

Civil Engineering and Development Department

Ma Liu Shui Reclamation

Project Profile

Contents

1.	Basic Information	1
1.1	Project Title	1
1.2	Purpose and Nature of the Project	1
1.3	Name of Project Proponent	3
1.4	Location and Scale of Project and History of the Site	3
1.5	Number and Types of Designated Projects (DPs) to be Covered by the Project Profile	3
1.6	Name and Telephone Number of Contact Person	4
2.	Outline of Planning and Implementation Programme	5
2.1	Project Implementation	5
2.2	Project Timetable	5
2.3	Interactions with Other Projects	6
3.	Possible Impacts on the Environment	7
3.1	General	7
3.2	Air Quality	7
3.3	Noise	8
3.4	Water Quality	8
3.5	Waste Management	9
3.6	Land Contamination	9
3.7	Ecology	9
3.8	Fisheries	10
3.9	Landscape and Visual	11
3.10	Cultural Heritage	11
3.11	Potential Hazard	12
4.	Major Elements of the Surrounding Environment	13
4.1	General	13
4.2	Air Sensitive Receivers	13
4.3	Noise Sensitive Receivers	14
4.4	Water Sensitive Receivers	14
4.5	Ecological Sensitive Receivers	14
4.6	Fisheries Sensitive Receivers	15
4.7	Cultural Heritage Elements	15
4.8	Visually Sensitive Receivers and Landscape Resources	15
4.9	Land Contamination	16
4.10	Potential Hazard	16
5.	Environmental Protection Measures to be Incorporated in the Design and Further Environmental Implications	17
5.1	General	17
5.2	Air Quality	17
5.3	Noise	18
5.4	Water Quality	18

5.5	Waste Management	20
5.6	Land Contamination	20
5.7	Ecology	20
5.8	Fisheries	21
5.9	Visual	21
5.10	Cultural Heritage	21
5.11	Potential Hazard	22
5.12	Severity, Distribution and Duration of Environmental Effects and Further Implications	22
6.	Use of Previously Approved EIA Reports	23

Tables

Table 1.1	Affected Existing Facilities	2
Table 1.2	List of Designated Projects	3
Table 2.1	List of Potential Interfacing Projects	6

Drawings

Figure 1.1	Site Location of the Project
Figure 4.1	Location of Air Sensitive Receivers (Indicative)
Figure 4.2	Location of Noise Sensitive Receivers (Indicative)
Figure 4.3	Location of Water Sensitive Receivers (Indicative)
Figure 4.4	Location of Ecological Sensitive Receivers (Indicative)
Figure 4.5	Location of Fisheries Sensitive Receivers (Indicative)
Figure 4.6	Locations of Public Sensitive Viewers, Major Visual Resources and Key Public Viewing Points (Indicative)

1. Basic Information

1.1 Project Title

1.1.1 Ma Liu Shui Reclamation (hereinafter named as the Project).

1.2 Purpose and Nature of the Project

1.2.1 In June 2011, the Civil Engineering and Development Department (CEDD) commenced a consultancy study on “Enhancing Land Supply Strategy: Reclamation outside Victoria Harbour and Rock Cavern Development” (ELSS) to identify suitable locations for reclamation outside Victoria Harbour and rock cavern development to enhance land supply in Hong Kong. Ma Liu Shui (MLS) was identified as one of the potential nearshore reclamation sites for residential development near Shatin New Town.

1.2.2 In February 2015, CEDD commenced the “Study on Technical Issues Related to Potential Reclamation Site at Ma Liu Shui – Feasibility Study” (the Feasibility Study) to further examine the technical issues related to the reclamation at MLS. The Feasibility Study concluded that the proposed reclamation development with a preliminary reclamation extent of 60 hectares (ha) would not cause insurmountable technical and environmental problems.

1.2.3 In December 2018, the Task Force on Land Supply (TFLS) recommended MLS reclamation for implementation with priority. The Government responded to the TFLS in March 2019 that to ensure the quality of life of the nearby communities will not be deteriorated and to allay the concerns of local residents, the MLS reclamation will be put on hold subject to the review to address concerns over traffic impact and housing mix in slower time.

1.2.4 In October 2021 the Final Recommendations of “Hong Kong 2030+: Towards a Planning Vision and Strategy Transcending 2030” (Hong Kong 2030+) suggested that the reclamation site at MLS together with the site of Sha Tin Sewage Treatment Works (STSTW) after relocation to caverns could be possible solution spaces in medium to long term mainly for Innovation and Technology (I&T) development and other compatible uses.

1.2.5 Taking on board the recommendations of Hong Kong 2030+, the 2021 Policy Address announced the Government would revive the MLS reclamation project, together with the land to be vacated by the relocation of the STSTW to caverns, for providing new land mainly for I&T development rather than the originally suggested residential use, so as to strengthen the development of the Eastern Knowledge and Technology Corridor with I&T as a major economic function. The major components of the proposed MLS reclamation site development include the followings:

- (i) the proposed reclamation and associated marine works;
- (ii) reprovisioning of existing facilities affected by the proposed reclamation; and
- (iii) land use/top-side development and associated infrastructure.

1.2.6 To take forward the MLS reclamation, CEDD commenced a consultancy agreement “Engineering Study on Ma Liu Shui Reclamation – Feasibility Study” (the Study) in July 2022. The Study will establish the reclamation extent and ascertain the technical feasibility of the proposed reclamation. Necessary works required for reprovisioning of facilities affected by the proposed reclamation will also be recommended. Existing facilities along the shoreline of MLS or within the proposed reclamation area which would be affected by the reclamation and required to be reprovisioned/modified are summarised in **Table 1.1**.

Table 1.1 Affected Existing Facilities

Land-based Facilities	Marine Infrastructures
<ul style="list-style-type: none"> • Marine Outer Waters District Headquarters and Marine Police North Division (MOWDIST MNDIV Operation Base) and its helipad • The Chinese University of Hong Kong (CUHK) Water Sports Centre • Ma Liu Shui Ferry Pier & Landing No. 1, 2 & 3 • Water Supplies Department (WSD) Saltwater Pumping Station • Boat access and associated facilities of Simon F.S. Li Marine Science Laboratory of CUHK • Potential affected area for temporary access road and site offices 	<ul style="list-style-type: none"> • STSTW emergency submarine outfall • Tolo Harbour Effluent Export Scheme (THEES) submarine pipe • Existing DSD drainage outfalls (5 nos.) • Seawater intake for Simon F.S. Li Marine Science Laboratory of CUHK • Seawater intake for WSD Saltwater Pumping Station

1.2.7 For the reclamation and the associated marine works as described in **Section 1.2.5(i)** and the reprovisioning of the marine infrastructures as listed in **Table 1.1** (hereafter referred to as the “reclamation and associated marine works”), which are designated project (DP) under the Environmental Impact Assessment Ordinance (EIAO) (Cap. 499), an Environmental Impact Assessment (EIA) following the statutory requirements of the EIAO will be conducted to assess the potential environmental impacts arising from the construction and operation of the Project. This Project Profile was prepared to apply for the EIA Study Brief to proceed with the EIA Study for the Project under S.5(1)(a) of the EIAO.

1.2.8 For reprovisioning / modification works associated with the land-based facilities affected by the proposed reclamation listed in **Table 1.1**, which are non-DP, an environmental assessment will be carried out separately under the Study to assess the potential environmental impacts associated with the proposed works and establish its environmental acceptability.

1.2.9 For the proposed land use/top-side development and associated infrastructure on the MLS reclamation site as described in **Section 1.2.5(iii)**, the Innovation, Technology and Industry Bureau (ITIB) has engaged the Hong Kong Science and Technology Parks Corporation (HKSTP) to carry out separate preliminary development study. Designated Projects (DPs) under Schedule 2 and/or 3 of the EIAO, if any, for the proposed land use development and associated infrastructure on the MLS reclamation site will be identified and addressed in subsequent separate study.

1.3 Name of Project Proponent

1.3.1 The Project Proponent is the Port Works Division, Civil Engineering Office, CEDD of the Government of the Hong Kong Special Administrative Region.

1.4 Location and Scale of Project and History of the Site

1.4.1 The preliminary layout of the proposed reclamation works is shown in **Figure 1.1**. The potential MLS reclamation site covers the sea area of approximately 60 ha which is located in the proximity of the Sha Tin/Ma On Shan New Town. The potential reclamation abuts the existing coastline along CUHK in the west, Hong Kong Science Park (HKSP) in the north-west and STSTW in the south. The abutting coastline was reclaimed during the new town development in Shatin and Ma On Shan in the early 1970s⁽¹⁾. The extent of the reclamation shown is tentative and indicative only and subject to further review under the Study.

1.4.2 As mentioned in **Section 1.2.5**, existing marine infrastructures affected by the proposed reclamation will be reprovioned. Details of the reprovioning works for marine infrastructures will be formulated under the Study.

1.5 Number and Types of Designated Projects (DPs) to be Covered by the Project Profile

1.5.1 The Project would consist of various Schedule 2 DPs under the EIAO as listed in **Table 1.2**. The list may not be exhaustive and may be updated in the course of the EIA Study.

Table 1.2 List of Designated Projects

Item No.	Designated Project	Remarks
Schedule 2 of the EIAO		
C.1	Reclamation works (including associated dredging works) more than 5 ha in size	- Tentative reclamation extent of the Project is approximately 60 ha in size.
F.5	A submarine sewage pipeline with a diameter of 1,200 mm or more and a length of 1 km or more	- The STSTW emergency submarine outfall to be reprovioned would be greater than 1,200 mm in diameter, and longer than 1 km in length. The design and details of the reprovioned emergency submarine outfall and the associated marine works should be subject to further review.
F.6	A submarine sewage outfall	

Note: Any Schedule 2 and Schedule 3 DPs under the EIAO identified for the future land use / top-side development as described in **Section 1.2.9** are to be covered in separate PP(s). They will be submitted to Director of Environmental Protection (DEP) separately to apply for the respective EIA Study Brief(s).

⁽¹⁾ https://www.cedd.gov.hk/filemanager/eng/content_954/Info_Sheet3.pdf

1.6 Name and Telephone Number of Contact Person

1.6.1 All enquiries regarding the Project can be addressed to:

Chief Engineer / Port Works (Attn: Mr. TANG Kai-yan, Alan)

Port Works Division

Civil Engineering Office

Civil Engineering and Development Department

4/F, Civil Engineering and Development Building

101 Princess Margaret Road

Homantin, Kowloon

Tel.: 2762 5630

Fax: 2714 2054

2. Outline of Planning and Implementation Programme

2.1 Project Implementation

2.1.1 The Project Proponent, subject to the final recommendation of this Study, will be responsible for implementing the proposed reclamation works and associated marine works, together with all the environmental mitigation measures, the environmental monitoring and audit requirements as specified in the EIA Report of the Project. The scope of the EIA Study includes the following:

- Reclamation works at MLS;
- Seawall construction for the proposed reclamation works;
- Reprovisioning of STSTW emergency submarine outfall;
- Protection/reprovisioning of THEES submarine pipe;
- Extension of existing DSD drainage outfalls (5 nos.);
- Reprovisioning of seawater intake for Simon F.S. Li Marine Science Laboratory of CUHK; and
- Reprovisioning of seawater intake for WSD Saltwater Pumping Station.

2.1.2 For this Project, non-dredged method is planned to be adopted for reclamation works. Subject to further review and design under the Study, the following dredging activities may be carried out:

- Enabling works for ground treatment for seawall construction; and
- Construction of the proposed shaft(s) for the re-diverted emergency submarine outfall.

2.1.3 The Consultants of the Study are responsible for undertaking the EIA Study according to the EIA Study Brief to be issued by the Director of Environmental Protection (DEP) for the Project and responding on behalf of the Project Proponent to issues related to the EIA Study. The construction works of the proposed reclamation and associated marine works will be carried out by contractors to be appointed under various works contracts.

2.2 Project Timetable

2.2.1 The Study commenced in July 2022 for completion within a study period of 24 months. Subject to necessary statutory procedures, it is anticipated that the construction works for the proposed reclamation works and the associated marine works will be carried out in phase and progressively completed from around 2029.

2.3 Interactions with Other Projects

2.3.1 Based on information available on the public domain and/or information provided by responsible project proponents, potential projects that would have interface with the Project during the construction stage have been identified and are listed in **Table 2.1**. This list should be revisited during the subject EIA Study to ensure all the latest projects available from the respective stakeholders are incorporated.

Table 2.1 List of Potential Interfacing Projects

Potential Interfacing Project Name
“Widening of T6 Bridge of Tate's Cairn Highway - Investigation, Design and Construction” under Agreement No. CE 73/2021 (HY)
“Upgrading of Tolo Harbour Effluent Export Scheme – Investigation” under Agreement No. CE 76/2021 (DS)
“Relocation of Sha Tin Sewage Treatment Works to Caverns: Caverns and Sewage Treatment Works – Investigation, Design and Construction” under Agreement No. CE 30/2014 (DS)

3. Possible Impacts on the Environment

3.1 General

- 3.1.1 It is anticipated that the construction of the Project would involve marine-based construction works including protective/reprovisioning works for the THEES submarine pipe, sand blanket laying, ground improvement works, seawall construction, reclamation filling, seawater intake and outfall construction, etc.
- 3.1.2 All the prevailing legislative requirements would be considered in the EIA Study to assess the possible environmental impacts.
- 3.1.3 The EIA Study would assess the environmental impacts on the existing environmental sensitive receivers during different construction phases of the reclamation works, and the associated marine works. As the environmental impacts of the land use / top-side development would be assessed under subsequent separate EIA Study(s), the major environmental concerns of the Project will be related to the construction activities during the construction phase. Subject to detailed assessment, the newly reclaimed land might have some potential water quality, ecology, fisheries and visual impacts during the operation phase.

3.2 Air Quality

Construction Impacts

- 3.2.1 Dust generation from the construction activities including excavation works, backfilling, wind erosion of exposed area, temporary storage of spoil on site, transportation and handling of spoil, etc., as well as gaseous emissions from constructional plants / marine vessels are expected to be the major sources of impact during construction phase. No odour impact is anticipated for the construction phase considering that most of the construction activities will not give rise to any source of odour, except for the potential dredging activities as discussed in **Section 2.1.2**. While non-dredged methods will be adopted for the reclamation works as far as practicable, the amount of sediment dredged will be minimized. In addition, the sediment dredged will be loaded onto barges and be transported away or, if contaminated, treated at temporary locations in the vicinity of the Project as soon as practicable. It is also suggested that any odorous materials shall be transported away from the site within 24 hours and the dredged materials shall be covered by tarpaulin or impervious sheets at all times. Hence, it is anticipated that there would not be any adverse odour impacts during the construction phase.
- 3.2.2 Cumulative impacts from other potential interfacing projects will also be taken into account during the EIA Study. With the implementation of mitigation measures specified in the Air Pollution Control (Construction Dust) Regulation, proposed dust suppression measures and good site practices to be checked by regular site environmental audits, no adverse dust impact on the air sensitive receivers (ASRs) in the vicinity of the construction site is anticipated.

3.3 Noise

Construction Impacts

- 3.3.1 The potential sources of noise impacts on noise sensitive receivers (NSRs) during construction phase will mainly be the use of powered mechanical equipment (PME) for various construction activities. The key construction activities which will generate noise impacts include reclamation, potential earth filling, excavation, and site formation, etc. The transport of scrap materials and waste from the site will also generate traffic noise. The impact of any night time work will also be considered under the EIA Study. With sufficient separation distance and with implementation of suitable mitigation measures, adverse noise impacts on existing NSRs during construction phase of the Project will not be expected.

3.4 Water Quality

Construction Impacts

- 3.4.1 Potential major sources of water quality impacts may arise from reclamation works. Laying of sand blanket, seawall construction and underwater filling with sufficient length of leading seawall are the major marine-based works for reclamation. Subject to further review under the Study, dredging activities for ground treatment of seawall construction, and dredging of marine sediments for construction of the re-diverted emergency submarine outfall might be conducted.
- 3.4.2 Potential water quality impacts may arise from loss of fines and contaminants into the receiving waters and sedimentation at the sensitive receivers associated with the marine construction works, wastewater discharge from general construction activities, drainage and construction site runoff from construction site, proposed dredging works, filling activities for reclamation and seawall construction, sewage from workforce, construction works in close proximity of inland water and accidental spillage of chemicals. To control the potential water quality impacts on the nearby Water Sensitive Receivers (WSRs), provision of adequate mitigation measures, such as the adoption of non-dredged reclamation methods, optimisation of construction phasing, etc., and environmental monitoring programme, would be considered and implemented as far as practicable. Hydrodynamic and water quality modelling will be conducted in the EIA Study to quantitatively assess the impacts during construction phase.

Operational Impacts

- 3.4.3 Major pollution sources/impacts arising from the proposed works are mainly the hydrodynamic issues due to the reclamation and water quality issues associated with reclamation, and reprovision of the emergency submarine outfall of STSTW and drainage discharge.
- 3.4.4 After completion of the reclamation, the water flow pattern in the vicinity of the reclaimed land would be permanently altered. Water quality impacts due to release of untreated effluents into the nearby water bodies from the reprovisioned emergency submarine outfall of STSTW will be assessed. On the other hand, the findings of the hydrodynamic and water quality modelling will be taken into account to evaluate and assess the acceptability of the discharge location of the reprovisioned emergency submarine outfall of STSTW.

3.5 Waste Management

Construction Impacts

- 3.5.1 Subject to further review under the Study, it is anticipated that no marine sediments would be dredged arising from the proposed reclamation works with the adoption of non-dredged reclamation method. Dredging of marine sediments might be resulted for the ground treatment of seawall construction and the proposed shaft construction for the reprovisioned emergency submarine outfall of STSTW.
- 3.5.2 Construction and demolition (C&D) materials and chemical waste will be generated from the construction activities for reclamation activities and associated marine works. The management of C&D materials and chemical waste shall be addressed in the EIA Study.
- 3.5.3 The construction workforce will generate general refuse comprising food scraps, waste paper, empty containers etc. Adverse environmental impacts arisen from the general refuse e.g. odour generation, windblown litter, vermin, will not be expected if the waste storage areas are properly maintained and regularly cleared.

3.6 Land Contamination

- 3.6.1 The location of the proposed reclaimed land and the associated marine works are currently open sea, and hence there is no land contamination potential.

3.7 Ecology

- 3.7.1 The proposed reclamation would not encroach upon any existing natural terrestrial habitats and thus direct impacts to the terrestrial ecological resources are expected to be minimal. However, indirect impact to the terrestrial ecological resources in the vicinity is anticipated.
- 3.7.2 The potential terrestrial and marine ecological impacts induced by the proposed reclamation and the associated marine works will be associated with:

Construction Impacts

- Temporary habitat loss, habitat degradation and habitat fragmentation induced during the construction phase;
- Disturbance to nearby habitats and associated wildlife due to possible air pollution, water pollution, noise and glare, arising from reclamation activities/related vessel traffic, especially the ecological sensitive receivers (e.g. intertidal, subtidal and benthic habitats);
- Impact to flora and fauna species of conservation importance, e.g. coral communities in Tolo Harbour waters and ardeids in egrettry / night-roosting site at Penfold Park;
- Increased sediment load; and
- Pollutants from construction, including but not limited to construction site runoff and accidental spillage of chemicals.

Operational Impacts

- Permanent habitat loss and habitat fragmentation, gradually accumulated since the commencement of reclamation;
- Potential impacts arising from change of water flow hydrodynamic regime, water quality, erosion and sedimentation patterns due to reclamation and the consequential impacts to ecological sensitive receivers.

3.8 Fisheries

3.8.1 According to the Port Survey 2021 by Agriculture, Fisheries and Conservation Department (AFCD) ⁽²⁾, the Tolo Harbour supports low to moderate fisheries production, with production ranging from >0-300 kg/ha. The fisheries production of inner Tolo Harbour (waters in closest proximity to the potential MLS reclamation site) is low (>0-50 kg/ha), and moving towards the Tolo Channel, production increases to 200 – 300 kg/ha. The fishing operations in Tolo Harbour is low to moderate (>100 – 400 vessels), in which sampans were the dominant fishing vessels within the potential MLS reclamation site.

Construction Impacts

3.8.2 Reclamation and dredging works would lead to temporary and permanent loss and/or temporary disturbance to fishing grounds and important nursery areas for commercial fisheries resources at Tolo Harbour and nearby fish culture zone(s). There may also be potential risk of accidental chemical spillage to the surrounding water during marine construction, which may affect fisheries resources and aquaculture sites near the Project site. Potential impact on fisheries due to the Project and the related changes in water quality or hydrodynamics regime near the proposed Project site will be assessed in the EIA Study.

Operational Impacts

3.8.3 During operation phase, the proposed reclamation would lead to a direct loss of fishing grounds which may affect fisheries resources/ production and fishing operations within and adjacent to the proposed reclamation area.

3.8.4 The proposed reclamation may also change the local hydrodynamic regime and affect fisheries resources, important nursery areas and nearby fish culture zone(s). Potential impact on fisheries will be assessed in the EIA Study.

⁽²⁾ Agriculture, Fisheries and Conservation Department (2022) Port Survey 2021. Agriculture Fisheries and Conservation Department. The Government of the Hong Kong Special Administrative Region

3.9 Landscape and Visual

- 3.9.1 Based on desktop study, landscapes with distinctive character/resources (e.g. Country Parks, coastal protection areas, conservation areas, wetlands, areas of high landscape value, scenic spots, hilltops, ridgeline, rivers, mature woodlands, special water features, nature reserves, Sites of Special Scientific Interest (SSSI), historic landscapes, sites of cultural heritage, sites with Old and Valuable Trees, stone wall tree, tree of particular interest, etc.) are not anticipated within 500 m from the Potential Reclamation Area. Therefore, there is no direct impact or direct loss on any of the landscapes with distinctive character/resources due to the Project. The recommendations in the relevant prevailing guidelines and procedures to avoid/ minimize landscape impacts or to enhance landscape quality of the proposed Project will be followed. Thus, adverse landscape impact is not anticipated.
- 3.9.2 The major visual resources/ setting is characterized by the ridgelines of Ma Liu Shui, Kau To Shan to the west, Ma On Shan to the east and Tolo Harbour to the North. The Potential Reclamation Area abuts MOWDIST MNDIV Operation Base, WSD Saltwater Pumping Station and DSD STSTW to the south. For the possible permanent visual impacts, the reclamation works and reprovisioning works are of generally low height and elevations, and would not be expected to induce major visual change from some of the sensitive key public viewing points or on existing visually sensitive areas and major visual resources enjoyed by the public (e.g. Ma On Shan Promenade, etc.). The details of visual envelope and visual receptors will be identified and further elaborated during the EIA Study.
- 3.9.3 The expected sources of visual impacts arising from the Project would include, but not limited to, the following:
- Loss of visual amenity due to the irreversible change of the existing seascape setting;
 - Change in visual quality, intrusion and obstruction created by the reclaimed land;
 - Permanent loss of visual amenity of the sea and natural environment due to the reclaimed land; and
 - Narrowing the sea in the Sha Tin Hoi due to reclamation.

3.10 Cultural Heritage

Terrestrial Archaeology & Built Heritage

- 3.10.1 The reclamation and the associated marine works would be located at open sea and coastal area with no Site of Archaeological Interest (SAI) or built heritage identified in the vicinity. And hence, direct or indirect damage to or loss of buried archaeological sites / resources, would not be expected.
- 3.10.2 Impacts on terrestrial archaeology, monuments, and built heritage during operation phase are not anticipated.

Marine Archaeology

- 3.10.3 A marine archaeological investigation (MAI) will be conducted to identify the archaeological potential of the affected seabed and to ascertain the archaeological value on the areas. Subject to the findings of the MAI, the works affecting any identified archaeological potential, including impacts caused by reclamation on any remains of cultural significance buried in the seabed, would need to be avoided.

3.10.4 The potential impact on marine archaeology during operation phase will be investigated and assessed during the EIA Study.

3.11 Potential Hazard

3.11.1 Subject to further review of the reclamation extent under the Study, the protection zone of the existing Towngas submarine pipeline is approximately 38m from the proposed reclamation. The reclamation would not run close to neither Potentially Hazardous Installations (PHI) nor dangerous goods (DG) store. The Electrical and Mechanical Services Department's Code of Practice on the "Avoidance of Damage to Gas Pipes 2nd Edition" will be observed.

3.11.2 No DG will be manufactured, used, stored or transported during reclamation, and during the construction and operation of the reprovisioned marine infrastructures.

4. Major Elements of the Surrounding Environment

4.1 General

- 4.1.1 The reclamation site at MLS is located in the proximity of Sha Tin/Ma On Shan New Town and immediately adjacent to the CUHK, HKSP and STSTW, with a possible reclamation area of about 60 ha. There are waterfront related facilities established along the existing water edge, namely MOWDIST MNDIV Operation Base, HKPF and its helipad, MLS Ferry Pier and landing steps, Water Sports Centre of CUHK, Marine Science Laboratory of CUHK, WSD Saltwater Pumping Station, existing waterfront promenade and the cycling track along the existing water edge. The majority of the existing shoreline at MLS is engineered artificial or disturbed shoreline. The main vehicular routes to the Project Site are either via Tolo Highway, Chak Cheung Street, Sui Cheung Street and Science Park Road; or Tate's Cairn Highway, T6 Bridge, Chak Cheung Street, Sui Cheung Street and Science Park Road.
- 4.1.2 The major existing and planned sensitive receivers and sensitive parts of the natural environment relating to respective environmental aspects that may be affected by the Project are discussed below. The identified existing and planned sensitive receivers are not exhaustive and indicative only, which would be further studied and updated during the EIA Study.

4.2 Air Sensitive Receivers

- 4.2.1 The study area for the air quality impact assessment is preliminarily defined as area within 500 metres from the boundary of the Potential Reclamation Area, subject to the Study Brief. Potential air sensitive receivers (ASRs) that may be affected by the Project are as follows:
- **Residential uses:** Innocell; Postgraduates Hall of CUHK; Student Residence of CUHK (Wu Ho Man Yuen Building); Kam Tai Court; Mountain Shore; Sausalito; La Costa; Ocean View; Oceanaire; and Baycrest;
 - **Educational institutions:** Hong Kong Institute of Biotechnology; Simon F.S. Li Marine Science Laboratory of CUHK; Shanghai Fraternity Association Research Services Center, CUHK; S.K.H. Ma On Shan Holy Spirit Primary School; and Tak Sun Secondary School;
 - **Recreational uses:** The Sir Philip Hadden-Cave Sports Field; and The CUHK Water Sports Centre;
 - **Commercial uses:** SAE Technology Centre at HKSP; and Photonic Centre at HKSP;
 - **Other uses:** CUHK Medical Centre and Hyatt Regency Hong Kong Sha Tin; and
 - **Government, Institution or Community (G/IC):** MOWDIST MNDIV Operation Base, HKPF ⁽³⁾.
- 4.2.2 The locations of the identified ASRs are indicated in **Figure 4.1**.

⁽³⁾ MOWDIST MNDIV Operation Base, HKPF will be closed and relocated. It is regarded as an ASR until its closure.

4.3 Noise Sensitive Receivers

4.3.1 The study area for the noise impact assessment is preliminarily defined as area within 300 metres from the boundary of the Potential Reclamation Area, subject to the Study Brief. Potential noise sensitive receivers (NSRs) that may be affected by the Project are as follows:

- **Residential uses:** Innocell; Postgraduates Hall of CUHK; Student Residence of CUHK (Wu Ho Man Yuen Building); and Kam Tai Court;
- **Educational institutions:** Hong Kong Institute of Biotechnology; Simon F.S. Li Marine Science Laboratory of CUHK; Shanghai Fraternity Association Research Services Center, CUHK; and S.K.H. Ma On Shan Holy Spirit Primary School; and
- **Other uses:** CUHK Medical Centre and Hyatt Regency Hong Kong Sha Tin ⁽⁴⁾.

4.3.2 The locations of the identified NSRs are indicated in **Figure 4.2**.

4.4 Water Sensitive Receivers

4.4.1 The identified water sensitive receivers (WSRs) are listed below and their locations are indicated in **Figures 4.3**.

- WSD seawater intakes at Tai Po and Shatin; Water abstraction for cooling and flushing along MLS;
- Seawater intake for the Simon F.S. Li Marine Science Laboratory of CUHK;
- Gazetted beach at Lung Mei and Secondary Contact Recreation Subzone;
- Shuen Wan Typhoon Shelter;
- Yim Tin Tsai, Yim Tin Tsai (East), Lo Fu Wat and Yung Shue Au Fish Culture Zones (FCZs);
- Mangroves at Tolo Harbour Areas;
- Coral communities in Tolo Harbour waters;
- Hoi Ha Wan Marine Park;
- Kei Ling Ha Mangal, Ting Kok, and Hoi Ha Wan SSSIs; and
- The important nursery area for commercial fisheries resource at Northeast Waters in Tolo Harbour.

4.5 Ecological Sensitive Receivers

4.5.1 The ecological sensitive receivers are identified as follows:

- Egret / night-roosting site inside Penfold Park
- Coral communities in Tolo Harbour waters

⁽⁴⁾ CUHK Medical Centre and Hyatt Regency Hong Kong Sha Tin do not rely on opened window for ventilation.

- Mangroves in Tolo Harbour Areas
- Ting Kok, Kei Ling Ha Mangal and Hoi Ha Wan SSSIs
- Hoi Ha Wan Marine Park

4.5.2 The locations of the identified ecological sensitive receivers are indicated in **Figure 4.4**.

4.6 **Fisheries Sensitive Receivers**

4.6.1 The fisheries sensitive receivers are identified as follows:

- Yim Tin Tsai, Yim Tin Tsai (East), Yung Shue Au and Lo Fu Wat FCZs
- The important nursery area for commercial fisheries resource at Northeast Waters in Tolo Harbour

4.6.2 The locations of the identified fisheries sensitive receivers are indicated in **Figure 4.5**.

4.7 **Cultural Heritage Elements**

4.7.1 The terrestrial cultural heritage elements and marine archaeology elements are identified as follows:

Terrestrial Cultural Heritage Elements

- No SAI or built heritage is identified within 500 m from the Project.

Marine Archaeology Elements

- Based on Marine Archaeological Survey covering the Sha Tin Hoi water conducted in 2013, covering majority of the Potential Reclamation Area, no sonar contact of marine archaeological potential was identified within and in the vicinity of the Potential Reclamation Area.
- Further MAI will be carried out in the remaining area to investigate if there are any areas of marine archaeological potential.

4.8 **Visually Sensitive Receivers and Landscape Resources**

4.8.1 The view toward the Sha Tin Hoi with view of MLS / Ma On Shan development and view toward Tolo Harbour are the major visual resources enjoyed by the public that will be affected by the Project. Public viewers which will be potentially affected are identified.

- Recreation users and cyclers along Ma Liu Shui Promenade with associated cycle tracks, Pak Shek Kok Waterfront Park/ Promenade and Ma On Shan Promenade/Cycle Tracks/ Park and Sitting Out Area. (LC1, LC2 and LC3)
- Hikers at Ma On Shan Country Trail (LC4)
- Recreation users at Ma On Shan Park (LC5)
- Hikers at Sam Mun Tsai and Ma Shi Chau (LC6)
- Staff / users at Hong Kong Science Park (O1)
- Students / residents / staffs / users at CUHK (O2)

- Travellers along the Tolo Highway and Tate's Carin Highway (T1 and T2)

4.8.2 The locations of the visually sensitive viewers, major visual resources and the key public viewing points are presented in **Figure 4.6**.

4.8.3 There is no landscapes with distinctive character/resources within 500 m radius from the Potential Reclamation Area.

4.9 Land Contamination

4.9.1 No land contamination is anticipated within the Project Site.

4.10 Potential Hazard

4.10.1 Subject to further review of the reclamation extent under the Study, the protection zone of the existing Towngas submarine pipeline is approximately 38m from the proposed reclamation. The reclamation would not run close to neither PHI nor DG store.

5. Environmental Protection Measures to be Incorporated in the Design and Further Environmental Implications

5.1 General

5.1.1 The EIA Study will determine the significance of environmental impacts (both cumulative impacts and those arising from the Project) and any avoidance or mitigation measures to ensure that all proposals recommended by the Project would be environmentally acceptable. Reference would be made to the relevant legislation and other requirements including but not limited to the EIAO, Hong Kong Planning Standards and Guidelines (HKPSG), etc. Environmental monitoring and auditing of potential impacts that may arise from implementation of the works proposed by the Project will be provided for the construction and operation phases. Subject to the findings of the EIA Study, the following mitigation measures would be considered in the design, construction and operation of the Project.

5.2 Air Quality

Construction Impacts

General Construction Works

5.2.1 In order to prevent adverse impacts on air quality, the control measures stipulated in the Air Pollution Control (Construction Dust) Regulations should be implemented, wherever applicable, to limit the dust emissions from the site. Subject to investigation, the following mitigation measures, which are not exhaustive, will be considered during construction period to minimize impacts on air quality on nearby ASRs.

- Any vehicles/marine vessels with an open load compartment used for transferring dusty materials off-site will be properly fitted with side and tail boards and cover;
- Stockpiles of sand and aggregate will be enclosed on three sides and water sprays will be used to dampen stored materials and when receiving raw material;
- The site/ construction access will be frequently cleaned and watered to minimise fugitive dust emissions;
- In the process of material handling, any material which has the potential to create dust will be treated with water or sprayed with a wetting agent where practicable;
- Implementation of wheel washing facilities at access roads into and out of construction sites;
- Speed control of vehicles on-site/ construction access; and
- Sufficient dust suppression measures for batching facilities.

5.2.2 To minimize the exhaust emissions from Non-road Mobile Machinery (NRMM) and marine vessels, the following mitigation measures, which are not exhaustive, will be considered during construction period to minimize impacts on air quality on nearby ASRs.

- Connect construction plant and equipment to main electric supply and avoid use of diesel generators and diesel-powered equipment as far as practicable;

- Consider to restrict the use of exempted NRMMs;
- Deploy electrified NRMMs as far as practicable;
- Control routing of marine vessels;
- Minimize the number of trips of marine vessels; and
- Use clean fuel for marine vessels as far as practicable, etc.

5.2.3 Given that the potential sediment to be dredged would be delivered to barges and covered by tarpaulin or impervious sheets at all times, any odorous materials will be transported away from the site within 24 hours, adverse odour impact would not be anticipated.

5.3 Noise

Construction Impacts

General Construction Works

5.3.1 Subject to EIA findings, the following measures will be considered during construction period to minimize construction noise impacts on nearby NSRs.

- Adoption of quieter construction methods as far as practicable;
- Use of quieter powered mechanical equipment and plant, and/or fitted with muffler/silencers/ sound reduction devices;
- Provision of temporary noise barriers and enclosures, where practicable;
- Noise screening structures or purpose-built noise barriers will be provided along the site boundary to provide additional protection to NSRs nearby;
- Good site practices will be implemented as effective noise mitigation measures. These will include, but not limited to, locating noisy equipment and activities as far from NSRs as practical, scheduling noisy activities to minimise exposure of nearby NSRs to high levels of construction noise, limiting the use and number of equipment operating close to the NSRs, proper maintenance of construction plant and devising methods of working to minimise noise impacts on the surrounding environment; and
- Travelling route of the construction vehicles on public/ haul roads/ construction access should be planned as far as practicable in a way to minimize the noise impacts to NSRs.

5.4 Water Quality

Construction Impacts

5.4.1 In order to prevent adverse impacts on water quality, the following general mitigation measures would be put in place where appropriate.

5.4.2 *General Construction Works*

- Provision of adequate construction site drainage according to the established good practices;
- Open stockpiles of materials on site will be avoided or where unavoidable covered with tarpaulin or similar fabric during rainstorms;

- All runoffs arising from the construction site should be properly collected and treated to ensure the effluent comply with Water Pollution Control Ordinance. Silt trap and oil interceptor will be provided to remove the oil, lubricants, grease, silt, grit and debris from the wastewater before being pumped to the public stormwater drainage system. The silt traps and oil interceptors will be cleaned and maintained regularly;
- Minimisation of the impacts of concrete washings, use of infiltration/ sedimentation pits to settle out the washings before treatment/ re-use/ discharge, and adoption of treatment units with pH adjustment if necessary;
- Oil interceptors will be provided and properly maintained for collecting spillage or leakages from site workshops. The waste oil removed will be collected by licensed collectors;
- Mobile toilets or other appropriate means will be provided to store sewage before disposal through licensed collection agent or discharging to main sewerage system;
- For bore piling operations, the resulting suspension will be settled in sedimentation/ infiltration pit until supernatant is clear and the bentonite solids will be disposed appropriately;
- Good site practice will be adopted in accordance with the ProPECC PN 1/94 “Construction Site Drainage” and “Recommended Pollution Control Clauses for Construction Contracts” issued by EPD and the procedures in the Environment, Transport and Works Bureau (ETWB) Technical Circular (Works) TCW No. 5/2005 “Protection of Natural Stream/ Rivers from adverse impact arising from construction works”.

5.4.3 *Marine-based Works*

- Sequencing of works and location of WSRs shall be carefully considered to minimize adverse impact on the operation of WSRs;
- Non-dredged reclamation method for the reclaimed land would be adopted as far as practicable;
- Silt curtains should be deployed for dredging works (if any) and other major marine works below seawater level (e.g. reclamation filling);
- Size of vessels should be limited to maintain adequate clearance between vessels and the seabed to avoid undue turbidity generation from turbulence of vessel movement or propeller wash.

Operational Impacts

5.4.4 Subject to EIA findings, mitigation measures such as proper reprovision of two seawater intakes, proper design on the shape of the reclaimed land and marine based piers to minimize potential hydrodynamic and water quality impacts would be studied.

5.4.5 To avoid embayment/ corner zone where entrapment of pollutant e.g. floating refuse may occur during the operation phase, the shoreline should be smoothed out in the reclamation configuration as far as practicable. The locations of storm outfalls of the reclaimed land should be sited at locations with well flushed water to avoid adverse water quality impact.

5.5 Waste Management

Construction Impacts

5.5.1 The following mitigation measures will be considered during the construction phase to minimize waste generation and provide good control on waste management.

General Construction Works

- Good site practice and implementation of Waste Management Plan (WMP) will be adopted to minimize any potential waste impacts;
- Careful design, planning and good site management to encourage on-site sorting of C&D materials and minimize their generation during the course of construction;
- Chemical waste will be properly stored and transported off-site for treatment by a licensed collector;
- Refuse will need to be stored in enclosed bins and reputable waste collector should be employed to remove the generated refuse from the site, separately from construction and chemical wastes, on a daily basis to minimize odour, pest and litter impacts;
- A recording system for the amount of wastes generated, recycled and disposed;
- A WMP shall be prepared and be submitted to the Engineer for approval;
- Use of reusable non-timber formwork to reduce the amount of C&D material;
- Proper storage and site practices to minimise the potential for damage or contamination of construction materials; and

Marine-based Works

- Different reclamation fill options will be examined with a view to promoting beneficial reuse of public fill.

5.6 Land Contamination

5.6.1 As there is no land contamination potential for the proposed reclaimed land and the associated marine works, mitigation measure is not considered necessary.

5.7 Ecology

Construction Impacts

5.7.1 The mitigation measures that are to be implemented to minimize the impacts on air quality, noise and water quality will also help to minimize any impacts on ecological resources.

5.7.2 As regards ecological impact, the best mitigation is avoidance and will be used wherever possible. For impact which is considered unavoidable, mitigation measures will be adopted to minimize such impact, e.g. translocation of important species, confining works in specific area/season, avoiding percussive piling, alternative design/construction methods such as non-dredged reclamation, good site practices etc.

Operational Impacts

5.7.3 Subject to investigation, effective and feasible mitigation measures to address the permanent loss of habitats due to reclamation, such as provision of eco-shorelines to increase habitat diversity, will be developed and implemented.

5.8 Fisheries

Construction Impacts

5.8.1 Subject to investigation, the mitigation measures on water quality impact proposed in **Section 5.4** will be considered to minimise the impact on fisheries. Other possible mitigation measures will also be implemented if considered necessary.

Operational Impacts

5.8.2 Subject to investigation, effective and feasible mitigation measures to address the loss of fishing ground due to reclamation, such as provision of eco-shorelines to enhance fisheries habitat, will be developed. Other possible mitigation measures, if necessary, for enhancement of fisheries resources will also be studied in the EIA Study.

5.9 Visual

5.9.1 Subject to investigation, the following measures will be considered to minimize visual impacts on nearby visual sensitive viewers and resources.

- Optimization of reclamation area, construction area and contractor's temporary works areas to be minimised to avoid impacts on adjacent landscape;
- Greening treatment on bare soil surface after reclamation works; and
- Sensitive landscape design of reclamation edge with attractive landscape treatments and incorporation of coastal vegetation into seawalls to improve the compatibility of the new reclamation land with the existing environment.

5.10 Cultural Heritage

5.10.1 The reclamation and the associated marine works would be located at open sea and hence would not have any impacts on terrestrial archaeology, monuments and built heritage. Mitigation measure for terrestrial archaeology, monuments and built heritage is not considered necessary.

5.10.2 A MAI will be conducted by marine archaeologist to ascertain the archaeological value of the seabed affected by the proposed works. The MAI may include geophysical survey and diver inspection as necessary.

5.10.3 The potential impact on marine archaeology caused by the Project will be assessed during the EIA Study. Preservation *in-situ* should be considered to avoid the impact as far as practicable. If unavoidable, appropriate mitigation measures will be designed and agreed with Antiquities and Monuments Office (AMO), and implemented to the satisfaction of AMO.

5.11 Potential Hazard

- 5.11.1 Potential risk due to the Project is not anticipated. However, the need for mitigation measures, if necessary, would be reviewed during the EIA Study.

5.12 Severity, Distribution and Duration of Environmental Effects and Further Implications

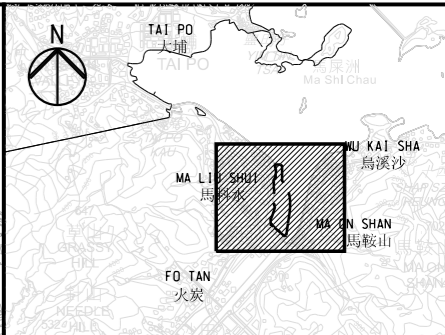
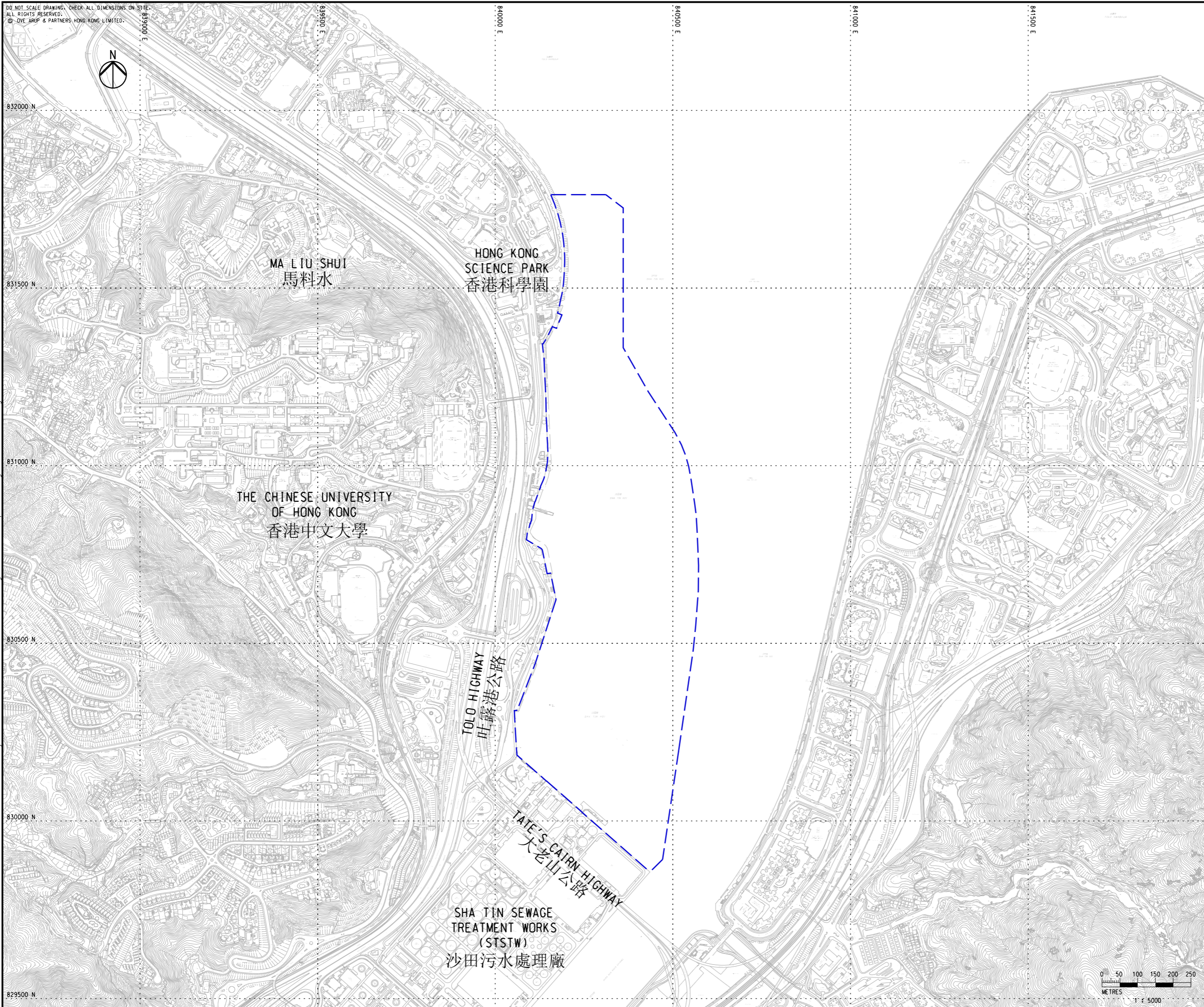
- 5.12.1 Subject to the findings of assessments, effective control and mitigation measures will be identified to ensure the impacts are within acceptable levels. The possible severity, distribution and duration of environmental effects such as beneficial and adverse effects; short and long term effects; secondary and induced effects; cumulative effects and transboundary effects will be considered and addressed in the EIA Study, where applicable. Public consultation regarding the reclamation works and the associated reprovisioning works will be carried out during the EIA Study. The key results from public consultation should also be documented in the EIA Report of the Project.

6. Use of Previously Approved EIA Reports

6.1.1 There are no relevant EIA reports already approved under the EIA Ordinance. However, the subsequent EIA Study may refer to the following relevant studies:

- Upgrading of Tai Po Sewage Treatment Works (Register No. AEIAR-244/2022)
- Revitalisation of Fo Tan Nullah (Register No. AEIAR-243/2022)
- Sha Tin Cavern Sewage Treatment Works (Register No. AEIAR-202/2016)
- Pak Shek Kok Development (Register No. AEIAR-001/1998)

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KEY PLAN 索引圖

LEGEND 圖例

POTENTIAL RECLAMATION AREA
(INDICATIVE ONLY)
潛在的填海範圍
(邊界只作參考)

Rev	Description	By	Date
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A	FIRST ISSUE	TC	01/23

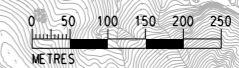
Consultant
ARUP

Project Title
Ma Liu Shui Reclamation
馬料水填海

Drawing title
LOCATION OF THE PROJECT
項目位置圖

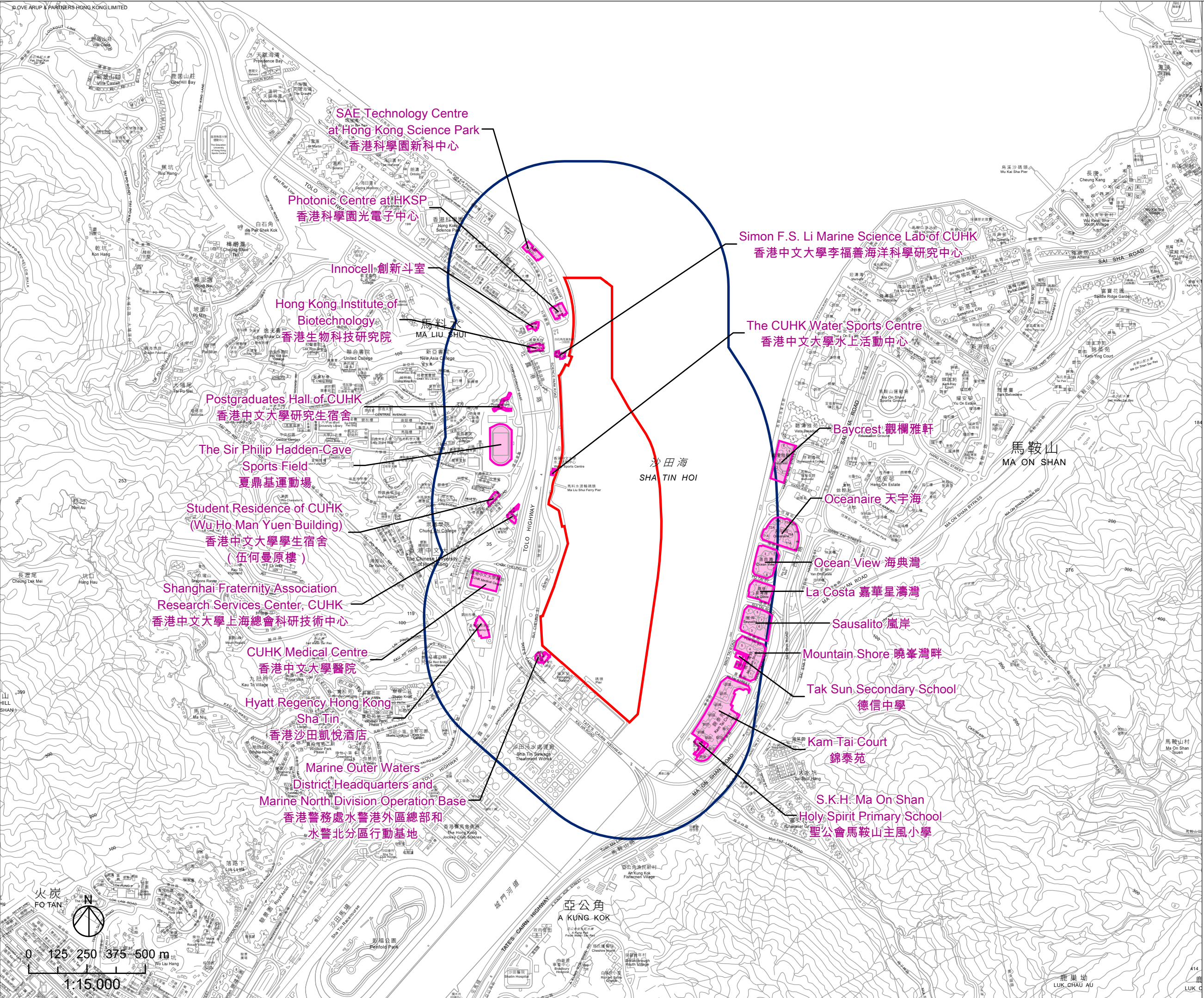
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Printed by : 29/06/2023
Filename : J:\2886000\288452-00 Ma Liu Shui\05_Int_Proj_Data\05-04 CAD and BIM\00 Drafting\DRAWING\Arup\GEO\Figure\Figure_1.1.dgn



Legend 圖例

- Potential Reclamation Area
潛在填海範圍
- 500m Assessment Area
500米評估範圍
- Air Sensitive Receiver
空氣敏感受體

SAE Technology Centre
at Hong Kong Science Park
香港科學園新科中心

Photonic Centre at HKSP
香港科學園光電子中心

Innocell 創新斗室

Hong Kong Institute of
Biotechnology
香港生物科技研究院

Postgraduates Hall of CUHK
香港中文大學研究生宿舍

The Sir Philip Hadden-Cave
Sports Field
夏鼎基運動場

Student Residence of CUHK
(Wu Ho Man Yuen Building)
香港中文大學學生宿舍
(伍何曼原樓)

Shanghai Fraternity Association
Research Services Center, CUHK
香港中文大學上海總會科技技術中心

CUHK Medical Centre
香港中文大學醫院

Hyatt Regency Hong Kong
Sha Tin
香港沙田凱悅酒店

Marine Outer Waters
District Headquarters and
Marine North Division Operation Base
香港警務處水警港外區總部和
水警北分區行動基地

Simon F.S. Li Marine Science Lab of CUHK
香港中文大學李福善海洋科學研究中心

The CUHK Water Sports Centre
香港中文大學水上活動中心

Baycrest 觀欄雅軒

Oceanaire 天宇海

Ocean View 海典灣

La Costa 嘉華星濤灣

Sausalito 嵐岸

Mountain Shore 曉峯灣畔

Tak Sun Secondary School
德信中學

Kam-Tai-Court
錦泰苑

S.K.H. Ma On Shan
Holy Spirit Primary School
聖公會馬鞍山主風小學

沙田海
SHA TIN HOI

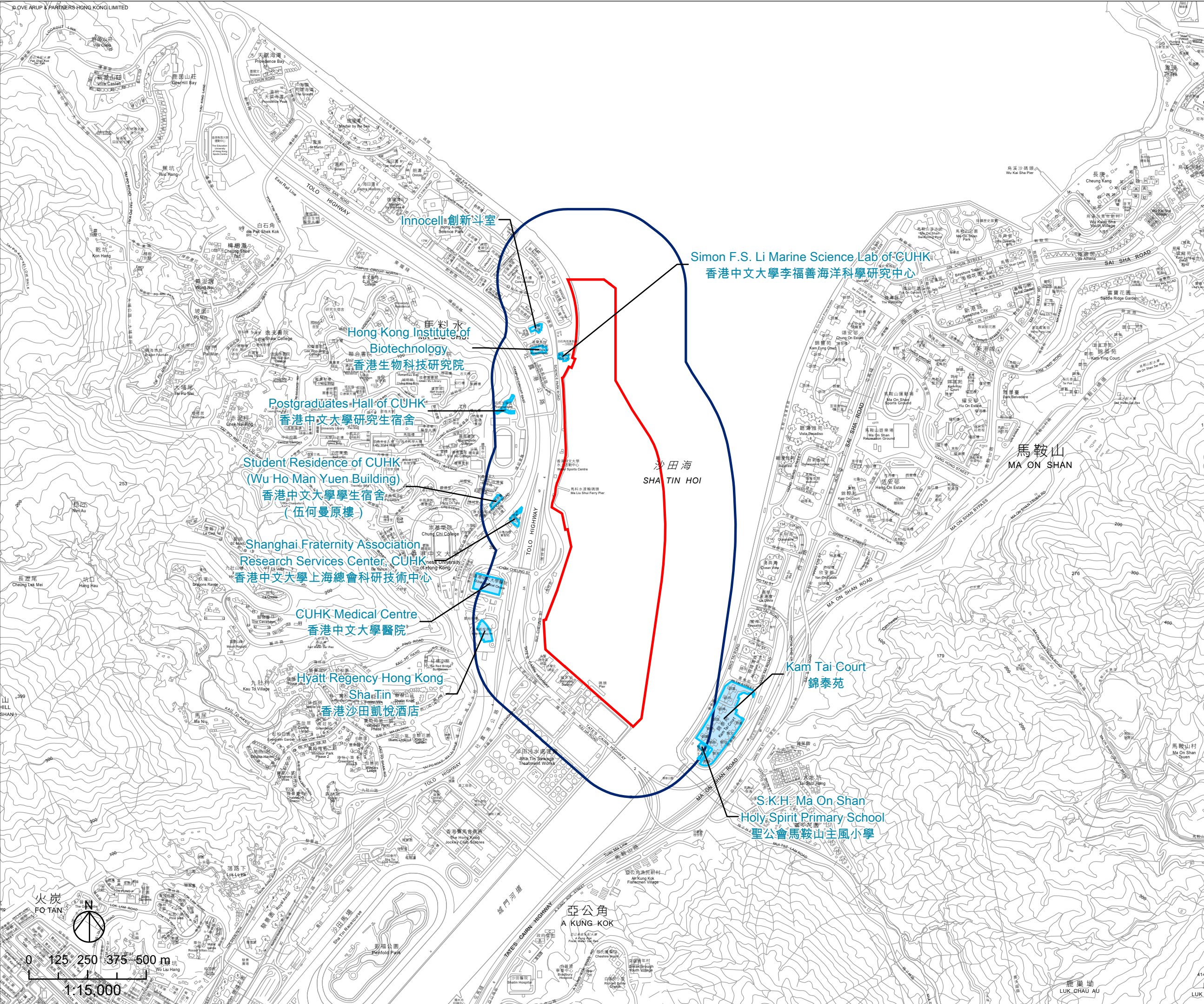
馬鞍山
MA ON SHAN



Rev	Description	By	Date
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<p>Drawing title</p> <p>Location of Air Sensitive Receivers (Indicative) 空氣敏感受體位置圖 (只供參考)</p>			
Drawing no.		Rev.	
Figure 4.1 / 圖 4.1			
Drawn	Date	Checked	Approved
	29/6/2023		
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Legend 圖例

- Potential Reclamation Area
潛在填海範圍
- 300m Assessment Area
300米評估範圍
- Noise Sensitive Receiver
噪音感應強的地方



Innocell 創新斗室
Innocell Science Park

Simon F.S. Li Marine Science Lab of CUHK
香港中文大學李福善海洋科學研究中心

Hong Kong Institute of
Biotechnology
香港生物科技研究院

Postgraduates Hall of CUHK
香港中文大學研究生宿舍

Student Residence of CUHK
(Wu Ho Man Yuen Building)
香港中文大學學生宿舍
(伍何曼原樓)

Shanghai Fraternity Association
Research Services Center, CUHK
香港中文大學上海總會科技技術中心

CUHK Medical Centre
香港中文大學醫院

Hyatt Regency Hong Kong
Sha Tin
香港沙田凱悅酒店

沙田海
SHA TIN HOI

Kam Tai Court
錦泰苑

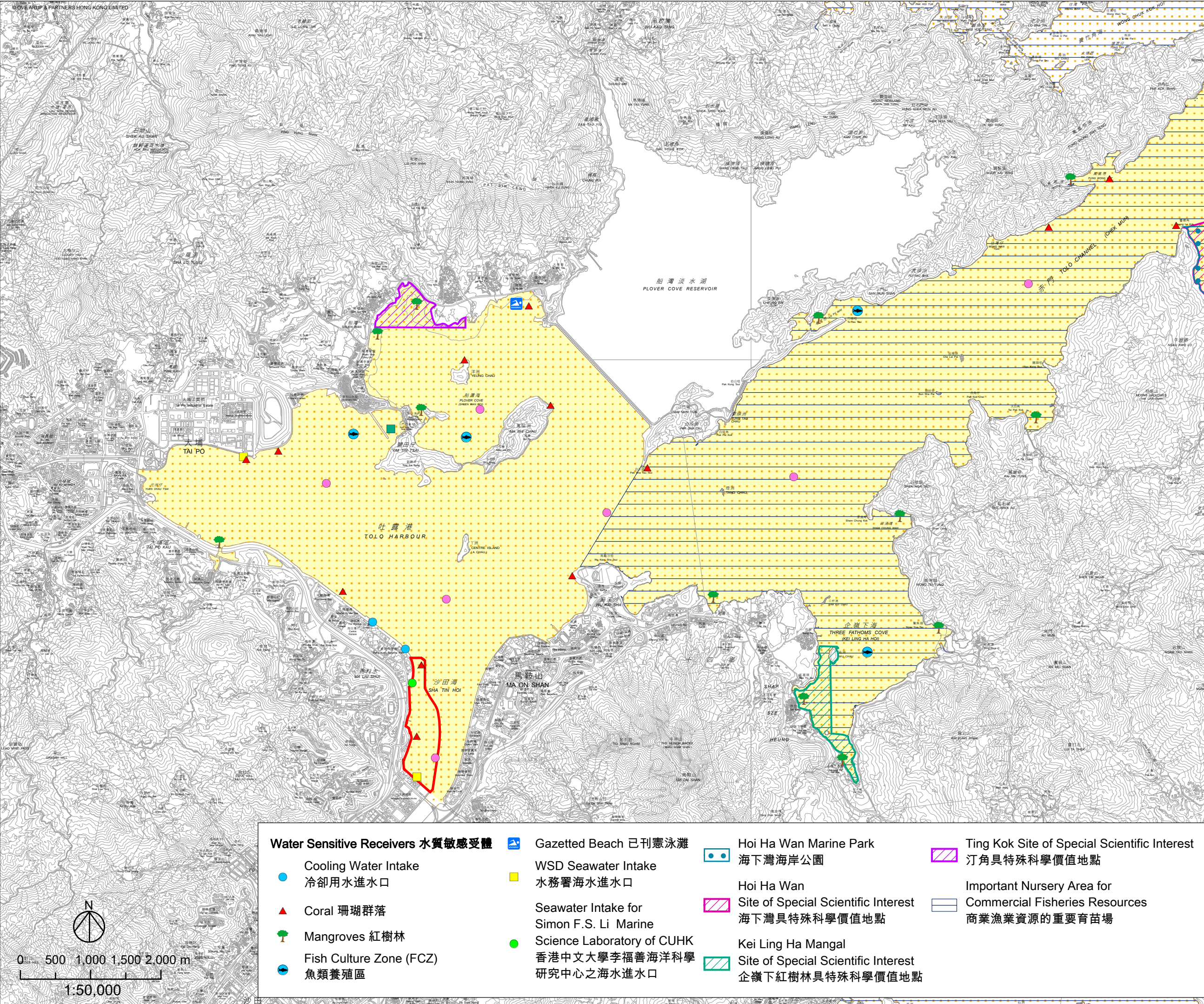
S.K.H. Ma On Shan
Holy Spirit Primary School
聖公會馬鞍山主風小學

馬鞍山
MA ON SHAN



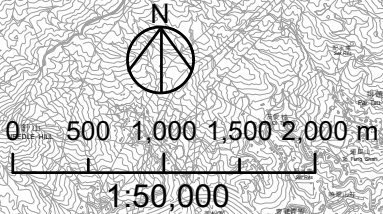
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<p>Drawing title</p> <p>Location of Noise Sensitive Receivers (Indicative) 噪音感應強的地方位置圖 (只供參考)</p>			
Drawing no.		Rev.	
Figure 4.2 / 圖 4.2			
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	29/6/2023		
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Date: 29/6/2023



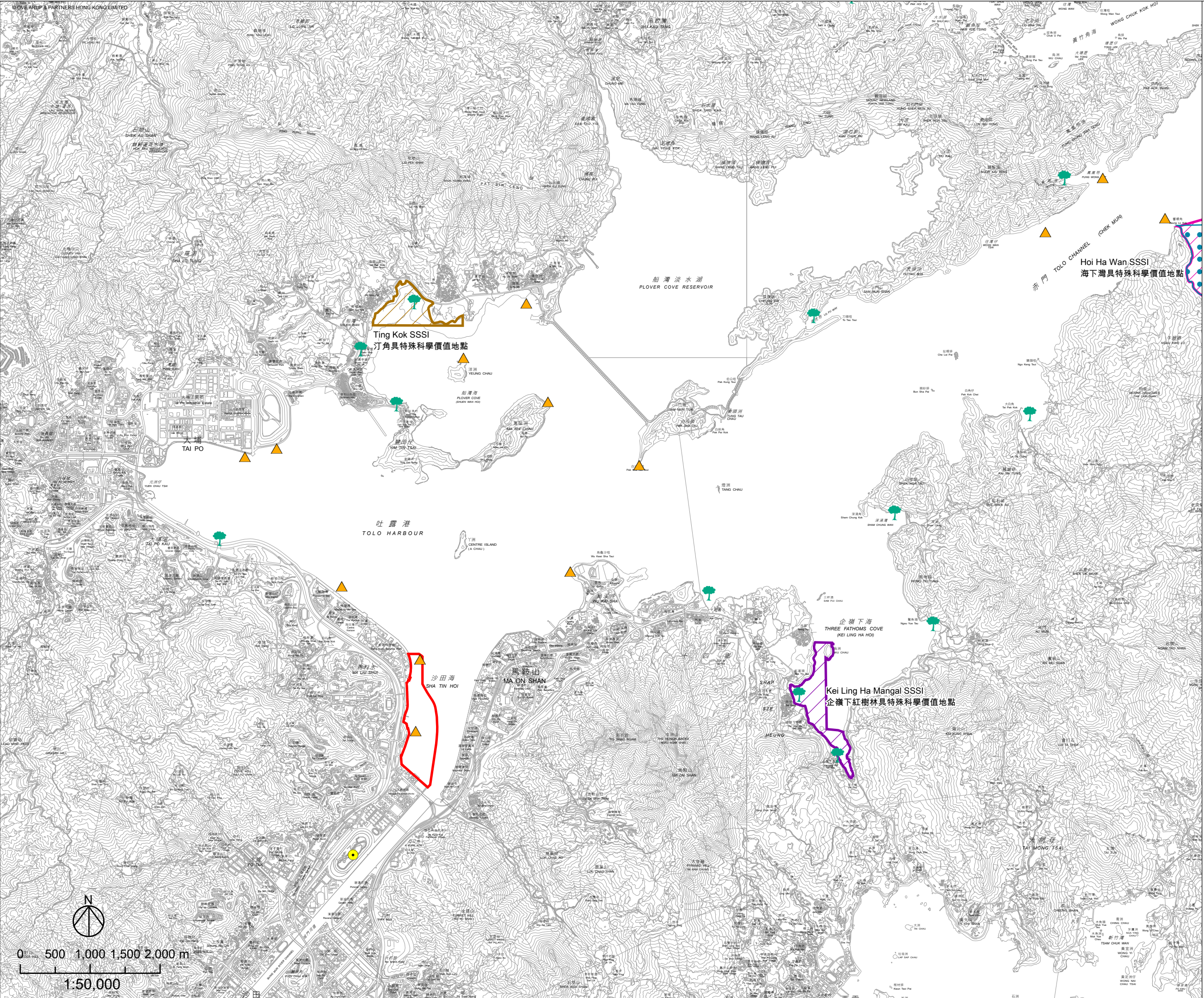
- Legend 圖例**
- Potential Reclamation Area
潛在填海範圍
 - EPD Marine Water Quality/Sediment Quality Monitoring Stations
環保署水質/沉積物監測站
 - Typhoon Shelter (EPD Monitoring Station)
避風塘 (環保署監測站)
 - Water Control Zone 水質管制區
 - Tolo Harbour & Channel WCZ
吐露港及赤門水質管制區
 - Secondary Contact Recreation Subzone
次級接觸康樂活動分區

- Water Sensitive Receivers 水質敏感受體**
- Cooling Water Intake
冷卻用水進水口
 - ▲ Coral 珊瑚群落
 - Mangroves 紅樹林
 - Fish Culture Zone (FCZ)
魚類養殖區
 - Gazetted Beach 已刊憲泳灘
 - WSD Seawater Intake
水務署海水進水口
 - Seawater Intake for Simon F.S. Li Marine
香港中文大學李福善海洋科學研究中心之海水進水口
 - Hoi Ha Wan Marine Park
海下灣海岸公園
 - Hoi Ha Wan
海下灣具特殊科學價值地點
 - Kei Ling Ha Mangal
企嶺下紅樹林具特殊科學價值地點
 - Ting Kok Site of Special Scientific Interest
汀角具特殊科學價值地點
 - Important Nursery Area for Commercial Fisheries Resources
商業漁業資源的重要育苗場



Rev	Description	By	Date
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Project Title Ma Liu Shui Reclamation 馬料水填海			
Drawing title Location of Water Sensitive Receivers (Indicative) 水質敏感受體位置圖 (只供參考)			
Drawing no.	Figure 4.3 / 圖 4.3	Rev.	
Drawn	Date 29/6/2023	Checked	Approved
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 Date: 29/6/2023



- Legend 圖例**
- Potential Reclamation Area
潛在填海範圍
 - Egret / Night-roosting Site inside Penfold Park
彭福公園內的鷺鳥林/夜棲地點
 - ▲ Coral Communities in Tolo Harbour Waters
吐露港海域內的珊瑚群落
 - ▲ Mangroves at Tolo Harbour Areas
吐露港內的紅樹林
 - Ting Kok Site of Special Scientific Interest (SSSI)
汀角具特殊科學價值地點
 - Kei Ling Ha Mangal Site of Special Scientific Interest (SSSI)
企嶺下紅樹林具特殊科學價值地點
 - Hoi Ha Wan Site of Special Scientific Interest (SSSI)
海下灣具特殊科學價值地點
 - Hoi Ha Wan Marine Park
海下灣海岸公園

Rev	Description	By	Date
Consultant			

ARUP

Project Title
 Ma Liu Shui Reclamation
 馬料水填海

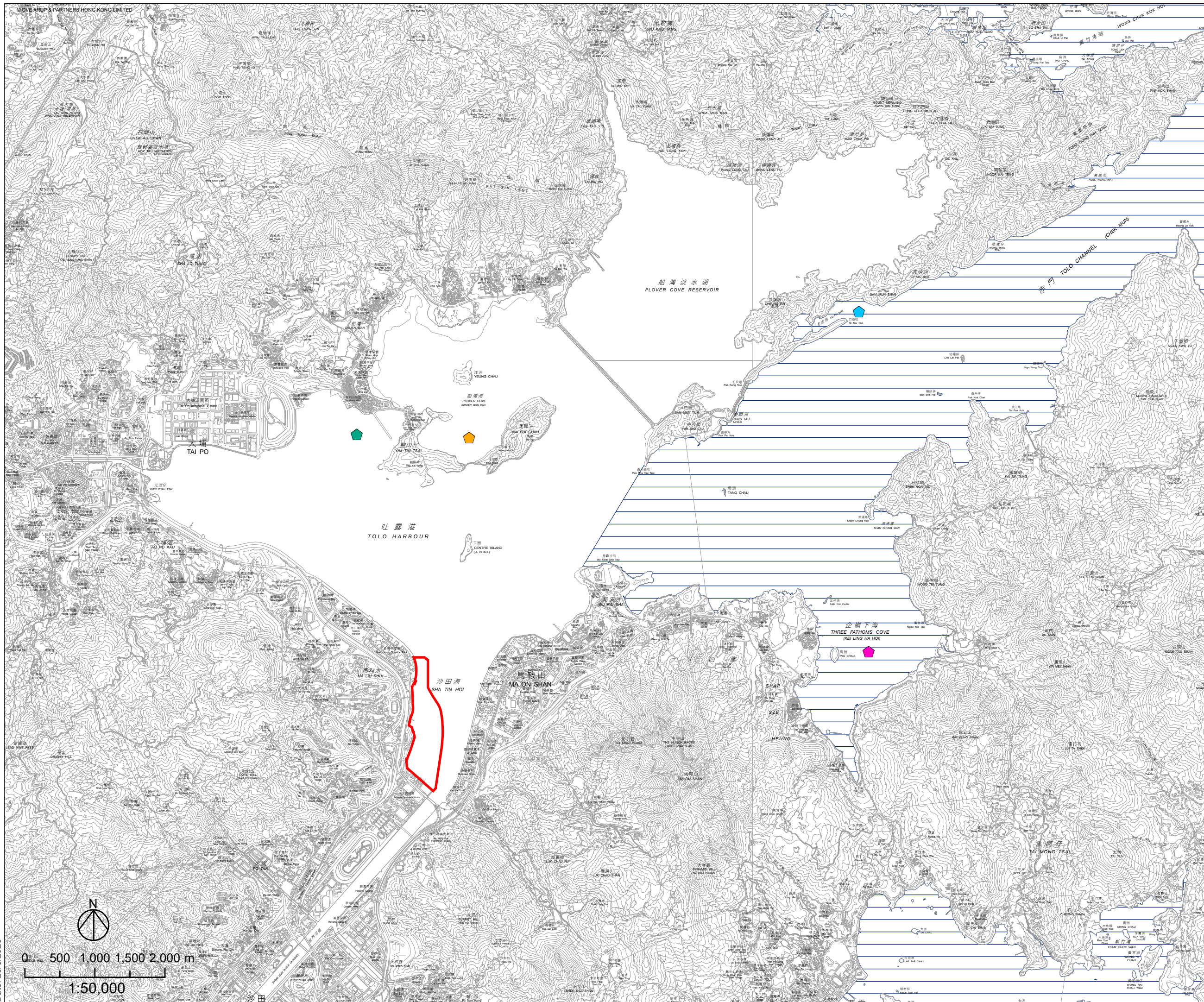
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 生態敏感受體位置圖 (只供參考)

Drawing no. Figure 4.4 / 圖 4.4	Rev.
Drawn Date: 29/6/2023	Checked Approved
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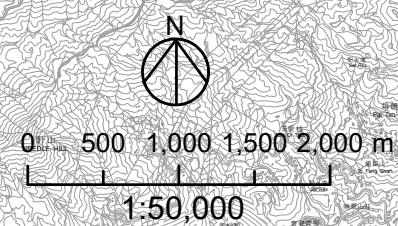


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 Date: 29/6/2023



Legend 圖例

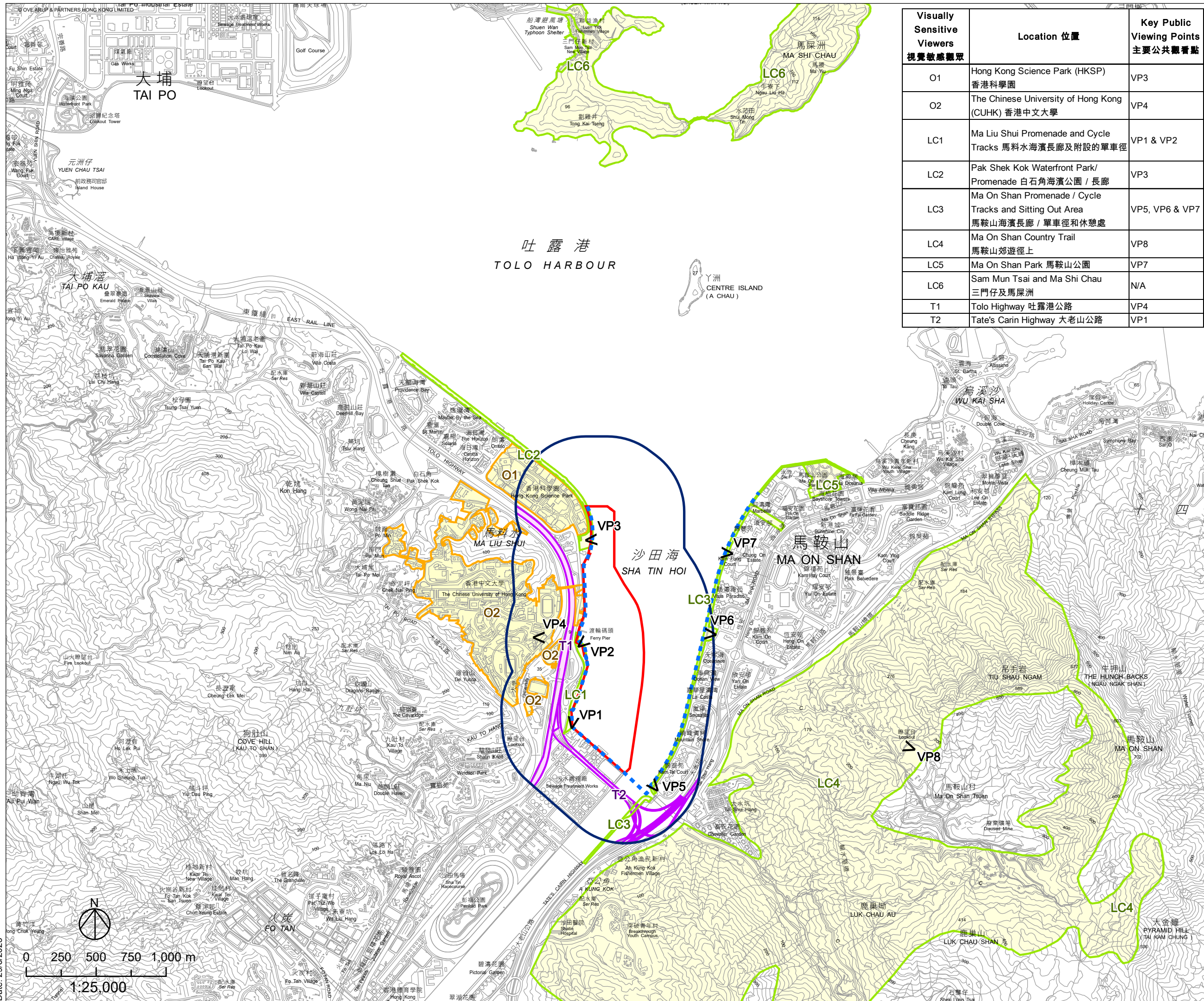
- Potential Reclamation Area
潛在填海範圍
- ◆ Yim Tin Tsai Fish Culture Zone (FCZ)
鹽田仔魚類養殖區
- ◆ Yim Tin Tsai (East) FCZ
鹽田仔(東)魚類養殖區
- ◆ Yung Shue Au FCZ
榕樹凹魚類養殖區
- ◆ Lo Fu Wat FCZ
老虎笏魚類養殖區
- Important Nursery Area for Commercial Fisheries Resources
商業漁業資源的重要育苗場



Rev	Description	By	Date
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Project Title Ma Liu Shui Reclamation 馬料水填海			
Drawing title Location of Fisheries Sensitive Receivers (Indicative) 漁業敏感受體位置圖 (只供參考)			
Drawing no.	Figure 4.5 / 圖 4.5	Rev.	
Drawn	Date 29/6/2023	Checked	Approved
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Civil Engineering and
Development Department



Visually Sensitive Viewers 視覺敏感觀眾	Location 位置	Key Public Viewing Points 主要公共觀看點
O1	Hong Kong Science Park (HKSP) 香港科學園	VP3
O2	The Chinese University of Hong Kong (CUHK) 香港中文大學	VP4
LC1	Ma Liu Shui Promenade and Cycle Tracks 馬料水海濱長廊及附設的單車徑	VP1 & VP2
LC2	Pak Shek Kok Waterfront Park/ Promenade 白石角海濱公園 / 長廊	VP3
LC3	Ma On Shan Promenade / Cycle Tracks and Sitting Out Area 馬鞍山海濱長廊 / 單車徑和休憩處	VP5, VP6 & VP7
LC4	Ma On Shan Country Trail 馬鞍山郊遊徑上	VP8
LC5	Ma On Shan Park 馬鞍山公園	VP7
LC6	Sam Mun Tsai and Ma Shi Chau 三門仔及馬屎洲	N/A
T1	Tolo Highway 吐露港公路	VP4
T2	Tate's Carin Highway 大老山公路	VP1

Legend 圖例

- Potential Reclamation Area
潛在填海範圍
- 500m Assessment Area
500米評估範圍
- < Key Public Viewing Points (VP)
主要公共觀看點 (VP)
- Occupational VSR (O)
職業視覺敏感受體 (O)
- Leisure and Cultural VSR (LC)
康樂及文化視覺敏感受體 (LC)
- Transportation VSR (T)
交通運輸視覺敏感受體 (T)
- ■ ■ Major Visual Resources
主要視覺資源

Rev	Description	By	Date
<h1>ARUP</h1>			
Project Title Ma Liu Shui Reclamation 馬料水填海			
Drawing title Locations of Visually Sensitive Viewers, Major Visual Resources and Key Public Viewing Points (Indicative) 公眾視覺敏感觀眾、主要視覺資源和 主要公眾觀景點位置圖 (只供參考)			
Drawing no. Figure 4.6 / 圖 4.6		Rev.	
Drawn	Date 29/6/2023	Checked	Approved
Scale 1:25,000		Status	

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Civil Engineering and
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