

## 6. Strategic Environmental Assessment

A Strategic Environmental Assessment (SEA) was carried out to evaluate at strategic level the potential environmental impacts of land use, the cumulative environmental impacts and environmental sustainability implications of the planning framework of the RDP. Environmental mitigation measures to address the impacts and follow-up investigation requirements were recommended where applicable. Major environmental issues are in relation to air quality, noise, water quality, waste, ecology, heritage, PHI hazard and landfill gas hazard.

*Air quality* is generally good within the existing Closed Area. The opening up of the existing Closed Area for future development will inevitably attract more people and generate more traffic in the area. The RDP however does not require construction of new roads in the existing Closed Area. However, for upgrading of the existing LMH Road and Man Kam To Road as well as some minor improvement works including provision of passing bays to some village access roads are recommended to enhance road safety. Increase in traffic flow within the existing Closed Area will therefore be limited. Technical assessments in this Study revealed that air quality at both existing and planned Air Sensitive Receivers (ASRs), with the road improvement scheme, is below the relevant Hong Kong Air Quality Objectives (HKAQO). There are a number of existing, planned and proposed odour emission sources within and in the vicinity of the existing Closed Area, including Shenzhen River, existing pig farms, STWs, NENT Landfills and its Extension, Man Kam To Animal Inspection Station, Sheung Shui Slaughter House, Sha Ling Livestock Waste Composting Plant, etc. Relevant setback distances in accordance with the Hong Kong Planning Standards and Guidelines (HKPSG) are recommended for the proposed developments from some of these odorous sources. Mitigation measures, such as odour removal systems and phasing out/relocating the polluting sources are recommended to tackle potential odour nuisance.

*Noise* in the ambience varies between the eastern, middle and western portions depending on the current activities level of the area. Subject to further detailed studies/assessments, in order to protect all the existing, planned and proposed sensitive receivers from traffic noise impact, appropriate noise mitigation measures, such as noise barriers and low noise surfacing materials on heavily trafficked major roads including Sha Tau Kok Road, Ping Che Road, Man Kam To Road, and LMH Road, etc. should be considered and implemented by the relevant parties. No new rail line and new fixed noise source is proposed within the existing Closed Area. Appropriate mitigation measures, such as noise barrier and buffer distance, as well as by phasing out or relocating the polluting sources, etc. have been suggested to avoid adverse impacts from the rail line, fixed noise sources including firing ranges, helipads, and BCPs, rail station, etc.

*Water quality* in the area is currently affected by domestic sewage from unsewered areas in the existing Closed Area being only partially treated by private treatment facilities and then discharged into Deep Bay via stormwater drains and streams. Most of these treatment facilities are septic tanks and soakaway systems in village houses. Although the opening up of the existing Closed Area would generate additional wastewater and sewage, the proposed RDP recommends conveying sewage flows to centralised STWs prior to discharging into nearby drainage system for its final disposal into the Deep Bay. The RDP has included an improvement proposal on the sewerage and sewage treatment infrastructure in the existing Closed Area.

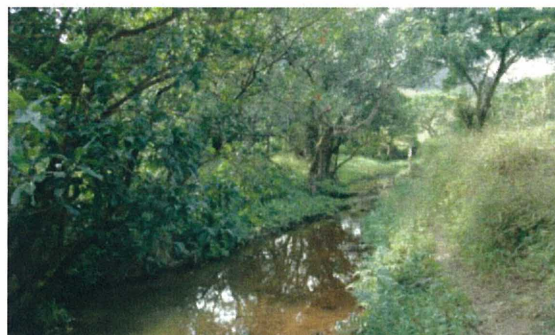
*The 1km Consultation Zone of the PHI* of Sheung Shui Water Treatment Works encroaches upon the existing Closed Area. Proposals for developments that will result in increase in the number of persons living or working in the Consultation Zone have to be submitted to the Coordinating Committee on Land-use Planning and Control relating to Potentially Hazardous Installations (CCPHI) for consideration. The Consultation Zone of NENT Landfill and its Extension also encroach upon the existing Closed Area. Due regards have been taken when formulating the land use framework for the area and protection measures were recommended for proposed developments within the Landfill Gas Consultation Zones.

Waste management strategy is integrated and enhanced in the development as appropriate. The land use framework would only generate a limited amount of construction and demolition (C&D) waste in phases after the release of the existing Closed Area. With reuse for the backfilling as well as reuse and recycling of the C&D waste, the surplus public fill and C&D waste requiring disposal is expected to be small and hence the extra loading on public filling areas and landfills will be minimized. Besides, it is estimated that only a limited amount of waste would be generated from the proposed development and by the visitors and residents during the operational phase.

Changes to the boundary of the existing Closed Area will potentially open up the area which is currently largely rural and relatively undisturbed land. A number of sites, habitats and species of known ecological value both locally and nationally exist in the Study Area. In the west lie extensive areas of fishponds and wetlands at Mai Po and San Tin that have long been recognised for their ecological significance in supporting large numbers of waterbirds and wetland-dependent species. The Mai Po Inner Deep Bay Ramsar Site, which recognises the international importance of these wetlands, extends into the westernmost part of the Study Area. To the east of this is the MTRC Lok Ma Chau Wetland Compensation Area, which attracts large numbers of the globally-threatened Black-faced Spoonbill. HHW is located to the north of Ma Tso Lung and contains fresh water marshes, fishponds and reed beds which are also important habitats for waterbirds. It forms an important year-round breeding and foraging habitat for a diverse suite of waterbirds. The fishponds at HHW form a contiguous part of the Deep Bay wetland eco-system and, together with fishponds at San Tin and Nam Sang Wai are listed as one of the Priority Sites for Enhanced Conservation "Deep Bay Wetland Outside Ramsar Site" under the New Nature Conservation Policy. These wetland areas will continue to receive the same degree of protection, and similar wetland protection mechanisms currently adopted will still be applied in the area.

Colonies of breeding herons and egrets that lie near the Study Area are sustained by wetlands within, while HSH Egrettry, one of the largest in Hong Kong, lies in the existing Closed Area near large areas of wetland at HHW and Long Valley. This egrettry is proposed for inclusion within a "CA" to protect the habitat and initial sections of the flight lines to and from vital foraging areas at Long Valley, Sha Ling and HHW. Appropriate land use zonings would be proposed to protect and conserve the integrity of the ecological corridor in the LMC area.

At LMH, there is an undisturbed valley that holds two SSSIs: LMH Lead Mines and LMH Stream SSSIs. The former is an undisturbed resting ground for bats and has become one of the most important bat colonies hosting over 2000 bats, while the latter is an unmodified stream that supports a very diverse lowland fish community, including a number of rare species. These SSSI designations will remain in order to maintain the same level of protection. To add further protection to these two SSSIs, LMH Lead Mine is proposed for inclusion in the potential country park at Robin's Nest. A 20m buffer zone is also recommended for LMH Stream for consideration to be included in the statutory town plans.



Lin Ma Hang Stream

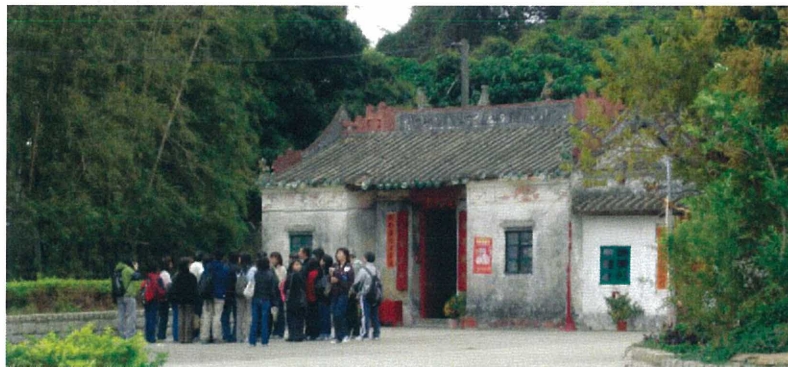
Surrounding the LMH valley is an area of woodland and shrubland that supports a diverse bird community including, in the grassland areas on the southern slopes, the globally-threatened Large Grass Warbler. The woodland is contiguous with forest at Wutongshan Forest Park in Shenzhen, and thus provides a vital link with Guangdong for the wildlife of Hong Kong. Maintenance of this link is vital for gene-flow and the sharing of biodiversity between the two places. In recognition of this and of the landscape diversity and visual splendour of the area, as well as to provide a valuable recreational resource for the people of Hong Kong, the potential Robin's Nest Country Park has been proposed



on the RDP. *Fung shui* woodlands in the existing Closed Area were proposed for zoning as “GB” or “CA” so as to conserve their heritage and ecological value.

Avoidance of impacts on habitats or species of high ecological value, and designation of “CA”, a potential Country Park and “GB” have been employed as important enhancement features that contribute significantly to the overall sustainability and environmental performance of the development plans.

Some built heritages resources are proposed to be adaptively reused and further investigation on the need for preservation of archaeological deposits is recommended. A declared monument and a number of graded and proposed graded historical buildings have been identified in the Study Area. The proposed land use would not have direct impact on built heritage resources. The RDP aims to revitalize the historical village through cultural tourism. The hiking/heritage trails proposed will link individual heritage resources together to enhance the tourism potential of the existing Closed Area. The adaptive reuse of the disused schools will also encourage rehabilitation of these buildings and also promote the cultural tourism.



**Historical Building**

In summary, while environmental mitigation measures and infrastructure facilities, such as noise barriers and sewerage infrastructures, are recommended with a view to reducing potential adverse environmental impact on the environmentally and ecologically sensitive areas within the Study Area, the RDP also aims to promote cultural tourism through groupings of heritage resources by means of the proposed hiking/heritage trails, revitalization of the historical villages and adaptive reuse of the disused old schools. It should also be noted that the SEA is a broad brush assessment only and when individual project is implemented, detailed studies and/or assessments shall be carried out by the respective project proponent(s) to evaluate and confirm adequacy and technical feasibility of the recommended environmental mitigation measures and infrastructure facilities. Some of these environmental mitigation measures and infrastructure facilities should also be implemented as recommended prior to population intake of the proposed developments.

## **7. Implementation**

The proposed land use framework will provide a basis for the preparation of statutory town plans before the opening up of the existing Closed Area. The Government will consider appropriate traffic management measures taking into account the road conditions and the anticipated traffic flow. The Government will also provide the necessary upgrading of infrastructural facilities and services (e.g. road improvements to Man Kam To Road, LMH Road and some village access roads).

In line with the planning intention and the land use framework proposed on the RDP, the Government will encourage private sector participation in taking forward the development proposals, including the Eco-lodge in Ma Tso Lung, Kong Nga Po Comprehensive Development Area, Hung Lung Hang Residential Area, the Development Corridors for cross boundary services, and development of recreation and leisure farming in agricultural land.