South Island Line (West)

– Project Profile

April 2026

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1 BASIC INFORMATION

1.1 Project Title

1.1.1 South Island Line (West) Project (hereinafter known as “the Project”).

1.2 Purpose and Nature of the Project

1.2.1 South Island Line (West) (SIL(W)) is one of the seven recommended railway schemes in the Railway Development Strategy 2014 (RDS-2014). The Project has been incorporated in the “Hong Kong Major Transport Infrastructure Development Blueprint” published by the Transport and Logistics Bureau in December 2023. It will provide an efficient and convenient transport service connecting the western and southern parts of Hong Kong Island, facilitating the public to go to the South Island Line (East) (SIL(E)) Wong Chuk Hang Station and Island Line HKU Station, passing through Aberdeen, Tin Wan, Wah Kwai, Wah Fu, Cyberport and Pok Fu Lam.

1.2.2 Upon further study for the Project, the transport benefit and delivery programme of the heavy rail scheme were unsatisfactory given the need to build sections of SIL(W) deep underground due to the hilly terrains and limited climbing capability of heavy rail. With a view to meeting the transport demand along the alignment as well as improving the technical feasibility and overall cost effectiveness of the project, medium capacity Smart and Green Mass Transit System (SGMTS) is adopted for the SIL(W) project as the SGMTS can be designed to a tighter horizontal radius and a steeper vertical gradient which is able to overcome the hilly and densely developed areas of the SIL(W) route.

1.2.3 Compared with a traditional heavy rail scheme, the adoption of the medium-capacity Smart and Green Mass Transit System (SGMTS) provides a more environmentally sustainable solution for meeting transport demand along the SIL(W) corridor. The SGMTS allows tighter horizontal radius and steeper gradients, thereby reducing the extent and depth of tunnel works otherwise required in hilly terrain. This in turn minimises excavation volumes, construction duration and associated carbon emissions from large-scale underground works.

1.2.4 The use of lighter, rubber-tyred and electrically powered transit vehicles further contributes to lower lifecycle carbon emissions, reduced construction materials, and smaller station and structural footprints. Overall, the SGMTS offers a greener, more energy-efficient and community-friendly transit option while maintaining operational reliability and connectivity for the western and southern parts of Hong Kong Island. The stations are intended to be simpler than typical MTR stations, designed to be lighter than conventional heavy rail stations.

1.3 Name of the Project Proponent

1.3.1 The project proponent is the MTR Corporation Limited.

1.4 Location and Scale of Project and History of Site

1.4.1 The Project is located in the southern and western part of Hong Kong Island. SIL(W) is a new transit line using SGMTS with the preliminary alignment starting at the existing Wong Chuk Hang Station (WCH) of South Island Line (East) (SIL(E)) and ending at HKU Station (HKU) of Island Line (ISL). It has a route length of about 7.5 km with six intermediate stations, namely Aberdeen Station (ABE), Tin Wan Station (TIW), Wah Fu Station (WAF), Wah Kwai Estate Station (WAK), Cyberport Station (CYP) and Queen Mary Hospital Station (QMH) and two terminal interchange stations at Wong Chuk Hang (WCH) and HKU with the existing SIL(E) and the ISL

respectively.

1.4.2 All stations and the majority of the route along SIL(W) are being elevated, only a section of tunnel (approximately 1.5km) between QMH and HKU is proposed at Pok Fu Lam area. The indicative locations of the proposed alignment and stations are shown in ***Figure 1***.

1.4.3 All proposed stations, and depot locations, alignments and project boundaries are subject to further studies.

1.4.4 The Project will involve the following key construction activities subject to the finding:

- Medium capacity SGMTS alignment comprising viaducts and tunnel from WCH Station to HKU Station (HKU) with six intermediate stations;
- Two new interchange stations of WCH* and HKU*;
- Six new stations of ABE*, TIW*, WAK*, WAF*, CYP* and QMH*;
- A covered depot near CYP Station; and
- Ancillary facilities such as Ventilation Buildings (VBs), Emergency Access Points (EAPs) / Emergency Egress Points (EEPs), other station associated facilities, system-wide facilities and stations pedestrian linkage facilities and associated road works.

** All the new station names in this Project Profile are working titles only.*

1.4.5 The proposed works components mentioned above are tentative and subject to review in the detailed planning and design of the Project and during the course of the Environmental Impact Assessment (EIA) study. There may be refinement of the alignment of the Project, which will be subject to a variety of factors such as planning and engineering considerations, environmental impacts, traffic impacts, land resumption requirements, and construction programme and cost, etc.

1.4.6 The proposed South Island Line (West) alignment mainly traverses previously developed urban areas on the southern and western sides of Hong Kong Island, including established residential districts, government and institutional facilities, and coastal areas that have undergone substantial modification through earlier public works and local developments. These areas have long been part of the built-up environment of Hong Kong Island and do not include extensive undisturbed greenfield land.

1.4.7 Along the coastal sections near Aberdeen, the land has been significantly shaped by large-scale reclamation works carried out from the 1960s to the 1980s, which converted the original shoreline into formed land for major roads, public housing, and community facilities. The subsequent establishment of the Aberdeen Typhoon Shelter further reinforced coastal development patterns and modified the marine frontage to support marine-related activities and local infrastructure.

1.4.8 Inland sections of the alignment pass through areas previously altered by terrain modification, including engineered slopes, platforms, and road corridors constructed under past development and infrastructure projects. Overall, the project corridor comprises modified or disturbed land, reflecting a long history of urban expansion, coastal formation works, and institutional development across the southern and western parts of Hong Kong Island.

1.5 Number and Types of Designated Projects

1.5.1 The Project is a designated project by virtue of below items under Part I, Schedule 2 to the Environmental Impact Assessment Ordinance (EIAO) (Cap. 499). An environmental permit is required under the EIAO for the construction and operation of the Project.

- Item A.2 “A railway and its associated stations”;
- Item A.4 “A railway siding, depot, maintenance workshop, marshalling yard or goods yard”;
- Item A.7 “A road tunnel or railway tunnel more than 800 m in length between portals”; and
- Item Q.1 “Projects involving earthworks partly in an existing country park”

1.5.2 A temporary project specific magazine may be required for overnight storage of explosives to support the construction of guideway tunnel and potentially the depot. The proposed magazine will consist of above ground single-storey structure. The Project may comprise of the below items under Part I and Part II, Schedule 2 of the Environmental Impact Assessment Ordinance (EIAO) (Cap. 499), subject to further studies.

- Item K.10 of Part I “An explosives depot or explosives manufacturing plant in a stand-alone, purpose built building”;
- Item 11 of Part II: “Decommissioning of a depot for the storage of explosives

1.5.3 A temporary barging point and associated minor dredging or seabed levelling activities for the operation of the barging point may be required for spoil removal and materials delivery during the construction phase subject to further studies. Therefore, the Project may comprise of the below items under Part I and Part 2, Schedule 2 to the Environmental Impact Assessment Ordinance (EIAO) (Cap. 499) subject to further studies.

- Item C.12 of Part I – “A dredging operation that is

(b) less than 500 m from the nearest boundary of an existing or planned specified area that is wholly or partly situated on or over any foreshore and sea-bed; or

(c) less than 200 m from the nearest boundary of an existing or planned specified area that is not wholly or partly situated on or over any foreshore and sea-bed.

1.6 Name and Telephone Number of Contact Persons

1.6.1 All queries regarding the Project can be addressed to:

Mr. Rodney Ip

MTR Corporation Limited

Tel.: 2688 1163

2 OUTLINE OF PLANNING AND IMPLEMENTATON PROGRAMME

2.1 Project Planning and Implementation

2.1.1 The Project will be implemented by engaging relevant professionals including consultants, contractors and in-house professionals throughout the planning, design, construction and implementation stages.

2.1.2 The construction works will be carried out by qualified contractors to be appointed under various works contracts.

2.2 Project Programme

2.2.1 The Project is targeted to commence project design in 2026 and commission by 2034. This tentative project implementation programme is subject to review.

2.3 Project Interface

2.3.1 Major committed projects in the vicinity which may have a potential interface with this Project have been identified and listed below. The list is not exhaustive and will be reviewed and updated during the EIA study. Any cumulative impact from concurrent projects including but not limited to the following during both construction and operational phases of the Project, will be addressed in the EIA as appropriate:

- Wah Fu Estate Redevelopment and New Public Housing at Pok Fu Lam South;
- HKU's Global Innovation Centre between Victoria Road and Pok Fu Lam Road, Pok Fu Lam;
- Site at the East of No. 3 Sassoon Road for Academic Development of HKU Medical Campus;
- Proposed Apartments for the Elderly with Ancillary Recreational, Care and Commercial Facilities at Victoria Road;
- Invigorating Island South projects in Wong Chuk Hang, Aberdeen and Tin Wan;
- Proposed residential institution (proposed hostel expansion to the existing St. John's College, University of Hong Kong) (Planning Application No. A/H11/105);
- Proposed new academic building for innovation and technology cum new entrance near the HKU Centennial Campus; and
- Proposed electricity substation near the HKU's Global Innovation Centre.

3 POSSIBLE IMPACT TO THE ENVIRONMENT

3.1 Environmental Impacts from the Project

3.1.1 The works for the Project will include site formation, foundation and piling works, building works, cut and cover construction, viaducts construction, and tunneling works potentially with the drill and blast method. It is anticipated that the surrounding sensitive receivers may be affected during the construction and operational stages of the Project.

3.1.2 Temporary / offsite works areas and works sites may be required for the establishment of site office, workshops, temporary storage of construction materials, utility or temporary access to support the construction of the Project. A temporary barging point may be established at Tin Wan Praya Road near Kellett Bay Waterfront, or at other suitable locations to be identified at a later stage, for spoil removal and materials delivery during construction phase, subject to further studies. This arrangement would help minimise the impact of dump truck traffic on the road network and the surrounding environment.

3.1.3 The potential impacts arising from the construction and the operation of the Project are discussed in **Sections 3.2** to **3.11**.

3.2 Air Quality

Construction Phase

3.2.1 Construction of the Project includes site clearance, site formation, building works and infrastructure works, as well as tunneling works. Potential air pollutant emissions would be generated from construction activities, such as blasting, if required, and earthworks, handling of materials at temporary stockpile areas and potential barging point, demolition, vehicular movements and erosion of unpaved areas and stockpiles. During tunnel excavation by drill and blast operations, fresh air would need to be provided for the tunnel, and fumes and stale air might have to be extracted via the tunnel portals. The use of construction trucks and diesel-powered plants and equipment, and marine vessels, if any, may also result in air pollutant emissions.

3.2.2 Should minor dredging or seabed levelling works be required, the potential odour impact will be reviewed and addressed in the EIA study. Potential cumulative air quality impact shall be assessed during the EIA stage to ensure compliance with relevant standards. Mitigation measures shall be considered to minimise the potential air quality impact, subject to the assessment findings.

Operational Phase

3.2.3 As electrically powered transit will be operated for the Project, no direct air pollutant emissions will arise from the train operations and no air quality issue is envisaged. In the depot, gaseous and particulate emissions generated from exhaust emissions of equipment used for maintenance operations are expected to be insignificant as the equipment is operated on a routine but infrequent basis.

3.3 Noise

Construction Phase

3.3.1 Potential sources of noise impact during construction would be associated with the use of powered mechanical equipment (PME) for various construction activities. Major construction works that would contribute to airborne construction noise impacts include site clearance and formation activities, structure construction, tunnel

construction, portal construction, re-provision/realignment of public roads, structure dismantling if required, spoils removal from tunnelling works & stockpiling, backfilling and reinstatement works. It is anticipated that piling will be used for foundation works, drill and blast method will be adopted for the tunnel section, hydraulic breaking method will be adopted for the depot construction, and open-cut method will be used for ancillary facilities. The potential noise impact, including both airborne and groundborne, on Noise Sensitive Receivers (NSRs) located in the vicinity of the works area will be assessed and identified. Quiet construction methods / plants and noise mitigation measures will be explored and incorporated where applicable subject to the findings of EIA to minimise the potential noise impact.

Operational Phase

3.3.2 The potential noise impact would be from the operation of the transit system on viaduct sections and above-ground stations, including that generated from the air conditioning systems and interaction between the wheels/tyres of the transit vehicle and the guideway, as well as from the running motor. As the SGMTS is generally lighter in size with mostly rubber-tyred and electrically powered transit, the operational noise of the transit system is envisaged to be less than that of heavy rail system, offering a quieter and more community-friendly transit solution. The assessment methodology will be agreed with the Director of Environmental Protection prior to the commencement of the assessment.

3.3.3 In addition, potential operation noise impact from the fixed noise sources such as electrical and mechanical (E&M) equipment of the stations, ancillary facilities and depot will be assessed in the EIA. Also, the potential traffic noise impact of road reprovision/realignment works will be assessed and mitigation measures will be implemented as applicable.

3.4 Water Quality

Construction Phase

3.4.1 The potential sources of water quality impact may be associated with the construction activities near and across Water Sensitive Receivers (WSRs) and the potential barging point operation and associated dredging activities, if any, subject to the future design. Construction site runoff and drainage; debris, refuse and liquid spillages; and sewage from the on-site construction workforce will be potential sources of water quality impacts.

Operational Phase

3.4.2 Potential water quality impacts during the operational phase may be associated with the additional sewage effluents from the staff and passengers for the extension of WCH and HKU Station, surface run-off from viaduct and station areas, and maintenance works in the depot. With the provision of proper connections to the public sewerage network and drainage network respectively, no adverse impacts on water quality are envisaged.

3.5 Waste Management

Construction Phase

3.5.1 Waste generated from the construction of the Project would include construction and demolition (C&D) materials, excavated sediments, general refuse from the onsite workforce, and some chemical wastes from the maintenance of construction plants and equipment. C&D materials would be generated from the construction of structures, tunnels, stations and ancillary facilities, such as ventilation buildings and

EAP/ EEP. Good site practices will be implemented to avoid or minimise potential environmental impacts associated with the handling, collection and disposal of waste.

Operational Phase

3.5.2 The potential issues with respect to waste are anticipated to be mainly related to the management of general refuse and a small amount of chemical waste generated from the operation of the stations and depot.

3.6 Land Contamination

Construction Phase

3.6.1 There would be potential contaminated sites within/in the vicinity of the Project. The initially identified potential sites with land contamination concerns in the vicinity of the Project include petrol filling stations nearby.

3.6.2 Site appraisal should be carried out during the EIA stage to identify areas with potential soil or groundwater contamination. Based on the findings of site investigations and assessment to be undertaken during the EIA stage, appropriate remediation actions will be formulated, and endorsed by EPD for implementation if contamination is identified.

Operational Phase

3.6.3 The operation of the transit line would unlikely cause any land contamination, and therefore no environmental concern in this respect is envisaged.

3.7 Ecology

Construction Phase

3.7.1 While the majority of works areas and works sites located in the developed area, there may be potential direct impacts at the footprint of the Project alignment interfering with some ecological resources, including potential loss of natural habitats (i.e. woodland, shrubland and natural watercourses / waterbody) and associated vegetation clearance and tree clearing. Indirect ecological impacts due to noise, dust, glare, water pollution and increased human activities may be resulted during the construction of the Project. Potential impact of minor dredging for the temporary barging point at Tin Wan Praya Road may also be resulted. The ecological impact at the construction phase will be assessed in detail during the EIA process when more design information becomes available. The following potential ecological areas and impacts along the alignment based on current design information have been identified.

Compensatory Ecological Planting Area (EPA) under SIL(E) Project at Staunton Creek Nullah

3.7.2 The preliminary alignment of the Project will pass through the Compensatory Ecological Planting Area (EPA) under SIL(E) at Staunton Creek Nullah. The EPA is a mitigation measure for the potential roosting site of ardeid. Construction activities, such as viaduct construction, will be conducted in proximity to the EPA and may cause direct and indirect impact to the EPA.

Wong Chuk Hang Egretry

3.7.3 The Wong Chuk Hang Egretry that supports a notable population of ardeid is located within 500 m from the southern boundary of the Project, and no direct impacts on the

Egretry are envisaged. It is expected that there will be no disturbance to the Egretry from the Project and thus no impact is anticipated.

Ap Lei Chau Ardeid Night Roost

3.7.4 The Ap Lei Chau Ardeid Night Roost is approximately located close to the downslope of the Habour School and next to Tai Wong Kung Temple. Though the ardeid night roost is located within 500 m from the southern boundary of the Project, far away from alignment with about 400 m. It is anticipated that there will be no potential impacts and disturbance to the flight lines from the Project.

Lung Fu Shan Country Park

3.7.5 The tunnel section of the preliminary alignment of the Project will pass underneath the Lung Fu Shan Country Park and no aboveground works would be anticipated.

Operational Phase

3.7.6 It is anticipated that the potential impacts to habitat types along the preliminary alignment will be less severe than those identified for the construction phase and will be assessed in detail during the EIA Study stage. Indirect ecological impacts may arise from the noise, glare and increased human activities associated with the transit operations.

3.8 Fisheries

Construction Phase

3.8.1 Construction phase impacts that may arise due to the potential barging point and associated dredging works include impacts on fisheries resources/production and fishing activities. In-direct fisheries impact may arise if construction activities result in pollution of coastal waters. Such impacts can be avoided by appropriate construction site management protocols.

Operational Phase

3.8.2 Impact on fisheries is not anticipated during the operation of the Project.

3.9 Cultural Heritage

Construction Phase

3.9.1 Kong Sin Wan Kiln Site of Archaeological Interest (SoAI) is located more than 80m from the alignment. The need for investigation shall be evaluated and the impact will be assessed in the archaeological impact assessment.

3.9.2 Potentially affected built heritage would include Queen Mary Hospital Main Block (Wing A to E) (Grade 3), Old Aberdeen Police Station, Main Building (Grade 2), Old Dairy Farm Paddock 43 (Grade 3), Old Dairy Farm, Paddock C9 (Grade 3), Treatment Works Building, Elliot Pumping Station & Filters (Grade 3), Workmen's Quarters Elliot Pumping Station & Filters (Grade 3), Senior Staff Quarters Elliot Pumping Station & Filters (Grade 2) and Ex-Western Fire Station (Grade 2) are located in the areas near the alignment and works area. The potential impact on the declared monuments and historic buildings will be assessed in the built heritage impact assessment.

Operational Phase

3.9.3 As there are potential archaeological areas and graded buildings within 300m from the proposed alignment, the potential impact on these cultural resources will be assessed in the archaeological impact assessment and built heritage impact assessment respectively.

3.10 Landscape and Visual

Construction Phase

3.10.1 The evaluation and assessment of landscape and visual impacts will follow the criteria and guidelines as stated in Annex 10 and Annex 18 of EIAO–TM respectively. The EIAO Guidance Note No. 8/2023 "Preparation of Landscape and Visual Impact Assessment under the EIAO" will also be taken into consideration.

3.10.2 Landscape impacts may arise during the construction of the Project as a result of the removal of existing trees and vegetation, associated slope works and retaining walls, the use of construction equipment, the erection of hoardings and temporary structures, stations, viaducts and other structures, cut and cover works and lighting for the construction sites. In addition, an Old and Valuable Tree/ Tree of Particular interests may be in proximity to the footprint of the station pedestrian linkage facilities of ABE Station and subject to the findings of EIA study, precautionary measures during the construction phase may be required. Broad brush tree survey and estimation of number of affected trees will be conducted in accordance with the relevant technical circular, and the potential impacts will be assessed in the EIA accordingly.

Operational Phase

3.10.3 There may be permanent loss of existing trees when construction of the Project is completed and potential visual impact on existing facilities within public open spaces may result. The potential impact will be assessed during the EIA.

3.10.4 There may be potential visual impact on the adjacent VSRs due to the above ground structures including ancillary facilities, such as ventilation buildings, viaduct and EEPs/EAPs, as well as stations. Subject to the findings of EIA study, considerations for aesthetic treatment would be required in the design of the physical structures to mitigate the impacts imposed by the Project. The potential impacts will be assessed in the EIA accordingly.

3.11 Hazard to Life

Construction Phase

3.11.1 The proposed viaduct alignment and the potential temporary barging point at Tin Wan Praya Road for supporting the construction of the Project is located within the 150m Consultation Zone (CZ) of the existing Towngas gas holder in Shek Pai Wan, Aberdeen, which is classified as a Potentially Hazardous Installation (PHI). During the construction phase of the Project, the construction of the viaduct, potential transportation route of explosive and barging operations within the 150m CZ may have implications on the risk levels associated with the PHI as a result of the introduction of construction worker population and activities at the potential temporary barging point. Taking into account the transient nature of the additional population and construction activities, the effect on risks is anticipated to be minor and amenable to minimisation through appropriate mitigation measures.

3.11.2 Furthermore, the overnight storage of explosives at the proposed magazine site and

the transportation of explosives from the proposed magazine to the construction works areas and use of explosives may also induce risks to the population in the vicinity. QRA should be conducted during the EIA stage to ensure compliance with the relevant criteria.

Operation Phase

3.11.3 The proposed viaduct alignment lies within the consultation zone of the existing Towngas gas holder in Shek Pai Wan, Aberdeen, a designated Potentially Hazardous Installation (PHI). During operation, the primary hazard arises from potential gas leakage or explosion at the depot, which could affect train passengers. A Quantitative Risk Assessment (QRA) will be carried out in accordance with Annex 4 of the EIAO Technical Memorandum and Hong Kong Risk Guidelines to evaluate individual and societal risks. Appropriate mitigation measures, including emergency response planning and coordination with Towngas and relevant authorities, will be implemented to ensure risks are reduced to acceptable or ALARP levels.

4 MAJOR ELEMENTS OF THE SURROUNDING ENVIRONMENT

4.1 General

4.1.1 The Project is located in the southern and western side of Hong Kong Island. The Project is a transit line between WCH and HKU, with six intermediate stations at Aberdeen, Tin Wan, Wah Kwai, Wah Fu, Cyberport and Queen Mary Hospital (i.e. ABE, TIW, WAK, WAF, CYP and QMH) and a depot is proposed near CYP. The alignment will pass through coastal area at south of Hong Kong Island, residential area, government lands, private lots, etc. Based on current design information, an overview of the existing environment adjacent to the Project is shown in ***Figure 1***.

4.2 Sensitive Receivers

4.2.1 The major sensitive receivers and sensitive parts of the natural environment, which might be affected potentially by the Project, are listed in **Table 4.1**. The list is not exhaustive and will be reviewed during the EIA stage.

Table 4.1 Major Sensitive Receivers / Concerned Areas in the vicinity of the Project

Types	Sensitive Receivers/Concerned Areas
Residential Developments	Topside Development at WCH Depot, Aberdeen Harbour Mansion, Aberdeen Centre, Tin Wan Estate, Ocean Court, Waterfront South, Pokfulam Terrace, Wah Fu Estate, Wah Kwai Estate, Residence Bel-Air, Baguio Villa, Madam S.H. Ho Residence for Medical Students, HKU Jockey Club Student Village I – Starr Hall, Hillview Garden Block A, Lok Po House
Planned Residential Developments and G/IC	Wah Fu Redevelopment, Public Housing Development at Wah King Street, Public Housing Development at Wah Lok Path, Public Housing Development at Pok Fu Lam (South)
Educational Institutions	Holy Spirit Seminary, Ebenezer School & Home for the Visually Impaired, TWGHs Hok Shan School, The ISP Academy, St John's College University of Hong Kong Marden Wing, University of Hong Kong
Others	Existing and Planned Hospitals / Clinics, industrial buildings, offices, shop and shopping centres, sport centres, community centres, place of public worships, playgrounds and parks etc.
Water Bodies	Fresh Water Service Reservoirs, Aberdeen (West) Typhoon Shelter, Staunton Creek Nullah
Areas of Conservation Value	Egretry roosting ground in Wong Chuk Hang Nullah (i.e. Staunton Creek Nullah), Potential ecological impact to the habitats in Wong Chuk Hang Nullah, Lung Fu Shan Country Park with tunnel passing underneath
Site of Cultural Heritage	Sites with Archaeological Potential: Kong Sin Wan Kiln Declared Monument: Lo Pan Temple Grade 1 Historic Buildings: Old Diary Farm Senior Staff Quarters, Holy Spirit Seminary Old Block

Types	Sensitive Receivers/Concerned Areas
	Grade 2 Historic Buildings: Old Aberdeen Police Station, Main Building, Aberdeen Technical School, Annex, Senior Staff Quarters Elliot Pumping Station & Filters and Ex-Western Fire Station, Nurses Quarters of Queen Mary Hospital, Old Dairy Farm, Manure Pit, Old Dairy Farm, Cowshed Grade 3 Historic Buildings: Aberdeen Technical School, Main Building, Queen Mary Hospital Main Block (Wing A to E), Old Dairy Farm Paddock 43, Old Dairy Farm, Paddock C9, Old wall between The Bethanie and Old Dairy Farm, Old Dairy Farm, Water Tank & Retaining Wall, Old Dairy Farm, Water Filter, Old Dairy Farm, Silo, Treatment Works Buildings, Elliot Pumping Station & Filters and Workmen's Quarters Elliot Pumping Station & Filters, Kwong Yuet Tong Public Office, No.9 Ching Lin Terrace, Holy Spirit Seminary, Chapel To be assessed: Old Cable House, Kong Sin Wan Road
Hazardous Installation	Towngas gas holder in Shek Pai Wan

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

5.1 Mitigation Measures for The Project

5.1.1 Practicable and effective mitigation measures will be adopted for the construction and operation of the Project to ensure compliance with relevant environmental standards. Possible key measures to be adopted, subject to studies, are listed below.

5.2 Air Quality

Construction Phase

5.2.1 Air quality control measures such as sufficient watering and good site practices should be adopted to mitigate the potential impact. With the adoption of proper measures, no insurmountable air quality impact is envisaged. It is expected that the Project will not induce adverse air quality impact to the Air Sensitive Receivers.

5.2.2 Appropriate air quality control measures, where applicable, as stipulated in the Air Pollution Control (Construction Dust) Regulation and Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation will be implemented during the construction period to control air quality. Following key air quality control measures should be implemented as appropriate:

- Watering of the active works areas, exposed areas and paved haul roads to reduce dust emission;
- Establishment and use of vehicle wheel and body washing facilities at the exit points of the site;
- Side enclosure and covering of any aggregate or dusty material storage piles to reduce emissions. Where this is not practicable owing to frequent usage, watering should be applied to aggregate fines;
- Provision of wind shield or similar dust mitigation measures at the loading area where dust generation is likely during the loading/unloading process of loose material, particularly in dry seasons/periods;
- Provision of impervious dust screens/sheeting and water spraying for demolition of buildings and breaking works;
- Travelling route of marine vessels shall be set away from any ASRs as far as practicable;
- Exempted NRMMs shall be avoided as far as practicable;
- Electric NRMMs shall be used and power supply shall be provided for on-site machinery as far as practicable;
- Installation of blast door at the openings with air treatment system for tunnelling works by drill and blast method, if any; and
- Where a site boundary adjoins a road, street, service lane or other area accessible to the public, hoarding of not less than 2.4 m high from ground level shall be provided as far as practicable; and where possible, routing of construction vehicles and positioning of construction plant should be at the maximum possible distance from Air Sensitive Receivers.

5.2.3 Should there be any dredging activities subject to the future design, possible mitigation measures shall be considered to minimize the potential odour impact based on the EIA findings:

- Loading of the dredged sediment to the barge shall be controlled to avoid splashing and overflowing of the sediment slurry to the surrounding water;

- Any dredged sediment should be stored in enclosed tanks / vessel compartments or properly covered as far as practicable to minimise its exposed area during its temporary storage and should be placed as far away from the identified ASRs as far as practicable;

- The dredged sediment is suggested to be delivered off-site for disposal as soon as possible, subject to production rate of dredged sediment and works programme, to minimise temporary storage of dredged sediment on barge; and

- Dredged sediment placed on marine construction vessel for disposal shall also be properly covered during transportation.

Operation Phase

5.2.4 As no direct air pollutant emissions will arise from the operation of the electric trains and the stations, mitigation measures will not be required during the operation phase, subject to further EIA study. During the depot operation, the potential air quality impacts from the maintenance works (including the use of NRMM) and the associated mitigation measures should be further reviewed in the EIA Study stage.

5.3 Noise

Construction Phase

5.3.1 Construction noise impacts can be minimised through adoption of good site practice and management, use of quiet construction methods/plant and adoption of noise barrier/enclosure. The mitigation measures outlined in the Environmental Impact Assessment Ordinance (EIAO) Guidance Note No. 9/2023 - Preparation of Construction Noise Impact Assessment Under the Environmental Impact Assessment Ordinance will be explored and incorporated where applicable subject to the findings of EIA. All construction works should be carried out during non-restricted hours (i.e. 0700 to 1900 hours, Monday to Saturday) unless a Construction Noise Permit (CNP) is obtained from EPD. For works areas near schools, construction activities should be scheduled to avoid the school examination periods as far as possible. Following noise mitigation measures are recommended to reduce the noise impact during construction:

- Only well-maintained plant should be operated on-site, and plant should be serviced regularly during the construction;
- Silencers or mufflers on construction equipment should be utilized and should be properly maintained during the construction;
- Location of items of PME should be sited as far from NSRs as possible;
- Machines and plant (such as trucks) that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum;
- Plant known to emit noise strongly in one direction should, wherever possible, be orientated so that the noise is directed away from the nearby NSRs;
- Material stockpiles and other structures should be effectively utilized, wherever practicable, in screening noise from on-site construction activities;
- Use of quality powered mechanical equipment (QPME) as far as possible; and

- Use of noise barrier/enclosure could further alleviate the construction noise impacts.

Operational Phase

5.3.2 The airborne transit noise Impact is mainly dominated by the rolling noise from transit movement. Potential noise mitigation measures in the form of vertical noise barriers, semi-enclosures and/or full enclosures at specified locations may be required to alleviate the noise impacts on nearby sensitive receivers from the operation of the transit system. The noise impact, including rolling noise, air condition systems at the transit vehicle, the cumulative noise impact with the existing train service at Wong Chuk Hang interchange station, and the associated mitigation measures for the possible transit system to be adopted for the Project should be further reviewed and formulated in the EIA study.

5.3.3 Possible measures to reduce operational noise impact from fixed noise sources include:

- Provision of noise mitigation measures (e.g. selection of quieter equipment, silencer, barriers and enclosure, etc);
- Adopts simple design approach for the stations with minimal fixed plant provisions; and
- The maximum sound power level (SWL) allowed for each fixed plant noise source to achieve noise compliance should be determined in the EIA stage and adopted as specification for future procurement contracts of the Project.

5.4 Water Quality

Construction Phase

5.4.1 Proper construction methods and sequences should be adopted to minimise the potential water quality impact. Mitigation measures including good site management practices as provided in Professional Persons on Construction Site Drainage, Environmental Protection Department, 2024 (ProPECC PN2/24) as well as standard measures in handling groundwater discharges/seepage from underground tunnelling works should be adopted to minimise the potential water quality impact. With the selection of proper construction methods and/or sequences, and adoption of appropriate mitigation measures, no adverse water quality impact is anticipated.

5.4.2 Following measures are recommended as good site practices to mitigate water quality impact during the construction phase:

- Construction site effluents including surface runoff should be properly collected, handled, treated and disposed of in accordance with the guidelines in ProPECC Practice Note PN 2/24 on Construction Site Drainage and provisions of Water Pollution Control Ordinance (WPCO) license to prevent high levels of suspended solids from entering surrounding waters or drainage network;
- Stockpiles of construction materials and dusty materials should be covered and located away from watercourses;
- Appropriate mitigation measure should be developed for groundwater control to minimise the potential groundwater due to tunnel construction if necessary;
- Sewage generated from the construction workforce should be collected in portable toilets and tankered away for proper disposal by a licensed specialist contractor at regular intervals; and

- Proper measures should be implemented to prevent oil or fuel spillage, e.g. removal of construction plants with identified oil/fuel leakage from site.

Operational Phase

5.4.3 Sewage and wastewater from stations and ancillary facilities will be properly conveyed into existing sewerage system. Silt trap/ oil interceptor would be provided and maintained in the designated drainage systems to minimize water quality impact arising from surface runoff. Surface runoff from viaducts and stations should be collected and conveyed to the designated drainage systems. The appropriate mitigation measures outlined in the "Drainage Plans subject to Comment by the Environmental Protection Department" (ProPECC PN 1/23) will be incorporated where applicable. Hence, no adverse water quality impact during operational phase is anticipated.

5.5 Waste Management

Construction Phase

5.5.1 During the construction stage, standard waste management measures and good site practices that should be implemented to manage C&D materials generated from the Project include preparation of a Waste Management Plan, on-site sorting and reuse of C&D materials, implementation of a trip-ticket system and appropriate handling, storage and disposal of chemical waste in accordance with the Waste Disposal (Chemical Waste) (General) Regulation and the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. General refuse should be stored in bins or other types of containers with cover separately from C&D materials and chemical wastes. Waste collectors/haulers should be employed by the contractor to remove general refuse from the site, separate from C&D materials and chemical wastes, on a regular basis to minimize environmental impacts.

5.5.2 Sediment should be handled in accordance with Section 4.2.1 of the Project Administration Handbook for Civil Engineering Works (PAH) and classified based on their contaminant level with reference to the Chemical Exceedance Levels (CEL) laid down in Appendix 4.28 of the PAH. Guidelines on the initial data assessment, the sampling and testing procedures, the biological test criteria, and the submission requirements set out in Appendix 4.29 of PAH will be followed. Potential impact and the handling, such as treatment and reuse of the excavated sediment, and disposal of excavated sediment will be reviewed and adequately addressed in accordance with Guidance Note. No. 1/2024 under Dumping at Sea Ordinance (Cap. 466) and Dumping at Sea Ordinance (Cap.466). Excavated sediments should be covered with tarpaulin for stockpiling and transportation. Construction plants and equipment should be properly designed and maintained to minimize the release of silt, sediments, contaminants or other pollutants.

Operational Phase

5.5.3 During the operational phase, general refuse should be collected and removed in appropriate covered containers to prevent odour and windblown litter. Separation of recyclable materials, such as paper and metals, from other waste streams should be encouraged to minimise waste disposal to landfills. All chemical waste from equipment maintenance should be handled, stored and disposed of properly and in accordance with the requirements of Waste Disposal (Chemical Waste) Regulation.

5.6 Land Contamination

5.6.1 Site appraisal will be carried out during the EIA stage to identify areas with potential soil or groundwater contamination. Prior to the construction works at the potentially

contaminated sites, site investigations and land contamination assessment should be conducted. Based on the findings of the investigation, the remediation actions, if required, should be detailed in a Remediation Action Plan (RAP). No construction works shall commence prior to the completion of the land contamination assessment, including the remediation works.

5.7 Ecology

Construction Phase

5.7.1 Detailed ecological assessment will be carried out during the EIA stage. Ecological impacts will be avoided and minimized as far as practicable. For habitats of significant ecological value that may be impacted by the Project, habitat compensation is one of the measures to mitigate the permanent and temporary habitat loss due to construction of above-ground structure. The scale of compensation and timeframe will be further reviewed in consultation with Government bureaus and departments during the detailed design stage.

Operational Phase

5.7.2 Avoiding or minimizing any direct impact/disturbance to any habitats and associated wildlife identified as far as possible

5.8 Fisheries

5.8.1 Appropriate construction site management protocols will be adopted to avoid indirect impact on fisheries due to pollution of coastal waters. Other required mitigation measures for fisheries, if any, will be identified during EIA stage and to be implemented during construction.

5.9 Cultural Heritage

5.9.1 A Cultural Heritage Impact Assessment, including the Built Heritage Impact Assessment and Archaeological Impact Assessment will be carried out under the EIA study to assess the potential direct and indirect impact on cultural heritage. Impacts on cultural heritage will be avoided as far as practicable. If unavoidable, mitigation measures to the direct and indirect impacts on cultural heritage will be proposed and implemented with prior agreement with the Antiquities and Monument Office.

5.10 Landscape and Visual

5.10.1 Possible key landscape and visual mitigation measures are as follows:

- Tree preservation, transplanting and compensatory planting in accordance with LAO PN Nos 6/2023 – Processing of Tree preservation and Removal Proposals for Building Development in Private Projects – Compliance with Tree Preservation Clause under Lease and DEVB TCW 5/2020- Registration and Preservation of Old and Valuable Trees;
- Control of night-time lighting glare;
- Erection of decorative screen hoarding compatible with the surrounding setting;
- Hard and soft landscape areas disturbed temporarily during construction shall be reinstated on like-to-like basis, or to the satisfaction of the relevant Government Departments;

- Considerations for aesthetic design and finishing materials would be adopted to alleviate the visual impacts of any above-ground structures and potential noise barriers/enclosures; and
- Adoption of sensitive architectural design and buffer/screen planting as far as practicable.

5.11 Hazard to Life

5.11.1 Quantitative risk assessment (QRA) should be undertaken, if necessary, in the EIA stage to confirm compliance with the risk guidelines in Annex 4 of the Technical Memorandum of Environmental Impact Assessment Ordinance. Mitigation measures, such as the adoption of contingency plan, inclusion of blast doors at the tunnel portals, vibration analysis to consider structures such as buildings, flyovers, and viaducts, will be developed as part of the QRA to be undertaken during the EIA stage to ensure compliance with the Hong Kong Government Risk Guidelines (HKRG).

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

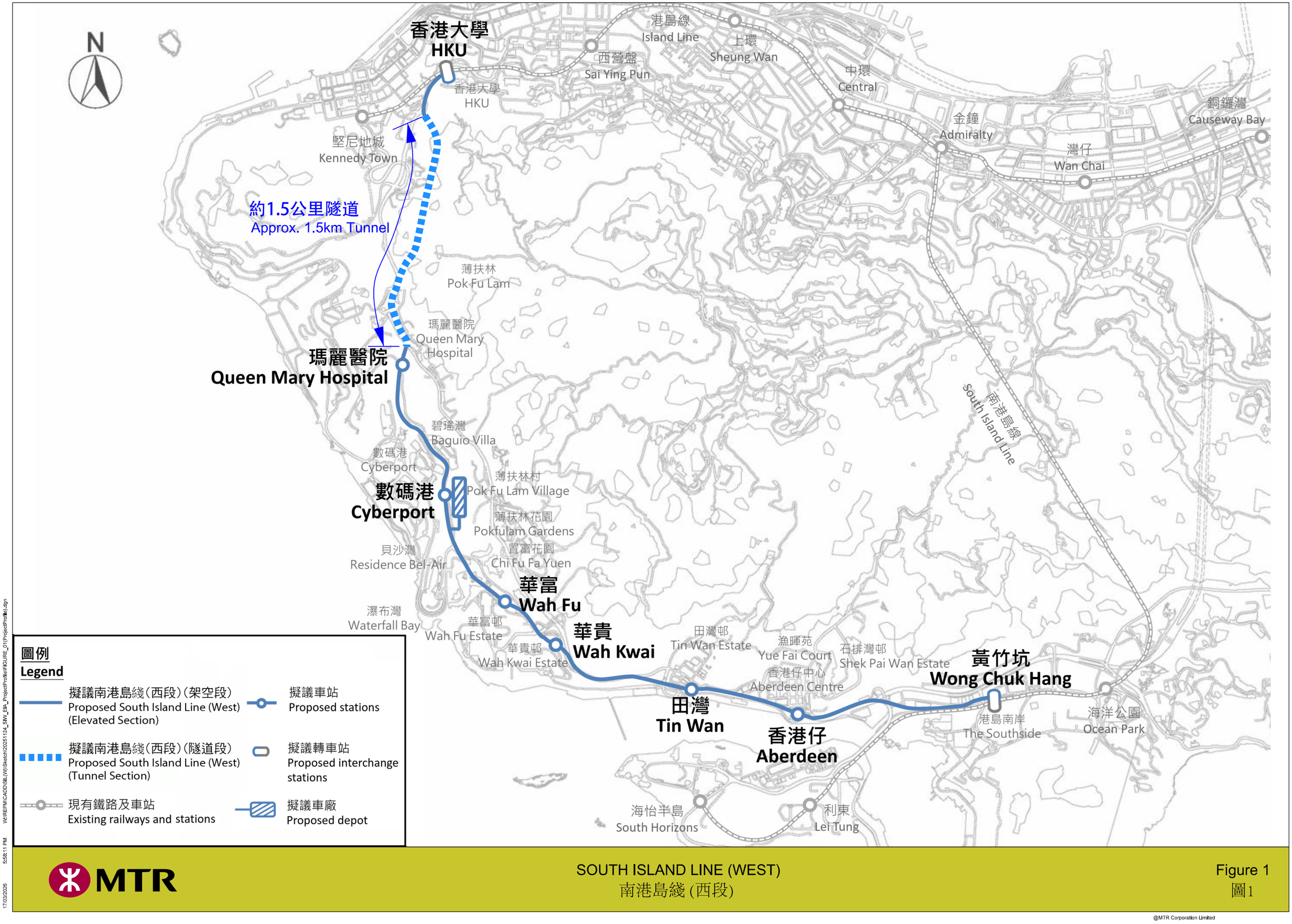
5.12.1 Subject to the findings of assessments, effective control and mitigation measures will be identified to ensure the impacts are at acceptable levels. The possible severity, distribution and duration of environmental effects such as beneficial and adverse effects; short and long term effects; secondary and induced effects; cumulative effects and trans-boundary effects from committed projects, comments received from public consultations and further implications will be considered and addressed in the EIA, where applicable.

6 USE OF PREVIOUSLY APPROVED EIA REPORTS

6.1.1 The following EIA reports are relevant for reference in the course of the EIA study for the Project as appropriate:

EIAO Register No.	Project Name	Date of Approval	Relevance Environmental Aspect and Control Measures to the Project
EIA-153/2008	West Island Line	23 Dec 2008	• Its findings and recommended mitigation measures in relation to noise is relevant for consideration due to proximity in location.
EIA-185/2010	South Island Line (East)	26 Oct 2010	• Its findings and recommended mitigation measures in relation to noise, ecology and hazard to life are relevant for consideration due to proximity in location.
EIA-249/2016	A Rooftop Helipad at the Proposed New Block of Queen Mary Hospital	22 Mar 2017	• Its findings and recommended mitigation measures in relation to ecology is relevant for consideration due to proximity in location.
EIA-315/2025	Smart and Green Mass Transit System in Kai Tak	3 Dec 2025	• Its findings and recommended mitigation measures in relation to noise and visual are relevant for consideration due to similar in project nature.
EIA-317/2025	Smart and Green Mass Transit System in East Kowloon	9 Dec 2025	• Its findings and recommended mitigation measures in relation to noise, landscape and visual and hazard-to-life are relevant for consideration due to similar in project nature.

Figure



SOUTH ISLAND LINE (WEST)
南港島綫 (西段)

Figure 1
圖1