

Ta Kwu Ling New Development Area - Priority Development Area Project Profile

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Civil Engineering and Development Department

Project Profile

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1. Basic Information

1.1 Project Title

- 1.1.1 The title of the Project is “Ta Kwu Ling New Development Area - Priority Development Area”, hereinafter referred as “the Project”.

1.2 Purpose and Nature of Project

- 1.2.1 The 2013 Policy Address initiated the investigation of development opportunities in New Territories North (NTN) to create a modern new town comparable in scale to Fanling / Sheung Shui New Town. In 2014, the Government commissioned the Preliminary Feasibility Study on Developing the New Territories North (the PFS). Through comprehensive planning, the PFS recommended optimising abandoned agricultural land and brownfields for building new communities, developing modern industries and industries preferring locations near the boundary crossings and enhancing existing living environments, with phased development aligned to major transport infrastructure. The PFS identified three Potential Development Areas (including San Tin / Lok Ma Chau Development Node (STLMC DN), the Man Kam To (MKT) Logistics Corridor, and the NTN New Town (covering Heung Yuen Wai (HYW), Ping Che, Ta Kwu Ling, Hung Lung Hang and Queen’s Hill)). The key planning and infrastructure concepts of NTN, as one of the Strategic Growth Areas to meet Hong Kong’s long-term social and economic needs, were promulgated in the public engagement of the “Hong Kong 2030+: Towards a Planning Vision and Strategy Transcending 2030” in 2016.
- 1.2.2 Following the completion of the PFS in 2018, the directive of advancing the studies in developing brownfields in NTN in the 2018 Policy Address and the acceptance of the recommendations of the Task Force on Land Supply in 2019, the Government commenced a feasibility study and an investigation study in 2019 and 2021 respectively to take forward STLMC DN as the first phase development of NTN. Taking into account the Northern Metropolis Development Strategy (NMDS) announced in the 2021 Policy Address, STLMC DN has been expanded into the San Tin Technopole.
- 1.2.3 In October 2021, the Civil Engineering and Development Department (CEDD) and the Planning Department (PlanD) commissioned the Planning and Engineering Study for the remaining phase development of NTN (the P&E Study) to establish a recommended land use proposal for NTN New Town and MKT (collectively named as NTN New Town). The study area has been subsequently expanded to cover the proposed comprehensive development of Lo Wu and MKT area under NMDS and other potential development areas. Under the Northern Metropolis (NM) Action Agenda published in October 2023, NTN New Town is located within the Boundary Commerce and Industry Zone in the eastern part of NM. In December 2024, the preliminary development proposal of NTN New Town in the form of Broad Land Use Concept was released, followed by a 2-month public engagement between January and March 2025. Given the vast scale of NTN New Town (about 1,420 hectares (ha)), the Government has decided to first proceed with the Priority Development Area (PDA), and NTN New Town is renamed as “Ta Kwu Ling New Development Area (TKL NDA)”.

Ta Kwu Ling New Development Area - Priority Development Area and Associated Infrastructural Works

- 1.2.4 By making good use of the HYW Boundary Control Point (BCP) and HYW Highway, the PDA project will transform the area near HYW BCP into town centre and an Enterprise Park, along with the TKL Campus Area of the NM University Town to boost gateway economy, foster emerging industries and nurture high-calibre talents. Beyond its economic and social benefits, the PDA will deliver an overall environmental improvement to the area by transforming existing brownfield and livestock farm operations into a functional community. In addition to removing pollution sources, new sewerage infrastructure (i.e. Effluent Polishing Plant with tertiary treatment, sewage pumping stations and pipes) network will be provided to treat the sewage generated from the new developments as well as nearby villages where the water quality would be greatly improved, as compared with the existing situation that the scattered brownfield and livestock farm operations lack proper sewage treatment and villages rely on septic tanks and soakaway pits for sewage treatment. Along with the improved water quality, Ping Yuen River will be revitalised to form part of the Central River Valley as the ecological backbone of the PDA with planting of carefully selected species at the riparian zones of the revitalised river to create diverse wildlife habitats for enhancing the biodiversity and ecology of the area. Besides, blue-green

infrastructure will be integrated in the PDA to enhance climate resilience for both the new developments and the existing villages. The above transformations will certainly deliver net environmental improvements and benefits to the Project and its surroundings.

- 1.2.5 To support the development of the PDA, site formation and infrastructural works including widening of Ping Che Road and some sections of Lin Ma Hang Road, construction of new roads, construction of vehicular bridges for crossing rivers, water, drainage and sewerage works, utility works, cycle tracks, and environmental mitigation measures etc. would also be carried out under the Project.

1.3 Name of Project Proponent

- 1.3.1 The Project Proponent is North Development Office (NDO), CEDD of the Government of the HKSAR.

1.4 Location and Scale of Project and History of Site

- 1.4.1 The Project, with area of about 330 ha, includes the PDA of TKL NDA (exact location and boundary of the PDA to be provided in the EIA report) and associated site formation and infrastructural works (e.g. necessary slope works, roadworks, water, drainage and sewerage works, utility works, cycle tracks, and environmental mitigation measures, etc.) The location and Project boundary are presented in **Figure 1**.
- 1.4.2 The PDA is located at the northeastern part of TKL NDA. It is situated at the low-lying area between HYW BCP and Shenzhen River in the northwest, Pak Fu Shan in the northeast, Wong Mau Hang Shan in the east and the hilly terrains of Lo Shue Ling and Kong Nga Po in the west, with the Ping Che area in the south and the Hung Lung Hang area in the southwest, while the North East New Territories Landfill and its extension (collectively the NENT Landfill) are located to its east. Currently, the area is served by HYW Highway, Lin Ma Hang Road and Ping Che Road.
- 1.4.3 Nestled between the surrounding hilly terrains, the low-lying area is featured by some green knolls and intersecting watercourses, with Ping Yuen River as the main watercourse flowing from Wo Keng Shan into the lowland before discharging into Shenzhen River. In the 1960s, the area was covered by agriculture land, clusters of settlements and natural vegetation. In the 1990s, brownfield operations were first observed in the Project area. Since the 2010s, more infrastructures (e.g., HYW Highway) have been observed. Currently, the Project area comprises clusters of settlements, permitted burial grounds, abandoned agricultural land intermixed with a growing extent of brownfield operations, livestock farms, vegetated habitats, etc. Most brownfield operations, including logistics and freight operation, open storage, warehouse and vehicle parking, etc., are located next to Ping Che Road, to the west and southwest of Chuk Yuen, and to the north of Tsung Yuen Ha.
- 1.4.4 The PDA, subject to the Recommended Outline Development Plan (RODP) being formulated under the P&E Study, would encompass various developments, including the TKL Campus Area of the NM University Town, Enterprise Park (for various industries such as modern logistics, food-related, advanced construction and advanced manufacturing), private and public housing, commercial uses (e.g. office, hotel, retail, dining and entertainment, etc.), community uses (e.g. schools, social welfare facilities, refuse collection point (RCP) cum community recycling centre (CRC)), open spaces, utilities and infrastructure facilities (e.g. 132kV electricity substations, green fuel station (GFS), effluent polishing plant (EPP), water treatment works (WTWs), water reclamation plant (WRP), sewage pumping stations (SPSs)), etc., and special uses (e.g. food control facilities (FCF)). The Project would also include the widening of Ping Che Road and some sections of Lin Ma Hang Road, river revitalisation works, and other associated site formation and infrastructural works.
- 1.4.5 Certain areas within the Project boundary where no works are proposed are marked as “Retained Area” in **Figure 2**.

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

- 1.5.1 The Project is a development project covering an area of about 330 ha and falls under Item 1 of Schedule 3 to the Environmental Impact Assessment Ordinance (EIAO), i.e. "*An urban development or redevelopment project covering an area of more than 50 ha*", which is a major designated project (DP) requiring an Environmental Impact Assessment (EIA) report.
- 1.5.2 The Project, as described in the scope above (i.e. **Section 1.4.4**), involves the following non-exhaustive list of elements, which are DPs under Part I of Schedule 2 to the EIAO, as listed in **Table 1.1**, that would be identified in the course of the study and subject to the final recommendation of the study.

Table 1.1 List of Part I of Schedule 2 Designated Projects

Designated Project under Part I of Schedule 2 to the EIAO		Separate EIA / Project Profile to be conducted by Other Project Proponent for Application of Environmental Permit (EP)
A.1	A carriageway for motor vehicles that is an expressway, trunk road, primary distributor road or district distributor road.	-
F.1	Sewage treatment works with an installed capacity of more than 15,000 m ³ per day.	-
F.2	Sewage treatment works— (a) with an installed capacity of more than 5 000 m ³ per day; and (b) a boundary of which is less than 200 m from the nearest boundary of an existing or planned (i) residential area.	-
F.4	A facility for generating, from sewage effluent treated by a sewage treatment plant, reclaimed water for use by the general public.	Yes

- 1.5.3 Besides the above listed DP items, based on the latest design information available, the tentative alignment of the railway and its associated railway station(s) of the Northeast New Territories Line (NENTL) (Item A.2) under planning, the tentative alignment of railway of the Northern Link Eastern Extension (NOLE) (Item A.2) under planning, and the tentative alignment of the Northern Metropolis Highway (Ta Kwu Ling Section) (Item A.1) under planning will be partially located within the Project boundary. The project proponents of these projects would meet the relevant requirements of the EIAO and apply for EP(s) for their construction and operation.
- 1.5.4 For the Ping Yuen River and its tributaries, the Project adopts a revitalisation approach focused on enhancing the river's ecological function and natural character. The works are designed to preserve the river in its existing alignment and avoid large-scale diversion as far as practicable. The relevant watercourses are less than 100m in channel width and are located at least 300m from any sensitive areas (e.g., site of special scientific interest (SSSI), site of cultural heritage, and conservation area, etc.) listed under Item I.1(b). Accordingly, the proposed revitalisation works would not fall within the scope of a DP under Item I.1, Part I of Schedule 2 to the EIAO.
- 1.5.5 The PDA has reserved land for the planned Water Treatment Works (WTW). Confirmed by the Water Services Department, the storage of dangerous goods of the planned WTW will be less than 500 tonnes. Hence, the scope of the planned WTW would not fall within the scope of a DP under Item E.2, Part I of Schedule 2 to the EIAO.
- 1.5.6 For the proposed vehicular bridge(s) crossing rivers, whilst some of the bridge(s) might be more than 100m in length between abutments subject to detailed design, there are no bridge piers over the sea. Accordingly, the proposed vehicular bridge(s) would not fall within the scope of a DP under Item A.8, Part I of Schedule 2 to the EIAO.

1.6 Name and Telephone Number of Contact Person

1.6.1 All queries regarding the Project can be addressed to:

Mr. POON Kwok Chung, Peter (CE/N2)

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2. OUTLINE OF PLANNING AND IMPLEMENTATION PROGRAMME

2.1 Project Overview

- 2.1.1 A Recommended Outline Development Plan (RODP) will be formulated for the PDA of TKL NDA to boost gateway economy, foster new emerging industries and nurture high-calibre talents. The Project would also include supporting infrastructure works.

2.2 Project Implementation

- 2.2.1 The Project Proponent, NDO of CEDD, subject to the final recommendation of the P&E Study, will be responsible for implementing the proposed works, together with the environmental mitigation measures, the environmental monitoring and audit requirements as recommended in the EIA report of this Project.
- 2.2.2 The Consultants of the P&E Study are responsible for undertaking the EIA study according to the EIA Study Brief to be issued under the EIAO and responding on behalf of the Project Proponent on issues relating to the EIA study.
- 2.2.3 The construction works of the proposed site formation and engineering infrastructure to serve the PDA will be carried out by phases by the contractors to be appointed under various works contracts.

2.3 Project Timetable

- 2.3.1 With reference to the initial implementation programme, the government-initiated works for the PDA may commence as early as 2028/29, subject to the funding arrangement and necessary statutory procedures. The outline of implementation programme and phasing plan for the development will be formulated under the Project and presented in the EIA report.

2.4 Interactions with Other Projects

- 2.4.1 Other projects that are in the vicinity of the Project that would potentially interface with the Project identified are listed below. As the implementation programmes of some of these projects are yet to be confirmed, the below list will be re-visited during the EIA study to ensure the list and their programmes are up-to-date. For those projects with development programmes available, the cumulative impacts arising from these projects during both construction and operational phases of the Project, would be identified, taken into account and addressed as appropriate in the EIA report.

- (a) Liantang / Heung Yuen Wai Boundary Control Point and Associated Works;
- (b) Agreement No. CE 89/2017 (DS) – Drainage Improvement Works at Ta Kwu Ling – Investigation, Design and Construction;
- (c) PWP No. 4409DS North East New Territories Sewerage System Upgrade;
- (d) Northeast New Territories Landfill and its Extension (collectively the NENT Landfill);
- (e) Police Facilities in Kong Nga Po (Hong Kong Police College Integrated Training Centre);
- (f) Agreement No. CE 4/2024 (HY) Northern Metropolis Highway – Investigation (Northern Metropolis Highway (Ta Kwu Ling Section)¹) would not be taken into account in this EIA Report. In any case, we will check for any updates to the above during preparation of the EIA Report.
- (g) Northeast New Territories Line; and
- (h) Northern Link Eastern Extension.

¹ “Northern Metropolis Highway (Ta Kwu Ling Section)” formerly known as “Northern Metropolis Highway (New Territories North New Town Section)”

- 2.4.2 Currently there is no defined development programme for the project listed under items (f) to (h) above. Any updates to their development programmes will be reviewed and the cumulative impacts would be assessed in the EIA report. Should it remain without a defined programme during the EIA report preparation stage, the associated cumulative impacts would not be taken into account in the EIA report.

3. POSSIBLE IMPACTS ON THE ENVIRONMENT

3.1 General

- 3.1.1 It is anticipated that the Project would involve site clearance, site formation works (including the necessary slope works and retaining structures), infrastructural works (widening of Ping Che Road and some sections of Lin Ma Hang Road, construction of new roads, and water, drainage and sewerage works, utility works, cycle tracks, and environmental mitigation measures etc.). The major activities of the construction works mentioned above are not exhaustive and will be further reviewed, developed and studied in the P&E Study and detailed in the EIA report.
- 3.1.2 Environmental impacts or issues that may arise during the construction and operational phases of the Project, as well as cumulative impact arising from concurrent projects are presented below.

3.2 Air Quality

Construction Phase

- 3.2.1 During the construction phase, temporary air quality impacts mainly from fugitive dust may arise from typical construction activities such as excavation, material handling, and vehicle movement, as well as exhaust emissions from construction plant and machinery. The corresponding potential air quality impact shall be evaluated. Requirements stipulated in the Air Pollution Control (Construction Dust) Regulation, Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation and Air Pollution Control (Fuel Restriction) Regulations (i.e. use of ultra-low Sulphur diesel) should be followed to minimise the fugitive dust impact from the construction activities and the exhaust emissions from construction plants and machineries.
- 3.2.2 The EIA report will recommend appropriate mitigation measures to ensure no adverse construction phase air quality impact due to the Project. Subject to the assessment in the EIA study, mitigation measures in **Section 5.2** would be recommended accordingly.

Operational Phase

- 3.2.3 The major operational phase sources of air emission include (i) vehicular emissions from existing and the future road networks such as the widened Ping Che Road, some sections of Lin Ma Hang Road and proposed roads within the PDA, the modern logistics developments and the public transport interchange (PTI) / public transport terminus (PTT) / transport interchange hub (TIH); and (ii) chimney emissions, namely potential biogas combustion at the proposed EPP and (iii) dust emissions from the existing concrete batching plant, i.e. K. Wah Concrete Company Limited (Specified Process (SP) Licence No: L-3-288(1)) (which is about 250 m away from the Project boundary). Another concrete batching plant Hang Yue Concrete Company Limited (SP Licence No: L-3-265(2A)) located within the Project boundary will be resumed and demolished under the Project. No other proposed chimney emissions would be expected from the Project². The potential air quality impact on the existing and planned air sensitive uses within 500 m from the Project boundary will be assessed in the EIA study.
- 3.2.4 Despite there may be potential odour emission sources (e.g. proposed SPSs, RCP, FCF and EPP) within the Project, these concerned facilities will be designed to meet stringent odour control standards, ensuring that the potential impacts on existing and planned air sensitive uses are effectively minimised.
- 3.2.5 The EIA report will recommend appropriate mitigation measures for implementation to ensure no adverse operational phase air quality or odour impacts due to the Project. Subject to the assessment in the EIA study, mitigation measures in **Section 5.2** would be recommended as necessary.

² This is an assumption at current stage. If in future chimney emitting uses appear during the operational stage, such uses will be governed by Air Pollution Control Ordinance and the requirement of SP Licence as appropriate.

3.3 Noise

Construction Phase

- 3.3.1 Noise impact during the construction phase may result from construction activities, neighbouring concurrent construction works, piling works, construction plants, traffic along site access roads, the use of powered mechanical equipment (PME), etc. The extent and significance of construction noise impacts would depend on the scale of construction activities, number of PME in operation, duration of construction activities, number of construction vehicle movements, etc. With implementation of suitable mitigation measures, carrying out construction works in phases and use of quieter construction equipment / plant, no adverse construction noise impact is anticipated.
- 3.3.2 The EIA report will recommend appropriate mitigation measures for implementation to ensure no adverse construction noise impact due to the Project. Subject to the assessment in the EIA study, mitigation measures in **Section 5.3** would be recommended as necessary.

Operational Phase

- 3.3.3 The potential operational noise impact arising from the Project includes road traffic noise impact and fixed noise impact. The sources of road traffic noise include the major existing roads such as HYW Highway, Ping Che Road and Lin Ma Hang Road, as well as other proposed roads within the Project boundary. The planned facilities with potential fixed noise sources within the Project boundary include the WTW, EPP, WRP, SPSs, FCF, PTI, PTT, TIH, and other fixed noise sources within the future Enterprise Park, etc. Potential fixed noise impact associated from abovementioned sources would be addressed in the EIA study.
- 3.3.4 The PDA has reserved land for the proposed NENTL under planning. Since there is no concrete development programme available for the above railway infrastructure, the associated potential rail noise impacts will be assessed in detail under separate Schedule 2 EIAs by its project proponent.
- 3.3.5 The EIA report will recommend appropriate mitigation measures for implementation to ensure no adverse operational phase road traffic noise impact or fixed noise impact due to the Project. Subject to the assessment in the EIA study, mitigation measures in **Section 5.3** would be recommended as necessary.

3.4 Water Quality

Construction Phase

- 3.4.1 The Project involves only land-based construction, and no marine works is anticipated. The construction activities, which will have likely impact on water quality, include site formation, river revitalisation works, drainage improvement works, removal of pond, removal or diversion of watercourses (if unavoidable), works within watercourse, land decontamination, construction of vehicular bridges across river, piling works, construction and upgrading of road network. The potential adverse impacts may comprise the increase in construction runoff, suspended solids (SS), pH value and turbidity levels of water bodies within the Project and associated water bodies, discharge of high SS and nutrient load water from pond dewatering process, sewage effluent from the workforce, accidental spillage of waste oils or other chemicals and generation of additional wastewater. The potential impacts on the nearby surface water associated with construction works would be addressed.
- 3.4.2 The EIA report will recommend environmental mitigation measures for implementation to ensure no adverse construction phase water quality impact due to the Project. Subject to the assessment in the EIA study, mitigation measures in **Section 5.4** would be recommended as necessary.

Operational Phase

- 3.4.3 Potential water pollution sources during operational phase will include domestic and non-domestic (generated by commercial activities, university campus, and Enterprise Park / industries, etc.) sewage in the PDA. The sewage arising from the Project would be conveyed to and treated at the proposed EPP with sufficient capacity to cater for the sewage flow from the PDA and subsequent reuse at the

planned WRP or discharge to Shenzhen River and ultimately to Deep Bay. The potential water quality impact arising from normal operation and any emergency situations of the proposed EPP and SPSs would be assessed in detail under the EIA report for this Project. Another source of potential impact will be the run-off or non-point source pollution from proposed roads and newly paved development areas. Stormwater control measures including adequate stormwater drainage system is recommended for the Project to minimise the non-point source pollution.

- 3.4.4 The Project will promote sustainable use of water, the potential of using reclaimed water for non-potable purposes within the Project would be realised by a planned WRP, reclaimed water service reservoir and associated pipeworks. The potential environmental impact associated with the WRP will be addressed accordingly under the EIAO to facilitate its EP application by its project proponent.
- 3.4.5 The EIA report will recommend mitigation measures for implementation to ensure no adverse operational phase water quality impact due to the Project. Subject to the assessment in the EIA study, mitigation measures in **Section 5.4** would be recommended as necessary.

3.5 Waste Management

Construction Phase

- 3.5.1 The construction activities of the Project would generate a variety of wastes including construction and demolition (C&D) materials arising from earthworks and demolition works, chemical wastes, general refuse, yard wastes, sediment/desilted materials from river revitalisation works and minimal amount of excavated fishpond sediment. The types of waste generated would be further reviewed during the EIA study. The quantities of the various types of wastes produced related to the programme of various works packages and the construction methods will be estimated and provided in the EIA report.
- 3.5.2 The EIA report will recommend environmental mitigation measures for implementation to ensure no adverse construction phase waste management implication due to the Project. Subject to the assessment in the EIA study, mitigation measures in **Section 5.5** would be recommended as necessary.

Operational Phase

- 3.5.3 The operation of the potential developments in the PDA and associated infrastructure will generate certain amount of municipal solid waste. Operation of the proposed EPP and SPSs would potentially generate screen wastes and sludge, which would require proper disposal. The storage and handling of these wastes would have the potential to cause environment impact and would be assessed in the EIA report. The above non-exhaustive list of waste categories would be reviewed during the EIA study.
- 3.5.4 The EIA report will recommend environmental mitigation measures for implementation to ensure no adverse operational phase waste management implication due to the Project. Subject to the assessment in the EIA study, mitigation measures in **Section 5.5** would be recommended as necessary.

3.6 Landfill Gas

- 3.6.1 The NENT Landfill adjoins the Project boundary to the northeast. Part of the Project, for possible enterprise park/industrial development, would be located within the 250 m Consultation Zone of the NENT Landfill. There is potential impact from landfill gas to the possible enterprise park/industrial development, subject to review under the P&E Study, above and below ground level during both construction and operational phases.
- 3.6.2 The EIA report will recommend environmental mitigation measures for implementation to ensure no adverse construction and operational phase landfill gas impact due to the Project. Subject to the assessment in the EIA study, mitigation measures in **Section 5.6** would be recommended as necessary.

3.7 Ecology

- 3.7.1 Habitats identified within the Project boundary include developed area, grassland, grassland/shrubland, shrubland, woodland, plantation, modified watercourse, natural/semi-natural watercourse, pond, marsh, active agricultural land, orchard, and wasteland.

- 3.7.2 The Project has, from the outset, adopted an avoidance approach. Recognised site of conservation importance (i.e. the area zoned "Conservation Area"), ecologically sensitive resources (a small section of HYW Stream, Ping Che Egrettry, woodland compensation area at Pak Fu Shan and fung shui woodland at HYW) are excluded from Project boundary to avoid direct impact. Ecologically sensitive resources including the fung shui woodlands at Tsung Yuen Ha and Kan Tau Wai which is located inside the Project boundary and will be retained, and hence will not be directly affected.
- 3.7.3 Of the above identified recognised sites of conservation importance and ecologically sensitive resources, "Conservation Area", Ping Che Egrettry, woodland compensation area at Pak Fu Shan and fung shui woodland at HYW are located outside the Project boundary at approximately 130 m, 170 m, 260 m and 130 m away from the nearest Project boundary, respectively. No direct impact on the recognised sites of conservation importance and ecological sensitive resources is anticipated. Considered the distance between these sites and the nearest proposed development, potential indirect disturbance (e.g. construction noise, dust, light or operational activities) may occur, and this would be assessed in the EIA report.
- 3.7.4 Fung shui woodlands at Kan Tau Wai and Tsung Yuen Ha are located within the Project boundary. The Project works footprint has been carefully delineated to preserve both fung shui woodlands. However, minor encroachment (approximately 0.1ha) upon the landscaped entrance of a wetland compensation area, which is created under the Liantang/Heung Yuen Wai BCP and Associated Works project and located underneath the HYW Highway, is anticipated. The location of wetland compensation area is presented in **Figure 4**. We will liaise with the proponent of Liantang/Heung Yuen Wai BCP and Associated Works project and relevant authorities to explore the opportunity of reprovision of the affected loading/unloading bay at the entrance, while the potential impacts on the wetland compensation area would be identified, evaluated and addressed in the EIA report.
- 3.7.5 Segments of Ping Yuen River, between Lei Uk and Tong Fong, between Kan Tau Wai and Tong Fong, and along the proposed Central River Valley, would be revitalised under the Project. The concerned segments currently run through various habitats, including agricultural land, grassland, developed and wasteland, and are receiving some discharge from nearby developed area or agricultural land. The revitalisation approach would mainly focus on enhancing the ecological function and natural character of the river. The works would be designed to preserve the river in its existing alignment as far as practicable. In general, the proposed revitalisation works are expected to have positive effects on local aquatic ecology, as well as the environment in the vicinity. Nevertheless, ecological surveys would be conducted to collect baseline information and ecological impacts will be assessed in the EIA report.
- 3.7.6 The Project would not pose adverse impact on Eurasian Otter (*Lutra lutra*) since no Eurasian Otter (*Lutra lutra*) was observed within the Project boundary during preliminary surveys from 2022 to 2025 and was supported by desktop study. Based on the available ecological information, Ping Yuen River within the Project area is not identified as a core habitat for Eurasian Otter, which in Hong Kong is primarily associated with fishpond habitats in the Inner Deep Bay area (e.g. Mai Po, San Tin, Lok Ma Chau) rather than upland watercourses such as Ping Yuen River. Thus, no significant adverse impacts on Eurasian Otter or its key habitats at the Inner Deep Bay area under this Project are anticipated.

Construction Phase

- 3.7.7 During construction phase, the potential ecological impacts may include direct habitat loss and habitat fragmentation, direct injury of wildlife and indirect disturbance including disturbance to nearby habitats and wildlife, air pollution, noise, glare and water quality. The developments within the Project boundary primarily impacts grassland (accounting for approximately 30% of the total Project site) where some were former abandoned agricultural land. A smaller segment, approximately 3%, consisting of active dry agricultural land within the Project boundary, is expected to be affected.
- 3.7.8 Environmental mitigation measures will be recommended for implementation to ensure no adverse construction phase ecological impact due to the Project. Subject to the assessment in the EIA study, mitigation measures in **Section 5.7** would be recommended as necessary.

Operational Phase

- 3.7.9 During operational phase, the potential ecological impacts may include direct injury of wildlife, indirect disturbance including disturbance to nearby habitats and wildlife, air pollution, noise, glare, water quality impact, and disturbance of bird flight lines between breeding/roosting sites and foraging grounds and migratory birds. The EIA study will take into account the latest planned developments and assess the potential environmental impacts including impacts on the bird flight lines due to buildings and infrastructures and then identify the necessary mitigation measures.
- 3.7.10 The EIA report will recommend mitigation measures for implementation to mitigate the identified adverse ecological impact during operational phase. Subject to the assessment in the EIA study, mitigation measures in **Section 5.7** would be recommended as necessary.

3.8 Hazard to Life

- 3.8.1 No explosives would be used during the construction phase of the Project.
- 3.8.2 Currently, landfill gas collected from the NENT Landfill is treated, and the treated gas is then transferred through a synthetic natural gas pipeline to the Tai Po Gas Production Plant. The section of this pipeline running along Sha Tau Kok Road near Hung Leng will overlap with the road widening works of Ping Che Road proposed under the Project. Since the pipeline operates under intermediate pressure, no significant potential hazard to the proposed development is anticipated. Nevertheless, the works consultants / contractors will liaise with The Hong Kong and China Gas Company Limited (HKCG) regarding the exact locations of existing and planned gas pipelines/gas installations in the vicinity and ensure any required minimum setback distances are maintained during the planning, design and construction stages.
- 3.8.3 The proposed works are in the vicinity of the Liquefied Petroleum Gas (LPG) storage installations at Block 3 & Block 20 of HYW BCP and Ta Kwu Ling Police Station respectively. The size of LPG cylinders using in Hong Kong is normally less than 50kg, a fireball with radius less than 10m will be resulted from an instantaneous rupture of an LPG cylinder. No significant potential hazard is expected due to the LPG cylinder storage at these installations. Nevertheless, the works consultants / contractors will check with the Registered Gas Supply Companies (i.e. Sinopec (Hong Kong) Petroleum Holding Company Limited for Block 3 of HYW BCP and Ta Kwu Ling Police Station LPG storage installations and IP&E GBA Limited for Block 20 of HYW BCP LPG storage installation) about the operation of their LPG cylinder wagon and liaise with them on taking necessary safety and precautionary measures to safeguard the LPG storage installations during the planning, design and construction stages.
- 3.8.4 An EPP is proposed within the PDA. Biogas would be generated during the sewage treatment process and biogas storage with total capacity of about 4,000 m³ in 2 cylindrical biogas holders is proposed for on-site generation of power and heat. Potential hazard to life impacts associated with the generation, storage, use and on-site transport of biogas at the proposed EPP will be assessed in detail in the EIA report.
- 3.8.5 Hazard-to-life impact during operational phase may also arise from the proposed Green Fuel Station (assumed to be LPG Filling Station at this stage) located within the PDA. The potential risk would be assessed as appropriate in the hazard to life impact assessment in the EIA study³.
- 3.8.6 The storage of dangerous goods of the planned WTW will be less than 500 tonnes, detailed design information including its actual dangerous goods storage capacity is not available at this stage. In the case the dangerous goods storage in the proposed WTW exceeds the threshold quantities for a Potentially Hazardous Installation (PHI), its project proponent will undertake a separate Hazard Assessment, Planning Study and Action Plan will be prepared by its project proponent for the Coordinating Committee on Land-use Planning and Control relating to Potentially Hazardous Installations (CCPHI) consideration.

³ The proposed GFS is intended to cater for future green fuel use but it is assumed to be conventional LPG filling station at this stage. The type(s) of green fuel to be supplied at the GFS will be subject to future needs and advice of relevant bureaux/departments at implementation stage. The quantitative risk assessment (QRA) should be reviewed and updated accordingly.

- 3.8.7 No other significant dangerous goods storage or PHI would be anticipated at the proposed developments within the Project boundary. In case, there will be significant dangerous goods storage proposed by the project proponent(s) or developer(s) after the EIA study, its project proponent will undertake quantitative risk assessment (QRA) and other separate studies to EPD and Fire Services Department (FSD) according to established mechanism in the future to address hazards arising from the operation of the hazardous facilities where necessary.

3.9 Cultural Heritage

- 3.9.1 There are four (4) Grade 3 historic buildings located within the Project boundary and five (5) Grade 3 historic building located outside the Project boundary but within 50 m from the Project boundary which all will be retained. No declared monument, proposed monument, sites of archaeological interest (SAI), new items for grading assessment and government historic sites identified by the Antiquities and Monuments Office (AMO) were identified. The existing heritage sites within and in the vicinity of the Project are further discussed in **Section 4.9**.
- 3.9.2 Since all the above identified heritage sites will be retained, no direct impact is anticipated during the construction phase. Potential indirect impacts of ground-borne vibration, settlement and tilting may be anticipated on the identified heritage sites located in close vicinity of the proposed construction works during the construction phase.
- 3.9.3 During operational phase, no potential impact to heritage sites is anticipated.
- 3.9.4 Since no SAI is identified within 50 m from the Project boundary, no archaeological impact is envisaged during construction and operational phases.
- 3.9.5 The EIA report will recommend environmental mitigation measures for implementation to ensure no adverse impact on the heritage sites⁴ due to the Project. Subject to the assessment in the EIA study, mitigation measures would be recommended as necessary.

3.10 Land Contamination

- 3.10.1 While there are no extensive areas of contaminated land, such as landfills, and no areas of elevated levels of naturally occurring arsenic are identified within the Project site, there are potential sources from small-scale vehicle repair workshops, workshops and storage sites with potential contaminated use that may need to be cleaned up before development works.
- 3.10.2 The EIA report will recommend environmental mitigation measures / remediation measures to ensure no adverse land contamination impact. Subject to the assessment in the EIA study, mitigation / remediation measures in **Section 5.10** would be recommended as necessary.

3.11 Landscape and Visual

- 3.11.1 The possible sources of construction/ operational phase landscape and visual impacts arising from the Project are as follows.
- (i) Irreversible change of existing landscape character;
 - (ii) Change in visual quality as a result of loss of existing landscape resources / elements;
 - (iii) Visual intrusion and obstruction created by the proposed developments and infrastructures; and
 - (iv) Change in visual quality due to the new developments, including beneficial impacts such as removal of existing brownfield sites.
- 3.11.2 The EIA report will recommend environmental mitigation measures for implementation to ensure no unacceptable landscape and visual impact due to the Project. Subject to the assessment in the EIA study, mitigation measures in **Section 5.11** would be recommended as necessary.

⁴ Heritage sites refer to declared monuments and proposed monuments, graded historic buildings, new items for grading assessment, sites of archaeological interest in Hong Kong and Government historic sites identified by Antiquities and Monuments Office, subject to assessment in the EIA study.

3.12 Fisheries

- 3.12.1 Five fishponds, all abandoned, were identified within 500 m from the Project boundary of which only one northwest of Tai Po Tin is located within the Project boundary. The other four abandoned fishponds are located at Pak Fu Shan, Sing Ping, southwest of Tai Po Tin and north of Wang Leng. The abandoned fishpond within the Project site is proposed to be filled and those outside the Project boundary will not be affected. Though the impact of filling or partially filling of the abandoned fishpond is anticipated to be minimal with proper mitigation measures, the impact from the loss of the fishpond on existing habitats would be considered in the EIA study. Any fishponds / fisheries sensitive resources / fisheries activities at and in the vicinity of the Project will be further identified, and potential direct and indirect impacts (such as water quality) to fishponds will be assessed in the EIA study.

3.13 Electric and Magnetic Field

- 3.13.1 Electric Field (ELF) and electromagnetic fields (EMF) are present everywhere in our environment. ELF is generated by difference in voltage. The higher the voltage, the stronger will be the resultant ELF. EMF is created by electric current. The greater the current, the stronger the EMF. ELF and EMF are produced by virtually all electrical consumer appliances, computer terminals, wiring in homes, offices and power lines.
- 3.13.2 No proposed 400kV electrical substation nor 400kV overhead transmission lines (OHL) would be expected under the Project.
- 3.13.3 Two sections of existing 400kV OHL of approximately 260 m and 160 m in length are located within the Project boundary, as shown in **Figure 3**.
- 3.13.4 Guidelines on limits of exposure to ELF and EMF were issued by the International Commission on Non-ionizing Radiation Protection (ICNIRP) in Year 1998. As stated in Section 2.3.10 of Chapter 7 of the Hong Kong Planning Standards and Guidelines, the EMF emanating from local OHLs are at extremely low frequency (50Hz) known as power frequency EMF, and the ICNIRP Guidelines (1998) are generally adopted as a prudent avoidance against the influence of power frequency EMF. According to the ICNIRP Guidelines (1998), the strength of ELF and EMF generated from the OHLs shall comply with the limits stated in **Table 3.1**.

Table 3.1 Guidelines on Limits of Exposure to 50Hz Power Frequency Electric and Magnetic Fields Issued by ICNIRP

Exposure Characteristics	Electric Field Strength, V/m	Magnetic Flux Density, μ T
General Public Continuous	5,000	100

- 3.13.5 In reviewing the potential ELF and EMF impact arising from the existing 400kV OHL, reference was made to two approved EIA reports, namely Development at San Hing Road and Hong Po Road, Tuen Mun (Register No.: AEIAR-227/2020) and San Tin / Lok Ma Chau Development Node (Register No.: AEIAR-261/2024). Given the strength of ELF depends only on the voltage and distance from the sources, while EMF depends only on the current and distance from the sources, both of these approved EIA reports provided valuable measurement results for assessing the potential ELF and EMF impact from the 400kV OHLs.
- 3.13.6 According to AEIAR-227/2020, the maximum ELF measured directly underneath the OHL was 288V/m (rms), while the EMF peaked at 4.88 μ T (rms). Similarly, the maximum ELF and EMF measured directly underneath the OHL were 198V/m (rms), and 1.40 μ T (rms) in AEIAR-261/2024. The strength of ELF and EMF induced by the 400kV OHL, even at the area directly underneath the OHL, were only a few percent of the limits stated in **Table 3.1**. This consistent observation across these two separate EIA studies strongly indicates that the strength of ELF and EMF induced by 400kV OHL are well within safe and acceptable exposure standards, even at locations directly underneath the cables. Since the above two approved EIA reports considered no adverse impact arising from the 400kV OHL, it is therefore expected that the existing 400kV OHL located within / in the vicinity of the Project boundary would not pose adverse impact on the proposed development of the Project.

4. MAJOR ELEMENTS OF THE SURROUNDING ENVIRONMENT

4.1 General

- 4.1.1 Surrounding environment of the Project including the following existing and planned sensitive receivers, sensitive parts of the natural environment, major elements of the surrounding environment, existing and/or relevant past uses would be studied in the EIA.

4.2 Air Quality

- 4.2.1 Local vehicular emissions from existing roads including the HYW Highway, Ping Che Road, etc. are the major sources affecting the air quality in the assessment area within 500m from the Project boundary.
- 4.2.2 There are existing industrial emission sources nearby. The concrete batching plant of Hang Yue Concrete Company Limited with Specified Process Licence (Licence Number L-3-265(2A)) which is located within the Project boundary and would be resumed and demolished under the Project, and the concrete batching plant of K. Wah Concrete Company Limited with Specified Process Licence (Licence Number L-3-288(1)) which is located within 500m from the Project boundary. Potential gaseous emissions may arise from the operation of the NENT Landfill. Two existing major point sources within 4km from the Project boundary include, the K. Wah Asphalt Ltd. and O-PARK2, which are located at more than 500m from the Project boundary. The cumulative air quality impact would be assessed in the EIA, if any.
- 4.2.3 The operation of the NENT Landfill and sewage treatment plant at HYW BCP may cause odour impact to the surroundings. Existing livestock farms located within the Project site in the HYW and Ta Kwu Ling areas would be resumed under the Project. Therefore, the associated odour impact to nearby air sensitive uses would be eliminated, hence the Project would improve the existing environment in respect of odour impact. Existing livestock farms in Kong Nga Po, Lo Shue Ling and Ha Shan Kai Wat located outside the Project boundary but within the 500 m assessment boundary would be retained. Given the large separation distances (i.e. more than 500 m) between these retained livestock farms and planned air sensitive uses under this Project, negligible odour impact would be anticipated from these retained livestock farms.
- 4.2.4 The potential air sensitive receivers affected by the Project include domestic premises, clinics, schools, educational institutions, offices, places of public worship, Government, Institution or Community (GIC) uses and existing villages. Sensitive receivers have been identified and listed in **Table 4.1**. The below list of sensitive receivers is not exhaustive and would be reviewed and updated under the EIA Study.

Table 4.1 Air and Noise Sensitive Receivers

ID	Description of Sensitive Receivers	Use ^[1]	Within Project Boundary	Approx. Shortest Distance from the Project Boundary, m	Air or Noise Sensitive Receivers ^[2]
A1	AFCD Ta Kwu Ling Operation Centre	GIC		<10	A
A2	ACO Racing Track	REC		260	A
A3	Blessing Villa	R		450	A, N
A4	C&ED Inbound Vehicle X-Ray Inspection Building	GIC		60	A
A5	Caritas Fung Wong Fung Ting Home	R	✓ ^[5]	- ^[6]	A, N
A6	Caritas Nursery School - Ta Kwu Ling	E	✓ ^[5]	- ^[6]	A, N
A7	Chow Tin Tsuen	R	✓ ^[3]	- ^[6]	A, N

ID	Description of Sensitive Receivers	Use ^[1]	Within Project Boundary	Approx. Shortest Distance from the Project Boundary, m	Air or Noise Sensitive Receivers ^[2]
A8	Chuk Yuen Village	R	✓ ^[3]	- ^[6]	A, N
A9	Customs Detector Dog Group Heung Yuen Wai Dog Base	GIC		10	A
A10	Dai Hing Garden	R	✓ ^[5]	- ^[6]	A, N
A11	Department Of Health Disinsection Station	GIC		40	A
A12	Fung Wong Wu Village	R		20	A, N
A13	Ha Heung Yuen Village	R		90	A, N
A14	Heung Yuen Wai BCP Passenger Terminal Building	GIC		100	A
A15	Heung Yuen Wai Fire Station	GIC		10	A
A16	Heung Yuen Wai Operational Base	GIC		10	A
A17	Heung Yuen Wai Village	R		120	A, N
A18	Hung Leng Village	R		40	A, N
A19	Hydrogro Modern Agriculture Farm	C		250	A
A20	Kai Fong Garden	R		160	A, N
A21	Kan Tau Tsuen	R		430	A, N
A22	Kan Tau Wai Village	R	✓ ^[3]	- ^[6]	A, N
A23	Kaw Liu Village	R	✓ ^[5]	- ^[6]	A, N
A24	Kingston Garden	R		400	A, N
A25	Ko Po Village	R		240	A, N
A26	Lei Uk Village	R		<10	A, N
A27	Leng Tsai Village	R		400	A, N
A28	Lok On Yuen	R		160	A, N
A29	Muk Wu Nga Yiu Village	R		390	A, N
A30	Ng Uk Tsuen	R		30	A, N
A31	Nga Yiu Ha Village	R		80	A, N
A32	Pak Fu Shan Operation Base Ta Kwu Ling Division Hong Kong Police Force	GIC		310	A
A33	Pak Fu Shan Police Post	GIC		140	A
A34	Ping Che Mini-Soccer Pitch	REC		120	A
A35	Ping Che New Village	R		<10	A, N
A36	Ping Che Village	R		<10	A, N

ID	Description of Sensitive Receivers	Use ^[1]	Within Project Boundary	Approx. Shortest Distance from the Project Boundary, m	Air or Noise Sensitive Receivers ^[2]
A37	Ping Che Yuen Ha Village	R		40	A, N
A38	Ping Yeung Village	R		30	A, N
A39	Ping Yuen Tin Hau Temple	W		260	A, N
A40	Ko Po North Village	R		240	A, N
A41	Pok Oi Sing Ping Village	R	✓ ^[5]	- ^[6]	A, N
A42	Regency Court	R		<10	A, N
A43	Tai Po Tin Village and nearby village houses	R	✓ ^[5]	- ^[6]	A, N
A44	Sheung Shan Kai Wat Village	R		380	A, N
A45	Sing Ping Village	R		70	A, N
A46	Ta Kwu Ling Ling Ying Public School	E		250	A, N
A47	Ta Kwu Ling Ambulance Depot	GIC	✓ ^[5]	- ^[6]	A
A48	Ta Kwu Ling District Rural Committee N.T.	GIC		30	A
A49	Ta Kwu Ling Police Station	GIC	✓ ^[3]	- ^[6]	A
A50	Ta Kwu Ling Village	R	✓ ^[4]	- ^[6]	A, N
A51	Temple Near Tsung Yuen Ha Village	W	✓ ^[3]	- ^[6]	A, N
A52	Tsung Yuen Ha Village	R	✓ ^[3]	- ^[6]	A, N
A53	The Baptist Convention of Hong Kong, Baptist Assembly	REC		<10	A
A54	Tong Fong Village	R	✓ ^[3]	- ^[6]	A, N
A55	Village House Near Ping Yeung Public School	R		130	A, N
A56	Wun Chuen Sin Kwoon	W		30	A, N
A57	Residential Development along Ping Che Road	R	✓ ^[4]	- ^[6]	A, N
A58	Ping Che Nursing Home Limited	R		30	A, N
A59	Temple near Sha Tau Kok Road - Ma Mei Ha	W		40	A, N
A60	Ta Kwu Ling Rural Centre Government Building (including Ta Kwu Ling General Out-Patient Clinic)	GIC (including CI)		<10	A, N

ID	Description of Sensitive Receivers	Use ^[1]	Within Project Boundary	Approx. Shortest Distance from the Project Boundary, m	Air or Noise Sensitive Receivers ^[2]
A61	Hong Kong Police College Integrated Training Centre (Kong Nga Po)	GIC		<10	A, N
A62	Proposed air and/or noise sensitive uses within the Project	R, E, GIC, etc.	✓	- ^[6]	A, N

Remarks:

- [1] R – Residential; E – Education; GIC – Government, Institutional and Community; C – Commercial/Retail; REC – Recreational; W – Public place of worship; CI – Clinic
- [2] A – Air Sensitive Receivers; N – Noise Sensitive Receivers
- [3] Existing sensitive uses to be retained under the Project tentatively.
- [4] Existing sensitive uses to be partially retained under the Project tentatively.
- [5] Existing sensitive uses to be resumed and demolished.
- [6] Located within or partially within the Project boundary.

4.3 Noise

- 4.3.1 The noise source of the existing environment within the Project site is predominated by the traffic on the existing major roads including HYW Highway and Ping Che Road, as well as scattered fixed noise sources located within and in the proximity of the Project, such as Lin Ma Hang Road Leachate Pumping Station, Ta Kwu Ling Ambulance Depot, HYW BCP, NENT Landfill, Hong Kong Police College Integrated Training Centre, Hang Yue Concrete Company Limited (to be resumed and demolished under the Project) and several SPSs.
- 4.3.2 With reference to the approved EIA report of the Police Facilities in Kong Nga Po (Register No.: AEIAR-201/2016), potential helicopter noise impact would be expected from the helipad located within the Hong Kong Police College Integrated Training Centre. Given the helipad is located over 300m from the Project boundary, no adverse helicopter noise impact would be expected to the Project.
- 4.3.3 Noise sensitive receivers located in the vicinity of the Project include domestic premises, clinics, schools, welfare facilities, the existing villages, home for the aged and places of public worship. Noise sensitive receivers have been identified and listed in **Table 4.1**. The list of the sensitive receivers is not exhaustive and would be reviewed and updated under the EIA Study.

4.4 Water Quality

- 4.4.1 The water quality sensitive receivers (WSRs) within and in the vicinity of Project site include rivers, channelised nullahs, ponds, wetland compensation area, Conservation Area and other water courses. The major rivers within and in vicinity to the Project site include Shenzhen River and Ping Yuen River. Representative WSRs located within the 500 m assessment area or within the Project site have been identified. The list of the WSRs is not exhaustive and would be reviewed and updated under the EIA study.

Table 4.2 Representative Water Quality Sensitive Receivers

WSR	Description	Status
WSR01*	HYW Stream	Watercourse

WSR	Description	Status
WSR02	Shenzhen River	Channelised nullah
WSR03*	Kong Yiu Channel	Channelised nullah
WSR04	River near Chuk Yuen Village	Channelised nullah
WSR05	River near northwest of NENT Landfill	Channelised nullah
WSR06	River near south of NENT Landfill	Channelised nullah
WSR07	River near west of NENT Landfill	Channelised nullah
WSR08*	Ping Yuen River (Mid-Section)	Watercourse
WSR09*	Ping Yuen River (Lower Section)	Watercourse
WSR10	Tan Shan River (Downstream-section)	Channelised nullah
WSR11*	Ng Tung River (River Indus)	Channelised nullah
WSR12*	Ping Yuen River (River Ganges) and its tributaries	Channelised nullah/watercourse
WSR13*	Downhill watercourses of Tung Fung Au	Natural watercourse
WSR14*	Watercourse near Pak Fu Shan	Watercourse
WSR15*	Watercourse near Shui Hau	Semi-natural watercourse
WSR16	Watercourse south of Hong Kong Police College Integrated Training Centre (Kong Nga Po)	Semi-natural watercourse
WSR17*	Wetland Compensation Area under HYW Highway	Wetland compensation area
WSR18*	Ponds near Lin Chuk Road	Ponds
WSR19	Ponds in Wun Chuen Sin Kwoon	Ponds
WSR20*	Ponds east of Shui Hau	Ponds
WSR21	Ponds north of Hong Kong Police College Integrated Training Centre (Kong Nga Po)	Ponds
WSR22	Pond near Kong Nga Po Road	Pond
WSR23	Pond west of ACO Racing Track	Pond
WSR24	Pond south of Hung Lung Hang	Pond
WSR25*	Pond northwest of Tai Po Tin	Pond
WSR26	Pond in Ping Che Kat Tin	Pond
WSR27	Conservation Area	Conservation Area

Note:

* Indicates the WSR is located within the Project boundary.

4.5 Waste Management

- 4.5.1 The existing solid waste arising from the area within the Project site includes domestic waste from village houses, agricultural waste, livestock farm waste, commercial / industrial waste generated from open storage and informal industrial uses; screening waste from SPS and chemical waste from vehicle dismantle and repair operations.

4.6 Landfill Gas

- 4.6.1 As mentioned in **Section 3.6.1** above, NENT Landfill is adjoining the Project at the northeast, and part of the Project site would be located within the 250 m Consultation Zone of the NENT Landfill.

4.7 Ecology

- 4.7.1 The Project has, from the outset, adopted an avoidance approach. Key ecological resources including the “Conservation Area”, Ping Che Egret, woodland compensation area at Pak Fu Shan, HYW Stream, and the fung shui woodland at HYW are all located outside the Project boundary and will not be affected.
- 4.7.2 The Project will be carefully designed to avoid or minimise impacts as far as possible on the fung shui woodlands at Kan Tau Wai and Tsung Yuen Ha, and the wetland compensation area under HYW Highway.
- 4.7.3 The Project site is largely made up of developed land and grassland. Detailed surveys would be undertaken to confirm the exact proportions. Other habitats of smaller extent proportion within the surroundings include woodland, mixed woodland, shrubland, plantation, watercourse, pond, marsh, active dry agricultural land, orchard, and wasteland were identified scattering across the assessment area. Based on preliminary information, species of conservation importance including flora: Incense Tree (*Aquilaria sinensis*), Ixonanthes (*Ixonanthes reticulata*) and fauna: Little Egret (*Egretta garzetta*), Chinese Pond Heron (*Ardeola bacchus*), Pallas's Squirrel (*Callosciurus erythraeus*) were identified within the Project boundary. The ecological habitats, sites of conservation importance, ecological sensitive resources and species of conservation importance (such as larger mammals, migratory birds) within the Project boundary mentioned above are not exhaustive and would be further reviewed in the EIA Study.

4.8 Hazard to Life

- 4.8.1 As mentioned in **Section 3.8**, a synthetic natural gas pipeline running along Sha Tau Kok Road near Hung Leng will overlap with the proposed widening works of Ping Che Road under the Project. Since this pipeline operates under intermediate pressure, no significant potential hazard to the proposed development is anticipated. Nevertheless, the works consultants / contractors will liaise with The Hong Kong and China Gas Company Limited (HKCG) regarding the exact locations of existing and planned gas pipelines/ installations in the vicinity and ensuring any required minimum setback distances are maintained during the planning, design and construction stages.
- 4.8.2 The LPG storage installations at Block 3 & Block 20 of HYW BCP and Ta Kwu Ling Police Station would not pose significant potential hazard as mentioned in **Section 3.8**.
- 4.8.3 In addition, no other significant dangerous goods storage within the Project boundary is noted. Furthermore, no Potentially Hazardous Installations (PHIs) nor existing petrol / LPG filling stations were identified in the vicinity of the Project site. The Project site is also not located near high pressure gas pipelines.

4.9 Cultural Heritage

- 4.9.1 Heritage sites identified within the Project boundary and within 50 m from the Project boundary are discussed below.
- 4.9.2 Within the Project boundary, there are four (4) Grade 3 historic buildings⁵. They are listed in **Table 4.3**. Their locations are indicated in **Figure 5**.

⁵ Antiquities Advisory Board. Lists of 1,444 Historic Buildings and New Items and assessment results. <https://www.aab.gov.hk/en/historic-buildings/results-of-the-assessment/index.html>

Table 4.3 Heritage Sites within the Project Boundary

Ref No.	Item	Status	Construction (Renovation) Year
HB724	Ta Kwu Ling Police Station, Ping Che Road, Ta Kwu Ling, N.T	Grade 3 Historic Building	1937
HB871	Nos. 57, 58, 59 Tsung Yuen Ha, Ta Kwu Ling, N.T.	Grade 3 Historic Building	Probably built in the 1930s
HB946	Wing Kit Study Hall, Nos. 12-13 Tong Fong, Ta Kwu Ling, N.T.	Grade 3 Historic Building	1889
HB1039	Kiu Fong Ancestral Hall, Tsung Yuen Ha, Ta Kwu Ling, N.T.	Grade 3 Historic Building	1933

- 4.9.3 Within 50 m from the Project boundary but outside the Project boundary, there is five (5) Grade 3 historic building⁵. They are listed in **Table 4.4** and their locations are indicated in **Figure 5**.

Table 4.4 Heritage Sites within 50 m from Project Boundary

Ref No.	Item	Status	Approximate Distance from the Project Boundary, m	Construction (Renovation) Year
HB678	Ng Ancestral Hall, Fung Wong Wu, Ta Kwu Ling, N.T.	Grade 3 Historic Building	40	1920s
HB704	Yeung Ancestral Hall, Fung Wong Wu, Ta Kwu Ling, N.T.	Grade 3 Historic Building	30	Between 1924 and 1945
HB1044	Hung Shing Temple, Hung Leng, Fanling, N.T.	Grade 3 Historic Building	50	Probably built in 1763
N92	Village houses, Nos. 24-25 Fung Wong Wu, Ta Kwu Ling, N.T.	Grade 3 Historic Building	30	1920s
N93	Village houses, Nos. 35-37, Fung Wong Wu, Ta Kwu Ling, N.T.	Grade 3 Historic Building	20	1920s

- 4.9.4 Built Heritage Impact Assessment (BHIA) would be conducted for known heritage sites that are within the Project site or its assessment areas during the EIA study. The impact assessment shall cover items with an official heritage status (declared/proposed monuments, graded historic buildings, new items for grading assessment and Government historic sites identified by the Antiquities and Monuments Office (AMO)).
- 4.9.5 Based on the List of SAI in Hong Kong of AMO, no SAI is located within 50 m from Project boundary, hence no Archaeological Impact Assessment (AIA) will be carried out under this EIA study. A separate comprehensive archaeological assessment for the PDA will be conducted by the project proponent in consultation with AMO in the detailed design stage before construction.

4.10 Land Contamination

- 4.10.1 The existing Project site is rural in character and comprising villages, agricultural activities, abandoned agricultural land and brownfield operations. The main potential sources of contaminants in the Project site are from brownfield operations including small-scale vehicle repair workshops, waste recycling yards and storage sites. Land contamination assessment will be carried out under the EIA study to formulate appropriate contamination assessment plans and remediation action plans, if necessary.

4.11 Landscape and Visual

- 4.11.1 The landscape elements / resources within and immediately adjacent to the PDA consist of both active and inactive agricultural land, ponds, marsh/reedbed, natural streams and channelised watercourses such as Ping Yuen River, grassland, shrubland, fung shui woodland to the south of Tsung Yuen Ha, secondary woodland along the eastern periphery of the PDA and areas of existing "Green Belt" ("GB")

within the Project area, plantation, orchard, village developments (within the PDA, namely Tsung Yuen Ha, Chuk Yuen; outside and adjacent to the PDA, namely Tong Fong, Lei Uk, Kan Tau Wai, Tai Po Tin), urbanised development, open storage, waste ground, temporary used area, landfill and reservoir.

- 4.11.2 The landscape character within the PDA largely consists of rural inland plain and miscellaneous rural fringe landscapes with scattered areas of upland and hillside landscape. The upland areas encapsulate the PDA with ridgelines, foothills and side valleys and are characterised by grass, shrub and woodland. The lowland areas are populated by rural inland plain, miscellaneous rural fringe and urban peripheral village landscapes occupied with mixed uses and brownfields sites.
- 4.11.3 The visual envelope of the PDA is defined by a series of ridgeline, namely Wong Mau Hang Shan at north-east, Wo Keng Shan in the east, Cheung Shan at south-east, Sheung Shui Wa Shan and Tai Leng Pei in the south, and Cham Shan and Sha Ling in the west. Considering the scale of the proposed Project is of such a nature that it will potentially alter the existing landscape and visual character as a whole, key public viewing points representing publicly accessible recreational, travelling and occupational locations shall be identified in the EIA study to demonstrate the development's potential visual impact. Details for key public viewers shall be identified and presented for the landscape and visual impact assessment during the EIA study.

4.12 Fisheries

- 4.12.1 Four fishponds are identified outside the Project boundary but within 500m assessment area at Pak Fu Shan, Sing Ping, southwest of Tai Po Tin and north of Wang Leng, while only one abandoned fishpond to the northwest of Tai Po Tin is located within the Project boundary. The status of fishponds and potential impact to the fisheries due to the Project would be reviewed and assessed under the EIA study.

4.13 Electric and Magnetic Field

- 4.13.1 As discussed in **Section 3.13**, two sections of the existing 400kV OHLs of approximately 260m and 160m in length, are located within the Project boundary (**Figure 3** refers). The sections of OHLs are currently surrounded by existing brownfield and livestock farms. According to the review findings in **Section 3.13**, future users of the proposed developments situated beneath / adjacent to the existing OHLs would be exposed to varying strength of associated ELF and EMF which are well below the stipulated limits in the ICNIRP Guidelines (1998).

5. ENVIRONMENTAL PROTECTION MEASURES TO BE INCORPORATED IN THE DESIGN AND ANY FURTHER ENVIRONMENTAL IMPLICATIONS

5.1 General

5.1.1 The EIA study will investigate those environmental impacts and propose appropriate mitigation measures with the intention that all proposals would meet the relevant requirements under the EIAO and are cost effective. The residual impacts, if any, would be mitigated to within the allowable limits. An environmental monitoring and audit (EM&A) programme will be established and implemented, where appropriate to ensure impacts the Project would meet relevant requirements during construction and operational phases.

5.1.2 The measures to minimise environmental impacts as listed in Annex 1 of the EIAO-TM have been reviewed. Subject to the findings of the EIA study, the below listed mitigation measures will be incorporated in the construction and operation of the Project, where appropriate. The mitigation measures to be considered will include the measures described in the following sections.

- pollution control technology
- source control
- waste management systems and practices
- potential for waste and wastewater minimisation
- acoustic barriers and insulation
- buffer zones and landscaping
- different siting of activities
- site layout and building design
- retention of natural environmental features
- control of construction work practices
- application of Chapters 7, 9 and 10 of the Hong Kong Planning Standards & Guidelines where applicable

5.2 Air Quality

Construction Phase

5.2.1 In order to avoid adverse impacts on air quality, the control measures stipulated in the Air Pollution Control (Construction Dust) Regulation should be implemented wherever applicable, to avoid or minimise air quality impacts on existing and planned air sensitive receivers (ASRs). Mitigation measures, for example those listed below will be implemented accordingly.

- Stockpiles of dusty material will not extend beyond contract boundaries;
- 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;
- Any vehicle with an open load compartment used for transferring dusty materials offsite 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 will be frequently cleaned and watered to minimise fugitive dust emissions;
- Motorised vehicles on site will be restricted to a maximum speed of 15 km/hr and shall be confined to designated haul roads which will be paved or surfaced with hardcore as far as possible; and

- Paving and subsequent regular sweeping of long-term haul roads within the site.

5.2.2 To minimise the exhaust emission from Non-Road Mobile Machinery (NRMM) during the construction phase, the following measures should be applied as far as practicable:

- Connect construction plant and equipment to main electricity supply and avoid use of diesel generators and diesel-powered equipment;
- Avoid exempted NRMMs as far as practicable; and
- Deploy electrified NRMMs as far as practicable.

Operational Phase

5.2.3 The proposed mitigation measures to improve the air quality within the Project site to be considered are as follows:-

(i) Vehicle Exhaust Emissions from Open Roads

- In order to further reduce the impacts from vehicle exhaust emissions from open roads, measures like facilitating greater use of railway and environmentally friendly vehicles within the PDA would be considered; and
- Provision of adequate buffer distance, tree planting and shrub plantation to separate the pedestrian and heavy trafficked road.

(ii) Exhaust Emissions from Chimneys

- Provision of adequate buffer distances to protect air sensitive uses from existing or planned chimneys if any.

(iii) Odour Management at Sewage Pumping Stations / proposed EPP

- Provision of adequate buffer distances to sensitive receivers;
- Design should be in accordance with DSD's Standard Design on Sewage Pumping Stations, with all pumps located underground and enclosed within a structure/building; and
- Deodorisation system should be installed and good housekeeping practice would be adopted.

(iv) Odour Management at Refuse Collection Points (RCPs)

- Odour removal system would be provided for the RCP to reduce odour nuisance in the vicinity; and
- The discharge of the odour removal system would be directed away from the ASRs to avoid the odour nuisance.

(v) Odour Management at Food Control Facilities (FCF)

- Provision of adequate buffer distances to sensitive receivers; and
- Deodourization system and good housekeeping practice would be adopted.

(vi) Impact from Public Transport Interchange (PTI), Public Transport Terminus (PTT) and Transport Interchange Hub (TIH)

- The design of the PTI / PTT / TIH would follow the design consideration recommended in the Control of Air Pollution in Semi-confined Public Transport Interchange (ProPECC PN 1/22);
- Adequate ventilation and dilution of vehicle exhaust should be provided;
- Ventilation exhaust, if any, would be directed away from the nearest ASRs; and
- Installation of control equipment such as filter or scrubbing units at the exhausted air outlets, if necessary.

(vii) Provision of central air conditioning system with fresh air intake at appropriate level to avoid unacceptable air quality conditions for indoor air sensitive uses in the developments when appropriate.

- 5.2.4 With implementation of above mitigation measures, air quality and odour impacts from the Project would be minimal, if any.
- 5.2.5 The above listed proposed mitigation measures are not exhaustive and will be reviewed under the EIA study. With proper implementation of the mitigation measures recommended in the EIA study, no adverse air quality impact would be expected.

5.3 Noise

Construction Phase

- 5.3.1 In order to mitigate potential adverse noise impacts, the following general mitigation measures should be considered.
- Quieter construction method will be considered;
 - Quieter plant will be used to reduce noise generated;
 - Movable and temporary barriers will be used to screen noise sensitive receivers (NSRs) from particular items of plant or noisy operations;
 - 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, proper maintenance of construction plant and devising methods of working to minimise noise impacts on the surrounding environment; and
 - Construction works carried out in phases.

Operational Phase

- 5.3.2 To minimise road traffic noise impact on NSRs, environmentally friendly layout designs may include arranging buildings, use of non-noise sensitive structures, such as podium, to screen traffic noise, and adequate setback distance away from roads. Besides, comprehensive pedestrian and cycle track network would be proposed throughout the PDA to minimise the generation of road traffic noise.
- 5.3.3 In addition, a number of noise mitigation designs, including traffic management measures, consideration of the application of low noise road surfacing for appropriate road section and where necessary, noise barriers, would be incorporated in the proposed development. A combination of direct mitigation measures at source and at noise sensitive receivers (including existing ones and the planned/proposed development sites) would be investigated to alleviate the extent of road traffic noise impact.
- 5.3.4 Should residual impacts be identified at the NSRs where the use of direct mitigation measures has been exhausted, these NSRs would then be tested for eligibility for indirect technical remedies.
- 5.3.5 For the fixed noise sources, mitigation measures such as provision of adequate buffer distance, placing the fixed noise sources away from noise sensitive uses, or environmentally friendly layout design should be incorporated in the layout plan to mitigate noise impacts from existing / planned fixed noise sources to nearby existing / planned NSRs. Other mitigation measures such as enclosing the fixed plant within reinforced concrete building or acoustic enclosure with openings directed away from NSRs, use of silencer, installation of acoustic louvre, installation of noise barrier/enclosure, etc., should be implemented to ensure compliance with relevant noise criteria. The details and extent of noise mitigation measures will be subject to the assessment results in the EIA study.
- 5.3.6 For the helicopter noise associated with the helipad at Hong Kong Police College Integrated Training Centre, no adverse helicopter noise impact would be anticipated due to its large separation distance of over 300m from the Project. Thus, mitigation measures is deemed not necessary.

- 5.3.7 For the rail noise, mitigation measures, such as provision of noise barrier, noise enclosure, floating slab trackform and high attenuation baseplate, would be considered in the separate Schedule 2 EIA study to be conducted by its project proponent.

5.4 Water Quality

Construction Phase

- 5.4.1 In order to prevent adverse impacts on water quality, the following general mitigation measures will be implemented.
- Surface run-off from the construction site should be reduced and directed into temporary sand traps or other silt removal facilities before discharging into the outlets;
 - Silt removal facilities should be maintained regularly;
 - Open stockpiles of materials on site should be avoided or where unavoidable, covered with tarpaulin or similar fabric during rainstorms;
 - Silt curtains or sand bag barriers will be used to confine the disturbed area during sediment removal activities;
 - Where possible, works entailing soil excavation will be minimised during the wet season;
 - 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;
 - A discharge license under WPCO would be obtained for discharge of effluent from the construction site, and the quantity and composition of any discharge would comply with the limits indicated in the licence;
 - Where dewatering of pond is required, water in existing pond shall be sampled and pre-treated if required before discharge;
 - Mobile toilets or other appropriate means will be provided to store sewage before disposal through licensed collection agent or discharging to main sewerage system; and
 - 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.

Operational Phase

- 5.4.2 The following general mitigation measures are proposed to be considered:
- provision of blue-green drainage infrastructure which facilitates the infiltration of rainfall and the process of natural filtering to reduce the quantity of and improve the quality of runoff;
 - reuse of the treated sewage effluent generated from the proposed EPP for non-potable uses (such as toilet flushing, irrigation and street cleansing) to reduce the water pollution load (the environmental impact associated with the generation of reclaimed water will be assessed in detail under a separate Schedule 2 EIA study by its project proponent);
 - implement Best Management Practices and stormwater pollution control plan;
 - upgrading/providing the sewerage system for discharge into the proposed EPP or providing other sewage treatment/disposal facilities to ensure that there is sufficient capacity to cater for the sewage flow from the proposed developments and surrounding villages; and
 - provision of suitable measures to minimise the risk of emergency discharges of untreated sewage effluent and to ensure timely repair.

- 5.4.3 Appropriate reclaimed water quality standards shall be adopted for the WRP for the reclaimed water for non-potable uses such as toilet flushing, irrigation and street cleansing, if pursued, to minimise any potential impact to water quality and human health. The quality of the reclaimed water will be closely monitored to ensure compliance with the relevant standards. Relevant requirements under the EIAO shall be met by its project proponent in view that the WRP for reuse of treated sewage effluent (TSE) is a Schedule 2 DP under the EIAO.

5.5 Waste Management

Construction Phase

- 5.5.1 Solid waste arising from construction will largely consist of spoil generated during earthworks, C&D materials from demolition works, chemical waste, general refuse, yard waste, sediment/desilted materials from river revitalisation works and minimal amount of fish pond sediment.
- 5.5.2 As the Project would require a large amount of fill material, the inert C&D waste generated during construction will be stored separately and reused in the works as much as possible.
- 5.5.3 Waste generated during the construction phase of the Project would be reduced and properly disposed of through proper waste management at the outset during the planning and design stages of the Project and proper practices on site including:
- Waste haulers should have the necessary registration and licences under the Waste Disposal Ordinance and the Waste Disposal (Chemical Waste) (General) Regulation from the Environmental Protection Department;
 - Separation of chemical wastes for special handling and appropriate treatment at a licensed facility;
 - In order to monitor the disposal of C&D material and solid wastes at public filling facilities and landfills, and control fly-tipping, a trip-ticket system shall be implemented by the Contractor, in accordance with the contract and the requirements of DEVB TCW No. 6/2010 "Trip Ticket System for Disposal of Construction and Demolition Materials", along with incorporating the use of dump trucks equipped with real-time tracking and monitoring devices;
 - Compilation of waste management plan in accordance with ETWB TC(W) No. 19/2005 "Environmental Management on Construction Sites";
 - Waste segregation and storage by category on site;
 - Avoidance / minimisation of waste generation on site;
 - Reuse and recycling of C&D material and unused chemicals;
 - Monitor and record the proper disposal of waste generated;
 - Proper storage and site practices to minimise the potential for damage or contamination of construction materials;
 - Use of reusable materials to reduce the amount of C&D material generated; and
 - for handling of dredged / excavated sediment, Project Administration Handbook for Civil Engineering Works (2024 Edition) will be followed.

Operational Phase

- 5.5.4 The waste management hierarchy of 'Reduce, Replace, Reuse and Recycle' shall be used to evaluate the waste management options to allow maximum waste reduction during the operation of the Project.
- 5.5.5 The following mitigation measures will be considered in the EIA report:
- General refuse should be collected from lidded bins and delivered to a central collection point and should be stored in enclosed containers to prevent odour, windblown litter, vermin, water pollution and visual impact;

- Segregation of recyclables should be encouraged by providing recyclables (e.g. used aluminium cans, waste paper and glass bottles) collection points at strategic locations within individual development sites; and
- EPP operation will generate waste from screenings, grits and sludge treatment. The sludge will be thickened, digested, dewatered and subsequently disposed of at T-PARK (or other approved facilities), while screenings and grits will be properly treated and disposed of at landfill. No adverse impact on the public would be anticipated.

5.6 Landfill Gas

- 5.6.1 Potential landfill gas hazards during the construction phase, as well as any potential hazards and constraints that may affect the proposed development within the PDA and associated infrastructural works will be reviewed.

Construction Phase

- 5.6.2 During the construction phase, excavation works and works in confined spaces (e.g. box culverts and trenches) may be required. Workers could be exposed to potential health hazards if landfill gas accumulates in such confined spaces. A qualitative assessment of landfill gas hazards to these receptors will therefore be undertaken.
- 5.6.3 Landfill gas risks associated with construction activities within the Consultation Zone of the NENT Landfill will be minimised through the implementation of appropriate precautionary measures in accordance with Chapter 8 of the Landfill Gas Hazard Assessment Guidance Note.
- 5.6.4 The EIA report will identify and recommend appropriate mitigation measures, where necessary, to ensure that no adverse landfill gas impacts are anticipated during the construction phase.

Operational Phase

- 5.6.5 Part of the Project falls within the Consultation Zone of the NENT Landfill and may be developed for uses such as enterprise park/industrial development, subject to review under the P&E Study. The potential impact of landfill gas from the NENT Landfill on the proposed development will be assessed in the EIA Study.
- 5.6.6 A qualitative assessment of landfill gas hazards will be undertaken using a source–pathway–target approach in accordance with the Landfill Gas Hazard Assessment Guidance Note.
- 5.6.7 Based on the assessment, an overall risk categorisation will be established to determine whether any mitigation measures are required. Where necessary, appropriate measures will be recommended for incorporation into the design to ensure that development within the Consultation Zone will be safe during operation.
- 5.6.8 Further review at the detailed design stage will allow refinement of any required protective measures, taking into account site-specific conditions.
- 5.6.9 Typical precautionary measures, where required, may include utility protection measures, venting of manholes and above-ground terminations, and sealing of utilities penetrating ground floor slabs. The detailed design will determine the applicability and extent of such measures.
- 5.6.10 General precautionary measures for consideration include adequate ventilation in confined spaces; gas monitoring prior to and during entry, use of appropriate personal protective equipment (PPE) and intrinsically safe equipment; avoidance of ignition sources, and implementation of safe working procedures and emergency response measures.

Utility Companies

- Where the assessment identifies potential risks, appropriate precautionary measures will be recommended, including advising utility companies of site conditions and ensuring that personnel adopt suitable safety practices, particularly when working in confined or enclosed spaces.

Developers of Sites

- Developers should ensure that the design and operation of the development take into account potential landfill gas hazards, where identified, to protect occupants, staff, maintenance workers and visitors.
- Ensure that strict procedures for maintaining control over all temporary and / or permanent works proposed at the sites are reviewed with regard to the landfill gas hazard. This needs to be accompanied by a comprehensive contingency plan in case of incidents, including liaison with EPD officers, Fire Services Department, Landfill Restoration Contractors and others, as necessary.
- All construction and maintenance (including utilities) personnel working at the site should be made aware of the hazards of landfill gas and its possible presence on site. This should be achieved through a combination of posting warning signs in prominent places and also by access to detailed information on landfill gas hazards and the designs and procedural means by which these hazards are being minimised on site.
- Entry to confined spaces such as refuse / storerooms, drainage manholes, etc. should be preceded by a period of "airing" the space by opening the door widely allowing fresh air to enter. Where appropriate, monitoring of gas should also precede entry.

5.7 Ecology

5.7.1 According to the *Annex 16 of EIAO-TM*, significant ecological impacts caused by the proposed Project should be mitigated, in order of priority, avoidance, minimisation, and compensation approaches to the maximum practical extent:

- (i) Avoidance approach - to avoid direct impacts on sites of conservation importance, ecological sensitive resources, as far as possible;
- (ii) Minimisation approach - to minimise impacts if avoidance is not possible; and
- (iii) Compensation approach - if the loss of important species and habitats is assessed to be significant, shall be compensated by measures such as re-provision of similar species/habitats or enhancement of existing habitats.

5.7.2 As regards habitat loss, the mitigation is avoidance and will be used wherever possible. Alternatives will be explored to avoid and minimise direct encroachment on the wetland compensation area under HYW Highway where feasible. For significant habitat loss which is considered unavoidable, mitigation including minimisation and compensation/enhancement will be proposed.

5.7.3 Mitigation measures such as good site practice, dust suppression measures, water pollution measures will be implemented to minimise the impacts on air quality, noise and water qualities. These measures will also help reduce indirect impacts on ecological resources.

5.8 Hazard to Life

5.8.1 As mentioned in **Section 3.8**, biogas would be generated during the sewage treatment process and biogas storage is proposed. Potential hazard to life impacts associated with the generation, storage, use and on-site transport of biogas at the proposed EPP will be assessed in detail.

5.8.2 Good safety practices and recommended design measures should be followed as far as practicable for the design and operation of the proposed EPP, which include provision of gas detectors; all electrical equipment inside the building should comply with explosion-proof classification requirements; no

unclassified electrical equipment should be used; all safety valves should be designed to discharge the released fluid to a safe location; provision of safety markings and crash barriers; provision of fixed crash barriers to protect against vehicle collision; provision of adequate warning signage and lighting; enforcement of maximum speed limit; lightning protection installations should be installed following IEC 62305, BS EN 62305, AS/NZS 1768, NFPA 780 or equivalent standards; provision of suitable fire extinguishers, an External Water Spray System (EWSS) as well as fire and gas detection system and fire suppression system; and implementation of stringent procedures to prohibit smoking or naked flames to be used on-site.

5.8.3 Subject to the findings of quantitative risk assessment (QRA) on the GFS, appropriate control measures and safeguards would be recommended to further reduce the risk issue during operational phase. Nonetheless, standard requirements of the station operator should be followed during the operation of GFS e.g. standard procedures for LPG delivery, in which two persons (the driver and his assistant) will be present during the delivery; the parked road tanker will face outward towards the exit so that it may leave rapidly should an emergency require it; condition of all connections and hoses will be checked by the driver; the storage vessels will be filled to a maximum of 85% of their liquid level capacity etc. As the types of green fuel which will be supplied at the GFS site will be subject to future needs and advice from relevant bureaux/departments at implementation stage, QRA will be reviewed and updated accordingly at implementation stage.

5.8.4 As mentioned in **Sections 3.8.1 and 3.8.3**, no significant potential hazard from the pipeline for the pipeline transferring the landfill gas from NENT Landfill to Tai Po Gas Production Plant and the LPG storage installations at the HYW BCP and the Ta Kwu Ling Police Station is anticipated. Notwithstanding, the works consultants / contractors will liaise with the operators of the above facilities to ensure relevant requirements are met during the planning, design and construction stages to ensure no hazard arising from the proposed works.

5.9 Cultural Heritage

5.9.1 A CHIA, including the BHIA, will be conducted during the EIA stage to assess the potential impacts on heritage sites during the construction and operational phases. All the identified graded historic buildings within the Project boundary will be retained, hence direct impacts on the heritage sites will be avoided. For indirect impacts, e.g. ground-borne vibration, settlement and tilting, mitigation measures to minimise the impacts on built heritage will be proposed and implemented as proposed in the EIA report. As mentioned in **Section 4.9.5**, since no SAI is located within 50 m from the Project boundary, no AIA will be carried out in this EIA report as no impact is expected on the SAI. A comprehensive archaeological assessment for the PDA will be assessed by the project proponent separately in consultation with AMO in the detailed design stage before construction.

5.10 Land Contamination

5.10.1 Mitigation measures, e.g. remediation of land, will be determined with reference to relevant guidelines such as "Guidance Manual for Use of Risk-based Remediation Goals for Contaminated Land Management (April 2023)", "Guidance Notes for Contaminated Land Assessment and Remediation (April 2023)", and "Practice Guide for Investigation and Remediation of Contaminated Land (April 2023)". Remediation works (if required) should be carried out and completed at areas identified with land contamination issues prior to the commencement of any construction works or development according to the prevailing guidelines.

5.11 Landscape and Visual

5.11.1 The landscape and visual impact assessment will make reference to EIAO's Guidance Note No. 8/2023 on "Preparation of Landscape and Visual Impact Assessment under EIAO", relevant Annexes of the Technical Memorandum of the EIAO and relevant technical circulars and annexes (for EIAO submission). The landscape impact assessment area would cover areas within 100 m from the Project boundary, while the visual impact assessment area would cover the visual envelope or zone of visual influence. The following measures will be incorporated in the Design Layouts in the design phase of the PDA, if feasible:

- Urban design features of the Recommended Urban Design Framework;
- Controlling building height profiles and providing stepped building heights;
- Responsive building massing and avoiding wall-effect;
- Preserving and establishing visual corridors; and
- Sustainable and quality landscape design principles and best practices.

5.11.2 The following general mitigation measures will be considered to alleviate the impacts during the operational phase:

- Compensatory tree planting for the tree loss due to the proposed development, if required;
- Aesthetic design of built development through consideration of appropriate detailed design, including facade treatment, colour scheme and texture of materials to be adopted to minimise visual impact and create harmony to adjacent areas;
- Provision of roadside amenity planting alongside the proposed roads of the proposed development;
- Aesthetic design of proposed highways and associated structures; and
- Provision of landscape treatment on water channels to enhance visual and landscape quality;

5.12 Fisheries

5.12.1 Mitigation measures should be formulated and implemented if necessary, according to the result of the EIA study. Careful planning of works to avoid or minimise filling of ponds and adoption of good site practice (e.g. control of construction site runoff) would be recommended to minimise potential fisheries impacts, where appropriate.

5.13 Electric and Magnetic Field

5.13.1 As mentioned in **Section 3.13**, no adverse impact due to exposure to ELF and EMF from the existing 400 kV OHLs is anticipated. Thus, mitigation measures is deemed not necessary.

5.13.2 No further assessment for the potential impact from electric and magnetic fields would be required.

5.14 Severity, Distribution and Duration of Environmental Effects

5.14.1 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 trans-boundary effects from the Project will be considered and addressed in the EIA, where applicable. Mitigation measures will be provided subject to the detailed assessment in the EIA study.

5.15 Further Implication

5.15.1 Early Engagement with Legislative Council - We have briefed the Panel on Development of the Legislative Council on the preliminary Development Proposal of NTN New Town on 24 January 2025. A 2-month public engagement (PE) was conducted from 17 January 2025 to 16 March 2025 (PE period) to solicit views from the public as well as relevant stakeholders on the Development Proposal.

5.15.2 Extensive Outreach to a Wide Range of Stakeholders - During the PE, a total of 22 briefing sessions / meetings were conducted. Apart from consulting statutory and advisory bodies (including Town Planning Board, Panel on Development of the Legislative Council, Sub-committee on Planning, Land and Conservation under the Advisory Committee on the Northern Metropolis, Planning Sub-committee of the Land and Development Advisory Committee, Heung Yee Kuk and North District Council), Sheung Shui District Rural Committee, Fanling District Rural Committee and Ta Kwu Ling District Rural Committee, the Study Team met the professional institutes, green groups and post-secondary education institutions. Briefing sessions were also arranged for local stakeholders with a total of over

800 attendees, including villagers, operators and owners of affected brownfields, farm / livestock farms and other business operators.

- 5.15.3 Broad Welcome and Positive Reception – The preliminary development proposal of NTN New Town with its development positioning as a BCP business district and a base for emerging industries was generally welcomed. The early implementation of the PDA around Heung Yuen Wai area, seizing the existing BCP and infrastructure, was also well received. Organisations including Heung Yee Kuk and the North District Council expressed support for the NTN New Town project. The media reports and news commentaries on the development proposal were generally positive. The EIA report will address relevant comments received as well as those received during public inspection of this Project Profile, if any.
- 5.15.4 Our Commitment to Continuous Public Engagement - The project proponent will continue public engagement work throughout the EIA process and beyond. Further engagement activities will be conducted as the project progresses, including but not limited to: (i) updates to key stakeholders and statutory bodies at appropriate juncture; (ii) public inspection of the EIA report in accordance with the EIA Ordinance; (iii) consultation with the Advisory Council on the Environment (ACE) or its EIA Subcommittee as required; and (iv) ongoing dialogue with local communities, green groups, and affected parties to address concerns and refine mitigation measures as necessary. The EIA report will address relevant comments received during the PE period, as well as any comments received during public inspection of the Project Profile.

6. USE OF PREVIOUSLY APPROVED EIA REPORTS

- 6.1.1 There is no previously approved EIA report for the proposed Project. However, the following approved EIA reports are considered relevant and will be referred to in the EIA Study. Where necessary, other relevant information identified during the EIA study would also be considered and documented in the EIA report.

Table 6.1 List of Relevant Approved EIA Reports

EIAO Register No.	Title of Approved EIA Report	Date of Approval	Relevant to this Project
AEIAR-201/2016	Police Facilities in Kong Nga Po	20 Oct 2016	Police Facilities in Kong Nga Po is located in the vicinity to the Project and hence the findings of this EIA report is a good reference for the environment impacts assessment of the PDA of TKL NDA
AEIAR-111/2007	North East New Territories Landfill Extension	20 Sep 2007	The North East New Territories Landfill Extension is in close proximity to the PDA of TKL NDA where the potential impacts arising from the odour and landfill gas generated from the landfill would need to be considered in the EIA.
AEIAR-161/2011	Liantang / Heung Yuen Wai Boundary Control Point and Associated Works	24 Mar 2011	Part of the Liantang / HYW BCP and the associated works assessment area, including part of the wetland compensation area under Heung Yuen Wai Highway, falls within the Project and the approved EIA report could be a good reference to the EIA study of the Project.

Use of Hong Kong Environmental Database (HKED) in the EIA Study

- 6.1.2 The Project strives to adopt smart technology and digital tools to enhance the efficiency, accuracy, and transparency of the EIA process. In particular, the project proponent is committed to using the Hong Kong Environmental Database (HKED), an online platform (<https://hked.odensystems.hk>), to help with this EIA study.
- 6.1.3 The following table outlines the possible applications of HKED across various technical areas of the EIA study. The actual use of HKED will be reviewed and refined during the EIA process as appropriate.

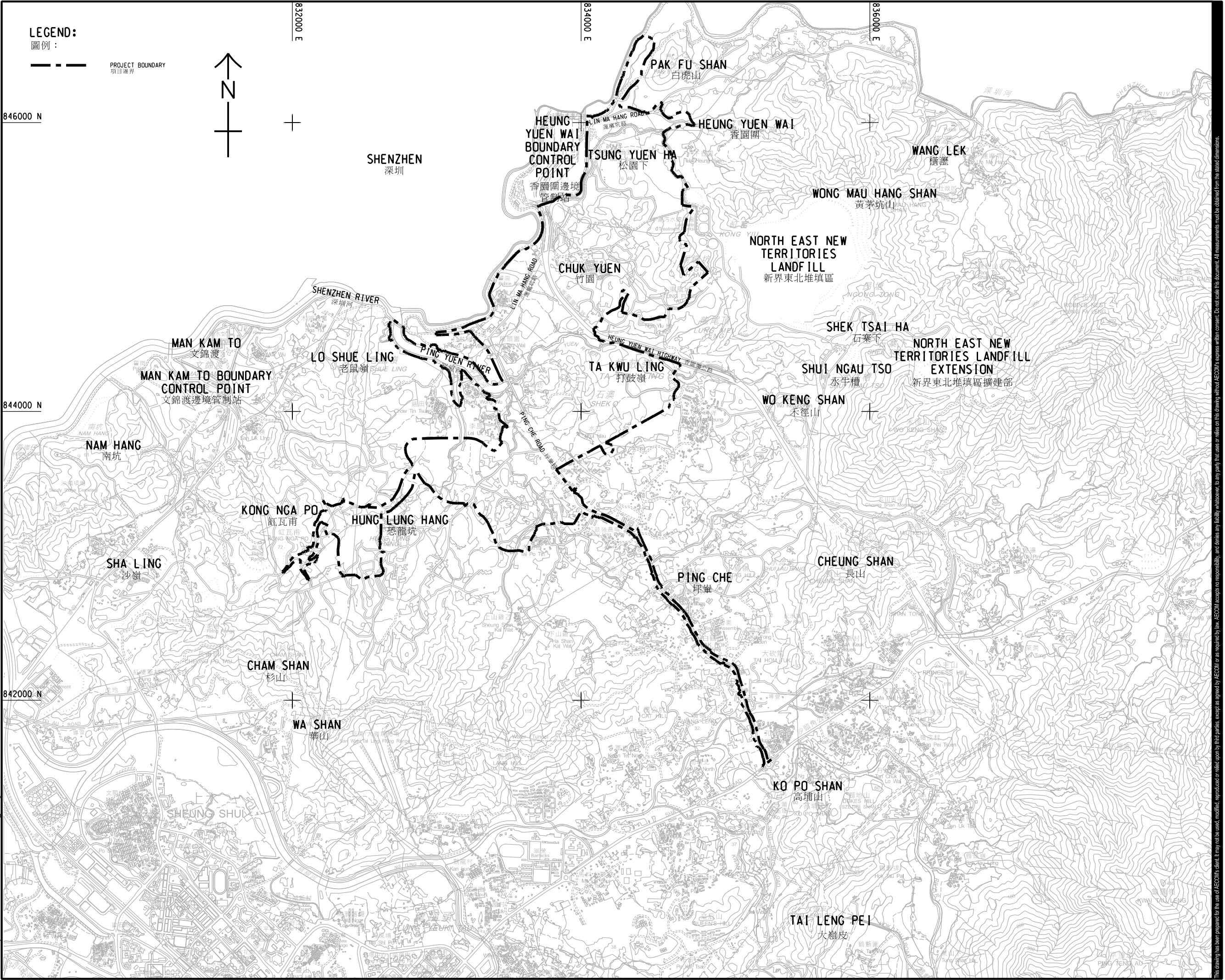
Table 6.2 Use of Hong Kong Environmental Database in the EIA Study

Aspects	Relevant Datasets, Tools or Functionalities to be used	Intended Application in the EIA Study
General	Site Analysis - Identification of sensitive area(s) under EIAO, which helps identification of designated project(s)	N/A
Air Quality	Smart Air Modelling Platform (SAMP) - Extracting PATH / AQMS background air quality - Preparation of air model files - Specified Process (SP) license search	- Description of environment - Preparation of model files

Aspects	Relevant Datasets, Tools or Functionalities to be used	Intended Application in the EIA Study
Noise	Identification of NSR and existing Industrial zones	- Identification of NSR - Determination of fixed noise sources criteria
	Web CNMP - Preparation of Construction Noise Management Plan(s)	- Preparation of CNMP(s) after the approval of the EIA report and before construction of the Project
Ecology	Site analysis - Identification of recognised sites of conservation importance and ecologically sensitive resources - Species of conservation importance recorded under EIAO	- Literature Review - Description of baseline condition
Fisheries	Site analysis - Identification of recognised sites of fisheries importance	- Literature Review - Description of baseline condition

- END-

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LEGEND:
圖例:
PROJECT BOUNDARY
項目邊界



846000 N

832000 E

834000 E

836000 E

844000 N

842000 N

AECOM

PROJECT
項目
TA KWU LING
NEW DEVELOPMENT AREA -
PRIORITY DEVELOPMENT AREA
打鼓嶺新發展區-優先發展區

CLIENT
業主
土木 工程 拓展 署
Civil Engineering and
Development Department
規 劃 署
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ISSUE/REVISION			
修訂			
I/R	DATE	DESCRIPTION	CHK.
修訂	日期	內容簡要	校核

STATUS
階段

SCALE
比例
A3 1: 24000

DIMENSION UNIT
尺寸單位
METRES

KEY PLAN
索引圖

PROJECT NO.
項目編號
60670881

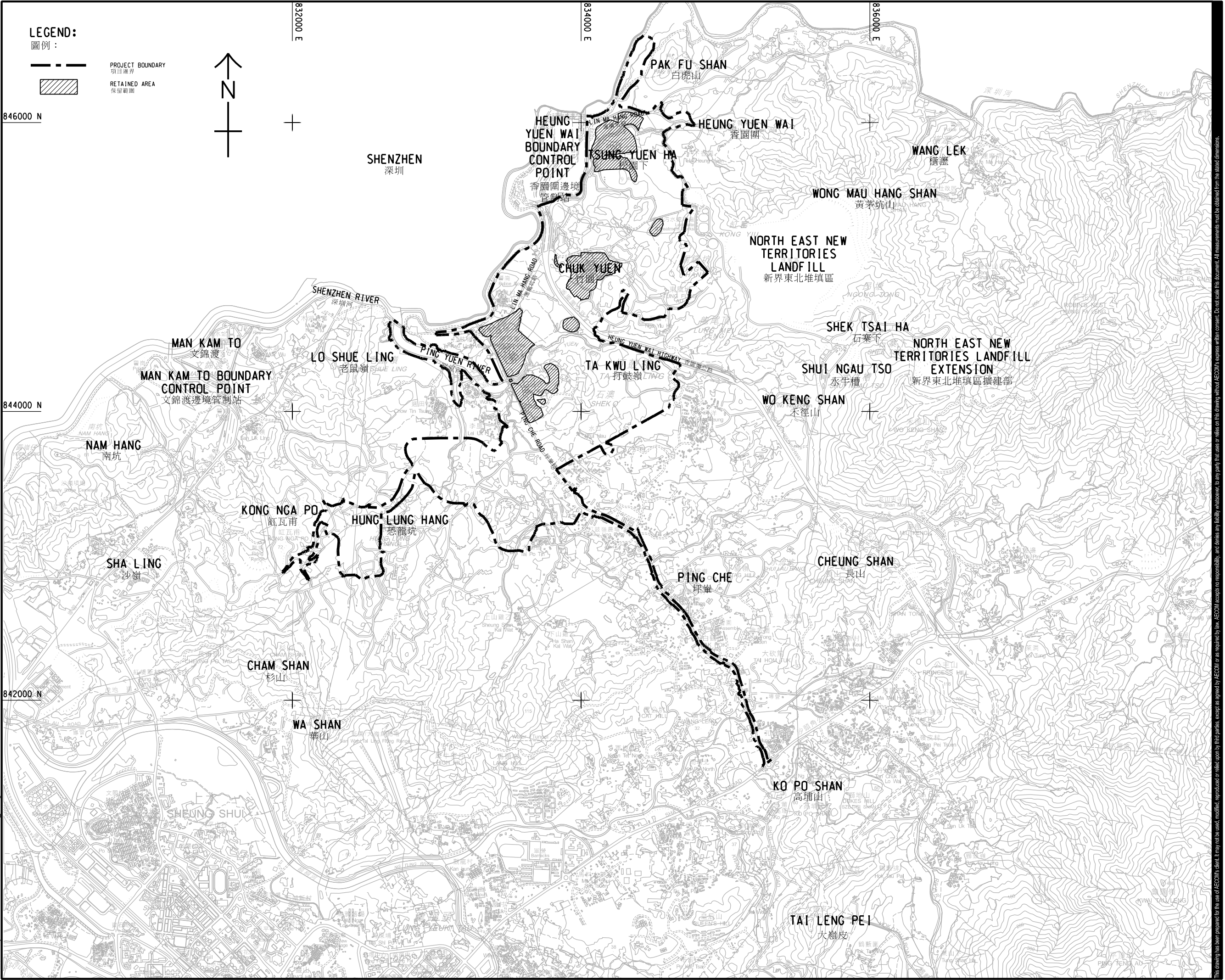
AGREEMENT NO.
協議編號
CE 21/2021

SHEET TITLE
圖紙名稱
TENTATIVE PROJECT BOUNDARY
暫定項目範圍

SHEET NUMBER
圖紙編號
60670881/A54/FIGURE 1
60670881/A54/圖1

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ISO A1 594mm x 841mm
Approved:
Checked:
Designer:
Project Management Initials:



LEGEND:
圖例：

PROJECT BOUNDARY
項目邊界

RETAINED AREA
保留範圍



846000 N

832000 E

834000 E

836000 E

844000 N

842000 N

AECOM

PROJECT

TA KWU LING
NEW DEVELOPMENT AREA -
PRIORITY DEVELOPMENT AREA
打鼓嶺新發展區-優先發展區

CLIENT



土木工 程 拓 展 署
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NO.	DATE	DESCRIPTION	CHK.

I/R	DATE	DESCRIPTION	CHK.

STATUS

SCALE

A3 1: 24000

DIMENSION UNIT

METRES

KEY PLAN

PROJECT NO.

60670881

AGREEMENT NO.

CE 21/2021

SHEET TITLE

LOCATIONS OF TENTATIVE
RETAINED AREAS
暫定保留範圍位置圖

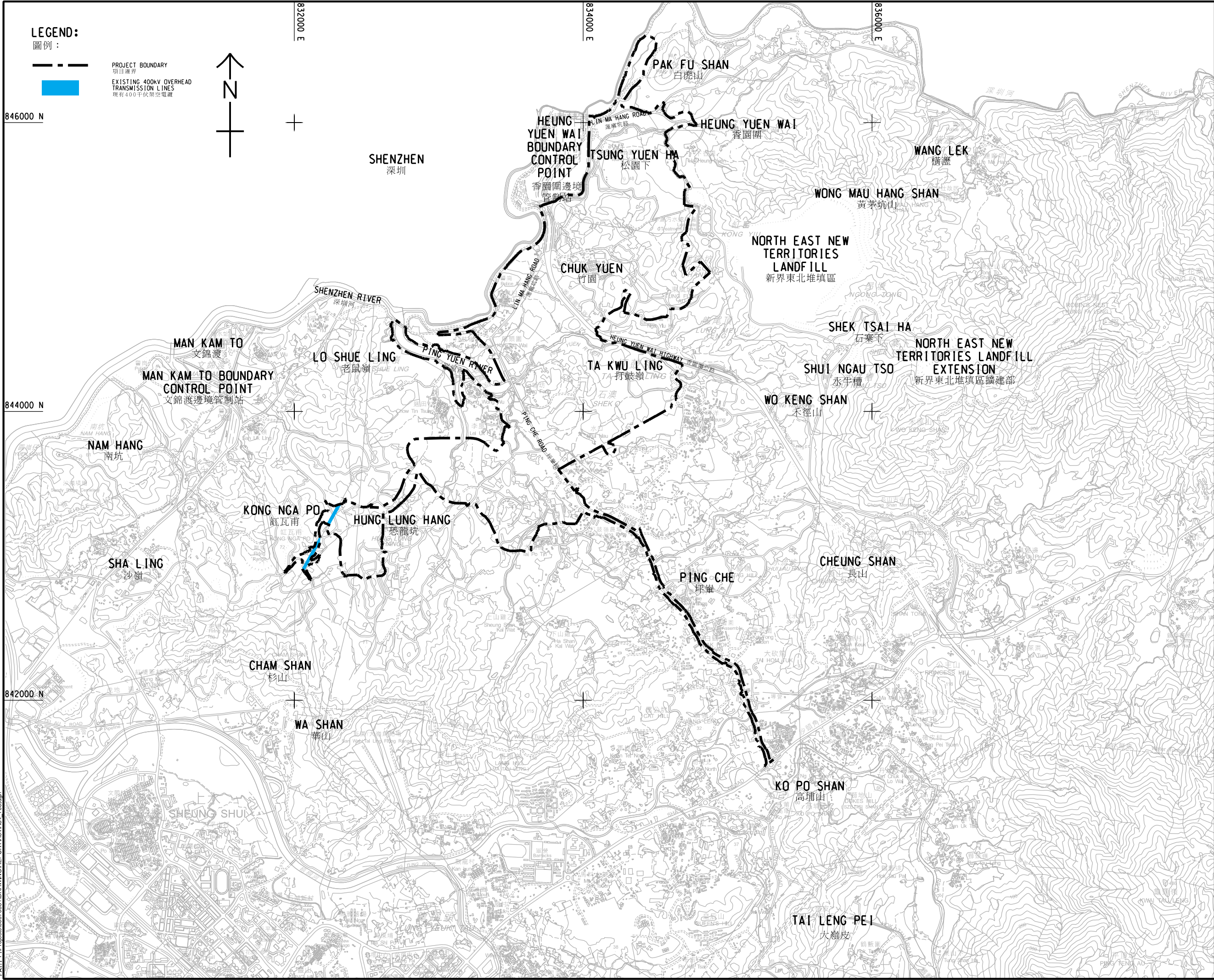
SHEET NUMBER

60670881/A54/FIGURE 2
60670881/A54/圖2

ISO A1 594mm x 841mm
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Designer:
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LEGEND:
圖例:

- PROJECT BOUNDARY
項目邊界
- EXISTING 400KV OVERHEAD
TRANSMISSION LINES
現有400千伏架空電纜



AECOM

PROJECT

TA KWU LING
NEW DEVELOPMENT AREA -
PRIORITY DEVELOPMENT AREA
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備註

SCALE

比例

A3 1: 24000

KEY PLAN

索引圖

DIMENSION UNIT

METRES

PROJECT NO.

60670881

AGREEMENT NO.

CE 21/2021

SHEET TITLE

LOCATION OF EXISTING 400KV
OVERHEAD TRANSMISSION LINES
現有400千伏架空電纜位置圖

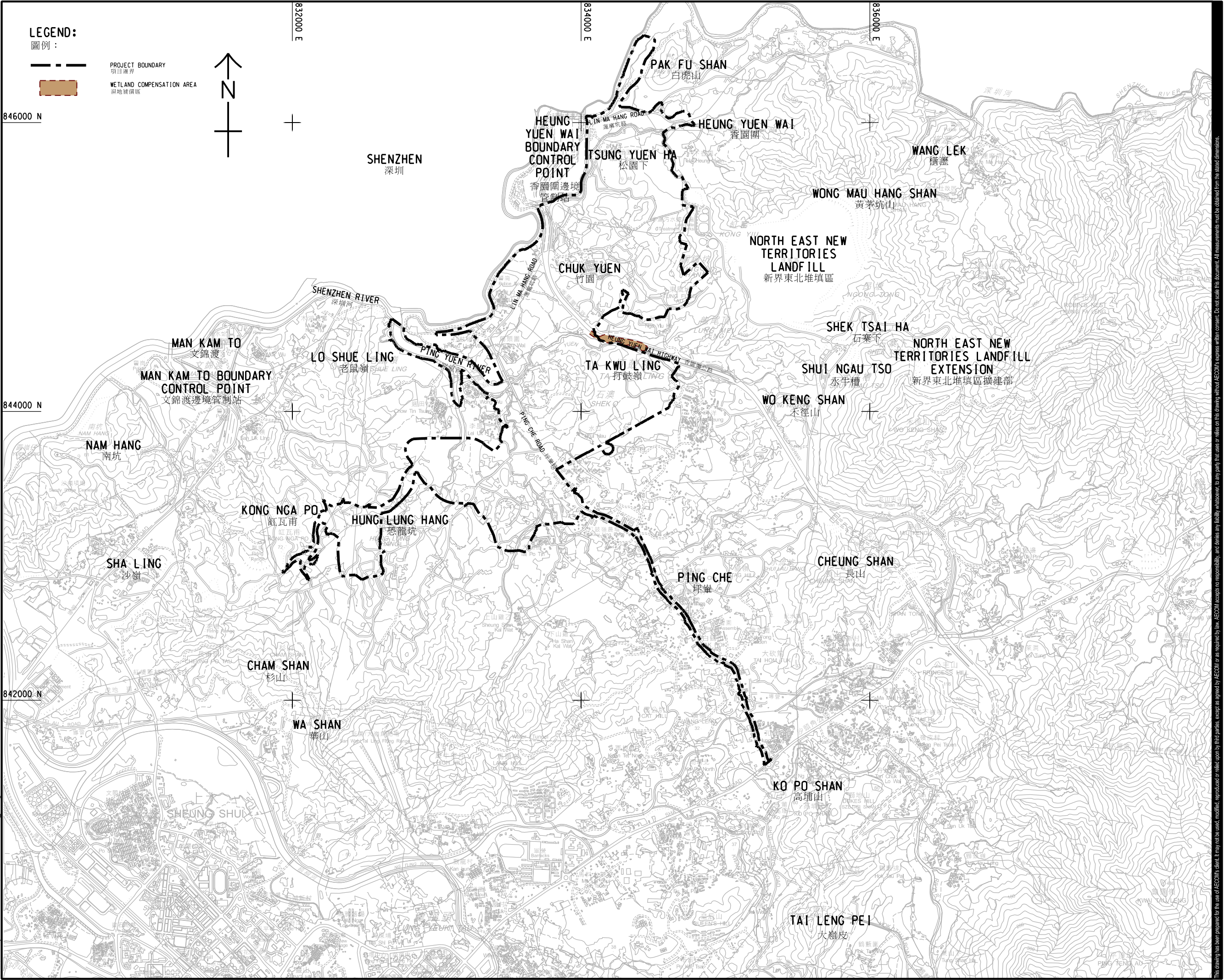
SHEET NUMBER

60670881/A54/FIGURE 3
60670881/A54/圖3

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Plot File by: tsuiwy 6/10/2026
PAIH P:\P\08111038\0811038\DRAWING\REPORT\A54\A54_704.dgn



LEGEND:
圖例：

 PROJECT BOUNDARY
項目邊界

 WETLAND COMPENSATION AREA
濕地補償區

AECOM

PROJECT
項目

TA KWU LING
NEW DEVELOPMENT AREA -
PRIORITY DEVELOPMENT AREA
打鼓嶺新發展區-優先發展區

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修訂	日期	內容簡要	校核

STATUS
階段

SCALE	DIMENSION UNIT
比例	尺寸單位
A3 1: 24000	METRES

KEY PLAN
索引圖

PROJECT NO.	AGREEMENT NO.
項目編號	協議編號
60670881	CE 21/2021

SHEET TITLE
圖紙名稱

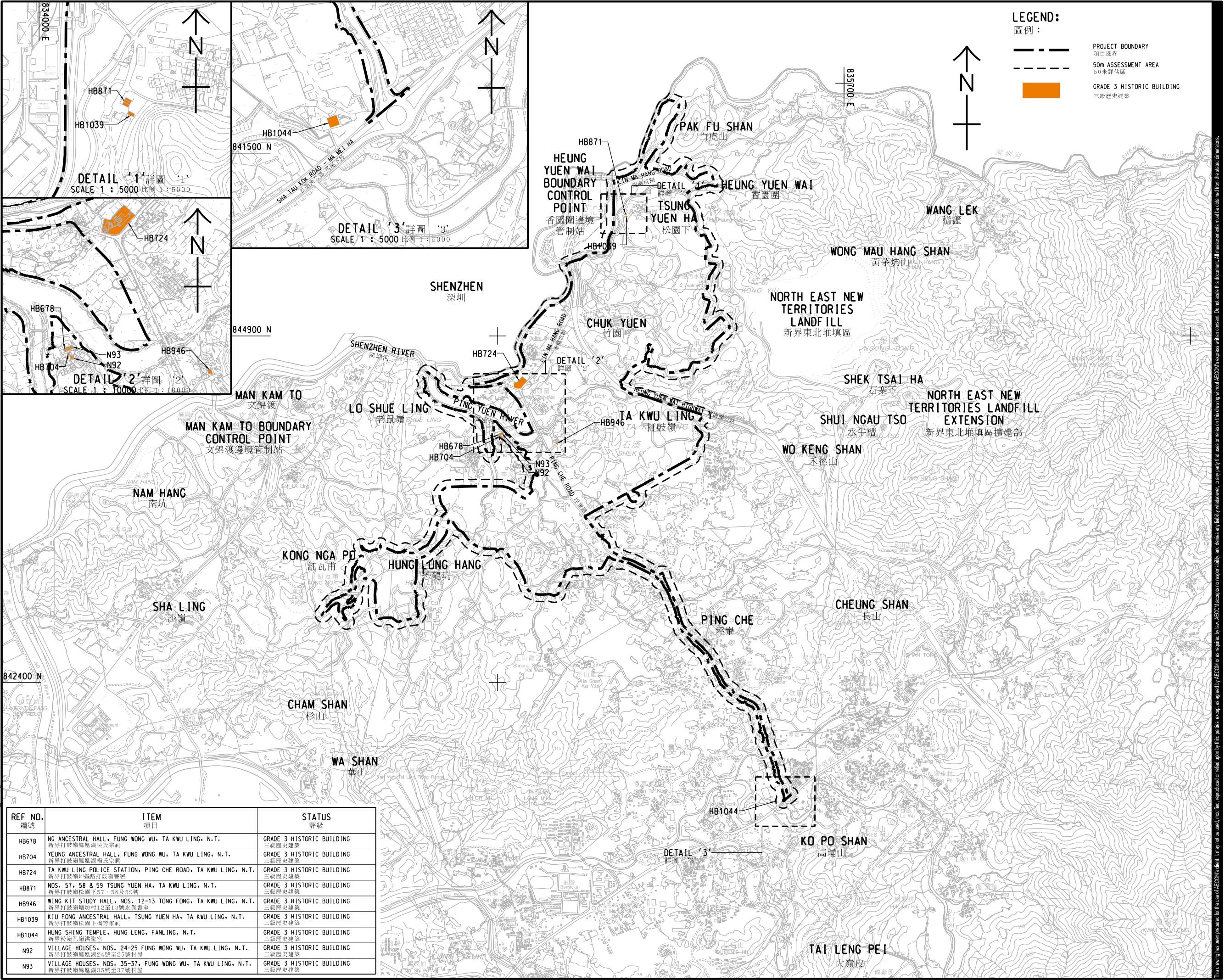
LOCATION OF WETLAND
COMPENSATION AREA
濕地補償區位置圖

SHEET NUMBER
圖紙編號

60670881/A54/FIGURE 4
60670881/A54/圖4

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Project Management Initials:



REF NO. 編號	ITEM 項目	STATUS 評級
HB678	NG ANCESTRAL HALL, FUNG WONG WU, TA KWU LING, N.T. 新界打鼓嶺鳳凰崗吳氏宗祠	GRADE 3 HISTORIC BUILDING 三級歷史建築
HB704	YEUNG ANCESTRAL HALL, FUNG WONG WU, TA KWU LING, N.T. 新界打鼓嶺鳳凰崗楊氏宗祠	GRADE 3 HISTORIC BUILDING 三級歷史建築
HB724	TA KWU LING POLICE STATION, PING CHE ROAD, TA KWU LING, N.T. 新界打鼓嶺坪嶺路打鼓嶺警署	GRADE 3 HISTORIC BUILDING 三級歷史建築
HB871	NOS. 57, 58 & 59 TSUNG YUEN HA, TA KWU LING, N.T. 新界打鼓嶺松園下57、58及59號	GRADE 3 HISTORIC BUILDING 三級歷史建築
HB946	WING KIT STUDY HALL, NOS. 12-13 TONG FONG, TA KWU LING, N.T. 新界打鼓嶺塘坊村12至13號永德書室	GRADE 3 HISTORIC BUILDING 三級歷史建築
HB1039	KIU FONG ANCESTRAL HALL, TSUNG YUEN HA, TA KWU LING, N.T. 新界打鼓嶺松園下橋芳家祠	GRADE 3 HISTORIC BUILDING 三級歷史建築
HB1044	HUNG SHING TEMPLE, HUNG LENG, FANLING, N.T. 新界粉嶺孔嶺洪聖宮	GRADE 3 HISTORIC BUILDING 三級歷史建築
N92	VILLAGE HOUSES, NOS. 24-25 FUNG WONG WU, TA KWU LING, N.T. 新界打鼓嶺鳳凰崗24號至25號村屋	GRADE 3 HISTORIC BUILDING 三級歷史建築
N93	VILLAGE HOUSES, NOS. 35-37, FUNG WONG WU, TA KWU LING, N.T. 新界打鼓嶺鳳凰崗35號至37號村屋	GRADE 3 HISTORIC BUILDING 三級歷史建築

LEGEND:
圖例:

PROJECT BOUNDARY
項目邊界

50m ASSESSMENT AREA
50米評估區

GRADE 3 HISTORIC BUILDING
三級歷史建築

PROJECT
項目

TA KWU LING
NEW DEVELOPMENT AREA -
PRIORITY DEVELOPMENT AREA
打鼓嶺新發展區-優先發展區

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ISSUE/REVISION 修訂			
I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 校核
STATUS 階段			

SCALE 比例	DIMENSION UNIT 尺寸單位
A3 1:24000	METRES
KEY PLAN 索引圖	

PROJECT NO.
項目編號

60670881

AGREEMENT NO.
協議編號

CE 21/2021

SHEET TITLE
圖紙名稱

LOCATIONS OF BUILT HERITAGE
文物建築位置圖

SHEET NUMBER
圖紙編號

60670881/A54/FIGURE 5
60670881/A54/圖5

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