

Agreement No. CE 33/2021 (CE)

Development at Ngau Tam Mei Area

Executive Summary





土木工程拓展署
Civil Engineering and
Development Department



規劃署
Planning Department

Agreement No. CE 33/2021 (CE)

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Executive Summary

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1 INTRODUCTION

1.1 Project Background

- 1.1.1 The Civil Engineering and Development Department (CEDD) and the Planning Department (PlanD) jointly commissioned the Ngau Tam Mei (NTM) Land Use Review Study (the Study) in November 2021 to capitalise on the development opportunities to be brought about by the NTM Station on the proposed Northern Link (hereinafter referred to as “NOL Main Line”). The Study aims to examine the comprehensive development of the brownfield clusters in NTM, which was subsequently extended to cover a nearby site as identified under the “Green Belt” Review announced in the 2022 Policy Address for holistic planning (hereinafter referred to as “the Project”); to ascertain the feasibility and acceptability of the Project with technical assessments including the statutory Environmental Impact Assessment (EIA); to formulate a Recommended Outline Development Plan (RODP); and to conduct public engagement (PE) for increasing awareness and engagement among stakeholders.
- 1.1.2 The Northern Metropolis Action Agenda (NMAA) promulgated in October 2023 outlines the development positioning of four major zones in the Northern Metropolis (NM). Amongst them, the Innovation and Technology (I&T) Zone covers San Tin Technopole (STT) and NTM. STT will be a hub for clustered I&T development, creating synergy with the Shenzhen I&T Zone. Upon completion of the proposed NOL Main Line in 2034, NTM will only be one station away from STT. It is stated in NMAA that land will be reserved in NTM for use of post-secondary education institutions, with a focus on scientific research to complement the I&T development in STT, promoting “research, academic and industry” collaboration.
- 1.1.3 The 2024 Policy Address announced to reserve land in the NM for the “Northern Metropolis University Town (NMUT)”, and encourage local post-secondary education institutions to introduce more branded programmes, research collaboration and exchange projects with renowned Mainland and overseas institutions in a flexible and innovative manner. It is also stated in the 2024 Policy Address that, land will be reserved in NTM for developing the third medical school and an integrated medical teaching and research hospital (hereinafter referred to as “Integrated Hospital”). As announced in the 2025 Policy Address, a Working Group on Planning and Construction of the University Town (WG) will be set up under the Committee on Development of the NM, to study the development mode for the NMUT and make recommendations on the positioning and vision regarding the development of NMUT sites to devise a clear, industry-led approach. The land in NTM can dovetail with the overall I&T development of the STT and the Hong Kong-Shenzhen Innovation and Technology Park (HSITP) at the Loop, among others, life and health technology industries, and to be used for joint development with the third medical school and an Integrated Hospital. The design and implementation of the UniTown will be duly considered by the Education Bureau under the steer of the WG.
- 1.1.4 A 2-month PE was conducted between 14 November 2024 and 13 January 2025 to solicit public views on a Broad Land Use Concept Plan developed under the Study. Taking into account the public views collected in the PE, policy directives, planning and engineering considerations, technical assessments as well as departmental advice, a RODP for the NTM New Development Area (NDA) has been formulated.
- 1.1.5 Locations of the Project Site (including the proposed works sites/areas) and the Development Area are shown in **Figure 1.1**. Located to the south of STT and to the northeast of Yuen Long New Town, the total area of Development Area covers about 130 ha and is currently occupied by Yau Tam Mei Tsuen, scattered

brownfield operations, farmland/fishponds, chicken farm, permitted burial grounds, etc. The Project comprises mainly educational institutions, hospital, other government, institution and community (GIC) facilities, housing, as well as the associated infrastructure works (e.g. road networks, sewage pumping station (SPS), etc.).

- 1.1.6 The NTM Station, the depot and the associated railway facilities under the NOL Main Line within the Project Site will be implemented by another project proponent (i.e. MTR Corporation Limited (MTRCL)), thus the construction and operation of these railway facilities are not part of this Project. The associated environmental impacts arising from the construction and operation of the NOL Main Line were assessed in its approved EIA report (Register No.: AEIAR-259/2024).

1.2 EIA Study

- 1.2.1 A Project Profile (PP) (No. PP-659/2023) for the Project based on an area of about 129 ha identified in the earlier stage of the Study was submitted to the Environmental Protection Department (EPD) on 9 November 2023 for application for an EIA Study Brief under Section 5(1)(a) of the *Environmental Impact Assessment Ordinance* (EIAO). An EIA Study Brief No. ESB-363/2023 was subsequently issued on 20 December 2023.

- 1.2.2 Refinements have been made to the Development Area in view of the latest infrastructure / transportation network designs, as well as to avoid encroachment on existing and/or planned interfacing developments (e.g. planned NM Highway). As a result, the size of Development Area was increased from about 129 ha to 130 ha.

- 1.2.3 The EIA study has been conducted for the Project in accordance with the requirements of the EIA Study Brief (No. ESB-363/2023) and the *Technical Memorandum on Environmental Impact Assessment Process* (EIAO-TM). The purposes of this EIA study are to identify information on the nature and extent of potential environmental impacts arising from the construction and operation of the Project and associated works that will take place concurrently. The information obtained in the EIA study will contribute to decisions by Director of Environmental Protection (DEP) on:

- (i) the overall acceptability of any adverse environmental consequences that are likely to arise as a result of the Project;
- (ii) the conditions and requirements for the detailed design, construction and operation of the Project to mitigate against adverse environmental consequences wherever practicable; and
- (iii) the acceptability of residual impacts after the proposed mitigation measures are implemented.

1.3 Purpose of this Executive Summary

- 1.3.1 This Executive Summary (ES) highlights the key information and findings of the EIA study for the Project. The outline of this ES is as follows:

- **Section 2:** Project Description
- **Section 3:** Key Findings of the Environmental Impact Assessment
- **Section 4:** Environmental Monitoring and Audit
- **Section 5:** Summary of Environmental Outcomes

- **Section 6:** Conclusion

2 PROJECT DESCRIPTION

2.1 Appreciation of Existing Environment

2.1.1 The Project Site is mainly covered by the approved Ngau Tam Mei OZP (No. S/YL-NTM/14). Area to the west of the Project Site is covered by the approved Mai Po and Fairview Park OZP (No. S/YL-MP/8). Area to the south of the Project Site is covered by the approved Ngau Tam Mei OZP (No. S/YL-NTM/14), including an “Industrial (Group D)” zone. Area to its further north is covered by the approved San Tin Technopole OZP (No. S/STT/2). San Tin Highway borders the Project Site to the west. To the east is the Ngau Tam Mei Water Treatment Works (NTMWTW), while hilly and mountainous ridges formed by Kai Kung Leng (part of Lam Tsuen Country Park (LTCP)) and Ngau Tam Shan surround the Project Site to the further south and north respectively.

2.1.2 Land at the immediately north of the Project Site is predominantly rural in character with low-rise building / structures embedded in a natural setting, which include Tam Mei Barracks (TMB) of the Hong Kong Garrison. There are also low-rise residential developments (e.g. the Vineyard and Green Crest) and a recognised village (i.e. Wai Tsai Tsuen) to the northwest. Recognised villages (e.g. Chuk Yuen Tsuen, San Wai Tsuen and Sheung Chuk Yuen) are situated to the west and southwest of the Project Site, on either side of San Tin Highway. Some domestic structures, agricultural uses (e.g. chicken farms), NTM Animal Waste Composting Plant (AWCP) and a lard boiling factory (LBF) are located to the south and southwest.

2.1.3 The Project Site has a rural character, comprising:

- (i) rural settlements (e.g. Yau Tam Mei Tsuen) with mostly temporary domestic structures;
- (ii) the Ngau Tam Mei Drainage Channel (NTMDC) which dissects the Project Site, flowing east to west and towards Deep Bay via Kam Tin River;
- (iii) scattered brownfield operations, such as logistics and freight operation, open storage, vehicle-related operation and warehouse / workshop;
- (iv) farmland and fishponds scattered along the existing NTMDC and a chicken farm in the southeast part of the Project Site; and
- (v) two permitted burial grounds (PBGs) (i.e. PBG Nos. YL/16 and 17) on the green knolls in the western part of the Project Site, as well as some scattered graves located outside PBGs but within the Project Site, including a grave of a prominent local figure at the area off Chuk Yau Road. Though none of the graves are declared monuments and graded historical buildings.

2.2 Need for the Project

2.2.1 As discussed in **Section 1.1.1** to **Section 1.1.3**, the Project aims to make use of the existing brownfield clusters and the “Green Belt” in NTM for comprehensive development, leveraging the development opportunities brought by the NOL Main Line, with the support of new and upgraded infrastructures proposed at the NTM.

2.2.2 To take forward the initiatives in NMAA and the 2024 Policy Address, land will be reserved in the eastern part of the Project Site for development of a university town (hereinafter referred to as “UniTown”). Local post-secondary institutions will be encouraged to introduce more innovative, cutting-edge and high-level branded programmes at undergraduate, postgraduate and professional levels, research collaboration and exchange projects with renowned Mainland and overseas institutions in a flexible and innovative manner, including cross-institution, interdisciplinary, cross-sector, and cross-boundary collaboration. These will enable

Hong Kong's academics and research to scale new height in international development, and facilitate the I&T development of surrounding areas such as STT by providing talent support at "research, academic and industry" front, promoting the integrated development of education, technology and talents, and promoting Hong Kong as an international hub for high-calibre talents.

- 2.2.3 As announced in the 2024 Policy Address, in addition to increasing training places of the existing two medical schools, the Government supports the plan to establish a third medical school by local university, so as to increase the number of doctors to support the local healthcare system in providing quality medical services and supporting the city's development as an international health and medical innovation hub. Land is therefore reserved in NTM for the third medical school.
- 2.2.4 Furthermore, with the gradual development of the NM, demand for healthcare services in the Yuen Long and North Districts will increase in future. There is a need to provide an Integrated Hospital in NTM. The Integrated Hospital will provide comprehensive healthcare services for the existing and planned population in the NM. It will be equipped with specialist manpower and related technology and apparatus to serve patients with individual highly complex diseases in the territory. The Integrated Hospital will also accommodate teaching, training and research facilities to complement the development of the life and health technology industry in STT and Hong Kong at large, promoting "research, academic and industry" collaboration. In particular, advanced life and health technology establishments (such as pre-clinical laboratories, animal laboratories, biological laboratories and cell culture R&D, etc.) will be attracted to the I&T Zone, helping the NM to become a "new international I&T city". Considering the proposed establishment of the third medical school at NTM, the Integrated Hospital can also serve as a teaching hospital.
- 2.2.5 To make the best use of the enhanced accessibility brought about by the proposed NOL Main Line, a residential community is planned around the NTM Station, with comprehensive amenities and supporting facilities to attract and retain top-notch academics and researchers.

2.3 Development Opportunities and Constraints

Development Opportunities

High Accessibility

- 2.3.1 San Tin Highway to the west of the Project Site is the main carriageway linking other areas in Yuen Long District and the New Territories. The Project Site will also connect with the planned NM Highway – San Tin Section via a district distributor (DD) road (namely Road D1) for direct and convenient access to other parts of the territory. The Project will connect to STT by a new local distributor (LD) road to the north of the Project Site.

Enhanced Railway Network

- 2.3.2 The future NOL Main Line includes an intermediate station at NTM and would serve as the backbone of the public transport network to cater for external and internal public transport demands.

Favourable Geographical Location

- 2.3.3 Located at the heart of the NM, neighbouring STT and connected by a number of existing and planned strategic transport links to other parts of the territory, there are opportunities for NTM NDA to provide additional land to capture the synergistic

and interactive relationship with STT by fostering “research, academic and industry” collaboration and the NM through physical and functional connections.

Plentiful Natural and Landscape Features

- 2.3.4 A number of natural and landscape features within and surrounding the Project Site could be utilised to create and foster a quality living environment, such as uplands and lowlands, green knolls, ridgeline/mountainous backdrops of Ngau Tam Shan and Kai Kung Leng, etc. There are opportunities to revitalise the existing NTMDC by adopting nature-based solution with blue-green infrastructures to enhance the ecology and biodiversity, and foster urban-rural integration.

Resolving Land Use Interface

- 2.3.5 At present, the brownfield operations in the NTM have created environmental nuisance such as odour and fixed noise, and interface problems. Through comprehensive development with more optimal uses, the Project provides opportunities to resolve land use interface problems and improve the local environment within the NDA.

Development Constraints

Environmental Constraints

- 2.3.6 The environmental constraints posed by the existing and planned infrastructures and uses require considerations in the planning of the Project include:
- (i) Two existing chicken farms, a LBF and NTM AWCP are located to the southeast and southwest of the Project Site. Besides, a sewage treatment plant within TMB directly borders the northern boundary of the NTM NDA. The proposed developments under the Project need to comply with the relevant requirements to minimise potential odour impacts from these facilities/uses.
 - (ii) The firing range of TMB is considered as a potential fixed noise source to the proposed noise sensitive uses in the northern part of the Project.
 - (iii) The NTMDC connects the pond habitat upstream, with the Deep Bay wetland habitats to the west of the assessment area of the Project. It serves as a bird flight path for various waterbird species. This channel also plays a role in flood management for the surrounding low-lying area. For minimising the environmental impacts, the Project should manage run-off and water quality, maintain habitat connectivity, and minimize potential disturbances to bird flight paths. Currently, the operation of NTMDC is governed by Environmental Permit No. FEP-01/003/1998/A held by Drainage Services Department (DSD) covering drainage channel from Ngau Tam Mei to Kam Tin River near Tai San Wai.
- 2.3.7 Two Green Belts with PBGs and vegetation cover the western part of the Project Site should be retained as far as possible.

Infrastructure Constraints

- 2.3.8 The constraints posed by the existing and planned infrastructures and land uses require considerations in the planning of the Project include:
- (i) The existing major distributor roads including San Tin Highway, Ngau Tam Mei Road, Chuk Yau Road, San Tam Road, Castle Peak Road – Tam Mi will likely

pose air quality and road traffic noise impacts to the proposed developments in the western part of the Project Site.

- (ii) The existing High Speed Rail (formerly known as Express Rail Link) runs underneath and through the Project Site in southeast-northwest orientation. The future NOL Main Line also traverses the Project Site, and the associated NTM Depot (NTD) is anticipated to pose development constraints and potential noise impacts to the developments of the Project.
- (iii) The existing overhead electricity transmission lines with pylons are located to the south and east of the Project which require sufficient vertical and horizontal separation distances from adjacent proposed land uses in accordance with the requirements stated in Hong Kong Planning Standards and Guidelines (HKPSG).
- (iv) The development of the NOL Main Line, including the planned NTM Station and the associated NTD within the Project Site, is being undertaken by the MTRCL separately. The railway scheme, including land area, and layout of the NTM Station, NTD, and ancillary facilities, was gazetted on 6 October 2023 and authorised on 8 April 2025. The potential interfacing challenges may arise concerning land use integration, infrastructure alignment, and construction sequencing between the railway facilities and the NTM NDA, and thus there should be close coordination to minimise the potential interface issues.

2.4 Description of the Project

Positioning and Planning Framework

- 2.4.1 Situated within the I&T Zone of NM, NTM NDA lies to the northeast of Yuen Long New Town and south of STT. Upon completion of the planned NOL Main Line, NTM will only be one station away from STT and well connected with the rest of NM and the urban areas. Through the proposed cross-boundary NOL Spur Line and new Huanggang Port (under construction), NTM NDA will also enjoy easy access to HSITP, which is the Hong Kong Park of the Hetao Shenzhen-Hong Kong Science and Technology Innovation Cooperation Zone and Shenzhen.
- 2.4.2 NTM NDA is positioned as an Academic and Research District. More than one third of the land is proposed for developing the UniTown, forming part of the NMUT. An Integrated Hospital is also planned to provide comprehensive healthcare services for the existing and new population in the NM. In the western part of the Project Site, a residential neighbourhood is planned to capitalise on the planned railway station (i.e. the NTM Station) of the NOL Main Line.
- 2.4.3 Under the RODP, the residential neighbourhood is proposed around the future NTM Station. Adopting a “15-minute neighbourhood” concept, comprehensive amenities and supporting facilities have been planned to maximise the convenience of future residents and to attract and retain top-notch academics and researchers. A district shopping centre atop the railway depot is proposed to provide retail, catering and entertainment facilities to meet the needs of local residents as well as those working or studying in NTM NDA.
- 2.4.4 The UniTown is proposed at the eastern part of the NDA with proposed road connection to/from STT and the planned NM Highway – San Tin Section. With ease of access to STT and HSITP, the UniTown could foster “research, academic and industry” collaboration for completing the I&T industry ecosystem in NM. Through provision of ample student hostel places, sports and outdoor leisure spaces, the UniTown will become a self-sustained university neighbourhood.

- 2.4.5 The Integrated Hospital is proposed at the central part of the NDA. It will be served by Road D1 which connects to major roads like San Tin Highway and NM Highway – San Tin Section. The hospital is within walkable distance to NTM Station and other public transport through the planned pedestrian network. As the Integrated Hospital can also serve as a teaching hospital, the central location could strengthen its functional integration with the third medical school, which will be accommodated in the UniTown in the eastern part of the NDA.
- 2.4.6 The UniTown, Integrated Hospital and residential neighbourhood will be linked up by a multi-functional blue-green spine along the revitalised NTMDC across NTM NDA. Apart from forming part of the integrated blue-green infrastructure to reduce flood risks and enhance environmental sustainability, the blue-green spine will be integrated with surrounding public open space and incorporated with pedestrian and cycle tracks connecting the key developments in NTM NDA.
- 2.4.7 To improve the external transport connectivity, a new interchange connecting directly to San Tin Highway and two junction improvement schemes at San Tam Road in the west and road connection to the planned NM Highway – San Tin Section in the east are proposed to direct traffic flow to/from NTM NDA. A new road connection to/from STT to the north is also planned, with a view to further integrating the two NDAs within the I&T zone. Regarding the internal road network, the existing Ngau Tam Mei Road will be widened. A DD road (i.e. Road D1) and three LD roads (i.e. Roads L1, L2 and L3) are proposed to connect various development sites. The proposed road network would also connect the surrounding villages to the wider road system, with vehicular access to existing communities maintained or reprovided.

Size, Scale, Shape and Design of the Project

- 2.4.8 Covering an area of about 130 ha, NTM NDA can accommodate a population of about 35,400 - 38,500, with provision of about 26,000 jobs (see **Figure 2.1**).
- 2.4.9 An overview of the key planning elements and land uses of the RODP is provided in **Table 2.1** and shown in **Figure 2.1**.

Table 2.1 Land Use Budget of the RODP

Land Use	Approximate Area (ha)
Government, Institution and Community (GIC) Facilities (including the UniTown, Integrated Hospital and other GIC Facilities and Reserve)	66
Residential (including railway topside commercial / residential development)	19
Open Space	13
Roads and Other Uses (including Railway and Amenity)	29
Green Belt (including permitted burial grounds)	3
Total:	130

Public Engagement

- 2.4.10 The RODP has taken into consideration the comments collected during the public inspection process of the PP and in the two-month PE exercise on the broad land

use concepts of NTM NDA conducted between 14 November 2024 to 13 January 2025 (the PE period).

- 2.4.11 For the PE exercise, 10 roving exhibitions in Hong Kong, Shenzhen and Guangzhou, and mobile exhibitions at 35 locations in Hong Kong were conducted. 12 briefing sessions were conducted for various statutory and advisory bodies (including Sub-committee on Planning, Land and Conservation of Advisory Committee on the Northern Metropolis, Panel on Development of Legislative Council, Town Planning and Development Committee of Yuen Long District Council, Planning Sub-committee of Land and Development Advisory Committee, Town Planning Board and Heung Yee Kuk), post-secondary education sector, San Tin Rural Committee, the villagers of Yau Tam Mei Tsuen, professional institutes, brownfield operators and green groups. A project website was also launched to ensure effective dissemination of information related to the Project. The key environmental related comments received from the public inspection process of the PP and the PE exercise are summarised in **Table 2.2**.

Table 2.2 Key Comments Related to Environment Received During Statutory Public Inspection Period and PE Period

Key Issue	Public Comments	Consideration Taken in RODP
Air Quality	The cumulative air quality impacts should be assessed, and effective mitigation measures should be formulated to control the air pollution. Polluting industrial/commercial activities should be forbidden in order not to worsen the air quality.	No polluting industrial/commercial activities are proposed within the Project Site.
	Odour arising from the LBF and air quality impact arising from other pollution sources should be addressed to protect the interests of the community.	<ul style="list-style-type: none"> • Odour and air quality impact from pollution sources have been assessed. • Details of air quality (including odour) impact assessment are provided in Section 3 of the EIA Report.
Water Quality	Any untreated surface run-off generated from the Project Site during both construction and operational phases should be prevented from discharging into NTMDC or its tributaries, other natural or man-made channels, stormwater drainage and wetlands directly.	Proper drainage and sewerage systems with due consideration of avoidance and minimization of the potential water quality impacts will be adopted. Details of water quality impact assessment are provided in Section 5 of the EIA Report.
	Watercourses with natural substrates and good water quality should not be destroyed and should be well protected.	It is anticipated that removal of a few watercourses is unavoidable for site formation works under the Project. Nevertheless, NTMDC will be revitalised to bring positive impacts to the nature in NDA.
Waste Management	Storage, transportation and disposal of solid wastes should be under stricter monitoring and control to avoid any fly-tipping of	<ul style="list-style-type: none"> • Global Positioning System (GPS) or equivalent system for tracking and monitoring of all dump trucks will be engaged to record their travel routings and parking

Key Issue	Public Comments	Consideration Taken in RODP
	solid wastes generated from the Project.	locations for avoiding illegal dumping and landfilling. <ul style="list-style-type: none"> A Trip Ticket System will be implemented to avoid illegal dumping.
Ecology	Given the high ecological sensitiveness around the Project Site, year-long ecological surveys for diverse taxa groups and habitats should be conducted in the EIA study. Additional bird survey efforts should be invested during the migratory seasons to assess the ecological impacts on migratory birds.	A 12-month baseline ecological survey (including bird survey) was conducted. Details of baseline ecological data and impact assessment are provided in Section 9 of the EIA Report.
	Eurasian Otter (<i>Lutra lutra</i>) could utilise the existing NTMDC and fishponds nearby. Intensive active search for field signs of Otters and the approach of employing Local Ecological Knowledge by conducting questionnaire interviews with local people should be taken.	There are no official published data or records of the Otter in the Project Site, and no Eurasian Otter was recorded during the baseline ecological survey. Further additional interview targeting the sightings of the Otter among the local people in NTM area was conducted upon receipt of the public comment. Based on the interview findings, no sightings of the Otter in NTM area were reported or heard by interviewees.
	Alternative alignment of the proposed road connection to/from STT should be explored to minimise woodland loss.	The alignment of the proposed road connection to/from STT has been reviewed and optimised with respect to engineering feasibility and other considerations to minimise the loss of woodland habitat.
	Removal of trees and vegetation in the Project Site should be avoided as far as possible in order to reduce ecological impact, loss of habitats and urban heat island effect. Any vegetation loss in the Project should be compensated through the cultivation of native plant species.	<ul style="list-style-type: none"> It is anticipated that some trees and vegetation removal are unavoidable for site formation works. Nevertheless, the land use formulation has maximised the opportunity for open space with greening in order to reduce ecological impact including the loss of habitats as well as landscape impact. Tree compensation is proposed to be provided at a 1:1 tree compensatory ratio at the roadside amenity areas and open space to compensate for tree loss due to the Project as far as practicable. Areas within the Project Site and off-site areas for compensatory tree planting would be explored and negotiated with

Key Issue	Public Comments	Consideration Taken in RODP
		relevant project proponent(s) to achieve 1:1 ratio in compensatory tree planting number as far as practicable.
	Avoidance / minimization of both direct and indirect impacts on wetland within/adjacent to Wetland Buffer Area (WBA) should be explored in both construction and operational phases.	The Project has been carefully planned such that the works would only be situated at the existing developed area / wasteland habitat within WBA to avoid direct impact to wetland within/adjacent to WBA, and the modified watercourse within WBA would be retained.
	Off-site negative impact, such as construction noise during construction phase and human activities during operational phase, would adversely affect foraging behavior ardeids at NTMDC.	<ul style="list-style-type: none"> Construction Noise Management Plan will be prepared during pre-tender and pre-construction stages to formulate the requirement of mitigation measures, monitoring and audit programme. Mitigation measures, such as provision of non-building area and "Open Space" along both sides of NTMDC and peripheral tree planting as screening, have been adopted to minimise the indirect impacts to ardeids during operational phase.
Impact on Agricultural Land and Fishponds	Agricultural land in NTM is generally in low degree of fragmentation which should be protected. Rural life and associated farmland and fishponds should be preserved in NDA developments under the concept of urban-rural integration to minimise impacts on local fisheries and agricultural industries.	Currently, the agricultural land in NTM is scattered and mostly consists of abandoned farmland, which is assessed to have low to moderate ecological value. To maximise the utilisation of land resources, these scattered plots of agricultural land are consolidated for developing into a functional community providing land for a UniTown, Integrated Hospital and residential neighbourhood to complement with the I&T development in STT. That said, opportunities of introducing urban farming in the planned open space are allowed under the RODP.
Cultural Heritage	Direct and indirect impacts on cultural heritage items should be identified.	Direct and indirect impacts on the identified cultural heritage items have been assessed in Section 12 of the EIA Report.
	Alternatives should be further explored to avoid/minimize direct loss on the cultural heritage items identified in both construction and operational phases.	Alternatives have been explored to avoid direct loss on Wai Cheung Ancestral Hall such that it would be preserved in situ.

Key Issue	Public Comments	Consideration Taken in RODP
	Existing buildings with collective memories and heritage characters should be reserved to enrich the continuity of heritage.	Flexibility for potential adaptive reuse of the building structures of the former Yau Tam Mei Primary School by future project proponents of UniTown is allowed in the RODP.
	Contingency measures should be prepared in case items of historical or archaeological importance can be spotted within the development area during construction phase.	In accordance with the <i>Antiquities and Monuments Ordinance (A&MO) (Cap. 53)</i> , Antiquities and Monuments Office (AMO) will be informed immediately in case of discovery of antiquities or supposed antiquities in the course of works.
Landscape and Visual	Yau Tam Mei Tsuen or nearby parks might contain "trees of particular interest (TPI)" which should be identified and protected in conservation plans.	<ul style="list-style-type: none"> The findings of broad-brush tree and vegetation survey, including all TPI(s) that would be directly impacted by the Project, and the associated mitigation measures, are provided in Section 11 of the EIA Report. Sensitivity analysis would be conducted in the detailed design and construction stages to further review and justify the need for any TPI(s) removal.
Electric and Magnetic Field	Due consideration should be given when planning developments at areas near the existing 400 kV overhead cables to the south of the Development Area to reduce potential impact of the electromagnetic field.	It is expected that the electric and electromagnetic field generated by the existing 400 kV overhead cables should be well below the relevant exposure standards and limits, and therefore adverse impact on the proposed developments of the Project is not anticipated.
Concern associated with the Proposed Revitalisation	A buffer zone should be provided at each side of the revitalised NTMDC to provide sufficient riparian habitats and to accommodate a wide range of water flow.	Open Space and non-building area (a combined width of 80 m) will be provided along the revitalised NTMDC (total length of about 2.2 km), serving as a buffer zone.
	Additional water source might be required for the revitalised NTMDC during dry season.	Provision for additional water source in dry season would be reviewed in detailed design stage.
Cumulative Environmental Impact	Given other major developments, such as the STT, NOL Main Line and NM Highway – San Tin Section, interconnected with the Project, all the potential environmental impacts of the adjacent developments should be addressed so that the cumulative environmental impacts will not be underestimated.	With the best available information, the cumulative impacts arising from the construction and operational phases of the identified interfacing projects have been assessed in the EIA Report.

2.5 Designated Projects under EIAO

2.5.1 The Development Area, covering an area of about 130 ha, constitutes a Designated Project (DP) by virtue of Item 1 under Schedule 3 of the EIAO:

- Item 1 – An urban development or redevelopment project covering an area of more than 50 ha.

2.5.2 In addition, the Project also constitutes DPs under Part I, Schedule 2 of the EIAO, which are listed in **Table 2.3** and illustrated in **Figure 2.2**.

Table 2.3 Schedule 2 Designated Projects Under the Project

Ref. No.	Schedule 2 Designated Project		Work Component / Reference in RODP
DP1	Item A.1	A carriageway for motor vehicles that is an expressway, trunk road, primary distributor road or district distributor road	Construction and operation of district distributor road (Road D1) and associated road works at San Tin Highway
DP2	Item I.1(b)	A drainage channel or river training and diversion works located less than 300 m from the nearest boundary of an existing or planned conservation area	Part of Revitalisation of NTMDC and river diversion works located less than 300 m from the nearest boundary of an existing conservation area

2.5.3 The Schedule 2 DP elements listed in **Table 2.4** were identified in the PP and the Study Brief of the Project. However, the Project no longer constitutes DP Items F.1, F.2 and H.1, Part I, Schedule 2 of the EIAO due to the update of Project scope.

Table 2.4 Schedule 2 Designated Projects Not Under the Project

Schedule 2 Designated Projects in the Project Profile and Study Brief		Relevant Work Component
Item F.1	Sewage treatment works with an installed capacity of more than 15,000 m ³ per day	Only SPS and sewerage provided
Item F.2	Sewage treatment works with an installed capacity of more than 5,000 m ³ per day; and a boundary of which is less than 200 m from the nearest boundary of an existing or planned (i) residential area; (ii) place of worship; (iii) educational institution; (iv) health care institution; (v) site of special scientific interest; (vi) site of cultural heritage; (vii) bathing beach; (viii) marine park or marine reserve; (ix) fish culture zone; or (x) seawater intake point	
Item H.1	A 400 kV electricity substation and transmission line	Only two 132 kV electricity substations proposed

2.5.4 Apart from the Schedule 2 DP elements presented in **Table 2.3** above, there are a number of non-DP elements in the RODP as summarised in **Table 2.5**. Details of Project's elements are presented in **Section 2.4** with their locations shown in **Figure 2.1**.

Table 2.5 Summary of Non-Designated Projects Under the Project

Non-Designated Project	Sub-Element
Education	University Town (Post-secondary Education Use)
	Primary School
	Secondary School
GIC Facilities	Integrated Hospital
	Ambulance Depot
	Community Recycling Centre
	Electricity Substations (ESS)
	Fire Station and Departmental Staff Quarters
	Indoor Sports Centre
	Library
	Refuse Collection Points (RCPs)
	Sewage Pumping Station
	Staff Quarters
Residential Development	Private Housing
	Dedicated Rehousing Estate
Open Space	Recreational Facilities and Landscaping
Amenity	Roadside Amenity
Green Belt	-
Other Specified Uses	Other Specified Uses (Railway Depot with Commercial/Residential Development)
	Other Specified Uses (Railway Depot with Public Open Space)
Road	Local Roads

2.6 Project Benefits and Environmental Initiatives

- 2.6.1 The Project aspires to capitalise the development potential brought about by the NTM Station of NOL Main Line by replanning the brownfields and adjoining area for supporting the future development of Hong Kong. Meanwhile, the proposed UniTown will offer space for activities relating to R&D and groom high-calibre talents to support the I&T development in STT, promoting “research, academic and industry” collaboration, as well as training more doctors to dovetail with Hong Kong’s development as an international health and medical innovation hub. Apart from providing comprehensive healthcare services for the existing and new population in the NM, the Integrated Hospital will be developed into a three-in-one teaching, training and research facility, providing training for medical and healthcare professionals, and conducting clinical trials and scientific research to facilitate the advancement of patient care. Through the Project, GIC facilities will be provided to support the existing and future residential population in the NM and along the future NOL Main Line.
- 2.6.2 The Project could deliver a range of benefits and bring in environmental initiatives as follow:

Direct Benefits

- (i) **Northern Metropolis Synergy** – With the vision to develop NM into a “New International I&T City”, NMAA outlines the strategic positioning and development themes of the four major zones in NM. Amongst them, the I&T Zone covers STT and NTM. STT will be the hub for clustered I&T development and the core of industry development of the entire NM. It is also proposed that land be reserved in NTM for use of post-secondary education institutions, with a focus on scientific research, to complement the I&T development in STT, promoting “research, academic and industry” collaboration. Through leveraging physical and functional connections with STT, the future planning of NTM NDA should aim to capture the synergistic and interactive relationship with STT and the other major development areas in NM, with a view towards fostering integration between the two NDAs within the I&T Zone and NM.
- (ii) **Nurture and Attract Talent** – To complement the positioning of NTM NDA as an Academic and Research District, a worker- and student-friendly university town vibe will be developed to groom high-calibre talents to support I&T development in STT, tie in with the Government’s objective of building Hong Kong into an international post-secondary education hub. The planning and urban design of the NDA should target to facilitate knowledge exchanges and cultivation of innovative ideas. On the other hand, a comprehensive residential neighbourhood with commercial, leisure and GIC facilities should be planned to foster a quality living environment for residents and talents. This would in turn attract and nurture talent to provide manpower for supporting industrial development. Housing mix of the NDA should complement the positioning of NTM NDA as an Academic and Research District.
- (iii) **Versatile Community** – To create a liveable area for the future population for NTM NDA as well as supporting the wider developments in NM, an integrated community with adequate and quality urban services and community facilities would be provided in NTM NDA to support the territorial housing demand with an emphasis on “live, learn, play and work”. To optimise the strategic location in NTM NDA, a large portion of land is reserved for the UniTown. Other key district facilities including healthcare and other supporting GIC facilities are also planned to serve NTM NDA and the wider communities. A residential neighbourhood with comprehensive amenities and supporting facilities is planned around the future NTM Station, to enable the residents to reach the GIC facilities for daily necessities, open space and major transport facilities by walking or cycling. A wide range of community facilities are also planned in NTM NDA to develop the area as a vibrant and liveable community to attract and retain global academics and researchers.
- (iv) **Meet Long-term Housing Needs of Hong Kong** – The Project will provide about 12,600-13,800 new flats, including private housing and dedicated rehousing estate to meet long-term housing needs of Hong Kong. Also, student hostels and staff quarters in the UniTown, and government departmental quarters will be provided.
- (v) **Home-job Balance to Reduce Cross-district Commuting** – Through a mix of educational, healthcare, commercial, community and government land uses, the Project will generate approximately 26,000 jobs. To complement the positioning of NTM NDA as an Academic and Research District, predominantly private housing will be provided in the area, which can enrich the choices of accommodation for teaching / research and hospital staff,

reducing the need for cross-district commuting and improving home-job balance.

- (vi) **Multi-functional Blue-green Spine** – The current NTMDC will be revitalised, and the riverfront will be integrated with blue-green infrastructure to reduce flood risks and enhance environmental sustainability. Leisure and recreational uses will be integrated to create pleasant and engaging public spaces. The blue-green spine will also form a key east-west transit corridor incorporated with pedestrian walkways and cycling tracks across the entire NDA that enhances connectivity within the urban fabric and facilitates social interactions.
- (vii) **Provision of GIC Facilities** – The Project has proposed a wide range of GIC facilities to support both existing and planned local population, as well as regional and territorial demand on specific aspects. The proposed GIC facilities include educational, recreational and healthcare facilities such as the Integrated Hospital.
- (viii) **Enhance Land Efficiency and Rural Environment** – At present, there are about 22 ha of brownfields clustered in the Project Site, including logistics and freight operation, open storage, vehicle-related operation and warehouse/workshop, etc., which produce adverse environmental, traffic and visual impacts to the neighbourhood. With the proposed developments and infrastructures, land use efficiency would be enhanced and the overall environment in the area can be significantly improved.
- (ix) **Improve Sewerage System Provision** – The Project will improve the existing sewerage infrastructure with new sewerage networks and a new SPS, which would benefit both the population of the nearby existing residential development / villages and the proposed developments under the Project. Water quality would be improved by the introduction of new sewerage networks to the currently unsewered areas
- (x) **Improve Transport Connectivity and Community Services to the Existing Villages and Residential Development in the Vicinity of NTM** – Existing villages and residential developments can be benefited from the newly planned GIC facilities, open space and improved rail-and-road transport connectivity, and other infrastructure services brought by the Project. These enhancements provide collective benefit and contribute to improve the quality of life of the existing villages and residential developments in the vicinity of the Project.
- (xi) **Improve Stormwater Management and Climate Resistance** – The proposed revitalised NTMDC and retention tanks would mitigate potential flooding issue and enhance the overall stormwater management system. By increasing the channel's capacity and naturalizing its flow through ecological design features, the revitalised NTMDC not only enhance its ecological function but also effectively convey stormwater run-off while reducing peak flow rates. The proposed retention tanks serve as critical flood attenuation facilities, temporarily storing excess stormwater during heavy rainfall events to prevent downstream flooding. The improved stormwater management also enhances climate resilience by better handling intense rainfall and extreme weather, reducing flood risks and increasing the area's adaptability to climate change.

Environmental Benefits and Initiatives

- (i) **Revitalisation of the NTMDC** – By integrating sustainability principles with engineering, Hong Kong's completed river revitalisation projects¹ demonstrate

¹ River Revitalisation for the Good of Water (https://www.dsd.gov.hk/EN/Publicity_and_Publications/Publicity/DSD_Sustainability_Reports/1/river_revitalisation.html)

how infrastructure can simultaneously achieve environmental and social objectives - bringing life back to the city's waterways and setting a benchmark for urban ecological design. Upon completion of revitalisation works at previously concrete lined drainage channels, river ecosystems can be restored and biodiversity will be enhanced through the promotion of wildlife growth. The revitalised rivers serve to reconnect urban communities with nature. Post-revitalisation surveys¹ have recorded a resurgence of native species (including bird, fish and dragonfly species) which indicate the improvement in the ecological health of these waterways. Similar to Hong Kong's earlier successful river revitalisation initiatives, the treatments for the NTMDC including channel widening, flattening of the southern riverbank, as well as incorporating green and eco-conservation elements, such as planting a variety of vegetation and mimicking natural stream environments, are proposed for the revitalization of NTMDC. The slopes of NTMDC will be transformed into planting areas, and new plantings including riparian species would be introduced to enhance aquatic habitats and support the implementation of blue-green infrastructure. The planting of native vegetation and creation of wildlife environments will also maximise biodiversity and promote environmental sustainability. These treatments would bring positive impacts to the nature, as well as the future population of NTM, whereby the overall ecological value and biodiversity would increase. It is expected that the enhanced habitats could provide more ecological resources for the waterbirds species of conservation importance, such as Citrine Wagtail, Great Egret, Little Egret and White-throated Kingfisher. The details of the revitalisation features and ecological enhancement measures will be further developed following Drainage Services Department Practice Note No. 3/2021 Guidelines on Design for Revitalisation of River Channel, and design elements will be agreed with relevant parties and departments during detailed design stage.

- (ii) **Integrated Walkability, Cycling, and Open Space Network** – The Project promotes sustainable, low-carbon mobility and active lifestyles through a comprehensive, people-centered network of pedestrian walkways and cycle tracks. This network connects key destinations – including UniTown, Integrated Hospital, public transport hubs, residential neighbourhood, retail outlets and community facilities – via elevated, covered, and barrier-free routes. The open space provision meet the enhanced provision of 3.5 m² per person under Hong Kong 2030+. The robust cycling network integrates with existing tracks, including connections to the New Territories Cycle Track Network along Castle Peak Road and an arterial route connecting major activity nodes across the NTM NDA.
- (iii) **Preservation of Points of Local Historical Interests** – Preservation of points of local historical interests has been considered in the RODP, taking into account the public comments obtained during the PE (Table 2.2 refers), to promote cultural sustainability. Notably, Wai Cheung Ancestral Hall is proposed to be preserved in situ allowing flexibility for future adaptive use within a planned open space. The open space surrounding Wai Cheung Ancestral Hall could be utilised for public to interact, relax and hold local community events. Subject to the detailed design in later stage, the former Yau Tam Mei Primary School, valued for its social significance, as a sole source of education in Yau Tam Mei Tsuen connecting many descendants of the village, and possesses some historical value as an embodiment of various acts of local benevolence recorded throughout its history, is also proposed to be preserved in situ within UniTown for potential adaptive reuse. This could provide the future students/teaching staff with a tangible link to the educational past of NTM. It is worth to note that both buildings are neither declared

monument nor graded historic building, and their preservation, conservation and protection is not required under EIAO-TM.

2.7 Development Programme for Project

Development Phasing

2.7.1 The Project would be commissioned in phases with the first population intake in Year 2033. Construction of the Project is scheduled to commence in early Year 2027, with completion targeted by 2036 to accommodate the intake of residential population, the UniTown and Integrated Hospital. The preliminary construction schedule under various phases is summarised in **Table 2.6**.

Table 2.6 Preliminary Construction and Population Intake Schedule

Development Stage	Area	Rationale of Phasing	Earliest Date for Commencement of Infrastructure Works	Earliest Date for Availability of Land for Building Works	Anticipated First Occupation/ Population Intake Date
Phase 1	<ul style="list-style-type: none"> DRE site (RSc.1) Integrated Hospital (G.8) & adjacent ESS site (G.9) Part of UniTown (G.11) Sewage pumping station (G.1) Road network connecting to the Integrated Hospital 	<ul style="list-style-type: none"> Early handover of the sites for building works (by others) 	Q1 2027	Q4 2028	2033 for DRE site
Phase 2	<ul style="list-style-type: none"> Remaining UniTown (G.6, G.10, G.11, G.12) Residential Site (R.3, R.4) Remaining G/ICs, School (E.1 & E2), Open Space (O.2, O.5-O.7), Amenity Areas Majority of road network NTMDC 	<ul style="list-style-type: none"> To commence infrastructure works for targeted population intake To allow early handover of UniTown 	Q3 2028	Q2 2031	Q2 2034
Phase 3	<ul style="list-style-type: none"> Residential Site R.1, R.2 Remaining open space Remaining roadworks, landscape works, riverside & site formation works 	<ul style="list-style-type: none"> To suit the programme of interfacing projects 	Q3 2030	Q3 2032	Q2 2036

Phase 1

- 2.7.2 Phase 1 comprises of site clearance and site formation of sites that would require early completion for handover, including DRE site “RSc.1”, Integrated Hospital “G.8”, ESS “G.9”, part of UniTown “G.11”, sewage pumping station at “G.1” and road network connecting to the Integrated Hospital. The population intake of the DRE site is expected to be in Year 2033.

Phase 2

- 2.7.3 This phase of development aims to support the remaining UniTown and population intake projected for the year 2034, along with the essential supporting infrastructures. Majority of these areas consist of main road network and road connection from existing road networks. There will be interface with NOL Main Line in this phase.
- 2.7.4 The major site formation and infrastructure works (including site clearance) in this development phase will include:
- (i) Site formation and development for key infrastructures including retention tank, RCPs and utilities laying, etc.;
 - (ii) Site formation and development for remaining areas of UniTown to facilitate completion for handover;
 - (iii) Site formation for R.3 and R.4;
 - (iv) Site formation and development for “E” and “G” sites such as primary school, etc.;
 - (v) Road improvement to Chuk Yau Road, Ngau Tam Mei Road and San Tam Road;
 - (vi) Construction of Road D1, proposed road connection to/from STT, Road L1, Road L2, Road L3, associated junction works and slip roads connecting San Tin Highway and local roads, pedestrian and cycling connectivity including cycle bridge, associated pedestrian walkway and cycle tracks;
 - (vii) Site clearance and revitalisation of NTMDC; and
 - (viii) Construction of associated open space and amenity areas.

Phase 3

- 2.7.5 The development in this phase is to support the remaining population intake in Year 2036 and to develop the remaining sites that are currently occupied by the transitional housing project in the western part of the NDA and NOL Main Line works area. There will be interface with the transitional housing and NOL Main Line in this phase.
- 2.7.6 The major site formation and infrastructure works in this development phase will include:
- (i) Site formation for R.1 and R.2 after demolition of the transitional housing;
 - (ii) Development of open space after demolition of the transitional housing; and
 - (iii) Remaining roadworks, landscape works, riverside and site formation works.

3 KEY FINDINGS OF THE ENVIRONMENTAL IMPACT ASSESSMENT

3.1 Approach to the EIA

3.1.1 The EIA process provides a means of identifying, assessing and reporting the environmental impacts associated with the construction and operation of the Project based on the engineering design information available at this stage. It is an iterative process that has been followed in parallel with the formulation of the RODP to identify the potential environmental issues of various design options, and develop alternatives as well as appropriate mitigation measures to be incorporated into the design, construction and operation of the Project. Public views obtained from the PE exercise have also been considered and incorporated into the formulation of the RODP and the EIA process where appropriate.

3.1.2 Mitigation measures have been proposed, where required, to avoid potential environmental impacts, or minimise or mitigate the impacts to acceptable levels. In addition, environmental benefits have been incorporated into the Project, where possible.

3.1.3 The findings of this EIA study have determined the likely nature and extent of the following environmental impacts predicted to arise from the construction and operation of the Project:

- Air Quality Impact;
- Noise Impact;
- Water Quality Impact;
- Sewerage and Sewage Treatment Implications;
- Waste Management Implications;
- Land Contamination;
- Ecological Implication (Terrestrial and Aquatic);
- Fisheries Impact;
- Landscape and Visual Impact;
- Impact on Cultural Heritage;
- Hazard to Life;
- Landfill Gas Hazard; and
- Impact from Electric and Magnetic Field.

3.2 Air Quality Impact

3.2.1 Assessment of potential air quality impacts arising from the construction and operation of the Project has been conducted in accordance with the criteria and guidelines as stated in Annexes 4 and 12 of the EIAO-TM as well as the requirements given in Section 3.4.3 and Appendix B of the EIA Study Brief. The assessment area for air quality impact assessment is within 500 m from the boundary of the Project Site.

Construction Phase

3.2.2 Potential air quality impact from the construction works of the Project would mainly be related to construction activities of excavation, material handling, spoil removal

and wind erosion. Construction activities of the concurrent projects within 500 m assessment area would also pose cumulative construction air quality impact. With the implementation of mitigation measures together with the recommended air quality control measures including frequent watering on active works areas, exposed areas and unpaved haul roads and other site management measures such as good site practices, and environmental monitoring and audit (EM&A) programme, no adverse air quality impact on the existing and planned air sensitive receivers (ASRs) in the vicinity of the works sites would be anticipated during the construction phase.

- 3.2.3 Vehicular emissions induced from the use of non-road mobile machinery (NRMMs) will cause potential air quality impact to the ASRs. According to DEVB TC(W) No. 1/2015, NRMMs with exempted label under the *Air Pollution Control (NRMM) Regulation* shall be avoided. The equipment would also be properly maintained to minimize any emissions. On-site power supply for NRMMs will be provided and the use of diesel generators and machinery will be avoided during the construction stage as far as practicable to reduce air emissions. The use of electrified NRMMs, which is unlikely to cause significant smoke and gaseous emissions, will also be adopted as far as practicable. Activities involving the use of non-electrical NRMMs should be located as far away as possible from the nearby ASRs, and careful scheduling of nearby construction works involving NRMMs could be managed by close coordination or collaboration among construction sites. Therefore, no adverse air quality impact is expected from the operation of the NRMMs.

Operational Phase

- 3.2.4 Cumulative air quality impact arising from the vehicular emission from existing and planned open roads, proposed transport facilities including Transport Interchange Hub (TIH) and Public Transport Terminus (PTT), and heavy goods vehicle/coach parking sites, as well as the existing and planned industrial emissions within 500 m assessment area has been assessed, and there would be no adverse air quality impact on the existing and planned ASRs.
- 3.2.5 Cumulative odour impact arising from existing odour sources (i.e. two chicken farms, a LBF, a sewage treatment plant at TMB) and the proposed SPS has been assessed. For the existing odour source, operation of LBF is regularly monitored to ensure compliance with the requirements and conditions set out in the offensive trade license (OTL), as well as the *Public Health and Municipal Services Ordinance (Cap. 132)* and its subsidiary legislations. For the proposed SPS, appropriate odour control measures, such as full enclosure of odour sources with negative pressure and provision of odour removal system with odour removal efficiency of at least 95% (>99.5% removal for H₂S) at the ventilation exhaust, should be implemented.
- 3.2.6 Proper planning on the location of air sensitive uses at Sites OU(RDCRD).1, G.6 and G.13 will be adopted such that no air sensitive use, including openable window, fresh air intake and recreational use in open space, within the odour exceedance zone.

3.3 Noise Impact

- 3.3.1 Assessments of potential noise impacts arising from the construction and operation of the Project have been conducted in accordance with the criteria and guidelines as stated in Annexes 5 and 13 of the EIAO-TM, and the requirements given in Section 3.4.4 and Appendix C of the EIA Study Brief. The assessment area covers the NSRs within 300 m from the boundary of the Project Site.

Construction Phase

- 3.3.2 Assessment on potential construction noise impact arising from the Project has been conducted qualitatively. The assessment results indicate that, with implementation of appropriate mitigation measures including quieter construction methods, good site practices and temporary barriers, etc., no adverse construction noise impact would be anticipated. A Construction Noise Management Plan (CNMP) containing the quantitative construction noise impact assessment, the construction noise monitoring and audit programme during the construction phase will be submitted to EPD.

Operational Phase

- 3.3.3 Road traffic noise impact assessment has been conducted. The predicted overall noise levels would exceed the respective noise criteria at a number of noise sensitive receivers (NSRs) in the unmitigated scenario. For the existing NSRs where the overall traffic noise level exceeded the criteria, all feasible direct mitigation measures such as noise barrier and low noise road surfacing have been considered and exhausted. The Project roads noise levels at all these NSRs would comply with the relevant noise criteria and the Project roads contributions to the overall noise levels would be insignificant, i.e. less than 1.0 dB(A). No further mitigation measures are therefore required for these existing NSRs. For the planned NSRs, with the proposed noise mitigation measures in place, the predicted noise levels at all planned NSRs within the Development Area would comply with the traffic noise criteria.
- 3.3.4 A qualitative assessment on impacts from fixed noise sources has been conducted. In view of the large separation distance between the existing fixed noise sources and the planned NSRs, and that the impact from the planned fixed noise sources could be effectively mitigated by implementing at-source noise control measure during the detailed design stage, no adverse cumulative impact from the existing fixed noise sources, the proposed fixed noise sources under the Project and concurrent projects would be anticipated. A quantitative fixed noise sources impact assessment with consideration of latest available information and cumulative impacts with recommendation of appropriate mitigation measures should be conducted for the identified fixed noise sources during detailed design stage via various planning/funding/land lease mechanism in accordance with the requirements of the HKPSG.
- 3.3.5 A review of airborne and ground-borne rail noise impacts from the NOL Main Line and High Speed Rail (HSR) has been conducted with reference to the approved EIA reports for NOL Main Line and HSR, and the Updated Operational Ground-borne Noise Prediction Report and the Commissioning Test Report for HSR. The nearest planned NSRs under the Project would be located at about 40 m from the NOL Main Line short trough section, which will be equipped with noise canopies and louvre walls, eliminating direct line-of-sight to airborne noise sources. For ground-borne noise from NOL Main Line and HSR, the planned ground-borne NSRs, which are high-rise development with generally better attenuation, will be located at more than 43 m and 20 m from the NOL Main Line and HSR respectively. Based on the review findings, the predicted ground-borne noise levels are expected to be well below statutory criteria, and thus adverse ground-borne rail noise impacts from either the NOL Main Line or HSR are not anticipated.

3.4 Water Quality Impact

- 3.4.1 Assessment of water quality impacts has been conducted in accordance with the requirements in Annexes 6 and 14 of the EIAO-TM, as well as Section 3.4.5 and Appendix D of the EIA Study Brief. The assessment area covers 500 m from the

boundary of the Project Site which include Development Area and the associated infrastructure works, covering the Deep Bay Water Control Zone (WCZ) and the water sensitive receivers in the vicinity of the Project.

Construction Phase

- 3.4.2 Water quality impacts from the construction works are associated with the general construction activities, construction site run-off, sewage effluent from construction workforce, accidental spillage of chemicals, construction works in proximity of / in inland waters, removal / diversion of watercourses, removal / filling of ponds, groundwater from contaminated areas, contaminated site run-off and wastewater from land decontamination. Proper site management and good site practices are recommended to ensure that construction and demolition materials and other construction-related materials would not enter the nearby watercourses. Sewage effluent arising from the construction workforce would be handled through provision of adequate portable toilets. Water quality monitoring and regular site inspection will be implemented during the construction phase, as recommended in the EM&A Manual. With the implementation of the recommended mitigation measures, the construction works for the Project would not result in adverse impacts on water quality.

Operational Phase

- 3.4.3 All sewage generated from the Project will be discharged to the public sewerage system and diverted to San Tin Effluent Polishing Plant (EPP), and when necessary, to the Yuen Long EPP via the proposed SPS and Nam Sang Wai (NSW) SPS for proper treatment. To avoid emergency bypass to the maximum extent as far as practicable, various precautionary measures have been proposed for incorporation in the design of the SPS. Also, a Contingency Plan is recommended to be developed for dealing with the remote occurrence of emergency discharge. Hence, the possibility of sewage overflow would be remote and the associated adverse water quality impact would be minimised.
- 3.4.4 Another source of potential impact during the operational phase will be non-point source run-off from impervious areas. Stormwater control measures including adequate stormwater drainage system with suitable pollutant removal devices, blue-green infrastructure and best management practices are recommended for the Project to minimise the non-point source pollution. With proper implementation of the recommended mitigation measures, it is anticipated that the water quality impacts associated with the non-point source discharge would be minimised.

3.5 Sewerage and Sewage Treatment Implications

- 3.5.1 Assessment on sewerage and sewage treatment implications has been carried out in accordance with the criteria and guidelines outlined in Annexes 6 and 14 of the EIAO-TM, and the requirements given in Section 3.4.6 and Appendix E of the EIA Study Brief.
- 3.5.2 There is no existing sewerage system near and within the Development Area. An on-site SPS with a capacity of 44,875 m³/day is proposed to cater for the sewage generated from the Project including the operation of future NOL Main Line (i.e. 504 m³/day) and the existing villages (i.e. 4,000 m³/day) in initial stage. Subject to residual capacity of San Tin EPP, the collected sewage could be pumped from the proposed SPS to San Tin EPP for treatment.
- 3.5.3 Since there will be a potential shortfall in the long term for the sewage treatment capacity in San Tin EPP, possible mitigation measures could include providing another sewerage network to allow diversion of sewage from the proposed on-site

SPS to NSW SPS has been proposed, subject to detailed design in the next stage of the Project.

- 3.5.4 The sewage discharge from nearby existing villages would be increased from 4,000 m³/day to ultimately 15,000 m³/day at the proposed on-site SPS in the long term, subject to further review in later stage. As such, the proposed on-site SPS would be further upgraded from 44,875 m³/day to 55,875 m³/day when need arises.
- 3.5.5 Based on the findings of preliminary sewerage impact assessment, the proposed developments under the Project would be sustainable from sewerage collection, treatment and disposal prospective, and thus there would be no identified insurmountable sewerage and sewage treatment implications arising from the Project.

3.6 Waste Management Implications

- 3.6.1 Assessment on waste management implications have been conducted in accordance with the criteria and guidelines stated in Annexes 7 and 15 of the EIAO-TM, and the requirements given in Section 3.4.7 and Appendix F of the EIA Study Brief.

Construction Phase

- 3.6.2 Construction and demolition (C&D) materials, chemical wastes, general refuse, excavated sediment, desilted materials and floating refuse will be generated from the construction of the Project.
- 3.6.3 The C&D materials comprise both non-inert (e.g. topsoil, vegetation and wood waste) and inert (e.g. soft materials and artificial hard materials) materials. It is estimated that around 5,437 m³ of non-inert C&D materials and 1,422,222 m³ of inert materials will be generated from site clearance and site formation works, while those from construction of new buildings and infrastructures will be around 39,628 m³ and 356,649 m³ respectively. Reduction measures have been recommended to minimise the amount of materials generated by the Project through reuse of C&D materials where practicable before delivery to Public Fill Reception Facilities, subject to the designation by the Public Fill Committee for beneficial use, or off-site disposal at the North East New Territories (NENT) Landfill as the last resort. It is expected that approximately 566 kg of general refuse will be generated daily at the peak time during the construction period, while a total of approximately 91,200 m³ of excavated sediment and about 100 m³ desilted materials will be generated, as well as a few cubic metres of chemical wastes each month and insignificant amount of floating refuse. With the implementation of the recommended mitigation measures, no unacceptable environmental impacts arising from handling, storage, transportation and disposal of wastes are expected.

Operational Phase

- 3.6.4 The main waste types generated during the operational phase of the Project will include municipal solid waste, chemical waste, clinical waste and desilted materials. Two new RCPs and a Community Recycling Centre will be provided by the Project for convenient collection of recyclables from the local community, and to create synergy in achieving better operational efficiency and environmental sustainability. Provided that the waste is handled, stored, transported and disposed of using the approved methods, adverse waste management implications associated with handling, storage, transportation and disposal of wastes during the operational phase are not expected.

3.7 Land Contamination

- 3.7.1 Assessment on potential of land contamination has been conducted in accordance with the guidelines stated in Annex 19 of the EIAO-TM, as well as the requirements given in Section 3.4.8 and Appendix G of the EIA Study Brief.
- 3.7.2 Site appraisals, in the form of desktop review and site walkovers, had been carried out to identify the past and current potentially contaminating land uses within the Project Site. A total of 30 potentially contaminated sites and 16 sites suspected to be used for industrial purposes were identified within the Project Site (excluding the works sites / areas under the NOL Main Line project and the development area under the San Tin / Lok Ma Chau Development Node (STLMC DN) project).
- 3.7.3 Further land contamination assessments, including further site appraisal and submission of Contamination Assessment Plan(s), should be conducted for the whole Project Site at a later stage of the Project when site access is available to confirm the existing land uses / activities, identify the presence of any potential contamination sources, and address any new contamination issues. The associated site investigation works and any necessary remediation action are recommended to be carried out after operation of concerned site(s) has ceased and prior to the commencement of construction works.
- 3.7.4 With the implementation of the recommended follow up works for the Project, any soil/groundwater contamination would be identified and properly remediated prior to the construction works. No insurmountable land contamination impacts to the Project are therefore anticipated.

3.8 Ecological Implication (Terrestrial and Aquatic)

- 3.8.1 Ecological impact assessment for the Project has been conducted in accordance with the requirements in Annexes 8 and 16 of the EIAO-TM, as well as Section 3.4.9 and Appendix H of the EIA Study Brief. The assessment area includes the areas within 500 m from the boundary of Project Site.
- 3.8.2 A total of 13 habitat types, namely marsh/reed, pond, natural watercourse, modified watercourse, semi-natural watercourse, agricultural land, woodland, mixed woodland, plantation, shrubland, grassland, village/orchard and developed area/wasteland, were identified within the assessment area.
- 3.8.3 There are five recognised sites of conservation importance present within the assessment area, including LTCP, Conservation Areas (CAs), Wetland Conservation Area (WCA), WBA and Priority Site for Enhanced Conservation. Other ecologically sensitive resources identified within the assessment area include ponds, Other Specified Uses (Wetland Conservation Park) (OU(WCP)) and Other Specified Uses (Comprehensive Development and Wetland Protection Area). Apart from WBA, no recognised sites of conservation importance are located within the Project Site.
- 3.8.4 The ecological importance of recorded habitats within the Project Site was evaluated. Over 70% of the habitats within the Project Site were village/orchard and developed area/wasteland habitats, which were generally of low ecological value. NTMDC was evaluated with moderate ecological value considering its faunal diversity and abundance, number of recorded fauna species of conservation importance as well as the notable utilisation by avifauna as bird flight corridor within the Project Site. The woodland habitat within the assessment area was considered as moderate ecological value given the moderate to high abundance and richness

of wildlife recorded. Habitats including marsh/reed, ponds to the east of W8a and W8b (excluding concrete tanks/ponds covered by nets), natural watercourse, semi-natural watercourse (i.e. W8, W8a and W8b), agricultural land, mixed woodland, hillside plantation, shrubland, grassland and village/orchard were of low to moderate ecological value. Other habitats including other ponds, modified watercourses (excluding NTMDC), other semi-natural watercourses, other plantation and developed area/wasteland habitat were rated as low in terms of ecological value.

- 3.8.5 Direct impacts arising from the construction and operational phases of the Project include direct loss of habitats and vegetation, fragmentation of wooded area on Ngau Tam Shan, direct impact on species of conservation importance including flora and fauna species and bird collision. Avoidance, minimisation, mitigation and compensation measures, such as transplantation and translocation of species of conservation importance, incorporation of wildlife corridor and animal barriers design, pre-construction survey and nest control for White-throated Kingfisher, provision of screen hoardings and use of non-transparent or non-glaring materials as appropriate are recommended.
- 3.8.6 On the other hand, indirect impacts such as disturbance impact to recognised sites of conservation importance, ecologically sensitive resources and foraging ground as well as associated wildlife, night-time disturbance and potential water quality and hydrodynamics impact may be induced. Measures such as provision of screening, use of directional lighting, general good site practice and other noise, air and water quality mitigation measures are recommended. Moreover, the feasibility to adopt the Modular Integrated Construction (MiC) technology for the construction of connection of cycle track will also be explored in the detailed design stage.
- 3.8.7 Further enhancement measures including the proposed revitalisation works in NTMDC would enhance the ecological value of the drainage channel in the area. The revitalised NTMDC within the Project Site would integrate with flood control with blue-green infrastructure and recreational amenities. This multifunctional approach would enhance environmental sustainability and public enjoyment.
- 3.8.8 Considering that the multifunctional approach would inevitably introduce human disturbance and hydrological instability, it would not adequately support the ecological requirements of a wetland system. Adjacent sloped areas along the revitalised NTMDC pose challenges, as maintaining stable water levels for marsh/reed habitats would be costly, complex, and unsustainable due to erosion and run-off risks. Additionally, the presence of planned infrastructure and facilities would leave only small and fragmented landscape areas that lack of the ecological connectivity and sufficient scale in supporting effective wetland compensation. As such, a wetland compensation site situated adjacent to Kam Tin River has been identified for mitigating effectively the direct loss of total 2.55 ha marsh/reed and natural watercourse habitats with low to moderate impact significance under the Project.
- 3.8.9 With the implementation of the mitigation and enhancement measures, no unacceptable residual ecological impacts are anticipated to arise from the construction and operation of the Project.

3.9 Fisheries Impact

- 3.9.1 Assessment on fisheries impacts has been conducted in accordance with the requirements in Annexes 9 and 17 of the EIAO-TM, as well as Section 3.4.10 and Appendix I of the EIA Study Brief. The assessment area covers 500 m from the boundary of the Project Site.
- 3.9.2 Key fisheries resources within the assessment area include active fishponds situated at the southeastern and eastern parts of the assessment area near the NTMWTW, and quite a number of them were found to be utilised by non-edible ornamental fish cultivation such as Koi. Some inactive and abandoned fishponds were identified along both sides of NTMDC and Yau Tam Mei Tsuen within the Project Site. On the other hand, clusters of fishponds, including inactive and abandoned fishponds, were recorded at the northwest of the assessment area near Yau Mei San Tsuen and at the southwest near Man Yuen Chuen.
- 3.9.3 It is anticipated that the Project would result in a permanent loss of potential fisheries resources, including 4.08 ha active fishponds, 0.86 ha inactive fishponds and 2.41 ha abandoned fishponds, which comprise about 0.4%, less than 0.1% and 0.2% of fishponds areas in Hong Kong respectively. Given that the area involved is considered as low in terms of the overall fishpond areas in Hong Kong (i.e. less than 1% in total) and quite a number of the active fishponds were utilised for non-edible ornamental fish cultivation, the fisheries impact arising from the Project is therefore considered to be low.
- 3.9.4 Upon the implementation of the recommended measures, no adverse impact on fisheries resources is anticipated from the construction and operation of the Project.

3.10 Landscape and Visual Impact

- 3.10.1 Assessment on landscape and visual has been conducted in accordance with Annexes 10 and 18 of EIAO-TM, the requirements given in Section 3.4.11 and Appendix J of the EIA Study Brief. The assessment area for the landscape impact assessment covers 100 m from the boundary of the Project Site.
- 3.10.2 Among the approximate 19,000 nos. of existing trees within the Project Site Boundary, approximately 90% would be inevitably affected by the Project and would be removed or transplanted as far as practicable. For those trees surveyed within the assessment area but outside the Project Site, they would be retained in situ. One Registered Old and Valuable Tree (OVT) was identified outside and to the west of the Project Site, though within the assessment area. Among 109 nos. of trees of particular interest (TPIs) identified within the Project Site, 48 nos. are very large size with DBH equal or exceeding 1 m, while 61 nos. are protected species. A detailed TPRP will be prepared and submitted to CEDD's tree works vetting panel during the detailed design stage to finalize tree treatment.
- 3.10.3 As stipulated under DEVB TC(W) No. 4/2020, tree compensation in a ratio of 1:1 as far as possible is advisable, under the current development proposal under purview of CEDD, areas are mainly public roads and engineering infrastructure works. Future residential/ commercial sites and UniTown which are outside the purview of CEDD and thus not considered for tree compensation under this assessment. In view of the above, approximately 3,200 trees are proposed to be compensated within Project Site. The exact number and location are subject to the detailed design and construction stages of the Project, and areas within the Project Site and off-site areas for compensatory tree planting should be explored and negotiated with relevant project proponent(s) to achieve 1:1 ratio in compensatory tree planting number as far as practicable.

- 3.10.4 In terms of the landscape impact, Modified Watercourse (LR4) and Wasteland (LR14) would have beneficial residual impacts arising from the revitalisation of the major channel NTMDC and rationalisation of the scattered brownfield operations during operational phase respectively. Marsh / Reed (LR1), Pond (LR2), Natural Watercourse (LR3), Semi-natural Watercourse (LR5), Agricultural Land (LR6), Woodland (LR7), Mixed Woodland (LR8), Plantation (LR9), Grassland (LR11) and Village/ Orchard (LR12) would have moderate impact significance before completion of works. With the implementation of appropriate mitigation measures, such as tree compensation as far as practicable, reinstatement of affected landscaping area based on like-for-like basis and provision of buffer screen planting, greenery provision at planned open space and roof greening, it is considered that residual impacts on most of these LRs would be improved to slight at operational phase after the maturity of mitigation measures. Meanwhile, Shrubland (LR10) and Developed Area (LR13) would have slight impact significance due to the proposed development. It is assumed that residual impacts on these LRs would be improved to negligible during operational phase after the maturity/ completion of mitigation measures.
- 3.10.5 For the landscape character area (LCA), Miscellaneous Rural Fringe Landscape (LCA5) would have beneficial residual impacts due to the rationalisation of the scattered brownfield operations after the maturity / completion of mitigation measures during operational phase. Comprehensive Residential Development Landscape (LCA3) would be preserved in total, hence the significance threshold of impact is negligible. The majority of permanent works such as site formation and associated road works would be located within Settled Valley Landscape (LCA1). Hence, it is anticipated that the impact significance before mitigation would be substantial at construction. With the implementation of mitigation measures, the residual impact is anticipated to be reduced to moderate during the operational phase. A small portion of Upland Plateau Landscape (LCA2) of high sensitivity would be irreversibly and permanently affected, the residual impact is anticipated as moderate during the construction, and would be reduced to slight during operational phase after the maturity / completion of mitigation measures. Some proposed works such as constructing footbridges and slip roads within Rural Inland Plain Landscape (LCA4) and Transportation Corridor Landscape (LCA6) would slightly alter the existing landscape character, and there would be slight and negligible impact significance to these LCAs respectively. With the implementation of mitigation measures, the residual impact on these LCAs would be reduced to negligible during operational phase.
- 3.10.6 In terms of the visual impact, considering that the Project is relatively extensive in terms of development scale, it is anticipated that the existing visual context of the selected VPs would be affected inevitably in various levels.
- 3.10.7 For the VP7, given the relatively long viewing distance, a small portion of the proposed development would be visible to viewers, while the existing key visual elements remain unobstructed. Given the magnitude of visual change is expected to be slight, it is anticipated that the significance thresholds of visual impact after mitigation measures established would be slight. For the VP6, partial obstruction to the key visual elements is anticipated with high visual complementary to proposed developments, the magnitude of visual change is expected to be moderate, it is anticipated that the significance thresholds of visual impact after mitigation measures established would be moderate. However, at VP4, the proposed developments would inevitably block the majority of the valley village settlement in the middle ground and parts of distant mountain and open sky view in the background. As new urbanised visual context at Ngau Tam Shan, contrasting with the existing natural scenery, the magnitude of visual change is expected to be moderate. It is anticipated that the significance thresholds of visual impact after

mitigation measures established would be moderate. Given the medium viewing distance and elevated view at VP5A and VP5B, the proposed project would be visible panoramically with partial obstruction to existing continuous ridgeline. The significance thresholds of visual impact after mitigation measures established is anticipated to be moderate. For the VP1, VP2 and VP3 viewing to the proposed development at a short distance, the proposed development would be considered as the extension of existing urbanised area (i.e. San Tin Highway and village houses). Despite the preservation of visual amenities including vegetation in the foreground, a portion of the Ngau Tam Shan and open sky view would be blocked. Hence, it is expected there would be a moderate magnitude of change for VP1, VP2 and VP3. It is anticipated that the significance thresholds of visual impact after mitigation measures established would remain same at moderate respectively as the views mostly consist of development massing.

- 3.10.8 Considering the scale and nature of the Project, it would inevitably result in certain levels of landscape and visual impacts in relation to the loss of water bodies, woodlands and the views from hilltop. Efforts have been exhausted to ameliorate the potential visual impact of the Project as far as possible. There would be residual landscape impact arising from the revitalisation of a major modified drainage channel (i.e. NTMDC), rationalisation of the scattered brownfield operations, but the majority of the proposed developments is located within developed / wasteland / man-made re-creatable landscapes, while the residual visual impact is confined within the visual envelope involving few numbers of public viewers along footbridges, hiking trails and unmaintained paths viewing infrequently and in short durations. With the implementation of the proposed landscape mitigation measures, the overall amenity of the Project should contribute to its surrounding area and complementary to the surrounding proposed developments as an urban fringe landscape, the overall residual landscape impact would be ranging from beneficial to moderate during operational phase, and the overall significance thresholds of visual impact after mitigation measures established would range from slight to moderate, no unacceptable residual landscape and visual impacts with mitigation measures implemented are expected.

3.11 Impact on Cultural Heritage

- 3.11.1 Assessment on impact on cultural heritage has been conducted in accordance with relevant guidelines and the criteria stated in Annexes 10 and 19 of the EIAO-TM and the requirements given in Section 3.4.12 and Appendix K of the EIA Study Brief. The assessment area covers 300 m from the boundary of the Project Site.

Built Heritage

Construction Phase

- 3.11.2 Baseline study, comprising of desktop research and field evaluation, has identified ten graded historic buildings located within assessment area but outside the Project Site. No built heritage is located within the Project Site. No direct or indirect impact is anticipated on the built heritage within the assessment area.
- 3.11.3 Taking into account the public comments obtained during the PE, Wai Cheung Ancestral Hall is proposed to be preserved in situ allowing flexibility for future adaptive use within a planned open space. Subject to the detailed design in later stage, the former Yau Tam Mei Primary School is also proposed to be preserved in situ within UniTown for potential adaptive reuse.
- 3.11.4 A total of seven other identified items (i.e. DD104 Lot 4186 S.E (Residence); DD104 Lot 4187 S.B (Watchtower); Remnants of Nam Shan Monastery; Subsidiary Station of San Yau Vegetable Marketing Co-operative Society, Ltd.; Lee's

Boundary Stone; Mailbox No. 299 and the Grave of Mr. Man Chiu Pak and His Wife) located within the Project Site will be subject to direct impact due to demolition. Cartographic and photographic record, and other documentation means (including 3D scanning), should be carried out for these buildings/structures prior to the commencement of the construction works at the respective locations for record purposes and future use, while implementation details for the Grave of Mr. Man Chiu Pak and His Wife would be subject to discussion between project proponent(s) and stakeholders. If former Yau Tam Mei Primary School is confirmed to be demolished in subsequent stages, preservation by record should also be conducted for the school.

- 3.11.5 Potential indirect impacts of ground-borne vibration, settlement and tilting are anticipated during the construction phase for eight other identified items (i.e. Wai Cheung Ancestral Hall, San Yau Vegetable Marketing Co-operative Society, Ltd.; DD104 Lot 2729 (Residence); Nos. 16-17, San Wai Tsuen; No. 25A, San Wai Tsuen; Mailbox No. 35; Mailbox No. 169 and Chun Chi Education Park) and the former Yau Tam Mei Primary School (if preserved in situ) which are located within or in proximity to the Project Site. Standard control measures on ground-borne vibration, tilting and settlement should be implemented by the future contractor(s) for these other identified items.
- 3.11.6 Standard measures of condition survey should be conducted for Wai Cheung Ancestral Hall and the former Yau Tam Mei Primary School (if preserved in situ), before and after the construction works to aid the formation of monitoring proposal and confirm its structural stability respectively. A buffer zone, where no piling works are allowed, should be reserved by the project proponent or its contractor(s) according to the results of the pre-construction condition survey in the design layout of the Project for these buildings to minimise potential adverse vibration impact from construction works. Provision of physical barriers and protocol to forbid direct contact of construction machineries should also be enforced on them by the contractor(s) during construction phase.
- 3.11.7 Dust suppression measures and good site practice should also be adopted by the contractor(s) during the construction phase in order to avoid dust nuisance on Wai Cheung Ancestral Hall, San Yau Vegetable Marketing Co-operative Society, Ltd. and their users, which are located within or in proximity of the Project Site. A safe access route to these buildings should be maintained by the contractor(s) for conducting mitigation measures. If the former Yau Tam Mei Primary School is confirmed to be preserved in situ in subsequent stages, the abovementioned dust suppression measures and provision of safe access route should also be conducted for the school during the construction phase.
- 3.11.8 To ensure no direct disturbance would be caused to the physical fabrics of eight other identified items located in proximity to the Project Site, including San Yau Vegetable Marketing Co-operative Society, Ltd.; DD104 Lot 2729 (Residence); Nos. 16-17, San Wai Tsuen; No. 25A, San Wai Tsuen; Mailbox No. 35; Mailbox No. 169; Man's Boundary Stone and Chun Chi Education Park, project proponent(s), subsequent developer(s) and contractor(s) should be aware of them when construction works are carrying out nearby.
- 3.11.9 No impact is anticipated for the remaining built heritage and other identified items during the construction phase. Therefore, no mitigation measure is required.

Operational Phase

- 3.11.10 During operational phase, in response to comments obtained during the PE, Wai Cheung Ancestral Hall will be preserved in situ, while the former Yau Tam Mei

Primary School is also proposed to be preserved in situ subject to the future project proponent's consideration at detailed design stage. It is anticipated these other identified items could be utilised as part of their proposed land use, direct impact would be anticipated. Any revitalisation proposed for Wai Cheung Ancestral Hall and the former Yau Tam Mei Primary School in subsequent stages should be further reviewed with mitigation measures as appropriate by the future project proponent(s) or subsequent developer(s).

- 3.11.11 In view of no impact on built heritage and other identified items except the preserved in situ Wai Cheung Ancestral Hall and the possible preserved in situ the former Yau Tam Mei Primary School during the operational phase, mitigation measure is not required.

Archaeology

- 3.11.12 Based on the desktop review and the findings of previous archaeological surveys, the identified high archaeological potential areas located within the Project Site include Ngau Tam Mei Site of Archaeological Interest (SAI), Ngau Tam Mei Archaeologically Sensitive Area (ASA) and Ngau Tam Mei (North) ASA. Direct impact on archaeological heritage is anticipated during the construction phase.
- 3.11.13 Archaeological excavation is recommended to be conducted at the Project Site within Ngau Tam Mei SAI before commencement of works involving soil disturbance. Considering the potential direct impact to both Ngau Tam Mei ASA and Ngau Tam Mei (North) ASA having high archaeological potential, archaeological survey-cum-excavation at these ASAs is recommended. For the potential direct impact to both the low-lying agricultural fields and hilly landscape within the Project Site where possess moderate-low archaeological potential, archaeological survey is recommended. The recommended archaeological survey and excavation, subject to future land resumption status and discussion with AMO in later stages, aims to obtain adequate archaeological information of these areas for verifying their archaeological potential, and retrieve the archaeological data, if any, before commencement of works involving soil disturbance at the respective areas.
- 3.11.14 The low archaeological potential areas identified in the archaeological assessments of the EIA studies for NOL Main Line and STL MC DN within the Project Site is considered as having acceptable impact, while there would be no impact on archaeological heritage by the Project for the areas that have been disturbed heavily due to modern development and have no archaeological potential.
- 3.11.15 As a precautionary measure and pursuant to the A&MO, the project proponent is required to inform the AMO immediately in case of discovery of antiquities or supposed antiquities in the course of works, so that appropriate mitigation measures, if needed, can be timely formulated and implemented in agreement with and to the satisfaction of AMO.

3.12 Hazard to Life

- 3.12.1 Hazard to life arising from any existing hazardous facilities with their consultation zones that encroach upon the Project Site, as well as any planned hazardous facilities proposed by the Project have been reviewed according to the requirements outlined in Annex 4 of the EIAO-TM and Section 3.4.13 of the EIA Study Brief.
- 3.12.2 As advised by Water Supplies Department, there is no liquid chlorine storage in NTMWTW, which is situated at approximately 170 m east from the Development

Area. Therefore, NTMWTW is not considered as hazardous facility, and there would not be any hazards related to storage of liquid chlorine. According to the RODP, there are no planned hazardous facilities within the Development Area. Therefore, no hazard to life impact would be arisen from the operation of the Project.

3.13 Landfill Gas Hazard

- 3.13.1 Assessment on landfill gas hazard has been conducted in accordance with the criteria and guidelines as stated in Annexes 7 and 19 of the EIAO-TM, as well as Section 3.4.14 and Appendix M of the EIA Study Brief.
- 3.13.2 A small portion of the Project Site lies within the consultation zone of the closed and restored Ngau Tam Mei Landfill. Qualitative landfill gas hazard assessment classified the risk categories as “Very Low” during both construction and operational phases, and thus no mitigation measures are required. However, appropriate precautionary and protective measures have been proposed and should be considered to further minimise the landfill gas hazard.

3.14 Impact from Electric and Magnetic Field

- 3.14.1 Assessment on impact from electric and magnetic field has been conducted in accordance with the requirements outlined in Section 3.4.15 of the EIA Study Brief.
- 3.14.2 According to the RODP, the existing 400 kV overhead cables are situated near/at the southern and eastern portions of the Development Area. Based on the measurement results in the previous approved EIA studies, the electric field and electro-magnetic field generated by the existing 400 kV overhead cables, even at the area directly underneath the overhead cables, were only a few percent of the general public and occupational exposure standards, and are well below the stipulated limit in the International Commission on Non-Ionizing Radiation Protection (1998) guidelines. Hence, it is expected that the existing 400 kV overhead cables located within / in the vicinity of the Development Area would not pose adverse impact on the proposed developments of the Project.

4 ENVIRONMENTAL MONITORING AND AUDIT

- 4.1.1 The EIA study of the Project has demonstrated its compliance with the EIAO-TM requirements. Actual impacts during the construction works will be monitored through a detailed EM&A programme. Full details of the programme are presented in a separate EM&A Manual associated with the EIA Report. The EM&A programme will provide management actions and detail the recommended mitigation measures to check the effectiveness of the recommended mitigation measures and compliance with relevant statutory criteria, thereby ensuring the environmental acceptability of the construction and operation of the Project.

5 SUMMARY OF ENVIRONMENTAL OUTCOMES

5.1.1 The EIA study of the Project has provided an assessment of the potential environmental impacts associated with the construction and operation of the Project, based on the engineering design information available at this stage. The key environmental outcomes are summarised in **Table 5.1**.

Table 5.1 Summary of Key Environmental Issues Avoided/Minimised and Sensitive Areas Protected

Design Approaches	Environmental Issues Avoided/Minimised and Sensitive Areas Protected
Avoidance of Impact on Sites of Conservation Importance	<ul style="list-style-type: none"> Encroachment of LTCP, CA, WCA, Priority Site for Enhanced Conservation and OU(WCP) have been avoided.
Avoidance/Minimisation of Ecological Impact on Pond Habitat	<ul style="list-style-type: none"> Impact to the ponds which are considered to have moderate ecological value, to the west of San Tin Highway have been avoided.
Incorporation of Wildlife Corridor and Animal Barriers Design	<ul style="list-style-type: none"> Incorporation of wildlife corridor and animal barriers design will be adopted during the detailed design of the proposed road connection to/from STT to mitigate habitat fragmentation and maintain the movement access for non-flying mammals including species of conservation importance.
Preservation of Natural Habitats	<ul style="list-style-type: none"> Sites GB.1 and GB.2 have been retained in the RODP such that the loss of natural habitats and the associated flora species of conservation importance could be avoided.
Revitalisation of NTMDC	<ul style="list-style-type: none"> NTMDC will be revitalised to serve as green buffer, enhancing biodiversity as well as the overall ecological value.
Avoidance of Impact from the Existing Odour Sources (i.e. chicken farms, LBF and TMB STP)	<ul style="list-style-type: none"> The planned ASRs have been proposed to be situated away from existing odour sources. Height restriction of air sensitive uses including openable window, fresh air intake and recreational use in open space at concerned sites that fall within odour exceedance zone has been proposed.
Clearing of Existing Odour Sources	<ul style="list-style-type: none"> A chicken farm within the Project Site will be removed to minimise the odour impact to the planned ASRs under the Project.
Provision of Sustainable Transport Infrastructure to Promote Low-carbon Living	<ul style="list-style-type: none"> Pedestrian-friendly environment and robust cycling network has been proposed in the RODP to promote walkability and cycling for low-carbon living.
Proper Design of TIH and PTT	<ul style="list-style-type: none"> Operational fixed noise impacts from the proposed TIH and PTT to NSRs are avoided.
Provision of Direct Road Traffic Noise Mitigation Measures	<ul style="list-style-type: none"> NSRs will be protected to achieve the statutory road traffic noise requirement through adoption of direct noise mitigation measures such as provision of LNRS, absorptive type noise barriers, and acoustic windows/balconies or acoustic windows/balconies lined with sound absorptive material.
Preservation of Points of Local Historical Interests	<ul style="list-style-type: none"> Local resources such as Wai Cheung Ancestral Hall and former Yau Tam Mei Primary School will

Design Approaches	Environmental Issues Avoided/Minimised and Sensitive Areas Protected
	<p>be preserved in situ within the Project Site in the RODP.</p> <ul style="list-style-type: none"> Flexibility for potential adaptive reuse of building structures by future project proponents of UniTown is also allowed in the RODP for former Yau Tam Mei Primary School.
Implementation of an EM&A Programme during Construction and Operational Phases	<ul style="list-style-type: none"> To ensure that all the recommended measures are in place.

6 CONCLUSION

- 6.1.1 The findings of the EIA provided information on the nature and extent of the environmental impacts likely to arise from the construction and operation of the Project. The EIA has, where appropriate, identified mitigation measures to ensure compliance with environmental legislation and standards. The summary of the environmental impacts arising from the Project is presented in **Table 6.1**.
- 6.1.2 Overall, the EIA concluded that the Project would comply with the requirements of the EIA SB and EIAO-TM with the implementation of the proposed mitigation measures during the construction and operational phases. The schedule of implementation of the proposed mitigation measures has been provided in the EIA Report. An EM&A programme has also been recommended to check the effectiveness of the proposed mitigation measures.

Table 6.1 Summary of Environmental Impacts

Sensitive Receivers / Assessment Points	Impact Prediction Results (Without Mitigation)	Key Relevant Standards/Criteria	Extents of Exceedance Predicted (Without Mitigation)	Impact Avoidance Measures / Mitigation Measures	Residual Impacts (After Implementation of Mitigation Measures)
Air Quality Impact					
Construction Phase					
<ul style="list-style-type: none"> Representative existing and proposed residential, educational institution, commercial developments and government uses within 500 m from the boundary of the Project Site 	<p>Potential dust impact from the construction works of the Project would mainly be related to the construction activities of excavation, material handling, spoil removal and wind erosion. Construction activities of the concurrent projects within 500 m assessment area would also pose cumulative construction dust impact.</p>	<ul style="list-style-type: none"> Air Quality Objectives <ul style="list-style-type: none"> <u>RSP</u> <ul style="list-style-type: none"> 24-hr average conc.: 75 µg/m³ (Number of exceedances allowed: 9) Annual average conc.: 30 µg/m³ <u>FSP</u> <ul style="list-style-type: none"> 24-hr average conc.: 37.5 µg/m³ (Number of exceedances allowed: 18) Annual average conc.: 15 µg/m³ Annexes 4 and 12 of the EIAO-TM 	<ul style="list-style-type: none"> N/A 	<p>Air quality control measures stipulated in <i>Air Pollution Control (Construction Dust) Regulation</i> and good site practices listed below should be carried out to further minimise construction air quality impact:</p> <ul style="list-style-type: none"> Regular watering to reduce dust emissions from exposed site surfaces and unpaved roads, particularly during dry weather; Frequent watering for particularly dusty construction areas and areas close to ASRs; Provide side enclosure and covering of any aggregate or dusty material storage piles to reduce emissions. Where this is not 	<ul style="list-style-type: none"> No residual impacts anticipated

Sensitive Receivers / Assessment Points	Impact Prediction Results (Without Mitigation)	Key Relevant Standards/Criteria	Extents of Exceedance Predicted (Without Mitigation)	Impact Avoidance Measures / Mitigation Measures	Residual Impacts (After Implementation of Mitigation Measures)
				<p>practicable owing to frequent usage, watering shall be applied to aggregate fines;</p> <ul style="list-style-type: none"> • For the works sites close to the ASRs with a separation distance less than 10 m, provide hoardings of not less than 3.5 m high from ground level along the site boundary; for the other works sites in general, provide hoarding of not less than 2.4 m high from ground level along site boundary except for site entrance or exit; • Avoid positioning material stockpiling areas, major haul roads and dusty works within the construction site close to concerned ASRs; • Avoid unnecessary exposed earth; • Locate all the dusty activities away from 	

Sensitive Receivers / Assessment Points	Impact Prediction Results (Without Mitigation)	Key Relevant Standards/Criteria	Extents of Exceedance Predicted (Without Mitigation)	Impact Avoidance Measures / Mitigation Measures	Residual Impacts (After Implementation of Mitigation Measures)
				<p>any nearby ASRs as far as practicable;</p> <ul style="list-style-type: none"> • Open stockpiles shall be avoided or covered. Where possible, prevent placing dusty material storage piles near ASRs; • Tarpaulin covering of all dusty vehicle loads transported to, from and between site locations; • Establishment and use of vehicle wheel and body washing facilities at the exit points of the site; • Where possible, routing of vehicles and positioning of construction plant should be at the maximum possible distance from ASRs; • Imposition of speed controls for vehicles on site haul roads; and • Instigation of an EM&A program with continuous 	

Sensitive Receivers / Assessment Points	Impact Prediction Results (Without Mitigation)	Key Relevant Standards/Criteria	Extents of Exceedance Predicted (Without Mitigation)	Impact Avoidance Measures / Mitigation Measures	Residual Impacts (After Implementation of Mitigation Measures)
				<p>construction dust monitoring to monitor the construction process in order to enforce controls and modify method of work if dusty conditions arise.</p> <p>Guidelines stipulated in EPD's <i>Recommended Pollution Control Clauses for Construction Contracts</i> should be incorporated in the contract document to abate dust impacts.</p> <p>Timely application of temporary electricity and water supply should be made and electric vehicles should be adopted as far as practicable.</p> <p>To minimise the exhaust emissions from NRMMS during the construction phase, the following measures should be</p>	

Sensitive Receivers / Assessment Points	Impact Prediction Results (Without Mitigation)	Key Relevant Standards/Criteria	Extents of Exceedance Predicted (Without Mitigation)	Impact Avoidance Measures / Mitigation Measures	Residual Impacts (After Implementation of Mitigation Measures)
				applied as far as practicable: <ul style="list-style-type: none"> Connect construction plant and equipment to main electricity supply and avoid use of diesel generators and diesel-powered equipment; Avoid exempted NRMMS; and Deploy electrified NRMMS. 	
Operational Phase					
<ul style="list-style-type: none"> Representative existing and proposed residential, educational institution, commercial developments and government uses within 500 m from the boundary of the Project Site 	Year 2034 <u>RSP</u> <ul style="list-style-type: none"> 10th highest 24-hr average conc: 51 – 55 µg/m³ Annual average: 20 – 21 µg/m³ <u>FSP</u> <ul style="list-style-type: none"> 19th highest 24-hr average conc: 30 – 33 µg/m³ Annual average: 12 – 14 µg/m³ <u>NO₂</u>	<ul style="list-style-type: none"> Air Quality Objectives <u>RSP</u> <ul style="list-style-type: none"> 24-hr average conc.: 75 µg/m³ (Number of exceedances allowed: 9) Annual average conc.: 30 µg/m³ <u>FSP</u> <ul style="list-style-type: none"> 24-hr average conc.: 37.5 µg/m³ (Number of exceedances allowed: 18) Annual average conc.: 15 µg/m³ <u>NO₂</u>	<ul style="list-style-type: none"> No exceedance was predicted 	<ul style="list-style-type: none"> No mitigation measure is required 	<ul style="list-style-type: none"> No residual impacts anticipated

Sensitive Receivers / Assessment Points	Impact Prediction Results (Without Mitigation)	Key Relevant Standards/Criteria	Extents of Exceedance Predicted (Without Mitigation)	Impact Avoidance Measures / Mitigation Measures	Residual Impacts (After Implementation of Mitigation Measures)
	<ul style="list-style-type: none"> 19th highest hourly average conc.: 55 – 114 µg/m³ 10th highest 24-hr average conc.: 20 – 47 µg/m³ Annual average conc.: 10 – 25 µg/m³ <p><u>SO₂</u></p> <ul style="list-style-type: none"> 4th highest 10-minute average conc: 27 – 30 µg/m³ 4th highest 24-hour average conc: 7 µg/m³ 	<ul style="list-style-type: none"> 1-hr average conc.: 200 µg/m³ (Number of exceedances allowed: 18) 24-hr average conc.: 120 µg/m³ (Number of exceedances allowed: 9) Annual average conc.: 40 µg/m³ Annexes 4 and 12 of the EIAO-TM 			
	<p><u>Odour Impact</u></p> <p><5 OU/m³ for the maximum 5-second average odour concentrations at most of the representative ASRs, except some planned ASRs at Sites OU(RDCRD).1, OU(RDPOS).1, G.5, G.6 and G.13.</p> <p>Odour exceedance zones were also found at Sites OU(RDCRD).1,</p>	<ul style="list-style-type: none"> 5 odour units based on an averaging time of 5 seconds 	<ul style="list-style-type: none"> Odour exceedances were predicted at some planned ASRs at Sites OU(RDCRD).1, OU(RDPOS).1, G.5, G.6 and G.13. Odour exceedance zones were found at Sites OU(RDCRD).1, OU(RDPOS).1, G.5, G.6 and G.13. 	<p><u>Proposed SPS</u></p> <ul style="list-style-type: none"> Full enclosure of odour sources of the proposed SPS with negative pressure to prevent leakage of odorous air and provision of odour removal system with odour removal efficiency of at least 95% (>99.5% removal for H₂S) at the ventilation exhaust to control the potential odour emission. 	<ul style="list-style-type: none"> No adverse residual odour impact anticipated.

Sensitive Receivers / Assessment Points	Impact Prediction Results (Without Mitigation)	Key Relevant Standards/Criteria	Extents of Exceedance Predicted (Without Mitigation)	Impact Avoidance Measures / Mitigation Measures	Residual Impacts (After Implementation of Mitigation Measures)
	OU(RDPOS).1, G.5, G.6 and G.13.			<ul style="list-style-type: none"> The exhaust of the deodouriser of the proposed SPS should be designed to be located furthest away and pointing away from any ASRs as far as practicable to further minimize any odour impact on the vicinity ASRs. <p><u>LBF</u></p> <ul style="list-style-type: none"> Prior to the population intake of the Proposed Development at OU (RDCRD).1, OU(RDPOS).1 and the proposed G/IC at G.5 and G.13, the following mitigation measures should be incorporated by Food and Environmental Hygiene Department as the licensing conditions after taking into account expert advice of EPD during the annual renewal of the offensive trade license for implementation: 	

Sensitive Receivers / Assessment Points	Impact Prediction Results (Without Mitigation)	Key Relevant Standards/Criteria	Extents of Exceedance Predicted (Without Mitigation)	Impact Avoidance Measures / Mitigation Measures	Residual Impacts (After Implementation of Mitigation Measures)
				<ul style="list-style-type: none"> - Proper storage, transport and handling of raw materials; - Good housekeeping; - Full enclosure of all odour emission sources of LBF except the Cracklings Storage Area (CSA), including Unloading and Storage Area of Raw Materials, Processing Areas and Lard Boilers, and all these fully enclosed areas shall be maintained under negative pressure; and - Provision of deodouriser(s) (biofilters or other appropriate deodourizing equipment with the odour removal efficiency of at least 95%) to treat all odourous air from the fully enclosed 	

Sensitive Receivers / Assessment Points	Impact Prediction Results (Without Mitigation)	Key Relevant Standards/Criteria	Extents of Exceedance Predicted (Without Mitigation)	Impact Avoidance Measures / Mitigation Measures	Residual Impacts (After Implementation of Mitigation Measures)
				<p>sources before discharging into the atmospheric environment.</p> <p><u>NDA Planning</u></p> <ul style="list-style-type: none"> • Proper planning on the location of air sensitive uses at Site G.6 should be adopted such that no air sensitive use, including openable window, fresh air intake and recreational use in open space, below 15 mAG within the odour exceedance zone. • Proper planning on the location of air sensitive uses at Sites (OU(RDCRD).1 and G.13 should be adopted such that no air sensitive use, including openable window, fresh air intake and recreational use in open space, should be located below 25 mAG and 20 mAG respectively 	

Sensitive Receivers / Assessment Points	Impact Prediction Results (Without Mitigation)	Key Relevant Standards/Criteria	Extents of Exceedance Predicted (Without Mitigation)	Impact Avoidance Measures / Mitigation Measures	Residual Impacts (After Implementation of Mitigation Measures)
				within the odour exceedance zones. • No future air sensitive uses of the proposed development shall be situated within the exceedance zones.	
Noise Impact					
Construction Phase					
<ul style="list-style-type: none"> Representative existing and planned domestic premises, educational institutions, places of public worship, barracks and noise sensitive temporary structures within 300 m from the boundary of the Project Site that rely on opened windows for ventilation. 	Potential adverse construction noise impact to existing or planned NSRs within 300 m from the boundary of the Project Site due to construction works from the Project	<ul style="list-style-type: none"> Annexes 5 and 13 of the EIAO-TM Leq_(30 min) 75 dB(A) at all domestic premises, temporary housing accommodation, hostels, convalescent homes and home for the aged Leq_(30 min) 70 dB(A) at places of public worship, courts of law, hospitals and medical clinics and educational institutions (including kindergartens and nurseries) (with criterion of 65 dB(A) during examinations) 	N/A	<ul style="list-style-type: none"> Good site practice <ul style="list-style-type: none"> Only well-maintained PME to be operated on-site and should be serviced regularly. Silencers or mufflers on construction equipment should be utilised and should be properly maintained. Mobile plant, if any, should be sited as far away from NSRs as possible. Machines and plant that may be in intermittent use should be shut 	<ul style="list-style-type: none"> No adverse residual impacts anticipated

Sensitive Receivers / Assessment Points	Impact Prediction Results (Without Mitigation)	Key Relevant Standards/Criteria	Extents of Exceedance Predicted (Without Mitigation)	Impact Avoidance Measures / Mitigation Measures	Residual Impacts (After Implementation of Mitigation Measures)
				<p>down between work periods or should be throttled down to a minimum.</p> <ul style="list-style-type: none"> - Plant known to emit noise strongly in one direction should, where possible, be orientated to direct noise away from the nearby NSRs. - Material stockpiles and other structures should be effectively utilised in screening noise from on-site construction activities. • Use of Quality Powered Mechanical Equipment and quieter construction method • Use of temporary movable noise barriers / noise insulating fabric / noise enclosure 	
Operational Phase					

Sensitive Receivers / Assessment Points	Impact Prediction Results (Without Mitigation)	Key Relevant Standards/Criteria	Extents of Exceedance Predicted (Without Mitigation)	Impact Avoidance Measures / Mitigation Measures	Residual Impacts (After Implementation of Mitigation Measures)
<ul style="list-style-type: none"> Representative existing and planned residential uses, educational institutions, places of public worship, barracks, noise sensitive temporary structures and planned residential developments within 300 m from the boundary of the Project Site that rely on opened windows for ventilation (for airborne noise impact assessments only). 	<p><u>Road Traffic Noise Impact</u></p> <ul style="list-style-type: none"> Predicted overall noise levels: up to 84 dB(A) Predicted road traffic noise levels of Project roads: up to 76 dB(A) <p><u>Fixed Noise Sources Impact</u></p> <ul style="list-style-type: none"> Adverse fixed noise impact is not anticipated due to proposed fixed noise sources with good design and mitigation measures, and EM&A. <p><u>Airborne Rail Noise Impact</u></p> <ul style="list-style-type: none"> No adverse airborne rail noise impact is anticipated <p><u>Ground-borne Rail Noise Impact</u></p> <ul style="list-style-type: none"> No adverse ground-borne rail noise impact is anticipated 	<p><u>Road Traffic Noise Impact</u></p> <ul style="list-style-type: none"> Annexes 5 and 13 of the EIAO-TM Calculation of Road Traffic Noise (1988) by Department of Transport, UK EIAO-GN 12/2023 L_{10(1 hour)} 70 dB(A) at 1 m from the façade of residential dwellings / noise sensitive temporary structures L_{10(1 hour)} 65 dB(A) at 1 m from the façade of educational institutions and places of public worship <p><u>Fixed Noise Sources Impact</u></p> <ul style="list-style-type: none"> Annexes 5 and 13 of the EIAO-TM Appropriate ANL-5 dB(A) as shown in Table 2 of IND-TM or the prevailing background noise level <p><u>Airborne Rail Noise</u></p> <ul style="list-style-type: none"> Annexes 5 and 13 of the EIAO-TM Table 2 of IND-TM <p><u>Ground-borne Rail Noise</u></p> <ul style="list-style-type: none"> Annexes 5 and 13 of the EIAO-TM Appropriate ANL-10 dB(A) as shown in Table 2 of IND-TM 	<p><u>Road Traffic Noise Impact</u></p> <ul style="list-style-type: none"> Exceedance of the noise criteria by up to 14 dB(A) <p><u>Fixed Noise Sources Impact</u></p> <ul style="list-style-type: none"> No exceedance predicted. <p><u>Airborne Rail Noise Impact</u></p> <ul style="list-style-type: none"> No exceedance predicted. <p><u>Ground-borne Rail Noise Impact</u></p> <ul style="list-style-type: none"> No exceedance predicted. 	<p><u>Road Traffic Noise Impact</u></p> <ul style="list-style-type: none"> Provision of low noise road surfacing (LNRS) Provision of absorptive type vertical barrier and cantilevered noise barriers on concerned Project road sections Provision of at-receiver mitigation measures such as acoustic windows / balconies or acoustic windows / balconies lined with sound absorptive material <p><u>Fixed Noise Sources Impact</u></p> <ul style="list-style-type: none"> All the pumps and noisy plants should be enclosed inside the building structure where practicable Proper selection of quiet plant aiming to reduce the tonality at NSRs Installation of silencer/acoustic enclosure/acoustic 	<ul style="list-style-type: none"> No adverse residual impacts anticipated.

Sensitive Receivers / Assessment Points	Impact Prediction Results (Without Mitigation)	Key Relevant Standards/Criteria	Extents of Exceedance Predicted (Without Mitigation)	Impact Avoidance Measures / Mitigation Measures	Residual Impacts (After Implementation of Mitigation Measures)
				<p>louvre for the exhaust of ventilation system</p> <ul style="list-style-type: none"> • Openings of ventilation systems should be located away from NSRs as far as practicable • Implement noise reduction measures at the proposed fire station and ambulance depot, as recommended in the Hong Kong Fire Services Department Environmental Report 2017 and Preliminary Environmental Review Report for Proposed Fire Station cum Ambulance Depot with Department Quarters at On Yu Road, Anderson Road Quarry Development Area <p><u>Airborne Rail Noise</u></p> <ul style="list-style-type: none"> • N/A <p><u>Ground-borne Rail Noise</u></p> <ul style="list-style-type: none"> • N/A 	
Water Quality Impact					

Sensitive Receivers / Assessment Points	Impact Prediction Results (Without Mitigation)	Key Relevant Standards/Criteria	Extents of Exceedance Predicted (Without Mitigation)	Impact Avoidance Measures / Mitigation Measures	Residual Impacts (After Implementation of Mitigation Measures)
Construction Phase					
<ul style="list-style-type: none"> Representative water sensitive receivers in the vicinity of the Project and within 500 m from the boundary of the Project, covers the Deep Bay WCZ as designated under the WPCO 	The potential sources of water quality impacts arising from the inland construction works include: <ul style="list-style-type: none"> General construction activities such as site clearance works, demolition works and site formation works; Construction site run-off; Sewage effluent from construction workforce; Accidental spillage of chemicals; Construction works in close proximity of inland waters; Construction works in inland waters; Removal / diversion of watercourses; Removal / filling of ponds; and Groundwater from contaminated areas, contaminated site 	<ul style="list-style-type: none"> Annexes 6 and 14 of the EIAO-TM Water Quality Objectives for the Deep Bay WCZ Technical Memorandum on Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters (DSS-TM) Practical Note for Professional Persons Practice Note (ProPECC PN) 1/23 and 2/24 Environmental, Transport and Works Bureau (ETWB) Technical Circular (Works) No. 5/2005 Hong Kong Planning Standards and Guidelines (HKPSG) 	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> Mitigation measures and good site practices in ProPECC PN 2/24 <i>Construction Site Drainage</i> Provision of temporary sanitary facilities, such as portable chemical toilets, for construction workforce Waste Disposal Ordinance Waste Disposal (Chemical Waste) (General) Regulation Precaution measures in ETWB Technical Circular (Works) No. 5/2005 Provision of dry zone for all the construction works to be undertaken in watercourses and stormwater drainage Proper treatment to wastewater and ingress water from the site in compliance with 	<ul style="list-style-type: none"> No adverse residual impacts anticipated

Sensitive Receivers / Assessment Points	Impact Prediction Results (Without Mitigation)	Key Relevant Standards/Criteria	Extents of Exceedance Predicted (Without Mitigation)	Impact Avoidance Measures / Mitigation Measures	Residual Impacts (After Implementation of Mitigation Measures)
	run-off and wastewater from land decontamination			WPCO before discharge <ul style="list-style-type: none"> Construction works at the existing ponds only after fully completion of dewatering Proper treatment or recharge of contaminated groundwater in compliance with the DSS-TM Emergency Response Plan 	
Operational Phase					
<ul style="list-style-type: none"> Representative water sensitive receivers in the vicinity of the Project and within 500 m from the boundary of the Project, covers the Deep Bay WCZ as designated 	The potential sources of water quality impacts arising from the operational phase include: <ul style="list-style-type: none"> Non-point source surface run-off from new impervious areas; Sewage disposal strategy for the new developments; 	<ul style="list-style-type: none"> Annexes 6 and 14 of the EIAO-TM Water Quality Objectives for the Deep Bay WCZ DSS-TM HKPSG ETWB TC (Works) No. 14/2004 DSD Practice Note No. 4/2022 <i>Guidelines on Water Harvesting</i> ProPECC PN 1/23 	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> Practices in ProPECC PN 1/23 DSD <i>Stormwater Drainage Manual (5th Edition)</i> ETWB TC (Works) No. 14/2004 <i>Maintenance of Stormwater Drainage Systems and Natural Watercourses</i> 	<ul style="list-style-type: none"> No adverse residual impacts anticipated

Sensitive Receivers / Assessment Points	Impact Prediction Results (Without Mitigation)	Key Relevant Standards/Criteria	Extents of Exceedance Predicted (Without Mitigation)	Impact Avoidance Measures / Mitigation Measures	Residual Impacts (After Implementation of Mitigation Measures)
under the WPCO	<ul style="list-style-type: none"> • Revitalisation and greening of drainage channel banks; • Sewage overflow and emergency discharge from the proposed SPS; • Potential impact from refuse collection points; • Potential flood risk; and • Change in flow regime and hydrology. 	<ul style="list-style-type: none"> • Guidelines for the Design of Small Sewage Treatment Plant 		<ul style="list-style-type: none"> • DSD Practice Note No. 4/2022 <i>Guidelines on Water Harvesting</i> • Stormwater Pollution Control Plan • Provision of a sewerage network to allow diversion of sewage from the proposed on-site SPS to San Tin EPP and, when necessary, Yuen Long EPP via the proposed on-site SPS and Nam Sang Wai SPS respectively for the sewage treatment, subject to detailed design stage • Provision of backup power for dual power supply in case of power failure to sustain the function of pumping and treatment facilities at the SPS • Provision of standby unit for all major equipment in case of break down / emergency at the SPS 	

Sensitive Receivers / Assessment Points	Impact Prediction Results (Without Mitigation)	Key Relevant Standards/Criteria	Extents of Exceedance Predicted (Without Mitigation)	Impact Avoidance Measures / Mitigation Measures	Residual Impacts (After Implementation of Mitigation Measures)
				<ul style="list-style-type: none"> Regular maintenance and checking of plant equipment Contingency Plan Provision of sedimentation facilities, petrol interceptors or other appropriate wastewater treatment system to treat the wastewater or surface run-off Screening facilities in drainage system to prevent substances present in stormwater run-off 	
Sewerage and Sewage Treatment Implications					
<ul style="list-style-type: none"> Existing and planned sewerage system, sewage treatment and disposal facilities 	<ul style="list-style-type: none"> Increase in sewage discharge arising from the Project Potential odour impact from the proposed SPS 	<ul style="list-style-type: none"> EPD's Guidelines for Estimating Sewage Flows for Sewerage Infrastructure Planning Version 1.0 Annexes 6 and 14 of EIAO-TM 	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> Non-dosing solutions should be considered in prior to dosing solutions Sewage septicity control measures such as direct injection of oxygen into the rising mains and pre-aeration in the wet well of the proposed 	<ul style="list-style-type: none"> N/A

Sensitive Receivers / Assessment Points	Impact Prediction Results (Without Mitigation)	Key Relevant Standards/Criteria	Extents of Exceedance Predicted (Without Mitigation)	Impact Avoidance Measures / Mitigation Measures	Residual Impacts (After Implementation of Mitigation Measures)
				<p>SPS should be adopted</p> <ul style="list-style-type: none"> • Enclose the proposed SPS inside a building structure with odour control measures such as scrubber and activated charcoal filter at the exhaust of the ventilation system • Vent should be located away from both existing and planned air sensitive uses as far as practicable • Provide a sewerage network to allow diversion of sewage from the proposed on-site SPS to San Tin EPP and, when necessary, Yuen Long EPP via the proposed on-site SPS and Nam Sang Wai SPS for the sewage treatment, subject to detailed design stage 	

Sensitive Receivers / Assessment Points	Impact Prediction Results (Without Mitigation)	Key Relevant Standards/Criteria	Extents of Exceedance Predicted (Without Mitigation)	Impact Avoidance Measures / Mitigation Measures	Residual Impacts (After Implementation of Mitigation Measures)
Waste Management Implications					
Construction Phase					
<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> Around 5,437 m³ of non-inert C&D materials and 1,422,222 m³ of inert C&D materials will be generated from site clearance and site formation works Around 39,628 m³ of non-inert C&D materials and 356,649 m³ of inert C&D materials will be generated from construction of new buildings and infrastructures Chemical wastes generated from building demolition, plant operation and maintenance of mechanical equipment would be a few cubic metres per month; the total amount of asbestos containing material to be generated will 	<ul style="list-style-type: none"> Annexes 7 and 15 of the EIAO-TM Waste Disposal Ordinance (Cap. 354) Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354C) Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N) Land (Miscellaneous Provisions) Ordinance (Cap. 28) Public Health and Municipal Services Ordinance (Cap. 132BK) – Public Cleansing and Prevention of Nuisances Regulation Air Pollution Control Ordinance (APCO) Project Administration Handbook (PAH) for Civil Engineering Works ETWB TC(W) No. 19/2005 on Environmental Management on Construction Site DEVB TC(W) No. 4/2020 “Tree Preservation” 	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> Implementation of good site practices, waste reduction measures and proper storage, collection and transport of waste Careful design, planning and good site management to reduce generation of C&D materials Monitoring of disposal of C&D waste with trip-ticket system and installing CCTV on site Sorting of yard waste for recycling and reuse on-site Precautionary measures for handling and disposal of asbestos containing materials Chemical waste should be stored in appropriate containers and collected by a 	<ul style="list-style-type: none"> No adverse residual impact anticipated

Sensitive Receivers / Assessment Points	Impact Prediction Results (Without Mitigation)	Key Relevant Standards/Criteria	Extents of Exceedance Predicted (Without Mitigation)	Impact Avoidance Measures / Mitigation Measures	Residual Impacts (After Implementation of Mitigation Measures)
	<p>be verified prior to construction stage</p> <ul style="list-style-type: none"> • Around 566 kg per day of general refuse will be generated from construction works and site-based staff and workers • Around 91,200 m³ of excavated sediment from pond excavation works • Up to 100 m³ of desilted materials from desilting works during revitalisation of NTMDC • Insignificant amount of floating refuse from construction activities along river channels or water bodies 	<ul style="list-style-type: none"> • Relevant guidelines on handling of yard waste on EPD's website (https://www.epd.gov.hk/epd/english/environmentinhk/waste/manage_facility/ypark.html) and Y-Park's website (https://www.ypark.hk/zh-hant/) • The Greening, Landscape and Tree Management Section of the Development Bureau <i>Guidelines on Yard Waste Reduction and Treatment</i> 		<p>licensed chemical waste contractor.</p> <ul style="list-style-type: none"> • Education programme and clearly labelling recycling bins to encourage segregation and recycling of aluminium, plastic wastes and wastepaper and reduce general refuse production • All excavated sediment will be treated and reused on-site as backfilling materials for the Project • The desilted materials should be handled by the Contractor using standard good practices before transporting for disposal • Removing floating materials and eventually storing and disposing of together with the general refuse, after 	

Sensitive Receivers / Assessment Points	Impact Prediction Results (Without Mitigation)	Key Relevant Standards/Criteria	Extents of Exceedance Predicted (Without Mitigation)	Impact Avoidance Measures / Mitigation Measures	Residual Impacts (After Implementation of Mitigation Measures)
				separating the recyclables for recycling	
Operational Phase					
<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> Around 138.7 tonnes per day of municipal solid waste A few cubic metres per month of chemical wastes will be generated from public facilities operation, maintenance of facilities and equipment, and laboratory testing in the Integrated Hospital Around 1,000 kg per day of clinical waste About 100 m³ of desilted materials per time of desilting works during maintenance of the revitalised NTMDC 	<ul style="list-style-type: none"> Annexes 7 and 15 of the EIAO-TM Waste Disposal Ordinance (Cap. 354) Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354C) Public Health and Municipal Services Ordinance (Cap. 132BK) – Public Cleansing and Prevention of Nuisances Regulation Code of Practice for the Management of Clinical Waste - Major Clinical Waste Producers and Waste Collectors (June 2010) 	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> Implementation of waste prevention programme as well as materials recovery and recycling programme Proper storage, collection and transport of waste Chemical waste should be stored in appropriate containers and collected by a licensed chemical waste contractor Clinical waste should be properly separated from other waste, packed, labelled, centrally collected and stored in designated clinical waste storage rooms. Clinical waste shall be collected by licensed clinical waste collectors for disposal at the licensed disposal facility 	<ul style="list-style-type: none"> No adverse residual impact anticipated

Sensitive Receivers / Assessment Points	Impact Prediction Results (Without Mitigation)	Key Relevant Standards/Criteria	Extents of Exceedance Predicted (Without Mitigation)	Impact Avoidance Measures / Mitigation Measures	Residual Impacts (After Implementation of Mitigation Measures)
				<ul style="list-style-type: none"> The desilted materials should be handled by the Contractor using standard good practices before transporting for disposal 	
Land Contamination					
<ul style="list-style-type: none"> Future occupants 	<ul style="list-style-type: none"> A total of 30 potentially contaminated sites and 16 sites suspected to be used for industrial purposes were identified within the Project Site (excluding the works sites / areas under the NOL Main Line project and the development area under the STLMD DN project) 	<ul style="list-style-type: none"> Annex 19 of the EIAO-TM Practice Guide for Investigation and Remediation of Contaminated Land (EPD, revised in April 2023) Guidance Note for Contaminated Land Assessment and Remediation (EPD, revised in April 2023) Guidance Manual for Use of Risk-based Remediation Goals (RBRGs) for Contaminated Land Management (EPD, revised in April 2023) 	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> Further site appraisal and submission of Contamination Assessment Plan(s) (CAP(s)) for the whole Project Site should be conducted at a later stage of the Project when site access is available. Intrusive site investigation and any necessary remediation action should be carried out after operation of concerned site(s) has ceased but prior to the commencement of construction works. The submission of Contamination Assessment Report(s), 	<ul style="list-style-type: none"> No adverse residual impact anticipated.

Sensitive Receivers / Assessment Points	Impact Prediction Results (Without Mitigation)	Key Relevant Standards/Criteria	Extents of Exceedance Predicted (Without Mitigation)	Impact Avoidance Measures / Mitigation Measures	Residual Impacts (After Implementation of Mitigation Measures)
				Remediation Action Plan(s) and Remediation Report(s) for EPD's approval, if remediation is required, should follow the relevant Guidance Manual, Guidance Note and Practice Guide.	
Ecological Implication (Terrestrial and Aquatic)					
Construction Phase					
<ul style="list-style-type: none"> Recognised sites of conservation importance Wetland habitats (e.g. ponds, marsh / reed, watercourses) Other terrestrial habitats (e.g. woodland) Wildlife (including flora and fauna species of conservation importance) 	<u>Direct Impacts</u> <ul style="list-style-type: none"> Direct impact on developed area/wasteland habitat within the WBA due to the construction works for a small section of cycle track and the associated connection Permanent loss of habitat including marsh/reed, ponds, watercourses, wooded habitats, grassland, shrubland, and man-made habitats (i.e. 	<ul style="list-style-type: none"> Annexes 8 and 16 of the EIAO-TM EIAO Guidance Notes Nos. 3/2010, 6/2010, 7/2023 and 10/2023 	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> Avoided loss of wetland habitat within the WBA Preservation of NTMDC with enhancement measures and non-building area or "Open Space" on both sides Preservation of mixed woodland habitat at the southern part of the Project Site Pre-construction survey and translocation / translocation, and nest control measures for species of 	<ul style="list-style-type: none"> No unacceptable adverse residual impact anticipated

Sensitive Receivers / Assessment Points	Impact Prediction Results (Without Mitigation)	Key Relevant Standards/Criteria	Extents of Exceedance Predicted (Without Mitigation)	Impact Avoidance Measures / Mitigation Measures	Residual Impacts (After Implementation of Mitigation Measures)
<ul style="list-style-type: none"> Flight corridor 	<p>agricultural land, village/orchard and developed area/wasteland)</p> <ul style="list-style-type: none"> Fragmentation of wooded areas Direct impact on species of conservation importance Potential direct injury/ mortality of wildlife species (e.g. bird collision) <p><u>Indirect Impacts</u></p> <ul style="list-style-type: none"> Disturbance impact (e.g. noise, glare, air/dust, traffic, anthropogenic activities and water quality deterioration etc.) to recognised sites of conservation importance, ecologically sensitive resources, flight corridor, potential bat roost, natural habitats and 			<p>conservation importance</p> <ul style="list-style-type: none"> Wetland compensation Provision of temporary access for wildlife, screen hoardings/fencings Phased construction works for revitalisation works in NTMDC Use of non-transparent or non-glaring building materials Provision of suitable lighting in construction sites, use of directional lighting and control of night-time lighting period Provision of screening (e.g. hoarding) for demarcation of the construction site Adoption of general good site practice Exploration of the feasibility to adopt MiC technology in the detailed design stage 	

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	associated wildlife in the vicinity <ul style="list-style-type: none"> Potential water quality, hydrodynamics impact Night-time disturbance 			<ul style="list-style-type: none"> Adoption of noise, air and water quality mitigation measures 	
Operational Phase					
<ul style="list-style-type: none"> Recognised sites of conservation importance and ecologically sensitive resources Wetland habitats (e.g. ponds, marsh / reed, watercourses) Other terrestrial habitats (e.g. woodland) Wildlife (including flora and fauna species of conservation importance) 	<u>Direct Impacts</u> <ul style="list-style-type: none"> Potential direct injury or mortality for less mobile fauna species along the proposed road connection to/from STT Potential bird collision to noise barriers, building façade and traffic flow of the proposed roads <u>Indirect Impacts</u> <ul style="list-style-type: none"> Disturbance impacts (e.g. human, noise, air quality, light pollution, traffic and 	<ul style="list-style-type: none"> Same as construction phase 	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> Incorporation of wildlife corridor design and animal barriers along the proposed road connection to/from STT Provision of embed/superimpose opaque strips or opaque dots/visual markers on proposed noise barriers Provision of tree planting at the eastern margin as screening Provision of non-building area or "Open Space" along both sides of NTMDC and peripheral tree planting as screening 	<ul style="list-style-type: none"> No unacceptable adverse residual impact anticipated

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<ul style="list-style-type: none"> Flight paths 	visual) to the recognised sites of conservation importance, ecologically sensitive resources, species of conservation importance, wildlife and habitat <ul style="list-style-type: none"> Obstruction and disturbance to flight corridor 				
Fisheries Impact					
<ul style="list-style-type: none"> Pond Culture Fisheries (aquaculture activities and fisheries production) 	<ul style="list-style-type: none"> Loss of active fishponds Loss of inactive fishponds Loss of abandoned fishponds Loss of watercourses for aquaculture activities Deterioration of water quality and hydrological condition Bund stability Blockage of access 	<ul style="list-style-type: none"> EIAO-TM Annexes 9 and 17 Water Pollution Control Ordinance (Cap. 358) 	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> Maintaining bund stability Minimisation of potential water quality impacts Control of construction site run-off Control of construction-related activities Implementation of good site practices 	<ul style="list-style-type: none"> No adverse residual impact anticipated

Sensitive Receivers / Assessment Points	Impact Prediction Results (Without Mitigation)	Key Relevant Standards/Criteria	Extents of Exceedance Predicted (Without Mitigation)	Impact Avoidance Measures / Mitigation Measures	Residual Impacts (After Implementation of Mitigation Measures)
Landscape and Visual Impact					
Construction Phase					
<ul style="list-style-type: none"> Landscape Resources (LRs) 	<ul style="list-style-type: none"> Beneficial impact on LR4 and LR14 Slight impact on LR10 and LR13 Moderate impact on LR1, LR2, LR3, LR5, LR6, LR7, LR8, LR9, LR11 and LR12 	<ul style="list-style-type: none"> Annexes 10 and 18 of the EIAO-TM EIAO-GN No. 8/2023 Preparation of Landscape And Visual Impact Assessment under the EIAO 	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> Preserve existing vegetation as far as practicable Minimise disturbance on watercourses Carefully manage construction activities and facilities Reinstate temporarily disturbed landscape areas Erect decorative screen hoarding 	<ul style="list-style-type: none"> Beneficial residual impact on LR4 and LR14 Slight residual impact on LR10 and LR13 Moderate residual impact on LR1, LR2, LR3, LR5, LR6, LR7, LR8, LR9, LR11 and LR12
<ul style="list-style-type: none"> Landscape Character Areas (LCAs) 	<ul style="list-style-type: none"> Beneficial impact on LCA5 Negligible impact on LCA3 and LCA6 Slight impact on LCA4 Moderate impact on LCA2 Substantial impact on LCA1 	<ul style="list-style-type: none"> Annexes 10 and 18 of the EIAO-TM EIAO-GN No. 8/2023 Preparation of LVIA under the EIAO 	<ul style="list-style-type: none"> N/A 		<ul style="list-style-type: none"> Beneficial residual impact on LCA5 Negligible residual impact on LCA3 and LCA6

Sensitive Receivers / Assessment Points	Impact Prediction Results (Without Mitigation)	Key Relevant Standards/Criteria	Extents of Exceedance Predicted (Without Mitigation)	Impact Avoidance Measures / Mitigation Measures	Residual Impacts (After Implementation of Mitigation Measures)
					<ul style="list-style-type: none"> Slight residual impact on LCA4 Moderate residual impact on LCA2 Substantial residual impact on LCA1
Operational Phase					
<ul style="list-style-type: none"> Landscape Resources (LRs) 	<ul style="list-style-type: none"> Same as Construction Phase 	<ul style="list-style-type: none"> Annexes 10 and 18 of the EIAO-TM EIAO-GN No. 8/2023 Preparation of LVIA under the EIAO 	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> Compensate loss of existing trees by tree planting in a ratio of 1:1 in terms of number as far as practicable Provide roadside and amenity planting Incorporate sensitive and aesthetically pleasing design of aboveground structures Provide buffer planting Provide green roof 	<ul style="list-style-type: none"> Beneficial residual impact on LR4 and LR14 Negligible residual impact on LR10, and LR13 Slight residual impact on LR1, LR2, LR3, LR5, LR6, LR7, LR8, LR9, LR11 and LR12

Sensitive Receivers / Assessment Points	Impact Prediction Results (Without Mitigation)	Key Relevant Standards/Criteria	Extents of Exceedance Predicted (Without Mitigation)	Impact Avoidance Measures / Mitigation Measures	Residual Impacts (After Implementation of Mitigation Measures)
<ul style="list-style-type: none">Landscape Character Areas (LCAs)	<ul style="list-style-type: none">Same as Construction Phase	<ul style="list-style-type: none">Annexes 10 and 18 of the EIAO-TMEIAO-GN No. 8/2023 - Preparation of LVIA under the EIAO	<ul style="list-style-type: none">N/A	<ul style="list-style-type: none">Revitalisation of NTMDC to create a Blue-Green NetworkMaximise greening on building structures and surfaces	<ul style="list-style-type: none">Beneficial residual impact on LCA5Negligible residual impact on LCA3, LCA4 and LCA6Slight residual impact on LCA2Moderate residual impact on LCA1
<ul style="list-style-type: none">Vantage Points (VPs)	<ul style="list-style-type: none">N/A	<ul style="list-style-type: none">Annexes 10 and 18 of the EIAO-TMEIAO-GN No. 8/2023 - Preparation of LVIA under the EIAO	<ul style="list-style-type: none">N/A		<ul style="list-style-type: none">Slight residual impact on VP7Moderate residual impact on VP1, VP2, VP3, VP4, VP5A, VP5B and VP6
Impact on Cultural Heritage					
Construction Phase					
<ul style="list-style-type: none">Built heritage, other identified	<u>Built Heritage and Other Identified Item</u>	<ul style="list-style-type: none">EIAO-TM Annexes 10 and 19A&MO (Cap.53)	<ul style="list-style-type: none">N/A	<u>Built Heritage and Other Identified Item</u>	<ul style="list-style-type: none">No adverse residual

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items and archaeological resources	<ul style="list-style-type: none"> A total of 54 built heritage and other identified items are identified within the 300 m assessment area. 9 other identified items are located within the Project Site. Wai Cheung Ancestral Hall will be retained in situ within a planned open space and the former Yau Tam Mei Primary School within the UniTown is proposed to be preserved in-situ, subject to the future project proponent's consideration at detailed design in later stages. The remaining 7 would be inevitably removed due to the Project. The remaining 45 built heritage and other identified items located outside the Project Site but 			<ul style="list-style-type: none"> Cartographic and photographic record, and other documentation means (including 3D scanning) should be conducted for items that will be subject to direct impact (i.e. demolition) prior to the commencement of any construction works at the respective locations for record purposes and future use, such as research, exhibition and educational programmes. Standard control measures on ground-borne vibration, tilting and settlement by drawing necessary references from relevant government guidelines should be implemented on other identified items when there are construction works nearby. Standard measures of pre-construction 	impact anticipated.

Sensitive Receivers / Assessment Points	Impact Prediction Results (Without Mitigation)	Key Relevant Standards/Criteria	Extents of Exceedance Predicted (Without Mitigation)	Impact Avoidance Measures / Mitigation Measures	Residual Impacts (After Implementation of Mitigation Measures)
	<p>within 300 m assessment area would be subject to indirect impacts.</p> <p><u>Archaeology</u></p> <ul style="list-style-type: none"> Potential direct impact on 3 high archaeological potential areas, namely Ngau Tam Mei SAI, Ngau Tam Mei ASA and Ngau Tam Mei (North) ASA, located within the Project Site is anticipated. Potential direct impact to both the upper stream low-lying agricultural fields and hilly landscape within the Project Site having moderate-low archaeological potential is anticipated. Acceptable impact on the low archaeological potential areas 			<p>condition survey should be carried out for Wai Cheung Ancestral Hall and the former Yau Tam Mei Primary School (if preserved in situ) to better understand its physical structural condition. A post-construction condition survey should also be carried out to confirm its structural stability</p> <ul style="list-style-type: none"> A buffer zone should be reserved for Wai Cheung Ancestral Hall and the former Yau Tam Mei Primary School (if preserved in situ) according to the results of the pre-construction condition survey in the design layout of the Project to mitigate potential adverse vibration impact arising from construction works. Protective covering or sheltering should be provided for Wai Cheung Ancestral Hall 	

Sensitive Receivers / Assessment Points	Impact Prediction Results (Without Mitigation)	Key Relevant Standards/Criteria	Extents of Exceedance Predicted (Without Mitigation)	Impact Avoidance Measures / Mitigation Measures	Residual Impacts (After Implementation of Mitigation Measures)
	<p>identified within the Project Site.</p> <ul style="list-style-type: none"> No impact is anticipated for the remaining areas that have been disturbed heavily due to modern development and have no archaeological potential and outside the Project Site. 			<p>and the former Yau Tam Mei Primary School (if preserved in situ) during construction activities in proximity to avoid potential damages through direct contact with construction machineries.</p> <ul style="list-style-type: none"> Dust suppression measures and good site practice should be adopted during the construction phase to avoid dust nuisance on Wai Cheung Ancestral Hall, San Yau Vegetable Marketing Co-operative Society, Ltd. and the former Yau Tam Mei Primary School (if preserved in situ). A safe access route to Wai Cheung Ancestral Hall, San Yau Vegetable Marketing Co-operative Society, Ltd. and the former Yau Tam Mei Primary School (if preserved in 	

Sensitive Receivers / Assessment Points	Impact Prediction Results (Without Mitigation)	Key Relevant Standards/Criteria	Extents of Exceedance Predicted (Without Mitigation)	Impact Avoidance Measures / Mitigation Measures	Residual Impacts (After Implementation of Mitigation Measures)
				<p>situ) should be maintained for conducting mitigation measures.</p> <ul style="list-style-type: none"> Management measures should be deployed, such as briefing to site staff before commencement of construction works and posting notices at site office(s), to be aware of the other identified items in close proximity. <p><u>Archaeology</u></p> <ul style="list-style-type: none"> Archaeological excavation is recommended for the Project Site within Ngau Tam Mei SAI prior to the commencement works involving soil disturbance. Archaeological excavation and survey-cum-excavation are recommended for the Ngau Tam Mei ASA 	

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				<p>and Ngau Tam Mei (North) ASA prior to the commencement works involving soil disturbance at the concerned high archaeological potential areas.</p> <ul style="list-style-type: none"> • Archaeological survey should be conducted at moderate-low archaeological potential areas. • As a precautionary measure and pursuant to the A&MO (Cap. 53), the project proponent is required to inform the AMO immediately in case of discovery of antiquities or supposed antiquities in the course of works, so that appropriate mitigation measures, if needed, can be timely formulated and implemented in agreement with and to the satisfaction of AMO. 	

Sensitive Receivers / Assessment Points	Impact Prediction Results (Without Mitigation)	Key Relevant Standards/Criteria	Extents of Exceedance Predicted (Without Mitigation)	Impact Avoidance Measures / Mitigation Measures	Residual Impacts (After Implementation of Mitigation Measures)
Operational Phase					
<ul style="list-style-type: none"> Built heritage, other identified items and archaeological resources 	<p><u>Built Heritage and Other Identified Item</u></p> <ul style="list-style-type: none"> No adverse impact on built heritage and other identified items is anticipated during operational phase, except Wai Cheung Ancestral Hall and former Yau Tam Mei Primary School at which direct impact is anticipated should they be utilised. <p><u>Archaeology</u></p> <ul style="list-style-type: none"> No adverse impact would be anticipated on archaeological resources during the operational phase. 	<ul style="list-style-type: none"> EIAO-TM Annexes 10 and 19 	<ul style="list-style-type: none"> N/A 	<p><u>Built Heritage and Other Identified Item</u></p> <ul style="list-style-type: none"> No mitigation measure would be required for built heritage and other identified items except the preserved in situ Wai Cheung Ancestral Hall and the possible preserved in situ the former Yau Tam Mei Primary School. Any revitalisation proposed for Wai Cheung Ancestral Hall and the former Yau Tam Mei Primary School in later stages should be further reviewed with mitigation measures as appropriate. <p><u>Archaeology</u></p> <ul style="list-style-type: none"> No mitigation measure would be required for archaeological resources during the operational phase. 	<ul style="list-style-type: none"> No adverse residual impact anticipated.

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Hazard to Life					
<ul style="list-style-type: none"> Existing and planned population 	<ul style="list-style-type: none"> Since there are no existing and planned hazardous facilities within and in the vicinity of the Development Area, no hazard to life impact is anticipated. 	<ul style="list-style-type: none"> Annex 4 of the EIAO-TM Hong Kong Risk Guidelines 	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> N/A
Landfill Gas Hazard					
Construction Phase					
<ul style="list-style-type: none"> Workers that would work within the CZ of Ngau Tam Mei Landfill (NTML) 	<ul style="list-style-type: none"> Qualitative LFGHA is assessed as "Very Low Risk" for construction phase and no mitigation measures are required. 	<ul style="list-style-type: none"> Annexes 7 and 19 of the EIAO-TM ProPECC PN 3/96 Landfill Gas Hazard Assessment Guidance Note (2022) 	<ul style="list-style-type: none"> N/A 	<p>No mitigation measures are required. However, the following precautionary and protective measures should be considered to further minimize the landfill gas hazard:</p> <ul style="list-style-type: none"> A protective barrier at the point where a utility passes through the perimeter of the CZ of NTML such that trench excavations do not form a route for gas migration. Service runs within the CZ of NTML should be designated as "special 	<ul style="list-style-type: none"> No adverse residual impact anticipated.

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				<p>routes” and utility companies should be informed to that effect so that they may consider implementing precautionary measures.</p> <ul style="list-style-type: none"> The presence of LFG should be monitored before entry and periodically during the works, as a precautionary measure for excavations of 1 m depth within the CZ of NTML. 	
Operational Phase					
<ul style="list-style-type: none"> Future occupants / workers within the CZ of NTML 	<ul style="list-style-type: none"> Qualitative LFGHA is assessed as “Very Low Risk” for operational phase and no mitigation measures are required. 	<ul style="list-style-type: none"> Annexes 7 and 19 of the EIAO-TM ProPECC PN 3/96 Landfill Gas Hazard Assessment Guidance Note (2022) 	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> No mitigation measures are required. However, the precautionary and protective measures same as construction phase should be considered to further minimize the landfill gas hazard. 	<ul style="list-style-type: none"> No adverse residual impact anticipated.

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Impact from Electric and Magnetic Field					
<ul style="list-style-type: none"> Future occupants under/in the vicinity of the existing 400 kV overhead cables situated near/at the southern and eastern portions of the Development Area 	<p><u>According to the SHR & HPR EIA report and STLMC DN EIA report:</u></p> <ul style="list-style-type: none"> The maximum electric field strength measured directly underneath the overhead cables was 288 V/m (rms) and 198 V/m (rms) respectively The maximum magnetic flux measured directly underneath the overhead cables was 4.88 μT (rms) and 1.40 μT (rms) respectively 	<ul style="list-style-type: none"> International Commission on Non-ionizing Radiation Protection (1998) guidelines (limits for continuous general public exposure: 5,000 V/m (rms) & 100 μT (rms); limits for continuous occupational exposure: 10,000 V/m (rms) & 500 μT (rms)) HKPSG 	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> No mitigating measures are required. 	<ul style="list-style-type: none"> No adverse residual impact anticipated.