae | <i>Ipomoea cairica</i> | 五爪金龍 | | | 0.2 | 5 | 0.3 | 5 | | | 0.2 | 5 | 0.3 | 5 | | | 0.2 | 5 | 0.3 | 5 | |
| Bare Gound | | | | | 0.3 | 5 | | | | | 0.3 | 5 | | | | | 0.3 | 5 | | | |
| | | | | | 60 | | 65 | | 37 | | 57 | | 50 | | 42 | | 60 | | 45 | | 42 |

P1 – Point count location 1; P3 – Point count location 3

Table 4.2 (Continuous). Flora species recorded from belt transect survey at the She Shan River

(T1- Upper stream section, T2 - middle stream section and T3 - Lower stream section)

| Family | Species | Chinese name | Post construction monitoring | | | | | | | | | | |
|----------------|------------------------------------|--------------|------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| | | | Oct-16 | | | Nov-16 | | | Dec-16 | | | | |
| | | | T1 | T2 | T3 | T1 | T2 | T3 | T1 | T2 | T3 | | |
| Commelinaceae | <i>Commelina diffusa</i> | 節節草 | Height(m)% | Height(m)% | Height(m)% | Height(m)% | Height(m)% | Height(m)% | Height(m)% | Height(m)% | Height(m)% | Height(m)% | Height(m)% |
| Poaceae | <i>Panicum repens</i> | 枯骨草 | | 0.5 15 | 0.5 8 | | 0.6 15 | 0.6 8 | | | | | |
| Asteraceae | <i>Mikania micrantha</i> | 薇甘菊 | | | | | | | | | | | |
| Brassicaceae | <i>Nasturtium officinale</i> | 西洋菜 | | | | | | | | | | | |
| Moraceae | <i>Ficus microcarpa</i> | 細葉榕 | | | | | | | | | | | |
| Moraceae | <i>Ficus hispida</i> | 對葉榕 | | | | | | | | | | | |
| Poaceae | <i>Microstegium ciliatum</i> | 剛秀竹 | | 0.5 10 | 0.5 15 | | 0.6 10 | 0.5 15 | | | 0.1 10 | | |
| Fabaceae | <i>Pueraria lobata</i> | 野葛 | | | | | | | | | | | |
| Araceae | <i>Colocasia esculenta</i> | 芋 | | | | | | | | | | | |
| Urticaceae | <i>Boehmeria nivea</i> | 芋麻 | | | | | | | | | | | |
| Asteraceae | <i>Bidens alba</i> | 白花鬼針草 | | | | | | | | | | | |
| Poaceae | <i>Pennisetum purpureum</i> | 象草 | 1.4 15 | | | | 1.5 15 | | | | | | |
| Poaceae | <i>Coix lacryma-jobi</i> | 薏苡 | | | | | | | | | | | |
| Amaranthaceae | <i>Alternanthera philoxeroides</i> | 空心蓮子草 | 1.1 10 | | | | 1.1 10 | | | | 0.1 10 | | |
| Poaceae | <i>Panicum maximum</i> | 大黍 | | | | | | | | | | | |
| Moraceae | <i>Broussonetia papyrifera</i> | 構樹 | | | | | | | | | | | |
| Polygonaceae | <i>Polygonum chinense</i> | 火炭母 | | | | | | | | | | | |
| Onagraceae | <i>Ludwigia hyssopifolia</i> | 草龍 | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus sp.</i> | 莎草 | | | | | | | | | | | |
| Poaceae | <i>Miscanthus floridulus</i> | 五節芒 | | | | | | | | | | | |
| Poaceae | <i>Brachiaria mutica</i> | 巴拉草 | | 0.5 15 | 0.5 20 | | 0.6 15 | 0.6 20 | | | 0.1 15 | 0.1 20 | 0.1 20 |
| Blechnaceae | <i>Blechnum orientale</i> | 烏毛蕨 | 0.4 15 | 1 10 | 1 10 | 0.5 15 | 1 10 | 1 10 | 0.1 15 | 0.1 10 | 0.1 10 | 0.1 10 | 0.1 10 |
| Poaceae | <i>Pennisetum alopecuroides</i> | 狼尾草 | | | | | | | | | | | |
| Araceae | <i>Alocasia macrorrhizos</i> | 海芋 | | | | | | | | | | | |
| Lemnaceae | <i>Lemna minor</i> | 浮萍 | | | | | | | | | | | |
| Polygonaceae | <i>Polygonum hydropiper</i> | 水蓼 | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus involucratus</i> | 風車草 | | | | | | | | | | | |
| Onagraceae | <i>Ludwigia erecta</i> | 美洲水丁香 | | | | | | | | | | | |
| Convolvulaceae | <i>Ipomoea cairica</i> | 五爪金龍 | | 0.2 5 | 0.3 5 | | 0.3 5 | 0.4 5 | | | 0.1 5 | 0.1 5 | 0.1 5 |
| Bare Ground | | | | 0.3 5 | | | 0.4 5 | | | | 0.4 5 | | |
| | | | | 60 | 45 | 42 | 60 | 45 | 42 | 75 | 60 | 65 | 65 |

P1 – Point count location 1; P3 – Point count location 3

Table 4.2 (Continuous). Flora species recorded from belt transect survey at the She Shan River

(T1- Upper stream section, T2 - middle stream section and T3 - Lower stream section)

| Family | Species | Chinese name | Post construction monitoring | | | Post construction monitoring | | | Post construction monitoring | | | |
|----------------|------------------------------------|--------------|------------------------------|-------------|-------------|------------------------------|-------------|-------------|------------------------------|-------------|-------------|----|
| | | | Jan-17 | | | Feb-17 | | | Mar-17 | | | |
| Transect | | | T1 | T2 | T3 | T1 | T2 | T3 | T1 | T2 | T3 | |
| | | | Height(m) % | Height(m) % | Height(m) % | Height(m) % | Height(m) % | Height(m) % | Height(m) % | Height(m) % | Height(m) % | |
| Commelinaceae | <i>Commelina diffusa</i> | 節節草 | | | | | | | | | | |
| Poaceae | <i>Panicum repens</i> | 枯骨草 | | | | | | | | | | |
| Asteraceae | <i>Mikania micrantha</i> | 薇甘菊 | | | | | | | | | | |
| Brassicaceae | <i>Nasturtium officinale</i> | 西洋菜 | | | | | | | | | | |
| Moraceae | <i>Ficus microcarpa</i> | 細葉榕 | | | | | | | | | | |
| Moraceae | <i>Ficus hispida</i> | 對葉榕 | | | | | | | | | | |
| Poaceae | <i>Microstegium ciliatum</i> | 剛秀竹 | | 0.2 10 | | | 0.3 10 | | | 0.4 12 | | |
| Fabaceae | <i>Pueraria lobata</i> | 野葛 | | | | | | | | | | |
| Araceae | <i>Colocasia esculenta</i> | 芋 | | | | | | | | | | |
| Urticaceae | <i>Boehmeria nivea</i> | 芋麻 | | | | | | | | | | |
| Asteraceae | <i>Bidens alba</i> | 白花鬼針草 | | | | | 0.2 2 | | | 0.3 5 | | |
| Poaceae | <i>Pennisetum purpureum</i> | 象草 | | | | | | | | | | |
| Poaceae | <i>Coix lacryma-jobi</i> | 薏苡 | | | | | | | | | | |
| Amaranthaceae | <i>Alternanthera philoxeroides</i> | 空心蓮子草 | 0.2 10 | | | | 0.3 10 | | | 0.5 10 | | |
| Poaceae | <i>Panicum maximum</i> | 大黍 | | | | | | | | | | |
| Moraceae | <i>Broussonetia papyrifera</i> | 構樹 | | | | | | | | | | |
| Polygonaceae | <i>Polygonum chinense</i> | 火炭母 | | | | | | | | | | |
| Onagraceae | <i>Ludwigia hyssopifolia</i> | 草龍 | | | | | | | | | | |
| Cyperaceae | <i>Cyperus sp.</i> | 莎草 | | | | | | | | | | |
| Poaceae | <i>Miscanthus floridulus</i> | 五節芒 | | | | | | | | | | |
| Poaceae | <i>Brachiaria mutica</i> | 巴拉草 | | 0.2 15 | 0.2 20 | | 0.3 20 | 0.3 20 | | 0.6 25 | 0.6 25 | |
| Blechnaceae | <i>Blechnum orientale</i> | 烏毛蕨 | 0.2 15 | 0.2 10 | 0.2 10 | 0.3 15 | 0.2 10 | 0.2 10 | 0.3 15 | 0.3 15 | 0.3 15 | |
| Poaceae | <i>Pennisetum alopecuroides</i> | 狼尾草 | | | | | | | | | | |
| Araceae | <i>Alocasia macrorrhizos</i> | 海芋 | | | | | 0.2 5 | 0.2 5 | | 0.2 5 | 0.3 5 | |
| Lemnaceae | <i>Lemna minor</i> | 浮萍 | | | | | | | | | | |
| Polygonaceae | <i>Polygonum hydropiper</i> | 水蓼 | | | | | | | | | | |
| Cyperaceae | <i>Cyperus involucratus</i> | 風車草 | | | | | 0.3 5 | 0.3 5 | | 0.3 5 | 0.3 5 | |
| Onagraceae | <i>Ludwigia erecta</i> | 美洲水丁香 | | | | | | | | | | |
| Convolvulaceae | <i>Ipomoea cairica</i> | 五爪金龍 | | 0.2 5 | 0.2 5 | | 0.2 5 | 0.2 5 | | 0.2 5 | 0.2 5 | |
| Bare Gound | | | | 0.5 5 | | | 0.5 5 | | | 0.3 5 | | |
| | | | | 75 | 60 | 65 | 75 | 43 | 55 | 75 | 28 | 45 |

P1 – Point count location 1; P3 – Point count location 3

Table 4.2 (Continuous). Flora species recorded from belt transect survey at the She Shan River

(T1- Upper stream section, T2 - middle stream section and T3 - Lower stream section)

| Family | Species | Chinese name | Post construction monitoring | | | | | | | | | | | |
|----------------|------------------------------------|--------------|------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| | | | Apr-17 | | | May-17 | | | Jun-17 | | | | | |
| | | | T1 | T2 | T3 | T1 | T2 | T3 | T1 | T2 | T3 | | | |
| Commelinaceae | <i>Commelina diffusa</i> | 節節草 | Height(m)% | Height(m)% | Height(m)% | Height(m)% | Height(m)% | Height(m)% | Height(m)% | Height(m)% | Height(m)% | Height(m)% | Height(m)% | Height(m)% |
| Poaceae | <i>Panicum repens</i> | 枯骨草 | | | | | | | | | | | | |
| Asteraceae | <i>Mikania micrantha</i> | 薇甘菊 | | | | | | | | | | | | |
| Brassicaceae | <i>Nasturtium officinale</i> | 西洋菜 | | | | | | | | | | | | |
| Moraceae | <i>Ficus microcarpa</i> | 細葉榕 | | | | | | | | | | | | |
| Moraceae | <i>Ficus hispida</i> | 對葉榕 | | | | | | | | | | | | |
| Poaceae | <i>Microstegium ciliatum</i> | 剛秀竹 | | 0.5 15 | 0.3 10 | | 0.7 15 | 0.4 10 | | | 0.7 10 | 0.4 5 | | |
| Fabaceae | <i>Pueraria lobata</i> | 野葛 | | | | | | | | | | | | |
| Araceae | <i>Colocasia esculenta</i> | 芋 | | | | | | | | | | | | |
| Urticaceae | <i>Boehmeria nivea</i> | 芋麻 | | | | | | | | | | | | |
| Asteraceae | <i>Bidens alba</i> | 白花鬼針草 | | 0.4 5 | | | 0.5 5 | | | | 0.5 5 | | | |
| Poaceae | <i>Pennisetum purpureum</i> | 象草 | | | | | | | | | | | | |
| Poaceae | <i>Coix lacryma-jobi</i> | 薏苡 | | | | | | | | | | | | |
| Amaranthaceae | <i>Alternanthera philoxeroides</i> | 空心蓮子草 | 0.5 10 | | | | 0.5 10 | | | | 0.5 5 | | | |
| Poaceae | <i>Panicum maximum</i> | 大黍 | | | | | | | | | | | | |
| Moraceae | <i>Broussonetia papyrifera</i> | 構樹 | | | | | | | | | | | | |
| Polygonaceae | <i>Polygonum chinense</i> | 火炭母 | | | | | | | | | | | | |
| Onagraceae | <i>Ludwigia hyssopifolia</i> | 草龍 | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus sp.</i> | 莎草 | | | | | | | | | | | | |
| Poaceae | <i>Miscanthus floridulus</i> | 五節芒 | | | | | | | | | | | | |
| Poaceae | <i>Brachiaria mutica</i> | 巴拉草 | | 0.7 35 | 0.7 30 | | 0.7 35 | 0.7 30 | | | 0.7 30 | 0.7 25 | | |
| Blechnaceae | <i>Blechnum orientale</i> | 烏毛蕨 | 0.3 15 | 0.3 15 | 0.3 15 | 0.4 15 | 0.3 15 | 0.3 15 | 0.4 10 | 0.3 10 | 0.3 10 | 0.3 15 | | |
| Poaceae | <i>Pennisetum alopecuroides</i> | 狼尾草 | | | | | | | | | | | | |
| Araceae | <i>Alocasia macrorrhizos</i> | 海芋 | | 0.5 5 | 0.3 5 | | 0.5 5 | 0.3 5 | | | 0.5 5 | 0.3 5 | | |
| Lemnaceae | <i>Lemna minor</i> | 浮萍 | | | | | | | | | | | | |
| Polygonaceae | <i>Polygonum hydropiper</i> | 水蓼 | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus involucratus</i> | 風車草 | | 0.3 5 | 0.3 5 | | 0.3 5 | 0.3 5 | | | 0.3 5 | 0.3 5 | | |
| Onagraceae | <i>Ludwigia erecta</i> | 美洲水丁香 | | | | | | | | | | | | |
| Convolvulaceae | <i>Ipomoea cairica</i> | 五爪金龍 | | 0.2 5 | 0.2 5 | | 0.3 5 | 0.2 5 | | | 0.3 5 | 0.2 5 | | |
| Bare Gound | | | | 0.3 5 | | | 0.3 5 | | | | 0.3 5 | | | |
| | | | | 75 | | 15 | | 30 | | 75 | | 15 | | 30 |
| | | | | | | | | | | | 85 | | 30 | |
| | | | | | | | | | | | | | | 40 |

P1 – Point count location 1; P3 – Point count location 3

Table 4.2 (Continuous). Flora species recorded from belt transect survey at the She Shan River

(T1- Upper stream section,T2 - middle stream section and T3 - Lower stream section)

| Family | Species | Chinese name | Post construction monitoring | | | | | | Post construction monitoring | | | | | | Post construction monitoring | | | | | | Post construction monitoring | | | | | | |
|----------------|------------------------------------|--------------|------------------------------|----|-----------|----|-----------|----|------------------------------|----|-----------|----|-----------|----|------------------------------|----|-----------|----|-----------|----|------------------------------|---|-----------|---|-----------|---|----|
| | | | T1 | | T2 | | T3 | | T1 | | T2 | | T3 | | T1 | | T2 | | T3 | | T1 | | T2 | | T3 | | |
| Transect | | | Jul-17 | | | | | | Aug-17 | | | | | | Sep-17 | | | | | | Oct-17 | | | | | | |
| | | | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | Height(m) | % | |
| Commelinaceae | <i>Commelina diffusa</i> | 節節草 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Panicum repens</i> | 枯骨草 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Mikania micrantha</i> | 薇甘菊 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Brassicaceae | <i>Nasturtium officinale</i> | 西洋菜 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Moraceae | <i>Ficus microcarpa</i> | 細葉榕 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Moraceae | <i>Ficus hispida</i> | 對葉榕 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Microstegium ciliatum</i> | 剛秀竹 | | | 0.8 | 10 | 0.5 | 5 | | | 0.8 | 10 | 0.5 | 5 | | | 0.8 | 10 | 0.5 | 5 | | | 0.2 | 5 | 0.2 | 5 | |
| Fabaceae | <i>Pueraria lobata</i> | 野葛 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Colocasia esculenta</i> | 芋 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Urticaceae | <i>Boehmeria nivea</i> | 苧麻 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Bidens alba</i> | 白花鬼針草 | | | 0.7 | 5 | | | | | 0.8 | 5 | | | | | 0.8 | 5 | | | | | 0.2 | 5 | | | |
| Poaceae | <i>Pennisetum purpureum</i> | 象草 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Coix lacryma-jobi</i> | 薏苡 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Amaranthaceae | <i>Alternanthera philoxeroides</i> | 空心蓮子草 | 0.6 | 5 | | | | | 0.6 | 5 | | | | | 0.6 | 5 | | | | | 0.2 | 5 | | | | | |
| Poaceae | <i>Panicum maximum</i> | 大黍 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Moraceae | <i>Broussonetia papyrifera</i> | 構樹 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Polygonaceae | <i>Polygonum chinense</i> | 火炭母 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Onagraceae | <i>Ludwigia hyssopifolia</i> | 草龍 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus sp.</i> | 莎草 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Miscanthus floridulus</i> | 五節芒 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Brachiaria mutica</i> | 巴拉草 | | | 0.7 | 30 | 0.7 | 25 | | | 0.7 | 30 | 0.7 | 25 | | | 0.7 | 30 | 0.7 | 25 | | | 0.2 | 5 | 0.2 | 5 | |
| Blechnaceae | <i>Blechnum orientale</i> | 烏毛蕨 | 0.4 | 10 | 0.5 | 10 | 0.5 | 15 | 0.4 | 10 | 0.5 | 10 | 0.5 | 15 | 0.4 | 10 | 0.5 | 10 | 0.5 | 15 | 0.2 | 5 | 0.2 | 5 | 0.2 | 5 | |
| Poaceae | <i>Pennisetum alopecuroides</i> | 狼尾草 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Alocasia macrorrhizos</i> | 海芋 | | | 0.5 | 5 | 0.3 | 5 | | | 0.5 | 5 | 0.3 | 5 | | | 0.5 | 5 | 0.4 | 5 | | | | | 0.4 | 5 | |
| Lemnaceae | <i>Lemna minor</i> | 浮萍 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Polygonaceae | <i>Polygonum hydropiper</i> | 水蓼 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus involucratus</i> | 風車草 | | | 0.3 | 5 | 0.3 | 5 | | | 0.4 | 5 | 0.3 | 5 | | | 0.5 | 5 | 0.3 | 5 | | | | | 0.3 | 5 | |
| Onagraceae | <i>Ludwigia erecta</i> | 美洲水丁香 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Convolvulaceae | <i>Ipomoea cairica</i> | 五爪金龍 | | | 0.4 | 5 | 0.3 | 5 | | | 0.4 | 5 | 0.3 | 5 | | | 0.5 | 5 | 0.4 | 5 | | | | | 0.4 | 5 | |
| Bare Gound | | | | | 0.3 | 5 | | | | | 0.3 | 5 | | | | | 0.3 | 5 | | | | | 0.2 | 5 | | | |
| | | | | | 85 | | 30 | | 40 | | 85 | | 30 | | 40 | | 85 | | 30 | | 40 | | 90 | | 80 | | 70 |

P1 – Point count location 1; P3 – Point count location 3

Table 4.3 Avifauna recorded along survey transects and at three selected point count locations at She Shan River.

(T1- Upper stream section, T2 - middle stream section and T3 - Lower stream section)

| Common Name | Species name | Chinese name | Status | Commonness | Baseline monitoring | | | Impact monitoring | | | | Impact monitoring | | | | Impact monitoring | | | | Impact monitoring | | | | Impact monitoring | | | | Impact monitoring | | | | | | | | | | |
|-------------------------|------------------------------------|--------------|------------|------------|---------------------|----|----|-------------------|----|----|-----------|-------------------|----|----|-----------|-------------------|----|----|-----------|-------------------|----|----|-----------|-------------------|----|----|-----------|-------------------|----|----|-----------|----|----|----|--------|----|----|----|
| | | | | | Jul-08 | | | Aug-08 | | | Jan-09 | | | | Jul-09 | | | | Jan-10 | | | | Jul-10 | | | | Jan-11 | | | | Jul-11 | | | | Jan-12 | | | |
| | | | | | Abundance | | | Abundance | | | Abundance | | | | Abundance | | | | Abundance | | | | Abundance | | | | Abundance | | | | Abundance | | | | | | | |
| | | | | | C | P1 | P3 | C | P1 | P3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 |
| Grey Heron | <i>Ardea cinerea</i> | 蒼鷺 | WV,PRC | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Grey Wagtail | <i>Motacilla cinerea</i> | 灰鶺鴒 | WV | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Japanese White Eye | <i>Zosterops japonica(simplex)</i> | 暗綠繡眼鳥 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Large Hawk Cuckoo | <i>Cuculus sparverioides</i> | 鷹鵒 | SV | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Little Egret | <i>Egretta garzetta</i> | 小白鷺 | R,RC | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Magpie Robin | <i>Copsychus saularis</i> | 鵲鴝 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Night Heron | <i>Nycticorax nycticorax</i> | 夜鷺 | R,LC | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Olive Backed Pipit | <i>Anthus hodgsoni</i> | 樹鶺 | WV | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Oriental Dollarbird | <i>Eurystomus orientalis</i> | 三寶鳥 | PM | U | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Plaintive Cuckoo | <i>Cacomantis merulinus</i> | 八聲杜鵑 | SV | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Plain Prinia | <i>Prinia inornata</i> | 純色鷓鴣 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Red-flanked Bluetail | <i>Tarsiger cyanurus</i> | 紅脇藍尾鶺 | WV&PM | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rufous-backed Shrike | <i>Lanius schach</i> | 棕背伯勞 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rufous-capped Babbler | <i>Stachyridopsis ruficeps</i> | 紅頭穗鵪 | R, LC | U | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Scarlet Minivet | <i>Pericrocotus speciosus</i> | 赤紅山椒鳥 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sooty-headed Bulbul | <i>Pycnonotus aurigaster</i> | 白喉紅臀鶺 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Spotted Dove | <i>Streptopelia chinensis</i> | 珠頸斑鳩 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Spotted Munia | <i>Lonchura punctulata</i> | 斑文鳥 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stejneger's Stonechat | <i>Saxicola stejnegeri</i> | 黑喉石鶺 | PM,WV | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| White Wagtail | <i>Motacilla alba</i> | 白鶺鴒 | WV | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| White-breasted Waterhen | <i>Amaurornis phoenicurus</i> | 白胸苦惡鳥 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Yellow Bellid Prinia | <i>Prinia flaviventris</i> | 黃腹鷓鴣 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Yellow Bittern | <i>Ixobrychus sinensis</i> | 黃葦鶺 | WV, PM, LC | U | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of birds | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| No. of species | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Note: R – Resident; WV – Winter visitor; PM – Passage migrant; C – Common; U – Uncommon

SpM – Spring migrant; Sv – Summer visitor; RPM - Rare passage migrant

C – transect count; P1 – Point count location 1; P3 – Point count location 3

+, occurred; ++, common; +++, abundant/dominant species in the the study area

Commonness and status were decided according to AFCD biodiversity website (www.hkbiodiversity.net)

All bird species are under protection of Wild Animals Protection Ordinance (Cap. 170)

Endangered Species of Animals and Plants Ordinance (Cap. 586)

RC : Regional concern Fellowes *et al* (2002)LC : Local Concern Fellowes *et al* (2002)PRC: Potential Regional concern Fellowes *et al* (2002)

CR: Rare in China Red Data Book Status

VU: Vulnerable in China Red Data Book Status

Table 4.3 Avifauna recorded along survey transects and at three selected point count locations at She Shan River.

(T1- Upper stream section, T2 - middle stream section and T3 - Lower stream section)

| Common Name | Species name | Chinese name | Status | Commonness | Impact monitoring | | | | Impact monitoring | | | | Impact monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | |
|-------------------------------|----------------------------------|--------------|--------------------|------------|-------------------|----|----|----|-------------------|----|----|----|-------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|
| | | | | | Jul-12 | | | | Jul-13 | | | | Dec-13 | | | | Jan-14 | | | | Feb-14 | | | | Mar-14 | | | | Apr-14 | | | |
| | | | | | Abundance | | | | Abundance | | | | Abundance | | | | Abundance | | | | Abundance | | | | Abundance | | | | Abundance | | | |
| | | | | | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 |
| Ashy Drongo | <i>Dicrurus leucophaeus</i> | 灰卷尾 | SWV, LC | U | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Barn Swallow | <i>Hirundo rustica</i> | 家燕 | PM | C | | | | + | | | | | | | | + | | | 2 | | | + | 2 | 2 | 1 | ++ | 1 | 3 | 4 | | | |
| Black Drongo | <i>Dicrurus macrocerus</i> | 黑卷尾 | Sv | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Black Kite | <i>Milvus lineatus</i> | 麻鷹 | R, RC, Cap.586 | C | | | | | | | | | | | | | | | | | | + | | | | | | | | | | |
| Black-necked Starling | <i>Sturnus nigricollis</i> | 黑領椋鳥 | R | C | + | | 1 | + | | | | | + | | | + | | | | | | + | | 2 | | + | | | 2 | | | |
| Black-throated Laughingthrush | <i>Garrulax chinensis</i> | 黑喉噪鶇 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Blue Whistling Thrush | <i>Myophonus caeruleus</i> | 紫嘯鶇 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bull-headed Shrike | <i>Lanius bucephalus</i> | 牛頭伯勞 | RPM | U | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Buzzard (Common Buzzard) | <i>Buteo buteo</i> | 普通鵟 | WV, Cap 586 | U | | | | | | | | | | | | | | | | | | | | + | | | | | | | | |
| Chestnut Bulbul | <i>Hemixos castanonotus</i> | 栗背短腳鶇 | R,WV | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Chinese Blackbird | <i>Turdus mandarinus</i> | 烏鶇 | WV | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Chinese Bulbul | <i>Pycnonotus sinensis</i> | 白頭鶇 | R | C | ++ | 2 | 5 | 1 | + | 1 | 1 | ++ | | 2 | 3 | + | 1 | | 2 | | + | 2 | 3 | 4 | ++ | | 2 | 3 | + | | | 2 |
| Chinese Pond Heron | <i>Ardeola bacchus</i> | 池鶇 | R,RC | C | + | 1 | | | + | 1 | 2 | 1 | + | 1 | 2 | 2 | + | 1 | 3 | 2 | + | 1 | 2 | 3 | + | 1 | 3 | 2 | + | 1 | 2 | 1 |
| Chinese Hwamei | <i>Garrulax canorus</i> | 畫眉 | R, Cap 586 | U | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Chinese Sparrowhawk | <i>Accipiter soloensis</i> | 赤腹鷹 | PM, Cap.586 | U | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Common Emerald Dove | <i>Chalcophaps indica</i> | 綠翅金鳩 | R,VU | U | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Common Kingfisher | <i>Alcedo atthis</i> | 普通翠鳥 | R | C | | | | | | | | 1 | + | | | | | | | | | + | | | | | | | + | | | |
| Common Koel | <i>Eudynamys scolopacea</i> | 噪鶇 | R | C | + | | | | + | | | | | | | + | | | | | | + | | | | | | | + | | | |
| Common Sandpiper | <i>Actitis hypoleucos</i> | 磯鶇 | WV&PM | C | | | | | | | | + | | | | + | | | | | | + | | | | | | | + | | | |
| Common Tailorbird | <i>Orthotomus sutorius</i> | 長尾縫葉鶇 | R | C | + | | 1 | + | | 1 | | | + | 1 | 1 | 1 | + | 1 | 1 | 1 | + | 1 | | 1 | + | 1 | 2 | 1 | + | 1 | 1 | |
| Crested bulbul | <i>Pycnonotus jocosus</i> | 紅耳鶇 | R | C | +++ | 4 | 5 | 3 | +++ | 2 | 2 | 3 | +++ | 3 | 2 | 5 | ++ | 2 | 4 | 6 | ++ | 2 | 2 | 8 | ++ | 3 | 4 | 6 | ++ | 2 | 2 | 5 |
| Crested Goshawk | <i>Accipiter trivirgatus</i> | 鳳頭鷹 | R, CR, Cap.586 | U | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Crested Myna | <i>Acridotheres cristatellus</i> | 八哥 | R | C | + | | 2 | | ++ | | | | ++ | | 2 | + | | | 3 | 2 | + | | | | 3 | + | | 2 | | + | | |
| Crested Serpent Eagle | <i>Spilornis cheela</i> | 蛇鶇 | R, VU, LC, Cap 586 | U | | | | | | | | | + | | | | | | | | | + | | | | | | | | | | |
| Domestic pigeon | <i>Columba sp.</i> | 鴿 | R | C | | | | | + | 1 | 2 | | + | 2 | | | | | | | | | | | | | | | | | | |
| Dusky Warbler | <i>Phylloscopus fuscatus</i> | 褐柳鶇 | WV | C | | | | | | | | + | | 1 | | + | | | 1 | 1 | + | | 2 | 1 | + | 1 | 1 | | + | | 1 | |
| Eurasian tree sparrow | <i>Passer montanus</i> | 麻雀 | R | C | ++ | 2 | | 3 | + | 2 | | | + | | | | | | | | + | | | | + | | 2 | | + | | | |
| Fork-tailed Sunbird | <i>Aethopyga christinae</i> | 叉尾太陽鳥 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Great Coucal | <i>Centropus sinensis</i> | 褐翅鴉鶇 | R,VU | C | + | | | | + | | | | + | | | | | | | | | + | | | | + | | | + | | | |
| Great Egret | <i>Ardea alba</i> | 大白鶇 | R,RC | C | | | | | | | | 1 | + | | | | | | 1 | | + | | | | 1 | + | | | + | | | |
| Great Tit | <i>Parus major(commixtus)</i> | 大山雀 | R | C | | | | | | | | | | | | + | | | | | | + | | | | + | | | + | | | |
| Green Sandpiper | <i>Tringa ochropus</i> | 白腰草鶇 | PM&WV | C | | | | | | | | + | | 2 | | + | | | 2 | | + | | | | | + | | | + | | | |

Table 4.3 Avifauna recorded along survey transects and at three selected point count locations at She Shan River.

(T1- Upper stream section, T2 - middle stream section and T3 - Lower stream section)

| Common Name | Species name | Chinese name | Status | Commonness | Impact monitoring | | | | Impact monitoring | | | | Impact monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | |
|-------------------------|------------------------------------|--------------|------------|------------|-------------------|----|----|----|-------------------|----|----|----|-------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|
| | | | | | Jul-12 | | | | Jul-13 | | | | Dec-13 | | | | Jan-14 | | | | Feb-14 | | | | Mar-14 | | | | Apr-14 | | | |
| | | | | | Abundance | | | | Abundance | | | | Abundance | | | | Abundance | | | | Abundance | | | | Abundance | | | | Abundance | | | |
| | | | | | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 |
| Grey Heron | <i>Ardea cinerea</i> | 蒼鷺 | WV,PRC | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Grey Wagtail | <i>Motacilla cinerea</i> | 灰鶺鴒 | WV | C | | | | | | | | | ++ | 2 | 3 | 3 | ++ | 2 | 3 | 3 | ++ | | 2 | 2 | ++ | 1 | 3 | 2 | + | | 1 | 1 |
| Japanese White Eye | <i>Zosterops japonica(simplex)</i> | 暗綠繡眼鳥 | R | C | | | | | | | | | ++ | | | 5 | ++ | | | 5 | ++ | | | 3 | ++ | | | 6 | + | 3 | | 4 |
| Large Hawk Cuckoo | <i>Cuculus sparverioides</i> | 鷹鵒 | SV | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Little Egret | <i>Egretta garzetta</i> | 小白鷺 | R,RC | C | + | | | | + | 2 | 1 | 1 | + | 1 | 2 | 2 | + | | 2 | 3 | + | 1 | 2 | 2 | + | 1 | 1 | 2 | + | | 1 | 1 |
| Magpie Robin | <i>Copsychus saularis</i> | 鶺鴒 | R | C | + | 1 | | 1 | + | | 1 | 1 | + | 1 | 1 | 2 | + | | 1 | 1 | + | | 2 | | + | 1 | 2 | 1 | + | 1 | 1 | 2 |
| Night Heron | <i>Nycticorax nycticorax</i> | 夜鷺 | R,LC | C | | | | | + | | | 2 | | | | | | | | | | | | | | | | | | | | |
| Olive Backed Pipit | <i>Anthus hodgsoni</i> | 樹鶺鴒 | WV | C | + | | | | | | | | ++ | | 3 | 2 | + | | 1 | | + | | | | + | | | | | | | |
| Oriental Dollarbird | <i>Eurystomus orientalis</i> | 三寶鳥 | PM | U | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Plaintive Cuckoo | <i>Cacomantis merulinus</i> | 八聲杜鵑 | SV | C | | | | | + | | | | | | | | | | | | | | | | + | | | | | | | |
| Plain Prinia | <i>Prinia inornata</i> | 純色鷓鴣 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Red-flanked Bluetail | <i>Tarsiger cyanurus</i> | 紅脇藍尾鶺鴒 | WV&PM | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rufous-backed Shrike | <i>Lanius schach</i> | 棕背伯勞 | R | C | + | 1 | | | + | | | | + | | | | + | | | | + | | | | + | | | | | | | |
| Rufous-capped Babbler | <i>Stachyridopsis ruficeps</i> | 紅頭穗鶺鴒 | R, LC | U | + | | 1 | | + | | | | + | | | | + | | | | + | | | | + | | | | | | | |
| Scarlet Minivet | <i>Pericrocotus speciosus</i> | 赤紅山椒鳥 | R | C | | | | | | | | | + | | | | | | | | | | | | | | | | | | | |
| Sooty-headed Bulbul | <i>Pycnonotus aurigaster</i> | 白喉紅臀鶺鴒 | R | C | + | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Spotted Dove | <i>Streptopelia chinensis</i> | 珠頸斑鳩 | R | C | + | 1 | 2 | | + | 1 | 1 | 2 | ++ | 2 | 4 | 3 | ++ | 3 | 2 | 4 | ++ | 2 | 6 | 5 | ++ | 3 | 4 | 4 | ++ | 2 | 3 | 4 |
| Spotted Munia | <i>Lonchura punctulata</i> | 斑文鳥 | R | C | ++ | | 5 | | ++ | | | | ++ | | | | ++ | | | | ++ | | 7 | | ++ | | 4 | | ++ | | 6 | |
| Stejneger's Stonechat | <i>Saxicola stejnegeri</i> | 黑喉石鶺鴒 | PM,WV | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| White Wagtail | <i>Motacilla alba</i> | 白鶺鴒 | WV | C | ++ | 2 | 1 | 1 | + | 2 | | 1 | ++ | 2 | 4 | 2 | + | | 2 | 1 | + | | 1 | 2 | + | 1 | 2 | 1 | + | | 1 | 1 |
| White-breasted Waterhen | <i>Amaurornis phoenicurus</i> | 白胸苦惡鳥 | R | C | + | | | | + | | | | + | | 1 | | + | | | | + | | | | + | | | | | | | |
| Yellow Bellid Prinia | <i>Prinia flaviventris</i> | 黃腹鷓鴣 | R | C | + | 1 | 1 | | + | | | | + | | | | + | 1 | 1 | | + | 1 | 3 | 2 | + | 1 | 2 | 1 | + | 1 | | 1 |
| Yellow Bittern | <i>Ixobrychus sinensis</i> | 黃葦鶺鴒 | WV, PM, LC | U | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of birds | | | | | 0 | 15 | 22 | 11 | | 10 | 10 | 14 | | 13 | 30 | 34 | | 11 | 26 | 32 | | 10 | 34 | 37 | | 16 | 38 | 31 | | 12 | 22 | 28 |
| No. of species | | | | | 20 | 9 | 8 | 7 | 22 | 6 | 8 | 9 | 31 | 9 | 14 | 16 | 32 | 11 | 16 | 17 | 33 | 11 | 18 | 18 | 34 | 13 | 19 | 17 | 32 | 9 | 11 | 12 |

Note: R – Resident; WV – Winter visitor; PM – Passage migrant; C – Common; U – Uncommon

SpM – Spring migrant; Sv - Summer visitor ; RPM - Rare passage migrant

C – transect count; P1 – Point count location 1; P3 – Point count location 3

+, occurred; ++, common; +++, abundant/dominant species in the the study area

Commonness and status were decided according to AFCD biodiversity website (www.hkbiodiversity.net)

All bird species are under protection of Wild Animals Protection Ordinance (Cap. 170)

Endangered Species of Animals and Plants Ordinance (Cap. 586)

RC : Regional concern Fellowes *et al* (2002)

LC : Local Concern Fellowes *et al* (2002)

PRC: Potential Regional concern Fellowes *et al* (2002)

CR: Rare in China Red Data Book Status

VU: Vulnerable in China Red Data Book Status

Table 4.3 Avifauna recorded along survey transects and at three selected point count locations at She Shan River.

(T1- Upper stream section, T2 - middle stream section and T3 - Lower stream section)

| Common Name | Species name | Chinese name | Status | Commonness | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | |
|-------------------------------|----------------------------------|--------------|--------------------|------------|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|
| | | | | | May-14 | | | | Jun-14 | | | | Jul-14 | | | | Aug-14 | | | | Sep-14 | | | |
| | | | | | Abundance | | | | Abundance | | | | Abundance | | | | Abundance | | | | Abundance | | | |
| | | | | | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 |
| Ashy Drongo | <i>Dicrurus leucophaeus</i> | 灰卷尾 | SWV, LC | U | | | | | | | | | | | | | | | | | | | | |
| Barn Swallow | <i>Hirundo rustica</i> | 家燕 | PM | C | ++ | 3 | 4 | 4 | + | 2 | | 1 | | | | | | | | | | | | |
| Black Drongo | <i>Dicrurus macrocerus</i> | 黑卷尾 | Sv | C | | | | | | | | | | | | | | | | | | | | |
| Black Kite | <i>Milvus lineatus</i> | 麻鷹 | R, RC, Cap.586 | C | | | | | | | | | | | | | | | | | + | | | |
| Black-necked Starling | <i>Sturnus nigricollis</i> | 黑領椋鳥 | R | C | + | | 1 | 2 | + | 2 | | 1 | + | 2 | 1 | 2 | + | 2 | | 2 | + | 1 | 2 | 2 |
| Black-throated Laughingthrush | <i>Garrulax chinensis</i> | 黑喉噪鵲 | R | C | | | | | | | | | | | | | | | | | | | | |
| Blue Whistling Thrush | <i>Myophonus caeruleus</i> | 紫嘯鶇 | R | C | | | | | | | | | | | | | | | | | | | | |
| Bull-headed Shrike | <i>Lanius bucephalus</i> | 牛頭伯勞 | RPM | U | | | | | | | | | | | | | | | | | | | | |
| Buzzard (Common Buzzard) | <i>Buteo buteo</i> | 普通鵟 | WV, Cap 586 | U | | | | | | | | | | | | | | | | | | | | |
| Chestnut Bulbul | <i>Hemixos castanonotus</i> | 栗背短腳鶇 | R,WV | C | | | | | | | | | | | | | | | | | | | | |
| Chinese Blackbird | <i>Turdus mandarinus</i> | 烏鶇 | WV | C | | | | | | | | | | | | | | | | | | | | |
| Chinese Bulbul | <i>Pycnonotus sinensis</i> | 白頭鶇 | R | C | + | | | | + | | | 1 | + | | | 2 | + | 2 | | | + | 2 | | 3 |
| Chinese Pond Heron | <i>Ardeola bacchus</i> | 池鷺 | R,RC | C | + | 1 | 1 | | + | 1 | 2 | | + | 2 | 2 | 1 | ++ | 1 | 2 | 2 | ++ | 2 | 1 | 1 |
| Chinese Hwamei | <i>Garrulax canorus</i> | 畫眉 | R, Cap 586 | U | | | | | | | | | | | | | | | | | | | | |
| Chinese Sparrowhawk | <i>Accipiter soloensis</i> | 赤腹鷹 | PM, Cap.586 | U | | | | | | | | | | | | | | | | | | | | |
| Common Emerald Dove | <i>Chalcophaps indica</i> | 綠翅金鳩 | R,VU | U | | | | | | | | | | | | | | | | | | | | |
| Common Kingfisher | <i>Alcedo atthis</i> | 普通翠鳥 | R | C | + | | | | + | | | | | | | | | | | | + | | | |
| Common Koel | <i>Eudynamys scolopacea</i> | 噪鵲 | R | C | + | | | | + | | | | + | | | | + | | | | | | | |
| Common Sandpiper | <i>Actitis hypoleucos</i> | 磯鶇 | WV&PM | C | + | | | | + | | | | | | | | | | | | | | | |
| Common Tailorbird | <i>Orthotomus sutorius</i> | 長尾縫葉鶇 | R | C | + | 1 | 2 | 1 | + | | 1 | | + | 1 | 1 | 1 | + | 1 | 1 | | + | 1 | 2 | 1 |
| Crested bulbul | <i>Pycnonotus jocosus</i> | 紅耳鶇 | R | C | ++ | 2 | | 4 | ++ | 3 | 2 | 3 | ++ | 2 | 4 | 5 | ++ | 3 | 2 | 4 | ++ | 2 | 4 | 3 |
| Crested Goshawk | <i>Accipiter trivirgatus</i> | 鳳頭鷹 | R, CR, Cap.586 | U | | | | | | | | | | | | | | | | | | | | |
| Crested Myna | <i>Acridotheres cristatellus</i> | 八哥 | R | C | + | | | | + | | | 2 | + | | 3 | 2 | + | 2 | 2 | 3 | + | | 3 | 2 |
| Crested Serpent Eagle | <i>Spilornis cheela</i> | 蛇鵟 | R, VU, LC, Cap 586 | U | | | | | | | | | | | | | | | | | | | | |
| Domestic pigeon | <i>Columba sp.</i> | 鴿 | R | C | | | | | | | | | | | | | | | | | | | | |
| Dusky Warbler | <i>Phylloscopus fuscatus</i> | 褐柳鶇 | WV | C | + | | | | + | | | | + | | | | + | | 1 | | + | 1 | | |
| Eurasian tree sparrow | <i>Passer montanus</i> | 麻雀 | R | C | + | 2 | | | + | | 2 | 1 | + | 2 | | 1 | + | | 3 | 2 | + | 3 | 2 | |
| Fork-tailed Sunbird | <i>Aethopyga christinae</i> | 叉尾太陽鳥 | R | C | | | | | | | | | | | | | | | | | | | | |
| Great Coucal | <i>Centropus sinensis</i> | 褐翅鷓鴣 | R,VU | C | + | | | | + | | | | + | | | | + | | 1 | | + | 1 | | |
| Great Egret | <i>Ardea alba</i> | 大白鷺 | R,RC | C | | | | | | | | | | | | | | | | | | | | |
| Great Tit | <i>Parus major(commixtus)</i> | 大山雀 | R | C | | | | | | | | | | | | | | | | | | | | |
| Green Sandpiper | <i>Tringa ochropus</i> | 白腰草鶇 | PM&WV | C | + | | | | + | | | | | | | | | | | | | | | |

Table 4.3 Avifauna recorded along survey transects and at three selected point count locations at She Shan River.

(T1- Upper stream section, T2 - middle stream section and T3 - Lower stream section)

| Common Name | Species name | Chinese name | Status | Commonness | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | |
|-------------------------|------------------------------------|--------------|------------|------------|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|
| | | | | | May-14 | | | | Jun-14 | | | | Jul-14 | | | | Aug-14 | | | | Sep-14 | | | |
| | | | | | Abundance | | | | Abundance | | | | Abundance | | | | Abundance | | | | Abundance | | | |
| | | | | | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 |
| Grey Heron | <i>Ardea cinerea</i> | 蒼鷺 | WV,PRC | C | | | | | | | | | | | | | | | | | | | | |
| Grey Wagtail | <i>Motacilla cinerea</i> | 灰鶺鴒 | WV | C | + | | | | | | | | + | | | | + | 1 | 1 | | + | 1 | 2 | 1 |
| Japanese White Eye | <i>Zosterops japonica(simplex)</i> | 暗綠繡眼鳥 | R | C | + | | | 6 | ++ | 4 | 2 | 3 | ++ | | | 4 | ++ | 2 | 2 | 5 | + | | | 3 |
| Large Hawk Cuckoo | <i>Cuculus sparverioides</i> | 鷹鵒 | SV | C | + | | | | | | | | | | | | | | | | | | | |
| Little Egret | <i>Egretta garzetta</i> | 小白鷺 | R,RC | C | + | 1 | 2 | 1 | + | | 2 | 2 | + | 1 | 2 | 1 | + | 1 | 2 | 2 | + | 2 | 3 | 2 |
| Magpie Robin | <i>Copsychus saularis</i> | 鶺鴒 | R | C | + | 1 | 1 | 1 | + | 1 | 2 | 2 | + | 1 | 1 | 1 | + | 1 | 1 | 1 | + | 1 | 1 | 2 |
| Night Heron | <i>Nycticorax nycticorax</i> | 夜鷺 | R,LC | C | | | | | | | | | | | | | | | | | | | | |
| Olive Backed Pipit | <i>Anthus hodgsoni</i> | 樹鶺鴒 | WV | C | | | | | | | | | | | | | | | | | | | | |
| Oriental Dollarbird | <i>Eurystomus orientalis</i> | 三寶鳥 | PM | U | | | | | | | | | | | | | | | | | | | | |
| Plaintive Cuckoo | <i>Cacomantis merulinus</i> | 八聲杜鵑 | SV | C | + | | | | + | | | | | | | | | | | | | | | |
| Plain Prinia | <i>Prinia inornata</i> | 純色鷓鴣 | R | C | | | | | | | | | | | | | | | | | | | | |
| Red-flanked Bluetail | <i>Tarsiger cyanurus</i> | 紅脇藍尾鶺鴒 | WV&PM | C | | | | | | | | | | | | | | | | | | | | |
| Rufous-backed Shrike | <i>Lanius schach</i> | 棕背伯勞 | R | C | + | | | | + | | | | + | | 1 | | + | | 1 | | + | | 1 | |
| Rufous-capped Babbler | <i>Stachyridopsis ruficeps</i> | 紅頭穗鶺鴒 | R, LC | U | + | | | | | | | | | | | | | | | | + | | | |
| Scarlet Minivet | <i>Pericrocotus speciosus</i> | 赤紅山椒鳥 | R | C | | | | | | | | | | | | | | | | | | | | |
| Sooty-headed Bulbul | <i>Pycnonotus aurigaster</i> | 白喉紅臀鶺鴒 | R | C | | | | | | | | | | | | | | | | | | | | |
| Spotted Dove | <i>Streptopelia chinensis</i> | 珠頸斑鳩 | R | C | ++ | 3 | 4 | 3 | ++ | 2 | 3 | 1 | ++ | 3 | 4 | 4 | ++ | 2 | 3 | 3 | ++ | 3 | 3 | 5 |
| Spotted Munia | <i>Lonchura punctulata</i> | 斑文鳥 | R | C | ++ | | 8 | | | | | | + | | 2 | | + | | 3 | | + | | 6 | |
| Stejneger's Stonechat | <i>Saxicola stejnegeri</i> | 黑喉石鶺鴒 | PM,WV | C | | | | | | | | | | | | | | | | | | | | |
| White Wagtail | <i>Motacilla alba</i> | 白鶺鴒 | WV | C | + | | 2 | 1 | + | | 1 | | + | 1 | 2 | 2 | + | 2 | 2 | 1 | + | 2 | 3 | 2 |
| White-breasted Waterhen | <i>Amaurornis phoenicurus</i> | 白胸苦惡鳥 | R | C | + | | | | + | | | | + | | | | + | | | | + | | | |
| Yellow Bellied Prinia | <i>Prinia flaviventris</i> | 黃腹鷓鴣 | R | C | + | | 1 | 1 | + | | 1 | 1 | + | 1 | 1 | 1 | + | 1 | 1 | | + | 1 | 2 | 1 |
| Yellow Bittern | <i>Ixobrychus sinensis</i> | 黃葦鶺鴒 | WV, PM, LC | U | | | | | | | | | | | | | | | | | | | | |
| Number of birds | | | | | | 15 | 26 | 24 | | 15 | 18 | 17 | | 16 | 24 | 26 | | 18 | 28 | 28 | | 23 | 35 | 28 |
| No. of species | | | | | 27 | 9 | 10 | 10 | 23 | 8 | 11 | 10 | 20 | 12 | 14 | 14 | 20 | 13 | 17 | 15 | 23 | 17 | 17 | 15 |

Note: R – Resident; WV – Winter visitor; PM – Passage migrant; C – Common; U – Uncommon

SpM – Spring migrant; Sv - Summer visitor ; RPM - Rare passage migrant

C – transect count; P1 – Point count location 1; P3 – Point count location 3

+, occurred; ++, common; +++, abundant/dominant species in the the study area

Commonness and status were decided according to AFCD biodiversity website (www.hkbiodiversity.net)

All bird species are under protection of Wild Animals Protection Ordinance (Cap. 170)

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RC : Regional concern Fellowes *et al* (2002)

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CR: Rare in China Red Data Book Status

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Table 4.3 Avifauna recorded along survey transects and at three selected point count locations at She Shan River.

(T1- Upper stream section, T2 - middle stream section and T3 - Lower stream section)

| Common Name | Species name | Chinese name | Status | Commonness | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | |
|-------------------------------|----------------------------------|--------------|--------------------|------------|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|
| | | | | | Oct-14 | | | | Nov-14 | | | | Dec-14 | | | | Jan-15 | | | | Feb-15 | | | |
| | | | | | Abundance | | | | Abundance | | | | Abundance | | | | Abundance | | | | Abundance | | | |
| | | | | | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 |
| Ashy Drongo | <i>Dicrurus leucophaeus</i> | 灰卷尾 | SWV, LC | U | | | | | | | | | | | | | | | | | | | | |
| Barn Swallow | <i>Hirundo rustica</i> | 家燕 | PM | C | | | | | | | | | | | | | | | | | | | | |
| Black Drongo | <i>Dicrurus macrocerus</i> | 黑卷尾 | Sv | C | | | | | | | | | | | | | | | | | | | | |
| Black Kite | <i>Milvus lineatus</i> | 麻鷹 | R, RC, Cap.586 | C | | | | | + | | | | + | | | | + | | | | + | | | |
| Black-necked Starling | <i>Sturnus nigricollis</i> | 黑領椋鳥 | R | C | + | 2 | | 1 | + | | 2 | | + | 2 | | | + | | 2 | 2 | + | | | |
| Black-throated Laughingthrush | <i>Garrulax chinensis</i> | 黑喉噪鶇 | R | C | | | | | | | | | | | | | | | | | | | | |
| Blue Whistling Thrush | <i>Myophonus caeruleus</i> | 紫嘯鶇 | R | C | | | | | | | | | | | | | | | | | | | | |
| Bull-headed Shrike | <i>Lanius bucephalus</i> | 牛頭伯勞 | RPM | U | | | | | | | | | | | | | | | | | | | | |
| Buzzard (Common Buzzard) | <i>Buteo buteo</i> | 普通鵟 | WV, Cap 586 | U | | | | | | | | | | | | | + | | | | + | | | |
| Chestnut Bulbul | <i>Hemixos castanonotus</i> | 栗背短腳鶇 | R,WV | C | | | | | | | | | | | | | | | | | | | | |
| Chinese Blackbird | <i>Turdus mandarinus</i> | 烏鶇 | WV | C | | | | | | | | | | | | | | | | | | | | |
| Chinese Bulbul | <i>Pycnonotus sinensis</i> | 白頭鶇 | R | C | + | | | 2 | + | 1 | | 3 | + | | 2 | 2 | + | 1 | | 3 | + | 1 | | 2 |
| Chinese Pond Heron | <i>Ardeola bacchus</i> | 池鶇 | R,RC | C | ++ | 2 | 2 | | ++ | 1 | | | + | | 1 | | ++ | 1 | 2 | 2 | ++ | 1 | 1 | |
| Chinese Hwamei | <i>Garrulax canorus</i> | 畫眉 | R, Cap 586 | U | | | | | | | | | | | | | | | | | | | | |
| Chinese Sparrowhawk | <i>Accipiter soloensis</i> | 赤腹鷹 | PM, Cap.586 | U | | | | | | | | | | | | | | | | | | | | |
| Common Emerald Dove | <i>Chalcophaps indica</i> | 綠翅金鳩 | R,VU | U | | | | | | | | | | | | | | | | | | | | |
| Common Kingfisher | <i>Alcedo atthis</i> | 普通翠鳥 | R | C | + | | | | + | | | | | | | | | | | | | | | |
| Common Koel | <i>Eudynamys scolopacea</i> | 噪鶇 | R | C | + | | | | + | | | | | | | | | | | | | | | |
| Common Sandpiper | <i>Actitis hypoleucos</i> | 磯鶇 | WV&PM | C | | | | | | | | | | | | | | | | | | | | |
| Common Tailorbird | <i>Orthotomus sutorius</i> | 長尾縫葉鶇 | R | C | + | | 1 | 1 | + | | 1 | | ++ | 1 | 1 | | ++ | 2 | 1 | 1 | + | 1 | 1 | |
| Crested bulbul | <i>Pycnonotus jocosus</i> | 紅耳鶇 | R | C | ++ | 3 | 1 | 4 | ++ | 2 | 1 | 3 | +++ | 2 | 3 | 2 | +++ | 3 | 2 | 4 | +++ | 2 | 2 | 4 |
| Crested Goshawk | <i>Accipiter trivirgatus</i> | 鳳頭鷹 | R, CR, Cap.586 | U | | | | | | | | | | | | | + | | | | + | | | |
| Crested Myna | <i>Acridotheres cristatellus</i> | 八哥 | R | C | + | | 2 | 4 | + | 3 | 2 | | + | 1 | | | + | | | 3 | + | | | 2 |
| Crested Serpent Eagle | <i>Spilornis cheela</i> | 蛇鶇 | R, VU, LC, Cap 586 | U | | | | | | | | | | | | | | | | | | | | |
| Domestic pigeon | <i>Columba sp.</i> | 鴿 | R | C | | | | | | | | | ++ | | | | ++ | | | | ++ | | | |
| Dusky Warbler | <i>Phylloscopus fuscatus</i> | 褐柳鶇 | WV | C | + | 1 | 1 | | + | 1 | | 1 | ++ | | | | ++ | 1 | 2 | 1 | ++ | | 1 | |
| Eurasian tree sparrow | <i>Passer montanus</i> | 麻雀 | R | C | + | 2 | | 3 | + | | | 2 | +++ | | 5 | 3 | +++ | 2 | 4 | 3 | +++ | | 3 | 2 |
| Fork-tailed Sunbird | <i>Aethopyga christinae</i> | 叉尾太陽鳥 | R | C | | | | | | | | | | | | | | | | | | | | |
| Great Coucal | <i>Centropus sinensis</i> | 褐翅鷓鴣 | R,VU | C | + | | 1 | | + | | | | + | | | | + | | 1 | | + | | 1 | |
| Great Egret | <i>Ardea alba</i> | 大白鷺 | R,RC | C | | | | | | | | | | | | | + | | | | + | | | |
| Great Tit | <i>Parus major(commixtus)</i> | 大山雀 | R | C | | | | | | | | | | | | | | | | | | | | |
| Green Sandpiper | <i>Tringa ochropus</i> | 白腰草鶇 | PM&WV | C | | | | | | | | | | | | | | | | | | | | |

Table 4.3 Avifauna recorded along survey transects and at three selected point count locations at She Shan River.

(T1- Upper stream section, T2 - middle stream section and T3 - Lower stream section)

| Common Name | Species name | Chinese name | Status | Commonness | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | |
|-------------------------|------------------------------------|--------------|------------|------------|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|----|
| | | | | | Oct-14 | | | | Nov-14 | | | | Dec-14 | | | | Jan-15 | | | | Feb-15 | | | | |
| | | | | | Abundance | | | | Abundance | | | | Abundance | | | | Abundance | | | | Abundance | | | | |
| | | | | | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C |
| Grey Heron | <i>Ardea cinerea</i> | 蒼鷺 | WV,PRC | C | | | | | | | | | | | | | | | | | | | | | |
| Grey Wagtail | <i>Motacilla cinerea</i> | 灰鶺鴒 | WV | C | + | | 1 | 1 | + | | | 1 | + | | 1 | | + | | 1 | 2 | + | 1 | 2 | 1 | |
| Japanese White Eye | <i>Zosterops japonica(simplex)</i> | 暗綠繡眼鳥 | R | C | + | | | | + | | | | + | | | | + | | | 4 | + | | | 3 | |
| Large Hawk Cuckoo | <i>Cuculus sparverioides</i> | 鷹鵒 | SV | C | | | | | | | | | + | | | | | | | | | | | | |
| Little Egret | <i>Egretta garzetta</i> | 小白鷺 | R,RC | C | + | 1 | 2 | 1 | + | 1 | 2 | 2 | + | 2 | 1 | 1 | + | 1 | 2 | 1 | + | 2 | 1 | 1 | |
| Magpie Robin | <i>Copsychus saularis</i> | 鶺鴒 | R | C | + | 1 | | 1 | + | 1 | 1 | 1 | + | | 1 | | + | 1 | 1 | 2 | + | 1 | | 1 | |
| Night Heron | <i>Nycticorax nycticorax</i> | 夜鷺 | R,LC | C | | | | | | | | | | | | | | | | | | | | | |
| Olive Backed Pipit | <i>Anthus hodgsoni</i> | 樹鶺鴒 | WV | C | | | | | | | | | | | | | | | | | | | | | |
| Oriental Dollarbird | <i>Eurystomus orientalis</i> | 三寶鳥 | PM | U | | | | | | | | | | | | | | | | | | | | | |
| Plaintive Cuckoo | <i>Cacomantis merulinus</i> | 八聲杜鵑 | SV | C | | | | | | | | | | | | | | | | | | | | | |
| Plain Prinia | <i>Prinia inornata</i> | 純色鷓鴣 | R | C | | | | | | | | | | | | | | | | | | | | | |
| Red-flanked Bluetail | <i>Tarsiger cyanurus</i> | 紅腦藍尾鶺鴒 | WV&PM | C | | | | | | | | | | | | | | | | | | | | | |
| Rufous-backed Shrike | <i>Lanius schach</i> | 棕背伯勞 | R | C | + | | 1 | | + | 1 | | | + | | | | + | | | | + | | 1 | | |
| Rufous-capped Babbler | <i>Stachyridopsis ruficeps</i> | 紅頭穗鶺鴒 | R, LC | U | + | | | | + | | | | + | | | | + | | | | + | | | | |
| Scarlet Minivet | <i>Pericrocotus speciosus</i> | 赤紅山椒鳥 | R | C | | | | | | | | | | | | | | | | | + | | | | |
| Sooty-headed Bulbul | <i>Pycnonotus aurigaster</i> | 白喉紅臀鶺鴒 | R | C | | | | | | | | | | | | | | | | | | | | | |
| Spotted Dove | <i>Streptopelia chinensis</i> | 珠頸斑鳩 | R | C | ++ | 4 | 2 | 3 | ++ | 3 | 3 | 4 | + | 1 | 2 | 2 | + | 2 | 3 | 4 | ++ | 2 | 3 | 3 | |
| Spotted Munia | <i>Lonchura punctulata</i> | 斑文鳥 | R | C | + | | 7 | | + | 6 | 5 | | + | 5 | | | + | | 5 | | + | | | | |
| Stejneger's Stonechat | <i>Saxicola stejnegeri</i> | 黑喉石鶺鴒 | PM,WV | C | | | | | | | | | | | | | | | | | | | | | |
| White Wagtail | <i>Motacilla alba</i> | 白鶺鴒 | WV | C | + | 2 | 2 | 1 | + | 1 | 2 | 2 | ++ | 1 | 2 | 2 | ++ | 1 | 2 | 2 | ++ | 1 | 2 | 2 | |
| White-breasted Waterhen | <i>Amaurornis phoenicurus</i> | 白胸苦惡鳥 | R | C | + | | | | + | | | | | | | | + | | | | + | | 1 | | |
| Yellow Bellid Prinia | <i>Prinia flaviventris</i> | 黃腹鷓鴣 | R | C | + | 1 | 1 | 1 | + | | 1 | 1 | | | | | | | | | | | | | |
| Yellow Bittern | <i>Ixobrychus sinensis</i> | 黃葦鶺鴒 | WV, PM, LC | U | | | | | | | | | | | | | | | | | | | | | |
| Number of birds | | | | | | 19 | 24 | 23 | | 21 | 20 | 20 | | 15 | 19 | 15 | | 15 | 16 | 17 | | 12 | 19 | 21 | |
| No. of species | | | | | | 23 | 17 | 17 | 15 | 23 | 19 | 17 | 16 | 21 | 9 | 11 | 7 | 24 | 10 | 13 | 14 | 25 | 9 | 12 | 10 |

Note: R – Resident; WV – Winter visitor; PM – Passage migrant; C – Common; U – Uncommon

SpM – Spring migrant; Sv - Summer visitor ; RPM - Rare passage migrant

C – transect count; P1 – Point count location 1; P3 – Point count location 3

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Table 4.3 Avifauna recorded along survey transects and at three selected point count locations at She Shan River.

(T1- Upper stream section, T2 - middle stream section and T3 - Lower stream section)

| Common Name | Species name | Chinese name | Status | Commonness | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | |
|-------------------------------|----------------------------------|--------------|--------------------|------------|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|---|
| | | | | | Mar-15 | | | | Apr-15 | | | | May-15 | | | | Jun-15 | | | | Jul-15 | | | | |
| | | | | | Abundance | | | | Abundance | | | | Abundance | | | | Abundance | | | | Abundance | | | | |
| | | | | | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C |
| Ashy Drongo | <i>Dicrurus leucophaeus</i> | 灰卷尾 | SWV, LC | U | | | | | | | | | | | | | | | | | | | | | |
| Barn Swallow | <i>Hirundo rustica</i> | 家燕 | PM | C | + | 1 | 2 | | ++ | | 2 | 2 | | ++ | 2 | | 2 | | ++ | 2 | | 2 | 2 | | |
| Black Drongo | <i>Dicrurus macrocerus</i> | 黑卷尾 | Sv | C | | | | | | | | | | | | | + | | | 2 | | | | | |
| Black Kite | <i>Milvus lineatus</i> | 鷹 | R, RC, Cap.586 | C | + | | 1 | | + | | 1 | | | | | | | | | | | | | | |
| Black-necked Starling | <i>Sturnus nigricollis</i> | 黑領椋鳥 | R | C | ++ | | 2 | 2 | ++ | | 2 | 2 | 2 | ++ | 2 | 2 | 2 | ++ | 1 | | 2 | ++ | 2 | | 2 |
| Black-throated Laughingthrush | <i>Garrulax chinensis</i> | 黑喉噪鶇 | R | C | | | | | + | | 1 | | | + | | 2 | | + | | | 2 | | | | |
| Blue Whistling Thrush | <i>Myophonus caeruleus</i> | 紫嘯鶇 | R | C | | | | | | | | | | | | | | | | | | | | | |
| Bull-headed Shrike | <i>Lanius bucephalus</i> | 牛頭伯勞 | RPM | U | | | | | | | | | | | | | | | | | | | | | |
| Buzzard (Common Buzzard) | <i>Buteo buteo</i> | 普通鵟 | WV, Cap 586 | U | | | | | | | | | | | | | | | | | | | | | |
| Chestnut Bulbul | <i>Hemixos castanonotus</i> | 栗背短腳鶇 | R,WV | C | | | | | | | | | | | | | | | | | | | | | |
| Chinese Blackbird | <i>Turdus mandarinus</i> | 烏鶇 | WV | C | | | | | | | | | | | | | | | | | | | | | |
| Chinese Bulbul | <i>Pycnonotus sinensis</i> | 白頭鶇 | R | C | ++ | 2 | | 3 | ++ | 1 | | 2 | ++ | 2 | | 2 | ++ | 3 | 1 | 2 | ++ | 2 | 2 | 2 | |
| Chinese Pond Heron | <i>Ardeola bacchus</i> | 池鶇 | R,RC | C | + | 1 | 1 | | + | 1 | | | + | 1 | | | + | 1 | | | + | | | 1 | |
| Chinese Hwamei | <i>Garrulax canorus</i> | 畫眉 | R, Cap 586 | U | | | | | | | | | | | | | | | | | | | | | |
| Chinese Sparrowhawk | <i>Accipiter soloensis</i> | 赤腹鷹 | PM, Cap.586 | U | | | | | | | | | | | | | | | | | | | | | |
| Common Emerald Dove | <i>Chalcophaps indica</i> | 綠翅金鳩 | R,VU | U | | | | | | | | | | | | | | | | | | | | | |
| Common Kingfisher | <i>Alcedo atthis</i> | 普通翠鳥 | R | C | | | | | | | | | | | | | + | 1 | | | | | | | |
| Common Koel | <i>Eudynamys scolopacea</i> | 噪鶇 | R | C | + | | 1 | | + | | 1 | | + | | 1 | | + | | 1 | 1 | | | | | |
| Common Sandpiper | <i>Actitis hypoleucos</i> | 磯鶇 | WV&PM | C | | | | | | | | | | | | | | | | | + | | | 1 | |
| Common Tailorbird | <i>Orthotomus sutorius</i> | 長尾縫葉鶇 | R | C | + | 1 | 1 | | + | 1 | | 1 | + | 1 | | 1 | + | | 1 | 1 | + | 2 | 2 | | |
| Crested bulbul | <i>Pycnonotus jocosus</i> | 紅耳鶇 | R | C | +++ | 3 | 1 | 4 | +++ | 3 | 2 | 3 | +++ | 4 | 3 | 3 | +++ | 5 | 4 | 4 | +++ | 5 | 5 | 7 | |
| Crested Goshawk | <i>Accipiter trivirgatus</i> | 鳳頭鷹 | R, CR, Cap.586 | U | | | | | + | | 1 | | | | | | | | | | | | | | |
| Crested Myna | <i>Acridotheres cristatellus</i> | 八哥 | R | C | ++ | | 2 | 3 | ++ | | 1 | 3 | ++ | | 2 | 3 | ++ | 3 | 2 | 3 | ++ | 2 | 2 | 1 | |
| Crested Serpent Eagle | <i>Spilornis cheela</i> | 蛇鶇 | R, VU, LC, Cap 586 | U | + | | | | | | | | + | | | | | | | | | | | | |
| Domestic pigeon | <i>Columba sp.</i> | 鴿 | R | C | | | | | | | | | | | | | | | | | | | | | |
| Dusky Warbler | <i>Phylloscopus fuscatus</i> | 褐柳鶇 | WV | C | + | | 1 | | + | | 1 | | + | | 1 | | + | | 1 | | + | 1 | 1 | | |
| Eurasian tree sparrow | <i>Passer montanus</i> | 麻雀 | R | C | ++ | 2 | | 2 | ++ | 2 | 2 | 2 | ++ | 3 | 2 | 2 | ++ | 2 | 3 | 3 | ++ | 3 | 3 | 3 | |
| Fork-tailed Sunbird | <i>Aethopyga christinae</i> | 叉尾太陽鳥 | R | C | | | | | + | | | 2 | | | | | | | | | | | | | |
| Great Coucal | <i>Centropus sinensis</i> | 褐翅鴉鶇 | R,VU | C | + | | 1 | | + | | 1 | | + | | 1 | | | | | | | | | | |
| Great Egret | <i>Ardea alba</i> | 大白鶇 | R,RC | C | | | | | | | | | | | | | | | | | | | | | |
| Great Tit | <i>Parus major(commixtus)</i> | 大山雀 | R | C | | | | | | | | | | | | | | | | | | | | | |
| Green Sandpiper | <i>Tringa ochropus</i> | 白腰草鶇 | PM&WV | C | | | | | | | | | | | | | | | | | | | | | |

Table 4.3 Avifauna recorded along survey transects and at three selected point count locations at She Shan River.

(T1- Upper stream section, T2 - middle stream section and T3 - Lower stream section)

| Common Name | Species name | Chinese name | Status | Commonness | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | |
|-------------------------|------------------------------------|--------------|------------|------------|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|
| | | | | | Mar-15 | | | | Apr-15 | | | | May-15 | | | | Jun-15 | | | | Jul-15 | | | |
| | | | | | Abundance | | | | Abundance | | | | Abundance | | | | Abundance | | | | Abundance | | | |
| | | | | | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 |
| Grey Heron | <i>Ardea cinerea</i> | 蒼鷺 | WV,PRC | C | | | | | + | | | | 1 | | | | | | | | | | | |
| Grey Wagtail | <i>Motacilla cinerea</i> | 灰鶺鴒 | WV | C | + | | 1 | 1 | + | | 1 | 1 | + | | 1 | 1 | + | | 1 | | + | | | 1 |
| Japanese White Eye | <i>Zosterops japonica(simplex)</i> | 暗綠繡眼鳥 | R | C | + | | | 4 | + | | | 3 | + | | 2 | 3 | + | | 3 | 3 | + | | 3 | 3 |
| Large Hawk Cuckoo | <i>Cuculus sparverioides</i> | 鷹鵒 | SV | C | + | | | | + | | | | + | | | | + | | | | | | | |
| Little Egret | <i>Egretta garzetta</i> | 小白鷺 | R,RC | C | + | 1 | 1 | 2 | + | | 1 | 1 | + | 1 | | 1 | + | 1 | | 1 | + | | | 1 |
| Magpie Robin | <i>Copsychus saularis</i> | 鶺鴒 | R | C | ++ | 1 | 2 | 1 | + | 1 | 2 | 1 | + | 2 | 2 | 1 | + | 1 | 2 | 2 | + | 2 | | 2 |
| Night Heron | <i>Nycticorax nycticorax</i> | 夜鷺 | R,LC | C | | | | | | | | | | | | | | | | | | | | |
| Olive Backed Pipit | <i>Anthus hodgsoni</i> | 樹鶺 | WV | C | | | | | | | | | | | | | | | | | | | | |
| Oriental Dollarbird | <i>Eurystomus orientalis</i> | 三寶鳥 | PM | U | | | | | | | | | | | | | | | | | | | | |
| Plaintive Cuckoo | <i>Cacomantis merulinus</i> | 八聲杜鵑 | SV | C | + | | | | + | | | | | | | | | | | | | | | |
| Plain Prinia | <i>Prinia inornata</i> | 純色鷓鴣 | R | C | | | | | | | | | | | | | | | | | | | | |
| Red-flanked Bluetail | <i>Tarsiger cyanurus</i> | 紅脇藍尾鶺 | WV&PM | C | | | | | | | | | | | | | | | | | | | | |
| Rufous-backed Shrike | <i>Lanius schach</i> | 棕背伯勞 | R | C | + | | 1 | | + | | | 1 | + | | | 1 | + | | | 1 | + | 1 | | |
| Rufous-capped Babbler | <i>Stachyridopsis ruficeps</i> | 紅頭穗鶺 | R, LC | U | + | | | | + | | | | + | | | | + | | | | + | | 1 | |
| Scarlet Minivet | <i>Pericrocotus speciosus</i> | 赤紅山椒鳥 | R | C | + | | | | | | | | | | | | | | | | | | | |
| Sooty-headed Bulbul | <i>Pycnonotus aurigaster</i> | 白喉紅臀鶺 | R | C | | | | | | | | | | | | | + | | | | | 1 | | |
| Spotted Dove | <i>Streptopelia chinensis</i> | 珠頸斑鳩 | R | C | ++ | 3 | 3 | 1 | ++ | 3 | 1 | 2 | ++ | 2 | 2 | 2 | ++ | 2 | 2 | 2 | ++ | 3 | 3 | 4 |
| Spotted Munia | <i>Lonchura punctulata</i> | 斑文鳥 | R | C | | | | | | | | | | | | | | | | | | | | |
| Stejneger's Stonechat | <i>Saxicola stejnegeri</i> | 黑喉石鶺 | PM,WV | C | | | | | | | | | | | | | | | | | | | | |
| White Wagtail | <i>Motacilla alba</i> | 白鶺鴒 | WV | C | + | | 1 | 2 | + | | 1 | 1 | + | | 1 | 1 | + | | 1 | 1 | + | | 1 | 1 |
| White-breasted Waterhen | <i>Amaurornis phoenicurus</i> | 白胸苦惡鳥 | R | C | + | | 1 | | + | | 1 | | + | | 1 | | + | | 1 | | | | | |
| Yellow Bellid Prinia | <i>Prinia flaviventris</i> | 黃腹鷓鴣 | R | C | + | 1 | 1 | | + | | 1 | | + | | 1 | | + | | 1 | 1 | + | | 1 | 1 |
| Yellow Bittern | <i>Ixobrychus sinensis</i> | 黃葦鶺 | WV, PM, LC | U | | | | | | | | | | | | | | | | | | | | |
| Number of birds | | | | | | 12 | 19 | 21 | | 12 | 21 | 29 | | 20 | 24 | 25 | | 24 | 24 | 34 | | 21 | 24 | 33 |
| No. of species | | | | | 26 | 9 | 12 | 10 | 28 | 8 | 18 | 18 | 24 | 11 | 15 | 14 | 25 | 11 | 13 | 18 | 19 | 10 | 12 | 15 |

Note: R – Resident; WV – Winter visitor; PM – Passage migrant; C – Common; U – Uncommon

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|-------------------------|------------------------------------|--------------|------------|------------|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|----|
| | | | | | Aug-15 | | | | Sep-15 | | | | Oct-15 | | | | Nov-15 | | | | Dec-15 | | | | |
| | | | | | Abundance | | | | Abundance | | | | Abundance | | | | Abundance | | | | Abundance | | | | |
| | | | | | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C |
| Grey Heron | <i>Ardea cinerea</i> | 蒼鷺 | WV,PRC | C | | | | | | | | | | | | | | | | | | | | | |
| Grey Wagtail | <i>Motacilla cinerea</i> | 灰鶺鴒 | WV | C | + | | | 1 | + | | | 1 | + | 1 | | | | | | | | | | | 1 |
| Japanese White Eye | <i>Zosterops japonica(simplex)</i> | 暗綠繡眼鳥 | R | C | + | 3 | 3 | | + | 3 | 3 | | | | | | | | | | | | | 5 | 3 |
| Large Hawk Cuckoo | <i>Cuculus sparverioides</i> | 鷹鵒 | SV | C | | | | | | | | | | | | | | | | | | | | | |
| Little Egret | <i>Egretta garzetta</i> | 小白鷺 | R,RC | C | + | | | 1 | | | | | + | | | | | | | | | | | 1 | |
| Magpie Robin | <i>Copsychus saularis</i> | 鶺鴒 | R | C | + | | 1 | 2 | + | | 2 | 2 | + | 1 | 2 | | | | | | | | | | 2 |
| Night Heron | <i>Nycticorax nycticorax</i> | 夜鷺 | R,LC | C | | | | | | | | | | | | | | | | | | | | | |
| Olive Backed Pipit | <i>Anthus hodgsoni</i> | 樹鶺鴒 | WV | C | | | | | | | | | | | | | | | | | | | | | |
| Oriental Dollarbird | <i>Eurystomus orientalis</i> | 三寶鳥 | PM | U | + | | 1 | | + | | 3 | | | | | | | | | | | | | | |
| Plaintive Cuckoo | <i>Cacomantis merulinus</i> | 八聲杜鵑 | SV | C | | | | | | | | | | | | | | | | | | | | | |
| Plain Prinia | <i>Prinia inornata</i> | 純色鷓鴣 | R | C | | | | | | | | | | | | | | | | | | | | ++ | |
| Red-flanked Bluetail | <i>Tarsiger cyanurus</i> | 紅脇藍尾鶺鴒 | WV&PM | C | | | | | | | | | | | | | | | | | | | | | |
| Rufous-backed Shrike | <i>Lanius schach</i> | 棕背伯勞 | R | C | + | 1 | | | + | | | 1 | + | 1 | | | | | | | | | | 1 | |
| Rufous-capped Babbler | <i>Stachyridopsis ruficeps</i> | 紅頭穗鶺鴒 | R, LC | U | + | | 1 | | + | | 1 | | | | | | | | | | | | | | |
| Scarlet Minivet | <i>Pericrocotus speciosus</i> | 赤紅山椒鳥 | R | C | | | | | | | | | | | | | | | | | | | | | |
| Sooty-headed Bulbul | <i>Pycnonotus aurigaster</i> | 白喉紅臀鶺鴒 | R | C | | | | | | | | | | | | | | | | | | | | | |
| Spotted Dove | <i>Streptopelia chinensis</i> | 珠頸斑鳩 | R | C | ++ | 2 | 3 | 2 | ++ | 3 | 3 | 4 | ++ | 3 | 5 | 5 | ++ | | | | | | | 3 | 4 |
| Spotted Munia | <i>Lonchura punctulata</i> | 斑文鳥 | R | C | | | | | + | | | 3 | + | | 4 | | | | | | | | | | |
| Stejneger's Stonechat | <i>Saxicola stejnegeri</i> | 黑喉石鶺鴒 | PM,WV | C | | | | | | | | | | | | | | | | | | | | + | |
| White Wagtail | <i>Motacilla alba</i> | 白鶺鴒 | WV | C | + | | 1 | | + | | | 1 | + | | | 3 | + | | | | | | | 1 | 1 |
| White-breasted Waterhen | <i>Amaurornis phoenicurus</i> | 白胸苦惡鳥 | R | C | | | | | | | | | + | | 1 | | | | | | | | | | |
| Yellow Bellid Prinia | <i>Prinia flaviventris</i> | 黃腹鷓鴣 | R | C | + | | 1 | | + | | 1 | | + | | | | | | | | | | | + | |
| Yellow Bittern | <i>Ixobrychus sinensis</i> | 黃葦鶺鴒 | WV, PM, LC | U | | | | | | | | | | | | | | | | | | | | | |
| Number of birds | | | | | | 17 | 31 | 23 | | 14 | 37 | 29 | | 15 | 35 | 21 | | 10 | 25 | 24 | | 10 | 27 | 34 | |
| No. of species | | | | | | 25 | 8 | 19 | 8 | 24 | 6 | 16 | 11 | 21 | 7 | 12 | 7 | 20 | 4 | 11 | 13 | 21 | 4 | 8 | 12 |

Note: R – Resident; WV – Winter visitor; PM – Passage migrant; C – Common; U – Uncommon

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|-------------------------|------------------------------------|--------------|------------|------------|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|----|
| | | | | | Jan-16 | | | | Feb-16 | | | | Mar-16 | | | | Apr-16 | | | | May-16 | | | | |
| | | | | | Abundance | | | | Abundance | | | | Abundance | | | | Abundance | | | | Abundance | | | | |
| | | | | | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C |
| Grey Heron | <i>Ardea cinerea</i> | 蒼鷺 | WV,PRC | C | | | | | | | | | | | | | | | | | | | | | |
| Grey Wagtail | <i>Motacilla cinerea</i> | 灰鶺鴒 | WV | C | + | | | 1 | + | 1 | | | + | 1 | | | + | 1 | | 1 | + | 1 | | 1 | |
| Japanese White Eye | <i>Zosterops japonica(simplex)</i> | 暗綠繡眼鳥 | R | C | ++ | | 7 | 6 | ++ | 3 | | 4 | ++ | | 4 | 2 | ++ | 3 | 3 | | ++ | 2 | | 2 | |
| Large Hawk Cuckoo | <i>Cuculus sparverioides</i> | 鷹鵒 | SV | C | | | | | | | | | | | | | + | | | | + | | | | |
| Little Egret | <i>Egretta garzetta</i> | 小白鷺 | R,RC | C | + | 1 | | | + | 1 | | | + | 1 | | | + | | 1 | | + | | | 1 | |
| Magpie Robin | <i>Copsychus saularis</i> | 鶺鴒 | R | C | + | | 2 | 2 | + | | 2 | 2 | + | | 1 | 1 | + | | 2 | | + | 1 | 1 | 1 | |
| Night Heron | <i>Nycticorax nycticorax</i> | 夜鷺 | R,LC | C | | | | | | | | | | | | | | | | | | | | | |
| Olive Backed Pipit | <i>Anthus hodgsoni</i> | 樹鶺 | WV | C | | | | | ++ | | | | ++ | | | | | | | | | | | | |
| Oriental Dollarbird | <i>Eurystomus orientalis</i> | 三寶鳥 | PM | U | | | | | | | | | | | | | | | | | | | | | |
| Plaintive Cuckoo | <i>Cacomantis merulinus</i> | 八聲杜鵑 | SV | C | | | | | | | | | | | | | | | | | | | | | |
| Plain Prinia | <i>Prinia inornata</i> | 純色鷓鴣 | R | C | + | | | | + | | | | + | | | | + | | | | + | | | | |
| Red-flanked Bluetail | <i>Tarsiger cyanurus</i> | 紅脇藍尾鶺 | WV&PM | C | | | | | + | | 1 | | | | | | | | | | | | | | |
| Rufous-backed Shrike | <i>Lanius schach</i> | 棕背白勞 | R | C | + | | | 1 | + | | | 1 | | | | | + | | | | | | | | |
| Rufous-capped Babbler | <i>Stachyridopsis ruficeps</i> | 紅頭穗鶺 | R, LC | U | + | | | | + | | | | + | | | | | | | | | | | | |
| Scarlet Minivet | <i>Pericrocotus speciosus</i> | 赤紅山椒鳥 | R | C | | | | | | | | | | | | | | | | | | | | | |
| Sooty-headed Bulbul | <i>Pycnonotus aurigaster</i> | 白喉紅臀鶺 | R | C | | | | | | | | | | | | | | | | | | | | | |
| Spotted Dove | <i>Streptopelia chinensis</i> | 珠頸斑鳩 | R | C | ++ | 3 | 1 | 4 | ++ | 4 | 2 | 5 | ++ | 3 | 3 | 4 | ++ | 4 | 4 | 2 | ++ | 4 | | 4 | |
| Spotted Munia | <i>Lonchura punctulata</i> | 斑文鳥 | R | C | | | | | | | | | | | | | | | | | | | | | |
| Stejneger's Stonechat | <i>Saxicola stejnegeri</i> | 黑喉石鶺 | PM,WV | C | + | | | | + | | | | + | | | | | | | | | | | | |
| White Wagtail | <i>Motacilla alba</i> | 白鶺鴒 | WV | C | + | 1 | | 1 | + | 1 | | | + | 1 | | | + | 1 | 1 | 1 | + | | | 1 | |
| White-breasted Waterhen | <i>Amaurornis phoenicurus</i> | 白胸苦惡鳥 | R | C | | | | | | | | | | | | | + | 1 | | | | | | | |
| Yellow Bellid Prinia | <i>Prinia flaviventris</i> | 黃腹鷓鴣 | R | C | + | | | | + | | | | + | | | | + | | | | + | | | | |
| Yellow Bittern | <i>Ixobrychus sinensis</i> | 黃葦鶺 | WV, PM, LC | U | | | | | | | | | | | | | | | | | | | | | |
| Number of birds | | | | | | 14 | 42 | 32 | | 22 | 34 | 28 | | 19 | 44 | 12 | | 22 | 36 | 18 | | 21 | 31 | 24 | |
| No. of species | | | | | | 27 | 7 | 13 | 11 | 27 | 9 | 9 | 9 | 25 | 9 | 9 | 6 | 22 | 8 | 8 | 10 | 19 | 7 | 7 | 11 |

Note: R – Resident; WV – Winter visitor; PM – Passage migrant; C – Common; U – Uncommon

SpM – Spring migrant; Sv - Summer visitor ; RPM - Rare passage migrant

C – transect count; P1 – Point count location 1; P3 – Point count location 3

+, occurred; ++, common; +++, abundant/dominant species in the the study area

Commonness and status were decided according to AFCD biodiversity website (www.hk biodiversity.net)

All bird species are under protection of Wild Animals Protection Ordinance (Cap. 170)

Endangered Species of Animals and Plants Ordinance (Cap. 586)

RC : Regional concern Fellowes *et al* (2002)

LC : Local Concern Fellowes *et al* (2002)

PRC: Potential Regional concern Fellowes *et al* (2002)

CR: Rare in China Red Data Book Status

VU: Vulnerable in China Red Data Book Status

Table 4.3 Avifauna recorded along survey transects and at three selected point count locations at She Shan River.

(T1- Upper stream section, T2 - middle stream section and T3 - Lower stream section)

| Common Name | Species name | Chinese name | Status | Commonness | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | | | | |
|-------------------------------|----------------------------------|--------------|--------------------|------------|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|-----------|----|----|----|
| | | | | | Jun-16 | | | | Jul-16 | | | | Aug-16 | | | | Sep-16 | | | | Oct-16 | | | | Nov-16 | | | |
| | | | | | Abundance | | | | Abundance | | | | Abundance | | | | Abundance | | | | Abundance | | | | Abundance | | | |
| | | | | | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 |
| Ashy Drongo | <i>Dicrurus leucophaeus</i> | 灰卷尾 | SWV, LC | U | | | | | | | | | | | | | | | | | | | | | | | | |
| Barn Swallow | <i>Hirundo rustica</i> | 家燕 | PM | C | | | | | ++ | 5 | | | ++ | 2 | | | | | | | + | | | | | | | |
| Black Drongo | <i>Dicrurus macrocerus</i> | 黑卷尾 | Sv | C | | | | | | | | | | | | | | | | | | | | | | | | |
| Black Kite | <i>Milvus lineatus</i> | 麻鷹 | R, RC, Cap.586 | C | | | | | | | | | | | | | + | | | | | | | | | | | |
| Black-necked Starling | <i>Sturnus nigricollis</i> | 黑領椋鳥 | R | C | ++ | | 2 | 2 | ++ | | | 3 | ++ | | 2 | 1 | ++ | 2 | | | ++ | | 3 | | ++ | | 2 | 2 |
| Black-throated Laughingthrush | <i>Garrulax chinensis</i> | 黑喉噪鵲 | R | C | | | | | | | | | | | | | | | | | | | | | | | | |
| Blue Whistling Thrush | <i>Myophonus caeruleus</i> | 紫嘯鶇 | R | C | | | | | | | | | | | | | | | | | | | | | | | | |
| Bull-headed Shrike | <i>Lanius bucephalus</i> | 牛頭伯勞 | RPM | U | | | | | | | | | | | | | | | | | | | | | | | | |
| Buzzard (Common Buzzard) | <i>Buteo buteo</i> | 普通鵟 | WV, Cap 586 | U | | | | | | | | | | | | | | | | | | | | | | | | |
| Chestnut Bulbul | <i>Hemixos castanonotus</i> | 栗背短腳鶇 | R,WV | C | ++ | | 5 | | | | | | | | | | | | | | | | | | | | | |
| Chinese Blackbird | <i>Turdus mandarinus</i> | 烏鶇 | WV | C | | | | | | | | | | | | | | | | | | | | | | | | |
| Chinese Bulbul | <i>Pycnonotus sinensis</i> | 白頭鶇 | R | C | ++ | 2 | 2 | 4 | ++ | 3 | 3 | 3 | ++ | 2 | 1 | 4 | ++ | 3 | 4 | | ++ | 2 | 3 | 2 | ++ | 3 | | 2 |
| Chinese Pond Heron | <i>Ardeola bacchus</i> | 池鶇 | R,RC | C | + | | 1 | | + | | 1 | | + | | 1 | | + | | 1 | | + | | 1 | | + | | 1 | |
| Chinese Hwamei | <i>Garrulax canorus</i> | 畫眉 | R, Cap 586 | U | | | | | | | | | | | | | | | | | | | | | | | | |
| Chinese Sparrowhawk | <i>Accipiter soloensis</i> | 赤腹鷹 | PM, Cap.586 | U | | | | | | | | | | | | | | | | | | | | | + | | | |
| Common Emerald Dove | <i>Chalcophaps indica</i> | 綠翅金鳩 | R,VU | U | | | | | | | | | | | | | | | | | | | | | | | | |
| Common Kingfisher | <i>Alcedo atthis</i> | 普通翠鳥 | R | C | | | | | | | | | + | | | | + | | | | + | | | | | | | |
| Common Koel | <i>Eudynamys scolopacea</i> | 噪鶇 | R | C | + | | | | + | | | | | | | | | | | | | | | | | | | |
| Common Sandpiper | <i>Actitis hypoleucos</i> | 磯鶇 | WV&PM | C | | | | | | | | | | | | | | | | | | | | | | | | |
| Common Tailorbird | <i>Orthotomus sutorius</i> | 長尾縫葉鶇 | R | C | + | | 1 | 1 | + | | 1 | 1 | + | | 1 | 1 | + | | 1 | 1 | + | 1 | 1 | | + | 1 | 1 | 1 |
| Crested bulbul | <i>Pycnonotus jocosus</i> | 紅耳鶇 | R | C | +++ | 5 | 10 | 8 | +++ | 7 | 8 | 2 | +++ | 9 | 8 | 6 | +++ | 9 | 8 | 6 | +++ | 7 | 6 | 2 | +++ | 8 | 5 | 2 |
| Crested Goshawk | <i>Accipiter trivirgatus</i> | 鳳頭鷹 | R, CR, Cap.586 | U | | | | | | | | | | | | | | | | | | | | | | | | |
| Crested Myna | <i>Acridotheres cristatellus</i> | 八哥 | R | C | + | | 2 | | + | | 3 | 3 | + | 2 | | 2 | ++ | 3 | 2 | | ++ | 3 | | 2 | ++ | | 2 | 2 |
| Crested Serpent Eagle | <i>Spilornis cheela</i> | 蛇鶇 | R, VU, LC, Cap 586 | U | | | | | | | | | + | | | | | | | | | | | | | | | |
| Domestic pigeon | <i>Columba sp.</i> | 鴿 | R | C | | | | | | | | | | | | | | | | | | | | | | | | |
| Dusky Warbler | <i>Phylloscopus fuscatus</i> | 褐柳鶇 | WV | C | + | | | | + | | | | + | | | | + | | | | + | | | | + | | | |
| Eurasian tree sparrow | <i>Passer montanus</i> | 麻雀 | R | C | ++ | 3 | 3 | 3 | ++ | 5 | 2 | 3 | ++ | 3 | 3 | | ++ | 3 | 3 | 2 | ++ | 4 | 4 | 3 | ++ | 3 | 3 | 4 |
| Fork-tailed Sunbird | <i>Aethopyga christinae</i> | 叉尾太陽鳥 | R | C | | | | | | | | | | | | | | | | | | | | | | | | |
| Great Coucal | <i>Centropus sinensis</i> | 褐翅鴉鶇 | R,VU | C | | | | | | | | | | | | | + | | | | + | | | | + | | | |
| Great Egret | <i>Ardea alba</i> | 大白鶇 | R,RC | C | | | | | | | | | | | | | | | | | | | | | | | | |
| Great Tit | <i>Parus major(commixtus)</i> | 大山雀 | R | C | | | | | | | | | | | | | | | | | | | | | | | | |
| Green Sandpiper | <i>Tringa ochropus</i> | 白腰草鶇 | PM&WV | C | + | | 1 | | + | | 1 | | + | | 1 | | | | | | | | | | + | | 1 | |

Table 4.3 Avifauna recorded along survey transects and at three selected point count locations at She Shan River.

(T1- Upper stream section, T2 - middle stream section and T3 - Lower stream section)

| Common Name | Species name | Chinese name | Status | Commonness | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | | | | |
|-------------------------|------------------------------------|--------------|------------|------------|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|-----------|----|----|----|
| | | | | | Jun-16 | | | | Jul-16 | | | | Aug-16 | | | | Sep-16 | | | | Oct-16 | | | | Nov-16 | | | |
| | | | | | Abundance | | | | Abundance | | | | Abundance | | | | Abundance | | | | Abundance | | | | Abundance | | | |
| | | | | | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 |
| Grey Heron | <i>Ardea cinerea</i> | 蒼鷺 | WV,PRC | C | | | | | | | | | | | | | | | | | | | | | | | | |
| Grey Wagtail | <i>Motacilla cinerea</i> | 灰鶺鴒 | WV | C | + | 1 | | 1 | + | | 1 | 1 | + | 2 | 1 | | + | 1 | 1 | | + | | 1 | 1 | | | | |
| Japanese White Eye | <i>Zosterops japonica(simplex)</i> | 暗綠繡眼鳥 | R | C | ++ | | | 2 | ++ | | 3 | | ++ | | 4 | | ++ | | 3 | 3 | ++ | | | 2 | ++ | | | |
| Large Hawk Cuckoo | <i>Cuculus sparverioides</i> | 鷹鵒 | SV | C | + | | | | | | | | | | | | | | | | | | | | | | | |
| Little Egret | <i>Egretta garzetta</i> | 小白鷺 | R,RC | C | + | | | 1 | + | | | 1 | + | | | 1 | + | | | 1 | + | | | 1 | | | | |
| Magpie Robin | <i>Copsychus saularis</i> | 鶺鴒 | R | C | + | | 2 | 1 | + | 2 | 2 | | + | 2 | 2 | | + | | 2 | 1 | + | | 1 | 1 | | | | |
| Night Heron | <i>Nycticorax nycticorax</i> | 夜鷺 | R,LC | C | | | | | | | | | | | | | | | | | | | | | | | | |
| Olive Backed Pipit | <i>Anthus hodgsoni</i> | 樹鶺鴒 | WV | C | | | | | | | | | | | | | | | | | | | | | | | | |
| Oriental Dollarbird | <i>Eurystomus orientalis</i> | 三寶鳥 | PM | U | | | | | | | | | | | | | | | | | + | | | | | | | |
| Plaintive Cuckoo | <i>Cacomantis merulinus</i> | 八聲杜鵑 | SV | C | | | | | | | | | | | | | | | | | | | | | | | | |
| Plain Prinia | <i>Prinia inornata</i> | 純色鷓鴣 | R | C | + | | | | + | | | | + | | | | + | | | | | | + | | | | | |
| Red-flanked Bluetail | <i>Tarsiger cyanurus</i> | 紅脇藍尾鶺鴒 | WV&PM | C | | | | | | | | | | | | | | | | | | | | | | | | |
| Rufous-backed Shrike | <i>Lanius schach</i> | 棕背伯勞 | R | C | | | | | + | | | | + | | | | + | | | | | | + | | | | | |
| Rufous-capped Babbler | <i>Stachyridopsis ruficeps</i> | 紅頭穗鶺鴒 | R, LC | U | + | | | | + | | | | + | | | | + | | | | | | | | | | | |
| Scarlet Minivet | <i>Pericrocotus speciosus</i> | 赤紅山椒鳥 | R | C | | | | | | | | | | | | | | | | | | | | | | | | |
| Sooty-headed Bulbul | <i>Pycnonotus aurigaster</i> | 白喉紅臀鶺鴒 | R | C | | | | | | | | | | | | | | | | | | | | | | | | |
| Spotted Dove | <i>Streptopelia chinensis</i> | 珠頸斑鳩 | R | C | ++ | 3 | 2 | 3 | ++ | 4 | 2 | 5 | ++ | 3 | 3 | 4 | ++ | 4 | 2 | 4 | ++ | 3 | 3 | 4 | ++ | | | |
| Spotted Munia | <i>Lonchura punctulata</i> | 斑文鳥 | R | C | | | | | | | | | | | | | | | | | | | | | | | | |
| Stejneger's Stonechat | <i>Saxicola stejnegeri</i> | 黑喉石鶺鴒 | PM,WV | C | | | | | | | | | | | | | | | | | | | | + | | | | |
| White Wagtail | <i>Motacilla alba</i> | 白鶺鴒 | WV | C | + | | 1 | 1 | + | | 1 | 1 | + | 1 | 1 | | + | 1 | 1 | | + | 1 | 1 | | | | | |
| White-breasted Waterhen | <i>Amaurornis phoenicurus</i> | 白胸苦惡鳥 | R | C | | | | | | | | | + | | | | | | | | | | | | | | | |
| Yellow Bellid Prinia | <i>Prinia flaviventris</i> | 黃腹鷓鴣 | R | C | + | | | | + | | | | + | | | | + | | | | | | + | | | | | |
| Yellow Bittern | <i>Ixobrychus sinensis</i> | 黃葦鶺鴒 | WV, PM, LC | U | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of birds | | | | | | 14 | 28 | 31 | | 26 | 26 | 25 | | 26 | 26 | 21 | | 26 | 27 | 19 | | 21 | 23 | 19 | | | | |
| No. of species | | | | | 21 | 5 | 9 | 14 | 21 | 6 | 10 | 12 | 23 | 9 | 10 | 9 | 21 | 8 | 10 | 8 | 21 | 7 | 9 | 10 | | | | |

Note: R – Resident; WV – Winter visitor; PM – Passage migrant; C – Common; U – Uncommon

SpM – Spring migrant; Sv - Summer visitor ; RPM - Rare passage migrant

C – transect count; P1 – Point count location 1; P3 – Point count location 3

+, occurred; ++, common; +++, abundant/dominant species in the the study area

Commonness and status were decided according to AFCD biodiversity website (www.hkbiobiodiversity.net)

All bird species are under protection of Wild Animals Protection Ordinance (Cap. 170)

Endangered Species of Animals and Plants Ordinance (Cap. 586)

RC : Regional concern Fellowes *et al* (2002)

LC : Local Concern Fellowes *et al* (2002)

PRC: Potential Regional concern Fellowes *et al* (2002)

CR: Rare in China Red Data Book Status

VU: Vulnerable in China Red Data Book Status

Table 4.3 Avifauna recorded along survey transects and at three selected point count locations at She Shan River.

(T1- Upper stream section, T2 - middle stream section and T3 - Lower stream section)

| Common Name | Species name | Chinese name | Status | Commonness | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | |
|-------------------------|------------------------------------|--------------|------------|------------|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|---|
| | | | | | Dec-16 | | | | Jan-17 | | | | Feb-17 | | | | Mar-17 | | | | Apr-17 | | | | May-17 | | | | |
| | | | | | Abundance | | | | Abundance | | | | Abundance | | | | Abundance | | | | Abundance | | | | Abundance | | | | |
| C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 | | |
| Grey Heron | <i>Ardea cinerea</i> | 蒼鷺 | WV,PRC | C | | | | | | | | | | | | | | | | | | | | | | | | | |
| Grey Wagtail | <i>Motacilla cinerea</i> | 灰鶺鴒 | WV | C | + | 1 | 1 | | + | 1 | 1 | | + | 1 | 1 | | + | 1 | 1 | | + | 1 | | | + | | 1 | | |
| Japanese White Eye | <i>Zosterops japonica(simplex)</i> | 暗綠繡眼鳥 | R | C | ++ | | 3 | | ++ | | 2 | | ++ | | 3 | | + | | 2 | | | | | | | | | | |
| Large Hawk Cuckoo | <i>Cuculus sparverioides</i> | 鷹鵒 | SV | C | | | | | | | | | | | | | + | | | | | | | | | | | | |
| Little Egret | <i>Egretta garzetta</i> | 小白鷺 | R,RC | C | + | | 1 | | + | 1 | | | + | | 1 | | + | | 1 | | + | | 1 | | + | | 1 | | |
| Magpie Robin | <i>Copsychus saularis</i> | 鶺鴒 | R | C | + | | 2 | 2 | + | | 2 | 2 | + | 1 | 1 | 1 | + | 2 | | 2 | + | 1 | 1 | 2 | + | | 1 | 1 | |
| Night Heron | <i>Nycticorax nycticorax</i> | 夜鷺 | R,LC | C | | | | | | | | | | | | | | | | | | | | | | | | | |
| Olive Backed Pipit | <i>Anthus hodgsoni</i> | 樹鶺鴒 | WV | C | | | | | | | | | | | | | | | | | | | | | | | | | |
| Oriental Dollarbird | <i>Eurystomus orientalis</i> | 三寶鳥 | PM | U | | | | | | | | | | | | | | | | | | | | | | | | | |
| Plaintive Cuckoo | <i>Cacomantis merulinus</i> | 八聲杜鵑 | SV | C | | | | | | | | | | | | | | | | | | | | | | | | | |
| Plain Prinia | <i>Prinia inornata</i> | 純色鶺鴒 | R | C | + | | | | + | | | | + | | | | + | | | | + | | | | + | | | | |
| Red-flanked Bluetail | <i>Tarsiger cyanurus</i> | 紅腦藍尾鶺鴒 | WV&PM | C | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rufous-backed Shrike | <i>Lanius schach</i> | 棕背伯勞 | R | C | + | | | | + | | | | + | | | | + | | | | + | | | | | | | | |
| Rufous-capped Babbler | <i>Stachyridopsis ruficeps</i> | 紅頭穗鶺鴒 | R, LC | U | | | | | | | | | + | | | | | | | | + | | | | + | | | | |
| Scarlet Minivet | <i>Pericrocotus speciosus</i> | 赤紅山椒鳥 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sooty-headed Bulbul | <i>Pycnonotus aurigaster</i> | 白喉紅臀鶺鴒 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | |
| Spotted Dove | <i>Streptopelia chinensis</i> | 珠頸斑鳩 | R | C | ++ | 5 | 3 | 3 | ++ | 2 | 2 | 3 | ++ | 3 | | 2 | ++ | | 5 | 4 | ++ | | 4 | 2 | ++ | 2 | 3 | 2 | |
| Spotted Munia | <i>Lonchura punctulata</i> | 斑文鳥 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stejneger's Stonechat | <i>Saxicola stejnegeri</i> | 黑喉石鶺鴒 | PM,WV | C | | | | | | | | | | | | | | | | | | | | | | | | | |
| White Wagtail | <i>Motacilla alba</i> | 白鶺鴒 | WV | C | + | 2 | 1 | | + | 2 | 1 | | + | 1 | 1 | | + | 1 | 1 | | + | | 1 | 1 | + | | 1 | 1 | |
| White-breasted Waterhen | <i>Amaurornis phoenicurus</i> | 白胸苦惡鳥 | R | C | | | | | | | | | | | | | + | | | | + | | 4 | | + | | 2 | | |
| Yellow Bellid Prinia | <i>Prinia flaviventris</i> | 黃腹鶺鴒 | R | C | + | | | | + | | | | + | | | | + | | | | + | | | | + | | | | |
| Yellow Bittern | <i>Ixobrychus sinensis</i> | 黃葦鶺鴒 | WV, PM, LC | U | | | | | + | | | | | | | | | | | | | | | | | | | | |
| Number of birds | | | | | | 25 | 28 | 23 | | 15 | 28 | 18 | | 20 | 29 | 20 | | 17 | 32 | 23 | | 9 | 34 | 21 | | 10 | 26 | 11 | |
| No. of species | | | | | | 19 | 6 | 10 | 9 | | 23 | 6 | 12 | 8 | | 22 | 8 | 11 | 8 | | 22 | 5 | 12 | 7 | | 23 | 3 | 12 | 8 |

Note: R – Resident; WV – Winter visitor; PM – Passage migrant; C – Common; U – Uncommon

SpM – Spring migrant; Sv - Summer visitor ; RPM - Rare passage migrant

C – transect count; P1 – Point count location 1; P3 – Point count location 3

+, occurred; ++, common; +++, abundant/dominant species in the the study area

Commonness and status were decided according to AFCD biodiversity website (www.hkbiodiversity.net)

All bird species are under protection of Wild Animals Protection Ordinance (Cap. 170)

Endangered Species of Animals and Plants Ordinance (Cap. 586)

RC : Regional concern Fellowes *et al* (2002)

LC : Local Concern Fellowes *et al* (2002)

PRC: Potential Regional concern Fellowes *et al* (2002)

CR: Rare in China Red Data Book Status

VU: Vulnerable in China Red Data Book Status

Table 4.3 Avifauna recorded along survey transects and at three selected point count locations at She Shan River.

(T1- Upper stream section, T2 - middle stream section and T3 - Lower stream section)

| Common Name | Species name | Chinese name | Status | Commonness | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | |
|-------------------------------|----------------------------------|--------------|--------------------|------------|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|
| | | | | | Jun-17 | | | | Jul-17 | | | | Aug-17 | | | | Sep-17 | | | | Oct-17 | | | |
| | | | | | Abundance | | | | Abundance | | | | Abundance | | | | Abundance | | | | Abundance | | | |
| | | | | | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 |
| Ashy Drongo | <i>Dicrurus leucophaeus</i> | 灰卷尾 | SWV, LC | U | | | | | | | | | | | | | | | | | | | | |
| Barn Swallow | <i>Hirundo rustica</i> | 家燕 | PM | C | ++ | | 5 | | ++ | | 8 | | | | | | | | | | | | | |
| Black Drongo | <i>Dicrurus macrocerus</i> | 黑卷尾 | Sv | C | + | | | | | | | | | | | | | | | | | | | |
| Black Kite | <i>Milvus lineatus</i> | 麻鷹 | R, RC, Cap.586 | C | | | | | | | | | | | | | | | | | | | | |
| Black-necked Starling | <i>Sturnus nigricollis</i> | 黑領椋鳥 | R | C | ++ | | 6 | | ++ | | 4 | 2 | ++ | | 3 | 3 | ++ | | 2 | 2 | ++ | | 3 | |
| Black-throated Laughingthrush | <i>Garrulax chinensis</i> | 黑喉噪鶇 | R | C | | | | | | | | | ++ | | | 3 | ++ | | | 4 | | | | |
| Blue Whistling Thrush | <i>Myophonus caeruleus</i> | 紫嘯鶇 | R | C | | | | | | | | | | | | | | | | | | | | |
| Bull-headed Shrike | <i>Lanius bucephalus</i> | 牛頭伯勞 | RPM | U | | | | | | | | | | | | | | | | | | + | | |
| Buzzard (Common Buzzard) | <i>Buteo buteo</i> | 普通鵟 | WV, Cap 586 | U | | | | | | | | | | | | | | | | | | | | |
| Chestnut Bulbul | <i>Hemixos castanonotus</i> | 栗背短腳鶇 | R,WV | C | | | | | | | | | | | | | | | | | | | | |
| Chinese Blackbird | <i>Turdus mandarinus</i> | 烏鶇 | WV | C | | | | | | | | | | | | | | | | | | | | |
| Chinese Bulbul | <i>Pycnonotus sinensis</i> | 白頭鶇 | R | C | ++ | 3 | 2 | 2 | ++ | 2 | 4 | 3 | ++ | 3 | 2 | | ++ | 2 | 3 | 1 | ++ | 3 | 3 | 2 |
| Chinese Pond Heron | <i>Ardeola bacchus</i> | 池鶯 | R,RC | C | + | | 1 | | + | | 1 | 1 | + | 1 | 1 | 1 | + | | 1 | | + | 1 | 1 | |
| Chinese Hwamei | <i>Garrulax canorus</i> | 畫眉 | R, Cap 586 | U | | | | | | | | | | | | | | | | | | | | |
| Chinese Sparrowhawk | <i>Accipiter soloensis</i> | 赤腹鷹 | PM, Cap.586 | U | | | | | | | | | | | | | | | | | | | | |
| Common Emerald Dove | <i>Chalcophaps indica</i> | 綠翅金鳩 | R,VU | U | | | | | | | | | | | | | | | | | | | | |
| Common Kingfisher | <i>Alcedo atthis</i> | 普通翠鳥 | R | C | | | | | | | | | | | | | | | | | | | | |
| Common Koel | <i>Eudynamys scolopacea</i> | 噪鶇 | R | C | + | | | | + | | | | + | | | | | | | | | | | |
| Common Sandpiper | <i>Actitis hypoleucos</i> | 磯鶇 | WV&PM | C | | | | | | | | | | | | | | | | | | | | |
| Common Tailorbird | <i>Orthotomus sutorius</i> | 長尾縫葉鶇 | R | C | + | | 1 | 1 | + | 1 | 1 | 1 | + | 1 | 1 | 1 | + | | 1 | 1 | + | | 1 | 1 |
| Crested bulbul | <i>Pycnonotus jocosus</i> | 紅耳鶇 | R | C | +++ | 8 | 3 | 3 | +++ | 3 | 10 | 2 | +++ | 5 | 8 | 5 | +++ | 8 | 7 | 5 | +++ | 5 | 8 | 2 |
| Crested Goshawk | <i>Accipiter trivirgatus</i> | 鳳頭鷹 | R, CR, Cap.586 | U | | | | | | | | | | | | | | | | | | | | |
| Crested Myna | <i>Acridotheres cristatellus</i> | 八哥 | R | C | + | | | 2 | + | | | | + | | 2 | | + | | 2 | 1 | + | | 2 | |
| Crested Serpent Eagle | <i>Spilornis cheela</i> | 蛇鶇 | R, VU, LC, Cap 586 | U | + | | | | + | | | | + | | | | | | | | | | | |
| Domestic pigeon | <i>Columba sp.</i> | 鴿 | R | C | | | | | | | | | | | | | | | | | | | | |
| Dusky Warbler | <i>Phylloscopus fuscatus</i> | 褐柳鶇 | WV | C | | | | | | | | | | | | | | | | | | | | |
| Eurasian tree sparrow | <i>Passer montanus</i> | 麻雀 | R | C | ++ | 5 | 4 | 3 | ++ | 3 | 6 | 2 | ++ | 3 | 5 | 4 | ++ | 4 | 2 | 5 | ++ | 3 | 3 | 4 |
| Fork-tailed Sunbird | <i>Aethopyga christinae</i> | 叉尾太陽鳥 | R | C | | | | | | | | | | | | | | | | | | | | |
| Great Coucal | <i>Centropus sinensis</i> | 褐翅鷓鴣 | R,VU | C | + | | | | + | | | | | | | | | | | | | | | |
| Great Egret | <i>Ardea alba</i> | 大白鷺 | R,RC | C | | | | | | | | | | | | | | | | | | | | |
| Great Tit | <i>Parus major(commixtus)</i> | 大山雀 | R | C | | | | | | | | | | | | | | | | | | | | |
| Green Sandpiper | <i>Tringa ochropus</i> | 白腰草鶇 | PM&WV | C | | | | | | | | | | | | | + | | | | + | | | |

Table 4.3 Avifauna recorded along survey transects and at three selected point count locations at She Shan River.

(T1- Upper stream section, T2 - middle stream section and T3 - Lower stream section)

| Common Name | Species name | Chinese name | Status | Commonness | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | |
|-------------------------|------------------------------------|--------------|------------|------------|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|---|
| | | | | | Jun-17 | | | | Jul-17 | | | | Aug-17 | | | | Sep-17 | | | | Oct-17 | | | | |
| | | | | | Abundance | | | | Abundance | | | | Abundance | | | | Abundance | | | | Abundance | | | | |
| | | | | | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C | T1 | T2 | T3 | C |
| Grey Heron | <i>Ardea cinerea</i> | 蒼鷺 | WV,PRC | C | | | | | | | | | | | | | | | | | | | | | |
| Grey Wagtail | <i>Motacilla cinerea</i> | 灰鶺鴒 | WV | C | + | | 1 | | + | | | | + | | | | + | | | | + | | | | |
| Japanese White Eye | <i>Zosterops japonica(simplex)</i> | 暗綠繡眼鳥 | R | C | | | | | + | | | | + | | 3 | | + | | 2 | 3 | + | | 3 | | |
| Large Hawk Cuckoo | <i>Cuculus sparverioides</i> | 鷹鵒 | SV | C | | | | | | | | | | | | | | | | | | | | | |
| Little Egret | <i>Egretta garzetta</i> | 小白鷺 | R,RC | C | + | | 1 | 1 | + | 1 | | | + | 1 | 1 | | + | 1 | 1 | | + | 1 | 1 | | |
| Magpie Robin | <i>Copsychus saularis</i> | 鶺鴒 | R | C | + | | 2 | 1 | + | 1 | 2 | 1 | + | 2 | | 1 | + | 1 | 1 | 1 | + | 2 | | 2 | |
| Night Heron | <i>Nycticorax nycticorax</i> | 夜鷺 | R,LC | C | + | | 2 | 1 | | | | | | | | | | | | | | | | | |
| Olive Backed Pipit | <i>Anthus hodgsoni</i> | 樹鷓 | WV | C | | | | | | | | | | | | | | | | | | | | | |
| Oriental Dollarbird | <i>Eurystomus orientalis</i> | 三寶鳥 | PM | U | | | | | | | | | | | | | | | | | + | | 1 | | |
| Plaintive Cuckoo | <i>Cacomantis merulinus</i> | 八聲杜鵑 | SV | C | | | | | | | | | | | | | | | | | | | | | |
| Plain Prinia | <i>Prinia inornata</i> | 純色鷓鴣 | R | C | + | | | | + | | | | + | | 1 | | + | | 1 | | + | | | 1 | |
| Red-flanked Bluetail | <i>Tarsiger cyanurus</i> | 紅腦藍尾鷓 | WV&PM | C | | | | | | | | | | | | | | | | | | | | | |
| Rufous-backed Shrike | <i>Lanius schach</i> | 棕背伯勞 | R | C | | | | | + | | | | + | | 2 | | | | | | | | | | |
| Rufous-capped Babbler | <i>Stachyridopsis ruficeps</i> | 紅頭穗鷓 | R, LC | U | + | | | | + | | | | | | | | | | | | | | | | |
| Scarlet Minivet | <i>Pericrocotus speciosus</i> | 赤紅山椒鳥 | R | C | | | | | | | | | | | | | | | | | | | | | |
| Sooty-headed Bulbul | <i>Pycnonotus aurigaster</i> | 白喉紅臀鶯 | R | C | | | | | | | | | | | | | | | | | | | | | |
| Spotted Dove | <i>Streptopelia chinensis</i> | 珠頸斑鳩 | R | C | ++ | 5 | 2 | 1 | ++ | 6 | 2 | 3 | ++ | 2 | 5 | 3 | ++ | 4 | 2 | 3 | ++ | 3 | 5 | 2 | |
| Spotted Munia | <i>Lonchura punctulata</i> | 斑文鳥 | R | C | | | | | | | | | | | | | | | | | | | | | |
| Stejneger's Stonechat | <i>Saxicola stejnegeri</i> | 黑喉石鷓 | PM,WV | C | | | | | | | | | | | | | | | | | | | | | |
| White Wagtail | <i>Motacilla alba</i> | 白鶺鴒 | WV | C | + | | 1 | 1 | + | | 1 | 1 | + | | 1 | 1 | + | 2 | 2 | | + | 2 | 2 | | |
| White-breasted Waterhen | <i>Amaurornis phoenicurus</i> | 白胸苦惡鳥 | R | C | | | | | | | | | | | | | | | | | | | | | |
| Yellow Bellid Prinia | <i>Prinia flaviventris</i> | 黃腹鷓鴣 | R | C | + | | | | + | | | | + | | | | | | | | | | | | |
| Yellow Bittern | <i>Ixobrychus sinensis</i> | 黃葦鶯 | WV, PM, LC | U | | | | | | | | | | | | | | | | | | | | | |
| Number of birds | | | | | | 21 | 31 | 16 | | 17 | 39 | 16 | | 18 | 34 | 23 | | 22 | 26 | 27 | | 20 | 33 | 14 | |
| No. of species | | | | | | 21 | 4 | 13 | 10 | 21 | 7 | 10 | 9 | 19 | 8 | 12 | 10 | 16 | 7 | 12 | 11 | 17 | 8 | 12 | 7 |

Note: R – Resident; WV – Winter visitor; PM – Passage migrant; C – Common; U – Uncommon

SpM – Spring migrant; Sv - Summer visitor ; RPM - Rare passage migrant

C – transect count; P1 – Point count location 1; P3 – Point count location 3

+, occurred; ++, common; +++, abundant/dominant species in the the study area

Commonness and status were decided according to AFCD biodiversity website (www.hk biodiversity.net)

All bird species are under protection of Wild Animals Protection Ordinance (Cap. 170)

Endangered Species of Animals and Plants Ordinance (Cap. 586)

RC : Regional concern Fellowes *et al* (2002)

LC : Local Concern Fellowes *et al* (2002)

PRC: Potential Regional concern Fellowes *et al* (2002)

CR: Rare in China Red Data Book Status

VU: Vulnerable in China Red Data Book Status

Table 4.4. Odonate species recorded at the She Shan River

| Species name | Common name | Chinese name | Status | Commonness | Baseline monitoring | | Impact monitoring | | | | Impact monitoring | | | | | Post construction monitoring | | | | | | | | | |
|----------------------------------------|--------------------------|--------------|--------|------------|---------------------|--------|-------------------|--------|--------|--------|-------------------|--------|--------|--------|--------|------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | | | | | Jul-08 | Aug-08 | Jan-09 | Jul-09 | Jan-10 | Jul-10 | Jan-11 | Jul-11 | Jan-12 | Jul-12 | Jul-13 | Dec-13 | Jan-14 | Feb-14 | Mar-14 | Apr-14 | May-14 | Jun-14 | Jul-14 | Aug-14 | Sep-14 |
| <i>Agriocnemis pygmalis</i> | Wandering Midget | 黃尾小蠅 | NP | VC | | | | | | | | | | | | | | | + | | | | | | |
| <i>Brachythemis contaminata</i> | Asian Amberwing | 黃翅蜻 | NP | VC | | | | | | | | | + | | | | | | | | | | | | |
| <i>Burmagomphus vermicularis</i> | Dog-legged Clubtail | 聯紋蠶春蜓 | P, LC | C | | | | | | | | | | | | | | | | | | | | | |
| <i>Ceragrion auranticum ryukyuanum</i> | Orange-tailed Sprite | 琉球橘黃蠅 | NP | VC | | | | | | | | | | | | | | | + | ++ | + | | + | | |
| <i>Copera ciliata</i> | Black-knees Featherlegs | 白狹扇蠅 | NP | VC | | | | | | | | | | | | | | | + | | | | | | |
| <i>Copera marginipes</i> | Yellow Featherlegs | 黃狹扇蠅 | NP | VC | | | | | | | | | | + | | | | | + | | | + | | + | |
| <i>Cocothemis servilla servilla</i> | Crimson Darter | 紅蜻 | NP | VC | + | + | | | + | | ++ | | | + | | | + | | | | + | + | + | + | |
| <i>Diplacodes trivialis</i> | Blue Percher | 紋藍小蜻 | NP | VC | + | | | | | | | | | | | | + | + | + | | | | | | |
| <i>Icinogomphus pertinax</i> | Common Flangetail | 霸王葉春蜓 | NP | C | | | | | | | | | | + | | | + | | | | + | | + | + | |
| <i>Ischnura senegalensis</i> | Common Bluetail | 褐斑異痣蠅 | NP | VC | | | | | | | | | | + | | | + | | | | + | | + | + | |
| <i>Nannophya pygmaea</i> | Scarlet Dwarf | 侏紅小蜻 | NP | C | | | | | | | | | | | | | | | | | | | | | |
| <i>Neurobasis chinensis chinensis</i> | Chinese Greenwing | 華艷色蠅 | NP | VC | | | | | | | | | | + | | | | | + | | | | | | |
| <i>Neurothemis fulvia</i> | Russet Percher | 網脈蜻 | NP | VC | | | | | + | | | | | | | | | | | | | + | + | | |
| <i>Orthetrum chrysis</i> | Red-faced Skimmer | 華麗灰蜻 | NP | VC | + | + | + | + | | | | | | | | | | | | | | | | | |
| <i>Orthetrum glaucum</i> | Common blue skimmer | 黑尾灰蜻 | NP | VC | | | | | | | | | | | | | | | | | | | | | |
| <i>Orthetrum luzonicum</i> | Marsh Skimmer | 呂宋灰蜻 | NP | VC | | | | | | | | | | + | | | | | | | | | | | |
| <i>Orthetrum pruinatum neglectum</i> | Common Red Skimmer | 赤褐灰蜻 | NP | VC | | | | | | | | | | | | | | | | | | | | | |
| <i>Orthetrum Sabina sabina</i> | Green Skimmer | 狹腹灰蜻 | NP | C | + | + | | | | | | | | | | | | | | | | | | + | |
| <i>Pantala flavescens</i> | Wandering Glider | 黃蜻 | NP | VC | + | + | | + | + | + | +++ | + | + | + | + | + | | | | | | | | | |
| <i>Prodasineura autumnalis</i> | Black Threadtail | 烏齒原蠅 | NP | VC | | | | | | | | | | | | | | | | | | | | | |
| <i>Pseudagrion pruinatum fraseri</i> | Ferruginous-faced Sprite | 赤斑蠅 | NP | C | | | | | | | | | | | | | | | | | | | | | |
| <i>Pseudagrion rubriceps rubriceps</i> | Orange-faced Sprite | 丹頂斑蠅 | NP | UC | + | | | | | | | | | | | | | | | | | | | | |
| <i>Rhinocypha perforata perforata</i> | Common Blue Jewel | 三斑鼻蠅 | NP | VC | | | | | | | | | | | | | | | | | | | | + | |
| <i>Rhyothemis variegata arria</i> | Variegated Flutterer | 斑麗翅蜻 | NP | C | | | | | | | | | | | | | | | | | | | | + | |
| <i>Trithemis aurora</i> | Crimson Dropwing | 曉褐蜻 | NP | VC | | | | | | | | | | | | | | | | | | | | + | |
| <i>Trithemis festiva</i> | Indigo Dropwing | 慶褐蜻 | NP | VC | | | | | | | | | | | | | | | | | | | | + | |
| <i>Zygonyx iris insignis</i> | Emerald Cascader | 彩紅蜻 | P,PG | VC | | | | | | | | | | | | | | | + | | | | + | + | |
| No of Species | | | | | 6 | 4 | 3 | 4 | 1 | 6 | 1 | 11 | 1 | 4 | 10 | 4 | 6 | 6 | 8 | 7 | 9 | 13 | 9 | 11 | 9 |

Note: NP – Not protected in Hong Kong ; P - Protected in Hong Kong

“VC” – Very Common; “UC” – Uncommon; “C” - Common

“+” – Species exists in the study area

“++” – Species common in the study area

“+++” – Species abundance in the study area

Commonness and status were decided according to AFCD biodiversity website

LC- Local Concern - Fellowes *et al* (2002)

PGC - Potential Global Concern - Fellowes *et al* (2002)

Table 4.4. Odonate species recorded at the She Shan River

| Species name | Common name | Chinese name | Status | Commonness | Post construction monitoring | | | | | | | Post construction monitoring | | | | | | | | |
|-----------------------------------------|--------------------------|--------------|--------|------------|------------------------------|--------|--------|--------|--------|--------|--------|------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| | | | | | Oct-14 | Nov-14 | Dec-14 | Jan-15 | Feb-15 | Mar-15 | Apr-15 | May-15 | Jun-15 | Jul-15 | Aug-15 | Sep-15 | Oct-15 | Nov-15 | Dec-15 | Jan-16 |
| <i>Agriocnemis pygmalis</i> | Wandering Midget | 黃尾小蠅 | NP | VC | | | | | | | | | | | | | | | | |
| <i>Brachythemis contaminata</i> | Asian Amberwing | 黃翅蜻 | NP | VC | | | | | | | | | | | | | | | | |
| <i>Burmagomphus vermicularis</i> | Dog-legged Clubtail | 聯紋蠅春蜓 | P, LC | C | | | | | | | | | | | | | | | | |
| <i>Ceriatrion auranticum ryukyuanum</i> | Orange-tailed Sprite | 琉球橘黃蠅 | NP | VC | | | | | | + | + | | + | + | + | + | | | | |
| <i>Copera ciliata</i> | Black-knees Featherlegs | 白狹扇蠅 | NP | VC | | | | | | | | | | | | | | | | |
| <i>Copera marginipes</i> | Yellow Featherlegs | 黃狹扇蠅 | NP | VC | + | | | | | + | + | | + | + | + | + | | | | |
| <i>Crocothemis servilla servilla</i> | Crimson Darter | 紅蜻 | NP | VC | + | + | + | + | | + | + | | + | + | + | + | + | + | + | |
| <i>Diplacodes trivialis</i> | Blue Percher | 紋藍小蜻 | NP | VC | | | | | | | | | | | | | | | | |
| <i>Ictinogomphus pertinax</i> | Common Flangetail | 霸王葉春蜓 | NP | C | | + | | | | | | | + | + | + | + | + | + | | |
| <i>Ischnura senegalensis</i> | Common Bluetail | 褐斑異痣蠅 | NP | VC | | | | | | | | | | | | | | | | |
| <i>Nannophya pygmaea</i> | Scarlet Dwarf | 侏紅小蜻 | NP | C | | | | | | | | | | | | | | | | |
| <i>Neurobasis chinensis chinensis</i> | Chinese Greenwing | 華艷色蠅 | NP | VC | + | + | | | | + | + | | | | + | + | + | + | | |
| <i>Neurothemis fulvia</i> | Russet Percher | 網脈蜻 | NP | VC | | | | | | + | + | | + | + | + | + | | | | |
| <i>Orthetrum chrysis</i> | Red-faced Skimmer | 華麗灰蜻 | NP | VC | | | | | | | | | | | + | + | + | + | | + |
| <i>Orthetrum glaucum</i> | Common blue skimmer | 黑尾灰蜻 | NP | VC | | | | | | | | | | | | | | | | |
| <i>Orthetrum luzonicum</i> | Marsh Skimmer | 呂宋灰蜻 | NP | VC | | | | | | | | | | | | | | | | |
| <i>Orthetrum pruinosum neglectum</i> | Common Red Skimmer | 赤褐灰蜻 | NP | VC | + | | | | | + | | | + | + | | | | | | |
| <i>Orthetrum Sabina sabina</i> | Green Skimmer | 狹腹灰蜻 | NP | C | + | | | | | | | | | | | | | + | + | |
| <i>Pantala flavescens</i> | Wandering Glider | 黃蜻 | NP | VC | + | + | | | | | | | + | + | + | + | + | + | + | + |
| <i>Prodasineura autumnalis</i> | Black Threadtail | 烏齒原蠅 | NP | VC | | | | | | + | | | + | + | + | + | | | | |
| <i>Pseudagrion pruinosum fraseri</i> | Ferruginous-faced Sprite | 赤斑蠅 | NP | C | | | | | | | | | | | | | | | | |
| <i>Pseudagrion rubriceps rubriceps</i> | Orange-faced Sprite | 丹頂斑蠅 | NP | UC | + | + | | | | | | | | | | | | | | |
| <i>Rhinocypha perforata perforata</i> | Common Blue Jewel | 三斑鼻蠅 | NP | VC | + | + | | | | + | | | + | + | + | + | | | | |
| <i>Rhyothemis variegata arria</i> | Variiegated Flutterer | 斑麗翅蜻 | NP | C | | | | | | | | | + | + | + | + | | | | |
| <i>Trithemis aurora</i> | Crimson Dropwing | 曉褐蜻 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Trithemis festiva</i> | Indigo Dropwing | 慶褐蜻 | NP | VC | + | + | | | | + | | | + | + | + | + | + | + | + | + |
| <i>Zygonyx iris insignis</i> | Emerald Cascader | 彩紅蜻 | P,PG | VC | | | | | | | | | | | | | | | | |
| No of Species | | | | | 11 | 7 | 2 | 2 | 1 | 5 | 10 | 12 | 13 | 13 | 13 | 12 | 9 | 7 | 2 | 3 |

Note: NP – Not protected in Hong Kong ; P - Protected in Hong Kong

“VC” – Very Common; “UC” – Uncommon; “C” - Common

“+” – Species exists in the study area

“++” – Species common in the study area

“+++” – Species abundance in the study area

Commonness and status were decided according to AFCD biodiversity website

LC- Local Concern - Fellowes *et al* (2002)PGC - Potential Global Concern - Fellowes *et al* (2002)

Table 4.4. Odonate species recorded at the She Shan River

| Species name | Common name | Chinese name | Status | Commonness | Post construction monitoring | | | | | | | | Post construction monitoring | | | | | | | | | | |
|-----------------------------------------|--------------------------|--------------|--------|------------|------------------------------|--------|--------|--------|--------|--------|--------|--------|------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---|
| | | | | | Feb-16 | Mar-16 | Apr-16 | May-16 | Jun-16 | Jul-16 | Aug-16 | Sep-16 | Oct-16 | Nov-16 | Dec-16 | Jan-17 | Feb-17 | Mar-17 | Apr-17 | May-17 | Jun-17 | Jul-17 | |
| <i>Agriocnemis pygmalis</i> | Wandering Midget | 黃尾小蠅 | NP | VC | | | | | | | | | | | | | | | | | | | |
| <i>Brachythemis contaminata</i> | Asian Amberwing | 黃翅蜻 | NP | VC | | | | | | | | | | | | | | | | | | | |
| <i>Burmagomphus vermicularis</i> | Dog-legged Clubtail | 聯紋蠅春蜓 | P, LC | C | | | | | + | | | | | | | | | | | | | | |
| <i>Ceriatrion auranticum ryukyuanum</i> | Orange-tailed Sprite | 琉球橘黃蠅 | NP | VC | | | + | + | + | + | + | + | + | + | | | | | | + | + | + | + |
| <i>Copera ciliata</i> | Black-knees Featherlegs | 白狹扇蠅 | NP | VC | | | + | + | + | + | + | + | | | | | | | | | | + | + |
| <i>Copera marginipes</i> | Yellow Featherlegs | 黃狹扇蠅 | NP | VC | | | | + | + | + | + | + | | | | | | | | | + | + | + |
| <i>Crocotthemis servilla servilla</i> | Crimson Darter | 紅蜻 | NP | VC | | | + | + | + | + | + | + | + | + | | | | | | | | | + |
| <i>Diplacodes trivialis</i> | Blue Percher | 紋藍小蜻 | NP | VC | | | | | | | | | | | | | | | | | | | |
| <i>Icetinogomphus pertinax</i> | Common Flangetail | 霸王葉春蜓 | NP | C | | | | + | + | + | + | + | | | | | | | | | | + | + |
| <i>Ischnura senegalensis</i> | Common Bluetail | 褐斑異痣蠅 | NP | VC | | | | | | | + | + | | | | | | | | | | | |
| <i>Nannophya pygmaea</i> | Scarlet Dwarf | 侏紅小蜻 | NP | C | | | | | | | | | | | | | | | | | | | |
| <i>Neurobasis chinensis chinensis</i> | Chinese Greenwing | 華艷色蠅 | NP | VC | | | + | + | + | + | + | + | + | + | | | | | | | + | + | + |
| <i>Neurothemis fulvia</i> | Russet Percher | 網脈蜻 | NP | VC | | | + | + | + | + | + | + | + | + | | | | | | | + | + | + |
| <i>Orthetrum chrysis</i> | Red-faced Skimmer | 華麗灰蜻 | NP | VC | | | + | + | + | + | + | + | + | + | | | | | | | + | + | + |
| <i>Orthetrum glaucum</i> | Common blue skimmer | 黑尾灰蜻 | NP | VC | | | | | | | | | | | | | | | | | | | |
| <i>Orthetrum luzonicum</i> | Marsh Skimmer | 呂宋灰蜻 | NP | VC | | | + | + | + | + | + | + | + | + | | | | | | | + | + | + |
| <i>Orthetrum pruinosum neglectum</i> | Common Red Skimmer | 赤褐灰蜻 | NP | VC | | | | | | | | | | | | | | | | | | | |
| <i>Orthetrum Sabina sabina</i> | Green Skimmer | 狹腹灰蜻 | NP | C | | | | | | | | | | | | | | | | | | | |
| <i>Pantala flavescens</i> | Wandering Glider | 黃蜻 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Prodasineura autumnalis</i> | Black Threadtail | 烏齒原蠅 | NP | VC | | | | | | | | | | | | | | | | | | | |
| <i>Pseudagrion pruinosum fraseri</i> | Ferruginous-faced Sprite | 赤斑蠅 | NP | C | | | | | | | | | | | | | | | | | | | |
| <i>Pseudagrion rubriceps rubriceps</i> | Orange-faced Sprite | 丹頂斑蠅 | NP | UC | | | | | | | | | | | | | | | | | | | |
| <i>Rhinocypha perforata perforata</i> | Common Blue Jewel | 三斑鼻蠅 | NP | VC | | | | + | + | + | | | | | | | | | | | + | + | + |
| <i>Rhyothemis variegata arria</i> | Variiegated Flutterer | 斑麗翅蜻 | NP | C | | | | | + | + | + | + | | | | | | | | | | + | + |
| <i>Trithemis aurora</i> | Crimson Dropwing | 曉褐蜻 | NP | VC | | + | + | + | + | + | + | + | + | + | | | | | | | + | + | + |
| <i>Trithemis festiva</i> | Indigo Dropwing | 慶褐蜻 | NP | VC | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Zygonyx iris insignis</i> | Emerald Cascader | 彩紅蜻 | P,PG | VC | | | | | | | | | | | | | | | | | | | |
| No of Species | | | | | 1 | 3 | 10 | 12 | 15 | 14 | 14 | 13 | 11 | 8 | 2 | 2 | 3 | 6 | 9 | 11 | 13 | 14 | |

Note: NP – Not protected in Hong Kong ; P - Protected in Hong Kong

“VC” – Very Common; “UC” – Uncommon; “C” - Common

“+” – Species exists in the study area

“++” – Species common in the study area

“+++” – Species abundance in the study area

Commonness and status were decided according to AFCD biodiversity website

LC- Local Concern - Fellowes *et al* (2002)PGC - Potential Global Concern - Fellowes *et al* (2002)

Table 4.4. Odonate species recorded at the She Shan River

| Species name | Common name | Chinese name | Status | Commonness | Post construction monitoring | | |
|------------------------------------------|--------------------------|--------------|--------|------------|------------------------------|--------|--------|
| | | | | | Aug-17 | Sep-17 | Oct-17 |
| <i>Agriocnemis pygmalis</i> | Wandering Midget | 黃尾小蠅 | NP | VC | | | |
| <i>Brachythemis contaminata</i> | Asian Amberwing | 黃翅蜻 | NP | VC | | | |
| <i>Burmagomphus vermicularis</i> | Dog-legged Clubtail | 聯紋蠅春蜓 | P, LC | C | | | |
| <i>Ceriatgrion auranticum ryukyuanum</i> | Orange-tailed Sprite | 琉球橘黃蠅 | NP | VC | + | + | + |
| <i>Copera ciliata</i> | Black-knees Featherlegs | 白狹扇蠅 | NP | VC | + | | |
| <i>Copera marginipes</i> | Yellow Featherlegs | 黃狹扇蠅 | NP | VC | + | | |
| <i>Crocothemis servilla servilla</i> | Crimson Darter | 紅蜻 | NP | VC | + | + | |
| <i>Diplacodes trivialis</i> | Blue Percher | 紋藍小蜻 | NP | VC | | | |
| <i>Ictinogomphus pertinax</i> | Common Flangetail | 霸王葉春蜓 | NP | C | + | + | + |
| <i>Ischnura senegalensis</i> | Common Bluetail | 褐斑異痣蠅 | NP | VC | | | |
| <i>Nannophya pygmaea</i> | Scarlet Dwarf | 侏紅小蜻 | NP | C | | | |
| <i>Neurobasis chinensis chinensis</i> | Chinese Greenwing | 華艷色蠅 | NP | VC | + | + | + |
| <i>Neurothemis fulvia</i> | Russet Percher | 網脈蜻 | NP | VC | + | + | + |
| <i>Orthetrum chrysis</i> | Red-faced Skimmer | 華麗灰蜻 | NP | VC | + | + | + |
| <i>Orthetrum glaucum</i> | Common blue skimmer | 黑尾灰蜻 | NP | VC | | | |
| <i>Orthetrum luzonicum</i> | Marsh Skimmer | 呂宋灰蜻 | NP | VC | + | + | + |
| <i>Orthetrum pruinosum neglectum</i> | Common Red Skimmer | 赤褐灰蜻 | NP | VC | | | + |
| <i>Orthetrum Sabina sabina</i> | Green Skimmer | 狹腹灰蜻 | NP | C | + | + | + |
| <i>Pantala flavescens</i> | Wandering Glider | 黃蜻 | NP | VC | + | + | + |
| <i>Prodasineura autumnalis</i> | Black Threadtail | 烏齒原蠅 | NP | VC | | | |
| <i>Pseudagrion pruinosum fraseri</i> | Ferruginous-faced Sprite | 赤斑蠅 | NP | C | | | |
| <i>Pseudagrion rubriceps rubriceps</i> | Orange-faced Sprite | 丹頂斑蠅 | NP | UC | | | |
| <i>Rhinocypha perforata perforata</i> | Common Blue Jewel | 三斑鼻蠅 | NP | VC | + | + | + |
| <i>Rhyothemis variegata arria</i> | Variiegated Flutterer | 斑麗翅蜻 | NP | C | + | + | + |
| <i>Trithemis aurora</i> | Crimson Dropwing | 曉褐蜻 | NP | VC | + | + | + |
| <i>Trithemis festiva</i> | Indigo Dropwing | 慶褐蜻 | NP | VC | + | + | + |
| <i>Zygonyx iris insignis</i> | Emerald Cascader | 彩紅蜻 | P,PG | VC | | | |
| No of Species | | | | | 15 | 13 | 13 |

Note: NP – Not protected in Hong Kong ; P - Protected in Hong Kong

“VC” – Very Common; “UC” – Uncommon; “C” - Common

“+” – Species exists in the study area

“++” – Species common in the study area

“+++” – Species abundance in the study area

Commonness and status were decided according to AFCD biodiversity website

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PGC - Potential Global Concern - Fellowes *et al* (2002)

Table 4.5 Aquatic Macro invertebrates recorded at She Shan River.

(T1- Upper stream section, T2 - middle stream section, T3 - Lower stream section)

| Species | Chinese name | Sampling location | | Baseline monitoring | | Impact monitoring | | | Impact monitoring | | | Impact monitoring | | | Impact monitoring | | | Impact monitoring | | | Impact monitoring | | | Impact monitoring | | | | | | | | | | | |
|----------------------------------|--------------|-------------------|----|---------------------|------------|-------------------|--------------|--------------|-------------------|-----------|--------|-------------------|----|-----------|-------------------|----|--------|-------------------|----|--------|-------------------|-----------|--------|-------------------|----|-----------|----|----|----|---|---|----|---|---|---|
| | | | | Jul-08 | | Aug-08 | | Jan-09 | | | Jul-09 | | | Jan-10 | | | Jul-10 | | | Jan-11 | | | Jul-11 | | | Jan-12 | | | | | | | | | |
| | | | | Status | Commonness | Upper stream | Lower stream | Upper stream | Lower stream | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | | | | | | |
| Mollusks | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Anodonta woodiana</i> | 背角無齒蚌 | NP | VC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Biomphalaria sp.</i> | -- | NP | VC | + | + | + | + | + | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Brotia hainanensis</i> | -- | NP | VC | + | + | + | + | + | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Corbicula fluminea</i> | 河蚬 | NP | VC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Melanoides tuberculata</i> | 縮擬黑螺 | NP | VC | + | + | + | ++ | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Pomacea canaliculata</i> | 蘋果螺 | NP | VC | + | ++ | + | + | + | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Radix plicatulus</i> | -- | NP | VC | + | + | + | + | + | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Sinoia quadrata</i> | 田螺 | NP | VC | + | + | + | ++ | + | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Insects | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Baetis sp.</i> | | NP | VC | + | + | + | + | + | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Caenis sp.</i> | -- | NP | VC | + | + | + | + | + | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Chironomus sp.</i> | 蚊幼虫 | NP | VC | + | + | ++ | ++ | + | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Euphaea sp.</i> | | NP | VC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Indobaetis sp.</i> | -- | NP | VC | + | + | + | + | + | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Odonate larvae</i> | | NP | VC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Orhethrum spp.</i> | -- | NP | VC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Pseudagrion spp.</i> | -- | NP | UC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Pseudocloeon sp.</i> | -- | NP | VC | + | + | + | + | + | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Serratella sp.</i> | | NP | VC | + | + | + | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Crustaceans | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Caridina cantanensis</i> | 廣東米蝦 | NP | VC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Cryptopotamon anacolithon</i> | 鯧刺溪蟹 | NP | VC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| No of Species | | | | 12 | 12 | 12 | 12 | 9 | 0 | 7 | 11 | 9 | 0 | 0 | 12 | 10 | 0 | 11 | 0 | 10 | 8 | 14 | 4 | 10 | 9 | 9 | 8 | 10 | 10 | 9 | 7 | 11 | 7 | 6 | 5 |

Note: NP – Not protected in Hong Kong;
P - protected species in Hong Kong
“VC” – Very Common; “UC” – Uncommon; “C” - Common
“+” – Species exists in the study area
“++” – Species common in the study area
“+++” – Species abundance in the study area
- Reference point was the sampling location outside the works area used to compare with the data within works area.

Table 4.5 Aquatic Macro invertebrates recorded at She Shan River.

(T1- Upper stream section, T2 - middle stream section, T3 - Lower stream section)

| Species | Chinese name | Sampling location | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | | | | | | | | |
|----------------------------------|--------------|-------------------|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|-----------|----|----|----|---|---|---|---|
| | | | | Jun-14 | | | | Jul-14 | | | | Aug-14 | | | | Sep-14 | | | | Oct-14 | | | | Nov-14 | | | | Dec-14 | | | | Jan-15 | | | | | | | |
| | | | | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | | | | |
| Mollusks | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Anodonta woodiana</i> | 背角無齒蚌 | NP | VC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Biomphalaria sp.</i> | -- | NP | VC | + | + | + | | + | + | + | | + | + | + | | + | + | + | | + | + | + | | + | + | + | | + | + | + | | + | + | + | | + | + | + | |
| <i>Brotia hainanensis</i> | -- | NP | VC | + | + | + | | + | + | + | | + | + | + | | + | + | + | | + | + | + | | + | + | + | | + | + | + | | + | + | + | | + | + | + | |
| <i>Corbicula fluminea</i> | 河蚬 | NP | VC | | | + | | | | + | | | | + | | | | + | | | | + | | | | + | | | | + | | | | + | | | | + | |
| <i>Melanooides tuberculata</i> | 縮擬黑螺 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Pomacea canaliculata</i> | 蘋果螺 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Radix plicatulus</i> | -- | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Sinoia quadrata</i> | 田螺 | NP | VC | + | + | + | + | + | + | + | + | + | + | ++ | + | + | + | + | ++ | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Insects | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Baetis sp.</i> | | NP | VC | | + | | | | + | + | | | + | + | | | + | + | | | + | + | | | + | + | | | + | + | | | + | + | | | + | + | |
| <i>Caenis sp.</i> | -- | NP | VC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Chironomus sp.</i> | 蠅幼虫 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Euphaea sp.</i> | | NP | VC | | | + | | | | + | | | | + | | | | + | | | | + | | | | + | | | | + | | | | + | | | | + | |
| <i>Indobaetis sp.</i> | -- | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Odonate larvae</i> | | NP | VC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Orhethrum spp.</i> | -- | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Pseudagrion spp.</i> | -- | NP | UC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Pseudocloeon sp.</i> | -- | NP | VC | | | | | | | | | | | + | | | | + | | | | + | | | | + | | | | + | | | | + | | | | + | |
| <i>Serratella sp.</i> | | NP | VC | | + | + | | | | + | | | | + | + | | | + | + | | | + | + | | | + | + | | | + | + | | | + | + | | | + | + |
| Crustaceans | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Caridina cantanensis</i> | 廣東米蝦 | NP | VC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Cryptopotamon anacoluthon</i> | 鯉刺溪蟹 | NP | VC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| No of Species | | | | 10 | 12 | 13 | 8 | 10 | 11 | 14 | 7 | 10 | 12 | 15 | 6 | 12 | 12 | 14 | 8 | 12 | 12 | 13 | 7 | 12 | 11 | 13 | 7 | 10 | 8 | 13 | 6 | 10 | 11 | 14 | 6 | | | | |

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|----------------------------------|--------------|-------------------|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|-----------|----|----|----|-----------|----|----|----|
| | | | | Feb-15 | | | | Mar-15 | | | | Apr-15 | | | | May-15 | | | | Jun-15 | | | | Jul-15 | | | | Aug-15 | | | | Sep-15 | | | |
| | | | | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 |
| Mollusks | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Anodonta woodiana</i> | 背角無齒蚌 | NP | VC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Biomphalaria sp.</i> | -- | NP | VC | | | + | | + | + | + | | + | + | + | | + | + | + | | + | + | + | | + | + | + | | + | + | + | | + | + | + | |
| <i>Brotia hainanensis</i> | -- | NP | VC | + | + | + | | + | + | + | | + | + | + | | + | + | + | | + | + | + | | + | + | + | | + | + | + | | + | + | + | |
| <i>Corbicula fluminea</i> | 河蚌 | NP | VC | | | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Melanoides tuberculata</i> | 縮擬黑螺 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Pomacea canaliculata</i> | 蘋果螺 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Radix plicatulus</i> | -- | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Sinoia quadrata</i> | 田螺 | NP | VC | + | + | + | + | + | + | ++ | + | + | + | ++ | + | + | + | + | ++ | + | + | + | ++ | + | + | + | ++ | + | + | + | ++ | + | + | + | ++ |
| Insects | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Baetis sp.</i> | | NP | VC | | | + | | | | | | | | | | | | + | | | | | | | | | | | | | | | | | |
| <i>Caenis sp.</i> | -- | NP | VC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Chironomus sp.</i> | 蠅幼虫 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Euphaea sp.</i> | | NP | VC | | | | | | + | + | | + | + | + | | | | + | + | | | + | + | | | + | + | | | + | + | | | + | + |
| <i>Indobaetis sp.</i> | -- | NP | VC | | + | + | | + | + | + | | | | | | + | + | + | | | | + | + | | | + | + | | | + | + | | | + | + |
| <i>Odonate larvae</i> | | NP | VC | | | | | | | | | | + | | | | | | | | | | | | | | | | | | | | | | |
| <i>Orhnetrum spp.</i> | -- | NP | VC | + | + | + | + | + | + | + | + | | | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Pseudagrion spp.</i> | -- | NP | UC | | + | + | | | | | | | + | + | | | | | | | | + | + | | | + | + | | | + | + | | | + | + |
| <i>Pseudocloeon sp.</i> | -- | NP | VC | | | | | | | | | + | + | + | + | | | | | | | | | | | | | | | | | | | | |
| <i>Serratella sp.</i> | | NP | VC | | + | | | | | | | | + | | | | | | | | | | | | | | | + | | | | | | | |
| Crustaceans | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Caridina cantanensis</i> | 廣東米蝦 | NP | VC | | | | | | | | | | | | | | | | | | | | | | | + | | | | | | | | + | |
| <i>Cryptopotamon anacoluthon</i> | 鯉刺溪蟹 | NP | VC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| No of Species | | | | 7 | 10 | 12 | 6 | 9 | 12 | 13 | 6 | 9 | 12 | 13 | 6 | 9 | 12 | 13 | 6 | 9 | 12 | 13 | 6 | 9 | 12 | 14 | 6 | 9 | 12 | 15 | 6 | 9 | 13 | 15 | 6 |

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|----------------------------------|--------------|-------------------|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|-----------|----|----|----|---|----|----|----|
| | | | | Oct-15 | | | | Nov-15 | | | | Dec-15 | | | | Jan-16 | | | | Feb-16 | | | | Mar-16 | | | | Apr-16 | | | | May-16 | | | | | | | |
| | | | | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | | | | |
| Mollusks | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Anodonta woodiana</i> | 背角無齒蚌 | NP | VC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Biomphalaria sp.</i> | -- | NP | VC | + | + | + | | + | + | + | | + | + | + | | + | + | + | | + | + | + | | + | + | + | | + | + | + | | + | + | + | | + | + | + | |
| <i>Brotia hainanensis</i> | -- | NP | VC | + | + | + | | + | + | + | | + | + | + | | + | + | + | | + | + | + | | + | + | + | | + | + | + | | + | + | + | | + | + | + | |
| <i>Corbicula fluminea</i> | 河鰓 | NP | VC | | | + | | | | + | | | | + | | | | + | | | | + | | | | + | | | | + | | | | + | | | | + | |
| <i>Melanoides tuberculata</i> | 縮擬黑螺 | NP | VC | + | + | ++ | + | + | + | ++ | + | + | + | ++ | + | + | + | ++ | + | + | + | ++ | + | + | + | ++ | + | + | + | ++ | + | + | + | ++ | + | + | + | ++ | + |
| <i>Pomacea canaliculata</i> | 蘋果螺 | NP | VC | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + |
| <i>Radix plicatulus</i> | -- | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Sinoia quadrata</i> | 田螺 | NP | VC | + | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ |
| Insects | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Baetis sp.</i> | | NP | VC | | | + | | | | + | | | | + | | | | + | | | | + | | | | + | | | | + | | | | + | | | | + | |
| <i>Caenis sp.</i> | -- | NP | VC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Chironomus sp.</i> | 蠓幼虫 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Euphaea sp.</i> | | NP | VC | | + | + | | | + | + | | | + | + | | | + | + | | | + | + | | | + | + | | | + | + | | | + | + | | | + | + | |
| <i>Indobaetis sp.</i> | -- | NP | VC | + | + | + | | + | + | + | | + | + | + | | + | + | + | | + | + | + | | + | + | + | | + | + | + | | + | + | + | | + | + | + | |
| <i>Odonate larvae</i> | | NP | VC | | + | + | | | + | + | | | + | + | | | + | + | | | + | + | | | + | + | | | + | + | | | + | + | | | + | + | |
| <i>Orhethrum spp.</i> | -- | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Pseudagrion spp.</i> | -- | NP | UC | | + | + | | | + | + | | | + | + | | | + | + | | | + | + | | | + | + | | | + | + | | | + | + | | | + | + | |
| <i>Pseudocloeon sp.</i> | -- | NP | VC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Serratella sp.</i> | | NP | VC | | + | | | | + | | | | + | | | | + | | | | + | | | | + | | | | + | | | | + | | | | + | | |
| Crustaceans | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Caridina cantanensis</i> | 廣東米蝦 | NP | VC | | | + | | | | + | | | | + | | | | + | | | | + | | | | + | | | | + | | | | + | | | | + | |
| <i>Cryptopotamon anacoluthon</i> | 鯉刺溪蟹 | NP | VC | | + | | | | + | | | | + | | | | + | | | | + | | | | + | | | | + | | | | + | | | | + | | |
| No of Species | | | | 9 | 13 | 15 | 6 | 9 | 13 | 15 | 6 | 9 | 14 | 15 | 6 | 9 | 14 | 15 | 6 | 9 | 14 | 15 | 6 | 9 | 14 | 15 | 6 | 9 | 14 | 15 | 6 | 9 | 14 | 15 | 6 | 9 | 14 | 15 | 6 |

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|----------------------------------|--------------|-------------------|----|------------------------------|-------------|-----------|----|------------------------------|----|-----------|----|------------------------------|----|-----------|----|------------------------------|----|-----------|----|------------------------------|----|-----------|----|------------------------------|----|-----------|----|
| | | | | Jun-16 | | | | Jul-16 | | | | Aug-16 | | | | Sep-16 | | | | Oct-16 | | | | Nov-16 | | | |
| | | | | Status | Common-ness | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 |
| Mollusks | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Anodonta woodiana</i> | 背角無齒蚌 | NP | VC | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Biomphalaria sp.</i> | -- | NP | VC | + | + | + | | + | + | + | | + | + | + | | + | + | + | | + | + | + | | + | + | + | |
| <i>Brotia hainanensis</i> | -- | NP | VC | + | + | + | | + | + | + | | + | + | + | | + | + | + | | + | + | + | | + | + | + | |
| <i>Corbicula fluminea</i> | 河蚌 | NP | VC | | | + | | | | + | | | | + | | | | + | | | | + | | | | + | |
| <i>Melanoides tuberculata</i> | 縮擬黑螺 | NP | VC | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + |
| <i>Pomacea canaliculata</i> | 蘋果螺 | NP | VC | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + |
| <i>Radix plicatulus</i> | -- | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Sinoia quadrata</i> | 田螺 | NP | VC | + | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ |
| Insects | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Baetis sp.</i> | | NP | VC | | | + | | | | + | | | | + | | | | + | | | + | | | | + | | |
| <i>Caenis sp.</i> | -- | NP | VC | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Chironomus sp.</i> | 蠅幼虫 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Euphaea sp.</i> | | NP | VC | | + | + | | | + | + | | | + | + | | | + | + | | | + | + | | | + | + | |
| <i>Indobaetis sp.</i> | -- | NP | VC | + | + | + | | + | + | + | | + | + | + | | + | + | + | | + | + | + | | + | + | + | |
| <i>Odonate larvae</i> | | NP | VC | | + | + | | | + | + | | | + | + | | | + | + | | | + | + | | | + | + | |
| <i>Orhethrum spp.</i> | -- | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Pseudagrion spp.</i> | -- | NP | UC | | + | + | | | + | + | | | + | + | | | + | + | | | + | + | | | + | + | |
| <i>Pseudocloeon sp.</i> | -- | NP | VC | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Serratella sp.</i> | | NP | VC | | + | | | | + | | | | + | | | | + | | | | + | | | | + | | |
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| <i>Caridina cantanensis</i> | 廣東米蝦 | NP | VC | | + | + | | | + | + | | | + | + | | | + | + | | | + | + | | | + | + | |
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| | | | | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | |
| Mollusks | | | | | | | | | | | | | | | | | | | | | | | | |
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| <i>Biomphalaria sp.</i> | -- | NP | VC | + | + | + | | + | + | + | | + | + | + | | + | + | + | | + | + | + | | |
| <i>Brotia hainanensis</i> | -- | NP | VC | + | + | + | | + | + | + | | + | + | + | | + | + | + | | + | + | + | | |
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| <i>Pomacea canaliculata</i> | 蘋果螺 | NP | VC | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + | |
| <i>Radix plicatulus</i> | -- | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Sinotia quadrata</i> | 田螺 | NP | VC | + | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | |
| Insects | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Baetis sp.</i> | | NP | VC | | | + | | | | + | | | | + | | | | | + | | | | + | |
| <i>Caenis sp.</i> | -- | NP | VC | | | | | | | | | | | | | | | | | | | | | |
| <i>Chironomus sp.</i> | 蠅幼虫 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Euphaea sp.</i> | | NP | VC | | + | + | | | + | + | | | + | + | | | + | + | | | + | + | | |
| <i>Indobaetis sp.</i> | -- | NP | VC | + | + | + | | + | + | + | | + | + | + | | + | + | + | | + | + | + | | |
| <i>Odonate larvae</i> | | NP | VC | | + | + | | | + | + | | | + | + | | | + | + | | | + | + | | |
| <i>Orhethrum spp.</i> | -- | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Pseudagrion spp.</i> | -- | NP | UC | | + | + | | | + | + | | | + | + | | | + | + | | | + | + | | |
| <i>Pseudocloeon sp.</i> | -- | NP | VC | | | | | | | | | | | | | | | | | | | | | |
| <i>Serratella sp.</i> | | NP | VC | | + | | | | | + | | | | + | | | | | + | | | | + | |
| Crustaceans | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Caridina cantanensis</i> | 廣東米蝦 | NP | VC | | + | + | | | + | + | | | + | + | | | + | + | | | + | + | | |
| <i>Cryptopotamon anacoluthon</i> | 鯉刺溪蟹 | NP | VC | | | + | | | | + | | | | + | | | | | | | | + | | |
| No of Species | | | | 9 | 14 | 16 | 6 | 9 | 14 | 16 | 6 | 9 | 14 | 16 | 6 | 9 | 14 | 16 | 6 | 9 | 14 | 16 | 6 | |

Note: NP – Not protected in Hong Kong;

P - protected species in Hong Kong

“VC” – Very Common; “UC” – Uncommon; “C” - Common

“+” – Species exists in the study area

“++” – Species common in the study area

“+++” – Species abundance in the study area

- Reference point was the sampling location outside the works

area used to compare the with the data within works area.

Table 4.5 Aquatic Macro invertebrates recorded at She Shan River.

(T1- Upper stream section, T2 - middle stream section, T3 - Lower stream section)

| Species | Chinese name | Sampling location | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | |
|----------------------------------|--------------|-------------------|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|
| | | | | May-17 | | | | Jun-17 | | | | Jul-17 | | | | Aug-17 | | | |
| | | | | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 |
| Mollusks | | | | | | | | | | | | | | | | | | | |
| <i>Anodonta woodiana</i> | 背角無齒蚌 | NP | VC | | | | | | | | | | | | | | | | |
| <i>Biomphalaria sp.</i> | -- | NP | VC | + | + | + | | + | + | + | | + | + | + | | + | + | + | |
| <i>Brotia hainanensis</i> | -- | NP | VC | + | + | + | | + | + | + | | + | + | + | | + | + | + | |
| <i>Corbicula fluminea</i> | 河蚌 | NP | VC | | | | | | | | | | | | | | | | |
| <i>Melanoides tuberculata</i> | 縮擬黑螺 | NP | VC | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + |
| <i>Pomacea canaliculata</i> | 蘋果螺 | NP | VC | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + |
| <i>Radix plicatulus</i> | -- | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Sinoia quadrata</i> | 田螺 | NP | VC | + | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ |
| Insects | | | | | | | | | | | | | | | | | | | |
| <i>Baetis sp.</i> | | NP | VC | | | + | | | | + | | | | + | | | | + | |
| <i>Caenis sp.</i> | -- | NP | VC | | | | | | | | | | | | | | | | |
| <i>Chironomus sp.</i> | 蠅幼虫 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Euphaea sp.</i> | | NP | VC | | + | + | | | + | + | | | + | + | | | + | + | |
| <i>Indobaetis sp.</i> | -- | NP | VC | + | + | + | | + | + | + | | + | + | + | | + | + | + | |
| <i>Odonate larvae</i> | | NP | VC | | + | + | | | + | + | | | + | + | | | + | + | |
| <i>Orhnetrum spp.</i> | -- | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Pseudagrion spp.</i> | -- | NP | UC | | + | + | | | + | + | | | + | + | | | + | + | |
| <i>Pseudocloeon sp.</i> | -- | NP | VC | | | | | | | | | | | | | | | | |
| <i>Serratella sp.</i> | | NP | VC | | + | | | | + | | | | + | | | | + | | |
| Crustaceans | | | | | | | | | | | | | | | | | | | |
| <i>Caridina cantanensis</i> | 廣東米蝦 | NP | VC | | + | + | | | + | + | | | + | + | | | + | + | |
| <i>Cryptopotamon anacoluthon</i> | 鯉刺溪蟹 | NP | VC | | | + | | | | + | | | | + | | | | + | |
| No of Species | | | | 9 | 14 | 16 | 6 | 9 | 14 | 16 | 6 | 9 | 14 | 16 | 6 | 9 | 14 | 16 | 6 |

Note: NP – Not protected in Hong Kong;

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- Reference point was the sampling location outside the works

area used to compare the with the data within works area.

Table 4.5 Aquatic Macro invertebrates recorded at She Shan River.

(T1- Upper stream section, T2 - middle stream section, T3 - Lower stream section)

| Species | Chinese name | Sampling location | | Post construction monitoring | | | |
|----------------------------------|--------------|-------------------|--------------|------------------------------|----|----|----|
| | | Status | Common -ness | Sep-17 | | | |
| | | | | Reference | T1 | T2 | T3 |
| Mollusks | | | | | | | |
| <i>Anodonta woodiana</i> | 背角無齒蚌 | NP | VC | | | | |
| <i>Biomphalaria sp.</i> | -- | NP | VC | + | + | + | |
| <i>Brotia hainanensis</i> | -- | NP | VC | + | + | + | |
| <i>Corbicula fluminea</i> | 河蚌 | NP | VC | | | | + |
| <i>Melanooides tuberculata</i> | 縮擬黑螺 | NP | VC | + | ++ | ++ | + |
| <i>Pomacea canaliculata</i> | 蘋果螺 | NP | VC | + | ++ | ++ | + |
| <i>Radix plicatulus</i> | -- | NP | VC | + | + | + | + |
| <i>Sinoiaia quadrata</i> | 田螺 | NP | VC | + | + | ++ | ++ |
| Insects | | | | | | | |
| <i>Baetis sp.</i> | | NP | VC | | | + | |
| <i>Caenis sp.</i> | -- | NP | VC | | | | |
| <i>Chironomus sp.</i> | 蠅幼虫 | NP | VC | + | + | + | + |
| <i>Euphaea sp.</i> | | NP | VC | | + | + | |
| <i>Indobaetis sp.</i> | -- | NP | VC | + | + | + | |
| <i>Odonate larvae</i> | | NP | VC | | + | + | |
| <i>Orhetrum spp.</i> | -- | NP | VC | + | + | + | + |
| <i>Pseudagrion spp.</i> | -- | NP | UC | | + | + | |
| <i>Pseudocloeon sp.</i> | -- | NP | VC | | | | |
| <i>Serratella sp.</i> | | NP | VC | | + | | |
| Crustaceans | | | | | | | |
| <i>Caridina cantanensis</i> | 廣東米蝦 | NP | VC | | + | + | |
| <i>Cryptopotamon anacoluthon</i> | 鯉刺溪蟹 | NP | VC | | | + | |
| No of Species | | | | 9 | 14 | 16 | 6 |

Note: NP – Not protected in Hong Kong;

P - protected species in Hong Kong

“VC” – Very Common; “UC” – Uncommon; “C” - Common

“+” – Species exists in the study area

“++” – Species common in the study area

“+++” – Species abundance in the study area

- Reference point was the sampling location outside the works area used to compare the with the data within works area.

Table 4.5 Aquatic Macro invertebrates recorded at She Shan River.

(T1- Upper stream section, T2 - middle stream section, T3 - Lower stream section)

| Species | Chinese name | Sampling location | | Post construction monitoring | | | |
|----------------------------------|--------------|-------------------|--------------|------------------------------|----|----|----|
| | | Status | Common -ness | Oct-17 | | | |
| | | | | Reference | T1 | T2 | T3 |
| Mollusks | | | | | | | |
| <i>Anodonta woodiana</i> | 背角無齒蚌 | NP | VC | | | | |
| <i>Biomphalaria sp.</i> | -- | NP | VC | + | + | + | |
| <i>Brotia hainanensis</i> | -- | NP | VC | + | + | + | |
| <i>Corbicula fluminea</i> | 河蚌 | NP | VC | | | | + |
| <i>Melanooides tuberculata</i> | 縮擬黑螺 | NP | VC | + | ++ | ++ | + |
| <i>Pomacea canaliculata</i> | 蘋果螺 | NP | VC | + | ++ | ++ | + |
| <i>Radix plicatulus</i> | -- | NP | VC | + | + | + | + |
| <i>Sinoiaia quadrata</i> | 田螺 | NP | VC | + | + | ++ | ++ |
| Insects | | | | | | | |
| <i>Baetis sp.</i> | | NP | VC | | | + | |
| <i>Caenis sp.</i> | -- | NP | VC | | | | |
| <i>Chironomus sp.</i> | 蠅幼虫 | NP | VC | + | + | + | + |
| <i>Euphaea sp.</i> | | NP | VC | | + | + | |
| <i>Indobaetis sp.</i> | -- | NP | VC | + | + | + | |
| <i>Odonate larvae</i> | | NP | VC | | + | + | |
| <i>Orhethrum spp.</i> | -- | NP | VC | + | + | + | + |
| <i>Pseudagrion spp.</i> | -- | NP | UC | | + | + | |
| <i>Pseudocloeon sp.</i> | -- | NP | VC | | | | |
| <i>Serratella sp.</i> | | NP | VC | | + | | |
| Crustaceans | | | | | | | |
| <i>Caridina cantanensis</i> | 廣東米蝦 | NP | VC | | + | + | |
| <i>Cryptopotamon anacoluthon</i> | 鯉刺溪蟹 | NP | VC | | | + | |
| No of Species | | | | 9 | 14 | 16 | 6 |

Note: NP – Not protected in Hong Kong;

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“VC” – Very Common; “UC” – Uncommon; “C” - Common

“+” – Species exists in the study area

“++” – Species common in the study area

“+++” – Species abundance in the study area

- Reference point was the sampling location outside the works area used to compare the with the data within works area.

Table 4.6 Fish species and Hong Kong Newt recorded at She Shan River
(T1- Upper stream section, T2 - middle stream section and T3 - Lower stream section)

| Species | Commonness | Status | Baseline monitoring | | | | Impact monitoring | | | | Impact monitoring | | | | Impact monitoring | | | | Impact monitoring | | | | | | | | |
|-------------------------------------|------------|---------------------|---------------------|--------------|--------------|--------------|-------------------|----|----|----|-------------------|----|----|-----|-------------------|----|----|----|-------------------|----|----|----|-----------|----|----|----|---|
| | | | Jul-08 | | Aug-08 | | Jan-09 | | | | Jul-09 | | | | Jan-10 | | | | Jul-10 | | | | Jan-11 | | | | |
| | | | Upper stream | Lower stream | Upper stream | Lower stream | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | |
| <i>Channa maculata</i> | 斑鱧 | NP | C | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Clarias gariepinus</i> | 革胡子鯪 | NP | VC | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Gambusia affinis</i> | 食蚊魚 | NP | VC | | | ++ | ++ | + | | + | + | + | | | | | + | | + | | + | | + | + | | | |
| <i>Hemiculter leucisculus</i> | 藍刀 | NP | UC | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Misgurnus anguillicaudatus</i> | 泥鰍 | NP | C | | | | | | | | | | | | | | | + | | | | + | | | | | |
| <i>Oreochromis niloticus</i> | 尼羅口孵非鯽 | NP | C | | | + | ++ | | | | + | + | | | + | + | | | | + | | + | ++ | + | | | |
| <i>Parazacco spilurus</i> | 異鱸 | NP, V | C | + | ++ | + | ++ | + | + | + | ++ | + | + | | | + | + | | | + | + | | + | | | | |
| <i>Poecilia reticulata</i> | 孔雀花魚 | NP | VC | | | ++ | ++ | | | | | | | + | + | | | | | + | | + | + | + | + | | |
| <i>Pterocryptis cochinchinensis</i> | 越南隱鱗鯰 | NP | C | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Puntius semifasciolatus</i> | 七星魚 | NP | C | +++ | ++ | +++ | +++ | ++ | | + | + | + | | + | + | | | | + | | + | + | + | + | + | | |
| <i>Rhinogobius</i> spp. | 鰕虎魚 | NP | C | | | + | + | + | | + | + | | | | | | + | | | + | | + | + | + | + | | |
| <i>Tilapia jola</i> | 喬克非鯽 | NP, VU | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Xiphophorus hellerii</i> | 劍尾魚 | NP | C | + | + | ++ | ++ | + | | + | + | + | | +++ | + | | + | | + | | + | + | + | + | + | | |
| <i>Xiphophorus variatus</i> | 雜色劍尾魚 | NP | C | | | + | + | | | | | | | | | | | | | | | + | + | | | | |
| <i>Zacco platypus</i> | 寬鱮 | NP | C | ++ | + | + | + | + | | + | + | + | | + | + | | + | | + | | + | + | + | + | + | | |
| 2x2m fish number | | | | 80 | 60 | 80 | 60 | 30 | | 15 | 45 | 30 | 0 | 0 | 300 | 30 | 0 | 13 | | 20 | 5 | 20 | 200 | 22 | 16 | 3 | 0 |
| No of Species | | | | 4 | 4 | 9 | 9 | 6 | 1 | 6 | 9 | 7 | 1 | 0 | 5 | 7 | 1 | 6 | 0 | 7 | 3 | 9 | 8 | 8 | 6 | 1 | 0 |
| Amphibian | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Paramesotriton hongkongensis</i> | 香港瘰螈 | P, Cap 170, NT, PGC | R | | | | | | | | | | | | | | | | | | | | | | | | |

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“+” – Species exists in the study area

“++” – Species common in the study area

“+++” – Species abundance in the study area

- Reference point was the sampling location outside the works area used to compare the with the data within works area.

“Cap 170” - List in Wild Animals Protection Ordinance (Cap.170)

“NT” - Near Threatened in IUCN Red List Status

“PGC”-Potential Global Concern by Fellowes *et al* (2002)

“V” - Vulnerable - in Red China Data Book

“VU” - Vulnerable - in IUCN Red List

Table 4.6 Fish species and Hong Kong Newt recorded at She Shan River
(T1- Upper stream section, T2 - middle stream section and T3 - Lower stream section)

| Species | Status | Commonness | Impact monitoring | | | | Impact monitoring | | | | Impact monitoring | | | | Impact monitoring | | | | Impact monitoring | | | | Post construction monitoring | | | | |
|-------------------------------------|--------|---------------------|-------------------|----|----|----|-------------------|----|----|----|-------------------|----|----|----|-------------------|----|----|----|-------------------|----|----|----|------------------------------|----|----|----|----|
| | | | Jul-11 | | | | Jan-12 | | | | Jul-12 | | | | Jul-13 | | | | Dec-13 | | | | Jan-14 | | | | |
| | | | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | |
| <i>Channa maculata</i> | 斑鱧 | NP | C | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Clarias gariepinus</i> | 革胡子鯪 | NP | VC | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Gambusia affinis</i> | 食蚊魚 | NP | VC | + | | + | + | | + | + | + | | | + | + | + | + | | + | + | + | + | | + | + | | |
| <i>Hemiculter leucisculus</i> | 藍刀 | NP | UC | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Misgurnus anguillicaudatus</i> | 泥鰍 | NP | C | | | | | | | | | | | + | | | | | | | | | | | | | |
| <i>Oreochromis niloticus</i> | 尼羅口孵非鯽 | NP | C | + | | | | | + | | | | | + | + | + | + | | + | + | + | + | | + | + | | |
| <i>Parazacco spilurus</i> | 異鱸 | NP, V | C | + | | | | | + | | | | | + | + | + | | | + | + | + | | + | + | ++ | | |
| <i>Poecilia reticulata</i> | 孔雀花魚將 | NP | VC | + | | | | | + | + | | | | + | + | + | | | | | | | | | | | |
| <i>Pterocryptis cochinchinensis</i> | 越南隱鰭鯪 | NP | C | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Puntius semifasciolatus</i> | 七星魚 | NP | C | + | | | | | + | + | | | | + | + | + | | | + | + | + | + | | + | + | | |
| <i>Rhinogobius</i> spp. | 鯿虎魚 | NP | C | + | | | | | + | + | | | | + | + | + | | | + | + | + | + | | + | + | | |
| <i>Tilapia jola</i> | 喬克非鯽 | NP, VU | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Xiphophorus hellerii</i> | 劍尾魚 | NP | C | + | | | | | + | + | | | | + | + | + | + | | + | + | + | + | | + | ++ | | |
| <i>Xiphophorus variatus</i> | 雜色劍尾魚 | NP | C | | | | | | | | | | | | | | | | | | | | | | + | | |
| <i>Zacco platypus</i> | 寬鳍鱮 | NP | C | + | | + | | | + | + | | | | + | + | + | | | + | + | + | + | | + | + | | |
| 2x2m fish number | | | | 6 | 4 | 2 | 3 | 8 | 2 | 4 | 0 | 4 | 2 | 2 | 0 | 5 | 3 | 4 | 2 | 5 | 3 | 4 | 2 | 12 | 16 | 30 | 40 |
| No of Species | | | | 8 | 0 | 2 | 1 | 8 | 6 | 1 | 0 | 9 | 7 | 7 | 3 | 9 | 8 | 8 | 3 | 8 | 8 | 7 | 6 | 8 | 8 | 7 | 7 |
| Amphibian | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Paramesotriton hongkongensis</i> | 香港瘰螈 | P, Cap 170, NT, PGC | R | | | | | | | | | | | | | | | | | | | | | | + | | |

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“PGC”-Potential Global Concern by Fellowes *et al* (2002)

“V” - Vulnerable - in Red China Data Book

“VU” - Vulnerable - in IUCN Red List

Table 4.6 Fish species and Hong Kong Newt recorded at She Shan River
(T1- Upper stream section, T2 - middle stream section and T3 - Lower stream section)

| Species | Commonness | Status | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | |
|-------------------------------------|------------|---------------------|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|----|
| | | | Feb-14 | | | | Mar-14 | | | | Apr-14 | | | | May-14 | | | | Jun-14 | | | | Jul-14 | | | | |
| | | | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | |
| <i>Channa maculata</i> | 斑鱧 | NP | C | + | | | | + | + | + | | + | + | + | | + | + | + | | + | + | | + | + | + | | |
| <i>Clarias gariepinus</i> | 革胡子鯪 | NP | VC | + | | | | + | | | | + | | | | + | | | | + | | | + | | + | | |
| <i>Gambusia affinis</i> | 食蚊魚 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| <i>Hemiculter leucisculus</i> | 藍刀 | NP | UC | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Misgurnus anguillicaudatus</i> | 泥鯪 | NP | C | + | | | | + | + | + | | + | + | + | | + | + | + | | + | | + | + | + | | | |
| <i>Oreochromis niloticus</i> | 尼羅口孵非鯽 | NP | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| <i>Parazacco spilurus</i> | 異鱸 | NP, V | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| <i>Poecilia reticulata</i> | 孔雀花魚將 | NP | VC | + | | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| <i>Pterocryptis cochinchinensis</i> | 越南隱鱗鯪 | NP | C | + | | | | + | | | | + | + | | | + | | | | + | | | | + | | | |
| <i>Puntius semifasciolatus</i> | 七星魚 | NP | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| <i>Rhinogobius</i> spp. | 鯪虎魚 | NP | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| <i>Tilapia jola</i> | 喬克非鯽 | NP, VU | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Xiphophorus hellerii</i> | 劍尾魚 | NP | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| <i>Xiphophorus variatus</i> | 雜色劍尾魚 | NP | C | | + | | | | + | + | | | + | + | + | | + | + | | | + | + | | + | | | |
| <i>Zacco platypus</i> | 寬鱮 | NP | C | + | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + | + | + | + | + | + | + | + | + | + | | |
| 2x2m fish number | | | | 30 | 40 | 50 | 60 | 60 | 60 | 70 | 70 | 40 | 40 | 50 | 40 | 20 | 10 | 20 | 10 | 12 | 5 | 8 | 6 | 16 | 8 | 10 | 10 |
| No of Species | | | | 12 | 8 | 7 | 7 | 12 | 11 | 11 | 8 | 12 | 11 | 12 | 9 | 10 | 10 | 13 | 9 | 10 | 9 | 11 | 9 | 9 | 8 | 11 | 10 |
| Amphibian | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Paramesotriton hongkongensis</i> | 香港瘰螈 | P, Cap 170, NT, PGC | R | + | | + | | + | + | + | | | | | | | | | | + | | | | + | | | |

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Table 4.6 Fish species and Hong Kong Newt recorded at She Shan River
(T1- Upper stream section, T2 - middle stream section and T3 - Lower stream section)

| Species | Status | Commonness | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | | | | | |
|-------------------------------------|--------|---------------------|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|-----------|----|----|----|----|
| | | | Aug-14 | | | | Sep-14 | | | | Oct-14 | | | | Nov-14 | | | | Dec-14 | | | | Jan-15 | | | | Feb-15 | | | | |
| | | | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | |
| <i>Channa maculata</i> | 斑鱧 | NP | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| <i>Clarias gariepinus</i> | 革胡子鯪 | NP | VC | | + | + | + | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Gambusia affinis</i> | 食蚊魚 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| <i>Hemiculter leucisculus</i> | 藍刀 | NP | UC | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Misgurnus anguillicaudatus</i> | 泥鰍 | NP | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| <i>Oreochromis niloticus</i> | 尼羅口孵非鯽 | NP | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| <i>Parazacco spilurus</i> | 異鱸 | NP, V | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| <i>Poecilia reticulata</i> | 孔雀花魚將 | NP | VC | | | | + | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Pterocryptis cochinchinensis</i> | 越南隱鰭鯰 | NP | C | | | + | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Puntius semifasciolatus</i> | 七星魚 | NP | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| <i>Rhinogobius</i> spp. | 鯿虎魚 | NP | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| <i>Tilapia jola</i> | 喬克非鯽 | NP, VU | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Xiphophorus hellerii</i> | 劍尾魚 | NP | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| <i>Xiphophorus variatus</i> | 雜色劍尾魚 | NP | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Zacco platypus</i> | 寬鰭鱈 | NP | C | + | + | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + | + | | | |
| 2x2m fish number | | | | 12 | 10 | 16 | 12 | 20 | 20 | 30 | 16 | 40 | 30 | 40 | 30 | 50 | 50 | 60 | 50 | 60 | 50 | 50 | 40 | 50 | 40 | 40 | 50 | 40 | 30 | 40 | 40 |
| No of Species | | | | 9 | 9 | 12 | 10 | 9 | 9 | 12 | 10 | 8 | 9 | 11 | 10 | 8 | 9 | 12 | 8 | 7 | 6 | 11 | 9 | 7 | 8 | 11 | 8 | 7 | 9 | 12 | 8 |
| Amphibian | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Paramesotriton hongkongensis</i> | 香港瘰螈 | P, Cap 170, NT, PGC | R | | | + | | | | | | | | | | | | | | | | | | | | | | | + | | |

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Table 4.6 Fish species and Hong Kong Newt recorded at She Shan River
(T1- Upper stream section, T2 - middle stream section and T3 - Lower stream section)

| Species | | Status | Commonness | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | |
|-------------------------------------|--------|---------------------|------------------|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|
| | | | | Mar-15 | | | | Apr-15 | | | | May-15 | | | | Jun-15 | | | | Jul-15 | | | |
| | | | | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 |
| <i>Channa maculata</i> | 斑鱧 | NP | C | | + | | | | + | | | | | + | + | | | | | | + | | |
| <i>Clarias gariepinus</i> | 革胡子鯪 | NP | VC | | | + | + | | | + | | + | | | + | + | | | | | + | + | |
| <i>Gambusia affinis</i> | 食蚊魚 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Hemiculter leucisculus</i> | 藍刀 | NP | UC | | | | | | | | | | | | | | | | | | | | |
| <i>Misgurnus anguillicaudatus</i> | 泥鰍 | NP | C | + | + | + | | + | + | + | | | | + | + | + | | | | + | + | + | |
| <i>Oreochromis niloticus</i> | 尼羅口孵非鯽 | NP | C | + | + | ++ | + | + | + | ++ | + | + | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ |
| <i>Parazacco spilurus</i> | 異鱸 | NP, V | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Poecilia reticulata</i> | 孔雀花魚將 | NP | VC | | | + | + | | | + | + | | | | | + | + | | | | + | + | |
| <i>Pterocryptis cochinchinensis</i> | 越南隱鰭鯪 | NP | C | | | + | | | | + | | | | | | + | | | | | | + | |
| <i>Puntius semifasciolatus</i> | 七星魚 | NP | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Rhinogobius</i> spp. | 鯢虎魚 | NP | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Tilapia jola</i> | 喬克非鯽 | NP, VU | | | | | | | | | | | | | | | | | | | | | |
| <i>Xiphophorus hellerii</i> | 劍尾魚 | NP | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Xiphophorus variatus</i> | 雜色劍尾魚 | NP | C | | + | + | | | | + | + | | | | | + | + | | | | + | + | |
| <i>Zacco platypus</i> | 寬鰭鱈 | NP | C | + | ++ | ++ | + | + | ++ | ++ | + | + | + | ++ | + | + | ++ | + | + | + | + | ++ | + |
| | | | 2x2m fish number | 40 | 40 | 50 | 50 | 30 | 35 | 55 | 45 | 20 | 10 | 20 | 10 | 20 | 10 | 20 | 10 | 15 | 8 | 15 | 8 |
| | | | No of Species | 8 | 10 | 12 | 9 | 8 | 10 | 12 | 9 | 8 | 9 | 13 | 10 | 8 | 8 | 13 | 10 | 8 | 8 | 13 | 10 |
| Amphibian | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Paramesotriton hongkongensis</i> | 香港瘰螈 | P, Cap 170, NT, PGC | R | | | + | | | | + | | | + | | | + | | | | | | | |

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| Species | | Status | Commonness | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | |
|-------------------------------------|--------|---------------------|------------|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|
| | | | | Aug-15 | | | | Sep-15 | | | | Oct-15 | | | | Nov-15 | | | | Dec-15 | | | |
| | | | | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 |
| <i>Channa maculata</i> | 斑鱧 | NP | C | | | + | | | | | + | | | | | + | | | | | | + | |
| <i>Clarias gariepinus</i> | 革胡子鯰 | NP | VC | | | + | | + | | + | | + | | + | | + | | + | | + | | + | + |
| <i>Gambusia affinis</i> | 食蚊魚 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Hemiculter leucisculus</i> | 藍刀 | NP | UC | | | | | | | | | | | | | | | | | | | | |
| <i>Misgurnus anguillicaudatus</i> | 泥鰍 | NP | C | + | + | + | | + | + | + | | + | + | + | | + | + | + | | + | + | + | |
| <i>Oreochromis niloticus</i> | 尼羅口孵非鯽 | NP | C | + | ++ | ++ | | + | ++ | ++ | | + | ++ | ++ | | + | ++ | ++ | | + | ++ | ++ | |
| <i>Parazacco spilurus</i> | 異鱧 | NP, V | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Poecilia reticulata</i> | 孔雀花魚 | NP | VC | | | + | + | | | + | + | | | + | + | | | + | + | | | + | + |
| <i>Pterocryptis cochinchinensis</i> | 越南隱鰭鯰 | NP | C | | | + | | | | + | | | | + | | | | + | | | | + | |
| <i>Puntius semifasciolatus</i> | 七星魚 | NP | C | + | + | + | | + | + | + | | + | + | + | | + | + | + | | + | + | + | |
| <i>Rhinogobius</i> spp. | 鰐虎魚 | NP | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Tilapia jola</i> | 喬克非鯽 | NP, VU | | | | | | | | | | | | | | | | | | | | | |
| <i>Xiphophorus hellerii</i> | 劍尾魚 | NP | C | + | + | + | | + | + | + | | + | + | + | | + | + | + | | + | + | + | |
| <i>Xiphophorus variatus</i> | 雜色劍尾魚 | NP | C | | | + | + | | | + | + | | | + | + | | | + | + | | | + | + |
| <i>Zacco platypus</i> | 寬鰭鱮 | NP | C | + | + | ++ | + | + | + | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + |
| 2x2m fish number | | | | 20 | 10 | 20 | 10 | 20 | 12 | 23 | 12 | 35 | 35 | 25 | 20 | 45 | 45 | 35 | 30 | 55 | 50 | 40 | 35 |
| No of Species | | | | 8 | 8 | 13 | 7 | 8 | 8 | 13 | 6 | 8 | 8 | 13 | 6 | 8 | 8 | 13 | 6 | 8 | 8 | 13 | 6 |
| Amphibian | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Paramesotriton hongkongensis</i> | 香港瘰螈 | P, Cap 170, NT, PGC | R | | | | | | | | | | | | | | | | | | | + | |

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|-------------------------------------|------------------|---------------------|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|----|
| | | | Jan-16 | | | | Feb-16 | | | | Mar-16 | | | | Apr-16 | | | | May-16 | | | | |
| | | | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | |
| <i>Channa maculata</i> | 斑鱧 | NP | C | | | + | | | | | | + | | | | | | | | | + | | |
| <i>Clarias gariepinus</i> | 革胡子鯪 | NP | VC | | | + | + | | | | | + | + | | | | | | | | + | + | |
| <i>Gambusia affinis</i> | 食蚊魚 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Hemiculter leucisculus</i> | 藍刀 | NP | UC | | | | | | | | | | | | | | | | | | | | |
| <i>Misgurnus anguillicaudatus</i> | 泥鰍 | NP | C | + | + | + | | | | + | + | + | | | | | + | + | + | | + | + | + |
| <i>Oreochromis niloticus</i> | 尼羅口孵非鯽 | NP | C | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + |
| <i>Parazacco spilurus</i> | 異鱸 | NP, V | C | + | + | + | | | + | + | + | | | + | + | + | | | + | + | + | | |
| <i>Poecilia reticulata</i> | 孔雀花魚將 | NP | VC | | | + | + | | | | | + | + | | | | | | | | + | + | + |
| <i>Pterocryptis cochinchinensis</i> | 越南隱鰭鯰 | NP | C | | | | | | | | | | | | | | | | | | | | |
| <i>Puntius semifasciolatus</i> | 七星魚 | NP | C | + | + | + | | | + | + | + | | | + | + | + | | | + | + | + | | |
| <i>Rhinogobius</i> spp. | 鯧虎魚 | NP | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Tilapia jola</i> | 喬克非鯽 | NP, VU | | | | | | | | | | | | | | | | | | | | | |
| <i>Xiphophorus hellerii</i> | 劍尾魚 | NP | C | + | + | + | | | + | + | + | | | + | + | + | | | + | + | + | | |
| <i>Xiphophorus variatus</i> | 雜色劍尾魚 | NP | C | | | + | + | | | | | + | + | | | | | | | | + | + | + |
| <i>Zacco platypus</i> | 寬鰭鱈 | NP | C | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + |
| | 2x2m fish number | | | 55 | 45 | 35 | 25 | 60 | 45 | 40 | 30 | 60 | 50 | 35 | 25 | 40 | 40 | 30 | 20 | 30 | 20 | 20 | 10 |
| | No of Species | | | 8 | 8 | 12 | 7 | 8 | 8 | 12 | 7 | 8 | 8 | 12 | 7 | 8 | 8 | 12 | 7 | 8 | 8 | 12 | 7 |
| Amphibian | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Paramesotriton hongkongensis</i> | 香港瘰螈 | P, Cap 170, NT, PGC | R | | | + | | | | + | | | | + | | | | | | | | | |

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|-------------------------------------|--------|---------------------|------------|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|
| | | | | Jun-16 | | | | Jul-16 | | | | Aug-16 | | | | Sep-16 | | | | Oct-16 | | | |
| | | | | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 |
| <i>Channa maculata</i> | 斑鱧 | NP | C | | | + | | | | | | + | | | | | | + | | | + | | |
| <i>Clarias gariepinus</i> | 革胡子鯪 | NP | VC | | | + | + | | | | + | + | | | | | | + | | | + | | |
| <i>Gambusia affinis</i> | 食蚊魚 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| <i>Hemiculter leucisculus</i> | 藍刀 | NP | UC | | | | | | | | | | | | | | | | | | | | |
| <i>Misgurnus anguillicaudatus</i> | 泥鰍 | NP | C | + | + | + | | + | + | + | | + | + | + | | + | + | + | | + | + | | |
| <i>Oreochromis niloticus</i> | 尼羅口孵非鯽 | NP | C | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | |
| <i>Parazacco spilurus</i> | 異鱸 | NP, V | C | | + | + | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| <i>Poecilia reticulata</i> | 孔雀花魚將 | NP | VC | | | | + | + | | | | | | | | | | + | | | + | | |
| <i>Pterocryptis cochinchinensis</i> | 越南隱鰭鯰 | NP | C | | | | | | | | | | | | | | | | | | | | |
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| <i>Tilapia jola</i> | 喬克非鯽 | NP, VU | | | | | | | | | | | | | | | | | | | | | |
| <i>Xiphophorus hellerii</i> | 劍尾魚 | NP | C | + | + | + | | + | + | + | | + | + | + | | + | + | + | | + | + | | |
| <i>Xiphophorus variatus</i> | 雜色劍尾魚 | NP | C | | | | + | + | | | | | | | | | | + | | | + | | |
| <i>Zacco platypus</i> | 寬鰭鱮 | NP | C | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | |
| 2x2m fish number | | | | 30 | 20 | 25 | 8 | 20 | 15 | 20 | 3 | 20 | 10 | 15 | 5 | 20 | 12 | 15 | 8 | 25 | 20 | 20 | 10 |
| No of Species | | | | 8 | 8 | 12 | 7 | 8 | 8 | 12 | 8 | 8 | 8 | 12 | 5 | 8 | 8 | 12 | 5 | 8 | 8 | 12 | 5 |
| Amphibian | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Paramesotriton hongkongensis</i> | 香港瘰螈 | P, Cap 170, NT, PGC | R | | | | | | | | | | | | | | | + | | | + | | |

Note: NP – Not protected in Hong Kong

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Table 4.6 Fish species and Hong Kong Newt recorded at She Shan River
(T1- Upper stream section, T2 - middle stream section and T3 - Lower stream section)

| Species | | Status | Commonness | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | |
|-------------------------------------|------------------|---------------------|------------|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|
| | | | | Nov-16 | | | | Dec-16 | | | | Jan-17 | | | | Feb-17 | | | | Mar-17 | | | |
| | | | | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 |
| <i>Channa maculata</i> | 斑鱧 | NP | C | | | + | | | | | | + | | | | | | | | | | + | |
| <i>Clarias gariepinus</i> | 革胡子鯪 | NP | VC | | | + | | | | | | + | | | | | | | | | | + | |
| <i>Gambusia affinis</i> | 食蚊魚 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Hemiculter leucisculus</i> | 藍刀 | NP | UC | | | | | | | | | | | | | | | | | | | | |
| <i>Misgurnus anguillicaudatus</i> | 泥鰍 | NP | C | + | + | + | | + | + | + | | + | + | + | | + | + | + | | + | + | + | |
| <i>Oreochromis niloticus</i> | 尼羅口孵非鯽 | NP | C | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + |
| <i>Parazacco spilurus</i> | 異鱸 | NP, V | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Poecilia reticulata</i> | 孔雀花魚將 | NP | VC | | | + | | | | | | | | + | | | | | | | | + | |
| <i>Pterocryptis cochinchinensis</i> | 越南隱鰭鯪 | NP | C | | | | | | | | | | | | | | | | | | | | |
| <i>Puntius semifasciolatus</i> | 七星魚 | NP | C | + | + | + | | + | + | + | | + | + | + | | + | + | + | | + | + | + | |
| <i>Rhinogobius</i> spp. | 鰻虎魚 | NP | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Tilapia jola</i> | 喬克非鯽 | NP, VU | | | | | | | | | | | | | | | | | | | | | |
| <i>Xiphophorus hellerii</i> | 劍尾魚 | NP | C | + | + | + | | + | + | + | | + | + | + | | + | + | + | | + | + | + | |
| <i>Xiphophorus variatus</i> | 雜色劍尾魚 | NP | C | | | + | | | | | | | | + | | | | | | | | + | |
| <i>Zacco platypus</i> | 寬鳍鱮 | NP | C | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + |
| | 2x2m fish number | | | 35 | 35 | 30 | 20 | 45 | 40 | 40 | 20 | 45 | 45 | 45 | 20 | 50 | 50 | 50 | 30 | 55 | 55 | 50 | 20 |
| | No of Species | | | 8 | 8 | 12 | 5 | 8 | 8 | 12 | 5 | 8 | 8 | 12 | 5 | 8 | 8 | 12 | 5 | 8 | 8 | 12 | 5 |
| Amphibian | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Paramesotriton hongkongensis</i> | 香港瘰螈 | P, Cap 170, NT, PGC | R | | | | | | | | | | | | | | | | | | | + | |

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“VC” – Very Common; “UC” – Uncommon; “C” - Common

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Table 4.6 Fish species and Hong Kong Newt recorded at She Shan River
(T1- Upper stream section, T2 - middle stream section and T3 - Lower stream section)

| Species | | Status | Commonness | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | |
|-------------------------------------|------------------|---------------------|------------|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|------------------------------|----|----|----|
| | | | | Apr-17 | | | | May-17 | | | | Jun-17 | | | | Jul-17 | | | | Aug-17 | | | |
| | | | | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 |
| <i>Channa maculata</i> | 斑鱧 | NP | C | | | + | | | | | | + | | | | | | | | | + | | |
| <i>Clarias gariepinus</i> | 革胡子鯪 | NP | VC | | | + | | | | | | + | | | | | | | | | + | | |
| <i>Gambusia affinis</i> | 食蚊魚 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Hemiculter leucisculus</i> | 藍刀 | NP | UC | | | | | | | | | | | | | | | | | | | | |
| <i>Misgurnus anguillicaudatus</i> | 泥鰍 | NP | C | + | + | + | | + | + | + | | + | + | + | | + | + | + | | + | + | + | |
| <i>Oreochromis niloticus</i> | 尼羅口孵非鯽 | NP | C | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + |
| <i>Parazacco spilurus</i> | 異鱸 | NP, V | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Poecilia reticulata</i> | 孔雀花魚將 | NP | VC | | | + | | | | | + | | | | | | | | | | | + | |
| <i>Pterocryptis cochinchinensis</i> | 越南隱鰭鯰 | NP | C | | | | | | | | | | | | | | | | | | | | |
| <i>Puntius semifasciolatus</i> | 七星魚 | NP | C | + | + | + | | + | + | + | | + | + | + | | + | + | + | | + | + | + | |
| <i>Rhinogobius</i> spp. | 鰕虎魚 | NP | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Tilapia jola</i> | 喬克非鯽 | NP, VU | | | | | | | | | | | | | | | | | | | | | |
| <i>Xiphophorus hellerii</i> | 劍尾魚 | NP | C | + | + | + | | + | + | + | | + | + | + | | + | + | + | | + | + | + | |
| <i>Xiphophorus variatus</i> | 雜色劍尾魚 | NP | C | | | + | | | | | + | | | + | | | | | | | | + | |
| <i>Zacco platypus</i> | 寬鰭鱮 | NP | C | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + | + | ++ | ++ | + |
| | 2x2m fish number | | | 35 | 30 | 40 | 15 | 20 | 20 | 15 | 10 | 15 | 10 | 10 | 5 | 15 | 8 | 8 | 5 | 20 | 10 | 10 | 5 |
| | No of Species | | | 8 | 8 | 12 | 5 | 8 | 8 | 12 | 5 | 8 | 8 | 12 | 5 | 8 | 8 | 12 | 5 | 8 | 8 | 12 | 5 |
| Amphibian | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Paramesotriton hongkongensis</i> | 香港瘰螈 | P, Cap 170, NT, PGC | R | | | + | | | | | + | | | + | | | | + | | | | + | |

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Table 4.6 Fish species and Hong Kong Newt recorded at She Shan River
(T1- Upper stream section, T2 - middle stream section and T3 - Lower stream section)

| Species | | Status | Commonness | Post construction monitoring | | | | Post construction monitoring | | | | |
|-------------------------------------|--------|---------------------|------------------|------------------------------|----|----|----|------------------------------|----|----|----|---|
| | | | | Sep-17 | | | | Oct-17 | | | | |
| | | | | Reference | T1 | T2 | T3 | Reference | T1 | T2 | T3 | |
| <i>Channa maculata</i> | 斑鱧 | NP | C | | | + | | | | | + | |
| <i>Clarias gariepinus</i> | 革胡子鯪 | NP | VC | | | + | | | | | + | |
| <i>Gambusia affinis</i> | 食蚊魚 | NP | VC | + | + | + | + | + | + | + | + | + |
| <i>Hemiculter leucisculus</i> | 藍刀 | NP | UC | | | + | | | | | + | |
| <i>Misgurnus anguillicaudatus</i> | 泥鰍 | NP | C | + | + | + | | + | + | + | + | |
| <i>Oreochromis niloticus</i> | 尼羅口孵非鯽 | NP | C | + | ++ | ++ | + | + | ++ | ++ | ++ | + |
| <i>Parazacco spilurus</i> | 異鱸 | NP, V | C | + | + | + | + | + | + | + | + | + |
| <i>Poecilia reticulata</i> | 孔雀花魚將 | NP | VC | | | + | | | | | + | |
| <i>Pterocryptis cochinchinensis</i> | 越南隱鰭鯪 | NP | C | | | | | | | | | |
| <i>Puntius semifasciolatus</i> | 七星魚 | NP | C | + | + | + | | + | + | + | + | |
| <i>Rhinogobius</i> spp. | 鯢虎魚 | NP | C | + | + | + | + | + | + | + | + | + |
| <i>Tilapia jola</i> | 喬克非鯽 | NP, VU | | | | + | | | | | + | |
| <i>Xiphophorus hellerii</i> | 劍尾魚 | NP | C | + | + | + | | + | + | + | + | |
| <i>Xiphophorus variatus</i> | 雜色劍尾魚 | NP | C | | | + | | | | | + | |
| <i>Zacco platypus</i> | 寬鰭鱮 | NP | C | + | ++ | ++ | + | + | ++ | ++ | ++ | + |
| | | | 2x2m fish number | 30 | 25 | 20 | 8 | 30 | 25 | 25 | 10 | |
| | | | No of Species | 8 | 8 | 14 | 5 | 8 | 8 | 14 | 5 | |
| Amphibian | | | | | | | | | | | | |
| <i>Paramesotriton hongkongensis</i> | 香港瘰螈 | P, Cap 170, NT, PGC | R | | | | | | | | | |

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Table 4.7 Abotic data for the Upper She Shan River

(T1- Upper stream section, T2 - middle stream section and T3 - Lower stream section)

| Parameter / date | Baseline monitoring | Impact monitoring | | | Impact monitoring | | | Impact monitoring | | | Impact monitoring | | | Impact monitoring | | | Impact monitoring | | |
|----------------------------|---------------------|-------------------|----------------------|---------------------|-------------------|------|-----------|-------------------|-----------|-----|-------------------|------|------|-------------------|------|------|-------------------|------|------|
| | Aug-08 | Jan-09 | | | Jul-09 | | | Jan-10 | | | Jul-10 | | | Jan-11 | | | Jul-11 | | |
| Replicate | | T1 | T2 | T3 | T1 | T2 | T3 | T1 | T2 | T3 | T1 | T2 | T3 | T1 | T2 | T3 | T1 | T2 | T3 |
| DO (mg/L) | 8.9 | -- | 9.1 | 8.3 | 6 | 5.8 | 6.5 | -- | 8.9 | -- | 8.2 | 8.3 | 8.3 | 8 | 8.5 | 8.8 | 8 | 8.5 | 9 |
| pH | 7.29 | -- | 7.51 | 7.42 | 7.22 | 7.16 | 7.35 | -- | 7.5 | -- | 7.5 | 7.5 | 7.5 | 6.9 | 7 | 7.2 | 7 | 7.2 | 7.5 |
| Nitrate (mg N/L) | 0.5 | -- | 1.6 | 1.5 | 0.22 | 0.3 | 0.4 | -- | 0.75 | -- | 0.1 | 0.14 | 0.2 | 0.1 | 0.2 | 0.7 | 0.1 | 0.3 | 0.4 |
| Ammonia (mg N/L) | 0.1 | -- | PO4-P (µg P/L) :<100 | PO4-P (µg P/L) :110 | 0.83 | 0.97 | 0.99 | -- | 0.03 | -- | 0.25 | 0.2 | 0.12 | 0.1 | 0.1 | 0.12 | 0.1 | 0.1 | 0.15 |
| Salinity (ppt) | <0.1 | -- | 0.1 | 0.1 | 0 | 0 | 0 | -- | 0 | -- | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Conductivity (µS/cm) | 90 | -- | 140 | 170 | 116 | 114 | 116 | -- | 105 | -- | 410 | 410 | 390 | 110 | 111 | 115 | 120 | 115 | 130 |
| BOD (mg/L) | <2 | -- | <2 | 4 | <2 | <2 | <2 | -- | 2 | -- | <2 | 3.2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| Water flow at pool (m/s) | 0.1-0.3 | -- | <0.01-0.1 | | <0.01 | N.A | <0.01-0.1 | -- | <0.01-0.1 | -- | 0.1 | 0 | 0 | 0.1 | 0 | 0 | 0.2 | 0.05 | 0.1 |
| Water flow at riffle (m/s) | 0.4-0.5 | -- | 0.2-0.3 | | <0.01 | N.A | 0.2-0.3 | -- | 0.01 | -- | 0.1 | 0 | 0 | 0.1 | 0 | 0 | 0.2 | 0.1 | 0.1 |
| Sand (%) | 55 | 65 | 23 | 65 | 23 | 23 | 65 | 5 | 23 | -- | 5 | 30 | 5 | 5 | 30 | 2 | 5 | 30 | 2 |
| Stone (%) | 25 | 30 | 75 | 30 | 75 | 75 | 30 | 40 | 75 | -- | 40 | 65 | 80 | 40 | 65 | 2 | 40 | 65 | 2 |
| Mud (%) | 30 | 5 | 2 | 5 | 2 | 2 | 5 | 5 | 2 | -- | 5 | 5 | 5 | 5 | 5 | 1 | 5 | 5 | 1 |
| Concrete (%) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 50 | 0 | 100 | 50 | 0 | 10 | 50 | 0 | 95 | 50 | 0 | 95 |

Table 4.7 Abotic data for the Upper She Shan River

(T1- Upper stream section, T2 - middle stream section and T3 - Lower stream section)

| Parameter / date | Impact monitoring | | | Impact monitoring | | | Impact monitoring | | | Impact monitoring | | | Post construction monitoring | | | Post construction monitoring | | | Post construction monitoring | | |
|----------------------------|-------------------|------|-----|-------------------|------|------|-------------------|------|------|-------------------|-------|------|------------------------------|------|------|------------------------------|-----|-----|------------------------------|-----|------|
| | Jan-12 | | | Jul-12 | | | Jul-13 | | | Dec-13 | | | Jan-14 | | | Feb-14 | | | Mar-14 | | |
| Replicate | T1 | T2 | T3 | T1 | T2 | T3 | T1 | T2 | T3 | T1 | T2 | T3 | T1 | T2 | T3 | T1 | T2 | T3 | T1 | T2 | T3 |
| DO (mg/L) | 8.6 | 8.2 | 8.8 | 7.7 | 7.7 | 6.3 | 7.8 | 7.8 | 7.7 | 8.7 | 8.6 | 9.2 | 8.3 | 8.2 | 8.6 | 7.2 | 7.6 | 7.8 | 7.1 | 7.2 | 7.2 |
| pH | 6.9 | 6.6 | 7.1 | 6.7 | 6.6 | 6.6 | 6.8 | 7.2 | 7.6 | 6.6 | 6.9 | 7.1 | 6.8 | 7.3 | 7.4 | 7.8 | 6.7 | 7.6 | 7.2 | 6.8 | 7.5 |
| Nitrate (mg N/L) | 0.2 | 0.2 | 0.4 | 0.84 | 0.86 | 1.14 | 0.6 | 0.61 | 0.7 | 0.78 | 0.63 | 0.53 | 1.2 | 1.12 | 1.02 | 1.5 | 1.2 | 1.6 | 1.2 | 1.1 | 0.77 |
| Ammonia (mg N/L) | 0.2 | 0.2 | 0.3 | 0.05 | 0.02 | 1.08 | 0.14 | 0.06 | 0.05 | 0.08 | <0.01 | 0.42 | 1.9 | 1.8 | 1.73 | 0.8 | 1.2 | 1.4 | 0.4 | 0.6 | 0.01 |
| Salinity (ppt) | 0 | 0 | 0 | 0.03 | 0.04 | 0.07 | 0.03 | 0.03 | 0.04 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Conductivity (µS/cm) | 122 | 118 | 126 | 121 | 120 | 160 | 94 | 97 | 97 | 116 | 116 | 134 | 124 | 118 | 132 | 128 | 113 | 132 | 123 | 136 | 140 |
| BOD (mg/L) | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| Water flow at pool (m/s) | 0.2 | 0.05 | 0.1 | 0.2 | 0.05 | 0.1 | 0.2 | 0.05 | 0.1 | 0.1 | 0.05 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Water flow at riffle (m/s) | 0.2 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| Sand (%) | 10 | 25 | 5 | 10 | 25 | 5 | 15 | 25 | 5 | 15 | 10 | 5 | 15 | 10 | 5 | 15 | 10 | 5 | 15 | 10 | 5 |
| Stone (%) | 45 | 65 | 5 | 45 | 65 | 5 | 65 | 65 | 15 | 65 | 80 | 20 | 65 | 80 | 20 | 65 | 80 | 20 | 65 | 80 | 20 |
| Mud (%) | 5 | 10 | 10 | 5 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 5 | 10 | 10 | 5 | 10 | 10 | 5 | 10 | 10 | 5 |
| Concrete (%) | 40 | 0 | 80 | 40 | 0 | 80 | 10 | 0 | 70 | 10 | 0 | 70 | 10 | 0 | 70 | 10 | 0 | 70 | 10 | 0 | 70 |

Table 4.7 Abotic data for the Upper She Shan River

(T1- Upper stream section, T2 - middle stream section and T3 - Lower stream section)

| Parameter / date | Post construction monitoring | | | Post construction monitoring | | | Post construction monitoring | | | Post construction monitoring | | |
|----------------------------|------------------------------|---------|---------|------------------------------|---------|---------|------------------------------|---------|---------|------------------------------|---------|---------|
| | Jul-17 | | | Aug-17 | | | Sep-17 | | | Oct-17 | | |
| Replicate | T1 | T2 | T3 | T1 | T2 | T3 | T1 | T2 | T3 | T1 | T2 | T3 |
| DO (mg/L) | 8.1 | 8.0 | 7.9 | 8.0 | 8.0 | 7.9 | 7.9 | 8.0 | 7.9 | 8.0 | 8.0 | 7.9 |
| pH | 7.7 | 7.7 | 7.6 | 7.7 | 7.7 | 7.7 | 7.7 | 7.6 | 7.7 | 7.7 | 7.7 | 7.7 |
| Nitrate (mg N/L) | 0.4 | 0.5 | 0.5 | 0.4 | 0.5 | 0.5 | 0.4 | 0.5 | 0.5 | 0.4 | 0.5 | 0.5 |
| Ammonia (mg N/L) | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Salinity (ppt) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Conductivity (µS/cm) | 15 | 18 | 19 | 20 | 22 | 25 | 18 | 23 | 28 | 23 | 25 | 25 |
| BOD (mg/L) | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| Water flow at pool (m/s) | 0.1-0.2 | 0.1-0.2 | 0.1-0.2 | 0.1-0.2 | 0.1-0.2 | 0.1-0.2 | 0.1-0.2 | 0.1-0.2 | 0.1-0.2 | 0.1-0.2 | 0.1-0.2 | 0.1-0.2 |
| Water flow at riffle (m/s) | 0.2-0.5 | 0.2-0.5 | 0.2-0.5 | 0.2-0.5 | 0.2-0.5 | 0.2-0.5 | 0.2-0.5 | 0.2-0.5 | 0.2-0.5 | 0.2-0.5 | 0.2-0.5 | 0.2-0.5 |
| Sand (%) | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Stone (%) | 80 | 80 | 30 | 80 | 80 | 30 | 80 | 80 | 30 | 80 | 80 | 30 |
| Mud (%) | 5 | 5 | 2 | 5 | 5 | 2 | 5 | 5 | 2 | 5 | 5 | 2 |
| Concrete (%) | 10 | 10 | 63 | 10 | 10 | 63 | 10 | 10 | 63 | 10 | 10 | 63 |

**Agreement No. CE65/2013(EP) Post-Construction
Ecological Monitoring of River Improvement Work in
Upper Lam Tsuen River, She Shan River and Upper Tai Po
River – Investigation
Post-Construction Ecological Monitoring Report (No. 46)
Upper Tai Po River**

October 2017



Prepared by : Mike Pang

14 November, 2017

Validated by: Mark Shea

14 November , 2017

Ecology Team: China Hong Kong Ecology Consultants

**Post-Construction Ecological Monitoring of River
Improvement Work in Upper Lam Tsuen River, She Shan
River and Upper Tai Po River – Investigation
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**Post-Construction Ecological Monitoring Report (No.46)
Upper Tai Po River**

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1 Introduction

- 1.1 The current post-construction ecological monitoring programme is under Agreement No. CE65/2013(EP) Post-Construction Ecological Monitoring of River Improvement Work in Upper Lam Tsuen River, She Shan River and Upper Tai Po River. The collected data are mainly used to assess ecological recovery process and effectiveness of ecological migration proposed and enforced during the construction period.
- 1.2 The scope of the ecological monitoring was detailed in EM & A Manual of the project. In brief, the survey aimed to collect data on abiotic factors such as water quality, substratum characteristics, water flow as well as flora and fauna.
- 1.3 China Hong Kong Ecology Consultants Ltd. was committed by Allied Environmental Consultants Ltd (AEC) to undertake the ecological monitoring tasks for the project from December 2014.
- 1.4 This is the number 46 post-construction ecological monitoring report for the project conducted **on 26th October 2017**. It contains the following subsections:
 - Summary of major points
 - Monitoring Methods and Results
 - Summary and Comments

2 Summary of Major Points

- Fauna and flora along the drainage project sections are in a process of re-establishing or restoration;
- Bird abundance was similar to those recorded during baseline survey;
- The abundance of target river fauna, i.e., fish *Parazacco spilurus* recorded was lower than those recorded during baseline monitoring (before fish capture/relocation took place). The reason for low fish population of *Parazacco spilurus* was due to river bed modification. The rare fish *Pseudobagrus trilineatus* was consistently recorded in the river during recent monitoring. The other target species, Hong Kong Newt was found within works area during baseline, impact monitoring and it was recorded in the river during post construction monitoring. Apart from fauna species, 55 flora species was recorded within the survey transects along the river course. Some common herbs were observed generating on the embankment, which indicating that vegetation was recovering. Flora species of *Tibouchina semidecandra* and *Ipomoea pes-caprae* were planted on the gabion along the river for landscape purpose;
- The abundance of fish was similar to last month with slight increase;
- Lower abundance of odonata was recorded in this month; and An adult Hong Kong Newt was recorded during the survey.

3 Monitoring Methodology

3.1 Riparian Vegetation

Riparian vegetation including aquatic and emergent was sampled by line transects along the affected river channel and riparian habitat. Species, relative abundance and average heights were recorded. Vegetation surveys were conducted at three selected belt transects with one located at the upper portion of the river channel (T1) and another one at the middle section of the river (T2), as well as reference site (**Figure 1**). The belt transects was run across the river channel in order to collect quantitative data of the vegetation, e.g., species inventory, height, percentage cover. Qualitative data of plants was collected by recording plant species along line transect, e.g., species inventory, relative abundance. Nomenclature and protection status of the species has followed those documented in Lai *et al.* (2004) and Hong Kong Herbarium (2015).

3.2 Avifauna

Avifauna survey was conducted during post construction monitoring period. Special attention was given to the river channel and corridor area which birds used as feeding and foraging habitat. Avifauna survey was undertaken in the early morning plus species recorded in the rest of the day when conducting other taxonomic groups (benthic, fish, insect) monitoring. Numerical abundance was recorded at fixed count points within a radius of 30 to 50m according to landscape feature and visual penetration extent. The duration of the point count of birds was standardized for 10 minutes at each location in order to collect comparable data. Transect count along accessible sections of river channel were used in order to collect qualitative data. Binoculars and digital camera were the main items of equipment used. Nomenclature and protection status of the species has followed in the AFCDD website (www.hkbiodiversity.net) and Carey *et al.* (2001).

The point count was conducted at two locations with one located at the lower portion of the river channel (T2) and the other located at the upper section of the river (T1). The point count locations, survey transect for bird survey and sampling sites for surveys of other faunal groups and flora was given in **Figure 1**.

3.3 Adult Odonata Survey

Adult Odonata surveys were conducted along transects (**Figure 1**). Binoculars, digital camera and hand net were utilized to aid identification. Numerical abundance, species identity and other notable behavior were recorded. Nomenclature and protection status of the species has followed those documented in the AFCDD website (www.hkbiodiversity.net), Wilson *et al.* (2004) and Tam *et al.* (2011). Adult Odonata survey was conducted along line transects in parallel with river channel within the works area where access was permitted.

3.4 Aquatic Macro-invertebrates

Macro-invertebrates in the river channel were surveyed in three sampling sites with two located at upper (T1) and middle (T2) proportion of the river respectively and one reference site. It aims to collect necessary macro-invertebrate fauna for ecological monitoring programme (**Figure 1**). Five replicates were taken at each sampling point and pool together for further sample sorting and identification. Kick sampling and hand netting were the survey methodologies for river organisms. Dissection microscope and digital camera were used to aid identification and enumeration. Numerical abundance and species identity were recorded. Nomenclature and protection status of the species has followed those documented in the AFCD website (www.hkbiodiversity.net) and other literatures such as Dudgeon (1994).

3.5 Fish and Newt

Fish community including target species *Parazacco spilurus* and *Paramesotriton hongkongensis* at the specified river channel was monitored by live trapping, hand netting and direct observation methods.

Sampling was conducted at three sampling locations with one located at upper section (T1) and one located at middle section (T2), as well as reference site. The selected sampling site covered major type of river habitats, e.g. river pool and riffle (**Figure 1**). The number of the observed fish and newt was estimated and recorded. Nomenclature and protection status of the species has followed those documented in the AFCD website (www.hkbiodiversity.net) and Lee *et al.* (2004).

3.6 Abiotic Data Collection

3.6.1 Water Quality Monitoring

Dissolved oxygen level, pH value, conductivity, salinity, BOD and nutrient level (nitrate and ammonium) were measured and analyzed by conventional methods in situ or in laboratory. The instruments for measuring dissolved oxygen level, pH value, conductivity, salinity were model: DO-5510, AZ8685, AZ8361 and AZ8374 respectively. All the instruments were calibrated every monitoring month according to the operation manuals in order to obtain the precise result. BOD test took 5 days to complete within darkness incubator with stable temperature at 20°C and was performed using model: DO-5510 for measuring dissolved oxygen. Nutrient levels including nitrate and ammonia were performed in laboratory by applying the In-house method SOP056 (FIA) and SOP057 (FIA) respectively.

3.6.2 Sediment Characteristics

Sediment/substrate characteristics were recorded of sediment cover in percentage e.g. mud, sand, rock, boulder and cemented bottom in the river bed at sampling sites.

3.6.3 Water Flow

Water flow rates in river channel were measured by recording the time taken for a floating object (e.g. floating ball) in a measured distance. The sampling sites for surveys were given in **Figure 1**.

4 Monitoring Results

4.1 Vegetation

Major proportion of river bed and bank was concrete and without plant colonizing (Photos 1-2). Vegetation has generally covered the gabion wall along the upper Tai Po River and the river bed with some common plants (Photo 3-4) including invasive species *Mikania micrantha*, and native species *Commelina diffusa*. Most of the plants on the river bed along the river have been removed from the clearance work. In total, 55 flora species was recorded within the survey transects along the river course. Abundant native species *Commelina diffusa* was the dominant species established in the river bed. Vegetation coverage in upper section was still low. Flooding was observed in this month, which washed out most of the plant of the river. The flora were generally in good health, and the height of the dominated riparian grass and herb species were in a range from 0.3m to 1.7m as observed along survey transect. Abundant flora species were shown in the **Table 4.1** marked with relative abundance sign “+++”. Results of vegetation survey and belt transect survey were presented in **Table 4.1** and **Table 4.2**. **Figure 1** shows the transect line for the flora surveys.

4.2 Fauna

4.2.1 Avifauna

An avifauna survey was undertaken along survey transects and at two defined point count locations. In total, 13 species of birds were recorded during bird survey. Among them, 5 species were wetland dependant birds observed feeding and roosting in the river channel including *Actitis hypoleucos* (Photo 5),, *Ardeola bacchus*, *Egretta garzetta*, *Motacilla alba* and *Motacilla cinerea*.. A common species *Pycnonotus jocosus* was the dominant species of most of the proportion of the river. All the birds in Hong Kong are under protection of Wild Animals Protection Ordinance (Cap. 170). Some of the wetland dependent species recorded are classified as Regional Concern by Fellowes *et al.* (2002) including *Egretta garzetta* and *Ardeola bacchus*, which were usually observed feeding in the river. Only foraging and roosting behaviour of some wetland dependent birds were noticed. Transect and Point Count locations were shown on **Figure 1**. Result of bird survey was presented in the **Table 4.3**.

4.2.2 Adult Odonata Survey

Odonata surveys were performed and a list of recorded odonata species at Upper Tai Po River is shown in **Table 4.4**. Number of odonata species recorded was similar to the previous surveys conducted in approximate period of last year. In total, 7 species odonata was found, the recorded odonata species was common species in Hong Kong (Photos 6-7). Comparing with the result of last month, less species of odonata were found in this month due to seasonality. Most of the odonata species in Hong Kong has the peak emergence from spring to late summer. It is expected that number of odonata will keep decreasing in the following months during dry season (Wilson *et al.*, 2004 & Tam *et al.*, 2011). Sampling location was shown in **Figure 1**.

4.2.3 Aquatic Macro-invertebrates

Aquatic-net and kick sampling were performed at the river. The river benthic fauna collected was mainly comprised of insects, molluscs and crustaceans (Photo 8). Details of recorded of river benthic fauna refers to **Table 4.5**. Sampling location was shown on **Figure 1**.

4.2.4 Hong Kong Newt

Survey of Hong Kong Newt was conducted at Upper Tai Po River. An adult Hong Kong Newt was recorded in this month at reference site. Hong Kong Newt is listed in Wild Animals Protection Ordinance (Cap. 170) and classified as “Near Threatened” under IUCN Red List Status and as “Potential Global Concern” by Fellowes *et al.* (2002). Record of Hong Kong Newts can be referred to **Table 4.6**.

4.2.5 River Fish Fauna

Fish surveys were performed at Upper Tai Po River during surveys. In total, 20 species freshwater fish were recorded within project area. Fish abundance was low along the modified river channel. The *Parazacco spilurus*, *Glyptothorax pallozonum* and *Pseudobagrus trilineatus*, which have conservation interest, were restricted in the upper section of the surveyed river outside the works boundary where the habitat was not affected by construction works, while *Parazacco spilurus* is listed in China Red Data Book Status as Vulnerable and *Pseudobagrus trilineatus* is classified as Global Concern by Fellowes *et al.* (2002). The data showed that fish abundance was similar to the record of last month. Details of records of fish fauna refers to **Table 4.6**. Sampling location was shown on **Figure 1**.

4.3 **Abiotic Data**

Data on water quality and major river hydrological feature (water flow and substratum) of the river were collected and are presented in the **Table 4.7**.

Generally, the water was not polluted and nutrient levels were generally low. Results of water test were presented in the **Table 4.7**.

The river substratums of upper and lower sections were comprised of 40% stone and 60% concrete, 20% stone and 80% concrete respectively. Moderate water flow up to 0.3m/second at pool and 0.6m/second at riffle was measured.

5 **Summary and Commentary**

Post construction ecological monitoring was carried out in current month and relevant biotic and abiotic data were collected according to project specification and EM & A Manual. An adult Hong Kong Newt was recorded during the survey. Fish’s abundance appears to be similar to last month. Bird abundance was similar to those recorded during baseline survey. Species richness of odonata was lower than last month’s result.

Aquatic and riparian vegetation along river channel was re-established compared to those recorded during baseline surveys. Vegetation has sparsely covered gabion wall and river bed along to the Upper Tai Po River.

The water quality of the surveyed river was not polluted as indicated by low nutrient concentration level of ammonium and nitrate although the river channel may receive discharge and runoff from the village areas.

6 REFERENCES

Carey, G.J., Chalmers, M.L., Diskin, D.A., Kennerley, P.R., Leader, P.J., Leven, M.R., Lewthwaite, R.W., Melville, D.S., Turnbull, M. and Yung, L. (2001) *The Avifauna of Hong Kong*. Hong Kong Bird Watching Society.

Dudgeon, D. and Corlett, R. (1994). *Hills and Streams - An Ecology of Hong Kong*. Hong Kong University Press, Hong Kong.

Hong Kong Herbarium (2015):
<http://herbarium.gov.hk/>

Hong Kong Biodiversity Website (2015):
<http://www.afcd.gov.hk/english/conservation/hkbiodiversity/hkbiodiversity.html>

Lai, P.C.C., Lam, Y.W., So, P.S., Tam, K.Y., Wan, P.Y.M. and Yip, K.L. (2004). *Check List of Hong Kong Plants*, Agriculture, Fisheries and Conservation Department, Hong Kong.

Lee, V.L.F., Lam, S.K.S., NG, F.K.Y., Chan, T.K.T. and Young, M.L.C. (2004). *Field Guide to the Freshwater Fish of Hong Kong*, Friends of the Country Parks and Cosmos Books Ltd, Hong Kong.

Tam, T.W., Leung, K.K., Kwan, B.P. S., Wu, K. K. Y., Tang, S. S. H., So, I.W.Y., Cheng, J.C.Y., Yuen, E.F.M., Tsang, Y.M and Leung, H.W. (2011). *The Dragonflies of Hong Kong*. Agriculture, Fisheries and Conservation Department, Friends of the Country Parks and Cosmos Books Ltd., Hong Kong.

Wilson, K.D.P., Tam, K.W., Kwan, B.S.P., Wu, K.K.Y., Wong, B.S.F. and Wong, J.K. (2004). *Field guide to the dragonflies of Hong Kong (2nd Edition)*. Agriculture, Fisheries and Conservation Department, Friends of the Country Parks and Cosmos Books Ltd., Hong Kong.

FIGURE

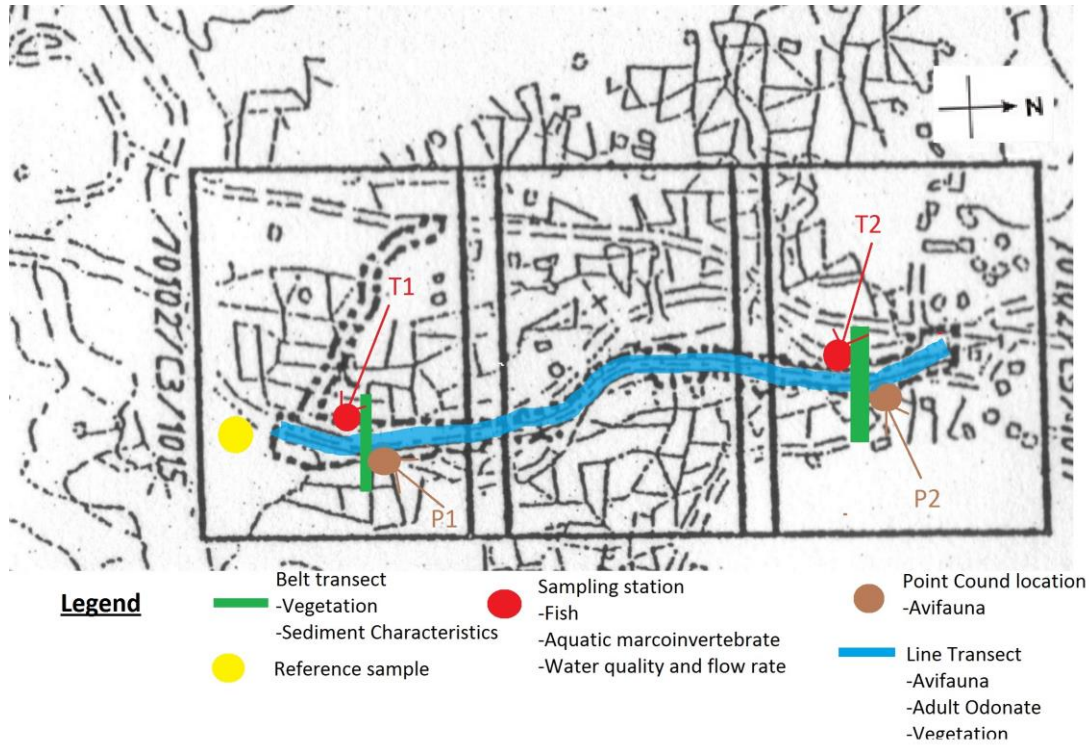


Figure 1. Sampling Location of Ecological Survey and Monitoring at Upper Tai Po River, Tai Po.

PHOTOS

| | |
|------------------------------------------------------------------------|----------------------------------------------------------------------------|
| | |
| <p>Photo 1: General view of the river channel (Reference site)</p> | <p>Photo 2: General view of the river channel (Upper section)</p> |
| | |
| <p>Photo 3: General view of the river channel (Middle section)</p> | <p>Photo 4: Vegetation sparsely growing on gabion (Middle section)</p> |
| | |
| <p>Photo 5 : Avifauna – <i>Actitis hypoleucos</i></p> | <p>Photo 6 : Odonata – <i>Trithemis aurora</i></p> |
| | |
| <p>Photo 7 : Odonata – <i>Trithemis festiva</i></p> | <p>Photo 8: Aquatic sample</p> |

TABLE

Table 4.1. Flora species recorded at the transect along the Upper Tai Po River including riparian habitat.

| Family | Species name | Species name in Chinese | Baseline | Impact Monitoring | | | | | | | | Impact Monitoring | | | Post Construction Monitoring | | | | | | | | | | | | |
|-----------------|------------------------------------|-------------------------|----------|-------------------|--------|--------|--------|--------|--------|--------|--------|-------------------|--------|--------|------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-----|-----|
| | | | Oct-07 | Jan-09 | Jul-09 | Jan-10 | Jul-10 | Jan-11 | Jul-11 | Jan-12 | Jul-12 | Mar-13 | Jul-13 | Jan-14 | Feb-14 | Mar-14 | Apr-14 | May-14 | Jun-14 | Jul-14 | Aug-14 | Sep-14 | Oct-14 | Nov-14 | Dec-14 | | |
| Acoraceae | <i>Acorus gramineus</i> | 金錢蒲 | | | | | | | | | | | | | | + | + | + | + | + | + | + | + | + | + | + | + |
| Amaranthaceae | <i>Alternanthera philoxeroides</i> | 空心蓮子草 | + | + | + | + | + | + | + | | | | | | | + | + | + | + | + | + | + | + | + | + | + | + |
| Amaranthaceae | <i>Amaranthus viridis</i> | 野葛 | | | | | | | | | | | | | | | + | + | + | + | + | + | + | + | + | + | + |
| Amaranthaceae | <i>Celosia argentea</i> | 青葙 | | | | | | | | | | | | | | | + | + | + | + | + | + | + | + | + | + | + |
| Araceae | <i>Alocasia macrorrhizos</i> | 海芋 | + | + | + | + | + | + | + | | | | | | | + | + | + | + | + | + | + | + | + | + | + | + |
| Araceae | <i>Colocasia esculenta</i> | 芋 | + | + | + | + | + | + | + | | | | | | | | + | + | + | + | + | + | + | + | + | + | + |
| Asteraceae | <i>Bidens alba</i> | 白花鬼針草 | + | + | + | + | + | + | ++ | + | + | + | + | + | + | ++ | ++ | ++ | ++ | ++ | +++ | +++ | +++ | +++ | +++ | +++ | +++ |
| Asteraceae | <i>Ageratum conyzoides</i> | 勝紅薊 | + | + | + | + | + | + | + | | | | | | | + | + | + | + | + | ++ | ++ | ++ | ++ | ++ | ++ | ++ |
| Asteraceae | <i>Mikania micrantha</i> | 薇甘菊 | ++ | + | + | + | + | + | + | + | + | + | ++ | ++ | ++ | ++ | +++ | +++ | +++ | +++ | +++ | +++ | +++ | +++ | +++ | +++ | +++ |
| Asteraceae | <i>Synedrella nodiflora</i> | 金腰箭 | + | + | + | + | + | + | + | | | | | | | + | + | + | + | + | + | + | + | + | + | + | + |
| Asteraceae | <i>Wedelia chinensis</i> | 鯉鯪菊 | + | + | + | + | + | + | + | + | | | | | | | + | + | + | + | + | + | + | + | + | + | + |
| Asteraceae | <i>Eclipta prostrata</i> | 鱧腸 | | | | | | | | | | | | | | | + | + | + | + | + | + | + | + | + | + | + |
| Asteraceae | <i>Erechitites hieracifolius</i> | 革命菜 | | | | | | | | | | | | | | | + | + | + | + | + | + | + | + | + | + | + |
| Asteraceae | <i>Youngia japonica</i> | 黃鹌菜 | | | | | | | | | | | | | | | | + | + | + | + | + | + | + | + | + | + |
| Asteraceae | <i>Conyza canadensis</i> | 小蓬草 | | | | | | | | | | | | | | | | + | + | + | + | + | + | + | + | + | + |
| Athyriaceae | <i>Callipteris esculenta</i> | 菜蕨 | + | + | + | + | + | + | + | | | | | | | | | + | + | + | + | + | + | + | + | + | + |
| Bombacaceae | <i>Bombax ceiba</i> | 木棉 | + | + | + | + | + | + | + | | | | | | | | | | | | | | | | | | |
| Brassicaceae | <i>Nasturtium officinale</i> | 西洋菜 | | | | | | | | | | | | | | | | | | | + | + | + | + | + | + | + |
| Caesalpiniaceae | <i>Bauhinia championii</i> | 缺葉藤 | | | | | | | | | | | | | | | | | | | + | + | + | + | + | + | + |
| Caprifoliaceae | <i>Viburnum odoratissimum</i> | 珊瑚樹 | + | + | + | + | + | + | + | | | | | | | | | | | | | | | | | | |
| Caryophyllaceae | <i>Drymaria cordata</i> | 荷蓮豆 | | | | | | | | | | | | | | | | | | | + | + | + | + | + | + | + |
| Caryophyllaceae | <i>Myosoton aquaticum</i> | 鵝腸菜 | | | | | | | | | | | | | | | | | | | + | + | + | + | + | + | + |
| Commelinaceae | <i>Commelina diffusa</i> | 節節草 | + | + | + | + | + | + | + | + | + | + | + | ++ | ++ | ++ | ++ | ++ | ++ | ++ | +++ | +++ | +++ | +++ | +++ | +++ | +++ |
| Commelinaceae | <i>Floscopa scandens</i> | 聚花草 | | | | | | | | | | | | | | | | + | + | + | + | + | + | + | + | + | + |
| Convolvulaceae | <i>Ipomoea aquatica</i> | 通菜 | + | + | + | + | + | + | + | | | | | | | | | | | | | | | | | | |
| Convolvulaceae | <i>Ipomoea cairica</i> | 五爪金龍 | + | + | + | + | + | + | + | + | | | | | | | + | + | + | + | ++ | ++ | ++ | ++ | ++ | ++ | ++ |
| Convolvulaceae | <i>Ipomoea pes-caprae</i> | 海灘牽牛 | | | | | | | | | | | | | | | + | + | + | + | + | + | + | + | + | + | + |
| Convolvulaceae | <i>Merremia hederacea</i> | 魚黃草 | | | | | | | | | | | | | | | | | | | + | + | + | + | + | + | + |
| Cucurbitaceae | <i>Benincasa hispida</i> | 冬瓜 | | | | | | | | | | | | | | | | | | | + | + | + | + | + | + | + |
| Equisetaceae | <i>Equisetum debile</i> | 筆管草 | + | + | + | + | + | + | + | | | | | | | | | | | | + | + | + | + | + | + | + |
| Euphorbiaceae | <i>Macaranga tanarius</i> | 血桐 | + | + | + | + | + | + | + | | | | | | | | | | | | + | + | + | + | + | + | + |
| Euphorbiaceae | <i>Glochidion zeylanicum</i> | 香港算盤子 | + | + | + | + | + | + | + | | | | | | | | | | | | | | | | | | |
| Euphorbiaceae | <i>Phyllanthus reticulatus</i> | 小果葉下珠 | | | | | | | | | | | | | | | | | | | + | + | + | + | + | + | + |
| Fabaceae | <i>Pueraria lobata</i> | 野葛 | + | + | + | + | + | + | + | | | | | | | | | | | | + | + | + | + | + | + | + |
| Lauraceae | <i>Cinnamomum camphora</i> | 樟樹 | + | + | + | + | + | + | + | | | | | | | | | | | | | | | | | | |
| Lauraceae | <i>Litsea glutinosa</i> | 潺槁樹 | + | + | + | + | + | + | + | | | | | | | | | | | | | | | | | | |
| Malvaceae | <i>Hibiscus rosa-sinensis</i> | 大紅花 | | | | | | | | | | | | | | | | | | | + | + | + | + | + | + | + |
| Melastomataceae | <i>Melastoma sanguineum</i> | 毛稔 | | | | | | | | | | | | | | | | | | | + | + | + | + | + | + | + |
| Melastomataceae | <i>Tibouchina semidecandra</i> | 巴西野牡丹 | | | | | | | | | | | | | | | | | | | + | + | + | + | + | + | + |
| Mimosaceae | <i>Calliandra haematocephala</i> | 紅絨球 | | | | | | | | | | | | | | | | | | | + | + | + | + | + | + | + |
| Mimosaceae | <i>Mimosa pudica</i> | 含羞草 | | | | | | | | | | | | | | | | | | | + | + | + | + | + | + | + |
| Mimosaceae | <i>Leucaena leucocephala</i> | 銀合歡 | | | | | | | | | | | | | | | | | | | + | + | + | + | + | + | + |
| Moraceae | <i>Ficus hispida</i> | 對葉榕 | + | + | + | + | + | + | + | | | | | | | | | | | | + | + | + | + | + | + | + |
| Moraceae | <i>Ficus variegata</i> | 青果榕 | | | | | | | | | | | | | | | | | | | + | + | + | + | + | + | + |
| Musaceae | <i>Musa paradisiaca</i> | 大蕉 | + | + | + | + | + | + | + | | | | | | | | | | | | + | + | + | + | + | + | + |
| Myrtaceae | <i>Psidium guajava</i> | 番石榴 | + | + | + | + | + | + | + | | | | | | | | | | | | + | + | + | + | + | + | + |

Table 4.1. Flora species recorded at the transect along the Upper Tai Po River including riparian habitat.

| Family | Species name | Species name in Chinese | Baseline | Impact Monitoring | | | | | | | | Impact Monitoring | | | Post Construction Monitoring | | | | | | | | | | | | | | | | | | | | | |
|-----------------------|---------------------------------|-------------------------|----------|-------------------|--------|--------|--------|--------|--------|--------|--------|-------------------|--------|--------|------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---|---|---|---|---|---|---|---|---|---|--|
| | | | Oct-07 | Jan-09 | Jul-09 | Jan-10 | Jul-10 | Jan-11 | Jul-11 | Jan-12 | Jul-12 | Mar-13 | Jul-13 | Jan-14 | Feb-14 | Mar-14 | Apr-14 | May-14 | Jun-14 | Jul-14 | Aug-14 | Sep-14 | Oct-14 | Nov-14 | Dec-14 | | | | | | | | | | | |
| Myrtaceae | <i>Cleistocalyx operculatus</i> | 水翁 | + | | + | | + | | + | | + | | | | | | | | | | | | | | | | | | | | | | | | | |
| Oleaceae | <i>Ligustrum sinense</i> | 山指甲 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Onagraceae | <i>Ludwigia erecta</i> | 美洲水丁香 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Oxalidaceae | <i>Oxalis corniculata</i> | 酢漿草 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Plantaginaceae | <i>Plantago major</i> | 車前草 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Panicum repens</i> | 枯骨草 | + | + | | + | | + | | + | | + | | + | | + | | + | | + | | + | | + | | + | | + | | + | | + | | | | |
| Poaceae | <i>Microstegium ciliatum</i> | 剛秀竹 | ++ | | + | | + | | + | | + | | + | | + | | + | | + | | + | | + | | + | | + | | + | | + | | + | | | |
| Poaceae | <i>Pennisetum purpureum</i> | 象草 | + | + | | + | | + | | + | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Coix lacryma-jobi</i> | 薏苡 | + | + | | + | | + | | + | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Phragmites karka</i> | 卡開蘆 | + | + | | + | | + | | + | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Miscanthus floridulus</i> | 五節芒 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Brachiaria mutica</i> | 巴拉草 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Digitaria radicata</i> | 紅尾翎 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum alopecuroides</i> | 狼尾草 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Polygonaceae | <i>Polygonum barbatum</i> | 毛蓼 | + | + | | + | | + | | + | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Polygonaceae | <i>Polygonum chinense</i> | 火炭母 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Polygonaceae | <i>Rumex crispus</i> | 假菠菜 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rutaceae | <i>Clauseria lansium</i> | 黃皮 | + | + | | + | | + | | + | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sapindaceae | <i>Dimocarpus longan</i> | 龍眼 | + | + | | + | | + | | + | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sapindaceae | <i>Litchi chinensis</i> | 荔枝 | + | + | | + | | + | | + | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Scrophulariaceae | <i>Scoparia dulcis</i> | 冰糖草 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Solanaceae | <i>Solanum torvum</i> | 水茄 | + | + | | + | | + | | + | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Solanaceae | <i>Solanum nigrum</i> | 龍葵 | | | | + | | + | | + | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Thelypteridaceae | <i>Cyclosorus parasiticus</i> | 華南毛蕨 | + | + | | + | | + | | + | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ulmaceae | <i>Celtis sinensis</i> | 朴樹 | + | + | | + | | + | | + | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Urticaceae | <i>Boehmeria nivea</i> | 苧麻 | + | + | | + | | + | | + | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Urticaceae | <i>Pouzolzia zeylanica</i> | 霧水葛 | | | | | | | | | | | | + | + | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Verbenaceae | <i>Lantana camara</i> | 馬纓丹 | + | + | | + | | + | | + | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Eleusine indica</i> | 牛筋草 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Brassicaceae | <i>Rorippa indica</i> | 塘葛菜 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Isachne globosa</i> | 柳葉箬 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Paspalum distichum</i> | 雙穗雀稗 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus involucreatus</i> | 風車草 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dioscoreaceae | <i>Dioscorea alata</i> | 參薯 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Menispermaceae | <i>Stephania longa</i> | 養箕篤 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Polygonaceae | <i>Polygonum hydropiper</i> | 水蓼 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Balsaminaceae | <i>Impatiens walleriana</i> | 非洲鳳仙 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rubiaceae | <i>Paederia scandens</i> | 雞矢藤 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ulmaceae | <i>Trema tomentosa</i> | 山黃麻 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Verbenaceae | <i>Duranta erecta</i> | 假連翹 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Floating plant | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lemnaceae | <i>Lemna minor</i> | 浮萍 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| No of Species | | | 38 | 38 | 38 | 39 | 39 | 34 | 11 | 12 | 4 | 17 | 23 | 27 | 36 | 39 | 59 | 60 | 61 | 61 | 61 | 62 | 63 | 63 | 63 | | | | | | | | | | | |

Note:
+, occurred; ++, common; +++, abundant species recorded in study area

Table 4.1. Flora species recorded at the transect along the Upper Tai Po River including riparian habitat.

| | | | Post Construction Monitoring | | | | | | | | | | | | | | | | |
|-----------------------|---------------------------------|-------------------------|------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Family | Species name | Species name in Chinese | Jan-15 | Feb-15 | Mar-15 | Apr-15 | May-15 | Jun-15 | Jul-15 | Aug-15 | Sep-15 | Oct-15 | Nov-15 | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Apr-16 | May-16 |
| Myrtaceae | <i>Cleistocalyx operculatus</i> | 水翁 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Oleaceae | <i>Ligustrum sinense</i> | 山指甲 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Onagraceae | <i>Ludwigia erecta</i> | 美洲水丁香 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Oxalidaceae | <i>Oxalis corniculata</i> | 酢漿草 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Plantaginaceae | <i>Plantago major</i> | 車前草 | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Panicum repens</i> | 枯骨草 | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Poaceae | <i>Microstegium ciliatum</i> | 剛秀竹 | ++ | ++ | ++ | ++ | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Poaceae | <i>Pennisetum purpureum</i> | 象草 | ++ | ++ | ++ | ++ | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Poaceae | <i>Coix lacryma-jobi</i> | 薏苡 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Poaceae | <i>Phragmites karka</i> | 卡開蘆 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Poaceae | <i>Miscanthus floridulus</i> | 五節芒 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Poaceae | <i>Brachiaria mutica</i> | 巴拉草 | +++ | +++ | +++ | +++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ |
| Poaceae | <i>Digitaria radicata</i> | 紅尾翎 | ++ | ++ | ++ | ++ | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Poaceae | <i>Pennisetum alopecuroides</i> | 狼尾草 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Polygonaceae | <i>Polygonum barbatum</i> | 毛蓼 | | | | | | | | | | | | | | | | | |
| Polygonaceae | <i>Polygonum chinense</i> | 火炭母 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Polygonaceae | <i>Rumex crispus</i> | 假菠菜 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Rutaceae | <i>Clausena lansium</i> | 黃皮 | | | | | | | | | | | | | | | | | |
| Sapindaceae | <i>Dimocarpus longan</i> | 龍眼 | | | | | | | | | | | | | | | | | |
| Sapindaceae | <i>Litsea chinensis</i> | 荔枝 | | | | | | | | | | | | | | | | | |
| Scrophulariaceae | <i>Scoparia dulcis</i> | 冰糖草 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Solanaceae | <i>Solanum torvum</i> | 水茄 | | | | | | | | | | | | | | | | | |
| Solanaceae | <i>Solanum nigrum</i> | 龍葵 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Thelypteridaceae | <i>Cyclosorus parasiticus</i> | 華南毛蕨 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Ulmaceae | <i>Celtis sinensis</i> | 朴樹 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Urticaceae | <i>Boehmeria nivea</i> | 苧麻 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Urticaceae | <i>Pouzolzia zeylanica</i> | 霧水葛 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Verbenaceae | <i>Lantana camara</i> | 馬纓丹 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Poaceae | <i>Eleusine indica</i> | 牛筋草 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Brassicaceae | <i>Rorippa indica</i> | 塘葛菜 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Poaceae | <i>Isachne globosa</i> | 柳葉箬 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Poaceae | <i>Paspalum distichum</i> | 雙穗雀稗 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Cyperaceae | <i>Cyperus involucreatus</i> | 風車草 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Dioscoreaceae | <i>Dioscorea alata</i> | 參薯 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Menispermaceae | <i>Stephania longa</i> | 養箕篤 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Polygonaceae | <i>Polygonum hydropiper</i> | 水蓼 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Balsaminaceae | <i>Impatiens walleriana</i> | 非洲鳳仙 | + | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Rubiaceae | <i>Paederia scandens</i> | 雞矢藤 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Ulmaceae | <i>Trema tomentosa</i> | 山黃麻 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Verbenaceae | <i>Duranta erecta</i> | 假連翹 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Floating plant | | | | | | | | | | | | | | | | | | | |
| Lemnaceae | <i>Lemna minor</i> | 浮萍 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| No of Species | | | 61 | 63 | 63 | 66 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 65 | 65 | 66 | 66 | 52 |

Note:
+, occurred; ++, common; +++, abundant species recorded in study area

Table 4.1. Flora species recorded at the transect along the Upper Tai Po River including riparian habitat.

| Family | Species name | Species name in Chinese | Post Construction Monitoring | | | | | | | | | | | | | | | | |
|-----------------------|---------------------------------|-------------------------|------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | | | Jun-16 | Jul-16 | Aug-16 | Sep-16 | Oct-16 | Nov-16 | Dec-16 | Jan-17 | Feb-17 | Mar-17 | Apr-17 | May-17 | Jun-17 | Jul-17 | Aug-17 | Sep-17 | Oct-17 |
| Myrtaceae | <i>Cleistocalyx operculatus</i> | 水翁 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Oleaceae | <i>Ligustrum sinense</i> | 山指甲 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Onagraceae | <i>Ludwigia erecta</i> | 美洲水丁香 | | | | | | | | | | | | | | | | | |
| Oxalidaceae | <i>Oxalis corniculata</i> | 酢漿草 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Plantaginaceae | <i>Plantago major</i> | 車前草 | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Panicum repens</i> | 枯骨草 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Poaceae | <i>Microstegium ciliatum</i> | 剛秀竹 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Poaceae | <i>Pennisetum purpureum</i> | 象草 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Poaceae | <i>Coix lacryma-jobi</i> | 薏苡 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Poaceae | <i>Phragmites karka</i> | 卡開蘆 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Poaceae | <i>Miscanthus floridulus</i> | 五節芒 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Poaceae | <i>Brachiaria mutica</i> | 巴拉草 | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ | ++ |
| Poaceae | <i>Digitaria radicata</i> | 紅尾翎 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Poaceae | <i>Pennisetum alopecuroides</i> | 狼尾草 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Polygonaceae | <i>Polygonum barbatum</i> | 毛蓼 | | | | | | | | | | | | | | | | | |
| Polygonaceae | <i>Polygonum chinense</i> | 火炭母 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Polygonaceae | <i>Rumex crispus</i> | 假菠菜 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Rutaceae | <i>Clausena lansium</i> | 黃皮 | | | | | | | | | | | | | | | | | |
| Sapindaceae | <i>Dimocarpus longan</i> | 龍眼 | | | | | | | | | | | | | | | | | |
| Sapindaceae | <i>Litchi chinensis</i> | 荔枝 | | | | | | | | | | | | | | | | | |
| Scrophulariaceae | <i>Scoparia dulcis</i> | 冰糖草 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Solanaceae | <i>Solanum torvum</i> | 水茄 | | | | | | | | | | | | | | | | | |
| Solanaceae | <i>Solanum nigrum</i> | 龍葵 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Thelypteridaceae | <i>Cyclosorus parasiticus</i> | 華南毛蕨 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Ulmaceae | <i>Celtis sinensis</i> | 朴樹 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Urticaceae | <i>Boehmeria nivea</i> | 苧麻 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Urticaceae | <i>Pouzolzia zeylanica</i> | 霧水葛 | | | | | | | | | | | | | | | | | |
| Verbenaceae | <i>Lantana camara</i> | 馬纓丹 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Poaceae | <i>Eleusine indica</i> | 牛筋草 | | | | | | | | | | | | | | | | | |
| Brassicaceae | <i>Rorippa indica</i> | 塘葛菜 | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Isachne globosa</i> | 柳葉箬 | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Paspalum distichum</i> | 雙穗雀稗 | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus involucreatus</i> | 風車草 | | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Dioscoreaceae | <i>Dioscorea alata</i> | 參薯 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Menispermaceae | <i>Stephania longa</i> | 莢箕篤 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Polygonaceae | <i>Polygonum hydropiper</i> | 水蓼 | | | | | | | | | | | | | | | | | |
| Balsaminaceae | <i>Impatiens walleriana</i> | 非洲鳳仙 | | | | | | | | | | | | | | | | | |
| Rubiaceae | <i>Paederia scandens</i> | 雞矢藤 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Ulmaceae | <i>Trema tomentosa</i> | 山黃麻 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Verbenaceae | <i>Duranta erecta</i> | 假連翹 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Floating plant | | | | | | | | | | | | | | | | | | | |
| Lemnaceae | <i>Lemna minor</i> | 浮萍 | + | + | + | | | | | | | | | | | | | | |
| No of Species | | | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 |

Note:

+, occurred; ++, common; +++, abundant species recorded in study area

Table 4.2. Flora species recorded from belt transect survey at the Upper Tai Po stream (T1- Upper stream sampling site and T2 - Lower stream sampling site)

| Family | Species | Chinese name | Baseline survey | | | | Impact monitoring | | | | Impact monitoring | | | | Impact monitoring | | | | Impact monitoring | | | | | | | | | | | |
|------------------|---------------------------------|--------------|-----------------|----|------------|----|-------------------|----|------------|----|-------------------|----|------------|-----|-------------------|----|------------|-----|-------------------|-----|------------|-----|-----|----|-----|-----|-----|----|----|----|
| | | | Oct-07 | | Jan-09 | | Jul-09 | | Jan-10 | | Jul-10 | | | | | | | | | | | | | | | | | | | |
| | | | P1 | | P2 | | T1 | | T2 | | T1 | | T2 | | T1 | | T2 | | | | | | | | | | | | | |
| | | | Height (m) | % | Height (m) | % | Reference (m) | % | Height (m) | % | Reference (m) | % | Height (m) | % | Reference (m) | % | Height (m) | % | Reference (m) | % | Height (m) | % | | | | | | | | |
| Asteraceae | <i>Mikania micrantha</i> | 薇甘菊 | 0.4 | 15 | 1 | 40 | 0.5 | 5 | 0.5 | 5 | | | 0.5 | 5 | | | 0.5 | 3 | 0.2 | 5 | 0.2 | 2 | 0.5 | 20 | 0.5 | 60 | | | | |
| Moraceae | <i>Ficus hispida</i> | 對葉榕 | 1 | 2 | | | 5 | 5 | | | | | 2 | 10 | 5 | 5 | | | | | | | 5 | 5 | | | | | | |
| Ulmaceae | <i>Celtis sinensis</i> | 朴樹 | 5 | 2 | | | | | | | 6 | 15 | | | 6 | 15 | | | | | | | | | | | 4m | 5 | | |
| Poaceae | <i>Microstegium ciliatum</i> | 剛秀竹 | 1.2 | 45 | 1.2 | 30 | | | 0.8 | 10 | 0.5 | 12 | | | 0.7 | 30 | | | | | | | 1 | 35 | 1 | 5 | 0.5 | 10 | | |
| Euphorbiaceae | <i>Macaranga tanarius</i> | 血桐 | 2 | 2 | | | 5 | 5 | 3 | 5 | 1.5 | 4 | 5 | 5 | 3 | 5 | 1.5 | 5 | 5 | 5 | | | 5 | 5 | | | | | | |
| Araceae | <i>Alcasia odora</i> | 海芋 | 1.5 | 23 | | | | | | | 1.5 | 25 | | | 2 | 30 | | | | | | | | | | | 2 | 10 | | |
| Araceae | <i>Colocasia esculenta</i> | 芋 | 0.3 | <1 | 0.4 | <1 | 0.3 | 2 | | | | | 0.3 | 2 | 0.8 | 5 | | | 0.3 | 1 | | | | | | | | | | |
| Myrtaceae | <i>Cleistocalyx operculatus</i> | 水翁 | | | 0.4 | 10 | 0.4 | 10 | 7 | 5 | | | 0.4 | 10 | 7 | 5 | | | 0.4 | 10 | 7 | 5 | | | 0.4 | 10 | | | | |
| Athyriaceae | <i>Callipteris esculenta</i> | 菜蕨 | | | 0.6 | 1 | 0.8 | 10 | | | 0.4 | 10 | 0.8 | 10 | | | 0.4 | 2 | 0.8 | 6 | | | 0.8 | 6 | | | | | | |
| Poaceae | <i>Phragmites karka</i> | 卡開蘆 | | | | | 1.5 | 51 | | | | | 1.5 | 51 | | | | | 1.5 | 53 | | | 1.5 | 10 | | | | | | |
| Thelypteridaceae | <i>Cyclosorus parasiticus</i> | 華南毛蕨 | 0.4 | 10 | | | | | | | 0.4 | 10 | | | 0.4 | 2 | | | | | | | | | | | | | | |
| Equisetaceae | <i>Equisetum debile</i> | 筆管草 | | | 0.6 | <1 | 0.3 | 2 | | | | | 0.3 | 2 | | | | | 0.3 | 2 | | | | | | | | | | |
| Asteraceae | <i>Ageratum conyzoides</i> | 勝紅菊 | | | | | | | 0.4 | 2 | | | | 0.4 | 2 | | | | | 0.2 | 2 | | | | | | | | | |
| Commelinaceae | <i>Commelina diffusa</i> | 節節草 | | | | | | | | | | | | | | | | 0.2 | 5 | 0.2 | 5 | 0.2 | 5 | | | 0.5 | 20 | | | |
| Solanaceae | <i>Solanum nigrum</i> | 龍葵 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Euphorbiaceae | <i>Mallotus paniculatus</i> | 白楸 | | | | | | | | | | | | | | | | | 0.3 | 5 | | | | | | | | | | |
| Poaceae | <i>Elyusine indica</i> | 牛筋草 | | | | | | | | | | | 0.5 | 5 | | | | | | 5 | | | | | | | | | | |
| Poaceae | <i>Pennisetum purpureum</i> | 象草 | | | | | | | | | 3 | 4 | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Wedelia chinensis</i> | 鯉魚菊 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Bidens alba</i> | 白花鬼針草 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Panicum repens</i> | 枯骨草 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Coix lacryma-jobi</i> | 薏苡 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Convolvulaceae | <i>Ipomoea cairica</i> | 五爪金龍 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cucurbitaceae | <i>Benincasa hispida</i> | 冬瓜 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fabaceae | <i>Pueraria lobata</i> | 野葛 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Convolvulaceae | <i>Merremia hederacea</i> | 魚黃草 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum alopecuroides</i> | 狼尾草 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Brachiaria mutica</i> | 巴拉草 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Onagraceae | <i>Ludwigia erecta</i> | 美洲水丁香 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Malvaceae | <i>Hibiscus rosa-sinensis</i> | 大紅花 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus sp.</i> | 莎草 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Balsaminaceae | <i>Impatiens walleriana</i> | 非洲鳳仙 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Amaranthaceae | <i>Celosia argentea</i> | 青葙 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bare Ground | | | | | | | | 10 | | 73 | | | 10 | | 10 | | | 78 | | 6 | | 10 | | 73 | | 88 | | 9 | 15 | 65 |

- Reference point was the sampling location outside the works area used to compare with the data within works area.

P1 – Point count location 1; P2 – Point count location 2

Table 4.2. Flora species recorded from belt transect survey at the Upper Tai Po stream (T1- Upper stream sampling site and T2 - Lower stream sampling site)

| Family | Species | Chinese name | Impact monitoring | | | | | | | | Impact monitoring | | | | | | | | Impact monitoring | | | | | | | | Impact monitoring | | | | | | | |
|------------------|---------------------------------|--------------|-------------------|------------|-----|-----------|--------|-----------|-----|------------|-------------------|-----------|-----------|------------|--------|-----------|---|------------|-------------------|-----------|-----|----|--|-----|--|--|-------------------|--|--|--|--|--|--|--|
| | | | Jan-11 | | | | Jul-11 | | | | Jan-12 | | | | Jul-12 | | | | | | | | | | | | | | | | | | | |
| | | | Reference | T1 | | T2 | | Reference | T1 | | T2 | | Reference | T1 | | T2 | | Reference | T1 | | T2 | | | | | | | | | | | | | |
| Height (m) | % | Height(m) | % | Height (m) | % | Height(m) | % | Height(m) | % | Height (m) | % | Height(m) | % | Height (m) | % | Height(m) | % | Height (m) | % | Height(m) | % | | | | | | | | | | | | | |
| Asteraceae | <i>Mikania micrantha</i> | 薇甘菊 | 0.5 | 10 | | | | | 0.5 | 10 | | | | | 0.4 | 20 | | | | | 0.4 | 10 | | | | | | | | | | | | |
| Moraceae | <i>Ficus hispida</i> | 對葉榕 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ulmaceae | <i>Celtis sinensis</i> | 朴樹 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Microstegium ciliatum</i> | 剛秀竹 | 1 | 15 | 1 | 5 | 0.5 | 2 | 1 | 2 | | | | | | | | | | | 1 | 55 | | | | | | | | | | | | |
| Euphorbiaceae | <i>Macaranga tanarius</i> | 血桐 | | | 4m | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Allocasia odora</i> | 海芋 | | | | | 0.4 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Colocasia esculenta</i> | 芋 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Myrtaceae | <i>Cleistocalyx operculatus</i> | 水翁 | 0.4 | 5 | 5m | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Athyriaceae | <i>Callipteris esculenta</i> | 菜蕨 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Phragmites karka</i> | 卡開蘆 | 1.5 | 2 | | | | | 1.5 | 2 | | | | | | | | | | | | | | | | | | | | | | | | |
| Thelypteridaceae | <i>Cyclosorus parasiticus</i> | 華南毛蕨 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Equisetaceae | <i>Equisetum debile</i> | 筆管草 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Ageratum conyzoides</i> | 勝紅菊 | | | | | 0.3 | 2 | 1.2 | 10 | | | | | 0.4 | 20 | | | | | | | | | | | | | | | | | | |
| Commelinaceae | <i>Commelina diffusa</i> | 節節草 | | | | 0.2 | 4 | | | | | | | | 0.4 | 10 | | | | | 0.4 | 5 | | | | | | | | | | | | |
| Solanaceae | <i>Solanum nigrum</i> | 龍葵 | | | | | | | | | | | | 0.5 | 4 | | | | | | | | | | | | | | | | | | | |
| Euphorbiaceae | <i>Mallotus paniculatus</i> | 白楸 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Elyusine indica</i> | 牛筋草 | | | | | | | | | | | | 0.3 | 5 | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum purpureum</i> | 象草 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Wedelia chinensis</i> | 鯉鯉菊 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Bidens alba</i> | 白花鬼針草 | | | 0.5 | 5 | 3 | | | | | | | 0.2 | 2 | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Panicum repens</i> | 枯骨草 | | | | | | | 1.5 | 5 | | | | | 1.5 | 5 | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Coix lacryma-jobi</i> | 薏苡 | | | | | | | | | | | | 1.5 | 5 | | | | | | 1.5 | 5 | | | | | | | | | | | | |
| Convolvulaceae | <i>Ipomoea cairica</i> | 五爪金龍 | | | | | | | | | | | | 0.2 | 5 | | | | | | 0.2 | 5 | | | | | | | | | | | | |
| Cucurbitaceae | <i>Benincasa hispida</i> | 冬瓜 | | | | 0.2 | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fabaceae | <i>Pueraria lobata</i> | 野葛 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Convolvulaceae | <i>Merremia hederacea</i> | 魚黃草 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum alopecuroides</i> | 狼尾草 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Brachiaria mutica</i> | 巴拉草 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Onagraceae | <i>Ludwigia erecta</i> | 美洲水丁香 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Malvaceae | <i>Hibiscus rosa-sinensis</i> | 大紅花 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus sp.</i> | 莎草 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Balsaminaceae | <i>Impatiens walleriana</i> | 非洲鳳仙 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Amaranthaceae | <i>Celosia argentea</i> | 青葙 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bare Gound | | | | 68 | | 80 | | 89 | | 71 | | 100 | | 89 | | 35 | | 100 | | 100 | | 20 | | 100 | | | | | | | | | | |

- Reference point was the sampling location outside the works area used to compare with the data within works area.

P1 – Point count location 1; P2 – Point count location 2

Table 4.2. Flora species recorded from belt transect survey at the Upper Tai Po stream (T1- Upper stream sampling site and T2 - Lower stream sampling site)

| Family | Species | Chinese name | Impact monitoring | | | | | | | | Impact monitoring | | | | | | | | Post construction monitoring | | | | | | | | Post construction monitoring | | | | | | | |
|------------------|---------------------------------|--------------|-------------------|-----------|-------------------|-------------------|------------|---|------------|-----|-------------------|-------------------|------------|-----------|------------|-----|-------------------|----|------------------------------|----|------------|-----|-------------------|----|--|--|------------------------------|--|--|--|--|--|--|--|
| | | | Stream | | Mar-13 | | | | Jul-13 | | | | Jan-14 | | | | Feb-14 | | | | | | | | | | | | | | | | | |
| | | | Transect | Reference | T1 | | T2 | | Reference | T1 | | T2 | | Reference | T1 | | T2 | | Reference | T1 | | T2 | | | | | | | | | | | | |
| | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | | | | | | | | | | | | |
| Asteraceae | <i>Mikania micrantha</i> | 薇甘菊 | 0.4 | 60 | | | | | 0.4 | 40 | 0.4 | 3 | | | 0.4 | 40 | 0.4 | 5 | | | 0.4 | 40 | 0.4 | 8 | | | | | | | | | | |
| Moraceae | <i>Ficus hispida</i> | 對葉榕 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ulmaceae | <i>Celtis sinensis</i> | 朴樹 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Microstegium ciliatum</i> | 剛秀竹 | | | | | | | | 0.6 | 3 | | | | | 0.6 | 3 | | | | | 0.6 | 5 | | | | | | | | | | | |
| Euphorbiaceae | <i>Macaranga tanarius</i> | 血桐 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Alocasia odora</i> | 海芋 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Colocasia esculenta</i> | 芋 | 0.3 | 2 | | | | | 0.3 | 5 | | | | | 0.3 | 3 | | | | | 0.3 | 3 | | | | | | | | | | | | |
| Myrtaceae | <i>Cleistocalyx operculatus</i> | 水翁 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Athyriaceae | <i>Callipteris esculenta</i> | 菜蕨 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Phragmites karka</i> | 卡開蘆 | | | | | | | 1.2 | 5 | | | | | 1.2 | 2 | | | | | 1.2 | 2 | | | | | | | | | | | | |
| Thelypteridaceae | <i>Cyclosorus parasiticus</i> | 華南毛蕨 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Equisetaceae | <i>Equisetum debile</i> | 筆管草 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Ageratum conyzoides</i> | 勝紅菊 | | | (concret section) | (concret section) | | | | | | (concret section) | | | | | (concret section) | | | | | | (concret section) | | | | | | | | | | | |
| Commelinaceae | <i>Commelina diffusa</i> | 節節草 | 0.4 | 5 | | | | | 0.4 | 5 | | | | | 0.4 | 6 | | | | | 0.4 | 6 | | | | | | | | | | | | |
| Solanaceae | <i>Solanum nigrum</i> | 龍葵 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Euphorbiaceae | <i>Mallotus paniculatus</i> | 白楸 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Eleusine indica</i> | 牛筋草 | | | | | | | | 0.3 | 3 | | | | | 0.3 | 3 | | | | | 0.3 | 3 | | | | | | | | | | | |
| Poaceae | <i>Pennisetum purpureum</i> | 象草 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Wedelia chinensis</i> | 鯉鯪菊 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Bidens alba</i> | 白花鬼針草 | 0.3 | 10 | | | | | 0.3 | 10 | 0.3 | 10 | | | 0.3 | 15 | 0.3 | 10 | | | 0.3 | 15 | 0.3 | 10 | | | | | | | | | | |
| Poaceae | <i>Panicum repens</i> | 枯骨草 | | | | | | | 0.6 | 5 | | | | | 0.6 | 5 | | | | | 0.6 | 5 | | | | | | | | | | | | |
| Poaceae | <i>Coix lacryma-jobi</i> | 薏苡 | 1.5 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Convolvulaceae | <i>Ipomoea cairica</i> | 五爪金龍 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cucurbitaceae | <i>Benincasa hispida</i> | 冬瓜 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fabaceae | <i>Pueraria lobata</i> | 野葛 | 0.2 | 5 | | | | | 0.2 | 10 | | | | | 0.2 | 10 | | | | | 0.2 | 10 | | | | | | | | | | | | |
| Convolvulaceae | <i>Merremia hederacea</i> | 魚黃草 | 0.2 | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum alopecuroides</i> | 狼尾草 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Brachiaria mutica</i> | 巴拉草 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Onagraceae | <i>Ludwigia erecta</i> | 美洲水丁香 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Malvaceae | <i>Hibiscus rosa-sinensis</i> | 大紅花 | | | | | | | | 0.6 | 5 | | | | | 0.6 | 5 | | | | | 0.6 | 5 | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus sp.</i> | 莎草 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Balsaminaceae | <i>Impatiens walleriana</i> | 非洲鳳仙 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Amaranthaceae | <i>Celosia argentea</i> | 青葙 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bare Gound | | | | 10 | | | | | | 20 | 76 | | | | | 19 | 74 | | | | | 19 | 69 | | | | | | | | | | | |

- Reference point was the sampling location outside the works area used to compare with the data within works area.

P1 – Point count location 1; P2 – Point count location 2

Table 4.2. Flora species recorded from belt transect survey at the Upper Tai Po stream (T1- Upper stream sampling site and T2 - Lower stream sampling site)

| Family | Species | Chinese name | Post construction monitoring | | | | | | | | Post construction monitoring | | | | | | | | Post construction monitoring | | | | | | | | Post construction monitoring | | | | | | | |
|------------------|---------------------------------|--------------|------------------------------|------------|-----|------------|-------------------|-----------|-----------|------------|------------------------------|-------------------|-----|------------|-----------|------------|-------------------|------------|------------------------------|------------|-----------|-------------------|-----|-----|----|--|------------------------------|--|--|--|--|--|--|--|
| | | | Mar-14 | | | | Apr-14 | | | | May-14 | | | | Jun-14 | | | | | | | | | | | | | | | | | | | |
| | | | Reference | | T1 | | T2 | | Reference | | T1 | | T2 | | Reference | | T1 | | T2 | | Reference | | T1 | | T2 | | | | | | | | | |
| Height (m) | % | Height(m) | % | Height (m) | % | Height (m) | % | Height(m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | | | | | | | | | | | |
| Asteraceae | <i>Mikania micrantha</i> | 薇甘菊 | 0.4 | 40 | 0.4 | 8 | (concret section) | 0.3 | 5 | 0.3 | 20 | (concret section) | 0.3 | 5 | 0.3 | 25 | (concret section) | 0.3 | 5 | 0.3 | 25 | (concret section) | | | | | | | | | | | | |
| Moraceae | <i>Ficus hispida</i> | 對葉榕 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ulmaceae | <i>Celtis sinensis</i> | 朴樹 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Microstegium ciliatum</i> | 剛秀竹 | | | 0.6 | 5 | | | 0.4 | 5 | | | | | 0.4 | 5 | | | | | 0.4 | | 5 | | | | | | | | | | | |
| Euphorbiaceae | <i>Macaranga tanarius</i> | 血桐 | | | | | | | | | 0.5 | | 1 | | | | | 0.5 | 1 | | | | | 0.5 | 1 | | | | | | | | | |
| Araceae | <i>Alocasia odora</i> | 海芋 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Colocasia esculenta</i> | 芋 | 0.3 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Myrtaceae | <i>Cleistocalyx operculatus</i> | 水翁 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Athyriaceae | <i>Callipteris esculenta</i> | 菜蕨 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Phragmites karka</i> | 卡開蘆 | 1.2 | 2 | | | | | 1.5 | 5 | | | | | 1.5 | 5 | | | | | 1.5 | | 5 | | | | | | | | | | | |
| Thelypteridaceae | <i>Cyclosorus parasiticus</i> | 華南毛蕨 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Equisetaceae | <i>Equisetum debile</i> | 筆管草 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Ageratum conyzoides</i> | 勝紅菊 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Commelinaceae | <i>Commelina diffusa</i> | 節節草 | 0.4 | 6 | | | | | | 0.1 | 5 | | | | | 0.1 | | 3 | | | | | 0.1 | 3 | | | | | | | | | | |
| Solanaceae | <i>Solanum nigrum</i> | 龍葵 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Euphorbiaceae | <i>Mallotus paniculatus</i> | 白楸 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Elyusine indica</i> | 牛筋草 | | | 0.3 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum purpureum</i> | 象草 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Wedelia chinensis</i> | 鯉魚菊 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Bidens alba</i> | 白花鬼針草 | 0.3 | 15 | 0.3 | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Panicum repens</i> | 枯骨草 | 0.6 | 5 | 0.6 | 2 | | | 0.3 | 5 | | | | | 0.3 | 3 | | | | | 0.3 | | 3 | | | | | | | | | | | |
| Poaceae | <i>Coix lacryma-jobi</i> | 薏苡 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Convolvulaceae | <i>Ipomoea cairica</i> | 五爪金龍 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cucurbitaceae | <i>Benincasa hispida</i> | 冬瓜 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fabaceae | <i>Pueraria lobata</i> | 野葛 | 0.2 | 10 | | | | | 0.4 | 10 | | | | | 0.4 | 15 | | | | | 0.4 | | 15 | | | | | | | | | | | |
| Convolvulaceae | <i>Merremia hederacea</i> | 魚黃草 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum alopecuroides</i> | 狼尾草 | | | | | | | | 1.5 | 5 | | | | | 1.5 | | 5 | | | | | 1.5 | 5 | | | | | | | | | | |
| Poaceae | <i>Brachiaria mutica</i> | 巴拉草 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Onagraceae | <i>Ludwigia erecta</i> | 美洲水丁香 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Malvaceae | <i>Hibiscus rosa-sinensis</i> | 大紅花 | | | 0.6 | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus sp.</i> | 莎草 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Balsaminaceae | <i>Impatiens walleriana</i> | 非洲鳳仙 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Amaranthaceae | <i>Celosia argentea</i> | 青葙 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bare Gound | | | | 19 | | 67 | | | 70 | | 69 | | | 67 | | 66 | | | 67 | | 66 | | | | | | | | | | | | | |

- Reference point was the sampling location outside the works area used to compare with the data within works area.

P1 – Point count location 1; P2 – Point count location 2

Table 4.2. Flora species recorded from belt transect survey at the Upper Tai Po stream (T1- Upper stream sampling site and T2 - Lower stream sampling site)

| Family | Species | Chinese name | Post construction monitoring | | | | | | | | Post construction monitoring | | | | | | | | Post construction monitoring | | | | | | | | Post construction monitoring | | | | | | | |
|------------------|---------------------------------|--------------|------------------------------|------------|-----|------------|-------------------|------------|-----|------------|------------------------------|-------------------|-----------|------------|--------|------------|-------------------|------------|------------------------------|------------|-----|-------------------|-----|----|-----|----|------------------------------|--|--|--|--|--|--|--|
| | | | Stream | | | | Jul-14 | | | | Aug-14 | | | | Sep-14 | | | | Oct-14 | | | | | | | | | | | | | | | |
| | | | Reference | T1 | | T2 | | Reference | T1 | | T2 | | Reference | T1 | | T2 | | Reference | T1 | | T2 | | | | | | | | | | | | | |
| Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | | | | | | | | | | | | | |
| Asteraceae | <i>Mikania micrantha</i> | 薇甘菊 | 0.4 | 8 | 0.4 | 25 | (concret section) | 0.4 | 10 | 0.4 | 28 | (concret section) | 0.4 | 10 | 0.4 | 28 | (concret section) | 0.4 | 10 | 0.4 | 30 | (concret section) | | | | | | | | | | | | |
| Moraceae | <i>Ficus hispida</i> | 對葉榕 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ulmaceae | <i>Celtis sinensis</i> | 朴樹 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Microstegium ciliatum</i> | 剛秀竹 | 0.6 | 5 | | | | 0.6 | 5 | | | | | | 0.6 | 5 | | | | | | | 0.6 | 10 | | | | | | | | | | |
| Euphorbiaceae | <i>Macaranga tanarius</i> | 血桐 | | | 0.6 | 1 | | | | 0.6 | 1 | | | | | | | 0.6 | 1 | | | | | | 0.6 | 1 | | | | | | | | |
| Araceae | <i>Alocasia odora</i> | 海芋 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Colocasia esculenta</i> | 芋 | | | | | | | | | | | | | | | | | | | | | 0.5 | 5 | | | | | | | | | | |
| Myrtaceae | <i>Cleistocalyx operculatus</i> | 水翁 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Athyriaceae | <i>Callipteris esculenta</i> | 菜蕨 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Phragmites karka</i> | 卡開蘆 | 1.5 | 5 | | | | 1.8 | 5 | | | | | | 1.8 | 5 | | | | | | | 2 | 5 | | | | | | | | | | |
| Thelypteridaceae | <i>Cyclosorus parasiticus</i> | 華南毛蕨 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Equisetaceae | <i>Equisetum debile</i> | 筆管草 | | | | | | | | | | | | | | | | | | | | | 0.3 | 5 | | | | | | | | | | |
| Asteraceae | <i>Ageratum conyzoides</i> | 勝紅菊 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Commelinaceae | <i>Commelina diffusa</i> | 節節草 | | | 0.2 | 4 | | | | 0.3 | 5 | | | | | | | 0.3 | 5 | | | | | | 0.3 | 10 | | | | | | | | |
| Solanaceae | <i>Solanum nigrum</i> | 龍葵 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Euphorbiaceae | <i>Mallotus paniculatus</i> | 白楸 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Elyusine indica</i> | 牛筋草 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum purpureum</i> | 象草 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Wedelia chinensis</i> | 鯉鯪菊 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Bidens alba</i> | 白花鬼針草 | | | | | | | | | | | | | | | | | | | | | | | 1 | 10 | | | | | | | | |
| Poaceae | <i>Panicum repens</i> | 枯骨草 | 0.4 | 3 | | | | 0.6 | 3 | | | | | | 0.6 | 4 | | | | | | | 0.6 | 4 | | | | | | | | | | |
| Poaceae | <i>Coix lacryma-jobi</i> | 薏苡 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Convolvulaceae | <i>Ipomoea cairica</i> | 五爪金龍 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cucurbitaceae | <i>Benincasa hispida</i> | 冬瓜 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fabaceae | <i>Pueraria lobata</i> | 野葛 | 0.4 | 15 | | | | 0.4 | 15 | | | | | | 0.4 | 18 | | | | | | | 0.4 | 18 | | | | | | | | | | |
| Convolvulaceae | <i>Merremia hederacea</i> | 魚黃草 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum alopecuroides</i> | 狼尾草 | | | 1.5 | 5 | | | 1.5 | 5 | | | | | 1.5 | 5 | | | | | 2 | 20 | | | | | | | | | | | | |
| Poaceae | <i>Brachiaria mutica</i> | 巴拉草 | | | | | | | | | | | | | | | | | | | 1.5 | 25 | | | | | | | | | | | | |
| Onagraceae | <i>Ludwigia erecta</i> | 美洲水丁香 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Malvaceae | <i>Hibiscus rosa-sinensis</i> | 大紅花 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus sp.</i> | 莎草 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Balsaminaceae | <i>Impatiens walleriana</i> | 非洲鳳仙 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Amaranthaceae | <i>Celosia argentea</i> | 青葙 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bare Gound | | | | | 64 | 65 | | | 62 | 61 | | | | | 58 | 61 | | | | | 43 | 4 | | | | | | | | | | | | |

- Reference point was the sampling location outside the works area used to compare with the data within works area.

P1 – Point count location 1; P2 – Point count location 2

Table 4.2. Flora species recorded from belt transect survey at the Upper Tai Po stream (T1- Upper stream sampling site and T2 - Lower stream sampling site)

| Family | Species | Chinese name | Post construction monitoring | | | | | | | | Post construction monitoring | | | | | | | | Post construction monitoring | | | | | | | | Post construction monitoring | | | | | | | |
|------------------|---------------------------------|--------------|------------------------------|------------|-----|------------|-------------------|------------|-----------|------------|------------------------------|-------------------|-----|------------|-----------|------------|-----|------------|------------------------------|------------|-----------|------------|-----|----|-----|----|------------------------------|--|--|--|--|--|--|--|
| | | | Nov-14 | | | | Dec-14 | | | | Jan-15 | | | | Feb-14 | | | | | | | | | | | | | | | | | | | |
| | | | Reference | | T1 | | T2 | | Reference | | T1 | | T2 | | Reference | | T1 | | T2 | | Reference | | T1 | | T2 | | | | | | | | | |
| Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | | | | | | | | | | | |
| Asteraceae | <i>Mikania micrantha</i> | 薇甘菊 | 0.4 | 12 | 0.4 | 30 | (concret section) | 0.4 | 12 | 0.4 | 30 | (concret section) | 0.8 | 15 | | | 0.3 | 10 | 0.8 | 15 | | | 0.3 | 10 | | | | | | | | | | |
| Moraceae | <i>Ficus hispida</i> | 對葉榕 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ulmaceae | <i>Celtis sinensis</i> | 朴樹 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Microstegium ciliatum</i> | 剛秀竹 | 0.6 | 15 | | | | 0.6 | 15 | | | | | | 1.3 | 5 | | | 1 | 5 | 1.3 | 5 | | | 1 | 5 | | | | | | | | |
| Euphorbiaceae | <i>Macaranga tanarius</i> | 血桐 | | | 0.6 | 1 | | | | 0.6 | 1 | | | | | | | | 0.6 | 1 | | | | | 0.6 | 1 | | | | | | | | |
| Araceae | <i>Alocasia odora</i> | 海芋 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Colocasia esculenta</i> | 芋 | 0.5 | 5 | | | | 0.5 | 5 | | | | | | 0.8 | 5 | | | | | 0.8 | 5 | | | | | | | | | | | | |
| Myrtaceae | <i>Cleistocalyx operculatus</i> | 水翁 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Athyriaceae | <i>Callipteris esculenta</i> | 菜蕨 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Phragmites karka</i> | 卡開蘆 | 2 | 5 | | | | 2 | 5 | | | | | | 1.7 | 10 | | | | | 1.7 | 10 | | | | | | | | | | | | |
| Thelypteridaceae | <i>Cyclosorus parasiticus</i> | 華南毛蕨 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Equisetaceae | <i>Equisetum debile</i> | 筆管草 | 0.3 | 5 | | | | 0.3 | 5 | | | | | | 0.3 | 5 | | | | | 0.3 | 5 | | | | | | | | | | | | |
| Asteraceae | <i>Ageratum conyzoides</i> | 勝紅菊 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Commelinaceae | <i>Commelina diffusa</i> | 節節草 | | | 0.3 | 10 | | | | 0.3 | 10 | | | | 0.2 | 10 | | | 0.4 | 60 | 0.3 | 10 | | | 0.5 | 60 | | | | | | | | |
| Solanaceae | <i>Solanum nigrum</i> | 龍葵 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Euphorbiaceae | <i>Mallotus paniculatus</i> | 白楸 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Elyusine indica</i> | 牛筋草 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum purpureum</i> | 象草 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Wedelia chinensis</i> | 鯉魚菊 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Bidens alba</i> | 白花鬼針草 | | | 1 | 10 | | | | 1 | 10 | | | | 1 | 5 | | | 0.8 | 2 | 1 | 5 | | | 0.8 | 2 | | | | | | | | |
| Poaceae | <i>Panicum repens</i> | 枯骨草 | 0.6 | 4 | | | | 0.6 | 4 | | | | | | 0.6 | 5 | | | | | 0.6 | 5 | | | | | | | | | | | | |
| Poaceae | <i>Coix lacryma-jobi</i> | 薏苡 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Convolvulaceae | <i>Ipomoea cairica</i> | 五爪金龍 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cucurbitaceae | <i>Benincasa hispida</i> | 冬瓜 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fabaceae | <i>Pueraria lobata</i> | 野葛 | 0.4 | 20 | | | | 0.4 | 20 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Convolvulaceae | <i>Merremia hederacea</i> | 魚黃草 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum alopecuroides</i> | 狼尾草 | | | 2 | 20 | | | 2 | 20 | | | | | | | 4 | 10 | | | | | 4 | 10 | | | | | | | | | | |
| Poaceae | <i>Brachiaria mutica</i> | 巴拉草 | | | 1.5 | 25 | | | 1.5 | 25 | | | | | | | | | | | | | | | | | | | | | | | | |
| Onagraceae | <i>Ludwigia erecta</i> | 美洲水丁香 | | | | | | | | | | | | 0.2 | 4 | | | | | | | 0.3 | 4 | | | | | | | | | | | |
| Malvaceae | <i>Hibiscus rosa-sinensis</i> | 大紅花 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus sp.</i> | 莎草 | | | | | | | | | | | | 0.2 | 6 | | | | | | | 0.2 | 6 | | | | | | | | | | | |
| Balsaminaceae | <i>Impatiens walleriana</i> | 非洲鳳仙 | | | | | | | | | | | | | | | 1 | 5 | | | | | 1 | 5 | | | | | | | | | | |
| Amaranthaceae | <i>Celosia argentea</i> | 青葙 | | | | | | | | | | | | 1.7 | 5 | | | | | 1.7 | 5 | | | | | | | | | | | | | |
| Bare Gound | | | | | 34 | 4 | | | 34 | 4 | | | | 35 | 88 | | | 7 | | 35 | 88 | | | 7 | | | | | | | | | | |

- Reference point was the sampling location outside the works area used to compare with the data within works area.

P1 – Point count location 1; P2 – Point count location 2

Table 4.2. Flora species recorded from belt transect survey at the Upper Tai Po stream (T1- Upper stream sampling site and T2 - Lower stream sampling site)

| Family | Species | Chinese name | Post construction monitoring | | | | | | Post construction monitoring | | | | | | Post construction monitoring | | | | | | Post construction monitoring | | | | | |
|------------------|---------------------------------|--------------|------------------------------|----|------------|----|------------|----|------------------------------|----|------------|----|------------|----|------------------------------|----|------------|----|------------|----|------------------------------|----|------------|----|------------|----|
| | | | Reference | | T1 | | T2 | | Reference | | T1 | | T2 | | Reference | | T1 | | T2 | | Reference | | T1 | | T2 | |
| | | | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % |
| Asteraceae | <i>Mikania micrantha</i> | 薇甘菊 | 0.8 | 15 | | | 0.3 | 10 | 0.8 | 15 | | | 0.3 | 10 | 0.5 | 10 | | | 0.3 | 3 | 0.5 | 10 | | | 0.3 | 3 |
| Moraceae | <i>Ficus hispida</i> | 對葉榕 | | | | | | | | | | | | | | | | | | | | | | | | |
| Ulmaceae | <i>Celtis sinensis</i> | 朴樹 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Microstegium ciliatum</i> | 剛秀竹 | 1.3 | 5 | | | 1 | 5 | 1.3 | 5 | | | 1 | 5 | 1 | 5 | | | 1 | 3 | 1 | 5 | | | 1 | 3 |
| Euphorbiaceae | <i>Macaranga tanarius</i> | 血桐 | | | | | 0.6 | 1 | | | | | 0.6 | 1 | | | | | 0.5 | 1 | | | | | 0.5 | 1 |
| Araceae | <i>Alocasia odora</i> | 海芋 | | | | | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Colocasia esculenta</i> | 芋 | 0.8 | 5 | | | | | 0.8 | 5 | | | | | 0.5 | 5 | | | | | 0.5 | 5 | | | | |
| Myrtaceae | <i>Cleistocalyx operculatus</i> | 水翁 | | | | | | | | | | | | | | | | | | | | | | | | |
| Athyriaceae | <i>Callipteris esculenta</i> | 菜蕨 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Phragmites karka</i> | 卡開蘆 | 1.7 | 10 | | | | | 1.7 | 10 | | | | | 1.5 | 10 | | | | | 1.5 | 10 | | | | |
| Thelypteridaceae | <i>Cyclosorus parasiticus</i> | 華南毛蕨 | | | | | | | | | | | | | | | | | | | | | | | | |
| Equisetaceae | <i>Equisetum debile</i> | 筆管草 | 0.3 | 5 | | | | | 0.3 | 5 | | | | | 0.3 | 5 | | | | | 0.3 | 5 | | | | |
| Asteraceae | <i>Ageratum conyzoides</i> | 勝紅菊 | | | 0.3 | 2 | | | | | 0.3 | 2 | | | | | 0.3 | 2 | | | | | 0.3 | 5 | | |
| Commelinaceae | <i>Commelina diffusa</i> | 節節草 | 0.3 | 10 | | | 0.5 | 60 | 0.3 | 10 | | | 0.5 | 60 | 0.3 | 10 | | | 0.5 | 35 | 0.3 | 10 | | | 0.5 | 35 |
| Solanaceae | <i>Solanum nigrum</i> | 龍葵 | | | | | | | | | | | | | | | | | | | | | | | | |
| Euphorbiaceae | <i>Mallotus paniculatus</i> | 白楸 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Eleusine indica</i> | 牛筋草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum purpureum</i> | 象草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Wedelia chinensis</i> | 鯉魚菊 | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Bidens alba</i> | 白花鬼針草 | 1 | 5 | | | 0.8 | 2 | 1 | 5 | | | 0.8 | 2 | 0.7 | 5 | | | 0.6 | 2 | 0.7 | 5 | | | 0.6 | 2 |
| Poaceae | <i>Panicum repens</i> | 枯骨草 | 0.6 | 5 | | | | | 0.6 | 5 | | | | | 0.4 | 5 | | | | | 0.4 | 5 | | | | |
| Poaceae | <i>Coix lacryma-jobi</i> | 薏苡 | | | | | | | | | | | | | | | | | | | | | | | | |
| Convolvulaceae | <i>Ipomoea cairica</i> | 五爪金龍 | | | | | | | | | | | | | | | | | | | | | | | | |
| Cucurbitaceae | <i>Benincasa hispida</i> | 冬瓜 | | | | | | | | | | | | | | | | | | | | | | | | |
| Fabaceae | <i>Pueraria lobata</i> | 野葛 | | | | | | | | | | | | | | | | | | | | | | | | |
| Convolvulaceae | <i>Merremia hederacea</i> | 魚黃草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum alopecuroides</i> | 狼尾草 | | | | | 4 | 10 | | | | | 4 | 10 | | | | | 2 | 7 | | | | | 2 | 7 |
| Poaceae | <i>Brachiaria mutica</i> | 巴拉草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Onagraceae | <i>Ludwigia erecta</i> | 美洲水丁香 | | | 0.3 | 4 | | | | | 0.3 | 4 | | | | | 0.3 | 2 | | | | | 0.3 | 5 | | |
| Malvaceae | <i>Hibiscus rosa-sinensis</i> | 大紅花 | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus sp.</i> | 莎草 | | | 0.2 | 6 | | | | | 0.2 | 6 | | | | | 0.2 | 3 | | | | | 0.2 | 5 | | |
| Balsaminaceae | <i>Impatiens walleriana</i> | 非洲鳳仙 | | | | | 1 | 5 | | | | | 1 | 5 | | | | | 1 | 3 | | | | | 1 | 3 |
| Amaranthaceae | <i>Celosia argentea</i> | 青葙 | 1.7 | 5 | | | | | 1.7 | 5 | | | | | 1.7 | 5 | | | | | 1.7 | 5 | | | | |
| Bare Gound | | | | 35 | | 88 | | 7 | | 35 | | 88 | | 7 | | 40 | | 93 | | 46 | | 40 | | 85 | | 46 |

- Reference point was the sampling location outside the works area used to compare with the data within works area.

P1 – Point count location 1; P2 – Point count location 2

Table 4.2. Flora species recorded from belt transect survey at the Upper Tai Po stream (T1- Upper stream sampling site and T2 - Lower stream sampling site)

| Family | Species | Chinese name | Post construction monitoring | | | | | | | | Post construction monitoring | | | | | | | | Post construction monitoring | | | | | | | | Post construction monitoring | | | | | | | |
|------------------|---------------------------------|--------------|------------------------------|------------|-----|------------|--------|------------|-----|------------|------------------------------|------------|-----------|------------|--------|------------|-----|------------|------------------------------|------------|-----|----|-----|----|-----|----|------------------------------|--|--|--|--|--|--|--|
| | | | Stream | | | | Jul-15 | | | | Aug-15 | | | | Sep-15 | | | | Oct-15 | | | | | | | | | | | | | | | |
| | | | Reference | T1 | | T2 | | Reference | T1 | | T2 | | Reference | T1 | | T2 | | Reference | T1 | | T2 | | | | | | | | | | | | | |
| Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | | | | | | | | | | | | | |
| Asteraceae | <i>Mikania micrantha</i> | 薇甘菊 | 0.5 | 10 | | | | | 0.5 | 10 | | | | | 0.5 | 10 | | | | | 0.5 | 10 | | | | | | | | | | | | |
| Moraceae | <i>Ficus hispida</i> | 對葉榕 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ulmaceae | <i>Celtis sinensis</i> | 朴樹 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Microstegium ciliatum</i> | 剛秀竹 | 1 | 5 | 1 | 1 | | | 1 | 5 | 1 | 1 | | | 1 | 5 | 1 | 1 | | | 1 | 5 | 1 | 3 | | | | | | | | | | |
| Euphorbiaceae | <i>Macaranga tanarius</i> | 血桐 | | | | | 1.5 | 5 | | | | | 1.5 | 5 | | | 1.5 | 5 | | | | | 1.5 | 5 | | | | | | | | | | |
| Araceae | <i>Allocasia odora</i> | 海芋 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Colocasia esculenta</i> | 芋 | 0.5 | 5 | 1.2 | 10 | | | 0.5 | 5 | 1.2 | 5 | | | 0.5 | 5 | 1.2 | 2 | | | 0.5 | 5 | 1.2 | 5 | | | | | | | | | | |
| Myrtaceae | <i>Cleistocalyx operculatus</i> | 水翁 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Athyriaceae | <i>Callipteris esculenta</i> | 菜蕨 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Phragmites karka</i> | 卡開蘆 | 1.5 | 10 | | | | | 1.5 | 10 | | | | | 1.5 | 10 | | | | | 1.5 | 10 | | | | | | | | | | | | |
| Thelypteridaceae | <i>Cyclosorus parasiticus</i> | 華南毛蕨 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Equisetaceae | <i>Equisetum debile</i> | 筆管草 | 0.3 | 5 | | | | | 0.3 | 5 | | | | | 0.3 | 5 | | | | | 0.3 | 5 | | | | | | | | | | | | |
| Asteraceae | <i>Ageratum conyzoides</i> | 勝紅菊 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Commelinaceae | <i>Commelina diffusa</i> | 節節草 | 0.3 | 10 | | | 0.4 | 40 | 0.4 | 10 | 0.2 | 20 | 0.4 | 30 | 0.4 | 10 | 0.2 | 5 | 0.4 | 30 | 0.4 | 10 | 0.2 | 15 | 0.4 | 30 | | | | | | | | |
| Solanaceae | <i>Solanum nigrum</i> | 龍葵 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Euphorbiaceae | <i>Mallotus paniculatus</i> | 白楸 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Eletusine indica</i> | 牛筋草 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum purpureum</i> | 象草 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Wedelia chinensis</i> | 鯉鯉菊 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Bidens alba</i> | 白花鬼針草 | 0.7 | 5 | | | 0.5 | 5 | 0.7 | 5 | | | 0.5 | 5 | 0.7 | 5 | | | 0.5 | 5 | 0.7 | 5 | | | 0.5 | 5 | | | | | | | | |
| Poaceae | <i>Panicum repens</i> | 枯骨草 | 0.4 | 5 | | | | | 0.4 | 5 | | | | | 0.4 | 5 | | | | | 0.4 | 5 | | | | | | | | | | | | |
| Poaceae | <i>Coix lacryma-jobi</i> | 薏苡 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Convolvulaceae | <i>Ipomoea cairica</i> | 五爪金龍 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cucurbitaceae | <i>Benincasa hispida</i> | 冬瓜 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fabaceae | <i>Pueraria lobata</i> | 野葛 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Convolvulaceae | <i>Merremia hederacea</i> | 魚黃草 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum alopecuroides</i> | 狼尾草 | | | 2.5 | 20 | 2 | 30 | | | 2.5 | 5 | 2 | 20 | | | 2.5 | 5 | 2 | 20 | | | 2 | 7 | 2 | 20 | | | | | | | | |
| Poaceae | <i>Brachiaria mutica</i> | 巴拉草 | | | 1.2 | 50 | 0.5 | 15 | | | 1.2 | 30 | 0.5 | 15 | | | 1.2 | 2 | 0.5 | 15 | | | 1.2 | 2 | 0.5 | 15 | | | | | | | | |
| Onagraceae | <i>Ludwigia erecta</i> | 美洲水丁香 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Malvaceae | <i>Hibiscus rosa-sinensis</i> | 大紅花 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus sp.</i> | 莎草 | | | 0.2 | 5 | | | | | 0.2 | 5 | | | | | 0.2 | 2 | | | | | 0.2 | 2 | | | | | | | | | | |
| Balsaminaceae | <i>Impatiens walleriana</i> | 非洲鳳仙 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Amaranthaceae | <i>Celosia argentea</i> | 青葙 | 1.7 | 5 | | | | | 1.7 | 5 | | | | | 1.7 | 5 | | | | | 1.7 | 5 | | | | | | | | | | | | |
| Bare Gound | | | | 40 | | 14 | | 5 | | 40 | | 34 | | 25 | | 40 | | 83 | | 25 | | 40 | | 66 | | 25 | | | | | | | | |

- Reference point was the sampling location outside the works area used to compare with the data within works area.

P1 – Point count location 1; P2 – Point count location 2

Table 4.2. Flora species recorded from belt transect survey at the Upper Tai Po stream (T1- Upper stream sampling site and T2 - Lower stream sampling site)

| Family | Species | Chinese name | Post construction monitoring | | | | | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | | | | |
|------------------|---------------------------------|--------------|------------------------------|----|------------|-----|------------|----|------------|----|------------------------------|-----|------------|----|------------------------------|----|------------|-----|------------------------------|----|------------|----|-----|-----|-----|----|
| | | | Stream | | Nov-15 | | | | Dec-15 | | | | Jan-16 | | | | Feb-16 | | | | | | | | | |
| | | | Transect | | Reference | | T1 | | T2 | | Reference | | T1 | | T2 | | Reference | | T1 | | T2 | | | | | |
| | | | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | | | | |
| Asteraceae | <i>Mikania micrantha</i> | 薇甘菊 | 0.5 | 10 | | | | | 0.5 | 5 | | | | | 0.5 | 5 | | | | | 0.5 | 5 | | | | |
| Moraceae | <i>Ficus hispida</i> | 對葉榕 | | | | | | | | | | | | | | | | | | | | | | | | |
| Ulmaceae | <i>Celtis sinensis</i> | 朴樹 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Microstegium ciliatum</i> | 剛秀竹 | 1 | 5 | 1 | 3 | | | 1 | 5 | 1 | 3 | | | 1 | 5 | 1 | 3 | | | 1 | 5 | 1 | 3 | | |
| Euphorbiaceae | <i>Macaranga tanarius</i> | 血桐 | | | | 1.5 | 5 | | | | | 1.5 | 5 | | | | | 1.5 | 5 | | | | | 1.5 | 5 | |
| Araceae | <i>Allocasia odora</i> | 海芋 | | | | | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Colocasia esculenta</i> | 芋 | 0.5 | 5 | 1.2 | 5 | | | 0.5 | 5 | 1.2 | 5 | | | 0.5 | 5 | 1.2 | 5 | | | 0.5 | 5 | 1.2 | 5 | | |
| Myrtaceae | <i>Cleistocalyx operculatus</i> | 水翁 | | | | | | | | | | | | | | | | | | | | | | | | |
| Athyriaceae | <i>Callipteris esculenta</i> | 菜蕨 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Phragmites karka</i> | 卡開蘆 | 1.5 | 10 | | | | | 1.5 | 7 | | | | | 1.5 | 7 | | | | | 1.5 | 7 | | | | |
| Thelypteridaceae | <i>Cyclosorus parasiticus</i> | 華南毛蕨 | | | | | | | | | | | | | | | | | | | | | | | | |
| Equisetaceae | <i>Equisetum debile</i> | 筆管草 | 0.3 | 5 | | | | | 0.3 | 5 | | | | | 0.3 | 5 | | | | | 0.3 | 5 | | | | |
| Asteraceae | <i>Ageratum conyzoides</i> | 勝紅菊 | | | | | | | | | | | | | | | | | | | | | | | | |
| Commelinaceae | <i>Commelina diffusa</i> | 節節草 | 0.4 | 10 | 0.2 | 20 | 0.4 | 30 | 0.4 | 7 | 0.2 | 20 | 0.4 | 30 | 0.4 | 10 | 0.2 | 25 | 0.4 | 35 | 0.4 | 10 | 0.2 | 25 | 0.4 | 35 |
| Solanaceae | <i>Solanum nigrum</i> | 龍葵 | | | | | | | | | | | | | | | | | | | | | | | | |
| Euphorbiaceae | <i>Mallotus paniculatus</i> | 白楸 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Elyusine indica</i> | 牛筋草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum purpureum</i> | 象草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Wedelia chinensis</i> | 鯉魚菊 | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Bidens alba</i> | 白花鬼針草 | 0.7 | 5 | | 0.5 | 5 | | 0.7 | 5 | | 0.5 | 5 | | 0.7 | 5 | | 0.5 | 5 | | 0.7 | 5 | | 0.5 | 5 | |
| Poaceae | <i>Panicum repens</i> | 枯骨草 | 0.4 | 5 | | | | | 0.4 | 5 | | | | | 0.4 | 5 | | | | | 0.4 | 5 | | | | |
| Poaceae | <i>Coix lacryma-jobi</i> | 薏苡 | | | | | | | | | | | | | | | | | | | | | | | | |
| Convolvulaceae | <i>Ipomoea cairica</i> | 五爪金龍 | | | | | | | | | | | | | | | | | | | | | | | | |
| Cucurbitaceae | <i>Benincasa hispida</i> | 冬瓜 | | | | | | | | | | | | | | | | | | | | | | | | |
| Fabaceae | <i>Pueraria lobata</i> | 野葛 | | | | | | | | | | | | | | | | | | | | | | | | |
| Convolvulaceae | <i>Merremia hederacea</i> | 魚黃草 | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum alopecuroides</i> | 狼尾草 | | | 2 | 10 | 2 | 20 | | | 2 | 10 | 2 | 20 | | | 2 | 10 | 2 | 20 | | | 2 | 10 | 2 | 20 |
| Poaceae | <i>Brachiaria mutica</i> | 巴拉草 | | | 1.2 | 2 | 0.5 | 15 | | | 1.2 | 2 | 0.5 | 15 | | | 1.2 | 2 | 0.5 | 15 | | | 1.2 | 2 | 0.5 | 15 |
| Onagraceae | <i>Ludwigia erecta</i> | 美洲水丁香 | | | | | | | | | | | | | | | | | | | | | | | | |
| Malvaceae | <i>Hibiscus rosa-sinensis</i> | 大紅花 | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus sp.</i> | 莎草 | | | 0.2 | 2 | | | | | 0.2 | 2 | | | | | 0.2 | 2 | | | | | 0.2 | 2 | | |
| Balsaminaceae | <i>Impatiens walleriana</i> | 非洲鳳仙 | | | | | | | | | | | | | | | | | | | | | | | | |
| Amaranthaceae | <i>Celosia argentea</i> | 青葙 | 1.7 | 5 | | | | | 1.7 | 5 | | | | | 1.7 | 5 | | | | | 1.7 | 5 | | | | |
| Bare Gound | | | | 40 | | 58 | | 25 | | 51 | | 58 | | 25 | | 48 | | 53 | | 20 | | 48 | | 53 | | 20 |

- Reference point was the sampling location outside the works area used to compare with the data within works area.

P1 – Point count location 1; P2 – Point count location 2

Table 4.2. Flora species recorded from belt transect survey at the Upper Tai Po stream (T1- Upper stream sampling site and T2 - Lower stream sampling site)

| Family | Species | Chinese name | Post construction monitoring | | | | | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | Post construction monitoring | | | | | | | | | | | | | | | | |
|------------------|---------------------------------|--------------|------------------------------|------------|-----|------------|--------|------------|-----|------------|------------------------------|------------|-----------|------------|------------------------------|------------|-----|------------|------------------------------|------------|-----|------------|------------------------------|------------|-----|-----|-----|---|-----|---|-----|---|-----|----|-----|---|-----|---|--|
| | | | Mar-16 | | | | Apr-16 | | | | May-16 | | | | Jun-16 | | | | Jul-16 | | | | | | | | | | | | | | | | | | | | |
| | | | Reference | T1 | | T2 | | Reference | T1 | | T2 | | Reference | T1 | | T2 | | Reference | T1 | | T2 | | Reference | T1 | | T2 | | | | | | | | | | | | | |
| Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | | | | | | | | | | | | | | |
| Asteraceae | <i>Mikania micrantha</i> | 薇甘菊 | 0.6 | 5 | | | | | 0.6 | 5 | | | | | | | | 0.6 | 5 | | | | | | | 0.6 | 5 | | | | | | | | | | | | |
| Moraceae | <i>Ficus hispida</i> | 對葉榕 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ulmaceae | <i>Celtis sinensis</i> | 朴樹 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Microstegium ciliatum</i> | 剛秀竹 | 1.2 | 5 | 1 | 3 | | | 1.2 | 5 | 1 | 3 | | | | | | 1.2 | 5 | | | | | | | 1.2 | 5 | | | | | | | | | | | | |
| Euphorbiaceae | <i>Macaranga tanarius</i> | 血桐 | | | | | | 1.5 | 5 | | | | | | | | | | | | | | | 1.5 | 5 | | | | | | | | 1.5 | 10 | | | | | |
| Araceae | <i>Alocasia odora</i> | 海芋 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Araceae | <i>Colocasia esculenta</i> | 芋 | 0.5 | 5 | 1.2 | 5 | | | 0.5 | 5 | 1.2 | 5 | | | | | | 0.5 | 5 | | | | | | | 0.5 | 5 | | | | | | | | | | | | |
| Myrtaceae | <i>Cleistocalyx operculatus</i> | 水翁 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Athyriaceae | <i>Callipteris esculenta</i> | 菜蕨 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Phragmites karka</i> | 卡開蘆 | 1.5 | 7 | | | | | 1.5 | 7 | | | | | | | | 1.5 | 5 | | | | | | | 1.5 | 5 | | | | | | | | | | | | |
| Thelypteridaceae | <i>Cyclosorus parasiticus</i> | 華南毛蕨 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Equisetaceae | <i>Equisetum debile</i> | 筆管草 | 0.3 | 5 | | | | | 0.3 | 5 | | | | | | | | 0.3 | 5 | | | | | | | 0.3 | 5 | | | | | | | | | | | | |
| Asteraceae | <i>Ageratum conyzoides</i> | 勝紅菊 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Commelinaceae | <i>Commelina diffusa</i> | 節節草 | 0.4 | 10 | 0.3 | 25 | 40 | 0 | 0.4 | 8 | 0.3 | 20 | 40 | 0 | 0.4 | 5 | 0.3 | 5 | 0.4 | 2 | 0.4 | 5 | 0.3 | 5 | 0.4 | 2 | 0.4 | 5 | 0.3 | 5 | 0.4 | 5 | 0.4 | 5 | 0.4 | 5 | | | |
| Solanaceae | <i>Solanum nigrum</i> | 龍葵 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Euphorbiaceae | <i>Mallotus paniculatus</i> | 白楸 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Eleusine indica</i> | 牛筋草 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum purpureum</i> | 象草 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Wedelia chinensis</i> | 鯉魚菊 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Bidens alba</i> | 白花鬼針草 | 0.7 | 5 | | | 0.5 | 5 | 0.7 | 5 | | | 0.5 | 5 | | | 0.7 | 5 | | | | | | | 0.5 | 5 | | | | | | | 0.7 | 5 | | | 0.5 | 8 | |
| Poaceae | <i>Panicum repens</i> | 枯骨草 | 0.4 | 5 | | | | | 0.4 | 5 | | | | | | | | 0.4 | 5 | | | | | | | 0.4 | 5 | | | | | | | | | | | | |
| Poaceae | <i>Coix lacryma-jobi</i> | 薏苡 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Convolvulaceae | <i>Ipomoea cairica</i> | 五爪金龍 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cucurbitaceae | <i>Benincasa hispida</i> | 冬瓜 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fabaceae | <i>Pueraria lobata</i> | 野葛 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Convolvulaceae | <i>Merremia hederacea</i> | 魚黃草 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum alopecuroides</i> | 狼尾草 | | | 2 | 10 | 2 | 20 | | | 2 | 8 | 2 | 10 | | | | | | | | | | | | | | | | | | | | | | 2 | 5 | | |
| Poaceae | <i>Bracharia mutica</i> | 巴拉草 | | | 1.2 | 2 | 0.5 | 15 | | | 1.2 | 2 | 0.5 | 10 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Onagraceae | <i>Ludwigia erecta</i> | 美洲水丁香 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Malvaceae | <i>Hibiscus rosa-sinensis</i> | 大紅花 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus sp.</i> | 莎草 | | | 0.2 | 2 | | | | | 0.2 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Balsaminaceae | <i>Impatiens walleriana</i> | 非洲鳳仙 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Amaranthaceae | <i>Celosia argentea</i> | 青葙 | 1.7 | 5 | | | | | 1.7 | 5 | | | | | | | | 1.7 | 5 | | | | | | | 1.7 | 5 | | | | | | | | | | | | |
| Bare Gound | | | 48 | | 53 | | 55 | | 50 | | 60 | | 70 | | 55 | | 93 | | 85 | | 55 | | 93 | | 85 | | 55 | | 93 | | 72 | | | | | | | | |

- Reference point was the sampling location outside the works area used to compare with the data within works area.

P1 – Point count location 1; P2 – Point count location 2

Table 4.2. Flora species recorded from belt transect survey at the Upper Tai Po stream (T1 - Upper stream sampling site and T2 - Lower stream sampling site)

| | | Post construction monitoring | | | | | | | Post construction monitoring | | | | | | | Post construction monitoring | | | | | | |
|------------------|---------------------------------|------------------------------|------------|----|------------|----|------------|----|------------------------------|----|------------|----|------------|----|------------|------------------------------|------------|----|------------|----|----|--|
| | | Aug-16 | | | | | | | Sep-16 | | | | | | | Oct-16 | | | | | | |
| | | Reference | | T1 | | T2 | | | Reference | | T1 | | T2 | | | Reference | | T1 | | T2 | | |
| Family | Species | Chinese name | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | | |
| Asteraceae | <i>Mikania micrantha</i> | 薇甘菊 | 0.6 | 5 | | | | | 0.5 | 10 | | | | | 0.5 | 10 | | | | | | |
| Moraceae | <i>Ficus hispida</i> | 對葉榕 | | | | | | | | | | | | | | | | | | | | |
| Ulmaceae | <i>Celtis sinensis</i> | 朴樹 | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Microstegium ciliatum</i> | 剛秀竹 | 1.2 | 5 | | | | | 1.5 | 10 | | | | | 1.5 | 10 | | | | | | |
| Euphorbiaceae | <i>Macaranga tanarius</i> | 血桐 | | | | | 1.5 | 10 | | | | | 1.5 | 10 | | | | | 1.6 | 10 | | |
| Araceae | <i>Alocasia odora</i> | 海芋 | | | | | | | 0.4 | 5 | | | | | 0.4 | 5 | | | | | | |
| Araceae | <i>Colocasia esculenta</i> | 芋 | 0.5 | 5 | | | | | 0.5 | 5 | | | | | 0.5 | 5 | | | | | | |
| Myrtaceae | <i>Cleistocalyx operculatus</i> | 水翁 | | | | | | | | | | | | | | | | | | | | |
| Athyriaceae | <i>Callipteris esculenta</i> | 菜蕨 | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Phragmites karka</i> | 卡開蘆 | 1.5 | 5 | | | | | 1.6 | 5 | | | | | 1.6 | 5 | | | | | | |
| Thelypteridaceae | <i>Cyclosorus parasiticus</i> | 華南毛蕨 | | | | | | | | | | | | | | | | | | | | |
| Equisetaceae | <i>Equisetum debile</i> | 筆管草 | 0.3 | 5 | | | | | 0.5 | 5 | | | | | 0.5 | 5 | | | | | | |
| Asteraceae | <i>Ageratum conyzoides</i> | 勝紅薊 | | | | | | | | | | | | | | | | | | | | |
| Commelinaceae | <i>Commelina diffusa</i> | 節節草 | 0.4 | 5 | 0.3 | 5 | 0.4 | 5 | 0.4 | 10 | 0.4 | 10 | 0.4 | 10 | 0.5 | 10 | 0.3 | 10 | 0.3 | 10 | | |
| Solanaceae | <i>Solanum nigrum</i> | 龍葵 | | | | | | | | | | | | | | | | | | | | |
| Euphorbiaceae | <i>Mallotus paniculatus</i> | 白楸 | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Eleusine indica</i> | 牛筋草 | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum purpureum</i> | 象草 | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Wedelia chinensis</i> | 鋤眼菊 | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Bidens alba</i> | 白花鬼針草 | 0.7 | 5 | | | 0.5 | 8 | 0.7 | 5 | | | 0.5 | 8 | 0.8 | 5 | | | 0.5 | 8 | | |
| Poaceae | <i>Panicum repens</i> | 枯骨草 | 0.4 | 5 | | | | | 0.4 | 5 | | | | | 0.4 | 5 | | | | | | |
| Poaceae | <i>Coix lacryma-jobi</i> | 薏苡 | | | | | | | | | | | | | | | | | | | | |
| Convolvulaceae | <i>Ipomoea cairica</i> | 五爪金龍 | | | | | | | | | | | | | | | | | | | | |
| Cucurbitaceae | <i>Benincasa hispida</i> | 冬瓜 | | | | | | | | | | | | | | | | | | | | |
| Fabaceae | <i>Pueraria lobata</i> | 野葛 | | | | | | | | | | | | | | | | | | | | |
| Convolvulaceae | <i>Merremia hederacea</i> | 魚黃草 | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum alopecuroides</i> | 狼尾草 | | | | | 2 | 5 | | | | | 1.6 | 5 | | | | | 1.6 | 5 | | |
| Poaceae | <i>Brachiaria mutica</i> | 巴拉草 | | | 1.2 | 2 | | | | | 1.2 | 5 | 1.3 | 5 | | | 1.2 | 5 | 1.3 | 5 | | |
| Onagraceae | <i>Ludwigia erecta</i> | 美洲水丁香 | | | | | | | | | | | | | | | | | | | | |
| Malvaceae | <i>Hibiscus rosa-sinensis</i> | 大紅花 | | | | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus sp.</i> | 莎草 | | | | | | | | | | | | | | | | | | | | |
| Balsaminaceae | <i>Impatiens walleriana</i> | 非洲鳳仙 | | | | | | | | | | | | | | | | | | | | |
| Amaranthaceae | <i>Celosia argentea</i> | 青葙 | 1.7 | 5 | | | | | 1.5 | 5 | | | | | 1.5 | 5 | | | | | | |
| Bare Gound | | | | 55 | | | 93 | | | 35 | | | 85 | | | 35 | | | 85 | | 62 | |

- Reference point was the sampling location outside the works area used to compare with the data within works area.

P1 – Point count location 1; P2 – Point count location 2

Table 4.2. Flora species recorded from belt transect survey at the Upper Tai Po stream (T1 - Upper stream sampling site and T2 - Lower stream sampling site)

| Family | Species | Chinese name | Post construction monitoring | | | | | | Post construction monitoring | | | | | | Post construction monitoring | | | | | |
|------------------|---------------------------------|--------------|------------------------------|----|------------|----|------------|----|------------------------------|----|------------|----|------------|----|------------------------------|----|------------|----|------------|----|
| | | | Reference | | T1 | | T2 | | Reference | | T1 | | T2 | | Reference | | T1 | | T2 | |
| | | | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % |
| | | | Nov-16 | | Dec-16 | | Jan-17 | | | | | | | | | | | | | |
| Asteraceae | <i>Mikania micrantha</i> | 薇甘菊 | 0.5 | 10 | | | | | 0.5 | 10 | | | | | 0.5 | 10 | | | | |
| Moraceae | <i>Ficus hispida</i> | 對葉榕 | | | | | | | | | | | | | | | | | | |
| Ulmaceae | <i>Celtis sinensis</i> | 朴樹 | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Microstegium ciliatum</i> | 剛秀竹 | 1.5 | 10 | | | | | 1.5 | 10 | | | | | 1.5 | 10 | | | | |
| Euphorbiaceae | <i>Macaranga tanarius</i> | 血桐 | | | 0.1 | 10 | | | | | | | 0.2 | 10 | | | | | 0.3 | 10 |
| Araceae | <i>Alocasia odora</i> | 海芋 | 0.4 | 5 | | | | | 0.4 | 5 | | | | | 0.4 | 5 | | | | |
| Araceae | <i>Colocasia esculenta</i> | 芋 | 0.5 | 5 | | | | | 0.5 | 5 | | | | | 0.5 | 5 | | | | |
| Myrtaceae | <i>Cleistocalyx operculatus</i> | 水翁 | | | | | | | | | | | | | | | | | | |
| Athyriaceae | <i>Callipteris esculenta</i> | 菜蕨 | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Phragmites karka</i> | 卡開蘆 | 1.6 | 5 | | | | | 1.6 | 5 | | | | | 1.6 | 5 | | | | |
| Thelypteridaceae | <i>Cyclosorus parasiticus</i> | 華南毛蕨 | | | | | | | | | | | | | | | | | | |
| Equisetaceae | <i>Equisetum debile</i> | 筆管草 | 0.5 | 5 | | | | | 0.5 | 5 | | | | | 0.5 | 5 | | | | |
| Asteraceae | <i>Ageratum conyzoides</i> | 勝紅蕒 | | | | | | | | | | | | | | | | | | |
| Commelinaceae | <i>Commelina diffusa</i> | 節節草 | 0.5 | 10 | 0.1 | 10 | 0.1 | 10 | 0.5 | 10 | 0.2 | 10 | 0.2 | 10 | 0.5 | 10 | 0.3 | 10 | 0.2 | 10 |
| Solanaceae | <i>Solanum nigrum</i> | 龍葵 | | | | | | | | | | | | | | | | | | |
| Euphorbiaceae | <i>Mallotus paniculatus</i> | 白楸 | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Eleusine indica</i> | 牛筋草 | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum purpureum</i> | 象草 | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Wedelia chinensis</i> | 鋤耞菊 | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Bidens alba</i> | 白花鬼針草 | 0.8 | 5 | | | 0.1 | 8 | 0.8 | 5 | | | 0.3 | 8 | 0.8 | 5 | | | 0.3 | 8 |
| Poaceae | <i>Panicum repens</i> | 枯骨草 | 0.4 | 5 | | | | | 0.4 | 5 | | | | | 0.4 | 5 | | | | |
| Poaceae | <i>Coix lacryma-jobi</i> | 薏苡 | | | | | | | | | | | | | | | | | | |
| Convolvulaceae | <i>Ipomoea cairica</i> | 五爪金龍 | | | | | | | | | | | | | | | | | | |
| Cucurbitaceae | <i>Benincasa hispida</i> | 冬瓜 | | | | | | | | | | | | | | | | | | |
| Fabaceae | <i>Pueraria lobata</i> | 野葛 | | | | | | | | | | | | | | | | | | |
| Convolvulaceae | <i>Merremia hederacea</i> | 魚黃草 | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum alopecuroides</i> | 狼尾草 | | | 0.1 | 5 | | | | | | | 0.3 | 5 | | | | | 0.3 | 5 |
| Poaceae | <i>Brachiaria mutica</i> | 巴拉草 | | | 0.1 | 5 | 0.1 | 5 | | | 0.3 | 5 | 0.3 | 5 | | | 0.3 | 5 | 0.3 | 5 |
| Onagraceae | <i>Ludwigia erecta</i> | 美洲水丁香 | | | | | | | | | | | | | | | | | | |
| Malvaceae | <i>Hibiscus rosa-sinensis</i> | 大紅花 | | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus sp.</i> | 莎草 | | | | | | | | | | | | | | | | | | |
| Balsaminaceae | <i>Impatiens walleriana</i> | 非洲鳳仙 | | | | | | | | | | | | | | | | | | |
| Amaranthaceae | <i>Celosia argentea</i> | 青葙 | 1.5 | 5 | | | | | 1.5 | 5 | | | | | 1.5 | 5 | | | | |
| Bare Gound | | | | 35 | | 85 | | 62 | | 35 | | 85 | | 62 | | 35 | | 85 | | 62 |

- Reference point was the sampling location outside the works area used to compare with the data within works area.

P1 – Point count location 1; P2 – Point count location 2

Table 4.2. Flora species recorded from belt transect survey at the Upper Tai Po stream (T1 - Upper stream sampling site and T2 - Lower stream sampling site)

| Family | Species | Chinese name | Post construction monitoring | | | | | | Post construction monitoring | | | | | | Post construction monitoring | | | | | |
|------------------|---------------------------------|--------------|------------------------------|----|------------|-----|------------|----|------------------------------|----|------------|----|------------|----|------------------------------|----|------------|----|------------|----|
| | | | Reference | | T1 | | T2 | | Reference | | T1 | | T2 | | Reference | | T1 | | T2 | |
| | | | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % |
| | | | Stream Transect | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Mikania micrantha</i> | 薇甘菊 | 0.5 | 10 | | | | | 0.5 | 10 | | | | | 0.5 | 10 | | | | |
| Moraceae | <i>Ficus hispida</i> | 對葉榕 | | | | | | | | | | | | | | | | | | |
| Ulmaceae | <i>Celtis sinensis</i> | 朴樹 | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Microstegium ciliatum</i> | 剛秀竹 | 1.5 | 10 | | | | | 1.6 | 10 | | | | | 1.6 | 10 | | | | |
| Euphorbiaceae | <i>Macaranga tanarius</i> | 血桐 | | | | | 0.3 | 10 | | | | | 0.3 | 10 | | | | | 0.3 | 10 |
| Araceae | <i>Alocasia odora</i> | 海芋 | 0.4 | 5 | | | | | 0.5 | 5 | | | | | 0.5 | 5 | | | | |
| Araceae | <i>Colocasia esculenta</i> | 芋 | 0.5 | 5 | | | | | 0.5 | 5 | | | | | 0.5 | 5 | | | | |
| Myrtaceae | <i>Cleistocalyx operculatus</i> | 水翁 | | | | | | | | | | | | | | | | | | |
| Athyriaceae | <i>Callipteris esculenta</i> | 菜蕨 | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Phragmites karka</i> | 卡開蘆 | 1.6 | 5 | | | | | 1.6 | 5 | | | | | 1.6 | 5 | | | | |
| Thelypteridaceae | <i>Cyclosorus parasiticus</i> | 華南毛蕨 | | | | | | | | | | | | | | | | | | |
| Equisetaceae | <i>Equisetum debile</i> | 筆管草 | 0.5 | 5 | | | | | 0.5 | 5 | | | | | 0.5 | 5 | | | | |
| Asteraceae | <i>Ageratum conyzoides</i> | 勝紅蕒 | | | | | | | | | | | | | | | | | | |
| Commelinaceae | <i>Commelina diffusa</i> | 節節草 | 0.6 | 10 | 0.4 | 10 | 0.3 | 10 | 0.6 | 10 | 0.5 | 10 | 0.3 | 10 | 0.6 | 10 | 0.5 | 10 | 0.3 | 10 |
| Solanaceae | <i>Solanum nigrum</i> | 龍葵 | | | | | | | | | | | | | | | | | | |
| Euphorbiaceae | <i>Mallotus paniculatus</i> | 白楸 | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Eleusine indica</i> | 牛筋草 | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum purpureum</i> | 象草 | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Wedelia chinensis</i> | 鋤眼菊 | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Bidens alba</i> | 白花鬼針草 | 0.8 | 5 | | | 0.4 | 8 | 0.8 | 5 | | | 0.4 | 8 | 0.8 | 5 | | | 0.4 | 8 |
| Poaceae | <i>Panicum repens</i> | 枯骨草 | 0.4 | 5 | | | | | 0.5 | 5 | | | | | 0.5 | 5 | | | | |
| Poaceae | <i>Coix lacryma-jobi</i> | 薏苡 | | | | | | | | | | | | | | | | | | |
| Convolvulaceae | <i>Ipomoea cairica</i> | 五爪金龍 | | | | | | | | | | | | | | | | | | |
| Cucurbitaceae | <i>Benincasa hispida</i> | 冬瓜 | | | | | | | | | | | | | | | | | | |
| Fabaceae | <i>Pueraria lobata</i> | 野葛 | | | | | | | | | | | | | | | | | | |
| Convolvulaceae | <i>Merremia hederacea</i> | 魚黃草 | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum alopecuroides</i> | 狼尾草 | | | | 0.3 | 5 | | | | | | 0.3 | 10 | | | | | 0.3 | 10 |
| Poaceae | <i>Brachiaria mutica</i> | 巴拉草 | | | 0.3 | 5 | 0.3 | 5 | | | 0.5 | 10 | 0.3 | 5 | | | 0.5 | 10 | 0.3 | 5 |
| Onagraceae | <i>Ludwigia erecta</i> | 美洲水丁香 | | | | | | | | | | | | | | | | | | |
| Malvaceae | <i>Hibiscus rosa-sinensis</i> | 大紅花 | | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus sp.</i> | 莎草 | | | | | | | | | | | | | | | | | | |
| Balsaminaceae | <i>Impatiens walleriana</i> | 非洲鳳仙 | | | | | | | | | | | | | | | | | | |
| Amaranthaceae | <i>Celosia argentea</i> | 青葙 | 1.5 | 5 | | | | | 1.5 | 5 | | | | | 1.5 | 5 | | | | |
| Bare Gound | | | | 35 | | 85 | | 62 | | 35 | | 80 | | 57 | | 35 | | 80 | | 57 |

- Reference point was the sampling location outside the works area used to compare with the data within works area.

P1 – Point count location 1; P2 – Point count location 2

Table 4.2. Flora species recorded from belt transect survey at the Upper Tai Po stream (T1- Upper stream sampling site and T2 - Lower stream sampling site)

| | | Post construction monitoring | | | | | | | Post construction monitoring | | | | | | | Post construction monitoring | | | | | | |
|------------------|---------------------------------|------------------------------|------------|----|------------|----|------------|----|------------------------------|---|------------|----|------------|----|------------|------------------------------|------------|----|------------|----|--|----|
| | | May-17 | | | | | | | Jun-17 | | | | | | | Jul-17 | | | | | | |
| | | Reference | | T1 | | T2 | | | Reference | | T1 | | T2 | | | Reference | | T1 | | T2 | | |
| Family | Species | Chinese name | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | | |
| Asteraceae | <i>Mikania micrantha</i> | 薇甘菊 | 0.5 | 10 | | | | | 0.5 | 5 | | | | | 0.5 | 5 | | | | | | |
| Moraceae | <i>Ficus hispida</i> | 對葉榕 | | | | | | | | | | | | | | | | | | | | |
| Ulmaceae | <i>Celtis sinensis</i> | 朴樹 | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Microstegium ciliatum</i> | 剛秀竹 | 1.7 | 10 | | | | | 1.7 | 5 | | | | | 1.7 | 5 | | | | | | |
| Euphorbiaceae | <i>Macaranga tanarius</i> | 血桐 | | | | | 0.3 | 10 | | | | | 0.3 | 5 | | | | | 0.4 | 5 | | |
| Araceae | <i>Alocasia odora</i> | 海芋 | 0.6 | 5 | | | | | 0.6 | 5 | | | | | 0.6 | 5 | | | | | | |
| Araceae | <i>Colocasia esculenta</i> | 芋 | 0.6 | 5 | | | | | 0.6 | 5 | | | | | 0.6 | 5 | | | | | | |
| Myrtaceae | <i>Cleistocalyx operculatus</i> | 水翁 | | | | | | | | | | | | | | | | | | | | |
| Athyriaceae | <i>Callipteris esculenta</i> | 菜蕨 | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Phragmites karka</i> | 卡開蘆 | 1.7 | 5 | | | | | 1.7 | 5 | | | | | 1.7 | 5 | | | | | | |
| Thelypteridaceae | <i>Cyclosorus parasiticus</i> | 華南毛蕨 | | | | | | | | | | | | | | | | | | | | |
| Equisetaceae | <i>Equisetum debile</i> | 筆管草 | 0.5 | 5 | | | | | 0.5 | 5 | | | | | 0.5 | 5 | | | | | | |
| Asteraceae | <i>Ageratum conyzoides</i> | 勝紅薊 | | | | | | | | | | | | | | | | | | | | |
| Commelinaceae | <i>Commelina diffusa</i> | 節節草 | 0.6 | 10 | 0.5 | 10 | 0.3 | 10 | 0.6 | 5 | 0.5 | 10 | 0.3 | 5 | 0.6 | 5 | 0.5 | 10 | 0.3 | 5 | | |
| Solanaceae | <i>Solanum nigrum</i> | 龍葵 | | | | | | | | | | | | | | | | | | | | |
| Euphorbiaceae | <i>Mallotus paniculatus</i> | 白楸 | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Eleusine indica</i> | 牛筋草 | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum purpureum</i> | 象草 | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Wedelia chinensis</i> | 鋤眼菊 | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Bidens alba</i> | 白花鬼針草 | 0.8 | 5 | | | 0.4 | 8 | 0.8 | 5 | | | 0.4 | 3 | 0.8 | 5 | | | 0.4 | 3 | | |
| Poaceae | <i>Panicum repens</i> | 枯骨草 | 0.5 | 5 | | | | | 0.5 | 5 | | | | | 0.6 | 5 | | | | | | |
| Poaceae | <i>Coix lacryma-jobi</i> | 薏苡 | | | | | | | | | | | | | | | | | | | | |
| Convolvulaceae | <i>Ipomoea cairica</i> | 五爪金龍 | | | | | | | | | | | | | | | | | | | | |
| Cucurbitaceae | <i>Benincasa hispida</i> | 冬瓜 | | | | | | | | | | | | | | | | | | | | |
| Fabaceae | <i>Pueraria lobata</i> | 野葛 | | | | | | | | | | | | | | | | | | | | |
| Convolvulaceae | <i>Merremia hederacea</i> | 魚黃草 | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum alopecuroides</i> | 狼尾草 | | | | | 0.3 | 10 | | | | | 0.3 | 10 | | | | | 0.4 | 10 | | |
| Poaceae | <i>Brachiaria mutica</i> | 巴拉草 | | | 0.5 | 10 | 0.3 | 5 | | | 0.5 | 10 | 0.3 | 5 | | | 0.5 | 10 | 0.3 | 5 | | |
| Onagraceae | <i>Ludwigia erecta</i> | 美洲水丁香 | | | | | | | | | | | | | | | | | | | | |
| Malvaceae | <i>Hibiscus rosa-sinensis</i> | 大紅花 | | | | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus sp.</i> | 莎草 | | | | | | | | | | | | | | | | | | | | |
| Balsaminaceae | <i>Impatiens walleriana</i> | 非洲鳳仙 | | | | | | | | | | | | | | | | | | | | |
| Amaranthaceae | <i>Celosia argentea</i> | 青葙 | 1.5 | 5 | | | | | 1.5 | 5 | | | | | 1.5 | 5 | | | | | | |
| Bare Gound | | | | 35 | | | 80 | | 57 | | 50 | | | 80 | | 72 | | 50 | | 80 | | 72 |

- Reference point was the sampling location outside the works area used to compare with the data within works area.

P1 – Point count location 1; P2 – Point count location 2

Table 4.2. Flora species recorded from belt transect survey at the Upper Tai Po stream (T1 - Upper stream sampling site and T2 - Lower stream sampling site)

| Family | Species | Chinese name | Post construction monitoring | | | | | | | | Post construction monitoring | | | | Post construction monitoring | | | | | | | |
|------------------|---------------------------------|--------------|------------------------------|----|------------|----|------------|----|------------|----|------------------------------|----|------------|----|------------------------------|----|------------|----|------------|----|----|--|
| | | | Stream | | Aug-17 | | | | Sep-17 | | | | Oct-17 | | | | | | | | | |
| | | | Transect | | Reference | | T1 | | T2 | | Reference | | T1 | | T2 | | Reference | | T1 | | T2 | |
| | | | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | Height (m) | % | | |
| Asteraceae | <i>Mikania micrantha</i> | 薇甘菊 | 0.5 | 5 | | | | | 0.5 | 5 | | | | | 0.5 | 5 | | | | | | |
| Moraceae | <i>Ficus hispida</i> | 對葉榕 | | | | | | | | | | | | | | | | | | | | |
| Ulmaceae | <i>Celtis sinensis</i> | 朴樹 | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Microstegium ciliatum</i> | 剛秀竹 | 1.7 | 5 | | | | | 1.7 | 5 | | | | | 1.7 | 5 | | | | | | |
| Euphorbiaceae | <i>Macaranga tanarius</i> | 血桐 | | | | | 0.5 | 5 | | | | | 0.5 | 5 | | | | | 0.6 | 5 | | |
| Araceae | <i>Alocasia odora</i> | 海芋 | 0.6 | 5 | | | | | 0.7 | 5 | | | | | 0.7 | 5 | | | | | | |
| Araceae | <i>Colocasia esculenta</i> | 芋 | 0.6 | 5 | | | | | 0.7 | 5 | | | | | 0.7 | 5 | | | | | | |
| Myrtaceae | <i>Cleistocalyx operculatus</i> | 水翁 | | | | | | | | | | | | | | | | | | | | |
| Athyriaceae | <i>Callipteris esculenta</i> | 菜蕨 | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Phragmites karka</i> | 卡開蘆 | 1.7 | 5 | | | | | 1.7 | 5 | | | | | 1.7 | 5 | | | | | | |
| Thelypteridaceae | <i>Cyclosorus parasiticus</i> | 華南毛蕨 | | | | | | | | | | | | | | | | | | | | |
| Equisetaceae | <i>Equisetum debile</i> | 筆管草 | 0.5 | 5 | | | | | 0.6 | 5 | | | | | 0.6 | 5 | | | | | | |
| Asteraceae | <i>Ageratum conyzoides</i> | 勝紅蕒 | | | | | | | | | | | | | | | | | | | | |
| Commelinaceae | <i>Commelina diffusa</i> | 節節草 | 0.6 | 5 | 0.5 | 10 | 0.3 | 5 | 0.6 | 5 | 0.5 | 10 | 0.3 | 5 | 0.6 | 5 | 0.5 | 10 | 0.5 | 5 | | |
| Solanaceae | <i>Solanum nigrum</i> | 龍葵 | | | | | | | | | | | | | | | | | | | | |
| Euphorbiaceae | <i>Mallotus paniculatus</i> | 白楸 | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Eleusine indica</i> | 牛筋草 | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum purpureum</i> | 象草 | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Wedelia chinensis</i> | 鋤眼菊 | | | | | | | | | | | | | | | | | | | | |
| Asteraceae | <i>Bidens alba</i> | 白花鬼針草 | 0.8 | 5 | | | 0.4 | 3 | 0.8 | 5 | | | 0.4 | 3 | 0.8 | 5 | | | 0.4 | 3 | | |
| Poaceae | <i>Panicum repens</i> | 枯骨草 | 0.6 | 5 | | | | | 0.6 | 5 | | | | | 0.6 | 5 | | | | | | |
| Poaceae | <i>Coix lacryma-jobi</i> | 薏苡 | | | | | | | | | | | | | | | | | | | | |
| Convolvulaceae | <i>Ipomoea cairica</i> | 五爪金龍 | | | | | | | | | | | | | | | | | | | | |
| Cucurbitaceae | <i>Benincasa hispida</i> | 冬瓜 | | | | | | | | | | | | | | | | | | | | |
| Fabaceae | <i>Pueraria lobata</i> | 野葛 | | | | | | | | | | | | | | | | | | | | |
| Convolvulaceae | <i>Merremia hederacea</i> | 魚黃草 | | | | | | | | | | | | | | | | | | | | |
| Poaceae | <i>Pennisetum alopecuroides</i> | 狼尾草 | | | | | 0.4 | 10 | | | | | 0.4 | 10 | | | | | 0.5 | 10 | | |
| Poaceae | <i>Brachiaria mutica</i> | 巴拉草 | | | 0.5 | 10 | 0.3 | 5 | | | 0.5 | 10 | 0.3 | 5 | | | 0.5 | 10 | 0.3 | 5 | | |
| Onagraceae | <i>Ludwigia erecta</i> | 美洲水丁香 | | | | | | | | | | | | | | | | | | | | |
| Malvaceae | <i>Hibiscus rosa-sinensis</i> | 大紅花 | | | | | | | | | | | | | | | | | | | | |
| Cyperaceae | <i>Cyperus sp.</i> | 莎草 | | | | | | | | | | | | | | | | | | | | |
| Balsaminaceae | <i>Impatiens walleriana</i> | 非洲鳳仙 | | | | | | | | | | | | | | | | | | | | |
| Amaranthaceae | <i>Celosia argentea</i> | 青葙 | 1.5 | 5 | | | | | 1.5 | 5 | | | | | 1.5 | 5 | | | | | | |
| Bare Gound | | | | 50 | | 80 | | 72 | | 50 | | 80 | | 72 | | 50 | | 80 | | 72 | | |

- Reference point was the sampling location outside the works area used to compare with the data within works area.

P1 – Point count location 1; P2 – Point count location 2

Table 4.3 Avifauna recorded along survey transects and at two selected point count locations for Upper Tai Po River. (T1- Upper stream section and T2- Lower stream section)

| | | | | | Baseline survey | | | Impact monitoring | | | | | | Impact monitoring | | | | | | Impact monitoring | | | | | | Post construction monitoring | | | | | | | | | | | | | | | | | | | | |
|-----------------------------|-------------------------------|--------------|--------|--------|-----------------|----|----|-------------------|----|----|-----------|----|----|-------------------|----|----|-----------|----|----|-------------------|----|----|-----------|----|----|------------------------------|----|----|-----------|----|----|-----------|----|----|-----------|----|----|-----------|----|----|--------|----|----|--------|----|----|
| | | | | | Oct-07 | | | Jan-09 | | | Jul-09 | | | Jan-10 | | | Jul-10 | | | Jan-11 | | | Jul-11 | | | Jan-12 | | | Jul-12 | | | Mar-13 | | | Jul-13 | | | Jan-14 | | | Feb-14 | | | Mar-14 | | |
| | | | | | Abundance | | | Abundance | | | Abundance | | | Abundance | | | Abundance | | | Abundance | | | Abundance | | | Abundance | | | Abundance | | | Abundance | | | Abundance | | | Abundance | | | | | | | | |
| Common Name | Species name | Chinese name | Status | Rarity | C | P1 | P2 | C | T1 | T2 | C | T1 | T2 | C | T1 | T2 | C | T1 | T2 | C | T1 | T2 | C | T1 | T2 | C | T1 | T2 | C | T1 | T2 | C | T1 | T2 | C | T1 | T2 | C | T1 | T2 | | | | | | |
| Scarlet-backed Flowerpecker | <i>Dicaeum cruentatum</i> | 朱背啄花鳥 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Siberian Stonechat | <i>Saxicola maurus</i> | 黑喉石鵯 | WV | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Silver-eared Mesia | <i>Leiothrix argentauris</i> | 銀耳相思鳥 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sooty-headed Bulbul | <i>Pycnonotus aurigaster</i> | 白喉紅臀鶇 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Spotted Dove | <i>Streptopelia chinensis</i> | 珠頸斑鳩 | R | C | + | | 2 | + | 1 | | + | 1 | 3 | + | 1 | 2 | + | 1 | 1 | + | 1 | 1 | + | 1 | 1 | + | 1 | 1 | + | 1 | 1 | + | 1 | 1 | + | 1 | 1 | + | 1 | 1 | + | 1 | 1 | | | |
| Violet Whistling Thrush | <i>Myiophonus caeruleus</i> | 紫嘯鶇 | R | C | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| White Wagtail | <i>Motacilla alba</i> | 白鶇鶇 | WV, R | C | + | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| White-breasted Waterhen | <i>Amaurornis phoenicurus</i> | 白胸苦惡鳥 | R | C | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| White-rumped Munia | <i>Lonchura striata</i> | 白腰文鳥 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Yellow Bellid Prinia | <i>Prinia flaviventris</i> | 灰頭鶇鶇 | R | C | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Yellow Wagtail | <i>Motacilla flava</i> | 黃鶇鶇 | WV&PM | C | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of birds | | | | | | 19 | 10 | | 22 | 23 | | 10 | 25 | | 24 | 39 | | 26 | 17 | | 21 | 13 | | 5 | 7 | | 10 | 9 | | 15 | 10 | | 12 | 8 | 0 | 9 | 7 | | 15 | 12 | | 26 | 24 | | 15 | 28 |
| No. of species | | | | | 19 | 11 | 7 | 8 | 8 | 6 | 8 | 6 | 8 | 18 | 9 | 13 | 19 | 13 | 11 | 23 | 10 | 10 | 20 | 5 | 5 | 16 | 5 | 5 | 14 | 7 | 6 | 15 | 5 | 6 | 21 | 5 | 5 | 25 | 7 | 8 | 26 | 12 | 9 | 27 | 10 | 13 |

Note: R – Resident; WV – Winter visitor; Sv – Summer Visitor; PM – Passage migrant; C – Common; U – Uncommon; SpM – Spring migrant; C – transect count; P1 – Point count location 1; P2 – Point count location 2

Abundance indication: +, No. of indiv. 1 ~ 3; ++, No. of indiv. 4 ~ 10; +++, No. of indiv. >10;

Commonness and status were decided according to AFCD biodiversity website (www.hkbbiodiversity.net)

All bird species are under protection of Wild Animals Protection Ordinance (Cap. 170)

Endangered Species of Animals and Plants Ordinance (Cap. 586)

RC : Regional concern Fellowes *et al* (2002)

LC : Local Concern Fellowes *et al* (2002)

PRC: Potential Regional onver Fellowes *et al* (2002)

CR: Rare in China Red Data Book Status

VU: Vulnerable in China Red Data Book Status

Table 4.3 Avifauna recorded along survey transects and at two selected point count locations for Upper Tai Po River. (T1- Upper stream section and T2- Lower stream section)

| Common Name | Species name | Chinese name | Status | Rarity | Post construction monitoring | | | | | | | | | Post construction monitoring | | | | | | | | | Post construction monitoring | | | | | | | | | Post construction monitoring | | | | | | | | | |
|-----------------------------|-------------------------------|--------------|--------|--------|------------------------------|----|----|--------|-----------|----|--------|----|-----------|------------------------------|----|----|-----------|----|----|--------|-----------|----|------------------------------|----|-----------|--------|----|----|-----------|----|----|------------------------------|-----------|----|--------|----|-----------|--------|----|----|-----------|
| | | | | | Apr-14 | | | May-14 | | | Jun-14 | | | Jul-14 | | | Aug-14 | | | Sep-14 | | | Oct-14 | | | Oct-14 | | | Dec-14 | | | Jan-15 | | | Feb-15 | | | Mar-15 | | | |
| | | | | | Abundance | C | T1 | T2 | Abundance | C | T1 | T2 | Abundance | C | T1 | T2 | Abundance | C | T1 | T2 | Abundance | C | T1 | T2 | Abundance | C | T1 | T2 | Abundance | C | T1 | T2 | Abundance | C | T1 | T2 | Abundance | C | T1 | T2 | Abundance |
| Scarlet-backed Flowerpecker | <i>Dicaeum cruentatum</i> | 朱背啄花鳥 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Siberian Stonechat | <i>Saxicola maurus</i> | 黑喉石鵲 | WV | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Silver-eared Mesia | <i>Leiothrix argentauris</i> | 銀耳相思鳥 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sooty-headed Bulbul | <i>Pycnonotus aurigaster</i> | 白喉紅臀鶇 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Spotted Dove | <i>Streptopelia chinensis</i> | 珠頸斑鳩 | R | C | ++ | 2 | 3 | ++ | 3 | 5 | ++ | 2 | 3 | ++ | 1 | 2 | ++ | 2 | 4 | ++ | 1 | 3 | ++ | 2 | 3 | ++ | 3 | 4 | + | 2 | 3 | ++ | 2 | 3 | +++ | 2 | 2 | ++ | 2 | 3 | |
| Violet Whistling Thrush | <i>Myiophonus caeruleus</i> | 紫嘯鶇 | R | C | | | | + | | | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| White Wagtail | <i>Motacilla alba</i> | 白鶇鶇 | WV, R | C | + | | 1 | | | | + | | 1 | + | 1 | 2 | + | 1 | 1 | + | 3 | 4 | + | 2 | 2 | + | 2 | 1 | + | | | | | + | 1 | 1 | + | | 1 | + | |
| White-breasted Waterhen | <i>Amaurornis phoenicurus</i> | 白胸苦惡鳥 | R | C | + | | | | + | | | + | | | | | + | | | | | | | | | | | | | | | | | | | | | | | | |
| White-rumped Munia | <i>Lonchura striata</i> | 白腰文鳥 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Yellow Bellid Prinia | <i>Prinia flaviventris</i> | 灰頭鶇鶇 | R | C | + | | | | + | | | | + | | | | + | | | | | | | | | | | | | | | | | | | | | | | | |
| Yellow Wagtail | <i>Motacilla flava</i> | 黃鶇鶇 | WV&PM | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of birds | | | | | | | 13 | 16 | | 14 | 22 | | 10 | 14 | | 9 | 18 | | 11 | 22 | | 14 | 23 | | 17 | 22 | | 8 | 17 | | 8 | 17 | | 14 | 20 | | 12 | 31 | | | |
| No. of species | | | | | | 24 | 7 | 9 | 24 | 7 | 7 | 17 | 5 | 8 | 17 | 7 | 8 | 18 | 6 | 10 | 19 | 8 | 12 | 21 | 9 | 13 | 23 | 10 | 13 | 19 | 4 | 9 | 22 | 4 | 9 | 20 | 9 | 12 | 17 | 6 | 14 |

Note: R – Resident; WV – Winter visitor; Sv – Summer Visitor; PM – Passage migrant; C – Common; U – Uncommon; SpM – Spring migrant; C – transect count; P1 – Point count location 1; P2 – Point count location 2

Abundance indication: +, No. of indiv. 1 ~ 3; ++, No. of indiv. 4 ~ 10; +++, No. of indiv. >10;

Commonness and status were decided according to AFCOD biodiversity website (www.hkbiodiversity.net)

All bird species are under protection of Wild Animals Protection Ordinance (Cap. 170)

Endangered Species of Animals and Plants Ordinance (Cap. 586)

RC : Regional concern Fellowes *et al* (2002)

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Table 4.3 Avifauna recorded along survey transects and at two selected point count locations for Upper Tai Po River. (T1- Upper stream section and T2- Lower stream section)

| | | Post construction monitoring | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------|-------------------------------|------------------------------|--------|--------|-----------|----|----|-----------|----|----|-----------|----|----|-----------|----|----|-----------|----|----|-----------|----|----|-----------|----|----|-----------|----|----|-----------|----|----|-----------|----|----|-----------|----|----|--------|----|----|----|----|----|
| | | Apr-15 | | | May-15 | | | Jun-15 | | | Jul-15 | | | Aug-15 | | | Sep-15 | | | Oct-15 | | | Nov-15 | | | Dec-15 | | | Jan-16 | | | Feb-16 | | | Mar-16 | | | Apr-16 | | | | | |
| Common Name | Species name | Chinese name | Status | Rarity | Abundance | | | Abundance | | | Abundance | | | Abundance | | | Abundance | | | Abundance | | | Abundance | | | Abundance | | | Abundance | | | Abundance | | | Abundance | | | | | | | | |
| | | | | | C | T1 | T2 | C | T1 | T2 | C | T1 | T2 | C | T1 | T2 | C | T1 | T2 | C | T1 | T2 | C | T1 | T2 | C | T1 | T2 | C | T1 | T2 | C | T1 | T2 | C | T1 | T2 | | | | | | |
| Scarlet-backed Flowerpecker | <i>Dicaeum cruentatum</i> | 朱背啄花鳥 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Siberian Stonechat | <i>Saxicola maurus</i> | 黑喉石鵲 | WV | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Silver-eared Mesia | <i>Leiothrix argentauris</i> | 銀耳相思鳥 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sooty-headed Bulbul | <i>Pycnonotus aurigaster</i> | 白喉紅臀鶇 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Spotted Dove | <i>Streptopelia chinensis</i> | 珠頸斑鳩 | R | C | ++ | 2 | 3 | ++ | 2 | 3 | ++ | 2 | 3 | ++ | 3 | 3 | ++ | 3 | 1 | ++ | 1 | 3 | ++ | 3 | 3 | ++ | 4 | 2 | ++ | 1 | 3 | ++ | 2 | 3 | ++ | 1 | 3 | ++ | 3 | 3 | ++ | 5 | 3 |
| Violet Whistling Thrush | <i>Myiophonus caeruleus</i> | 紫嘯鶇 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| White Wagtail | <i>Motacilla alba</i> | 白鶇鶇 | WV, R | C | ++ | | 3 | ++ | | 2 | ++ | | 3 | ++ | | 3 | ++ | 1 | 2 | ++ | | 2 | + | 1 | 1 | + | 1 | 1 | + | | 2 | + | 1 | 2 | + | 1 | 1 | + | 1 | 2 | + | 2 | 1 |
| White-breasted Waterhen | <i>Amaurornis phoenicurus</i> | 白胸苦惡鳥 | R | C | + | 1 | | + | 1 | | + | 1 | | | | | | + | 1 | | | | | | | | | | | | | | | | | | | | | + | | | |
| White-rumped Munia | <i>Lonchura striata</i> | 白腰文鳥 | R | C | | | | | | | | | | | | | + | 1 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Yellow Bellid Prinia | <i>Prinia flaviventris</i> | 灰頭鵯鶇 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Yellow Wagtail | <i>Motacilla flava</i> | 黃鶇鶇 | WV&PM | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of birds | | | | | | 18 | 32 | | 24 | 34 | | 31 | 33 | | 42 | 38 | | 31 | 38 | | 29 | 36 | | 37 | 33 | | 27 | 34 | | 19 | 32 | | 26 | 33 | | 21 | 30 | | 29 | 28 | | 27 | 32 |
| No. of species | | | | | 19 | 11 | 14 | 18 | 15 | 14 | 18 | 14 | 13 | 17 | 14 | 13 | 21 | 13 | 17 | 22 | 11 | 14 | 17 | 14 | 13 | 16 | 11 | 12 | 15 | 8 | 12 | 15 | 9 | 12 | 16 | 9 | 11 | 17 | 9 | 10 | 18 | 9 | 9 |

Note: R – Resident; WV – Winter visitor; Sv – Summer Visitor; PM – Passage migrant; C – Common; U – Uncommon; SpM – Spring migrant; C – transect count; P1 – Point count location 1; P2 – Point count location 2

Abundance indication: +, No. of indiv. 1 ~ 3; ++, No. of indiv. 4 ~ 10; +++, No. of indiv. >10;

Commonness and status were decided according to AFCD biodiversity website (www.hkbbiodiversity.net)

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Table 4.3 Avifauna recorded along survey transects and at two selected point count locations for Upper Tai Po River. (T1- Upper stream section and T2- Lower stream section)

| | | | | | Post construction monitoring | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------|-------------------------------|--------------|--------|--------|------------------------------|----|----|-----------|----|----|-----------|----|----|-----------|----|----|-----------|----|----|-----------|----|----|-----------|----|----|-----------|----|----|--------|----|----|
| | | | | | May-16 | | | Jun-16 | | | Jul-16 | | | Aug-16 | | | Sep-16 | | | Oct-16 | | | Nov-16 | | | Dec-16 | | | Jan-17 | | |
| | | | | | Abundance | | | Abundance | | | Abundance | | | Abundance | | | Abundance | | | Abundance | | | Abundance | | | Abundance | | | | | |
| Common Name | Species name | Chinese name | Status | Rarity | C | T1 | T2 | C | T1 | T2 | C | T1 | T2 | C | T1 | T2 | C | T1 | T2 | C | T1 | T2 | C | T1 | T2 | C | T1 | T2 | | | |
| Scarlet-backed Flowerpecker | <i>Dicaeum cruentatum</i> | 朱背啄花鳥 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Siberian Stonechat | <i>Saxicola maurus</i> | 黑喉石鵲 | WV | C | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Silver-eared Mesia | <i>Leiothrix argentauris</i> | 銀耳相思鳥 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sooty-headed Bulbul | <i>Pycnonotus aurigaster</i> | 白喉紅臀鶇 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Spotted Dove | <i>Streptopelia chinensis</i> | 珠頸斑鳩 | R | C | ++ | 2 | 3 | ++ | 4 | 5 | ++ | 3 | 4 | ++ | 4 | 5 | ++ | 3 | 4 | ++ | 4 | 5 | ++ | 4 | 2 | ++ | 3 | 2 | ++ | 5 | 2 |
| Violet Whistling Thrush | <i>Myiophonus caeruleus</i> | 紫嘯鶇 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| White Wagtail | <i>Motacilla alba</i> | 白鶇鶇 | WV, R | C | + | 1 | 1 | + | | 1 | + | | 1 | + | 1 | 1 | + | 1 | 1 | + | 1 | 1 | + | 1 | 1 | + | 2 | 1 | + | 1 | 1 |
| White-breasted Waterhen | <i>Amaurornis phoenicurus</i> | 白胸苦惡鳥 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| White-rumped Munia | <i>Lonchura striata</i> | 白腰文鳥 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Yellow Bellid Prinia | <i>Prinia flaviventris</i> | 灰頭鶇鶇 | R | C | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Yellow Wagtail | <i>Motacilla flava</i> | 黃鶇鶇 | WV&PM | C | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of birds | | | | | | 21 | 31 | | 22 | 34 | | 12 | 29 | | 19 | 37 | | 19 | 34 | | 22 | 37 | | 28 | 26 | | 29 | 31 | | 30 | 21 |
| No. of species | | | | | 18 | 9 | 10 | 19 | 8 | 10 | 16 | 5 | 10 | 16 | 8 | 11 | 15 | 8 | 10 | 15 | 9 | 12 | 16 | 13 | 11 | 16 | 9 | 12 | 16 | 11 | 12 |

Note: R – Resident; WV – Winter visitor; Sv – Summer Visitor; PM – Passage migrant; C – Common; U – Uncommon; SpM – Spring migrant; C – transect count; P1 – Point count location 1; P2 – Point count location 2

Abundance indication: +, No. of indiv. 1 ~ 3; ++, No. of indiv. 4 ~ 10; +++, No. of indiv. >10; Commonness and status were decided according to AFCD biodiversity website (www.hkbiodiversity.net)

All bird species are under protection of Wild Animals Protection Ordinance (Cap. 170)

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RC : Regional concern Fellowes *et al* (2002)

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Table 4.3 Avifauna recorded along survey transects and at two selected point count locations for Upper Tai Po River. (T1- Upper stream section and T2- Lower stream section)

| Post construction monitoring | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|-------------------------------|--------------|--------|--------|-----------|----|----|-----------|----|----|-----------|----|----|-----------|----|----|-----------|----|----|-----------|----|----|-----------|----|----|--|
| | | | | | Feb-17 | | | Mar-17 | | | Apr-17 | | | May-17 | | | Jun-17 | | | Jul-17 | | | May-17 | | | |
| | | | | | Abundance | | | Abundance | | | Abundance | | | Abundance | | | Abundance | | | Abundance | | | Abundance | | | |
| Common Name | Species name | Chinese name | Status | Rarity | C | T1 | T2 | C | T1 | T2 | C | T1 | T2 | C | T1 | T2 | C | T1 | T2 | C | T1 | T2 | C | T1 | T2 | |
| Scarlet-backed Flowerpecker | <i>Dicaeum cruentatum</i> | 朱背啄花鳥 | R | C | | | | | | | | | | | | | | | | | | | | | | |
| Siberian Stonechat | <i>Saxicola maurus</i> | 黑喉石鵲 | WV | C | | | | | | | | | | | | | | | | | | | | | | |
| Silver-eared Mesia | <i>Leiothrix argentauris</i> | 銀耳相思鳥 | R | C | | | | | | | | | | | | | | | | | | | | | | |
| Sooty-headed Bulbul | <i>Pycnonotus aurigaster</i> | 白喉紅臀鶇 | R | C | | | | | | | | | | | | | | | | | | | | | | |
| Spotted Dove | <i>Streptopelia chinensis</i> | 珠頸斑鳩 | R | C | ++ | 3 | 3 | ++ | 3 | 2 | ++ | 5 | 4 | ++ | 5 | 5 | ++ | 2 | 4 | ++ | 3 | 5 | ++ | 5 | 5 | |
| Violet Whistling Thrush | <i>Myiophonus caeruleus</i> | 紫嘯鶇 | R | C | | | | | | | | | | | | | | | | | | | | | | |
| White Wagtail | <i>Motacilla alba</i> | 白鶇鶇 | WV, R | C | + | 2 | 1 | + | 1 | 1 | + | | | + | 1 | 1 | + | 1 | 1 | + | 1 | 1 | + | 1 | 1 | |
| White-breasted Waterhen | <i>Amaurornis phoenicurus</i> | 白胸苦惡鳥 | R | C | | | | | | | + | | | | | | | | | | | | | | | |
| White-rumped Munia | <i>Lonchura striata</i> | 白腰文鳥 | R | C | | | | | | | | | | | | | | | | | | | | | | |
| Yellow Bellid Prinia | <i>Prinia flaviventris</i> | 灰頭鶇鶇 | R | C | | | | | | | | | | | | | | | | | | | | | | |
| Yellow Wagtail | <i>Motacilla flava</i> | 黃鶇鶇 | WV&PM | C | | | | | | | | | | | | | | | | | | | | | | |
| Number of birds | | | | | | 27 | 29 | | 28 | 28 | | 20 | 30 | | 24 | 30 | | 23 | 24 | | 24 | 30 | | 24 | 30 | |
| No. of species | | | | | 18 | 10 | 11 | 19 | 9 | 12 | 18 | 6 | 10 | 17 | 10 | 11 | 15 | 8 | 12 | 15 | 9 | 9 | 17 | 10 | 11 | |

Note: R – Resident; WV – Winter visitor; Sv – Summer Visitor; PM – Passage migrant; C – Common; U – Uncommon; SpM – Spring migrant; C – transect count; P1 – Point count location 1; P2 – Point count location 2

Abundance indication: +, No. of indiv. 1 ~ 3; ++, No. of indiv. 4 ~ 10; +++, No. of indiv. >10;

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Table 4.3 Avifauna recorded along survey transects and at two selected point count locations for Upper Tai Po River. (T1- Upper stream section and T2- Lower stream section)

| Post construction monitoring | | | | | | | | | | | | | | | | | | | |
|------------------------------|-------------------------------|--------------|--------|--------|-----------|----|----|-----------|----|----|-----------|----|----|-----------|----|----|-----------|----|----|
| | | | | | Jun-17 | | | Jul-17 | | | Aug-17 | | | Sep-17 | | | Oct-17 | | |
| | | | | | Abundance | | | Abundance | | | Abundance | | | Abundance | | | Abundance | | |
| Common Name | Species name | Chinese name | Status | Rarity | C | T1 | T2 | C | T1 | T2 | C | T1 | T2 | C | T1 | T2 | C | T1 | T2 |
| Scarlet-backed Flowerpecker | <i>Dicaeum cruentatum</i> | 朱背啄花鳥 | R | C | | | | | | | | | | | | | | | |
| Siberian Stonechat | <i>Saxicola maurus</i> | 黑喉石鵲 | WV | C | | | | | | | | | | | | | | | |
| Silver-eared Mesia | <i>Leiothrix argentauris</i> | 銀耳相思鳥 | R | C | | | | | | | | | | | | | | | |
| Sooty-headed Bulbul | <i>Pycnonotus aurigaster</i> | 白喉紅臀鶇 | R | C | | | | | | | | | | | | | | | |
| Spotted Dove | <i>Streptopelia chinensis</i> | 珠頸斑鳩 | R | C | ++ | 2 | 4 | ++ | 3 | 5 | ++ | 5 | 2 | ++ | 3 | 3 | ++ | 4 | 2 |
| Violet Whistling Thrush | <i>Myiophonus caeruleus</i> | 紫嘯鶇 | R | C | | | | | | | | | | | | | | | |
| White Wagtail | <i>Motacilla alba</i> | 白鶇鶇 | WV, R | C | + | 1 | 1 | + | 1 | 1 | + | 1 | 1 | + | 2 | | + | 1 | 1 |
| White-breasted Waterhen | <i>Amaurornis phoenicurus</i> | 白胸苦惡鳥 | R | C | | | | | | | | | | | | | | | |
| White-rumped Munia | <i>Lonchura striata</i> | 白腰文鳥 | R | C | | | | | | | | | | | | | | | |
| Yellow Bellid Prinia | <i>Prinia flaviventris</i> | 灰頭鶇鶇 | R | C | | | | | | | | | | | | | | | |
| Yellow Wagtail | <i>Motacilla flava</i> | 黃鶇鶇 | WV&PM | C | | | | | | | | | | | | | | | |
| Number of birds | | | | | | 23 | 24 | | 24 | 30 | | 26 | 12 | | 26 | 16 | | 26 | 16 |
| No. of species | | | | | 15 | 8 | 12 | 15 | 9 | 9 | 11 | 9 | 7 | 13 | 9 | 9 | 13 | 10 | 9 |

Note: R – Resident; WV – Winter visitor; Sv – Summer Visitor; PM – Passage migrant; C – Common; U – Uncommon; SpM – Spring migrant; C – transect count; P1 – Point count location 1; P2 – Point count location 2

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CR: Rare in China Red Data Book Status

VU: Vulnerable in China Red Data Book Status

Table 4.4. Odonate species recorded at the Upper Tai Po River

| Species | Common name | Chinese name | Status | Commonness | Baseline survey | Impact monitoring | | | | | Impact monitoring | | | | |
|---------------------------------------------|---------------------------|--------------|--------|------------|-----------------|-------------------|--------|--------|--------|--------|-------------------|--------|--------|--------|--------|
| | | | | | Oct-07 | Jan-09 | Jul-09 | Jan-10 | Jul-10 | Jan-11 | Jul-11 | Jan-12 | Jul-12 | Mar-13 | Jul-13 |
| <i>Aethriamanta brevipennis brevipennis</i> | Elusive Adjutant | 短腹異蜻 | NP | U | | | | | | | | | | | |
| <i>Macrodiplax cora</i> | Coastal Glider | 高翔濼蜻 | NP | C | | | | | | | | | | | |
| <i>Ceragrion auranticum ryukyuanum</i> | Orange-tailed Sprite | 琉球橘黃蝶 | NP | VC | | | | | | | | | | | |
| <i>Coper marginipes</i> | Yellow Featherlegs | 黃狹鼻蝶 | NP | VC | | | | | | | | | | | |
| <i>Crocothemis servilia servilia</i> | Crimson Darter | 紅蜻 | NP | VC | + | | + | | + | | | | | | |
| <i>Euphaea decorata</i> | Black-banded Gossamerwing | 方帶幽蝶 | NP | VC | | | | | | | + | | | | |
| <i>Neurobasis chinensis</i> | Chinese Greenwing | 華艷色蝶 | NP | C | | | | | + | | | | | | |
| <i>Neurothemis fulvia</i> | Russet Percher | 網脈蜻 | NP | VC | | | | | | | | | | | |
| <i>Orthetrum chrysis</i> | Red-faced Skimmer | 華麗灰蜻 | NP | VC | | + | + | | + | | | | + | | + |
| <i>Orthetrum glaucum</i> | Common blue skimmer | 黑尾灰蜻 | NP | VC | + | + | + | | | | | | | | + |
| <i>Orthetrum luzonicum</i> | Marsh Skimmer | 呂宋灰蜻 | NP | VC | | | | | | | | + | | | |
| <i>Orthetrum pruinosum neglectum</i> | Common Red Skimmer | 赤褐灰蜻 | NP | VC | | | | | | | | | | | |
| <i>Palpopleura sexmaculata sexmaculata</i> | Asian Widow | 六斑曲緣蜻 | NP | C | | | | | | | | | + | | |
| <i>Pantala flavescens</i> | Wandering Glider | 黃蜻 | NP | VC | + | | + | + | + | + | ++ | + | + | + | + |
| <i>Paracercion calamorum dyeri</i> | Dusky Lilysquatter | 蒼尾蝶 | P, LC | C | | | | | | | | | | | |
| <i>Prodasineura autumnalis</i> | Black Threadtail | 烏齒原蝶 | NP | VC | | | | | | | | | | | |
| <i>Pseudagrion rubriceps rubriceps</i> | Orange-faced Sprite | 丹頂斑蝶 | NP | C | | | | | | | + | | | | |
| <i>Rhinocypha perforata</i> | Common Blue Jewel | 三斑鼻蝶 | NP | VC | | | | | + | | | | | | |
| <i>Trithemis Aurora</i> | Crimson dropwing | 曉靄蜻 | NP | VC | + | | | | + | | | | | | |
| <i>Trithemis festiva</i> | Indigo Dropwing | 靄靄蜻 | NP | VC | | | | | | | + | | + | | + |
| <i>Urothemis signata signata</i> | Scarlet Basket | 赤斑曲鈎脈蜻 | NP | C | | | | | | | + | | | | |
| <i>Zygonyx iris insignis</i> | Emerald Cascader | 彩虹蜻 | P | P,PGC | | | | | | | | | | | |
| No of Species | | | | | 4 | 2 | 4 | 1 | 6 | 1 | 5 | 1 | 5 | 1 | 4 |

Note: NP – Not protected in Hong Kong P- Protected in Hong Kong

“VC” – Very Common; “UC” – Uncommon; “C” – Common

“+” – Species exists in the study area

“++” – Species common in the study area

“+++” – Species abundance in the study area

Commonness and status were decided according to AFCD biodiversity website (www.hkbiodiversity.net)

LC- Local Concern - Fellowes *et al* (2002)

PGC - Potential Global Concern - Fellowes *et al* (2002)

Table 4.4. Odonate species recorded at the UpperTai Po River

| Species | Common name | Chinese name | Status | Commonness | Post construction monitoring | | | | | | | | | | | | | | | | | |
|---------------------------------------------|---------------------------|--------------|--------|------------|------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---|
| | | | | | Jan-14 | Feb-14 | Mar-14 | Apr-14 | May-14 | Jun-14 | Jul-14 | Aug-14 | Sep-14 | Oct-14 | Nov-14 | Dec-14 | Jan-15 | Feb-15 | Mar-15 | Apr-15 | May-15 | |
| <i>Aethriamanta brevipennis brevipennis</i> | Elusive Adjutant | 短腹異蜻 | NP | U | | | | | | | | | | | | | | | | | | |
| <i>Macrodiplax cora</i> | Coastal Glider | 高翔濼蜻 | NP | C | | | | | | | | | | | | | | | | | | |
| <i>Ceriagrion auranticum ryukyuanum</i> | Orange-tailed Sprite | 琉球稀黃蝶 | NP | VC | | | | | + | + | | | | | | | | | | | + | + |
| <i>Copera marginipes</i> | Yellow Featherlegs | 黃狹尾蝶 | NP | VC | | | | | | | | + | + | + | + | | | | | | + | + |
| <i>Crocothemis servilia servilia</i> | Crimson Darter | 紅蜻 | NP | VC | | | | | | + | | | | | | | | | | | | |
| <i>Euphaea decorata</i> | Black-banded Gossamerwing | 方帶幽蝶 | NP | VC | | | | | | | | + | + | | | | | | | | | |
| <i>Neurobasis chinensis</i> | Chinese Greenwing | 華艷色蝶 | NP | C | | | + | + | + | | | + | + | + | + | | | | | + | + | |
| <i>Neurothemis fulvia</i> | Russet Percher | 網脈蜻 | NP | VC | | | | | | | | | | | | | | | | | | |
| <i>Orthetrum chrysis</i> | Red-faced Skimmer | 華麗灰蜻 | NP | VC | + | | | | | | | | | | | | | | | | | |
| <i>Orthetrum glaucum</i> | Common blue skimmer | 黑尾灰蜻 | NP | VC | | | | | | | | | | + | + | | | | | | | |
| <i>Orthetrum luzonicum</i> | Marsh Skimmer | 呂宋灰蜻 | NP | VC | | | | | | | | + | + | + | + | | | | | + | + | + |
| <i>Orthetrum pruinosum neglectum</i> | Common Red Skimmer | 赤褐灰蜻 | NP | VC | | | | | | | | | | | | | | | | | | + |
| <i>Palpopleura sexmaculata sexmaculata</i> | Asian Widow | 六斑曲緣蜻 | NP | C | | | | | | | | | | | | | | | | | | |
| <i>Pantala flavescens</i> | Wandering Glider | 黃蜻 | NP | VC | | | | | | | | | | | | + | + | | | | | |
| <i>Paracercion calamor dyeri</i> | Dusky Lilysquatter | 蒼尾蝶 | P, LC | C | | | | | + | | | | | | | | | | | | | |
| <i>Prodasineura autumnalis</i> | Black Threadtail | 烏齒原蝶 | NP | VC | | | | | | | | | | | | | | | | | | |
| <i>Pseudagrion rubriceps rubriceps</i> | Orange-faced Sprite | 丹頂斑蝶 | NP | C | | | | | | | + | | | | | | | | | | | + |
| <i>Rhinocypha perforata</i> | Common Blue Jewel | 三斑鼻蝶 | NP | VC | | | | | | | | | | + | + | | | | | | + | + |
| <i>Trithemis Aurora</i> | Crimson dropwing | 曉靄蜻 | NP | VC | | | + | | | | | + | + | + | + | + | + | + | + | + | + | + |
| <i>Trithemis festiva</i> | Indigo Dropwing | 靄靄蜻 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Urothemis signata signata</i> | Scarlet Basket | 赤斑曲鈞脈蜻 | NP | C | | | | | | | | | | | | | | | | | | |
| <i>Zygonyx iris insignis</i> | Emerald Cascader | 彩虹蜻 | P | P,PGC | | | | | | | | | + | + | + | + | | | | | | |
| No of Species | | | | | 2 | 1 | 3 | 4 | 4 | 2 | 5 | 7 | 8 | 9 | 6 | 2 | 2 | 1 | 3 | 6 | 7 | |

Note: NP – Not protected in Hong Kong P- Protected in Hong Kong

“VC” – Very Common; “UC” – Uncommon; “C” - Common

“+” – Species exists in the study area

“++” – Species common in the study area

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Commonness and status were decided according to AFCD biodiversity website (www.hkbiodiversity.net)

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Table 4.4. Odonate species recorded at the Upper Tai Po River

| Species | Common name | Chinese name | Status | Commonness | Post construction monitoring | | | | | | | | | | | | | | | | |
|---------------------------------------------|---------------------------|--------------|--------|------------|------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----|---|
| | | | | | Jun-15 | Jul-15 | Aug-15 | Sep-15 | Oct-15 | Nov-15 | Dec-15 | Jan-16 | Feb-16 | Mar-16 | Apr-16 | May-16 | Jun-16 | Jul-16 | Aug-16 | | |
| <i>Aethriamanta brevipennis brevipennis</i> | Elusive Adjutant | 短腹異蜻 | NP | U | | | | | | | | | | | | | + | + | + | | |
| <i>Macrodiplax cora</i> | Coastal Glider | 高翔濼蜻 | NP | C | + | + | | | | | | | | | | | | | | | |
| <i>Ceragrion auranticum ryukyuanum</i> | Orange-tailed Sprite | 琉球橘黃蝶 | NP | VC | + | + | + | + | | | | | | | | | | + | + | + | + |
| <i>Coperia marginipes</i> | Yellow Featherlegs | 黃狹扇蝶 | NP | VC | + | + | + | + | | | | | | | | | | | | | |
| <i>Crocothemis servilia servilia</i> | Crimson Darter | 紅蜻 | NP | VC | | + | + | + | + | + | | | | | | | | | + | + | + |
| <i>Euphaea decorata</i> | Black-banded Gossamerwing | 方帶幽蝶 | NP | VC | | | | | | | | | | | | | | | | | |
| <i>Neurobasis chinensis</i> | Chinese Greenwing | 華艷色蝶 | NP | C | | | + | + | + | | | | | | | | + | + | + | + | + |
| <i>Neurothemis fulvia</i> | Russet Percher | 網脈蜻 | NP | VC | | + | + | + | | | | | | | | | | | | | |
| <i>Orthetrum chrysis</i> | Red-faced Skimmer | 華麗灰蜻 | NP | VC | | | + | + | + | + | | | | | + | + | + | + | + | + | + |
| <i>Orthetrum glaucum</i> | Common blue skimmer | 黑尾灰蜻 | NP | VC | | | | | + | + | | | | | | | | | | | |
| <i>Orthetrum luzonicum</i> | Marsh Skimmer | 呂宋灰蜻 | NP | VC | + | + | + | | | | | | | | | | + | + | + | + | + |
| <i>Orthetrum pruinosum neglectum</i> | Common Red Skimmer | 赤褐灰蜻 | NP | VC | + | + | + | | | | | | | | | | + | + | + | + | + |
| <i>Palpopleura sexmaculata sexmaculata</i> | Asian Widow | 六斑曲緣蜻 | NP | C | + | + | | | | | | | | | | | | | | | |
| <i>Pantala flavescens</i> | Wandering Glider | 黃蜻 | NP | VC | | | | | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Paracercion calamorum dyeri</i> | Dusky Lilysquatter | 蒼尾蝶 | P, LC | C | | | | | | | | | | | | | | | | | |
| <i>Prodasineura autumnalis</i> | Black Threadtail | 烏齒原蝶 | NP | VC | | | | + | | | | | | | | | | | | | |
| <i>Pseudagrion rubriceps rubriceps</i> | Orange-faced Sprite | 丹頂斑蝶 | NP | C | + | + | | | | | | | | | | | | | | | |
| <i>Rhinocypha perforata</i> | Common Blue Jewel | 三斑鼻蝶 | NP | VC | + | + | + | + | + | | | | | | | | | + | + | + | + |
| <i>Trithemis Aurora</i> | Crimson dropwing | 曉靄蜻 | NP | VC | | | | | + | + | | | | | | | + | + | + | + | + |
| <i>Trithemis festiva</i> | Indigo Dropwing | 靄靄蜻 | NP | VC | + | + | + | + | + | | | | + | | | | + | + | + | + | + |
| <i>Urothemis signata signata</i> | Scarlet Basket | 赤斑曲鈎脈蜻 | NP | C | | | | | | | | | | | | | | | | | |
| <i>Zygonyx iris insignis</i> | Emerald Cascader | 彩虹蜻 | P | P,PGC | | | | | | | | | | | | | | | | | |
| No of Species | | | | | 9 | 11 | 10 | 8 | 8 | 5 | 1 | 2 | 1 | 2 | 7 | 10 | 11 | 11 | 11 | 10 | |

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Table 4.4. Odonate species recorded at the Upper Tai Po River

| Species | Common name | Chinese name | Status | Commonness | Post construction monitoring | | | | | | | | | | | | | |
|---------------------------------------------|---------------------------|--------------|--------|------------|------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | | | | | Sep-16 | Oct-16 | Nov-16 | Dec-16 | Jan-17 | Feb-17 | Mar-17 | Apr-17 | May-17 | Jun-17 | Jul-17 | Aug-17 | Sep-17 | Oct-17 |
| <i>Aethriamanta brevipennis brevipennis</i> | Elusive Adjutant | 短腹異蜻 | NP | U | | | | | | | | | | | | | | |
| <i>Macrodiplox cora</i> | Coastal Glider | 高翔濼蜻 | NP | C | | | | | | | | | | | | | | |
| <i>Ceriagrion auranticum ryukyuanum</i> | Orange-tailed Sprite | 琉球橘黃蝶 | NP | VC | | | | | | | | | | | | | | |
| <i>Copera marginipes</i> | Yellow Featherlegs | 黃狹扇蝶 | NP | VC | | | | | | | | | + | + | + | + | + | |
| <i>Crocothemis servilia servilia</i> | Crimson Darter | 紅蜻 | NP | VC | + | + | | | | | | | | | + | + | + | + |
| <i>Euphaea decorata</i> | Black-banded Gossamerwing | 方帶幽蝶 | NP | VC | | | | | | | | | | | | | + | |
| <i>Neurobasis chinensis</i> | Chinese Greenwing | 華艷色蝶 | NP | C | + | + | | | | | | | + | + | + | + | + | + |
| <i>Neurothemis fulvia</i> | Russet Percher | 網脈蜻 | NP | VC | | | | | | | | | | | | | | |
| <i>Orthetrum chrysis</i> | Red-faced Skimmer | 華麗灰蜻 | NP | VC | + | + | + | | | | | | + | + | + | + | + | + |
| <i>Orthetrum glaucum</i> | Common blue skimmer | 黑尾灰蜻 | NP | VC | | | | | | | | | | | | | | |
| <i>Orthetrum luzonicum</i> | Marsh Skimmer | 呂宋灰蜻 | NP | VC | + | + | + | | | | | | | | | | | |
| <i>Orthetrum pruinosum neglectum</i> | Common Red Skimmer | 赤褐灰蜻 | NP | VC | | | | | | | + | + | + | + | + | + | + | + |
| <i>Palpopleura sexmaculata sexmaculata</i> | Asian Widow | 六斑曲緣蜻 | NP | C | | | | | | | | | | | | | | |
| <i>Pantala flavescens</i> | Wandering Glider | 黃蜻 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Paracercion calamorum dyeri</i> | Dusky Lilysquatter | 蒼尾蝶 | P, LC | C | | | | | | | | | | | | | | |
| <i>Prodasineura autumnalis</i> | Black Threadtail | 烏齒原蝶 | NP | VC | | | | | | | | | | + | + | + | + | |
| <i>Pseudagrion rubriceps rubriceps</i> | Orange-faced Sprite | 丹頂斑蝶 | NP | C | | | | | | | | | | | | | | |
| <i>Rhinocypha perforata</i> | Common Blue Jewel | 三斑鼻蝶 | NP | VC | + | | | | | | | | | + | + | + | + | |
| <i>Trithemis Aurora</i> | Crimson dropwing | 曉靄蜻 | NP | VC | + | + | + | | | | | | | + | + | + | + | + |
| <i>Trithemis festiva</i> | Indigo Dropwing | 靄靄蜻 | NP | VC | + | + | + | | | | + | + | | + | + | + | + | + |
| <i>Urothemis signata signata</i> | Scarlet Basket | 赤斑曲鈎脈蜻 | NP | C | | | | | | | | | | | | | | |
| <i>Zygonyx iris insignis</i> | Emerald Cascader | 彩虹蜻 | P | P,PGC | | | | | | | | | | | | | | |
| No of Species | | | | | 8 | 7 | 5 | 1 | 1 | 2 | 3 | 6 | 9 | 10 | 10 | 11 | 9 | 7 |

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Table 4.5 Aquatic Macro invertebrates recorded at Upper Tai Po River (T1- Upper stream sampling site and T2- Lower stream sampling site)

| Species | Chinese name | Sampling point | Baseline survey | | Impact monitoring | | Impact monitoring | | Impact monitoring | | Impact monitoring | | Impact monitoring | | Impact monitoring | | Impact monitoring | | Impact monitoring | | Impact monitoring | | | | | | | | |
|----------------------------------|--------------|----------------|-----------------|----|-------------------|----|-------------------|-----------|-------------------|----|-------------------|----|-------------------|-----------|-------------------|----|-------------------|----|-------------------|-----------|-------------------|----|---|----|---|---|----|---|---|
| | | | Oct-07 | | Jan-09 | | Jul-09 | | Jan-10 | | Jul-10 | | Jan-11 | | Jul-11 | | Jan-12 | | Jul-12 | | | | | | | | | | |
| | | | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | | | | | | | |
| Mollusca | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Biomphalaria sp.</i> | -- | NP | VC | | + | | + | | + | | + | | + | | + | | + | | + | | + | | | | | | | | |
| <i>Brotia hainanensis</i> | -- | NP | VC | ++ | + | ++ | | ++ | | ++ | + | ++ | + | | + | | + | + | | + | | + | | | | | | | |
| <i>Melanoides tuberculata</i> | 緋梅里螺 | NP | VC | | | | + | + | + | + | | + | | ++ | | + | | + | | + | + | + | | | | | | | |
| <i>Physella acuta</i> | 尖膀胱螺 | NP | VC | | | | | | | | | | | | + | + | ++ | | | + | | + | | | | | | | |
| <i>Pomacea canaliculata</i> | 蘋果螺 | NP | VC | | | | + | + | | ++ | + | + | | ++ | | + | | + | + | + | + | + | | | | | | | |
| <i>Radix plicatulus</i> | 羅白螺 | NP | VC | | ++ | | + | | + | | + | + | | + | + | | + | | + | + | + | + | | | | | | | |
| <i>Sinotia quadrata</i> | 田螺 | NP | VC | | | | ++ | | + | ++ | | ++ | | +++ | | | + | | + | | + | + | | | | | | | |
| Insects | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Anisocentropus sp.</i> | -- | NP | VC | | | | | | | | | | | + | | | | | | | | | | | | | | | |
| <i>Arctopora sp.</i> | -- | NP | VC | | | | | | | | | | | + | | | | | | | | | | | | | | | |
| <i>Aulocodes sp.</i> | -- | NP | VC | | | | | | | + | | | | + | | | | | | | | | | | | | | | |
| <i>Baetis sp.</i> | -- | NP | VC | + | | + | | + | | + | + | | + | + | | + | | | | | | + | | | | | | | |
| <i>Chironomus sp.</i> | 蠅幼虫 | NP | VC | + | + | + | | + | | + | + | + | + | + | + | + | + | + | + | + | + | + | | | | | | | |
| <i>Ephemera sp.</i> | -- | NP | VC | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Indobaetis sp.</i> | -- | NP | VC | + | | + | | + | | + | + | | + | + | | + | | | | | | | | | | | | | |
| <i>Mnais sp.</i> | -- | NP | VC | | + | + | | + | | + | + | | + | + | | + | + | | + | + | | + | | | | | | | |
| Odonate Larvae | -- | NP | VC | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Orthetrum sp.</i> | -- | NP | VC | + | + | + | | + | | + | + | | + | + | | + | | + | + | | + | + | | | | | | | |
| <i>Perla sp.</i> | -- | NP | VC | | | | | | | + | | | + | | | | | | | | | | | | | | | | |
| <i>Rhaphium sp.</i> | -- | NP | VC | | | | | | | | | | | | | | | | | | | + | | | | | | | |
| <i>Tipulidae spp.</i> | -- | NP | VC | | | | | | | + | | | + | | | | | | | | | + | | | | | | | |
| Crustacea | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Caridina cantonensis</i> | 廣東米蝦 | NP | VC | | | + | | + | | + | ++ | | + | ++ | + | + | + | + | + | + | | + | | | | | | | |
| <i>Cryptopotamon anacaluthon</i> | 鯉刺溪蟹 | NP | C | | | + | | + | | + | | | + | + | | | | + | | | | + | | | | | | | |
| <i>Eriocheir japonica</i> | 日本絨螯蟹 | NP | C | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Macrobrachium hainanense</i> | 海南沼蝦 | NP | VC | | | + | | + | | + | + | | + | + | + | + | + | + | + | + | | + | | | | | | | |
| No of Species | | | | 5 | 6 | 9 | 0 | 5 | 11 | 2 | 5 | 11 | 12 | 6 | 11 | 16 | 8 | 10 | 6 | 5 | 12 | 4 | 4 | 10 | 6 | 4 | 14 | 7 | 1 |

Note:

"NP" – Not protected in Hong Kong
 "+" - Listed in wild Animals protection Ordinance (Cap. 170) and
 listed as "Near Threatened" in IUCN Red List Status
 "VC" – Very Common; "UC" – Uncommon; "C" - Common

"+" – Species exists in the study area

"++" – Species common in the study area

"+++" – Species abundance in the study area

- Reference point was the sampling location outside the works
 area used to compare the with the data within works area.

Table 4.5 Aquatic Macro invertebrates recorded at Upper Tai Po River (T1- Upper stream sampling site and T2- Lower stream sampling site)

| Species | Chinese name | Sampling point | Impact monitoring | | Impact monitoring | | Post construction monitoring | | | | | | | | | | | | | | | | | |
|---------------------------------|--------------|----------------|-------------------|----|-------------------|-----------|------------------------------|----|-----------|--------|----|-----------|--------|----|-----------|--------|----|-----------|--------|----|-----------|--------|----|---|
| | | | Mar-13 | | Jul-13 | | Jan-14 | | | Feb-14 | | | Mar-14 | | | Apr-14 | | | May-14 | | | Jun-14 | | |
| | | | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | |
| Mollusca | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Biomphalaria sp.</i> | -- | NP | VC | | | | | | | | | | | | | | | | | | | | | |
| <i>Brotia hainanensis</i> | -- | NP | VC | + | | | + | | | + | + | | + | + | | + | + | | + | + | | + | + | |
| <i>Melanoides tuberculata</i> | 緞梅黑螺 | NP | VC | + | + | | + | + | | + | + | | + | + | | + | + | | + | + | | + | + | |
| <i>Physella acuta</i> | 尖膀胱螺 | NP | VC | + | | | | | | | | | | | | | | | | | | | | |
| <i>Pomacea canaliculata</i> | 蘋果螺 | NP | VC | + | | + | + | | + | + | | + | + | | + | + | | + | + | | + | + | + | |
| <i>Radix plicatulus</i> | 羅白螺 | NP | VC | + | | | + | | + | + | | + | + | | + | + | | + | + | | + | + | + | |
| <i>Sinotaia quadrata</i> | 田螺 | NP | VC | + | | | + | | + | + | | + | + | | + | + | | + | + | | + | + | + | |
| Insects | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Anisocentropus sp.</i> | -- | NP | VC | | | | | | | | | | | | | | | | | | | | | |
| <i>Arctopora sp.</i> | -- | NP | VC | | | | | | | | | | | | | | | | | | | | | |
| <i>Aulocodes sp.</i> | -- | NP | VC | | | | | | | | | | | | | | | | | | | | | |
| <i>Baetis sp.</i> | -- | NP | VC | + | | | + | | | + | | | + | | | + | | | + | | | + | | |
| <i>Chironomus sp.</i> | 蠅幼虫 | NP | VC | + | + | | + | + | | + | + | | + | + | | + | + | | + | + | | + | + | |
| <i>Ephemera sp.</i> | -- | NP | VC | | | | | | | | | | | | | | | | | | | | | |
| <i>Indobaetis sp.</i> | -- | NP | VC | | | | + | | | + | + | | + | + | | + | + | | + | + | | + | + | |
| <i>Mnais sp.</i> | -- | NP | VC | + | | | + | | | + | + | | + | + | | + | + | | + | + | | + | + | |
| Odonate Larvae | -- | NP | VC | | | | | | | | | | | | | | | | | | | | | |
| <i>Orthetrum sp.</i> | -- | NP | VC | + | | | + | | | + | + | | + | + | | + | + | | + | + | | + | + | |
| <i>Perla sp.</i> | -- | NP | VC | | | | | | | | | | | | | | | | | | | | | |
| <i>Rhaphium sp.</i> | -- | NP | VC | + | | | | | | | | | | | | | | | | | | | | |
| <i>Tipulidae spp.</i> | -- | NP | VC | | | | | | | | | | | | | | | | | | | | | |
| Crustacea | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Caridina cantonensis</i> | 廣東米蝦 | NP | VC | + | | | + | + | | + | + | | + | + | | ++ | ++ | | + | + | | + | + | |
| <i>Cryptopotamon anacoluton</i> | 鯉刺溪蟹 | NP | C | + | | | | | | + | | | | | | + | | | | | | + | | |
| <i>Eriocheir japonica</i> | 日本絨螯蟹 | NP | C | | | | | | | | | | | | | | | | | | | | | |
| <i>Macrobrachium hainanense</i> | 海南沼蝦 | NP | VC | + | | | + | | | + | + | | + | + | | + | + | | + | + | | + | + | |
| No of Species | | | | 14 | 2 | 0 | 13 | 4 | 1 | 13 | 7 | 4 | 14 | 10 | 8 | 17 | 11 | 9 | 18 | 13 | 9 | 15 | 9 | 7 |
| | | | | | | | | | | | | | | | | | | | | | | | | 5 |

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 "NP" – Not protected in Hong Kong
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 "+" – Species exists in the study area
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 "+++" – Species abundance in the study area
 - Reference point was the sampling location outside the works area used to compare the with the data within works area.

Table 4.5 Aquatic Macro invertebrates recorded at Upper Tai Po River (T1- Upper stream sampling site and T2- Lower stream sampling site)

| Species | Chinese name | Sampling point | Post construction monitoring | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|--------------|----------------|------------------------------|----|----|-----------|----|----|-----------|----|----|-----------|----|----|-----------|----|----|-----------|----|----|-----------|----|----|---|
| | | | Jul-14 | | | Aug-14 | | | Sep-14 | | | Oct-14 | | | Nov-14 | | | Dec-14 | | | Jan-15 | | | |
| | | | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | |
| Mollusca | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Biomphalaria sp.</i> | -- | NP | VC | + | | | + | | | + | | | + | | | + | | | + | | | + | | |
| <i>Brotia hainanensis</i> | -- | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Melanoides tuberculata</i> | 縵梅黑螺 | NP | VC | + | + | | + | | | + | | | + | | | + | | | + | | | + | | |
| <i>Physella acuta</i> | 小膀胱螺 | NP | VC | | | | | | | + | | | + | | | + | | | + | | | + | | |
| <i>Pomacea canaliculata</i> | 蘋果螺 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Radix plicatulus</i> | 羅白螺 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Sinotaia quadrata</i> | 田螺 | NP | VC | + | + | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Insects | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Anisocentropus sp.</i> | -- | NP | VC | + | | | + | | | + | | | + | + | | + | + | | + | + | | + | + | |
| <i>Arctopora sp.</i> | -- | NP | VC | | | | + | | | + | | | + | | | + | | | + | | | + | | |
| <i>Aulocodes sp.</i> | -- | NP | VC | | | | | | | | | | | | | + | | | + | | | + | | |
| <i>Baetis sp.</i> | -- | NP | VC | + | | | + | | | + | + | | + | + | | + | + | | + | | | + | | |
| <i>Chironomus sp.</i> | 蠅幼虫 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Ephemera sp.</i> | -- | NP | VC | + | | | + | | | + | + | | + | + | | + | | | + | | | + | | |
| <i>Indobaetis sp.</i> | -- | NP | VC | + | | | + | | | + | + | | + | + | | + | | | + | | | + | | |
| <i>Mnais sp.</i> | -- | NP | VC | + | + | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Odonate Larvae | -- | NP | VC | | | | | | | | | | | | | + | | | | | | + | | |
| <i>Orhetrum sp.</i> | -- | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Perla sp.</i> | -- | NP | VC | + | | | | | | | | | | | | + | | | | | | + | | |
| <i>Rhaphium sp.</i> | -- | NP | VC | + | | | + | | | + | | | + | | | | | | | | | | | |
| <i>Tipulidae spp.</i> | -- | NP | VC | | | | | | | | | | | | | | | | | | | | | |
| Crustacea | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Caridina cantonensis</i> | 廣東米蝦 | NP | VC | + | + | + | + | + | + | + | + | + | + | ++ | + | + | ++ | + | + | ++ | + | + | ++ | + |
| <i>Cryptopotamon anacoluthon</i> | 蠃刺溪蟹 | NP | C | + | | | + | | | + | | | + | | | + | | | + | | | + | | |
| <i>Eriocheir japonica</i> | 日本絨螯蟹 | NP | C | | | | | | | | | | | | | | | | | | | | | |
| <i>Macrobrachium hainanense</i> | 海南沼蝦 | NP | VC | + | + | | + | + | | + | + | | + | + | | + | + | | + | + | | + | + | |
| No of Species | | | | 18 | 10 | 6 | 18 | 9 | 8 | 19 | 12 | 8 | 19 | 13 | 7 | 19 | 11 | 6 | 16 | 10 | 5 | 19 | 10 | 5 |

Note:

"NP" – Not protected in Hong Kong
 "+" - Listed in Wild Animals Protection Ordinance (Cap. 170) and
 listed as "Near Threatened" in IUCN Red List Status
 "VC" – Very Common; "UC" – Uncommon; "C" - Common

"+" – Species exists in the study area

"++" – Species common in the study area

"+++" – Species abundance in the study area

- Reference point was the sampling location outside the works
 area used to compare the with the data within works area.

Table 4.5 Aquatic Macro invertebrates recorded at Upper Tai Po River (T1- Upper stream sampling site and T2- Lower stream sampling site)

| Species | Chinese name | Sampling point | Post construction monitoring | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|--------------|----------------|------------------------------|----|----|-----------|----|----|-----------|----|----|-----------|----|----|-----------|----|----|-----------|----|----|-----------|----|----|-----------|----|----|
| | | | Feb-15 | | | Mar-15 | | | Apr-15 | | | May-15 | | | Jun-15 | | | Jul-15 | | | Aug-15 | | | Sep-15 | | |
| | | | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 |
| Mollusca | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Biomphalaria sp.</i> | -- | NP VC | + | | | + | + | + | + | | | + | | | + | | | + | | | + | | | + | | |
| <i>Brotia hainanensis</i> | -- | NP VC | + | + | | + | | | + | + | | + | + | | + | + | | + | + | | + | + | | + | + | |
| <i>Melanoides tuberculata</i> | 緞梅黑螺 | NP VC | + | | | + | | | + | | | + | | + | | + | | + | | + | | + | | + | + | |
| <i>Physella acuta</i> | 尖膀胱螺 | NP VC | + | | | + | | | + | | | + | | | + | | | + | | | + | | | | | |
| <i>Pomacea canaliculata</i> | 蘋果螺 | NP VC | + | + | + | + | | | + | + | + | + | + | + | + | ++ | + | ++ | + | ++ | + | + | ++ | + | + | |
| <i>Radix plicatulus</i> | 羅白螺 | NP VC | + | | | + | + | | + | | | + | | | + | | | + | | | + | | | + | + | |
| <i>Sinotia quadrata</i> | 田螺 | NP VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Insects | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Anisocentropus sp.</i> | -- | NP VC | + | | | + | | | + | | | + | | | + | | | + | | | + | | | + | | |
| <i>Arctopora sp.</i> | -- | NP VC | + | | | + | | | + | | | + | | | + | | | + | | | + | | | + | | |
| <i>Aulocodes sp.</i> | -- | NP VC | + | | | + | | | + | | | + | | | + | | | + | | | + | | | + | | |
| <i>Baetis sp.</i> | -- | NP VC | + | | | + | + | + | + | | | + | | | + | | | + | | | + | | | + | | |
| <i>Chironomus sp.</i> | 蠅幼虫 | NP VC | + | + | + | + | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Ephemera sp.</i> | -- | NP VC | + | | | + | + | | + | | | + | | | + | | | + | | | + | | | + | | |
| <i>Indobaetis sp.</i> | -- | NP VC | + | | | + | | | + | | | + | | | + | | | + | | | + | | | + | | |
| <i>Mnais sp.</i> | -- | NP VC | + | | | + | | | + | | | + | | | + | | | + | | | + | | | + | | |
| Odonate Larvae | -- | NP VC | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Orthetrum sp.</i> | -- | NP VC | + | + | | | | | + | + | | + | + | | + | + | | + | + | | + | + | | + | + | |
| <i>Perla sp.</i> | -- | NP VC | | | | + | | | + | | | + | | | + | | | + | | | + | | | + | | |
| <i>Rhaphium sp.</i> | -- | NP VC | | | | + | | | + | | | + | | | + | | | + | | | + | | | + | | |
| <i>Tipulidae spp.</i> | -- | NP VC | | | | | | | | | | | | | | | | | | | | | | | | |
| Crustacea | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Caridina cantonensis</i> | 廣東米蝦 | NP VC | + | ++ | + | + | + | | ++ | ++ | | ++ | ++ | + | ++ | ++ | + | ++ | ++ | + | ++ | ++ | + | ++ | + | |
| <i>Cryptopotamon anacoluthon</i> | 棘刺溪蟹 | NP C | + | | | ++ | ++ | + | + | | + | | + | | + | | + | | + | | + | | + | | + | |
| <i>Eriocheir japonica</i> | 日本絨螯蟹 | NP C | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Macrobrachium hainanense</i> | 海南沼蝦 | NP VC | + | + | | + | | | + | + | | + | | | + | | | + | | | + | | | + | + | |
| No of Species | | | 18 | 7 | 4 | 19 | 7 | 5 | 20 | 7 | 4 | 15 | 7 | 4 | 15 | 7 | 4 | 15 | 7 | 4 | 16 | 6 | 4 | 16 | 6 | 3 |

Note:
 "NP" – Not protected in Hong Kong
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 "VC" – Very Common; "UC" – Uncommon; "C" - Common
 "+" – Species exists in the study area
 "++" – Species common in the study area
 "+++" – Species abundance in the study area
 - Reference point was the sampling location outside the works area used to compare the with the data within works area.

Table 4.5 Aquatic Macro invertebrates recorded at Upper Tai Po River (T1- Upper stream sampling site and T2- Lower stream sampling site)

| Species | Chinese name | Sampling point | Post construction monitoring | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|--------------|----------------|------------------------------|----|----|-----------|----|----|-----------|----|----|-----------|----|----|-----------|----|----|-----------|----|----|-----------|----|----|-----------|----|----|
| | | | Oct-15 | | | Nov-15 | | | Dec-15 | | | Jan-16 | | | Feb-16 | | | Mar-16 | | | Apr-16 | | | May-16 | | |
| | | | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 |
| Mollusca | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Biomphalaria sp.</i> | -- | NP VC | + | | | + | | | + | | | + | | | + | | | + | | | + | | | + | | |
| <i>Brotia hainanensis</i> | -- | NP VC | + | + | | + | + | | + | + | | + | + | | + | + | | + | + | | + | + | | + | + | |
| <i>Melanoides tuberculata</i> | 緞梅黑螺 | NP VC | + | | + | | | + | | | + | | | + | | | + | | | + | | | + | | + | |
| <i>Physella acuta</i> | 小膀胱螺 | NP VC | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Pomacea canaliculata</i> | 蘋果螺 | NP VC | ++ | + | + | ++ | + | + | ++ | + | + | ++ | + | + | ++ | + | + | ++ | + | + | ++ | + | + | ++ | + | |
| <i>Radix plicatulus</i> | 羅白螺 | NP VC | + | | | + | | | + | | | + | | | + | | | + | | | + | | | + | | |
| <i>Sinotia quadrata</i> | 田螺 | NP VC | + | + | | + | + | | + | + | | + | + | | + | + | | + | + | | + | + | | + | + | |
| Insects | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Anisocentropus sp.</i> | -- | NP VC | + | | | + | | | + | | | + | | | + | | | + | | | + | | | + | | |
| <i>Arctopora sp.</i> | -- | NP VC | + | | | + | | | + | | | + | | | + | | | + | | | + | | | + | | |
| <i>Aulocodes sp.</i> | -- | NP VC | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Baetis sp.</i> | -- | NP VC | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Chironomus sp.</i> | 蠅幼虫 | NP VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Ephemera sp.</i> | | NP VC | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Indobaetis sp.</i> | -- | NP VC | + | | | + | | | + | | | + | | | + | | | + | | | + | | | + | | |
| <i>Mnais sp.</i> | -- | NP VC | + | | | + | | | + | | | + | | | + | | | + | | | + | | | + | | |
| Odonate Larvae | -- | NP VC | + | | | + | | | + | | | + | | | + | | | + | | | + | | | + | | |
| <i>Orthetrum sp.</i> | -- | NP VC | + | + | | + | + | | + | + | | + | + | | + | + | | + | + | | + | + | | + | + | |
| <i>Perla sp.</i> | -- | NP VC | + | | | + | | | + | | | + | | | + | | | + | | | + | | | + | | |
| <i>Rhaphium sp.</i> | -- | NP VC | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Tipulidae spp.</i> | -- | NP VC | | | | | | | | | | | | | | | | | | | | | | | | |
| Crustacea | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Caridina cantonensis</i> | 廣東米蝦 | NP VC | ++ | + | | ++ | + | | ++ | + | | ++ | + | | ++ | + | | ++ | + | | ++ | + | | ++ | + | |
| <i>Cryptopotamon anacoluthon</i> | 鯉刺溪蟹 | NP C | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Eriocheir japonica</i> | 日本絨螯蟹 | NP C | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Macrobrachium hainanense</i> | 海南沼蝦 | NP VC | + | | | + | | | + | | | + | | | + | | | + | | | + | | | + | | |
| No of Species | | | 16 | 6 | 3 | 16 | 6 | 3 | 16 | 6 | 3 | 16 | 6 | 3 | 16 | 6 | 3 | 16 | 6 | 3 | 16 | 6 | 3 | 15 | 6 | 3 |

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- Reference point was the sampling location outside the works
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Table 4.5 Aquatic Macro invertebrates recorded at Upper Tai Po River (T1- Upper stream sampling site and T2- Lower stream sampling site)

| Species | Chinese name | Sampling point | Post construction monitoring | | | | | | | | | | | | | | | | | | |
|----------------------------------|--------------|----------------|------------------------------|----|----|-----------|----|----|-----------|----|----|-----------|----|----|-----------|----|----|-----------|----|----|---|
| | | | Jun-16 | | | Jul-16 | | | Aug-16 | | | Sep-16 | | | Oct-16 | | | Nov-16 | | | |
| | | | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | |
| Mollusca | | | | | | | | | | | | | | | | | | | | | |
| <i>Biomphalaria sp.</i> | -- | NP | VC | + | | | + | | | + | | | + | | | + | | | + | | |
| <i>Brotia hainanensis</i> | -- | NP | VC | + | + | | + | + | | + | + | | + | + | | + | + | | + | + | |
| <i>Melanoides tuberculata</i> | 細梅里螺 | NP | VC | + | | + | + | | + | + | | + | + | | + | + | | + | + | + | |
| <i>Physella acuta</i> | 尖脐肺螺 | NP | VC | | | | | | | | | | | | | | | | | | |
| <i>Pomacea canaliculata</i> | 蘋果螺 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Radix plicatulus</i> | 雜白螺 | NP | VC | + | | | + | | | + | | | + | | | + | | | + | | |
| <i>Sinotia quadrata</i> | 田螺 | NP | VC | + | + | | + | + | | + | + | | + | + | | + | + | | + | + | |
| Insects | | | | | | | | | | | | | | | | | | | | | |
| <i>Anisocentropus sp.</i> | -- | NP | VC | + | | | + | | | + | | | + | | | + | | | + | | |
| <i>Arctopora sp.</i> | -- | NP | VC | + | | | + | | | + | | | + | | | + | | | + | | |
| <i>Aulocodes sp.</i> | -- | NP | VC | | | | | | | | | | | | | | | | | | |
| <i>Baetis sp.</i> | -- | NP | VC | | | | | | | | | | | | | | | | | | |
| <i>Chironomus sp.</i> | 蠅幼虫 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Ephemera sp.</i> | | NP | VC | | | | | | | | | | | | | | | | | | |
| <i>Indobaetis sp.</i> | -- | NP | VC | + | | | + | | | + | | | + | | | + | | | + | | |
| <i>Mnais sp.</i> | -- | NP | VC | + | | | + | | | + | | | + | | | + | | | + | | |
| Odonate Larvae | -- | NP | VC | + | | | + | | | + | | | + | | | + | | | + | | |
| <i>Orthetrum sp.</i> | -- | NP | VC | + | + | | + | + | | + | + | | + | + | | + | + | | + | + | |
| <i>Perla sp.</i> | -- | NP | VC | + | | | + | | | + | | | + | | | + | | | + | | |
| <i>Rhaphium sp.</i> | -- | NP | VC | | | | | | | | | | | | | | | | | | |
| <i>Tipulidae spp.</i> | -- | NP | VC | | | | | | | | | | | | | | | | | | |
| Crustacea | | | | | | | | | | | | | | | | | | | | | |
| <i>Caridina cantonensis</i> | 廣東米蝦 | NP | VC | + | + | | + | + | | + | + | | + | + | | + | + | | + | + | |
| <i>Cryptopotamon anacoluthon</i> | 鯉刺溪蟹 | NP | C | | | | | | | | | | + | | | + | | | + | | |
| <i>Eriocheir japonica</i> | 日本絨螯蟹 | NP | C | | | | | | | | | | | | | | | | | | |
| <i>Macrobrachium hainanense</i> | 海南沼蝦 | NP | VC | | | | | | | | | | + | | | + | | | + | | |
| No of Species | | | | 15 | 6 | 3 | 15 | 6 | 3 | 15 | 6 | 3 | 17 | 6 | 3 | 17 | 6 | 3 | 17 | 6 | 3 |

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- Reference point was the sampling location outside the works
 area used to compare the with the data within works area.

Table 4.5 Aquatic Macro invertebrates recorded at Upper Tai Po River (T1- Upper stream sampling site and T2- Lower stream sampling site)

| Species | Chinese name | Sampling point | Post construction monitoring | | | | | | | | | | | | |
|---------------------------------|--------------|----------------|------------------------------|----|----|-----------|----|----|-----------|----|----|-----------|----|----|---|
| | | | Dec-16 | | | Jan-17 | | | Feb-17 | | | Mar-17 | | | |
| | | | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | |
| Mollusca | | | | | | | | | | | | | | | |
| <i>Biomphalaria sp.</i> | -- | NP | VC | + | | | + | | | + | | | + | | |
| <i>Brotia hainanensis</i> | -- | NP | VC | + | + | | + | + | | + | + | | + | + | |
| <i>Melanoides tuberculata</i> | 緞唇黑螺 | NP | VC | + | | + | + | | + | | + | | + | | + |
| <i>Physella acuta</i> | 尖唇肺螺 | NP | VC | | | | | | | | | | | | |
| <i>Pomacea canaliculata</i> | 蘋果螺 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Radix plicatulus</i> | 羅白螺 | NP | VC | + | | | + | | | + | | | + | | |
| <i>Sinotaia quadrata</i> | 田螺 | NP | VC | + | + | | + | + | | + | + | | + | + | |
| Insects | | | | | | | | | | | | | | | |
| <i>Anisocentropus sp.</i> | -- | NP | VC | + | | | + | | | + | | | + | | |
| <i>Arctopora sp.</i> | -- | NP | VC | + | | | + | | | + | | | + | | |
| <i>Aulocodes sp.</i> | -- | NP | VC | | | | | | | | | | | | |
| <i>Baetis sp.</i> | -- | NP | VC | | | | | | | | | | | | |
| <i>Chironomus sp.</i> | 蠅幼虫 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Ephemera sp.</i> | | NP | VC | | | | | | | | | | | | |
| <i>Indobaetis sp.</i> | -- | NP | VC | + | | | + | | | + | | | + | | |
| <i>Mnais sp.</i> | -- | NP | VC | + | | | + | | | + | | | + | | |
| Odonate Larvae | -- | NP | VC | + | | | + | | | + | | | + | | |
| <i>Orthetrum sp.</i> | -- | NP | VC | + | + | | + | + | | + | + | | + | + | |
| <i>Perla sp.</i> | -- | NP | VC | + | | | + | | | + | | | + | | |
| <i>Rhaphium sp.</i> | -- | NP | VC | | | | | | | | | | | | |
| <i>Tipulidae spp.</i> | -- | NP | VC | | | | | | | | | | | | |
| Crustacea | | | | | | | | | | | | | | | |
| <i>Caridina cantonensis</i> | 廣東米蝦 | NP | VC | + | + | | + | + | | + | + | | + | + | |
| <i>Cryptopotamon anacoluton</i> | 鯁刺溪蟹 | NP | C | + | | | + | | | + | | | + | | |
| <i>Eriocheir japonica</i> | 日本絨螯蟹 | NP | C | + | | | + | | | + | | | + | | |
| <i>Macrobrachium hainanense</i> | 海南沼蝦 | NP | VC | + | | | + | | | + | | | + | | |
| No of Species | | | | 17 | 6 | 3 | 18 | 6 | 3 | 18 | 6 | 3 | 18 | 6 | 3 |

Note:

"NP" – Not protected in Hong Kong
 "+" - Listed in Wild Animals Protection Ordinance (Cap. 170) and
 listed as "Near Threatened" in IUCN Red List Status
 "VC" – Very Common; "UC" – Uncommon; "C" – Common

"+" – Species exists in the study area

"++" – Species common in the study area

"+++" – Species abundance in the study area

- Reference point was the sampling location outside the works
 area used to compare the with the data within works area.

Table 4.5 Aquatic Macro invertebrates recorded at Upper Tai Po River (T1- Upper stream sampling site and T2- Lower stream sampling site)

| Species | Chinese name | Sampling point | Post construction monitoring | | | | | | | | | | | | | | | |
|---------------------------------|--------------|----------------|------------------------------|----|----|-----------|----|----|-----------|----|----|-----------|----|----|-----------|----|----|---|
| | | | Apr-17 | | | May-17 | | | Jun-17 | | | Jul-17 | | | Aug-17 | | | |
| | | | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | |
| Mollusca | | | | | | | | | | | | | | | | | | |
| <i>Biomphalaria sp.</i> | -- | NP | VC | + | | | + | | | + | | | + | | | + | | |
| <i>Brotia hainanensis</i> | -- | NP | VC | + | + | | + | + | | + | + | | + | + | | + | + | |
| <i>Melanoides tuberculata</i> | 緞唇黑螺 | NP | VC | + | | + | + | | + | + | | + | + | | + | + | + | |
| <i>Physella acuta</i> | 尖唇肺螺 | NP | VC | | | | | | | | | | | | | | | |
| <i>Pomacea canaliculata</i> | 蘋果螺 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Radix plicatulus</i> | 羅白螺 | NP | VC | + | | | + | | | + | | | + | | | + | | |
| <i>Sinotaia quadrata</i> | 田螺 | NP | VC | + | + | | + | + | | + | + | | + | + | | + | + | |
| Insects | | | | | | | | | | | | | | | | | | |
| <i>Anisocentropus sp.</i> | -- | NP | VC | + | | | + | | | + | | | + | | | + | | |
| <i>Arctopora sp.</i> | -- | NP | VC | + | | | + | | | + | | | + | | | + | | |
| <i>Aulocodes sp.</i> | -- | NP | VC | | | | | | | | | | | | | | | |
| <i>Baetis sp.</i> | -- | NP | VC | | | | | | | | | | | | | | | |
| <i>Chironomus sp.</i> | 蠅幼虫 | NP | VC | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Ephemera sp.</i> | | NP | VC | | | | | | | | | | | | | | | |
| <i>Indobaetis sp.</i> | -- | NP | VC | + | | | + | | | + | | | + | | | + | | |
| <i>Mnais sp.</i> | -- | NP | VC | + | | | + | | | + | | | + | | | + | | |
| Odonate Larvae | -- | NP | VC | + | | | + | | | + | | | + | | | + | | |
| <i>Orthetrum sp.</i> | -- | NP | VC | + | + | | + | + | | + | + | | + | + | | + | + | |
| <i>Perla sp.</i> | -- | NP | VC | + | | | + | | | + | | | + | | | + | | |
| <i>Rhaphium sp.</i> | -- | NP | VC | | | | | | | | | | | | | | | |
| <i>Tipulidae spp.</i> | -- | NP | VC | | | | | | | | | | | | | | | |
| Crustacea | | | | | | | | | | | | | | | | | | |
| <i>Caridina cantonensis</i> | 廣東米蝦 | NP | VC | + | + | | + | + | | + | + | | + | + | | + | + | |
| <i>Cryptopotamon anacoluton</i> | 鯉刺溪蟹 | NP | C | + | | | + | | | + | | | + | | | + | | |
| <i>Eriocheir japonica</i> | 日本絨螯蟹 | NP | C | + | | | + | | | + | | | + | | | + | | |
| <i>Macrobrachium hainanense</i> | 海南沼蝦 | NP | VC | + | | | + | | | + | | | + | | | + | | |
| No of Species | | | | 18 | 6 | 3 | 18 | 6 | 3 | 18 | 6 | 3 | 18 | 6 | 3 | 18 | 6 | 3 |

Note:

"NP" – Not protected in Hong Kong
 "+" - Listed in Wild Animals Protection Ordinance (Cap. 170) and
 listed as "Near Threatened" in IUCN Red List Status
 "VC" – Very Common; "UC" – Uncommon; "C" – Common

"+" – Species exists in the study area

"++" – Species common in the study area

"+++" – Species abundance in the study area

- Reference point was the sampling location outside the works
 area used to compare the with the data within works area.

Table 4.5 Aquatic Macro invertebrates recorded at Upper Tai Po River (T1- Upper stream sampling site and T2- Lower stream sampling site)

| Species | Chinese name | Sampling point | Post construction monitoring | | | | | | |
|----------------------------------|--------------|----------------|------------------------------|----|----|-----------|----|----|---|
| | | | Sep-17 | | | Oct-17 | | | |
| | | | Reference | T1 | T2 | Reference | T1 | T2 | |
| Mollusca | | | | | | | | | |
| <i>Biomphalaria sp.</i> | -- | NP | VC | + | | | + | | |
| <i>Brotia hainanensis</i> | -- | NP | VC | + | + | | + | + | |
| <i>Melanoides tuberculata</i> | 縵蜆黑螺 | NP | VC | + | | + | + | | + |
| <i>Physella acuta</i> | 小蹄肺螺 | NP | VC | | | | | | |
| <i>Pomacea canaliculata</i> | 蘋果螺 | NP | VC | + | + | + | + | + | + |
| <i>Radix plicatulus</i> | 羅白螺 | NP | VC | + | | | + | | |
| <i>Sinotia quadrata</i> | 田螺 | NP | VC | + | + | | + | + | |
| Insects | | | | | | | | | |
| <i>Anisocentropus sp.</i> | -- | NP | VC | + | | | + | | |
| <i>Arctopora sp.</i> | -- | NP | VC | + | | | + | | |
| <i>Aulocodes sp.</i> | -- | NP | VC | | | | | | |
| <i>Baetis sp.</i> | -- | NP | VC | | | | | | |
| <i>Chironomus sp.</i> | 蠅幼虫 | NP | VC | + | + | + | + | + | + |
| <i>Ephemera sp.</i> | -- | NP | VC | | | | | | |
| <i>Indobaetis sp.</i> | -- | NP | VC | + | | | + | | |
| <i>Mnais sp.</i> | -- | NP | VC | + | | | + | | |
| Odonate Larvae | -- | NP | VC | + | | | + | | |
| <i>Orthetrum sp.</i> | -- | NP | VC | + | + | | + | + | |
| <i>Perla sp.</i> | -- | NP | VC | + | | | + | | |
| <i>Rhaphium sp.</i> | -- | NP | VC | | | | | | |
| <i>Tipulidae spp.</i> | -- | NP | VC | | | | | | |
| Crustacea | | | | | | | | | |
| <i>Caridina cantonensis</i> | 廣東米蝦 | NP | VC | + | + | | + | + | |
| <i>Cryptopotamon anacoluthon</i> | 鯽刺溪蟹 | NP | C | + | | | + | | |
| <i>Eriocheir japonica</i> | 日本絨螯蟹 | NP | C | + | | | + | | |
| <i>Macrobrachium hainanense</i> | 海南沼蝦 | NP | VC | + | | | + | | |
| No of Species | | | | 18 | 6 | 3 | 18 | 6 | 3 |

Note:

"NP" – Not protected in Hong Kong
 "+" - Listed in Wild Animals Protection Ordinance (Cap. 170) and
 listed as "Near Threatened" in IUCN Red List Status
 "VC" – Very Common; "UC" – Uncommon; "C" - Common

"+" – Species exists in the study area

"++" – Species common in the study area

"+++" – Species abundance in the study area

- Reference point was the sampling location outside the works
 area used to compare the with the data within works area.

Table 4.6 Fish species and Hong Kong Newt recorded at Upper Tai Po River (T1- Upper stream sampling site and T2 - Lower stream sampling

| Species | | Status | Commonness | Baseline survey | | Impact monitoring | | | Impact monitoring | | | Impact monitoring | | | Impact monitoring | | | Impact monitoring | | | Impact monitoring | | | Impact monitoring | | | Impact monitoring | | | | | |
|----------------------------------------------------|--------|---------------|------------|-----------------|----|-------------------|----|----|-------------------|----|-----|-------------------|----|----|-------------------|-----|-----|-------------------|----|----|-------------------|----|----|-------------------|----|----|-------------------|----|----|-----------|----|----|
| | | | | Oct-07 | | Jan-09 | | | Jul-09 | | | Jan-10 | | | Jul-10 | | | Jan-11 | | | Jul-11 | | | Jan-12 | | | Jul-12 | | | Mar-13 | | |
| | | | | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 |
| <i>Cyprinus carpio</i> var. <i>viridiviolaceus</i> | 錦鯉 | NP | C | | | | | | | | | | | | + | | | | | | | | | | | | | | | | | |
| <i>Gambusia affinis</i> | 食蚊魚 | NP | VC | + | ++ | | | + | | + | + | | | | + | +++ | | + | + | + | + | + | + | + | ++ | + | + | + | + | + | | |
| <i>Glyptothorax pallozonum</i> | 白線紋胸鮡 | NP | R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Liniparhomaloptera disparis</i> | 擬平鮡 | NP | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Misgurnus anguillicaudatus</i> | 泥鰍 | NP | C | | | + | | | + | | | + | | | + | | | | | | | | | | + | | | | | + | | |
| <i>Oreochromis niloticus</i> | 尼羅口孵非鯽 | NP | C | + | | | | | | | | | | | + | | | | + | + | | + | + | | | | | + | | | | |
| <i>Parazacco spilurus</i> | 異鱸 | V and | C | ++ | | + | + | | + | | | + | | + | + | | + | + | + | + | + | + | + | | | | | | + | | | |
| <i>Poecilia reticulata</i> | 孔雀花魚 | NP | C | ++ | + | | | ++ | | | | + | | | + | ++ | | + | + | + | + | + | + | | | | | | | | | |
| <i>Pseudobagrus trilineatus</i> | 三線擬鱔 | NP,GC | R | | | | | | | | | | | | | | | | | | | | | | | | | | | | + | |
| <i>Pseudogastromyzon myersi</i> | 麥氏擬腹吸鮡 | NP | C | + | | + | | | + | | | + | | + | | | ++ | ++ | | + | + | | + | | | | | + | | | | |
| <i>Pterocryptis cochinchinensis</i> | 越南隱睛鮡 | NP | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Puntius semifasciolatus</i> | 七星魚 | NP | C | + | | + | + | | + | + | + | + | + | ++ | + | + | | + | | + | + | + | + | + | + | + | | | | + | | |
| <i>Rhinogobius</i> spp. | 鯢虎魚 | NP | C | + | | + | + | | + | | | + | ++ | + | + | + | | + | | + | | + | + | + | + | + | | | + | | | |
| <i>Schistura fasciolata</i> | 橫紋南鮡 | NP | C | + | | + | | | + | + | | + | | | + | + | | + | + | + | + | + | + | | | | | | + | + | | |
| <i>Xiphophorus hellerii</i> | 劍尾魚 | NP | C | ++ | | + | | | + | + | ++ | + | + | ++ | + | + | ++ | + | + | + | + | + | + | ++ | + | | | | + | | | |
| <i>Xiphophorus variatus</i> | 雜色劍尾魚 | NP | C | + | | | | | | | | | | | ++ | | | | | + | + | + | ++ | | | | | | | | | |
| | | 2x2m fish | | 70 | 60 | 15 | 8 | 25 | 10 | 20 | 100 | 10 | 2 | 8 | 10 | 7 | 100 | 10 | 5 | 20 | 6 | 2 | 4 | 6 | 2 | 5 | 5 | 2 | 2 | 5 | 2 | 1 |
| | | No of Speices | | 10 | 2 | 7 | 3 | 2 | 7 | 4 | 4 | 7 | 5 | 5 | 7 | 9 | 7 | 8 | 5 | 3 | 11 | 2 | 7 | 10 | 3 | 5 | 8 | 2 | 2 | 9 | 2 | 1 |
| Amphibian | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Paramesotriton hongkongensis</i> | 香港瘰螥 | P | UC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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 “+” – Species exists in the study area
 “++” – Species common in the study area
 “+++” – Species abundance in the study area
 V – Listed as vulnerable in China Fish Red Data Book
 GC- Global Concern - Fellowes *et al* (2002)
 - Reference point was the sampling location outside the works area used to compare with the data within works area.

Table 4.6 Fish species and Hong Kong Newt recorded at Upper Tai Po River (T1- Upper stream sampling site and T2 - Lower stream sampling

| Species | | Status | Commonness | Post construction monitoring | | | | | | | | | | | | | | | | | | Post construction monitoring | | | | | | | | | | | | | | |
|----------------------------------------------------|--------|---------------|------------|------------------------------|----|----|-----------|----|----|-----------|----|----|-----------|----|----|-----------|----|----|-----------|----|----|------------------------------|----|----|-----------|----|----|-----------|----|----|-----------|----|----|----|---|---|
| | | | | Oct-14 | | | Nov-14 | | | Dec-14 | | | Jan-15 | | | Feb-15 | | | Mar-15 | | | Apr-15 | | | May-15 | | | Jun-15 | | | Jul-15 | | | | | |
| | | | | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | | | |
| <i>Cyprinus carpio</i> var. <i>viridiviolaceus</i> | 錦鯉 | NP | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Gambusia affinis</i> | 食蚊魚 | NP | VC | + | | + | | + | | | | | + | | + | + | | + | + | + | | + | | + | + | + | | + | + | + | | + | + | | | |
| <i>Glyptothorax pallozoum</i> | 白線紋胸鮡 | NP | R | + | | | | | + | | | | | + | | | | | + | | | | | + | | | | | + | | | + | | + | | |
| <i>Liniparhomaloptera disparis</i> | 擬平鮡 | NP | C | + | | | | | | + | | | | | + | | | | | + | | | | | | + | | | | | + | | | + | | |
| <i>Misgurnus anguillicaudatus</i> | 泥鮡 | NP | C | + | | | | | | | + | | | | | + | | | | | | | | | | + | | | | | | | | | | |
| <i>Oreochromis niloticus</i> | 尼羅口非鯽 | NP | C | | | + | | | | | + | | | | + | | | | | | | + | | | | + | | | | | + | | | + | | |
| <i>Parazacco spilurus</i> | 異鱸 | V and | C | + | + | | | + | + | | | | | + | + | | | | | | | + | + | | | + | + | | | + | + | | + | + | | + |
| <i>Poecilia reticulata</i> | 孔雀花魚 | NP | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Pseudobagrus trilineatus</i> | 三線擬鱸 | NP,GC | R | + | | | + | | | + | | | | | + | | | | | | | + | | | | | + | | | | | | + | | | |
| <i>Pseudogastromyzon myersi</i> | 麥氏擬腹吸鮡 | NP | C | + | | | | | | | + | | | | | + | | | | | | | + | | | | | | | | | | + | | | + |
| <i>Pterocryptis cochinchinensis</i> | 越南隱睛鮡 | NP | C | + | | | | | | | + | | | | | + | | | | | | | + | | | | | | | | | | | + | | + |
| <i>Puntius semifasciolatus</i> | 七星魚 | NP | C | + | + | + | | + | + | + | | + | + | + | | + | + | + | + | + | + | | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Rhinogobius</i> spp. | 鯢虎魚 | NP | C | + | + | + | | + | + | + | | + | + | + | + | + | + | + | + | + | + | | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Schistura fasciolata</i> | 橫紋南鮡 | NP | C | + | | | | | | | + | | | | | + | | | | | | | + | | | | | | | | | | + | | | + |
| <i>Xiphophorus hellerii</i> | 劍尾魚 | NP | C | + | | | | | | | + | | | | | + | | | | | | | + | | | | | | | | | | | + | | + |
| <i>Xiphophorus variatus</i> | 雜色劍尾魚 | NP | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2x2m fish | | 40 | 15 | 20 | 50 | 20 | 30 | 60 | 30 | 30 | 50 | 20 | 20 | 40 | 20 | 20 | 50 | 20 | 20 | 40 | 15 | 20 | 12 | 4 | 2 | 10 | 4 | 2 | 8 | 4 | 2 | 4 | 2 | |
| | | No of Speices | | 12 | 3 | 4 | 12 | 3 | 4 | 12 | 3 | 4 | 12 | 4 | 4 | 12 | 4 | 4 | 12 | 4 | 4 | 12 | 4 | 4 | 11 | 4 | 4 | 11 | 4 | 4 | 11 | 4 | 4 | 11 | 4 | 4 |
| Amphibian | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Paramesotriton hongkongensis</i> | 香港瘰螈 | P | UC | + | | | + | | | | | | | + | | | | | | | | + | | | | | | | + | | | | + | | | + |

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“+” – Species exists in the study area

“++” – Species common in the study area

“+++” – Species abundance in the study area

V – Listed as vulnerable in China Fish Red Data Book

GC- Global Concern - Fellowes *et al* (2002)

- Reference point was the sampling location outside the works area used to compare with the data within works area.

Table 4.6 Fish species and Hong Kong Newt recorded at Upper Tai Po River (T1- Upper stream sampling site and T2 - Lower stream sampling

| Species | | Status | Commonness | Post construction monitoring | | | | | | | | | Post construction monitoring | | | | | | | | | | | |
|----------------------------------------------------|--------|---------------|------------|------------------------------|----|----|-----------|----|----|-----------|----|----|------------------------------|----|----|-----------|----|----|-----------|----|----|-----------|----|----|
| | | | | Aug-15 | | | Sep-15 | | | Oct-15 | | | Nov-15 | | | Dec-15 | | | Jan-16 | | | Feb-16 | | |
| | | | | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 |
| <i>Cyprinus carpio</i> var. <i>viridivittaceus</i> | 錦鯉 | NP | C | | | | | | | | | | | | | | | | | | | | | |
| <i>Gambusia affinis</i> | 食蚊魚 | NP | VC | + | + | + | + | + | + | + | + | | | | | | | | | | | | | |
| <i>Glyptothorax pallozonum</i> | 白線紋胸鮡 | NP | R | + | | | | | | | | | | | | | | | | | | | | |
| <i>Liniparhomaloptera disparis</i> | 擬平鮡 | NP | C | + | | | + | | | | | | | | | | | | | | | | | |
| <i>Misgurnus anguillicaudatus</i> | 泥鰍 | NP | C | | | | | | | | | | | | | | | | | | | | | |
| <i>Oreochromis niloticus</i> | 尼羅口孵非鯽 | NP | C | | | + | | | + | + | | | | | | | | | | | | | | |
| <i>Parazacco spilurus</i> | 異鱸 | V and | C | + | + | | + | + | | + | + | | | | | | | | | | | | | |
| <i>Poecilia reticulata</i> | 孔雀花魚將 | NP | C | | | | | | | | | | | | | | | | | | | | | |
| <i>Pseudobagrus trilineatus</i> | 三線擬鱮 | NP,GC | R | + | | | + | | | + | | | | | | | | | | | | | | |
| <i>Pseudogastromyzon myersi</i> | 麥氏擬腹吸鮡 | NP | C | + | | | + | | | + | | | | | | | | | | | | | | |
| <i>Pterocryptis cochinchinensis</i> | 越南隱睛鮡 | NP | C | + | | | + | | | + | | | | | | | | | | | | | | |
| <i>Puntius semifasciolatus</i> | 七星魚 | NP | C | + | + | | + | + | | + | + | | | | | | | | | | | | | |
| <i>Rhinogobius</i> spp. | 鰻虎魚 | NP | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| <i>Schistura fasciolata</i> | 橫紋南鮡 | NP | C | + | | | + | | | + | | | | | | | | | | | | | | |
| <i>Xiphophorus hellerii</i> | 劍尾魚 | NP | C | + | | | + | | | + | | | | | | | | | | | | | | |
| <i>Xiphophorus variatus</i> | 雜色劍尾魚 | NP | C | | | | | | | | | | | | | | | | | | | | | |
| | | 2x2m fish | | 10 | 5 | 2 | 15 | 7 | 6 | 20 | 10 | 5 | 35 | 15 | 10 | 45 | 20 | 5 | 50 | 15 | 5 | 45 | 20 | 5 |
| | | No of Speices | | 11 | 4 | 3 | 11 | 4 | 3 | 12 | 4 | 1 | 12 | 4 | 1 | 12 | 4 | 1 | 11 | 4 | 1 | 11 | 4 | 1 |
| Amphibian | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Paramesotriton hongkongensis</i> | 香港瘰螈 | P | UC | + | | | + | | | + | | | | | | | | | | | | | | |

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GC- Global Concern - Fellowes *et al* (2002)

- Reference point was the sampling location outside the works area used to compare with the data within works area.

Table 4.6 Fish species and Hong Kong Newt recorded at Upper Tai Po River (T1- Upper stream sampling site and T2 - Lower stream sampling

| Species | | Status | Commonness | Post construction monitoring | | | | | | | | | | | | Post construction monitoring | | | | | |
|----------------------------------------------------|--------|---------------|------------|------------------------------|----|----|-----------|----|----|-----------|----|----|-----------|----|----|------------------------------|----|----|-----------|----|----|
| | | | | Mar-16 | | | Apr-16 | | | May-16 | | | Jun-16 | | | Jul-16 | | | Aug-16 | | |
| | | | | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 |
| <i>Cyprinus carpio</i> var. <i>viridivittaceus</i> | 錦鯉 | NP | C | | | | | | | | | | | | | | | | | | |
| <i>Gambusia affinis</i> | 食蚊魚 | NP | VC | + | + | | + | + | | + | | | + | | | + | | | + | | |
| <i>Glyptothorax pallozonum</i> | 白線紋胸鮡 | NP | R | | | | | | | | | | | | | + | | | + | | |
| <i>Liniparhomaloptera disparis</i> | 擬平鮡 | NP | C | + | | | + | | | + | | | + | | | + | | | + | | |
| <i>Misgurnus anguillicaudatus</i> | 泥鰍 | NP | C | | | | | | | | | | | | | | | | | | |
| <i>Oreochromis niloticus</i> | 尼羅口孵非鯽 | NP | C | + | | | + | | | + | | | + | | | + | | | + | | |
| <i>Parazacco spilurus</i> | 異鱸 | V and | C | + | + | | + | + | | + | + | | + | + | | + | + | | + | + | |
| <i>Poecilia reticulata</i> | 孔雀花魚鱒 | NP | C | | | | | | | | | | | | | | | | | | |
| <i>Pseudobagrus trilineatus</i> | 三線擬鱨 | NP,GC | R | | | | | | | + | | | + | | | + | | | + | | |
| <i>Pseudogastromyzon myersi</i> | 麥氏擬腹吸鮡 | NP | C | + | | | + | | | + | | | + | | | + | | | + | | |
| <i>Pterocryptis cochinchinensis</i> | 越南隱睛鮡 | NP | C | + | | | + | | | + | | | + | | | + | | | + | | |
| <i>Puntius semifasciolatus</i> | 七星魚 | NP | C | + | + | | + | + | | + | | | + | | | + | | | + | | |
| <i>Rhinogobius spp.</i> | 鰻虎魚 | NP | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Schistura fasciolata</i> | 橫紋南鮡 | NP | C | + | | | + | | | + | | | + | | | + | | | + | | |
| <i>Xiphophorus hellerii</i> | 劍尾魚 | NP | C | + | | | + | | | + | | | + | | | + | | | + | | |
| <i>Xiphophorus variatus</i> | 雜色劍尾魚 | NP | C | | | | | | | | | | | | | | | | | | |
| | | 2x2m fish | | 45 | 20 | 5 | 40 | 15 | 5 | 25 | 10 | 5 | 25 | 10 | 5 | 20 | 7 | 2 | 22 | 5 | 2 |
| | | No of Speices | | 11 | 4 | 1 | 11 | 4 | 1 | 12 | 2 | 1 | 11 | 2 | 1 | 12 | 2 | 1 | 12 | 2 | 1 |
| Amphibian | | | | | | | | | | | | | | | | | | | | | |
| <i>Paramesotriton hongkongensis</i> | 香港瘰螈 | P | UC | + | | | + | | | + | | | | | | | | | | | |

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Table 4.6 Fish species and Hong Kong Newt recorded at Upper Tai Po River (T1- Upper stream sampling site and T2 - Lower stream sampling

| Species | | Status | Commonness | Post construction monitoring | | | Post construction monitoring | | | Post construction monitoring | | | Post construction monitoring | | | Post construction monitoring | | |
|----------------------------------------------------|--------|---------------|------------|------------------------------|----|----|------------------------------|----|----|------------------------------|----|----|------------------------------|----|----|------------------------------|----|----|
| | | | | Sep-16 | | | Oct-16 | | | Nov-16 | | | Dec-16 | | | Jan-17 | | |
| | | | | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 |
| <i>Cyprinus carpio</i> var. <i>viridivittaceus</i> | 錦鯉 | NP | C | | | | | | | | | | | | | | | |
| <i>Gambusia affinis</i> | 食蚊魚 | NP | VC | + | | | + | | | + | | | + | | | | + | |
| <i>Glyptothorax pallozonum</i> | 白線紋胸鮡 | NP | R | + | | | + | | | + | | | + | | | | + | |
| <i>Liniparhomaloptera disparis</i> | 擬平鮡 | NP | C | + | | | + | | | + | | | + | | | | + | |
| <i>Misgurnus anguillicaudatus</i> | 泥鰍 | NP | C | | | | | | | | | | | | | | | |
| <i>Oreochromis niloticus</i> | 尼羅口孵非鯽 | NP | C | + | | | + | | | + | | | + | | | | + | |
| <i>Parazacco spilurus</i> | 異鱸 | V and | C | + | | | + | | | + | | | + | | | | + | |
| <i>Poecilia reticulata</i> | 孔雀花魚將 | NP | C | | | | | | | | | | | | | | | |
| <i>Pseudobagrus trilineatus</i> | 三線擬鱨 | NP,GC | R | + | | | + | | | + | | | + | | | | + | |
| <i>Pseudogastromyzon myersi</i> | 麥氏擬腹吸鮡 | NP | C | + | | | + | | | + | | | + | | | | + | |
| <i>Pterocryptis cochinchinensis</i> | 越南隱睛鮡 | NP | C | + | | | + | | | + | | | + | | | | + | |
| <i>Puntius semifasciolatus</i> | 七星魚 | NP | C | + | | | + | | | + | | | + | | | | + | |
| <i>Rhinogobius</i> spp. | 鯢虎魚 | NP | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Schistura fasciolata</i> | 橫紋南鮡 | NP | C | + | | | + | | | + | | | + | | | | + | |
| <i>Xiphophorus hellerii</i> | 劍尾魚 | NP | C | + | | | + | | | + | | | + | | | | + | |
| <i>Xiphophorus variatus</i> | 雜色劍尾魚 | NP | C | | | | | | | | | | | | | | | |
| | | 2x2m fish | | 22 | 2 | 2 | 25 | 2 | 2 | 30 | 2 | 2 | 35 | 2 | 2 | 40 | 2 | 2 |
| | | No of Speices | | 12 | 1 | 1 | 12 | 1 | 1 | 12 | 1 | 1 | 12 | 1 | 1 | 12 | 1 | 1 |
| Amphibian | | | | | | | | | | | | | | | | | | |
| <i>Paramesotriton hongkongensis</i> | 香港瘰螈 | P | UC | + | | | + | | | | | | | | | | | |

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| Species | | Status | Commonness | Post construction monitoring | | | Post construction monitoring | | | Post construction monitoring | | | Post construction monitoring | | | Post construction monitoring | | |
|----------------------------------------------------|--------|---------------|------------|------------------------------|----|----|------------------------------|----|----|------------------------------|----|----|------------------------------|----|----|------------------------------|----|----|
| | | | | Feb-17 | | | Mar-17 | | | Apr-17 | | | May-17 | | | Jun-17 | | |
| | | | | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 |
| <i>Cyprinus carpio</i> var. <i>viridivittaceus</i> | 錦鯉 | NP | C | | | | | | | | | | | | | | | |
| <i>Gambusia affinis</i> | 食蚊魚 | NP | VC | + | | | + | | | + | | | + | | | | + | |
| <i>Glyptothorax pallozonum</i> | 白線紋胸鮡 | NP | R | + | | | + | | | + | | | + | | | | + | |
| <i>Liniparhomaloptera disparis</i> | 擬平鮡 | NP | C | + | | | + | | | + | | | + | | | | + | |
| <i>Misgurnus anguillicaudatus</i> | 泥鰍 | NP | C | | | | | | | | | | | | | | | |
| <i>Oreochromis niloticus</i> | 尼羅口孵非鯽 | NP | C | + | | | + | | | + | | | + | | | | + | |
| <i>Parazacco spilurus</i> | 異鱸 | V and | C | + | | | + | | | + | | | + | | | | + | |
| <i>Poecilia reticulata</i> | 孔雀花魚 | NP | C | | | | | | | | | | | | | | | |
| <i>Pseudobagrus trilineatus</i> | 三線擬鱮 | NP,GC | R | + | | | + | | | + | | | + | | | | + | |
| <i>Pseudogastromyzon myersi</i> | 麥氏擬腹吸鮡 | NP | C | + | | | + | | | + | | | + | | | | + | |
| <i>Pterocryptis cochinchinensis</i> | 越南隱睛鮡 | NP | C | + | | | + | | | + | | | + | | | | + | |
| <i>Puntius semifasciolatus</i> | 七星魚 | NP | C | + | | | + | | | + | | | + | | | | + | |
| <i>Rhinogobius</i> spp. | 鰻虎魚 | NP | C | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Schistura fasciolata</i> | 橫紋南鮡 | NP | C | + | | | + | | | + | | | + | | | | + | |
| <i>Xiphophorus hellerii</i> | 劍尾魚 | NP | C | + | | | + | | | + | | | + | | | | + | |
| <i>Xiphophorus variatus</i> | 雜色劍尾魚 | NP | C | | | | | | | | | | | | | | | |
| | | 2x2m fish | | 45 | 2 | 2 | 45 | 2 | 2 | 40 | 2 | 2 | 30 | 2 | 2 | 20 | 2 | 2 |
| | | No of Speices | | 12 | 1 | 1 | 12 | 1 | 1 | 12 | 1 | 1 | 12 | 1 | 1 | 12 | 1 | 1 |
| Amphibian | | | | | | | | | | | | | | | | | | |
| <i>Paramesotriton hongkongensis</i> | 香港瘰螈 | P | UC | | | | | | | | | | | | | | | |

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| Species | | Status | Commonness | Post construction monitoring | | | Post construction monitoring | | | Post construction monitoring | | | Post construction monitoring | | |
|----------------------------------------------------|--------|---------------|------------|------------------------------|----|----|------------------------------|----|----|------------------------------|----|----|------------------------------|----|----|
| | | | | Jul-17 | | | Aug-17 | | | Sep-17 | | | Oct-17 | | |
| | | | | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 | Reference | T1 | T2 |
| <i>Cyprinus carpio</i> var. <i>viridivittaceus</i> | 錦鯉 | NP | C | | | | | | | | | | | | |
| <i>Gambusia affinis</i> | 食蚊魚 | NP | VC | + | | | + | | | + | | | + | | |
| <i>Glyptothorax pallozonum</i> | 白線紋胸鮡 | NP | R | + | | | + | | | + | | | + | | |
| <i>Liniparhomaloptera disparis</i> | 擬平鮡 | NP | C | + | | | + | | | + | | | + | | |
| <i>Misgurnus anguillicaudatus</i> | 泥鰍 | NP | C | | | | | | | | | | | | |
| <i>Oreochromis niloticus</i> | 尼羅口孵非鯽 | NP | C | + | | | + | | | + | | | + | | |
| <i>Parazacco spilurus</i> | 異鱧 | V and | C | + | | | + | | | + | | | + | | |
| <i>Poecilia reticulata</i> | 孔雀花魚將 | NP | C | | | | | | | | | | | | |
| <i>Pseudobagrus trilineatus</i> | 三線擬鱧 | NP,GC | R | + | | | + | | | + | | | + | | |
| <i>Pseudogastromyzon myersi</i> | 麥氏擬腹吸鮡 | NP | C | + | | | + | | | + | | | + | | |
| <i>Pterocryptis cochinchinensis</i> | 越南隱睛鮡 | NP | C | + | | | + | | | + | | | + | | |
| <i>Puntius semifasciolatus</i> | 七星魚 | NP | C | + | | | + | | | + | | | + | | |
| <i>Rhinogobius spp.</i> | 鯢虎魚 | NP | C | + | + | + | + | + | + | + | + | + | + | + | + |
| <i>Schistura fasciolata</i> | 橫紋南鮡 | NP | C | + | | | + | | | + | | | + | | |
| <i>Xiphophorus hellerii</i> | 劍尾魚 | NP | C | + | | | + | | | + | | | + | | |
| <i>Xiphophorus variatus</i> | 雜色劍尾魚 | NP | C | | | | | | | | | | | | |
| | | 2x2m fish | | 15 | 1 | 1 | 20 | 1 | 1 | 25 | 1 | 1 | 25 | 1 | 1 |
| | | No of Speices | | 12 | 1 | 1 | 12 | 1 | 1 | 12 | 1 | 1 | 20 | 1 | 1 |
| Amphibian | | | | | | | | | | | | | | | |
| <i>Paramesotriton hongkongensis</i> | 香港瘰螈 | P | UC | | | | | + | | | + | | | + | |

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Table 4.7 Abotic data for Upper Tai Po River (T1- Upper stream sampling site and T2- Lower stream sampling site)

| Parameters/ Date | Baseline survey | | Impact monitoring | | | | | | | | | | | | |
|----------------------------|-----------------|-------------------------|-------------------|----------|------|----------|------|----------|-----|----------|-----|----------|-----|----------|-----|
| | Oct-07 | Jan-09 | | Jul-09 | | Jan-10 | | Jul-10 | | Jan-11 | | Jul-11 | | Jan-12 | |
| Replicate | T1 | T1 | T2 | T1 | T2 | T1 | T2 | T1 | T2 | T1 | T2 | T1 | T2 | T1 | T2 |
| DO (mg/L) | 8.2 | 9 | 4 | 6.3 | 6 | 9.4 | 8.8 | 9 | 6.5 | 10.5 | 9.8 | 9 | 8.2 | 8.8 | 8.4 |
| pH | 6.9 | 7.18 | 6.86 | 7.28 | 6.96 | 8.2 | 8.5 | 7.3 | 7.2 | 6.9 | 7.1 | 7.1 | 7.3 | 6.8 | 7.6 |
| Nitrate (mg N/L) | 0.39 | 0.1 | 1.3 | 0.07 | 1.32 | 0.12 | 0.71 | 0.1 | 0.5 | 0.1 | 0.5 | 0.1 | 0.5 | <0.1 | 0.5 |
| Ammonia (mg/L) | <0.01 | PO4-P (µg P/L): <100 | | 0.01 | 0.22 | <0.01 | 0.2 | 0.1 | 0.2 | 0.01 | 0.3 | 0.01 | 0.2 | <0.01 | 0.3 |
| Salinity (ppt) | <0.1 | <0.1 | 0.1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Conductivity (mS/cm) | 40 | 40 | 190 | 34 | 118 | 42 | 72 | 49 | 43 | 50 | 60 | 50 | 60 | 65 | 74 |
| BOD (mg/L) | < 2 | < 2 | 12 | < 2 | < 2 | < 2 | 2 | < 2 | 2 | 2 | < 2 | < 2 | 2 | < 2 | 3 |
| Water flow at pool (m/s) | 0.01-0.2 | 0.01-0.2 | | 0.01-0.2 | | 0.01-0.2 | | 0.01-0.2 | | 0.01-0.2 | | 0.01-0.2 | | 0.01-0.2 | |
| Water flow at riffle (m/s) | 0.2-0.5 | 0.2-0.5 | | 0.2-0.5 | | 0.2-0.5 | | 0.2-0.5 | | 0.2-0.5 | | 0.2-0.5 | | 0.2-0.5 | |
| Sand (%) | 15 | 15 | | 15 | 25 | 15 | 25 | 15 | 25 | 15 | 25 | 15 | 15 | 15 | 15 |
| Stone (%) | 80 | 80 | | 80 | 70 | 80 | 70 | 80 | 70 | 80 | 70 | 80 | 70 | 80 | 70 |
| Mud (%) | 5 | 5 | | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Concrete(%) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 10 |

Table 4.7 Abotic data for Upper Tai Po River (T1- Upper stream sampling site and T2- Lower stream sampling site)

| Parameters/ Date | Post construction monitoring | | | | | | | | | |
|----------------------------|------------------------------|-------|----------|-------|----------|-------|----------|-------|----------|-------|
| | Jun-17 | | Jul-17 | | Aug-17 | | Sep-17 | | Oct-17 | |
| Replicate | T1 | T2 | T1 | T2 | T1 | T2 | T1 | T2 | T1 | T2 |
| DO (mg/L) | 8.0 | 8.0 | 7.9 | 8.0 | 8.0 | 8.0 | 7.9 | 8.0 | 7.9 | 7.9 |
| pH | 7.7 | 7.7 | 7.7 | 7.7 | 7.7 | 7.8 | 7.7 | 7.8 | 7.7 | 7.8 |
| Nitrate (mg N/L) | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Ammonia (mg/L) | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Salinity (ppt) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Conductivity (mS/cm) | 22 | 21 | 19 | 20 | 23 | 25 | 18 | 23 | 23 | 28 |
| BOD (mg/L) | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Water flow at pool (m/s) | 0.01-0.3 | | 0.01-0.3 | | 0.01-0.3 | | 0.01-0.3 | | 0.01-0.3 | |
| Water flow at riffle (m/s) | 0.3-0.6 | | 0.3-0.6 | | 0.3-0.6 | | 0.3-0.6 | | 0.3-0.6 | |
| Sand (%) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Stone (%) | 40 | 20 | 40 | 20 | 40 | 20 | 40 | 20 | 40 | 20 |
| Mud (%) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Concrete(%) | 60 | 80 | 60 | 80 | 60 | 80 | 60 | 80 | 60 | 80 |