

13 Fisheries Impact Assessment

13.1 Overview

This section presents the assessment of direct and indirect fisheries impact for the LMC Loop Project. Baseline information on the fish ponds within the Assessment Area, assessment methodology, identification and evaluation of fisheries impacts (if any) arising from the Project and mitigation measures are included. In general, with the current alignment selected for external connections, good site practices to minimize dust, water quality and waste produced, direct and indirect fisheries impacts arising from the Project is considered to be minor.

The fisheries impact assessment has been conducted in accordance with the requirement of Annexes 9 and 17 of the TM-EIAO as well as the requirements set out under Clause 3.4.14 of the EIA Study Brief. The area for fisheries impact includes all areas within 500m from the boundaries of the Project, and other water systems of fisheries importance (e.g. Deep Bay) if potentially impacted during construction or operation of the Project. Special attention is given to the potential impacts on aquaculture activities and the loss of fish ponds. The Assessment Area is illustrated in Figure 13.1.

13.2 Legislation, Standards and Guidelines

The relevant legislations, standards and guidelines applicable to the present study for the assessment of fisheries impact assessment:

- Environmental Impact Assessment Ordinance (EIAO) (CAP. 499), Technical Memorandum on Environmental Impact Assessment Process (TM-EIAO).

13.2.1 Environmental Impact Assessment Ordinance (EIAO) (CAP. 499), Technical Memorandum on Environmental Impact Assessment Process (TM-EIAO)

The general criteria and guidelines for evaluating and assessing fisheries impacts and considering mitigation measures are documented in the Annexes 9 and 17 of the TM-EIAO.

13.3 Baseline Conditions

Pond fish culture has been practised in the northwestern New Territories for a long period of time. Traditionally, only primary freshwater fish and several brackish species, such as Bighead Carp *Aristichthys nobilis*, Edible Goldfish *Carassius auratus*, Grass Carp *Ctenopharyngodon idellus*, Mud Carp *Cirrhinus chinensis*, Flathead Mullet and Nile Tilapia *Oreochromis niloticus*, are farmed. However, in recent years, certain high-value marine species such as Giant Grouper *Epinephelus lanceolatus*, Yellowfin Seabream *Acanthopagrus latus* and Spotted Scat *Scatophagus argus* have also been cultured in diluted seawater by fish farms close to the coast (e.g. at Mai Po).

In order to help local fish farms to develop, AFCD has introduced new aquaculture species (i.e. Jade Perch *Scortum barcoo*) to Hong Kong, and also launched the “Accredited Fish Farm Scheme” (AFFS). Under this scheme, products from registered fish farms are “accredited” by AFCD, and can be marketed under the unique brand name of the scheme. The department believes that this scheme can make local aquaculture products “stand out by branding”.

Several fish farms have started to culture new species and AFCD has carried out much promotional work; according to the data extracted from AFCD’s website and AFCD’s annual reports, the production of pond fish in Hong Kong has stabilised in recent years. Annual pond fish production and fish pond area in the territory are listed in the **Table 13.1**.

Table 13.1 Annual pond fish production and fish pond area

Year	Pond Fish Production (tonne)	Fish Pond Area (ha)	Overall Pond Fish Production Rate (kg/ha/year)
1997	5000	1125	4444
1998	4900	1110	4414
1999	4500	1094	4113
2000	2817	1060	2657
2001	2550	1059	2407
2002	1989	1030	1931
2003	2114	1029	2054
2004	1977	1026	1927
2005	1897	1026	1849
2006	1943	1024	1897
2007	1927	1160	1661
2008	2266	1160	1953
2009	2105	1160	1814
2010	2190	1109	1975
2011	2315	1130	2049

On the other hand, based on the information from AFCD, local pond fish production accounted for approximately only 4% of local pond fish consumption in 2011. Most pond fish consumed in the territory are imported from the Mainland.

There are no capture fisheries known within the Assessment Area, and no assessment of impact is carried out. Capture fisheries have not been covered in previous EIA reports for the area such as Improvements to San Tin Interchange (HyD 2004) or the EIA Report for Sheung Shui to LMC Spur Line (KCRC 2002).

13.4 Assessment Methodology

Literature review and internet search have been conducted to assess the baseline status of pond fish culture activity within the Assessment Area as well as the territory. Literatures and websites reviewed include:

- AFCD annual reports (1997-2011);
- AFCD website (http://www.afcd.gov.hk/english/fisheries/fish_aqu/fish_aqu.html);

- HyD. 2004. Improvements to San Tin Interchange. EIA report submitted to the EPD;
- KCRC. 2002. EIA report for Sheung Shui to Lok Ma Chau Spur Line. EIA report submitted to the EPD.

In addition to desktop survey, site visits were undertaken to investigate actual fisheries status within the Assessment Area from June to September 2009 and from December 2009 to January 2010. Activities related to fisheries observed during other field surveys were also recorded. During site visits, local villagers, fish farmers and pond owners were interviewed. A committee member of the HKNTFCA was also contacted for further information on local pond fisheries. The actual pond status was then further updated based on information obtained from AFCD.

Ponds observed were categorized as follows:

- Active: evidence of commercial aquaculture activities, including commercial fish ponds, fish fry ponds.
- Inactive: no evidence of commercial aquaculture activities, but no major physical constraints to its resumption in the short-term, including ponds with fish present in non-commercial quantities and ponds for casual sport fishing or water sports.
- Abandoned: physical evidence that aquaculture has not taken place for many years (i.e. overgrown) and/or where there are obvious physical constraints to its short-term resumption (i.e. fenced); concreted ornamental ponds and ponds for wetland compensation or wastewater treatment are also included in this category.

13.5 Site Investigation

13.5.1 LMC Loop

Based on aerial photos, there were active ponds inside LMC Loop in the past. However, after the Shenzhen River Regulation Project, these ponds were filled and lost. Although differential settlement of fill has resulted in the creation of small pond-like areas, these are not actively managed and are full of emergent vegetation (and ecologically are marshes). Further, the water quality of these areas is poor, as excavated mud from the old Shenzhen River was dumped in this area during the regulation works. These depressions are not active fish ponds and are not suitable for fish culture.

13.5.2 Hoo Hok Wai, Ma Tso Lung, Tse Koo Hung and Areas covered by Road Alignments

Hoo Hok Wai is a core fish pond area in Hong Kong, with many active fish ponds. Aquaculture activities such as drying of ponds, reprofiling, harvesting and feeding are routine. Some ponds, however, are inactive or abandoned; these ponds are usually covered with dense vegetation and show no sign of commercial aquaculture activity. In areas to the south of LMC Loop, alongside the current boundary fence road, there is a mixture of abandoned, inactive and active ponds. Those close to Ha Wan Tsuen or the LMC BCP are mainly not active. Most of

these ponds are not actively managed and some have been abandoned since the construction of the LMC Spur Line. But certain very small ponds are still active.

The ponds in front of the LMC MTR Station are managed to mitigate impacts of the project on wetland habitat. The fish are not sold to the market. These ponds are not regarded as abandoned fish ponds. Some ponds on the eastern side of the Station are managed to treat wastewater, and should also be regarded as abandoned. Further away from the Station most ponds are actively managed for aquaculture purposes, but these ponds are far from the Project boundary.

Active ponds mentioned above usually practise polyculture, and fish kept in these ponds included Bighead Carp, Common Carp, Edible Goldfish, Grass Carp, Flathead Mullet, Mud Carp and Nile Tilapia. Unsalable bread and residues from local food factories were the main feed for these fishes. These farms follow traditional methods of producing fish. No ponds were found culturing high-priced species such as Giant Grouper, Scat and Seabream in the Assessment Area.

No pond was found at Tse Koo Hang. At Ma Tso Lung there are two non-commercial ponds culturing fish for self-consumption, two abandoned ponds and one for raising fish fry.

13.5.3 Summary

The status and area of ponds within the Assessment Area are summarized in the **Table 13.2** and **Figure 13.1**.

Table 13.2 Status and area (ha) of ponds within the assessment area

Pond Category	Fisheries Status	Total Area (ha)
Active	Commercial fish ponds	143.04
Inactive	Inactive (producing fishes for self-consumption/ not in a commercial manner)	22.40
Abandoned	Fenced/ abandoned/ overgrown/ not for fisheries purpose	66.51

13.6 Identification and Evaluation of Fisheries Impacts

13.6.1 Construction Phase - Direct Impacts

The following Designated Projects (DPs) have been included in assessing the direct fisheries impact during construction phase:

- Western Connection Road (DP2);
- Direct Linkage to LMC Station (DP3); and
- Eastern Connection Road (DP6).

Fish ponds impacted by the Project are illustrated in **Figure 13.2**.

13.6.1.1 LMC Loop

No direct loss fisheries impact will result from clearance and development of LMC Loop.

13.6.1.2 Western Connection Road and Direct Link to LMC Station

The Western Connection Road will utilise alignments of the existing Ha Wan Tsuen Road and Lok Ma Chau Road, which will be upgraded and widened to meet future traffic volume. The Direct Link to LMC Station is a new on-viaduct road that provides access to LMC Loop from LMC Station. Impacts on ponds of these two alignments overlap, as they will be constructed concurrently. **Figure 13.2** illustrates the impacted ponds.

With regard to the Direct Link, to the west of San Tin Eastern Main Drainage Channel half of one abandoned pond will be lost permanently (an area of 0.41ha).

Between LMC Meander and the STEMDC ponds lost permanently include: Pond 3 (0.31ha, inactive), Pond 4 (0.77ha, active) and the pond immediately to the south of Pond 1 (0.41ha, abandoned). In addition, the pond immediately south of Pond 2 (0.35ha), which is active, will be lost permanently.

Along the alignment of the WCR, the active Pond 10 (0.89ha) will be lost permanently.

Finally, the 0.41ha Pond 5, which is active, will be drained during the construction phase, but reinstated on completion, while active Ponds 11 and inactive Pond 13 (2.10 and 1.10ha respectively) will also be drained only during the construction phase. **Table 13.3** summarises the pond loss.

13.6.1.3 Eastern Connection Road

The Eastern Connection Road links the eastern side of LMC Loop with the Kwu Tung area.

Some reinstatement of active Ponds 36-38, is possible, and as a result there will be a temporary loss of active ponds of 3.32ha. There will be permanent loss of 1.36ha of these ponds along with 0.74ha of active Pond 93. However, since Area 4 (i.e. active Ponds 36-38) is proposed be designated as wetland mitigation area to address the ecological impacts arisen from the project, these ponds would be permanently lost. Hence, the total area of ponds loss as fishpond would be 5.41 ha (active Ponds 36-38 and Pond 93). Two inactive ponds, two abandoned ponds and a fish fry farm are located at Ma Tso Lung. The proposed alignment of the Eastern Connection Road through Ma Tso Lung, however, is not predicted to directly impact these ponds or the farm. Thus, no direct fisheries impacts are predicted.

13.6.2 Construction Phase – Indirect Impacts

The following Designated Projects (DPs) have been included in assessing the indirect fisheries impact during construction phase:

- Ecological Area (DP1);
- Western Connection Road (DP2);
- Direct Linkage to LMC Station (DP3); and
- Eastern Connection Road (DP6).

13.6.2.1 Bund Stability and Water Seepage

There is also the potential for adverse impact on bund stability and water seepage due to construction works in close proximity.

13.6.2.2 Blockage of Existing Access

There is the potential for access to fish ponds to be blocked due to construction works, which may have an impact on management activities and fisheries production. At the current time, however, the extent of this is unknown.

13.6.2.3 Dumping of Construction Waste

Dumping of construction waste or excavated material on fish ponds other than those already indicated as requiring draining for construction purposes could cause a direct impact on pond fisheries. If this activity is not controlled, this impact is considered to be significant.

13.6.2.4 Other Indirect Impacts

Fish ponds close to the construction site may be affected by runoff, dust, silt and chemical wastes arising from construction activities. Untreated runoff and sediment would raise the level of suspended solids (SS). Elevated SS level may have acute or chronic effect on fish. In addition, as the streams and the nearby LMC Meander are sources of water for active fish ponds, pollutants discharging into these water bodies may also eventually cause a fisheries impact. Blockage of these water bodies due to poor construction activities (e.g. disorderly dumping of excavated material) may also affect the water supply to fish ponds and thus affect culture activities.

13.6.3 Operational Phase

The following Designated Projects (DPs) have been included in the fisheries impact assessment during operational phase:

- Ecological Area (DP1);
- Western Connection Road (DP2);
- Direct Linkage to LMC Station (DP3); and
- Eastern Connection Road (DP6).

Some ponds will be lost permanently. The effect of this has been evaluated above; this section presents an assessment of other fisheries impacts likely to appear during the operational phase.

Sewage and runoff from the proposed development could potentially cause impacts on nearby water bodies. This, in turn, could cause a deterioration of water quality and affect fish.

The Ecological Area will largely comprise reed marsh, with a small area of freshwater marsh. This habitat will be similar to inactive or abandoned ponds and reed and freshwater marshes already in the area. Given the similarity, there is unlikely to be any discharge different in nature to that existing, and thus operation

of the wetland would not cause any additional adverse impact on nearby water bodies. Therefore, significant fisheries impact is unlikely to be caused by the operation of the mitigation wetland.

The development area and proposed alignments may generate surface runoff, which may contain lubricants, oil or other contaminants that would affect the water quality of the streams and ponds nearby.

There is concern that existing paths to active fish ponds may be blocked during the operational phase (i.e. blocked by proposed connection roads). On the other hand, some ponds will be adjacent to future connection roads and thus bund stability and water seepage issues may also be concerns during the operational phase. If these impacts are not mitigated, they may be significant.

13.6.4 Wetland Mitigation

As mitigation for impacts of wetland loss and disturbance to wetland habitats elsewhere, both permanent and temporary wetland mitigation is proposed whereby fish ponds are managed to increase ecological value and attract required numbers of target species. The management of these ponds will ultimately be similar to the regime at the wetland mitigation area for the LMC Spur Line and Station, and thus these ponds will be removed from fish culture activities.

The first of the areas (Area 2) slated for use as a permanent mitigation area lies to the northeast of LMC Loop (affected pond numbers are 53-58 and 96). Of these, Ponds 53, 54, 56, 57, 58 and 96 are actively managed, while the remainder are inactive. The area of active ponds is 7.16ha and the area of inactive ponds is 1.29ha.

The second of the proposed areas for permanent mitigation, Area 7, lies adjacent to the existing wetland mitigation area for the LMC Spur Line and Station. These ponds are abandoned and have an area of 3.08ha; although in theory they could be brought back into production, the fact that they lie on government land in a relatively inaccessible location adjacent to the wetland mitigation area means that this is highly unlikely. This loss is considered to be of low significance.

Finally, Area 9 is proposed. This comprises 7.0ha of land contiguous with both Area 7 and the wetland mitigation area for LMC Spur Line and Station. Most of the ponds in this area are abandoned, the exception being a single active pond of 1.34ha. 5.48ha of abandoned ponds will also be subject to permanent loss.

A potential alternative area for permanent mitigation once the Eastern Connection Road is constructed is Area 4, which comprises Ponds 36-38 near Ngau Kok Shan, and constitutes 3.32ha. These ponds are active.

Impacts on access to adjacent fish ponds are possible, although the locations of the mitigation areas immediately adjacent to existing roads and to LMC Meander make this unlikely.

Permanent and temporary direct fisheries impacts on the Project are summarised in **Table 13.3**, while an assessment of fisheries impact is provided in **Table 13.4**.

Table 13.3 Direct loss of fish ponds arising from the Project.

Development aspect	Temporary Loss			Permanent Loss		
	Active	Inactive	Abandoned	Active	Inactive	Abandoned
WCR/LMC DC	2.51-	1.10-	-	2.01	0.31	0.82
ECR	3.32-	-	-	2.10		-
WMA Area 2	-			7.16	1.29	-
WMA Area 4*	-			3.32*	-	-
WMA Area 7	-					3.08
WMA Area 9	-			1.34		5.48
Total	5.83	1.10	-	12.61	1.60	9.38

* potential alternative to use of Area 9, not included in total sum.

WCR/ECR = Western/Eastern Connection Road; WMA = wetland mitigation area

Table 13.4 Summary of fisheries impact in absence of mitigation

Criteria	LMC Loop	Western Connection Road and Direct Link to LMC Station	Eastern Connection Road	Wetland mitigation areas
Nature of impact	No direct impact. Potential indirect impacts (discharge of sewage/wastewater, runoff).	Temporary and permanent loss of active, inactive and abandoned ponds. Potential indirect impacts (construction waste dumping, discharge of sewage/wastewater, runoff, seepage, bund stability, blockage of access roads).	Temporary loss of active ponds. Permanent loss of active and inactive ponds. Potential indirect impacts (construction waste dumping, wastewater, runoff, blockage of access roads).	Permanent loss of both active and abandoned ponds. Potential impacts on access to adjacent managed ponds.
Size of affected area	Nil.	Temporary loss: 2.51ha of active and 1.10 ha of inactive pond. Permanent loss: 2.01ha of active pond and 0.31 ha of inactive pond and 0.82 of abandoned pond.	Temporary loss: 3.32ha of active pond. Permanent loss: 2.10ha of active pond.	For Area 2 there will be permanent loss of 7.16ha of active ponds and 1.29ha of inactive ponds. Permanent loss of 3.08ha of abandoned ponds (Area 7) and 1.34ha of active ponds and 5.48ha of abandoned pond (Area 9). Permanent loss of 3.32ha of active pond

Criteria	LMC Loop	Western Connection Road and Direct Link to LMC Station	Eastern Connection Road	Wetland mitigation areas
				(Area 4) will occur should it be chosen. No temporary losses are anticipated.
Loss of fisheries resources/ production	Nil.	Most of the affected ponds are not actively managed currently, thus low.	Only small area of inactive ponds impacted.	Given the dominance of inactive ponds, this does not constitute a significant loss.
Impact on nursery or spawning grounds	Nil.	Nil.	Nil.	Nil.
Impact on fishing activity	Nil.	Very low impact, as only one small pond involved.	Low.	Low impact affecting small number of fish pond operators.
Impact on aquaculture activity	Minor.	Minor permanent impact.	Minor	Minor permanent impact.

The total permanent loss of fish culture production from the Project may affect 23.59ha (up to 12.61ha of active ponds, up to 1.60ha of inactive ponds and up to 9.38ha of abandoned ponds) depending on which Wetland Mitigation option is selected. At a cumulative maximum of slightly more than 2% of the overall fish pond area in the northwest NT, this is considered to constitute a minor loss to fisheries production, especially as only 52% of these ponds are currently active.

13.6.4.1 Impacts to Capture Fisheries

No capture fisheries are present within the Study Area and as such no impacts are predicted to capture fisheries in the construction or operational stages of this Project.

13.6.4.2 Impacts to Water Systems of Fisheries Importance

Given the distance from the Study Area, approximately 10km, it is considered that construction and/or operational impacts to water systems of fisheries importance (e.g. Deep Bay) are insignificant.

13.6.4.3 Bio-remediation of Shenzhen River

As mitigation for odour issues of the Shenzhen River will be required under the air quality impact assessment, in-situ bio-remediation will be carried out to improve sediment quality via nitrate injection (no dredging work required). The major water quality impact of this treatment concerns the potential release of

nitrate-nitrogen, ammonia and heavy metals from sediments into the water. An in-situ trial test on bio-remediation using calcium nitrate indicated that downstream nutrient levels of TKN, ammonia nitrogen, nitrate, nitrite and total nitrogen will increase slightly under low-flow conditions, but will be highly diluted by natural tidal surge. This slight low-flow increase in nutrient levels in what is already a eutrophic system is predicted to have an insignificant impact in downstream areas, including Mai Po Inner Deep Bay Ramsar Site and the oyster farms some 10km south west of the LMC Loop.

13.6.5 Cumulative Impact

Since this project is not predicted to cause significant fisheries impact (i.e. no large area of active fish pond would be affected permanently), the potential for significant cumulative impacts is limited. The NENT NDA PES is not currently predicted to cause significant fisheries impact except in respect of fish fry ponds near Ho Sheung Heung. However, no fish fry ponds are predicted to be impacted by the current Project.

The Closed Area study included HHW as part of its study area, but no development was proposed for this area, and thus no impacts were predicted. Work on the preparation of an OZP for HHW is now under way. The land use zonings ultimately adopted for HHW may have potential impact on fisheries, but it is currently unknown what these will be. Ongoing construction of a secondary boundary fence will bring negligible impacts on fisheries.

13.7 Mitigation Measures

13.7.1 Loss of Pond Areas

Permanent loss of a small area of active, inactive and abandoned ponds is considered to be a minor impact, in view of the small contribution to the total fish pond area in Hong Kong. It is considered that no mitigation is required for this loss.

13.7.2 Dumping of Construction Waste

Illegal dumping of waste and excavated material will be properly managed (see **Chapter 7**), and thus such impact is not predicted to occur.

13.7.3 Bund Stability and Water Seepage

During the construction stage, a layer of permanent sheet pile wall will be erected along the site boundary adjacent to fish ponds after commencement of site works. The sheet pile wall will be constructed by silent piling method (Press-in method) which induces minimal vibration. Therefore the stability of the fish pond bund will not be influenced by the construction of the sheet pile wall, subsequent construction works and the loading from the road during operational stage. In addition, the sheet pile wall will have grouting or a grout curtain to avoid water seepage from the fish pond to the excavation area. With these measures, significant impacts are not anticipated.

Prior to the operational phase, affected ponds will be reinstated as far as practicable after completion of construction works.

13.7.4 Blockage of Access Roads to Fish Ponds

Temporary traffic arrangements will be instigated to maintain or provide alternative access to fish ponds during construction phase. Detailed arrangement cannot be provided at this stage, but the project proponent will be responsible for drawing up such an arrangement with the contractor as and when necessary throughout the construction period. Subsequently, access to the fish ponds will not be blocked in the operational phase.

13.7.5 Other Indirect Impacts

Standard mitigation measures to control site runoff and other pollutants caused by construction activities and good site practices will be implemented during the construction phase of the Project. Excavated material and other inert construction wastes produced will be transferred to proper recipients (i.e. landfill) (see Waste Management Section). Sewage from the proposed development will be dealt with via a sewerage system and will not be discharged directly to surrounding water bodies. With these measures, indirect impacts on fisheries due to construction activities will be insignificant (for details of measures protecting nearby water bodies including fish ponds please see Water Quality Impact Assessment).

13.7.6 Wetland Mitigation Impacts

Operation of the wetland mitigation areas required to compensate for direct and indirect impacts on wetland areas arising from the project result in the loss of both active and inactive ponds. However, this is considered to be a minor and insignificant impact in view of the small contribution to the total fish pond area in Hong Kong. It is considered that no mitigation is required for this loss.

13.7.7 Good Site Practice

13.7.7.1 Dust Minimization

During all excavation works, good site practice should be adopted to minimize impacts on fisheries. The below site practices should be adopted during this time.

- Any excavated or stockpile of dusty material should be covered entirely by impervious sheeting or sprayed with water to maintain the entire surface wet and then removed or backfilled or reinstated where practicable within 24 hours of the excavation or unloading;
- Any dusty materials remaining after a stockpile is removed should be wetted with water and cleared from the surface of roads;
- Exposed earth should be properly treated by compaction, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shortcrete or other suitable surface stabiliser within six months after the last construction activity on the construction site or part of the construction site where the exposed earth lies;

- Excavation profiles must be properly designed and executed with attention to the relevant requirements for environment, health and safety;
- In case the soil to be excavated is situated beneath the groundwater table, it may be necessary to lower the groundwater table by installing well points or similar means;
- Supply of suitable clean backfill material after excavation, if required;
- Vehicles containing any excavated materials should be suitably covered to limit potential dust emissions or contaminated run-off, and truck bodies and tailgates should be sealed to prevent any discharge during transport or during wet season;
- Speed control for the trucks carrying contaminated materials should be enforced; and
- Vehicle wheel washing facilities at the site's exit points should be established and used.

13.7.8 Contingency Plan

The contractor should prepare an emergency contingency plan for actions to be taken if significant impacts, such as accidental spillage of chemicals, water seepage from fish ponds, damaged/ destabilized pond bunds, pond water contamination by site runoff, on fish ponds occur. The contractor should submit the emergency contingency plan dealing with, but not limited to, the aforementioned potential impacts to the engineer for review, comment and approval. The fish pond operators will also be consulted for the details of the contingency plan, which will also be submitted to AFCD for review and comment. The plan should include, but not limited to, the following:

- Potential emergency situations;
- Chemicals or hazardous materials used on-site (and their location);
- Emergency response team;
- Emergency response procedures;
- List of emergency telephone hotlines;
- Locations and types of emergency response equipment;
- Training plan and testing for effectiveness.

During the operational phase, it is also suggested that similar plan should be in place to deal with any accidental spillage event.

13.8 Residual Environmental Impacts and Monitoring and Audit

With the above measures and measures for mitigating water quality impacts and managing waste, no residual impact is anticipated.

With the monitoring and audit for water quality, specific programme for fisheries is not deemed necessary.

13.9 Conclusion

Since the pond areas to be lost do not account for a significant proportion of the total fish pond area in Hong Kong, the fisheries impact is considered to be low significance. Indirect impacts arising from construction activities and operation of the proposed development would be properly mitigated through standard practices and thus no significant fisheries impact is anticipated. Overall, no unacceptable fisheries impact is predicted from this project.