Attachment 2: Revised Environmental Assessment

Environmental Assessment Report

Section 12A Proposed Amendment to the Notes of the Approved Quarry Bay OZP relating to the " Other Specified Uses" zone annotated "Cultural and/or Commercial Leisure and Tourism Related Uses"

Prepared for: Masterplan Limited
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1. INTRODUCTION

1.1 Background

1.1.1 The landholding of Marine Riches III (the Applicant) is a prime waterfront site located at IL 8590 R.P. and IL 8723 R.P. in Quarry Bay (the Original Site). The Original Site is currently zoned "Other Specified Use (Cultural and/or Commercial, Leisure and Tourism Related Uses)" (OU (1)) and "Open Space" (O) on the Quarry Bay Outline Zoning Plan (OZP) No. S/H21/28.

1.1.2 The Original Site was previously zoned "Industrial", and the approved S16 planning application No. A/H21/150 and the subsequent approved S16A Minor Amendment No. A/H21/150-1 approved on 24 August 2022 for a proposed mixed development comprises of 10 storey office block and 4 hotel blocks, (2 blocks of 11 storey, 1 block of 12 storey and 1 block of 13 storeys) including 1 storey (G/F) commercial podium, 1 basement level of commercial use and 1 basement level of internal transport facilities with a total Gross Floor Area (GFA) of 37,155m^2, a height of 41mPD for office and 34 to 41 mPD for hotel, and a site coverage of 92%, for Cultural and /or Commercial, Leisure and Tourism Related Uses

1.1.3 The approved Building Plans for the industrial building remain valid, despite the subsequent change in zoning, and construction of the industrial building commenced with work on the foundations in 2017.

1.1.4 However, the Development Bureau, the District Council Members and the General Public have visions for the waterfront site that do not include industrial use. Therefore, the Applicant has revisited the approved use of the Original Site for hotel and office development to create exciting and interesting aspects in maximising the urban design principles and public planning gains. The new Development Proposal is a prestigious development for visitors and the public with a range of commercial, residential, tourism and entertainment use that will create unique and lively designation at the Waterfront Promenade.

1.1.5 The Applicant is aware of the Government's intention to develop a continuous Public Waterfront Promenade along the Quarry Bay Waterfront. In this regard, the OU zone is intended for use for cultural, leisure and tourism use taking advantage of the waterfront setting. The Applicant is thus willing to partly surrender the Original Site in exchange for the government land zoned OU(1) to form a new Development Site with an area of approximately 8,532m^2. The Development Site is proposed to be developed into residential, commercial and cultural facilities (the Proposed Development), rather than the hotel and office building. The Proposed Development will provide a total GFA of about 39,480m^2 with maximum building heights of 44mPD on Hoi Yu Street consisting of about 67% of Residential area (approximately 26,545m^2) and about 33% of Cultural / Entertainment (including Eating Place and Shops and Services, and Covered Public Open Space (approximately 12,935m^2).

1.1.6 The Application Site will comprise the aforementioned Development Site zoned OU (1) on the Approved Quarry Bay OZP No. S/H21/28. The main purpose of this application is to identify an alternative way for achieving the Planning Intention for the "OU (1)" zone. The Planning Intention of the "OU (1)" zone is retained as in the Notes to the zone and the "cultural and/or commercial, leisure and tourism" related uses will be the main focus. The only change proposed is to request the inclusion of "flat" in Column 2 of the Notes to the "OU (1)", thus requiring to submit a planning application under Section 12A of the Town Planning Ordinance (TPO) to grant a permission from the Town Planning Board (TPB) by the Applicant. Furthermore, the maximum building height of OU(1) zone is restricted to 35mPD and so a permission from the TPB is also required for the amendment to the building height restriction.

1.1.7 SMEC Asia Limited (SMEC) has been appointed to prepare this Environmental Assessment (EA) Report summarising the assessment of environmental impacts arising from the Proposed Development to support the planning application.

1.2 Site Description

1.2.1 The location of the Proposed Development and its environs are shown in **Figure 1-1**, in which the uses surrounding the Proposed Development include:

- To the north: the seafront and Victoria Harbour
- To the east: MTR Corporation Quarry Bay Substation and East Harbour Tunnel (EHT) Quarry Bay Ventilation Building
- To the south: Hoi Yu Street, Island East Corridor, Quarry Bay Park Phase II, and Food and Environmental Hygiene Department (FEHD) Transport Section Quarry Bay Depot
- To the west: Water Supplies Department (WSD) Quarry Bay Saltwater Pumping Station

1.3 Project Description

1.3.1 The Proposed Development will comprise the following:

- One single podium with three-storey basement of car parking facilities.
- Three 10-storey residential towers above the podium, and one 5-storey cultural / entertainment building.
- The approximate GFA for Residential, and Cultural / Entertainment Uses would be about 26,545m^2, and 12,935 m^2 respectively.

1.3.2 The indicative layout and sectional plans of the Proposed Development are provided in the Planning Statement.

1.4 Objectives of this Report

1.4.1 The objectives of this EA Report are to:

- Identify and qualitatively assess potential environmental impacts that may rise from the construction and operation of the Project, in terms of air quality, noise, water quality, waste management and land contamination.

- Recommend appropriate measures to mitigate any identified impact.

1.5 Report Structure

1.5.1 This report is structured as follows:

1.5.2 Section 1 is this section, and it gives an introduction of the background project and project description.

1.5.3 Section 2 describes the air quality impact to identify and assess the potential air quality impact of the project and proposes the necessary mitigation measures to be implemented during the construction phase. As requested by EPD, a separate operational phase quantitative AQIA has been prepared and is a standalone document attached at Appendix 6 of the Planning Statement.

1.5.4 Section 3 describes the noise impact to identify and assess the potential noise impact of the project and propose the necessary mitigation measures to be implemented during both construction and operational phase.

1.5.5 Section 4 describes the water quality impact to identify and assess the potential water quality impact of the project and propose the necessary mitigation measures to be implemented during both construction and operational phase.

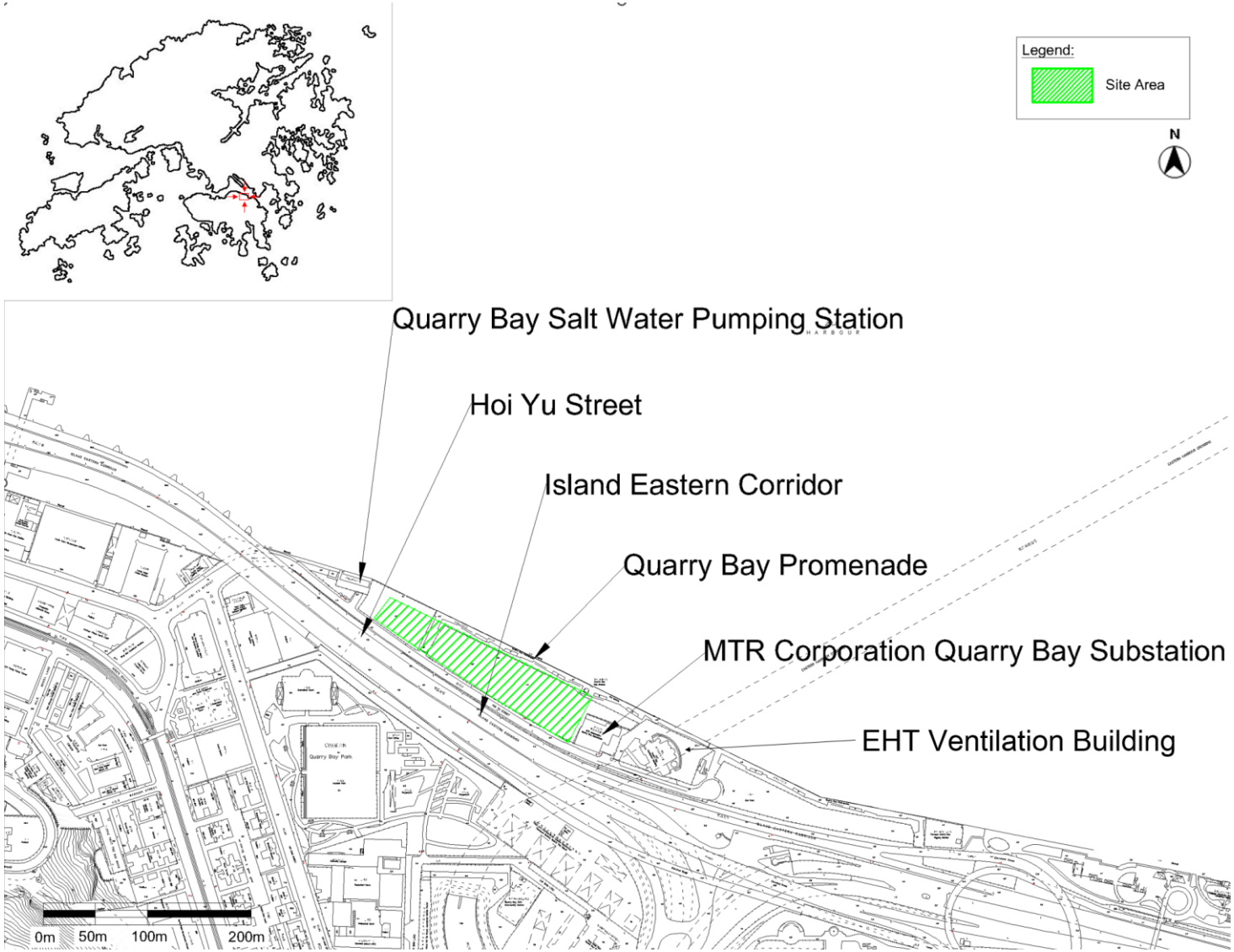
1.5.6 Section 5 describes waste management to identify and assess the potential waste management impact of the project and propose the necessary mitigation measures to be implemented during both construction and operational phase.

1.5.7 Section 6 identifies and assesses the potential land contamination impact of the project through review of past and present land use and activities and proposes necessary mitigation measures to be implemented prior to construction phase.

1.5.8 Section 7 provides a brief comparison of the sewage impact between the previously Approved Scheme and the Proposed Scheme, to demonstrate that the current design does not cause adverse impacts to the existing sewage system.

1.5.9 Section 8 is the conclusion of this report, summarising the findings and the corresponding mitigation measures.

Figure 1-1: Site Location and Its Environs



2. AIR QUALITY: Construction Phase

2.1.1 This section assesses the potential air quality impacts that will be generated by the Project during the construction and its operation phase. Mitigation measures are recommended, where necessary, as part of the assessment. Reference for a quantitative AQIA focusing on the operational phase is included in Appendix 6 of the Planning Statement.

2.2 Regulation, Standards, and Guidelines

2.2.1 The regulations and guidelines that are found relevant to the air quality impact assessment of the proposed waterfront development are summarised as below:

Air Pollution Control Ordinance (APCO) (CAP. 311)

2.2.2 Under APCO, the Air Quality Objectives have been established. The current AQOs took effect from 11 April 2025 and are listed in **Table 2.1**.

Table 2.1 Hong Kong Air Quality Objectives

Pollutant	Averaging time	Concentration limit [i] (μg/m^3)	Number of exceedances allowed
Sulphur dioxide	10-minute	500	3
	24-hour	40	3
Respirable suspended particulates (PM_{10}) [ii]	24-hour	75	9
	Annual	30	Not applicable
Fine suspended particulates ($PM_{2.5}$) [iii]	24-hour	37.5	18
	Annual	15	Not applicable
Nitrogen dioxide	1-hour	120	9
	Annual	40	Not applicable
Ozone	8-hour	160	9
	Peak Season	100	Not applicable
Carbon monoxide [vi]	1-hour	30,000	0
	8-hour	10,000	0
	24hours	4000	0
Lead	Annual	0.5	Not applicable

Notes:

[i] All measurements of the concentration of gaseous air pollutants, i.e., Sulphur dioxide, nitrogen dioxide, ozone and carbon monoxide, are to be adjusted to a reference temperature of 293 Kelvin and a reference pressure of 101.325 kilopascal.

[ii] Respirable suspended particulates mean suspended particles in air with a nominal aerodynamic diameter of 10 μm or less.

[iii] Fine suspended particulates mean suspended particles in air with a nominal aerodynamic diameter of 2.5 μm or less.

[iv] The 8-hour mean of CO concentration is calculated based on item 9 of schedule 5 of APCO. The maximum daily 8-hour mean concentration of CO in air is selected by examining 8 hour running averages, calculated from CO hourly data and updated each hour, that is:

(a) the first calculation period for a day is the period from 5pm on the previous day to 1am on that day; and

(b) the last calculation period for a day is the period from 4pm to 12 midnight on that day.

Annex 4 and Annex 12 of the Technical Memorandum of Environmental Impact Assessment Ordinance (EIAO-TM)

2.2.3 Annex 4 of EIAO-TM provides criteria for evaluating air quality impact for Designated Project while Annex 12 describes the commonly adopted approaches and methodologies for assessment of air quality impact.

2.2.4 Even though the proposed waterfront development would not be classified as Designated Project, the criteria and assessment guideline stipulated in EIAO-TM would be applied

Air Pollution Control (Construction Dust) Regulation (CAP. 311R)

2.2.5 Enacted under Section 43 of the APCO, the *Air Pollution Control (Construction Dust) Regulation* defines notifiable and regulatory works to ensure effective dust abatement measures have been properly implemented to reduce dust emissions for a number of construction activities.

2.2.6 The Regulation requires that any notifiable work shall give advance notice to the Environmental Protection Department (EPD), and the contractor shall ensure that the notifiable and regulatory works are carried out in accordance with the Schedule of the Regulation. Dust control and suppression measures are also provided in the Schedule.

Air Pollution Control (Fuel Restriction) Regulations (CAP. 311I)

2.2.7 Enacted under the APCO, the Air Pollution Control (Fuel Restriction) Regulations restrict the types and Sulphur content of fuels that may be used in specified industrial and commercial combustion plants, with the objective of reducing Sulphur dioxide and related emissions in Hong Kong. Any future fuel-burning installations (e.g. boilers or generators) within the proposed development will be required to use compliant low-Sulphur or gaseous fuels to meet these statutory requirements and to avoid adverse air quality impacts

Air Pollution Control (Non- Road Mobile Machinery) (Emission) Regulation (CAP. 311Z)

2.2.8 This Regulation requires Non-Road Mobile Machinery (NRMM), except those exempted, to comply with the prescribed emission standards. All regulated machines sold or leased for use in Hong Kong must be approved or exempted with a proper label in a prescribed format issued by EPD. Only approved or exempted NRMMs with a proper label are allowed to be used in specified activities and locations including construction sites, container terminals and back up facilities, restricted areas of the airport, designated waste disposal facilities and specified processes.

Hong Kong Planning Standards and Guidelines (HKPSG)

2.2.9 The minimum buffer distances required between pollutant source and permitted uses recommended in Chapter 9 Environment of *Hong Kong Planning Standards and Guidelines* (HKPSG) and are summarised in **Tables 2.2** to **2.4** for ease of reference.

Table 2.2: Recommended Buffering Distance between Different Roads and Permitted Uses

Pollution Source	Type of Road	Buffer Distance	Permitted Uses
Road and Highways	Trunk Road and Primary Distributor	> 20m	Active and passive recreation uses
		3 - 20m	Passive recreational uses
		< 3m	Amenity areas

Pollution Source	Type of Road	Buffer Distance	Permitted Uses
	District Distributor	> 10m	Active and passive recreation uses
		< 10m	Passive recreational uses
	Local Distributor	> 5m	Active and passive recreation uses
		< 5m	Passive recreational uses
	Under Flyovers	-	Passive recreational uses

Table 2.3: Recommended Buffering Distance between Different Roads and Permitted Uses

Pollution Source	Difference in Height between Industrial Chimney Exit and the Site	Buffer Distance	Permitted Uses
Industrial Areas	< 20m	> 200m	Active and passive recreation uses
		5 - 200m	Passive recreational uses
	20 - 30m	> 100m	Active and passive recreation uses
		5 - 100m	Passive recreational uses
	30 - 40m	> 50m	Active and passive recreation uses
		5 - 50m	Passive recreational uses
	> 40m	> 10m	Active and passive recreation uses

Remarks:

(a) In situations where the height of chimneys is not known, use the set of guidelines marked with an asterisk for preliminary planning purposes and refine as and when more information is available.

(b) The buffer distance is the horizontal, shortest distance from the boundary of the industrial lot, the position of existing chimneys or the edge of road kerb to the boundary of open space sites.

(c) The guidelines are generally applicable to major industrial areas but NOT individual large industrial establishments which are likely to be significant air pollution sources. Consult EPD when planning open space sites close to such establishments.

(d) Amenity areas are permitted in any situation.

Table 2.4: Recommended Buffering Distance between Oduor and Dusty Sources

Pollution Source	Sensitive Use	Buffer Distance
Oduor Source	Sensitive Use	200m
Dusty Source	Sensitive Use	100m

2.3 Background Air Quality

2.3.1 Eastern Air Quality Monitoring Station (AQMS) is the nearest AQMS to the proposed waterfront development. The latest air quality monitoring results from the previous five years has been reviewed and summarised in **Table 2.5**.

Table 2.5: Air Quality Monitoring Results in Eastern AQMS

Pollutant	Averaging Time	AQO ($\mu g/m^3$)	Pollutant Concentration ($\mu g/m^3$)					
			2020	2021	2022	2023	2024	5-year mean
Respirable Suspended Particulates (RSP)	10th Highest 24-hour	75 (9)	60	62	49	52	61	57 [76%]
	Annual	30	27	29	23	24	24	25 [85%]
	19th Highest 24-hour	37.5 (18)	29	29	28	27	33	29 [78%]

Pollutant	Averaging Time	AQO ($\mu g/m^3$)	Pollutant Concentration ($\mu g/m^3$)					
			2020	2021	2022	2023	2024	5-year mean
Fine Suspended Particulates (FSP)	Annual	15	14	14.5	13	14.5	15	14 [95%]
Nitrogen Dioxide (NO_2)	19th Highest 1-hour	200 (18)	113	129	99	106	93	108 [54%]
	10th Highest 24-hour	120 (9)	59	61	53	53	50	55 [46%]
	Annual	40	34	35	32	32	31	33 [82%]
Sulphur Dioxide (SO_2)	4th Highest 10-Min	500 (3)	16	22	35	37	11	24 [5%]
	4th Highest 24-hour	40 (3)	6	5	5	4	4	5 [12%]
Ozone (O_3)	10th Highest 8-hour	160 (9)	140	148	**185**	149	155	155 [97%]
	Peak season	100	90	89	**101**	93	**101**	95 [95%]

Notes:

[i] Monitoring results exceeding the AQOs are shown as **bolded**.

[ii] The 5-year mean is the average of the corresponding pollutant concentration from Year 2020 to 2024.

[iii] CO is not measured in the Eastern AQMS.

2.3.2 From **Table 2.5**, it can be observed that the monitored concentration of all the air pollutants can satisfy the corresponding AQOs in recent years except exceedance of 8-hour averaging and peak season of ozone was recorded in Year 2022, and 2022 & 2024 respectively.

2.3.3 The background air quality levels in Year 2026 and Year 2030 predicted by Pollutants in the Atmosphere and the Transport over Hong Kong 2024 Version (PATH v3.0) model released by EPD in January 2024 are adopted in this report. The background air quality levels in relevant grid (44,30) in PATH in Year 2026 (targeted Project commence year) and Year 2030 (targeted Project completion) was reviewed and summarised in **Table 2.6**.

Table 2.6: Predicated Air Quality Result from Path v3.0

Pollutant	Averaging Time	Concentration Limit (µg/m3)	Data Summary	Grid (43,31)	Grid (45,30)	Grid (44,30)	Grid (44,31)	Grid (45,30)
				Concentration ($\mu g/m^3$)				
Respirable Suspended Particulates (PM_{10})	24-hour	75 (9)	10th highest	52.43	50.44	51.1	50.25	49.47
	Annual	30	-	20.24	19.33	19.81	19.09	18.81
Fine Suspended Particulates ($PM_{2.5}$)	24-hour	37.5 (18)	19th highest	31.3	28.85	30.02	28.75	28.52
	Annual	15	-	12.54	11.73	12.17	11.53	11.31
Nitrogen Dioxide (NO_2)	1-hour	200 (18)	19th highest	74.78	90.16	70.65	85.39	70.64
	24-hour	120 (9)	10th highest	31.92	41.32	29.92	38.63	29.87
	Annual	40	-	16.09	20.02	15.85	17.23	15.27
Sulphur Dioxide (SO_2)	10-minute	500 (3)	4th highest	22.66	22.68	22.68	22.54	22.66
	24-hour	40 (3)	4th highest	6.86	6.92	6.87	6.83	6.83
Ozone (O_3)	8-hour	160 (9)	10th highest	**171.22**	**169.94**	**170.13**	**170.88**	**169.45**
	Peak Season	100	-	**117.88**	**117.81**	**118.55**	**120.22**	**120.25**
Carbon Monoxide (CO)	1-hour	30000 (0)	Maximum	528.72	519.86	527.25	518.72	525.06
	8-hour	10000 (0)	Maximum	502.74	488.54	501.38	488.52	493.88
	24-hour	4000 (0)	Maximum	475.55	459.32	477.41	459.97	472.85

Notes:

[i] Predicted results exceeded the AQOs are shown as **bolded**.

[ii] Reference conditions: temperature at 293 Kelvin and pressure at 101.325 kilopascal.

2.3.4 From **Table 2.6**, it can be found that future background air pollutant concentration would be below AQOs, except Ozone. Exceedance of O_3 is claimed to be a complex regional air pollution issue in *Air Quality in Hong Kong 2022* and is less relevant to the location of the site.

2.4 Identification of Air Sensitive Receivers (ASRs) during Construction Stage

2.4.1 The assessment area for air quality impact assessment would be taken as 500 m from the site boundary. Air Sensitive Receivers (ASR) will be identified according to Annex 12 of EIAO-TM. Based on the desktop study and site visit on 2 September 2024, the first layer of ASRs closes to the site boundary in the 500 m assessment area have been identified and listed in **Table 2.7**. As a separate quantitative Air Quality Impact Assessment (AQIA) report has been prepared to discuss the air quality impact associated with the Project during its operation phase, the identification of the ASRs will be limited to those in relationship to the construction phase of the Project. The location of ASRs would be represented by their nearest point to site boundary and are shown in **Figure 2-1**.

Table 2.7: Representative ASRs during Construction Phase

ASR ID	Description	Land Use	Status	Distance to Site Boundary (m)	Building Height (mPD)
A1	Boardwalk Underneath Island Eastern Corridor	Open Space	Existing	33	4.1
A2	North Point Police Station	Government, Institution or Community	Existing	214	61.7
A3	Eastern Harbour Centre	Commercial	Existing	63	96.4
A4	Quarry Bay Park Phase 2	Open Space	Existing	74	5.0
A5	Canossa College	Government, Institution or Community	Existing	162	26.6
A6	Chinachem Exchange Square	Commercial	Existing	294	88.7
A7	Lincoln House	Commercial	Existing	306	167.9
A8	One Taikoo Place	Commercial	Existing	303	225.6
A9	Berkshire House	Commercial	Existing	315	137.3
A10	Taikoo Shing Harbour View Gardens	Residential	Existing	320	87.7
A11	Quarry Bay Park Phase 1	Open Space	Existing	265	4.6
A12	Quarry Bay Promenade	Open Space	Existing	9	3.6
A13	Quarry Bay Park Community Garden	Open Space	Existing	145	6.7

ASR ID	Description	Land Use	Status	Distance to Site Boundary (m)	Building Height (mPD)
A14	FEHD Transport Section Quarry Bay Depot	Government, Institution or Community	Existing	63	10
A15	HKPF Quarry Bay Vehicle Pound	Government, Institution or Community	Existing	181	9.5

2.5 Air Quality Impact During Construction Stage

2.5.1 This section identified the air quality impact arising from the construction stage of the Proposed Development. Mitigation measures are recommended accordingly.

Construction Stage of Proposed Development

2.5.2 The construction stage of the Proposed Development is tentatively scheduled from 2026 to 2030. The proposed development will include an amphitheater, a culture venue, and three residential towers. At the current application stage, the detailed design of the Proposed Development has not yet commenced, and the detail construction programme is not available at this planning stage.

2.5.3 A site visit conducted in 28th May 2025 identified a building on Pak Fuk Road, located 480m away within the 500m assessment area, that is prepared for demolition, expected to commence within the next 10 months as per the notice displayed on sit .Given that Quarry Bay is a well-developed area and our project is not directly adjacent to the demolition site, it is unlikely that the construction will lead to any significant adverse air quality impacts. The demolition project will adhere to the best environmental regulations and construction practices to mitigate air and noise impacts, allowing us to anticipate no cumulative dust impact or only very minimal effects that will not affect our project.

Air Quality Impact Assessment during Construction Stage

2.5.4 The potential air pollution sources related to the construction of the Proposed Development include the plant emission from the deployed construction machinery and equipment, and the fugitive dust generated from handling of dusty materials. Additionally, emissions from construction vehicles and trucks, or generators are also considered as the potential air pollution sources during the construction phase.

2.5.5 Plant emissions are statutorily controlled under Air Pollution Control (Non- Road Mobile Machinery) (Emission) Regulation and Air Pollution Control (Fuel Restriction) Regulations. While the fugitive dust impact is identified as the primary source of air pollution during the construction stage of the Proposed Development, the specific number of construction trucks and equipment to be operated onsite will be determined during the detailed design stage. Since the number of the plants and equipment to be deployed at a time will be constrained by available space in the construction site with site area approximately 8,532 m^2, it is unlikely that the construction phase of the Proposed Development could result in large number of plants operating simultaneously. The plant emission is anticipated to be not significant as long as the deployed plant and machinery comply with the relevant regulations and standards.

2.5.6 It is anticipated that the construction activities of the Proposed Development will involve demolition works, site formation works, foundation works, superstructure works and landscape works. The existing car park within the site area will be demolished and filled to 4.30 mPD as the ground level of the proposed waterfront development, along with the construction of multiple levels of basement. These activities, including stockpiling, excavation, and demolition would generate emission of air pollutants that could impact the nearby ASRs.

2.5.7 The Eastern Harbour Centre, Boardwalk Underneath Island Eastern Corridor IEC and Quarry Bay Park Phase 2 are three of the closest existing ASRs to the site boundary with 63m, 79 m and 74 m respectively. Considering the nature of the Boardwalk as an open space used for recreation purposes and its relatively close distance to Site boundary. They are expected to be the critical ASRs affected the most by the air quality impact from the Proposed Development.

2.5.8 The construction phase of the Proposed Development would involve large area of demolition and site formation works, which are typically dust intense construction activities, and the site boundary is close to nearby ASRs, the contractor shall implement the standardised dust suppression measures to minimise the air quality impact during the construction phase. The mitigation measures against the air quality impact during the construction phase is detailed in the following paragraphs.

Mitigation Measure for Air Quality Impact during Construction Stage

2.5.9 To avoid adverse dust impact on the nearby air sensitive uses, mitigation measure shall be implemented during the construction stage as follows:

- For any wall of the building to be demolished that abuts or fronts upon a street, service lane or other open area accessible to the public, impervious dust screens or sheeting shall be used to enclose the whole wall to a height of at least 1 m higher than the highest level of the structure being demolished.
- Provide hard paving on open area, regular watering to reduce dust emissions from exposed site surfaces and unpaved roads, particularly during dry weather.
- The working area of any excavation or earth moving operation shall be sprayed with water immediately before, during and immediately after the operation to maintain the entire surface wet.
- Unpaved surface should be minimised. Exposed earth should be covered or paved as soon as the works have been completed.
- Frequent watering for particularly dusty areas and areas close to ASRs.
- Any stockpile of dusty materials shall be either covered entirely by impervious sheeting, placed in an area sheltered on the top and the 3 sides, or sprayed with water so as to maintain the entire surface wet.
- Dusty works and stockpiling near ASRs should be avoided.
- Where possible, dusty materials shall be sprayed with water immediately prior to any loading, unloading or transfer operation so as to maintain the dusty materials wet.
- The working area for the uprooting of trees, shrubs, or vegetation or for the removal of boulders, poles, pillars or temporary or permanent structures shall be sprayed with water immediately before, during and immediately after the operation so as to maintain the entire surface wet.
- All demolished items (including trees, shrubs, vegetation, boulders, poles, pillars, structures, debris, rubbish and other items arising from site clearance) that may

dislodge dust particles shall be covered entirely by impervious sheeting or placed in an area sheltered on the top and the 3 sides within a day of demolition.

- Tarpaulin covering of all dusty vehicle loads transported to, from and between site locations.
- Vehicle washing facilities including a high-pressure water jet shall be provided at every discernible or designated vehicle exit point. The area where vehicle washing takes place and the section of the road between the washing facilities and the exit point shall be paved with concrete, bituminous materials or hardcore.
- Provision of not less than 2.4 m high hoarding from ground level along site boundary where adjoins a road, streets or other accessible to the public except for a site entrance or exit.
- Spray water on the surface of façade before and during grinding work.
- Site hoarding with sufficient height should be installed at the site boundary closed to the ASRs.
- Equip vacuum cleaner on grinder for façade grinding work as far as practicable.
- Main haul road shall be sprayed with water so as to maintain the entire road surface wet. Imposition of speed controls for vehicles on site haul roads and confine haulage and delivery vehicles to designated roadways inside the site.
- The portion of any road leading only to a construction site that is within 30 m of a discernible or designated vehicle entrance or exit shall be kept clear of dusty materials.
- Where possible, routing of vehicles and positioning of construction plant should be at the maximum possible distance from ASRs.
- Haul road should be located away from ASRs.
- Every stock of more than 20 bags of cement or dry Pulverised Fuel Ash (“PFA”) should be covered entirely by impervious sheeting or placed in an area sheltered on the top and three sides.
- Plan the site layout to locate machinery and dust causing activities, including haul roads and stockpiling areas away from receptor as far as possible.
- Erect solid screens or barriers around dusty activities as far as practicable.
- Where possible, connect the construction plant and equipment to mains electricity supply and avoid use of diesel generator and diesel-powered equipment to minimize air quality impact arising from the equipment.
- Install an electrostatic precipitator at the eating area to effectively remove oily fumes and cooking odours.

2.5.10 Air quality impact during construction can be effectively controlled by the mitigation measures and good site practice. It is expected that air quality impact from the Proposed Development during its construction stage would not be adverse with the implementation of the abovementioned measures.

2.6 Air Quality Impact During Operation Stage

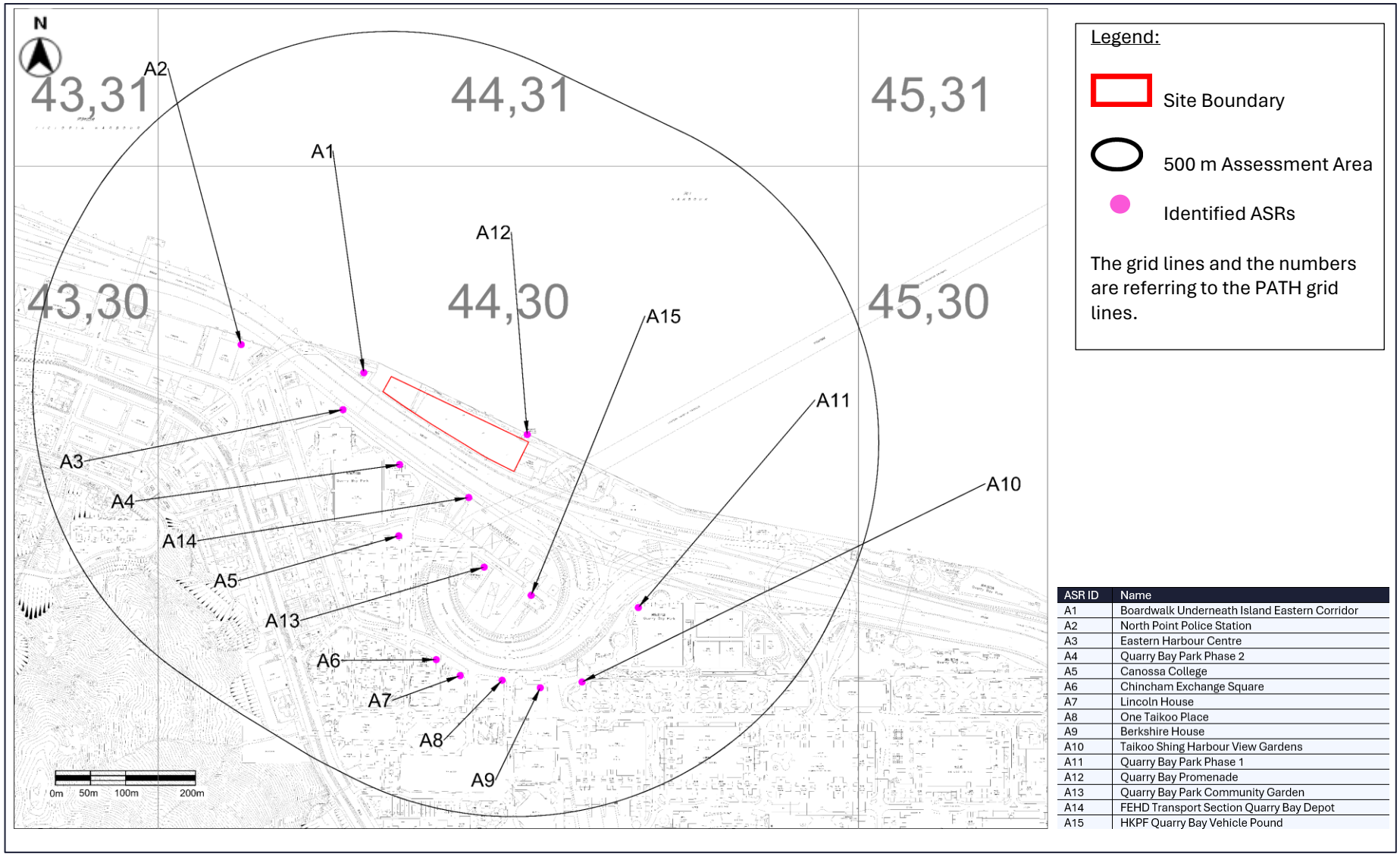
2.6.1 The Proposed Development would include residential, cultural and entertainment feature. Direct emission of air pollutant from the Proposed Development during its operation stage is not expected. However, as the Proposed Development is considered air sensitive, and is bound by Island Eastern Corridor (IEC), it will be affected by the vehicular emission from the traffic networks.

2.6.2 As the Proposed Development cannot meet the HKPSG buffer distance requirement for trunk road, a detailed quantitative Air Quality Impact Assessment (AQIA) has been conducted and is included in Appendix 6 of the Planning Statement.

2.7 Conclusion: Air Quality Construction Phase

2.7.1 The air quality impact related to the construction phase of the Proposed Development has been discussed. It is anticipated that the Proposed Development will not induce adverse construction air quality impacts to the surrounding, providing with the implementation of the construction dust mitigation measures. The operational stage quantitative air quality impact assessment is included in Appendix 6 of the Planning Statement where impacts have been assessed using modelling tools. Air pollution sources included vehicular emissions, major point sources emissions, and background emissions are identified and the concentration of NO_2, SO_2, RSP and FSP are predicted according to relevant guidelines.

Figure 2-1: Identified ASRs within 500 m Assessment Area from Site Boundary



ASR ID	Name
A1	Boardwalk Underneath Island Eastern Corridor
A2	North Point Police Station
A3	Eastern Harbour Centre
A4	Quarry Bay Park Phase 2
A5	Canossa College
A6	Chincham Exchange Square
A7	Lincoln House
A8	One Taikoo Place
A9	Berkshire House
A10	Taikoo Shing Harbour View Gardens
A11	Quarry Bay Park Phase 1
A12	Quarry Bay Promenade
A13	Quarry Bay Park Community Garden
A14	FEHD Transport Section Quarry Bay Depot
A15	HKPF Quarry Bay Vehicle Pound

3. NOISE

3.1 Background

3.1.1 The following section will assess the noise impact that will be generated by the project during the construction and will affect the site during the operation phase. Mitigation measures are recommended, where necessary, as part of the assessment.

3.2 Environmental Legislation and Standards

Noise Control Ordinance (CAP. 400)

3.2.1 The main piece of legislation controlling environmental noise impact is the *Noise Control Ordinance* (NCO). The NCO enables regulations and Technical Memoranda (TM) to be enacted, which introduce detailed control criteria, measurement procedures and other technical matters. Environmental noise is governed under the following Technical Memoranda:

- Technical Memorandum on Noise from Percussive Piling (PP-TM).
- Technical Memorandum on Noise from Construction Work other than Percussive Piling (GW-TM).
- Technical Memorandum on Noise from Construction Work in Designated Area (DA-TM).
- Technical Memorandum for the Assessment of Noise from Places Other Than Domestic Premises, Public Places or Construction Sites (IND-TM).

3.2.2 According to EPD's Plan No. EPD/AN/HKI-01 for Hong Kong Island and Lamma Island, the Site is located within a Designated Area (DA), hence, DA-TM is applicable.

3.2.3 Construction Noise Permit (CNP) must be obtained by the contractor for any percussive piling at any time. CNP must also be obtained for the use of any Powered Mechanical Equipment (PME) within restricted hours as always defined in the NCO (for all days 7 pm to 7 am the next day and on general holidays or Sundays).

3.2.4 In addition to CNP, hand-held breakers having a mass of above 10 kg and any air compressor capable of supplying compressed air at 500 kPa or above for carrying out construction work must be fitted with a Noise Emission Label (NEL) issued under the *Noise Control (Hand-held Percussive Breakers) Regulation* and the *Noise Control (Air Compressors) Regulation* of NCO.

3.2.5 There is no statutory control for noise arising from construction activities (other than percussive pilling) during normal working hours (7 am to 7 pm from Monday to Saturday, not including general holidays). Nevertheless, Professional Persons Environmental Consultative Committee (ProPECC) Practice Note PN 1/24 Minimizing Noise from Construction Activities (ProPECC PN1/24) recommends the noise criteria shown in **Table 3.1** as recommended guideline and criteria for construction noise control during non-restricted hours.

Table 3.1: Construction Noise Criteria for Non-restricted Hours

Noise Sensitive Use	Recommended Noise Criterion, $L_{eq\ (30\ min)}$, during Non-restricted Hours
All Domestic Premises, Temporary Housing accommodation, Hostels, Convalescences Homes, Home for the Aged	75 dB(A)
Places of Public Worship, Court of Law, Hospitals and Medical Clinics	70 dB(A)
Educational Institutions (including kindergartens and nurseries)	70 dB(A) (or 65 dB(A) during examination)

3.2.6 For fixed plant noise during operation phase, the requirements of IND-TM shall be complied with. Table 2 of IND-TM stipulates the day, evening and nighttime Acceptable Noise Levels (ANLs) for Noise Sensitive Receivers (NSRs) according to the corresponding Area Sensitive Rating (ASR), which is determined by Influencing Factors (IFs) in accordance with the IND-TM.

3.2.7 The classification of ASR is summarised in **Table 3.2** and the ANL corresponding each ASR is summarised in **Table 3.3**

Table 3.2: Classification of Area Sensitive Ratings

Type of Area Containing NSR	Degree to which NSR is affected by IF		
	Not Affected	**Indirectly Affected**	**Directly Affected**
(i) Rural area, including country parks or village type developments	A	B	B
(ii) Low density residential area consisting of low-rise or isolated high-rise developments	A	B	C
(iii) Urban area	B	C	C
(iv) Area other than those above	B	B	C

Table 3.3: Acceptable Noise Level corresponding to each Area Sensitive Rating

Time Period	**ANL, dB(A)**		
	ASR "A"	**ASR "B"**	**ASR "C"**
Day (0700 to 1900 hours)	60	65	70
Evening (1900 to 2300 hours)	60	65	70
Night (2300 to 0700 hours)	50	55	60

3.2.8 IEC is an expressway with traffic flow of over 100,000 vehicle/day in reference to Annual Traffic Census 2024, and it is at the vicinity of the Proposed Development. IEC is identified as a factor directly affecting the Proposed Development. The ASR of the Proposed Development is C, and the ANL of the noise sensitive use within the Proposed Development would be 70 dB(A) during day time and evening time, and 60 dB(A) during night time.

Hong Kong Planning Standards and Guidelines

3.2.9 The noise criteria for planned fixed noise source shall follow the requirements of **Table 4.1** of Chapter 9 of HKPSG:

a. 5dB(A) below the appropriate ANLs shown in Table 2 of IND-TM, and

b. The prevailing background noise levels, whichever is lower.

3.2.10 As recommended in Table 4.1 of Chapter 9 of HKPSG, the standards of road traffic noise in terms of $L_{10(1\text{-hr})}$ for the following uses relying on opened windows for ventilation are shown in **Table 3.4.**

Table 3.4 Summary of Road Traffic Noise Standards

Uses	Noise criteria $L_{10(1\text{-hr})}$, dB(A)
All domestic premises including temporary housing accommodation	70
Hotels and hostels	70
Offices	70
Educational institutions including kindergartens, childcare centres and all others where unaided voice communication is required	65
Places of public worship and courts of law	65
Diagnostic rooms and wards of hospitals, clinics, convalescences and residential care homes for the elderly	55

Noise Control Guidelines for Music, Singing and Instrument Performing Activities

3.2.11 In accordance with the Noise Control Guidelines for Music, Singing and Instrument Performing Activities published by EPD, the noise criteria for music, singing and instrument performing activities in places other than domestic premises, public places or construction sites should not be more than 10 dB(A) above the background noise level, measured at 1m from the exterior building facade of any NSRs, during day time and evening period, i.e. 0700 – 2300 hours. Meanwhile, for nighttime, i.e. 2300-0700 hours, noise from the aforementioned activities should not be audible by any NSRs.

3.3 Noise Sensitive Use at the Vicinity of the Site

3.3.1 The first layer of noise sensitive receivers (NSRs) within the 300 m buffering distance to Site boundary have been identified as listed in **Table 3.5** and indicated at **Figure 3-1**. They include the Canossa College and several residential buildings at Quarry Bay, as well as the Proposed Development itself, which would include domestic premises.

Table 3.5: Identified Noise Sensitive Use within 300 m Buffering Distance to Site Boundary

Noise Sensitive Receiver id	Noise Sensitive Receiver	Land Use	Approximate Distance to Site Boundary (m)
NSR 1	Proposed Development Block 1	Residential	0
NSR 2	Proposed Development Block 2	Residential	0
NSR 3	Proposed Development Block 3	Residential	0
NSR 4	Man Ning House	Residential	285
NSR 5	Man Hong House	Residential	259
NSR 6	Lai Wah Mansion	Residential	223
NSR 7	Ritz Garden Apartment	Residential	242
NSR 7	Royal Terrace	Residential	264
NSR 8	King's View Court	Residential	254
NSR 9	Canossa College	Institutional	163

3.4 Prevailing Background Noise

3.4.1 Prevailing background noise has been measured for the Site area in the previous planning application (TPB reference: A/H21/150) at the vicinity of the Proposed Development. The measured result is presented in **Table 3.6**. The detailed background noise monitoring results are presented in **Appendix A** of this report.

Table 3.6: Prevailing Background Noise Levels

ID	Measurement Location		Background Noise Level[1], $L_{eq(5mins)}$,dB(A)		
	mAG[2]	Location	Day	Evening	Night
BG1	2	Quarry Bay Park Phase I	54	54	48
	10		55	56	50
	15		57	57	51
BG2	2	Quarry Bay Park Phase II	56	55	50
	10		57	57	51
	20		59	59	53

Notes:
1. The lowest background noise level in $L_{eq(5\text{-}min)}$ dB(A) in the corresponding time period (day: 07:00 to 19:00; evening: 19:00 to 23:00; night: 23:00 to 07:00 next day).
2. mAG – metre above ground.

3.5 Potential Noise Impacts During Construction

3.5.1 Various construction activities will be the key noise sources generated during the construction phase. In particular, the use of Powered Mechanical Equipment (PME) and the vehicle movement within the Application Site are the major potential noise sources.

3.5.2 Construction shall be carried out during non-restricted hours from 07:00 to 19:00 on days not being general holidays as far as practicable. In addition to implementing the mitigation measures recommended in ProPECC PN1/24, where applicable, the mitigation measures and on-site practice as listed in **Section 3.8** are recommended to further minimising the potential construction noise impacts.

3.5.3 If construction work involving use of PME is required during the restricted hours of 19:00 to 07:00 on any day or anytime on a Sunday or a general holiday, a Construction Noise Permit (CNP) shall be applied for under the NCO. The noise criteria and assessment procedures for obtaining a CNP are specified in GW-TM. If percussive piling is found necessary during the construction stage at any time, a CNP shall also be obtained in accordance with PP-TM.

3.6 Potential Noise Impacts During Operation

3.6.1 The Proposed Development will comprise of domestic premises, and is considered noise sensitive use to fixed plant noise impact from the proximity to the Site, and road traffic noise impact from the nearby road network. Meanwhile, the Proposed Development could also induce fixed plant noise impact to the vicinity as the outdoor Electrical and Mechanical (E&M) equipment for the buildings will be installed in the future. Cultural and leisure usage is planned for the Proposed Development. The event holding activities potentially might cause entertainment noise nuisance to noise sensitive use at the Proposed Development and to the surrounding. The fixed noise impact and the noise from event is discussed in the following sections. The road traffic noise impact to the Proposed Development is discussed in **Section 3.7**.

Existing Fixed Plant Noise Source at the Proximity of the Site

3.6.2 The Proposed Development locates at Quarry Bay. The vicinity of the Proposed Development is maturely developed areas, at which large number of high-rise buildings can be observed, and most of the buildings are equipped with rooftop E&M equipment like chillers, water towers, and ventilation systems. The rooftop E&M equipment shall be classified as fixed plant noise source. However, considering that the Proposed Development is at the seafront of Victoria Harbour and is segregated by IEC, Quarry Bay Park Phase 1, and Quarry Park Phase 2 from the high-density area of Quarry Bay, the sound propagation of emitted noise from the rooftop E&M equipment to the Proposed Development would be extensively distracted, and the fixed noise impact to the Proposed Development would be negligible. In this regard, the identification of the potential fixed noise source relevant to the Site would focus on the seafront corridor between Victoria Harbour and IEC.

3.6.3 Three existing fixed plant noise sources can be identified at the proximity of the site, including the WSD Quarry Bay Saltwater Pumping Station, the MTR Quarry Bay Substation, and the EHC Quarry Bay Ventilation Building. The locations of the identified fixed plant noise sources are indicated at **Figure 3-2**.

3.6.4 A site visit has been conducted at the vicinity of the Site on 04 October 2024 in the afternoon at around 16:00. During the site visit, the prevailing noise background at the Site area was dominated by the traffic noise from IEC. The noise emission from these potential fixed plant noise sources was not audible. It was also observed that the opening of these fixed plant noise sources was not oriented to the site of the Proposed Development.

3.6.5 At the current TPO Section 12A application stage, only the conceptual design of the proposed development is available, and the detailed building design is yet to formulated. In the later detail design, either as part of the Section 16 planning application process or as part of the land lease condition, a detailed Noise Impact Assessment (NIA) report shall be carried out for the Proposed Development. Measurement to the fixed plant noise sources shall be carried out to verify the impact from the fixed plant noise sources.

3.6.6 Given the observations during the site visit, it is expected that the fixed noise impact from existing sources on the Proposed Development would not be insurmountable and could be mitigated in the future development, if necessary.

Fixed Plant Noise Source of the Proposed Development

3.6.7 E&M equipment will be provided for the Proposed Development, and it will comprise of fixed noise sources. While most of equipment such as pumps, lifts, transformers, will be installed inside plant rooms and the emitted noise should be confined, outdoor E&M equipment like chiller and cooling tower could induce fixed plant noise impact to the surrounding as well as the domestic premises within the proposed development.

3.6.8 The domestic premises within the Proposed Development may be subject to the fixed noise impact from the outdoor E&M equipment within it. Both the architectural design of the residential clusters and the building services design of the E&M equipment is yet to be formulated. Evaluating the fixed plant noise impact will be carried out at the detailed design stage.

3.6.9 To ensure the fixed plant noise generated by the Proposed Development would not cause excessive impact to the future developed domestic premises, planned fixed noise sources within the Proposed Development shall be properly designed to meet the relevant noise criteria as stipulated in Chapter 9 of the HKPSG and NCO. Provisions shall be made to control the fixed noise sources by suitable noise control measures recommended in Good Practices on Ventilation System Noise Control and Good Practices on Pumping System Noise Control whenever applicable. As such, it is anticipated that the fixed plant noise impact on the domestic premises due to the operation of the outdoor E&M equipment of Proposed Development will not exceed the relevant noise criteria under the HKPSG and NCO.

3.6.10 As long as the noise emission outdoor E&M equipment installed at the Proposed Development can satisfy the criteria in HKPSG and NCO, and would not cause adverse fixed plant noise impact to the domestic premises within the Proposed Development, the fixed plant noise impact to other NSRs out of the Site is anticipated to be small and acceptable, given the consideration of the distance and structure segregation between the Proposed Development and the urban area of Quarry Bay.

Noise from Event

3.6.11 No large-scale outdoor concert type facilities or PA system is planned for the Proposed Development at this stage. In case the event is held at the open space, the sound emitted during the event might cause noise nuisance to the noise sensitive use within the Proposed Development as well as the surrounding.

3.6.12 The statuary control of the noise from events is under Section 5 of NCO at which noise causing annoyance to any person who commits an offence. There is no quantitative noise level requirement on noise generated by events under HKPSG and the technical memorandums under NCO. To minimize the chance of causing annoyance to the residents of the Proposed Development and pedestrians nearby, preventative measures shall be implemented to control the noise from event at an acceptable level.

3.6.13 Considering that noise from events would be largely related to the management of the event organizer and the subjective acceptance of residents and receptors rather than the environmental condition, it is unlikely that the noise from event will be insurmountable and constitute as adverse environmental impact with the implementation of appropriate management practice.

3.7 Road Traffic Noise

3.7.1 The Proposed Development will comprise of domestic premises and is considered sensitive to road traffic noise. To evaluate the road traffic noise impact to the Proposed Development, a preliminary road traffic noise impact assessment has been conducted based on the conceptual design scheme of the Proposed Development. The assessment methodology and results are discussed in the following sections.

Road Traffic Noise Impact Assessment Methodology

Noise Prediction Methodology

3.7.2 NoiseMap Five is adopted in this Environmental Assessment to predict the road traffic noise level generated by the nearby road network to the Proposed Development. NoiseMap Five uses the UK standard calculation methodologies Calculation of Road Traffic Noise (CRTN), which are procedures recommended in HKPSG Chapter 9.

Noise Source

3.7.3 The road traffic noise impact assessment is based on the projected peak hourly traffic flows in 2045, which corresponds to the maximum projected traffic conditions within 15 years of occupancy of the Proposed Development, anticipated to commence in 2030. All road sections within the 300 m buffering distance to the Site boundary have been considered. The detailed peak hour traffic forecast for 2045 is provided by the traffic consultant and is attached as **Appendix B** of this EA report.

Noise Assessment Point

3.7.4 Conventionally, noise assessment points (NAPs) shall be assigned to the openable windows within rooms for habitation use, at which the provision of windows is to satisfy the natural ventilation requirement in Building (Planning) Regulation. At the current Section 12A planning application stage, the architectural design of the Proposed Development is not yet available, and the rooms for habitation use or windows for ventilation are all yet to be determined. As an alternative method, the NAPs are distributed evenly along the building footprint of the conceptual design scheme to obtain a high-level understanding on the traffic noise levels within the Site area. The locations of NAPs are set to be 1.2m above the floor levels and 1m away from the building footprint. All the NAP are assigned with 360 degrees unobstructed view. Façade correction is applied to all the NAPs to give the possibly most adverse traffic noise impact estimation. The layout of the NAPs is presented in **Figure 3-3**.

Predicted Traffic Noise Level

3.7.5 The predicted road traffic noise levels at each NAP at different floor levels corresponding to the peak hour traffic flow at daytime and nighttime period are presented in **Table 3.7** and **Table 3.8** respectively.

Table 3.7: Predicted Road Traffic Noise Level in $L_{10\ (1\ hour)}$ dB(A) during Daytime

Floor Level	L02	L03	L04	L05	L06	L07	L08	L09	L10	L11
NAP id	+11.9m PD	+15.1m PD	+18.3m PD	+21.5m PD	+24.7m PD	+27.9m PD	+31.1m PD	+34.3m PD	+37.5m PD	+40.7m PD
1	**80**	**81**	**81**	**81**	**81**	**80**	**80**	**80**	**80**	**79**
2	**82**	**82**	**82**	**81**	**81**	**81**	**80**	**80**	**80**	**79**
3	**83**	**82**	**82**	**82**	**81**	**81**	**81**	**80**	**80**	**80**
4	**75**	**76**	**76**	**76**	**75**	**75**	**75**	**75**	**75**	**74**
5	**72**	**74**	**74**	**74**	**74**	**74**	**74**	**73**	**73**	**73**
6	70	**73**	**73**	**73**	**73**	**73**	**73**	**73**	**72**	**72**
7	69	**72**	**72**	**72**	**72**	**72**	**72**	**72**	**72**	**72**
8	69	**71**	**72**	**72**	**72**	**72**	**72**	**72**	**71**	**71**
9	48	48	48	48	48	48	48	49	52	55
10	48	48	48	48	48	48	48	49	52	55
11	48	48	48	48	48	48	49	50	52	55
12	48	48	48	48	48	48	49	50	52	55
13	48	48	48	48	48	48	49	50	52	55
14	49	49	49	49	49	49	49	50	53	55
15	50	50	51	53	55	60	65	67	68	68
16	51	52	54	59	**73**	**76**	**76**	**76**	**75**	**75**
17	**80**	**80**	**80**	**80**	**79**	**79**	**79**	**79**	**79**	**78**
18	**81**	**81**	**81**	**81**	**80**	**80**	**80**	**79**	**79**	**79**
19	**82**	**82**	**81**	**81**	**81**	**81**	**80**	**80**	**80**	**79**
20	**83**	**82**	**82**	**82**	**81**	**81**	**81**	**80**	**80**	**80**
21	**76**	**76**	**76**	**76**	**76**	**75**	**75**	**75**	**75**	**75**

Floor Level	L02	L03	L04	L05	L06	L07	L08	L09	L10	L11
NAP id	+11.9m PD	+15.1m PD	+18.3m PD	+21.5m PD	+24.7m PD	+27.9m PD	+31.1m PD	+34.3m PD	+37.5m PD	+40.7m PD
22	**76**	**77**	**77**	**77**	**77**	**77**	**76**	**76**	**76**	**76**
23	69	**74**	**75**	**75**	**75**	**75**	**75**	**74**	**74**	**74**
24	68	**72**	**74**	**75**	**74**	**74**	**74**	**74**	**74**	**74**
25	68	**73**	**74**	**75**	**75**	**74**	**74**	**74**	**74**	**74**
26	69	**75**	**75**	**75**	**75**	**75**	**75**	**75**	**75**	**74**
27	**79**	**79**	**79**	**79**	**79**	**78**	**78**	**78**	**78**	**77**
28	**82**	**82**	**82**	**81**	**81**	**81**	**80**	**80**	**80**	**80**
29	**79**	**81**	**81**	**80**	**80**	**80**	**80**	**79**	**79**	**79**
30	49	49	49	49	49	49	49	51	53	56
31	50	50	50	50	49	49	50	51	53	56
32	50	50	50	50	50	50	50	51	53	57
33	51	51	51	50	50	50	50	51	53	58
34	51	51	50	50	50	50	50	50	53	57
35	50	50	50	50	50	49	49	50	53	57
36	50	49	49	49	49	49	49	50	53	56
37	49	49	49	49	49	49	49	50	53	56
38	50	52	54	59	**72**	**76**	**76**	**75**	**75**	**75**
39	**78**	**79**	**79**	**79**	**79**	**79**	**79**	**78**	**78**	**78**
40	**81**	**81**	**81**	**81**	**81**	**80**	**80**	**80**	**80**	**79**
41	**82**	**82**	**81**	**81**	**81**	**80**	**80**	**80**	**80**	**79**
42	53	54	57	62	**78**	**80**	**80**	**80**	**80**	**80**
43	54	55	57	62	**77**	**80**	**80**	**80**	**80**	**80**
44	**83**	**82**	**82**	**82**	**81**	**81**	**81**	**80**	**80**	**80**
45	**79**	**80**	**80**	**80**	**80**	**79**	**79**	**79**	**79**	**78**
46	**77**	**79**	**79**	**79**	**79**	**79**	**78**	**78**	**78**	**78**
47	50	51	52	55	60	68	70	**71**	**71**	**71**
48	51	52	55	58	63	64	65	66	66	67
49	51	53	55	59	64	65	66	67	67	68
50	51	53	56	61	65	66	67	68	69	69
51	52	54	58	63	68	70	70	**71**	**71**	**72**
52	52	54	59	70	**72**	**73**	**74**	**75**	**75**	**75**
53	**74**	**76**	**76**	**76**	**77**	**77**	**77**	**78**	**78**	**78**
54	**76**	**78**	**78**	**78**	**78**	**78**	**78**	**78**	**78**	**78**
55	**78**	**79**	**79**	**79**	**79**	**79**	**79**	**79**	**79**	**79**
56	**81**	**81**	**81**	**80**	**80**	**80**	**80**	**80**	**80**	**79**
57	**81**	**81**	**81**	**81**	**80**	**80**	**80**	**80**	**80**	**79**
58	**81**	**81**	**81**	**81**	**80**	**80**	**80**	**80**	**79**	**79**
59	**80**	**81**	**81**	**80**	**80**	**80**	**80**	**79**	**79**	**79**
60	**79**	**80**	**80**	**80**	**79**	**79**	**79**	**79**	**79**	**78**
61	**78**	**79**	**79**	**79**	**79**	**78**	**78**	**78**	**78**	**78**
62	50	51	54	59	**73**	**76**	**76**	**75**	**75**	**75**
63	49	50	51	52	56	61	66	67	67	67
64	48	48	48	48	48	48	49	50	52	55
65	48	48	48	48	48	48	48	50	52	55
66	48	48	48	48	48	48	48	49	51	54
67	47	47	47	47	47	47	48	49	51	54
68	47	47	47	47	47	47	48	49	51	55
69	47	47	47	47	47	47	47	49	51	54

Remarks:

The predicted road traffic noise levels are rounded to the nearest whole numbers.

Those exceeding the HKPSG criteria, $L_{10\ (1hour)}$ 70 dB(A) are pointed out as bold and underlined.

Table 3.8: Predicted Road Traffic Noise Level in $L_{10\ (1\ hour)}$ dB(A) during Nighttime

Floor Level	L02	L03	L04	L05	L06	L07	L08	L09	L10	L11
NAP id	+11.9m PD	+15.1m PD	+18.3m PD	+21.5m PD	+24.7m PD	+27.9m PD	+31.1m PD	+34.3m PD	+37.5m PD	+40.7m PD
1	**79**	**81**	**80**	**80**	**80**	**80**	**79**	**79**	**79**	**78**
2	**81**	**81**	**81**	**81**	**80**	**80**	**80**	**79**	**79**	**79**
3	**82**	**82**	**81**	**81**	**81**	**80**	**80**	**80**	**79**	**79**

Floor Level	L02	L03	L04	L05	L06	L07	L08	L09	L10	L11
NAP id	+11.9m PD	+15.1m PD	+18.3m PD	+21.5m PD	+24.7m PD	+27.9m PD	+31.1m PD	+34.3m PD	+37.5m PD	+40.7m PD
4	**74**	**75**	**75**	**75**	**75**	**74**	**74**	**74**	**74**	**74**
5	**71**	**73**	**73**	**73**	**73**	**73**	**73**	**73**	**72**	**72**
6	70	**72**	**72**	**72**	**72**	**72**	**72**	**72**	**72**	**71**
7	69	**71**	**72**	**72**	**72**	**71**	**71**	**71**	**71**	**71**
8	68	**71**	**71**	**71**	**71**	**71**	**71**	**71**	**71**	**71**
9	47	47	47	47	47	47	47	49	51	55
10	47	47	47	47	47	47	47	49	51	55
11	47	47	47	47	47	47	48	49	51	54
12	47	47	47	47	47	48	48	49	51	54
13	48	48	48	48	48	48	48	49	51	54
14	48	48	48	48	48	48	48	50	52	55
15	49	50	50	52	55	60	65	66	67	67
16	50	51	53	58	**72**	**75**	**75**	**75**	**75**	**74**
17	**79**	**79**	**79**	**79**	**79**	**78**	**78**	**78**	**78**	**78**
18	**80**	**80**	**80**	**80**	**79**	**79**	**79**	**79**	**78**	**78**
19	**81**	**81**	**81**	**80**	**80**	**80**	**80**	**79**	**79**	**79**
20	**82**	**82**	**81**	**81**	**81**	**80**	**80**	**80**	**79**	**79**
21	**75**	**76**	**75**	**75**	**75**	**75**	**74**	**74**	**74**	**74**
22	**76**	**77**	**76**	**76**	**76**	**76**	**76**	**75**	**75**	**75**
23	68	**73**	**74**	**74**	**74**	**74**	**74**	**74**	**74**	**73**
24	67	**72**	**73**	**74**	**74**	**74**	**73**	**73**	**73**	**73**
25	67	**72**	**74**	**74**	**74**	**74**	**74**	**73**	**73**	**73**
26	69	**74**	**75**	**75**	**75**	**74**	**74**	**74**	**74**	**74**
27	**78**	**79**	**78**	**78**	**78**	**78**	**77**	**77**	**77**	**77**
28	**82**	**81**	**81**	**81**	**80**	**80**	**80**	**79**	**79**	**79**
29	**78**	**80**	**80**	**80**	**79**	**79**	**79**	**79**	**78**	**78**
30	49	49	49	49	48	48	49	50	52	56
31	49	49	49	49	49	49	49	50	52	56
32	50	49	49	49	49	49	49	50	53	56
33	50	50	50	50	49	49	49	50	53	57
34	50	50	50	50	49	49	49	50	52	57
35	49	49	49	49	49	49	49	50	52	56
36	49	49	49	49	48	48	48	49	52	55
37	48	48	48	48	48	48	48	49	52	55
38	50	51	53	58	**71**	**75**	**75**	**75**	**75**	**74**
39	**78**	**79**	**79**	**78**	**78**	**78**	**78**	**78**	**77**	**77**
40	**81**	**80**	**80**	**80**	**80**	**80**	**79**	**79**	**79**	**79**
41	**81**	**81**	**81**	**80**	**80**	**80**	**79**	**79**	**79**	**79**
42	52	53	56	61	**77**	**80**	**80**	**79**	**79**	**79**
43	53	54	57	62	**77**	**80**	**79**	**79**	**79**	**79**
44	**82**	**82**	**81**	**81**	**81**	**80**	**80**	**80**	**79**	**79**
45	**79**	**80**	**79**	**79**	**79**	**79**	**78**	**78**	**78**	**78**
46	**76**	**79**	**79**	**78**	**78**	**78**	**78**	**77**	**77**	**77**
47	50	50	52	54	60	67	70	70	70	70
48	50	52	54	58	62	64	64	65	66	66
49	50	52	54	59	63	64	65	66	67	67
50	50	52	55	60	64	66	66	67	68	68
51	51	54	57	63	67	69	70	70	**71**	**71**
52	51	54	58	69	**72**	**73**	**74**	**74**	**74**	**75**
53	**73**	**75**	**75**	**75**	**76**	**76**	**77**	**77**	**77**	**77**
54	**76**	**77**	**77**	**77**	**77**	**78**	**78**	**78**	**78**	**78**
55	**77**	**79**	**79**	**78**	**79**	**78**	**78**	**78**	**78**	**78**
56	**80**	**80**	**80**	**80**	**80**	**79**	**79**	**79**	**79**	**79**
57	**80**	**80**	**80**	**80**	**80**	**80**	**79**	**79**	**79**	**79**
58	**80**	**80**	**80**	**80**	**80**	**79**	**79**	**79**	**79**	**79**
59	**79**	**80**	**80**	**80**	**79**	**79**	**79**	**79**	**79**	**78**
60	**78**	**79**	**79**	**79**	**79**	**78**	**78**	**78**	**78**	**78**
61	**77**	**78**	**78**	**78**	**78**	**78**	**77**	**77**	**77**	**77**
62	49	51	53	58	**72**	**75**	**75**	**75**	**74**	**74**
63	49	49	50	52	55	60	65	66	66	67
64	48	48	48	48	47	48	48	49	51	54

Floor Level	L02	L03	L04	L05	L06	L07	L08	L09	L10	L11
NAP id	+11.9m PD	+15.1m PD	+18.3m PD	+21.5m PD	+24.7m PD	+27.9m PD	+31.1m PD	+34.3m PD	+37.5m PD	+40.7m PD
65	47	47	47	47	47	47	47	49	51	54
66	47	47	47	47	47	47	47	49	51	53
67	47	47	46	46	46	47	47	48	50	53
68	46	46	46	46	46	46	47	48	51	54
69	46	46	46	46	46	46	47	48	50	53

Remarks:
The predicted road traffic noise levels are rounded to the nearest whole numbers.
Those exceeding the HKPSG criteria, $L_{10\ (1hour)}$ 70 dB(A) are pointed out as bold and underlined.

3.7.6 **Table 3.7** and **Table 3.8** indicate that there are exceedances of the predicted traffic noise levels over the HKPSG traffic noise criteria, $L_{10\ (1\ hour)}$ 70 dB(A), and the noise levels during the daytime are higher than the nighttime. It is observed that all the NAPs at the southern portion of the Proposed Development orienting to the IEC will be exposed to a road traffic noise level exceeding $L_{10\ (1\ hour)}$ 70 dB(A), and at some floor levels will reach 80 dB(A). This notwithstanding, given the site characteristics and orientation, the flexibility in the layout and building design and the practical examples of the adoption of innovative noise mitigation designs in various residential developments along IEC, mitigation measures through combination of building layout and innovative noise mitigation measures are considered and confirmed to be feasible in the context of this proposed development. The Developer is committed to implement all necessary mitigation measures through combination of appropriate building design and noise mitigation measures as described in ProPECC PN 5/23 "Application of Innovative Noise Mitigation Designs in Planning Private Residential Developments against Road Traffic Noise Impact" (ProPECC PN 5/23) including single aspect building design, architectural fins, acoustic windows and balconies...etc. to address the road traffic noise impact in the detail design stage and to fully mitigate the adverse road traffic noise impact and present the updated Traffic Noise Impact Assessment (TNIA) in the S16A application stage and/or land title document.

3.8 Mitigation Measures during Construction Stage

3.8.1 Construction activities shall be carried out during daytime of normal working days. The mitigation measures recommended in ProPECC PN1/24 should be implemented where applicable. In addition, the following measures and on-site practice are recommended to minimise the potential construction noise impacts during daytime:

- Quiet PME and construction method should be adopted if possible.
- The Contractor shall devise and execute working methods to minimise the noise impacts on the surrounding sensitive uses and provide experienced personnel with suitable training to ensure that those methods are implemented.
- Regular maintenance of equipment.
- Noisy equipment and noisy activities should be located as far away from the NSRs as is practical.

- Use quiet construction method, e.g. use saw-cut or hydraulic crusher instead of excavator-mounted percussive breaker.
- PME should be kept to a minimum and the parallel use of noisy equipment / machineries should be avoided.
- Erect noise barriers or noise enclosure for the PME if appropriate.
- Spot check resultant noise levels at nearby NSRs.

3.8.2 With the implementation of the above standardised mitigation measures, noise impacts during the construction phases of the Proposed Development will be minimised.

3.9 Mitigation Measure during Operation Stage

Existing Fixed Plant Noise Source

3.9.1 Existing fixed plant noise sources have been identified at the vicinity of the Site as described at Section 3.4.3. Subject to the noise measurement and impact evaluation result on these sources at the later detailed design stage, mitigation measure like adjusting building layout could be considered whenever applicable.

Fixed Plant Noise Impact from the Proposed Development

3.9.2 As described in Section 3.4.8, the outdoor E&M equipment of the Proposed Development shall be designed to satisfy the criteria of HKPSG and NCO. And the noise insultation and control measures recommended in Good Practices on Ventilation System Noise Control and Good Practices on Pumping System Noise Control shall be implemented when applicable.

Noise from Event

3.9.3 No large-scale outdoor concert type facilities are proposed within the development. Any PA system design will be provided at the operational stage, once the cultural and event programming is better defined. Should there be any update, the event organizer shall minimise the noise annoyance. It is suggested to follow the Noise Control Guidelines for Music, Singing and Instrument Performing Activities throughout the event and activities. Proper specific acoustic design shall be considered in appropriate locations. The feasible management practices would include, but not limited to, are as follows:

- Install sound insulating or sound absorptive materials/panels at suitable locations.
- Avoid orienting loudspeakers that direct music or sound to the noise sensitive use windows of the NSRs.
- Maintain the volume of the sound system at low levels as far as practicable;
- Use sound limiter, working along with a monitoring system, to control the volume generated from loudspeakers or manual adjustment and monitoring of the PA system;

- Noise monitoring will be carried out in accordance with the Noise control Guidelines for Music, Singing and Instrument Performing Activities;
- Announce and notify the potential noise sensitive uses before the event and enquiry for the comments on the acoustic control measures
- A manned complaint hotline could be provided during events;

3.9.4 All practicable noise mitigation measures will be implemented, where reasonably required, to ensure compliance with NCO.

Traffic Noise

3.9.5 As mentioned in **Section 3.7.6**, exceedances of traffic noise levels over the HKPSG criteria are predicted at the Proposed Development.

Overview of the Predicted Traffic Noise Levels at the Proposed Development

3.9.6 The predicted traffic noise levels during daytime are presented in **Figure 3-4**. The bimodal distribution of the traffic noise levels reveals the following findings:

- The geometry and footprint of the Proposed Development could provide some degree of shielding effect on the traffic noise from the nearby road networks for the NAPs at the northern portion of the Proposed Development. Around 43% of the predicted traffic noise levels could comply with the HKPSG criteria, $L_{10(1\text{-hour})}$ 70dB(A), and no mitigation would be needed for them. These relatively low traffic noise levels correspond to the opening orientating to the Victoria Harbour.
- On the other hand, the nearby road networks could induce adverse traffic noise impact if the NAPs are not shielded by the Proposed Development. Around 57% of the predicted traffic noise levels are over the $L_{10(1\text{-hour})}$ 70dB(A), mitigation measures are required for them. These high traffic noise levels correspond to the opening orientating to the IEC.
- It is also observed that around 31% of the predicted traffic noise levels have reached a relatively high level (exceeding $L_{10(1\text{-hour})}$ 78dB(A)), appearing at the NAPs being close to IEC. Mitigation measures will be required.

3.9.7 The Developer is committed to implement feasible mitigation measures through combination of appropriate building design and noise mitigation measures as described in ProPECC PN 5/23 including single aspect building design, architectural fins, acoustic windows and balconies...etc. to address the road traffic noise impact in the detail design stage to fully mitigate the adverse road traffic noise impact. Examples of some feasible mitigation measures are described in the following sections.

Feasible Mitigation Measures for Noise Sensitive Uses

3.9.8 The priority of mitigating traffic noise shall focus on reducing the exposure to noise. It is suggested that the rooms at which external façades are facing IEC should be designed for non-habitation use. For example, it is suggested to locate kitchens, toilets, and store rooms at the southern portion of the buildings. These areas would not be classified as noise sensitive use, and can serve as insulation between the noise source and the rooms for sensitive use. Besides, the rooms for habitation purpose shall be arranged at the northern side of the Proposed Development as far as possible. The orientation toward the Victora Harbour would utilise the shielding effect of the building geometry and footprint and by nature would result in lower level of the traffic noise level received. This design approach reduces the possibility of the residents being exposed to high levels of traffic noise impact.

Acoustic Window and Acoustic Balcony

3.9.9 If opening toward IEC for rooms with habitation purpose is found necessary during the detailed design stage, the at-receiver noise mitigation measures shall be provided. The ProPECC PN 5/23 suggested that the provision of acoustic window parallel to dominant line source can provide a reduction of at least $L_{10(1\text{-hour})}$ 6 dB(A) for traffic noise, while the provision of enhanced acoustic balcony parallel to dominant line source can provide a reduction of at least $L_{10(1\text{-hour})}$ 8 dB(A). As shown in **Figure 3-4**, about 26% of the predicted traffic noise levels are between $L_{10(1\text{-hour})}$ 71 to 78 dB(A).

Single Aspect Building Design and Non-Openable Windows

3.9.10 It is foreseen that the traffic noise levels at the façade close to IEC (for instance, the NAP No. 3 at Tower 1 of the Proposed Development) will be subject to a traffic noise level exceeding $L_{10(1\text{-hour})}$ 78 dB(A) and reaching $L_{10(1\text{-hour})}$ 83 dB(A). Providing adequate reduction through at-receiver mitigation measures might be difficult. As the last resort, no opening shall be provided if the facades are facing the IEC and at-reciever mitigation measures are not sufficient. Single aspect building design and adoption of non-openable windows could be considered.

3.9.11 In summary, several feasible mitigation measures are discussed for consideration based on the predicted traffic noise levels. It is demonstrated that the traffic noise impact on the Proposed Development is surmountable and can be effectively mitigated through a series of multi-level measures. The Developer is committed to implement feasible mitigation measures in the detail design stage of the Proposed Development to fully mitigate the adverse road traffic noise impact. An updated road traffic noise impact assessment will be conducted based on the finalised architectural design of the Proposed Development in the detailed design stage, and the schedule for the implementation of the noise mitigation measures will be determined accordingly.

3.10 Conclusions: Noise

3.10.1 The proposed development would generate construction noise impact. With the implementation of the recommended standardised mitigation measures, construction noise impacts from the Proposed Development would not be adverse.

3.10.2 During the operation stage, the Proposed Development may induce fixed plant noise impact due to the installation of outdoor E&M equipment and might cause annoyance due to noise generated in events. The outdoor E&M equipment shall be designed in accordance with the criteria stipulated in HKPSG and NCO. Noise insultation and control measures shall be implemented as far as applicable. The event organizer shall follow the Noise Control Guidelines for Music, Singing and Instrument Performing Activities and implement appropriate management practice to prevent annoyance caused due to events. It is anticipated that the Proposed Development would not cause adverse noise impact to the surrounding environmental during its operation stage.

3.10.3 The preliminary assessment in this Environmental Assessment report has indicated that the fixed plant noise impacts and traffic noise impact on the Proposed Development would be surmountable, and has demonstrated the feasibility of mitigating the associated adverse impact. The fixed noise impact from the nearby existing noise sources shall be evaluated by conducting noise measurements. Road traffic noise impact from the road network to the Proposed Development shall be re-assessed based on the finalized architectural design. An updated noise impact assessment will be conducted in the TPO Section 16 planning application for residential developments which would be affected by noise impact. It is anticipated that the fixed noise impact and traffic noise impact on the Proposed Development will be evaluated thoroughly at the detailed design stage, and mitigation measures will be determined to ensure the compliance with HKPSG and NCO.

3.10.4 In conclusion, the noise impact arisen from the construction and operation of the Proposed Development is assessed based on the best available information at this stage, and no adverse or insurmountable noise impact is anticipated with the implementation of feasible noise mitigation measures in the detail design stage.

Figure 3-1: Identified Noise Sensitive Receivers within 300 m Buffering Distance to Site Boundary

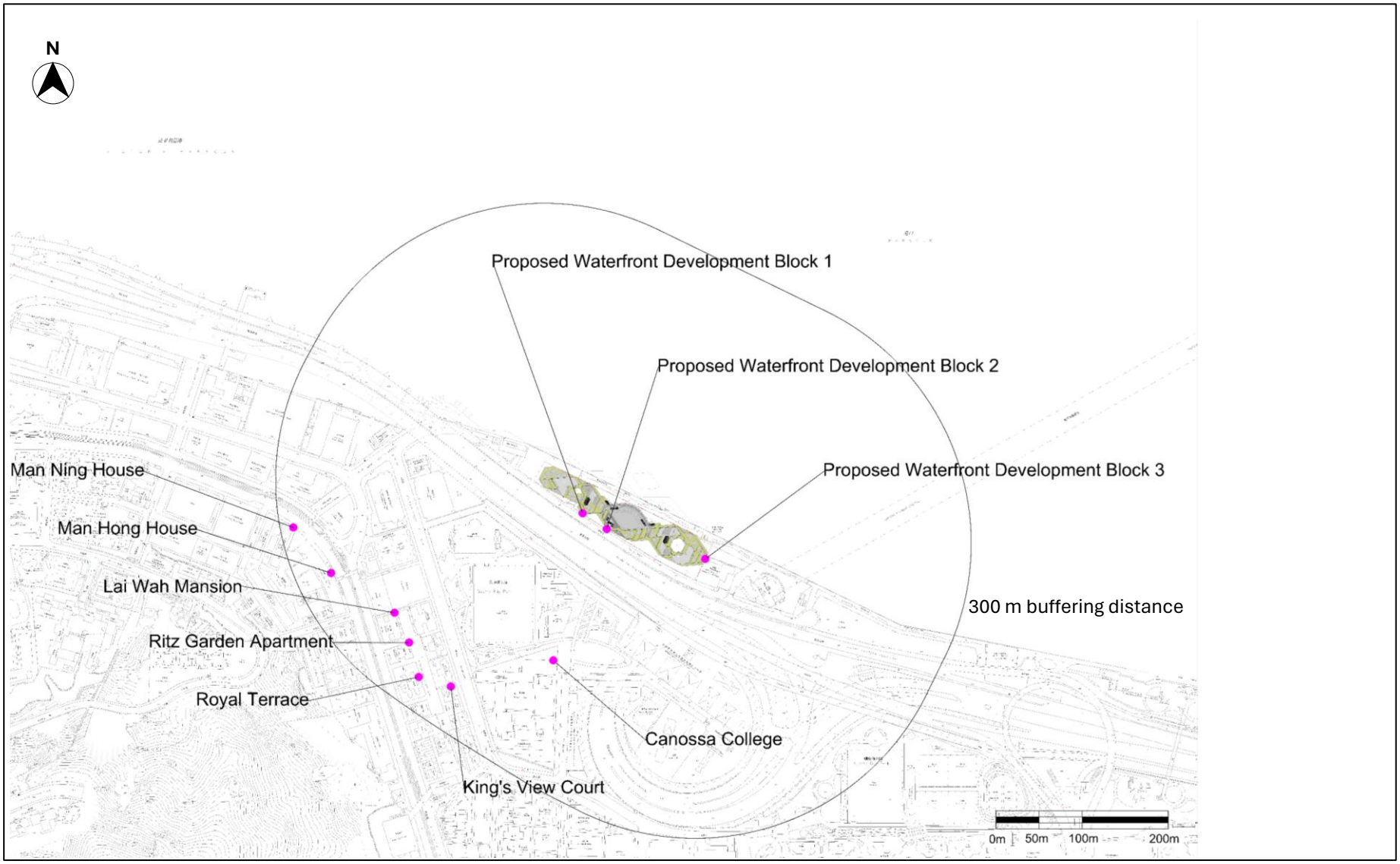
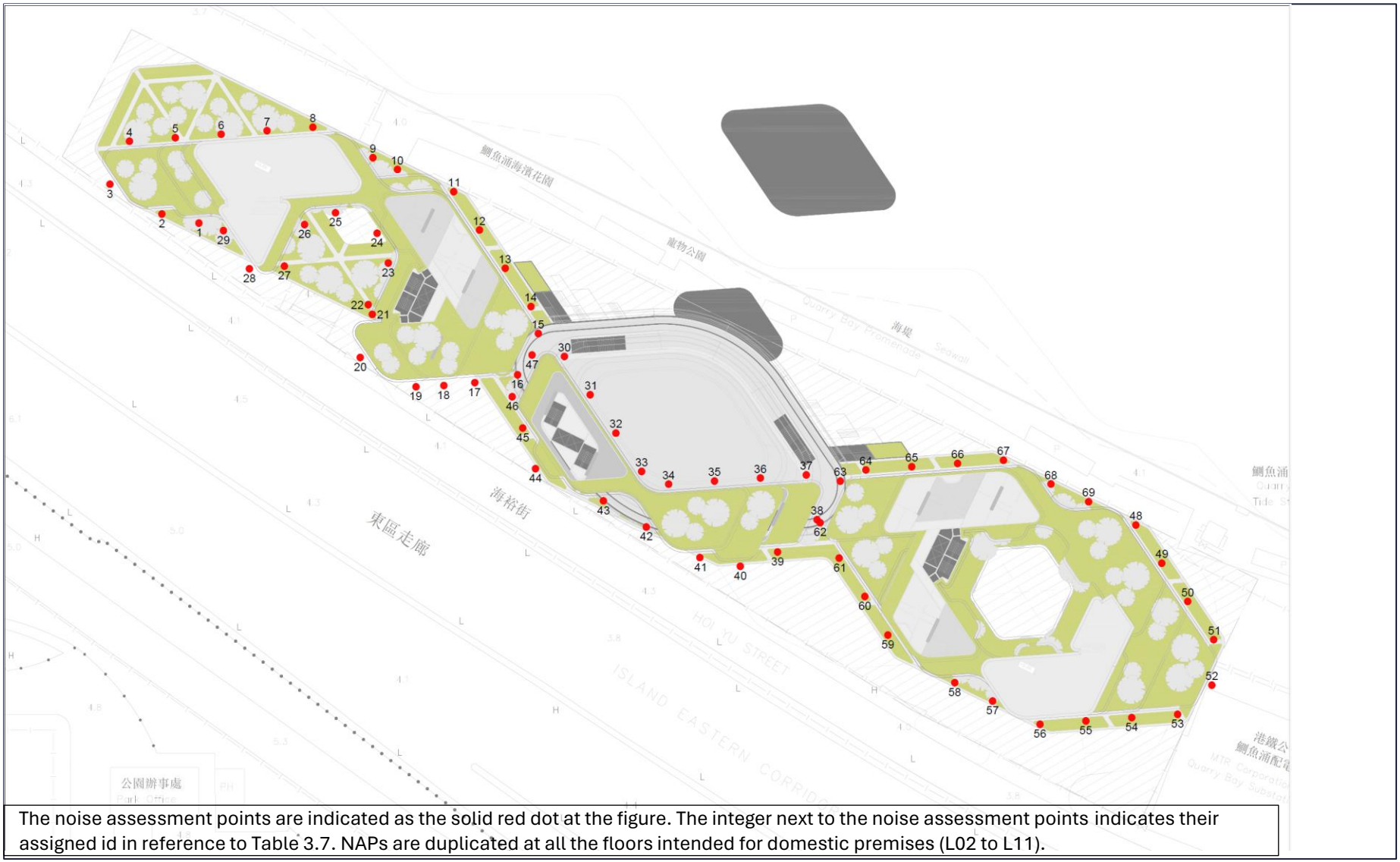


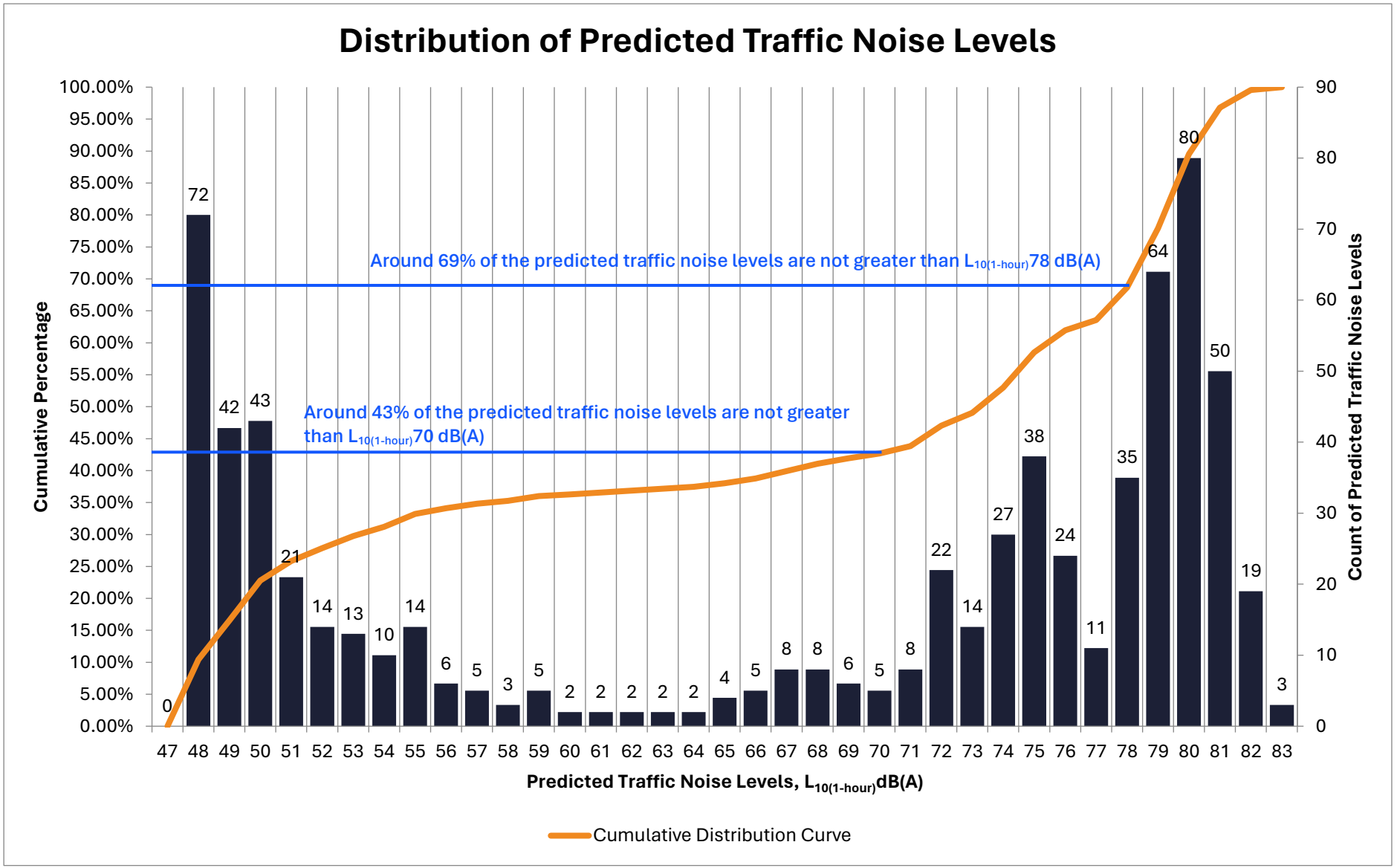
Figure 3-2: Identified Fixed Noise Sources at the Vicinity of the Site

Figure 3-3: Location of Noise Assessment Points



The noise assessment points are indicated as the solid red dot at the figure. The integer next to the noise assessment points indicates their assigned id in reference to Table 3.7. NAPs are duplicated at all the floors intended for domestic premises (L02 to L11).

Figure 3-4: Distribution Chart of Predicted Traffic Noise Levels during Daytime



4. WATER QUALITY

4.1 Background

4.1.1 The following section will assess the water quality impact that will be generated by the project during the construction and operation phase. Mitigation measures are recommended, where necessary, as part of the assessment.

4.2 Environmental Legislation and Standards

Water Pollution Control Ordinance (CAP. 358)

4.2.1 An amendment to the *Water Pollution Control Ordinance* (WPCO) was enacted in 1990 and provides a mechanism for setting effluent standards. These are included in the *Technical Memorandum Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters* of WPCO. All discharges into government sewerage systems, marine and inland waters are required to comply with the standards stipulated in the Technical Memorandum.

4.2.2 The Proposed Development locates in Victoria Harbour (Phase Three) Water Control Zone. The corresponding water quality objective is presented in **Table 4.1**.

Table 4.1: Water Quality Objective at Victoria Harbour (Phase Three) Water Control Zone

Parameter	Water Quality Objective	Part or Parts of Zone
A. AESTHETIC APPEARANCE	(a) There should be no objectionable odours or discolouration of the water.	Whole zone
	(b) Tarry residues, floating wood, articles made of glass, plastic, rubber or any other substances should be absent.	Whole zone
	(c) Mineral oil should not be visible on the surface. Surfactants should not give rise to a lasting foam.	Whole zone
	(d) There should be no recognisable sewage-derived debris.	Whole zone
	(e) Floating, submerged and semi-submerged objects of a size likely to interfere with the free movement of vessels, or cause damage to vessels, should be absent.	Whole zone
	(f) The water should not contain substances which settle to form objectionable deposits.	Whole zone
B. BACTERIA	The level of Escherichia coli should not exceed 1 000 per 100 mL, calculated as the geometric mean of the most recent 5 consecutive samples taken at intervals of between 7 and 21 days. (E.R. 6 of 2020)	Inland waters
C. COLOUR	Human activity should not cause the colour of water to exceed 50 Hazen units	Inland waters
D. DISSOLVED OXYGEN	(a) The level of dissolved oxygen should not fall below 4 mg per litre for 90% of the sampling occasions during the whole year; values should be calculated as the annual water column average (see Note). In addition, the concentration of dissolved oxygen should not be less than 2 mg per litre within 2 m of the seabed for 90% of the sampling occasions during the whole year.	Marine waters
	(b) The level of dissolved oxygen should not be less than 4 mg per litre.	Inland waters
E. pH	(a) The pH of the water should be within the range of 6.5–8.5 units. In addition, human activity should not cause the natural pH range to be extended by more than 0.2 unit.	Marine waters

Parameter	Water Quality Objective	Part or Parts of Zone
	(b) Human activity should not cause the pH of the water to exceed the range of 6.0–9.0 units.	Inland waters
F. TEMPERATURE	Human activity should not cause the daily temperature range to change by more than 2.0 degree Celsius.	Whole zone
G. SALINITY	Human activity should not cause the salinity level to change by more than 10%.	Whole zone
H. SUSPENDED SOLIDS	(a) Human activity should neither cause the suspended solids concentration to be raised more than 30% nor give rise to accumulation of suspended solids which may adversely affect aquatic communities.	Marine waters
	(b) Human activity should not cause the annual median of suspended solids to exceed 25 mg per litre.	Inland waters
I. AMMONIA	The un-ionized ammoniacal nitrogen level should not be more than 0.021 mg per litre, calculated as the annual average (arithmetic mean).	Whole zone
J. NUTRIENTS	(a) Nutrients should not be present in quantities sufficient to cause excessive or nuisance growth of algae or other aquatic plants.	Marine waters
	(b) Without limiting the generality of objective (a) above, the level of inorganic nitrogen should not exceed 0.4 mg per litre, expressed as annual water column average (see Note).	Marine waters
K. 5-DAY BIOCHEMICAL OXYGEN DEMAND	The 5-day biochemical oxygen demand should not exceed 5 mg per litre.	Inland waters
L. CHEMICAL EXYGEN DEMAND	The chemical oxygen demand should not exceed 30 mg per litre.	Inland waters
M. TOXIC SUBSTANCES	(a) Toxic substances in the water should not attain such levels as to produce significant toxic, carcinogenic, mutagenic or teratogenic effects in humans, fish or any other aquatic organisms, with due regard to biologically cumulative effects in food chains and to interactions of toxic substances with each other.	Whole zone
	(b) Human activity should not cause a risk to any beneficial use of the aquatic environment.	Whole zone

Note:
Expressed normally as the arithmetic mean of at least 3 measurements at 1 m below surface, mid depth and 1 m above the seabed. However, in water of a depth of 5 m or less the mean shall be that of 2 measurements (1 m below surface and 1 m above seabed), and in water of less than 3 m the 1 m below surface sample only shall apply.

Construction Site Drainage, ProPECC PN 2/24

4.2.3 Under *ProPECC Practice Note PN 2/24 Construction Site Drainage* (ProPECC PN 2/24), various guidelines for the handling and disposal of construction site discharges are included. The guidelines include the use of sediment traps, wheel washing facilities for vehicles leaving the Site, adequate maintenance of drainage systems to prevent flooding and overflow, sewage collection and treatment, and comprehensive waste management (collection, handling, transportation, and disposal) procedures.

Drainage Plan subject to Comment by Environmental Protection Department, ProPECC PN 1/23

4.2.4 Under *ProPECC Practice Note PN 1/23 Drainage Plan subject to Comment by Environmental Protection Department* (ProPECC PN 1/23), various guidelines for the pollution control for discharge to storm drains and foil sewers, such as the use of grease trap for wastewater from the restaurant kitchen, the use of silt removal facilities for open

surface channel led to stormwater drains, etc. are included. The guidelines also include the requirements for submission of drainage plans.

4.3 Water Sensitive Receivers

4.3.1 The beneficial uses within that are sensitive to water pollution are considered as water sensitive receivers (WSRs). Within the 500 m buffering distance to Site boundary, two WSRs, Victoria Harbour and WSD Quarry Bay Salt Water Pumping Station, are identified and are considered relevant to the Proposed Development. Victoria Harbour is at the immediate north of the Proposed Development, while the Quarry Bay Salt Water Pumping Station is at the west. The location of the identified WSRs is indicated at **Figure 4-1**. Their information is summarised in **Table 4.2**.

Table 4.2: Identified WSRs relevant to Proposed Development

WSR ID	Description	Type	Approximate Distance to Site Boundary (m)
W1	Victoria Harbour	Open Marine Water	8.4
W2	Quarry Bay Salt Water Pumping Station	Seawater Intake	24.3

4.4 Water Quality Impact during Construction Stage

4.4.1 During the Construction Stage of the Proposed Development, the potential source of water quality impact is anticipated to be

- Construction Site Runoff
- Accidental spillage of chemicals
- Sewage generated from on-site construction workers

Construction Site Runoff

4.4.2 Construction site run-off may increase the loads of sediment and other contaminants. The discharge of uncontrolled site run-off may cause potential blockage of drainage channel and increase of SS level and turbidity in the nearby water body. The pH of the water system may be altered from the release of contaminants and result in toxic effects to the water biota. However, these potential impacts are considered as temporary and reversible. Construction site run-off usually comprises:

- Contaminated surface run-off and erosion from site surfaces, exposed bare soil and earth, drainage channels, earth working areas and stockpiles.
- Effluents from dewatering associated with piling, grouting and cement washing;
- Wastewater from dust suppression sprays and vehicle wheel washing; and;
- Contaminated surface run-off by fuel, oil, solvents and lubricants from maintenance area for construction equipment and vehicle.

4.4.3 Because of the close distance to Site boundary, Victoria Harbour will be vulnerable to the construction runoff from the proposed development. Control measures shall be implemented by the contractor to prevent direct discharge of site runoff to Victoria Harbour. Impact from construction site runoff can be effectively minimised by good site practices and relevant guidelines. Adequate site drainage with sedimentation tank and perimeter drain along Site boundary will be provided on Site. With the implementation of mitigation measures and good site practices, it is expected that the effluent from the construction site will meet the requirements specified on the discharge licence and the WPCO-TM. Therefore, unacceptable water quality impacts on the WSRs are not anticipated.

Accidental Spillage of Chemicals

4.4.4 Surface soils may be contaminated by the accidental spillage of trace of chemicals used in general construction works, e.g. lubricant oil, paints, diesel and solvents, etc. The contaminated soil may be washed away by construction site run-off and enter nearby stormwater drainage channels, thus resulting in adverse water quality impacts. These potential impacts are considered as temporary and reversible.

4.4.5 Implementation of good construction and site management practices, such as perimeter drain along site boundary and sediment trap, will ensure the generation of accidental chemical spillage is minimised. As such, spillage of chemicals shall not enter nearby stormwater drains and adverse water quality impacts on the WSRs can be avoided.

Sewage Generated from On-Site Workforce and Staff

4.4.6 There will be sewage generation from Food & Beverage (F&B) areas, temporary sanitary facilities and waste disposal area for on-site construction workforce and staff. The characteristics of the sewage may include high levels of BOD_5, ammonia and E. *coli*. However, adverse water quality impacts on the water system including nearby WSRs are not anticipated by adequate control of construction phase sewage through provision of sewage collection and disposal facilities, such as on-site chemical toilets.

4.5 Water Quality Impact during the Operation Stage

4.5.1 The major sources of wastewater generation arising from the Proposed Development will be sewage from toilets; greywater from bathrooms showers and sinks; greywater from kitchens sinks and drains; and backwashing/cleaning water from water features. All such kinds of wastewater need to be properly collected and discharged to the existing public sewerage system.

4.5.2 There is existing public sewerage connection available adjacent to the Proposed Development. The sewerage connection and any necessary infrastructure shall be designed to allow sewage arising from the Proposed Development flow into the existing public sewerage system to ensure the compliance with the building (Standards of Sanitary Fitments, Plumbing, Drainage Works and Latrines) Regulations. It is expected that a drainage plan will be prepared during the detailed design stage of the Proposed Development for review of Building Department (BD), Drainage Services Department (DSD), and EPD. It is anticipated that no water quality impact will arise from the sewage handling of the Proposed Development.

4.5.3 There will be no vehicle maintenance and repair conducted within the basement carpark. All the runoff within the basement will be properly collected and discharged to the drainage system. Mitigation measures, such as oil interceptors, will be provided before the terminal manhole to intercept any petrol, oil or mechanical grease washed from the road surface. With the provision of the oil interceptor, adverse water quality impact is not anticipated.

4.6 Mitigation Measures

Construction Phase

4.6.1 During construction, it is recommended that portable toilets should be provided for construction workers. These will be supplied, maintained and emptied (at a sewage treatment facility off-site) by a specialist contractor.

4.6.2 The construction contractor shall follow good site practice and be responsible for the design construction, operation and maintenance of all the mitigation measures a specified in *ProPECC PN 2/24* for construction site drainage:

- Surface run-off from construction sites shall be discharged into storm drains after treated in adequately designed sand/silt removal facilities such as sand traps, silt traps and sediment basins. Channels or earth bunds or sandbag barriers shall be provided on site to properly direct storm water to such silt removal facilities. Perimeter channels at site boundaries shall be provided where necessary to intercept storm run-off from outside the Site so that it will not wash across the Site.
- Silt removal facilities, channels and manholes shall be maintained, and the deposited silt and grit should be removed regularly, at the onset of and after each rainstorm to ensure that these facilities are always functioning properly.
- For the purpose of preventing soil erosion, temporarily exposed slope surfaces shall be covered e.g. by tarpaulin, and temporary access roads shall be protected by crushed stone or gravel, as excavation proceeds. Intercepting channels shall be provided (e.g. along the crest/edge of excavation) to prevent storm runoff from washing across exposed soil surfaces. Arrangements shall always be in place to ensure that adequate surface protection measures can be safely carried out well before the arrival of a rainstorm.
- Earthworks final surfaces shall be well compacted, and the subsequent permanent work or surface protection shall be carried out immediately after the final surfaces are formed to prevent erosion caused by rainstorms. Appropriate drainage like intercepting channels shall be provided where necessary.
- Measures shall be taken to minimise the ingress of rainwater into trenches. If excavation of trenches in wet seasons is necessary, they shall be dug and backfilled in short sections. Rainwater pumped out from trenches or foundation excavations shall be discharged into storm drains via silt removal facilities.
- Open stockpiles of construction materials (e.g. aggregates, sand and fill material) on sites shall be covered with tarpaulin or similar fabric during rainstorms. Measures shall be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system.
- Manholes shall always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage system, and to prevent storm run-off from getting into foul sewers.

- Discharge of surface run-off into foul sewers shall always be prevented in order not to unduly overload the sewerage system.

Operation Phase

4.6.3 Wastewater generated during the operation phase, including domestic sewage; will be collected and discharged to the public sewerage system. Therefore, no adverse water quality impact arising from the Proposed Development is anticipated.

Proper drainage system will be provided within the basement carparks to collect the runoff, oil interceptors will be provided before the terminal manhole to intercept the petrol oil or mechanical grease wash-down from the road surface. With the provision of the oil interceptors, adverse water quality impact is not anticipated.

4.6.4 Grit and debris traps will be provided at the terminal manhole for the podium water feature to remove grit and debris before discharge to the storm drain. If chlorine will be used as the disinfectants, the effluent shall be discharged in accordance with the effluent standard as stipulated in the TM. With the provision of the mitigation measures, adverse water quality impact is not anticipated.

4.7 Conclusions: Water Quality

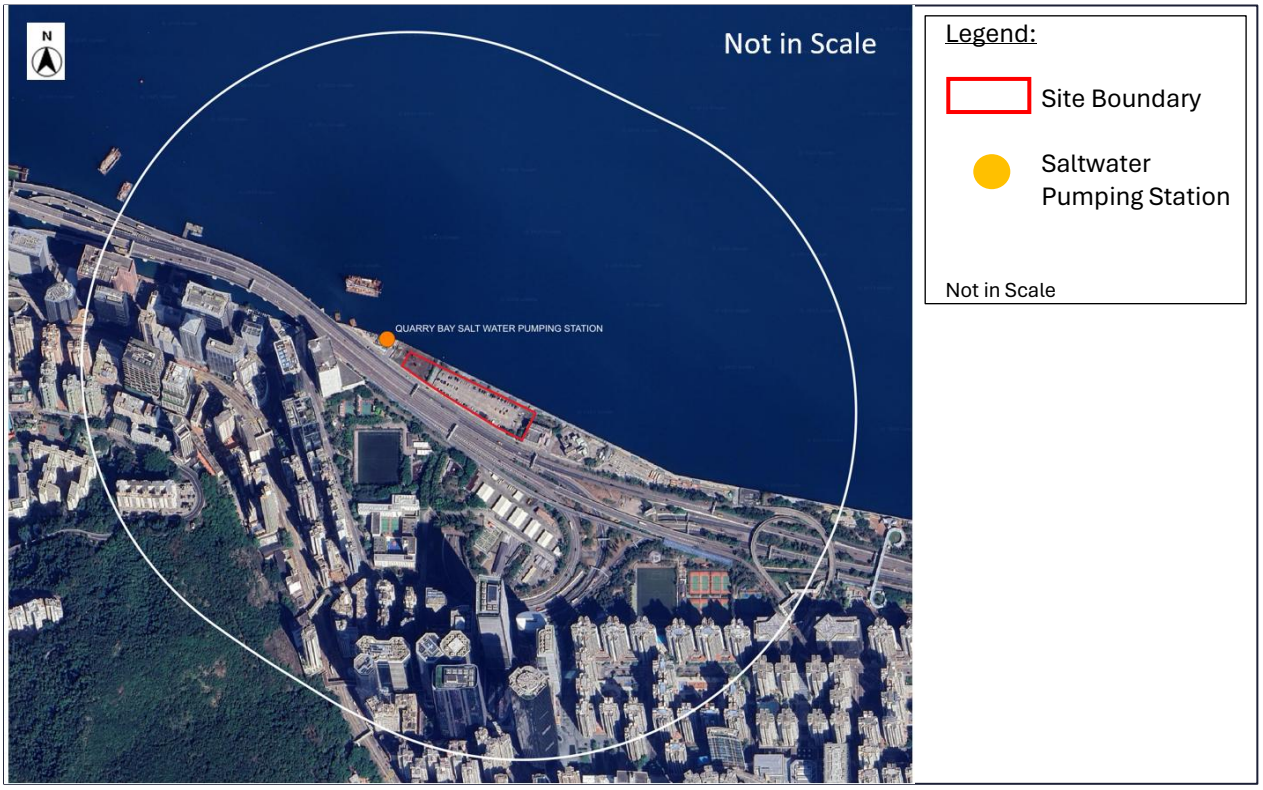
4.7.1 During construction, water quality impacts can be properly controlled with the implementation of good site practice as recommended in **Section 4.3.2**. Portable toilets, when necessary, will be provided for constructions workers on-site. Provided these measures are implemented, it is unlikely than any adverse water quality impacts from the Site will be anticipated during the construction phase.

4.7.2 The contractor shall apply for a Discharge Licence from EPD under the WPCO. All site discharges should be treated as necessary in accordance with the terms and conditions of the Discharge Licence.

4.7.3 During operation, no adverse water quality impact is anticipated from the wastewater generated by the Proposed Development since all the wastewaters will be collected and discharged to the public sewerage system. No adverse water quality impact from the basement carpark, it is anticipated with the implementation of the recommended mitigation measures. With the provision of the mitigation measure, adverse water quality impact is not anticipated.

4.7.4 Overall, no adverse water quality impact is anticipated during the construction or operational phases of the Proposed Development.

Figure 4-1: Identified Water Quality Sensitive Receivers



5. WASTE MANAGEMENT

5.1 Background

5.1.1 The following section will assess the waste management impact that will be generated by the project during the construction and operation phase. Mitigation measures are recommended, where necessary, as part of the assessment.

5.2 Environmental Legislation and Standards

5.2.1 As various types of wastes will be generated from demolition, excavation, and construction, each waste stream will require a different approach for management according to their chemical and physical nature characteristics.

5.2.2 The legislation and guidelines applicable to the study and assessment of waste management implications include:

Waste Disposal Ordinance

5.2.3 The Waste Disposal Ordinance (WDO) prohibits any unauthorised disposal of wastes. Construction waste, defined under Cap. 354N of the WDO, refers to a substance, matter or thing which is generated from construction works. It includes all abandoned materials, whether processed or stockpiled or not, before being abandoned, but does not include sludge, screenings or matter removed or generated from desludging, desilting or dredging works.

5.2.4 Under the WDO, wastes can only be disposed of at designated waste disposal facilities licensed by the Environmental Protection Department (EPD). Breach of this Ordinance can lead to a fine and/or imprisonment. The WDO also stipulates the requirements for issuing licenses for the collection and transportation of waste.

Waste Disposal (Chemical Waste) (General) Regulation

5.2.5 According to the definition under this regulation, chemical waste includes scrap materials or unwanted substances specified under Schedule 1 of the Regulation, if such a substance or chemical occurs in such a form, quantity or concentration that causes pollution or constitutes a danger to health or risk of pollution to the environment. It provides regulations for chemical waste control, and administers the possession, storage, collection, transportation and disposal of chemical waste. The EPD has also issued a ‘guideline’ document – the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes (1992), which details how the Contractor should comply with the regulations on chemical waste.

Waste Disposal (Charges for Disposal of Construction Waste) Regulation

5.2.6 Under the Waste Disposal (Charges for Disposal of Construction Waste) Regulation, enacted in January 2006, construction waste delivered to a landfill for disposal must not contain more than 50% by weight of inert material. Construction waste delivered to a sorting facility for disposal must contain more than 50% by weight of inert material, and construction waste delivered to a Public Fill Reception Facility (PFRF) for disposal must consist entirely of inert material.

Land (Miscellaneous Provisions) Ordinance

5.2.7 According to the Land (Miscellaneous Provisions) Ordinance, individuals or companies delivering public fill to PFRFs are required to hold dumping licences issued under delegated powers from the Director of Lands.

Dumping at Sea Ordinance

5.2.8 The Dumping at Sea Ordinance (DASO) is the principal statutory legislation to control dumping of sediment at sea. It safeguards the water quality and ecology of Hong Kong waters.

Public Cleansing and Prevention of Nuisances Regulation

5.2.9 The Public Cleansing and Prevention of Nuisances Regulation under the Public Health and Municipal Services Ordinance provides control on illegal tipping of wastes on unauthorised (unlicensed) sites.

Trip Ticket System for Disposal of Construction & Demolition Materials

5.2.10 The trip-ticket system is a recording system for orderly disposal of construction waste to disposal sites (i.e., PFRFs) by trucks. The contractor is required to complete a standard trip-ticket form outlining the details of the transportation vehicle, contents of the vehicle (type and approximate volume of waste) and the designated disposal facility. Once the waste is delivered to the designated facility, a receipt is issued to the vehicle operator for return to the project engineer or architect representative for verification of the contractor's compliance with the policy requirements.

5.2.11 The implementation of such a system has ensured a certain level of accountability between the project proponent, engineer/architect and the contractor. Moreover, it facilitates the recording of waste as it arrives at the landfill or PFRF and minimise the potential for cross-contamination with other waste which the vehicle operator may otherwise likely pick-up and route to the disposal facility. This system assumes that the contractor will bear the responsibility for the sorting (where applicable) of the construction waste generated on their site prior to its disposal.

5.2.12 Other relevant guidelines relate to waste management and disposal in Hong Kong include:

- Civil Engineering and Development Department (CEDD) Technical Circular No. 11/2019, Management of Construction and Demolition Materials.

- Building Department Practice Notes for Authorised Persons, Registered Structural Engineers and Registered Geotechnical Engineers Waste Minimisation – Construction and Demolition Waste (ADV-19).
- Building Department Practice Notes for Authorised Persons, Registered Structural Engineers and Registered Geotechnical Engineers Waste Minimisation – Provision of Fitments and Fittings in New Buildings (APP-114).
- Building Department Practice Notes for Registered Contractors (PNRC 17), Control of Environmental Nuisance from Construction.
- Code of Practice on the Packaging, Labelling and Storage of Chemical Waste.
- Administrative Guidance – Management Framework for Disposal of Dredged/Excavated Sediment published by the EPD.
- Guidelines on Yard Waste Reduction and Treatment (July 2014).

5.3 Description of Existing Environment

5.3.1 The Application Site is a waterfront site on Hoi Yu Street, Quarry Bay. The Site is bounded by the Victoria Harbour to the north, MTR Corporation Quarry Bay Substation and East Harbour Tunnel Quarry Bay Ventilation Building to the east, Hoi Yu Street and Island East Corridor to the south, and Water Supplies Department Quarry Bay Saltwater Pumping Station to the west.

5.3.2 According to the most recent site inspection carried out on 4 October 2024, most of the Application Site area is paved. The existing conditions of the Application Site are shown in **Figure 5-1**.

Figure 5-1: Existing Conditions within the Application Site

5.4 Assessment Approach

5.4.1 The waste management hierarchy is to minimize waste generation. If waste generation cannot be avoided, a waste management plan will be established prior to commencement of works to outline the methods that can be incorporated into the Project for waste minimisation, including reuse, recycling, matching disposal with other projects, handling, storage, transportation and disposal of expected waste materials.

5.4.2 The waste management hierarchy is a concept that shows the desirability of various waste management methods and comprises the following in descending order of preference:

- Avoidance;
- Minimisation;
- Reuse / recycling;
- Treatment; and
- Disposal.

5.4.3 The approach and method for assessing waste management implications during the construction and operation phases of the Project would be studied as per following:

a) Estimation of types and quantities of the waste generated and fill to be imported;
b) Assessment of potential impacts from the management of waste with respect to potential hazards, air and odour emissions, noise, wastewater discharge and public transport;
c) Examination of the opportunities for reducing waste generation;

d) Identification of disposal options for each type of waste; and

e) Assessment of impacts on the capacity of waste collection, transfer and disposal facilities.

5.4.4 Prior to considering the disposal options for various types of waste, opportunities for reducing waste generation, on-site or offsite reuse and recycling have been evaluated. Measures which can be taken in the planning and design phases (i.e., by modifying the design approach) and in the construction phase for maximising waste reduction have been separately considered.

5.4.5 After considering all options and methods to reduce waste generation and maximising reuse opportunities, the types and quantities of waste required to be disposed are estimated and the disposal options for each waste stream are provided.

5.4.6 The disposal options recommended for the generated waste in this report have considered the result of the assessment. The impacts caused by handling (including stockpiling, labelling, packaging and storage), collection, and reuse / disposal of wastes are addressed, and the appropriate mitigation measures are discussed in the next section.

5.5 Potential Impacts

Construction Phase

5.5.1 The assessment on waste management implications is based on best available preliminary design information and it is anticipated majority of wastes are generated from site clearance, excavation and infrastructure development. **Table 5.1** outlined the identified waste streams during construction phase.

Table 5.1: Waste Types and Sources during the Construction Phase

Waste Types	Waste Sources	Examples
Construction and Demolition (C&D) materials (inert and non-inert)	• Site clearance • General excavation • Construction of developments	Inert C&D materials: • Rocks • Soft materials Non-inert C&D materials • Bamboo, timber, paper, plastic etc.
Marine Sediment	• General excavation	• Marine clay, marine mud
Chemical Waste	• Mechanical equipment maintenance • Operation and maintenance of plant and mechanical equipment	• Cleaning fluids, solvents, waste lubricating oil and fuel etc.
General Refuse	• Local workforce	• Food waste, cans, waste paper etc.

Construction and Demolition Materials

5.5.2 C&D materials contain a mixture of inert and non-inert materials and is mainly generated from site clearance, excavation and infrastructure development. The quantity of C&D materials to be produced from the construction phase is estimated to be 99,444.50 m^3.

5.5.3 Inert C&D materials generated from construction activities is expected at 99,055.85 m^3 and would include, but not limited to rock, soil, concrete, asphalt, bitumen and soft granular materials that can be transported to Government's Public Fill Reception Facilities (PFRFs). Inert C&D materials will be used on-site as backfilling as much as possible before transporting to PFRFs. It is estimated that surplus inert C&D materials will be transported to PFRFs.

5.5.4 Non-inert C&D materials generated from the construction activities is expected at 388.65 m^3 and would include, but not limited to bamboo, timber, vegetation, paper and plastic that cannot be transported to PFRPs. Non-inert C&D materials will be sorted on-site and taken to the appropriate recycling facilities, whilst timber and woody materials will also be sorted out on site and sent to the Yard Waste Recycling Centre (Y·Park) for recycling as much as possible. Excess non-recyclable non-inert C&D materials will be disposed of at designated landfills.

5.5.5 The quantities of materials generated during construction phase and the recommended disposal outlets are shown in **Table 5.2**. The proposed outlet of C&D materials is subject to agreement with the EPD and the CEDD at later stages of the Project. It is conservatively assumed that if any excavated materials are to be reused, they will only be reused within the corresponding site where the materials are generated.

5.5.6 To minimise the impact resulting from the collection and transportation of C&D materials for offsite disposal, inert C&D materials should be segregated from the C&D materials on-site for reuse as fill materials as far as practicable. The surplus inert C&D materials could be transported to PFRFs for beneficial use by any other projects in Hong Kong. Liaison with the CEDD Public Fill Committee (PFC) on the management of C&D materials will be required before the commencement of construction work. No construction work is allowed to proceed until all issues on management of C&D materials have been resolved and all relevant arrangements have been endorsed by the relevant authorities including the CEDD PFC and the EPD.

5.5.7 With the proper implementation of good construction site practice, waste reduction measures and mitigation measures recommendations outlined in **Section 5.6**, the on-site handling, reuse, transportation and disposal of C&D materials would not cause adverse environmental impacts.

Marine Sediment

5.5.8 Excavated sediment is not expected although the Application Site was reclaimed in 1980s. The excavation of basement of the Proposed Development would not reach the marine deposit layer based on the latest design scheme.

5.5.9 The preliminary building layout, excavation plans and sections indicate the proposed basement excavation for culture venue and carpark within the Application Site to be at -8.5 mPD (bottom of basement to be at -6.0 mPD, and assumed 2.5m thick of pile cap).

5.5.10 Review of previous drillhole records showed marine deposit are found from -12.24 mPD to -27.12 mPD. Location of previous drillhole and the drillhole records are presented in **Appendix C**.

5.5.11 Should marine sediment be encountered during excavation, the sediment should be treated and reused on site or at concurrent projects as much as possible. In case marine dumping is required, rationale for the removal of sediment, sediment sampling and testing plan, preliminary sediment quality report / sediment quality report shall be submitted in accordance with the Administrative Guidance – Management Framework for Disposal of Dredged/Excavated Sediment published by the EPD.

Chemical Waste

5.5.12 Chemical waste arising during the construction phase would induce environmental, health and safety hazards if not stored and disposed of in an appropriate manner as stipulated in the Waste Disposal (Chemical Waste) (General) Regulations. The potential hazards include:

- Toxic effects to workers;
- Adverse impacts on water quality from spills; and
- Fire hazards.

5.5.13 The maintenance and servicing of construction plant and equipment may generate some chemical wastes such as used solvents, contaminated rags and waste lubricating oil. It is difficult to quantify the amount of chemical waste that will arise from the construction activities since it will be dependent on the contractor's on-site maintenance requirements and the amount of plant utilised. However, it is anticipated that the quantity of chemical waste, such as waste lubricating oil and solvents produced from plant maintenance, will be small and estimate to be a few litres per month. The amount of chemical waste to be generated will be quantified in the Waste Management Plan (WMP) to be prepared by the Contractor for the site.

5.5.14 Materials classified as chemical wastes will require special handling and storage arrangements before removal for offsite disposal at the approved Chemical Waste Treatment Centre (CWTC) or recycling by licensed facilities. Mitigation and control requirements for chemical wastes are detailed in **Section 5.6**. Provided that the handling, storage and disposal of chemical wastes are in accordance with these requirements, adverse environmental impacts are not expected.

General Refuse

5.5.15 The maximum number of workforces to be employed for the Project is expected at 100 workers and the commercial and industrial waste generation of about 0.53 kg/person/day[1] would be assumed. The general refuse arise from local work force during construction phase is estimated at 53 kg/day.

5.5.16 Such refuse will be properly managed so that intentional or accidental release to the surrounding environment will be avoided. Disposal of refuse at sites other than approved waste transfer or disposal facilities will be prohibited. Effective collection of site wastes will be required to prevent waste materials being blown around by wind, flushed or leached into the marine environment, or creating an odour nuisance or pest / vermin problem. Waste storage areas will be well maintained and cleaned regularly.

[1] Commercial and industrial waste of 0.53 kg/person/day according to Plate 2.7 Per capita disposal rates of MSW, domestic waste and commercial & industrial waste from 2015 to 2024, Monitoring of Solid Waste in Hong Kong, Waste Statistics for 2024. <https://www.wastereduction.gov.hk/sites/default/files/resources_centre/waste_statistics/msw2024_eng.pdf>

5.5.17 Separate bins shall be provided to ensure general refuse is segregated from recyclables materials such as wastepaper, plastic and aluminum cans. It is recommended that general refuse should be collected daily for disposal. Provided that the mitigation measures as detailed in **Section 5.6** are adopted, and the implementation of good waste management practices at the site, adverse environmental impacts are not expected to arise from the storage, handling and transportation of workforce wastes.

Table 5.2: Estimated Quantities of Wastes to be Generated during Construction Phase

Activities	Waste Type			
	Inert C&D Materials (m^3) [1]	Non-inert C&D Materials (m^3) [2]	Chemical Waste	General Refuse
Site Clearance	1,706 [3]	0	N/A	N/A
Basement Excavation	93,852 [4]	0		
Construction of Superstructure	3,497.85 [5]	388.65 [5]		
Maintenance and Operation of Mobile Equipment	0	0	A few litres per month	
Local Workforce	0	0	0	100 workers at 65 kg/day [6]
Total	99,055.85	388.65	A few litres per month	100 workers at 65 kg/day
Management Options	On-site reuse: As much as possible PFRFs: 99,055.85	Recycle: 77.73 (Assuming recycling rate at 20%) Landfill: 310.92	Reduce and reuse before offsite disposal	Segregate general refuse from recyclables
Recommended outlets	Transport to PFRFs at Tseung Kwan O Area 137	Reduce and recycle as much as possible before disposal to landfill at West New Territories Landfill	Collected by a licensed collector to be disposed at the CWTC	Recycle as much as possible before disposal to landfill at West New Territories Landfill

Notes:

[1] Inert C&D materials include all grade rocks, topsoil and excavated soil, broken concrete, asphalt, bitumen and granular materials, etc.

[2] Non-inert C&D materials include, but not limited to, bamboo, timber, paper, plastic and general refuse etc. that cannot be transported to PFRFs.

[3] Assuming slab thickness of 0.2 m, site area of 8,532 m^2, and concrete density of 2,400 kg/m^3.

[4] Assuming depth of basement is 11 m, site area of 8,532 m^2, and soil density of 1,600 kg/m^3.

[5] The amount is estimated based on a gross floor area (GFA) of 38,865 m^2 of the proposed development. With reference to the "Reduction of Construction Waste Final Report" (PolyU, 1993), a C&D materials generation rate of 0.1 m^3 per 1 m^2 GFA is adopted. A ratio of 1:9 for non-inert: inert C&D materials is adopted with reference to the "Monitoring of Solid Waste in Hong Kong, 2024" issued by the EPD.

[6] Assuming generation of commercial and industrial waste at 0.65 kg/person/day according to Plate 2.7 Per capita disposal rates of MSW, domestic waste and commercial & industrial waste from 2015 to 2024, Monitoring of Solid Waste in Hong Kong, Waste Statistics for 2024.

Operation Phase

General Refuse

5.5.18 Majority of wastes generated during operation phase would be general refuse arose from the commercial activities and housing residents of the Proposed Development. No significant waste implication is anticipated as the quantity of general refuse is expected to be reasonable with implementation of appropriate control measures, no adverse waste implications are anticipated during operation phase.

5.5.19 The estimated general refuse arising from the commercial activities and housing residents is summarised in **Table 5.3**, based on the estimated number of occupants, showing about 0.73 tpd of wastes to be generated during fully operation phase. This estimate assumed no waste reduction measure to reduce the demand for valuable landfill space. Based on information from the EPD, the major components of municipal solid wastes in Hong Kong included food waste, glass, metals, paper, plastics and putrescible. Most of these materials are recyclable which could significantly reduce the amount for final disposal.

Table 5.3: Estimated Quantities of Wastes to be Generated during Operation Phase

Planned Number of Occupants	EPD's Waste Generation Rate	Estimated Waste Arising	Example of Waste	Management Options and recommended outlets
600 from the commercial activities	0.65 kg/person/day [2]	0.32 tpd [3]	• General Refuse • Recyclable Waste	Recycle as much as possible before disposal to landfill at West New Territories Landfill
429 (+10% allowance = 472) [1]	0.86 kg/person/day [2]	0.41 tpd		
Total	1.40 kg/person/day	0.73 tpd		

Notes:

[1] The flat number adopted for technical assessment shall be 165 + 10% allowance for infrastructure capacity. Average domestic household size at 2.6 from 12/2024 – 2/2025 according to the Census and Statistics Department.

[2] Commercial and industrial waste at 0.65 kg/person/day and domestic waste of 0.86 kg/person/day according to Plate 2.7 Per capita disposal rates of MSW, domestic waste and commercial & industrial waste from 2015 to 2024, Monitoring of Solid Waste in Hong Kong, Waste Statistics for 2024.
<https://www.wastereduction.gov.hk/sites/default/files/resources_centre/waste_statistics/msw2024_eng.pdf>

[3] tpd denotes tonnes per day.

5.5.20 General refuse should be collected on a daily basis and delivered to the refuse collection point accordingly. A reputable waste collector should be employed to remove general refuse regularly to avoid odour nuisance or pest/vermin problems. Sufficient recycling containers are recommended to be provided at suitable and noticeable locations in the area to encourage recycling of waste such as food waste, aluminium cans, plastics bottles and wastepaper. The management offices of the new development should minimise the amount of waste to be disposed of at landfill and maximise the recovery of materials from the waste stream. With the implementation of recommended mitigation measures described below, no adverse environmental impact is anticipated.

Waste Collection and Disposal

5.5.21 An effective and efficient waste handling system is essential in order to minimise potential environmental impacts for the waste storage, collection and transport, as such impacts may include odour if waste is not collected frequently; water quality if waste enter storm water drains; aesthetics and vermin problems if the waste storage area is not well maintained and cleaned regularly. The waste handling system may also facilitate materials recovery and recycling.

5.5.22 A refuse collection room could be installed in each building at the ground floor for localised refuse collection and the waste would be transported to a Central Refuse Collection Chamber (CRCC) using electrical vehicles subject to future consideration during detailed design stage. The waste could be sorted to recover materials (such as paper and cardboards, plastics, metals and batteries, etc.) as far as possible, prior to be compacted into containers at the CRCC.

5.5.23 Recyclable materials should be segregated into different containers to avoid potential odour nuisance to the residents and workers during transport of waste. Enclosed waste containers should be used; the collection route and time should be properly planned. The CRCC should contain mobile compactor and related equipment to provide adequate waste handling services. The remaining refuse should be collected at least once a day and must be disposed at approved waste transfer or disposal facilities by the waste collector.

Waste Recycling

5.5.24 To facilitate effectual waste recycling, future property management of the Proposed Development is recommended to implement a waste recycling programme, such as a 4-bin recycling system for paper, metal, glass and plastic, alongside with a general refuse bin. They should be placed in prominent places with clear indications to promote waste separation at source.

5.5.25 Provided that the mitigation measures as recommended in **Section 5.6** are adopted, the potential environmental impacts caused by the storage, handling transport and disposal of general refuse are expected to be minimal.

5.5.26 It is recommended that the general refuse be collected on a daily basis for disposal. With the proper implementation of the recommended mitigation measures, adverse impacts from waste management during operation phase are not anticipated.

5.6 Mitigation Measures

Construction Phase

5.6.1 The mitigation measures for construction phase are recommended based on the waste management hierarchy principles. Recommendations of good site practices, waste reduction measures, alongside with the waste transportation, storage and collection are described in the following:

Good Site Practices

5.6.2 Appropriate waste handling, transportation and disposal methods for different types of wastes generated from construction activities should be implemented to ensure these waste streams do not enter the nearby water sensitive receivers.

5.6.3 Adverse impacts related to waste management such as dust, odour, noise and wastewater discharge will not be expected to arise, provided that good site practices will be strictly followed. Recommendations for good site practices during the construction activities include:

- Nomination of an approved person, such as a site manager, to be responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site.
- Training of site personnel in proper waste management and chemical handling procedures;
- Provision of sufficient waste disposal points and regular collection of waste;

- Appropriate measures to minimise windblown litter and dust / odour during transportation of waste by either covering trucks or by transporting wastes in enclosed containers;
- Provision of wheel washing facilities before the trucks leaving the works area so as to minimise dust introduction to public roads; and
- Well planned delivery programme for offsite disposal such that adverse environmental impact from transporting the inert or non-inert C&D materials is not anticipated.

Waste Reduction Measures

5.6.4 Good management and control can prevent the generation of a significant amount of waste. Waste reduction is best achieved at the planning and design stage, as well as by ensuring the implementation of good site practices. Recommendations to achieve waste reduction include:

- Sort inert C&D materials to recover any recyclable portions such as metals;
- Segregation and storage of different types of waste in different containers or skips to enhance reuse or recycling of materials and their proper disposal;
- Encourage collection of recyclable waste such as waste paper and aluminium cans by providing separate labelled bins to enable such waste to be segregated from other general refuse generated by the work force;
- Proper site practices to minimise the potential for damage or contamination of inert C&D materials; and
- Plan the use of construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste.

5.6.5 In addition to the above measures, specific mitigation measures are recommended below for the identified waste arising to minimise environmental impacts during handling, transportation and disposal of these wastes.

Storage, Collection and Transportation of Waste

5.6.6 Storage of waste on-site may induce adverse environmental implications if not properly managed. The following recommendation should be implemented to minimise the impacts:

- All waste should be handled and stored properly to prevent leakage or overflow. An enclosed and covered area is preferred to reduce the occurrence of wind-blown light material;
- Stockpiling area should be provided with covers and water spraying system to prevent materials from wind-blown or being washed away; and
- Designation of different locations to stockpile each material to enhance reuse.

5.6.7 The collection and transportation of waste from works area to respective disposal sites may also induce adverse environmental impacts if not properly managed. The following recommendation should be implemented to minimise the impacts:

- Remove waste in a timely manner;
- Employ trucks with cover or enclosed containers for waste transportation;

- Obtain relevant waste disposal permits from the appropriate regulatory authorities; and
- Disposal of waste should be done at licensed waste disposal facilities.

5.6.8 In addition to the above measures, other specific mitigation measures on handling the excavated materials, chemical waste and materials generated from construction phase are recommended below.

Excavated C&D Materials

5.6.9 Wherever practicable, C&D material generated from Project activities should be segregated from other wastes to avoid contamination and ensure acceptability at the PFRFs. The following mitigation measures should be implemented in handling the excavated C&D materials:

- Maintain temporary stockpiles and reuse excavated fill material for backfilling;
- Carry out on-site sorting;
- Make provisions in the Contract documents to allow and promote the use of recycled aggregates where appropriate; and:
- Implement a trip-ticket system in accordance with DEVB TCW No. 06/2010, Trip-ticket System for Disposal of Construction and Demolition Material for each works contract to ensure that the disposal of C&D materials are properly documented and verified.

5.6.10 Details of the recommended on-site sorting and reuse of C&D materials are provided below:

5.6.11 All C&D materials arising from the construction would be sorted on-site as far as practicable to recover the inert C&D material going to PFRFs and reusable / recyclable non-inert materials prior to disposal offsite. Non-inert portion of C&D materials, such as wood, timber, plastics, steel and other metals should be reused, recycled, and as last resort, disposed of to landfill.

5.6.12 The Contractor would be responsible for devising a system to work for on-site sorting of C&D materials and designated area(s) shall be setup within the site for the temporary stockpiling of C&D materials and to facilitate the sorting process. Within stockpile areas, the following shall be observed to minimise potential environmental impacts or nuisance:

- Cover the materials during heavy rainfall and windy days;
- Locate stockpiles to minimise potential air quality, water quality and visual impacts; and
- Minimise land intake of stockpile areas as far as possible.

5.6.13 It is recommended that the system should include the identification of the source of waste generation, estimated quantity, arrangement for on-site sorting and/or collection, temporary stockpile areas, and frequency of collection from recycling Contractors or frequency of removal offsite.

Reuse of C&D Material

5.6.14 It is estimated that C&D materials would be generated throughout the entire construction stage. The construction programme would be reviewed to maximize the quantity of on-site reuse of C&D materials whenever opportunity arises. The future Contractor should reuse the C&D materials as much as practicable to accommodate the actual site conditions and construction programme.

Transportation of C&D Material

5.6.15 The collection and transportation of waste from works area to respective disposal sites may also induce adverse environmental impacts if not properly managed. It is recommended to remove waste in timely manner; employ the trucks with cover or enclosed containers for waste transportation; obtain relevant waste disposal permits from the appropriate authorities; and dispose the waste at licensed waste disposal facilities.

Use of Standard Formwork and Planning of Construction Materials Purchasing

5.6.16 Standard formwork should also be used as far as practicable in order to minimise the arising of C&D materials. The use of more durable formwork (i.e., metal hoarding) or plastic facing should be encouraged in order to enhance the possibility of recycling. The purchasing of construction materials should be carefully planned in order to avoid excessive ordering and wastage.

Provision of Wheel Washing Facilities

5.6.17 Wheel washing facilities is mandatory and should be placed at the site entrance before the trucks leave the works area. Dust disturbance due to transportation of trucks to the public road network could be minimised by such arrangement.

Marine Sediment

5.6.18 Should marine sediment be encountered during excavation, the sediment should be treated and reused on site or at concurrent projects as much as possible. In case marine dumping is required, rationale for the removal of sediment, sediment sampling and testing plan, preliminary sediment quality report / sediment quality report shall be submitted in accordance with the Administrative Guidance – Management Framework for Disposal of Dredged/Excavated Sediment published by the EPD.

Chemical Wastes

5.6.19 For those activities which generated chemical waste, it may be possible to find alternatives to eliminate the use of chemicals, reduce the generation quantities or replace with a chemical type that is less harmful on the environment and less invasive on the health and safety of workers.

5.6.20 When chemical waste is produced at the construction site, the Contractor should register with the EPD as a Chemical Waste Producer, and to follow the guidelines stated in the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. Good quality containers compatible with chemical wastes should be used.

5.6.21 Appropriate labels should be securely attached on each chemical waste container, indicating the corresponding chemical characteristics of the chemical waste, such as explosive, flammable, oxidizing, irritant, toxic, harmful, and corrosive, etc. The Contractor shall engage a licensed collector to transport and dispose the chemical wastes at the Chemical Waste Treatment Centre in Tsing Yi, or other licensed facility, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.

5.6.22 In order to prevent leakage or spillage, chemical wastes shall be properly packed and held in labelled containers and stored in designated storage area. Container of chemical waste shall be closed or sealed. Whereas chemical waste that cannot be recycled should be disposed of at either the CWTC, or other licensed facility, as mentioned above.

General Refuse

5.6.23 General refuse should be stored in enclosed bins separated from construction and chemical wastes. Recycling bins should also be placed to encourage recycling. Preferably enclosed and covered areas should be provided for general refuse collection and routine cleaning for these areas should also be implemented to keep areas clean. A reputable waste collector should be employed to remove general refuse on a daily basis. It is expected that such arrangements would minimise potential environmental impacts. Adverse potential environmental impacts arising from waste management implications is not anticipated during construction phase.

Operation Phase

General Refuse

5.6.24 During operation phase, the major waste anticipated would be general refuse generated from household residents. It is recommended that future property management of the housing development adopt a waste reduction programme and employ a reputable cleaner / waste collector to provide routine cleaning to minimise odour, pest and litter impacts associated with the generation of domestic refuse.

5.7 Conclusions: Waste Management

5.7.1 The types of wastes generated during the construction and operation phases have been assessed, recommendations have been provided to minimise waste arising, and offsite disposal of each type of waste have been suggested.

5.7.2 C&D materials will inevitably be produced during the construction phase of the Project. Wastes generated from construction activities include inert and non-inert C&D materials, chemical waste and general refuse. Mitigation measures have been proposed following the avoidance-minimization-recycling-reuse-treatment-disposal hierarchy.

5.7.3 Wastes generated during construction phase can be minimised through careful planning during the detailed design and with good site practice during construction. The potential for reuse of inert C&D materials within the Project will be rigorously explored throughout the course of the Project in an effort to minimise offsite disposal. C&D materials is suggested to be recycled on-site as much as possible. Various waste management measures and good site practices have been provided to reduce the volume of waste.

5.7.4 During operation phase, no significant waste implication is expected from housing residents and the commercial activities at the development. The quantity of general refuse arising from the operation phase can be minimised by implementing an effectual waste handling system and waste reduction programme, and by hiring a reputable waste collector. As such it is considered to have no adverse environmental impacts

5.7.5 Provided that the wastes are managed by implementing all the recommended mitigation measures, there would be no significant environmental impact anticipated during the construction and operation phases of the Project.

6. LAND CONTAMINATION

6.1 Background

6.1.1 Potential land contamination issue of the Application Site is discussed in this section.

6.2 Environmental Legislation and Standards

6.2.1 Land contamination assessment has been conducted in accordance with the following legislation, standard and guidelines:

Guidance Note for Contaminated Land Assessment and Remediation

6.2.2 The Guidance Note for Contamination Land Assessment and Remediation (Guidance Note) sets out the requirements for proper assessment and management of potentially contaminated sites such as oil installations (e.g. oil depots, petrol filling stations), gas works, power plants, shipyards/boatyards, chemical manufacturing/processing plants, steel mills/metal workshops, car repairing/dismantling workshops and scrap yards. In addition, it provides guidelines on how site assessments should be conducted and analysed and suggests practical remedial measures that can be adopted for the cleanup of contaminated sites.

Practice Guide for Investigation and Remediation of Contaminated Land

6.2.3 The Practice Guide for Investigation and Remediation of Contaminated Land (Practice Guide) focuses on providing guidance on soil and groundwater contamination investigation, assessment and remediation. It outlines the process for conducting land contamination assessment and remediation in Hong Kong, and sets out the requirements for:

- Planning and implementation of the contaminated land investigation;
- Interpretation of the investigation results using the Risk-Based Remediation Goals (RBRGs);
- Reporting the contaminated land assessment;
- Planning and implementation of remediation actions; and
- Reporting the remediation works.

Guidance Manual for Use of Risk-based Remediation Goals for Contaminated Land Management

6.2.4 The Guidance Manual for Use of Risk-based Remediation Goals for Contaminated Land Management (Guidance Manual) introduces the risk-based approach in land contamination assessment and present instructions for comparison of soil and groundwater data to the RBRGs for 54 chemicals of concern commonly found in Hong Kong. The RBRGs were derived to suit Hong Kong conditions by following the international practice of adopting a risk-based methodology for contaminated land assessment and remediation and were designed to protect the health of people who could potentially be exposed to land impacted by chemicals under four broad post restoration land use categories. The RBRGs also serve as the remediation targets if remediation is necessary.

6.3 Site Appraisal and Potential Soil and Land Contamination

Historical Land Uses of the Site

6.3.1 Based on the review of aerial photographs, the Application Site was not formed until the 1980s by reclamation. Eastern and mid-portion of the Application Site operated as an open car park since the Site was formed until 2000, where containers and barging activities were observed. The eastern and mid-portion of the Application Site became an open car park again in 2010 and remains in operation till present day. According to the information from different Government Departments, the area was used as the Temporary Quarry Bay Public Fill Barging Point from 2005 to 2008.

6.3.2 Western portion of the Site remained vacant since its formation till 2017 with piling activities observed. Piling activities were completed before 2024 with no structures built. The portion remains vacant till present day. Historical aerial photographs are attached in **Appendix D**. No potential land contamination issues are observed and identified from the historical land use of the Application Site.

Site Walkover

6.3.3 Site walkover was conducted at the Application Site on 08 October 2024. The Site was used as an open car park with area mostly paved by concrete. The paved surface was well maintained. No oil stain nor any potentially land contaminating activities were observed. The site walkover checklist and the photographs taken during the site visit is provided in **Appendix E**.

Information from Governmental Department

6.3.4 The EPD has been consulted on 15 August 2024 for the records of Chemical Waste Producer (CWP) Registration and chemical spillage/leakage record on site. While no chemical spillage and leakage was recorded, three (3) chemical waste producer registrations were recorded. The letters are presented in **Appendix F**.

- Temporary Quarry Bay Public Fill Barging Point registered on 12 August 2005;
- Construction Site of Proposed Industrial Development on I.L. 8590 RP & 8723 RP registered on 30 November 2011; and
- Construction Site of Proposed Industrial Development on I.L. 8590 RP & 8723 RP registered on 28 June 2017.

6.3.5 The Temporary Quarry Bay Public Fill Barging Point was operated by the CEDD to collect and deliver inert construction and demolition materials in the past. The temporary barging point was closed in December 2008. Considering this facility was previously managed, and eventually terminated by a government authority, and that inert C&D materials consist of rocks, concrete, asphalt, rubbles, bricks, stones and earth that does not include any chemicals and organic wastes, it is very unlikely that the activity there caused land contamination issue.

6.3.6 Despite there were two (2) CWPs as construction site for industrial development, no construction activities were commenced except piling works as observed from the aerial photographs in the western portion of the Application Site. The Site was either remained vacant or operated as an open car park most of the time since its formation. It is unlikely that the two (2) CWPs for the construction activities would have material impact to the Site area.

6.3.7 Fire Service Department has been consulted on 15 August 2024 for the record of dangerous goods licence and incidents of spillage/leakage of dangerous goods related to the Site area. No dangerous goods licence and no incident of dangerous goods leakage/spillage was recorded. The letters are presented in **Appendix F**.

6.4 Conclusion: Land Contamination

6.4.1 A site appraisal for the Application Site reviewing the past and present land use and activities was carried out through desktop studies, site walkover and review of information from Governmental Departments. No signs of contaminations nor potentially land contaminating activities were identified within the Application Site. Potential land contamination issues are not anticipated, and therefore no site investigation works will be required.

7. SEWAGE IMPACT

7.1 Background

7.1.1 This section discuss the potential sewage impacts arising from the Proposed Scheme. A preliminary calculation will be conducted to compare the previously Approved Scheme with the Proposed Scheme to demonstrate whether there are any adverse impact.

7.2 Evaluation of Sewage Impact

7.2.1 To assess the acceptability of the sewage impact arising from the operation of the Proposed Development, the sewage generation has been estimated based on the following assumptions under **Table 7.1**:

Table 7.1: Parameter for Estimating Wastewater Generation from the Proposed Development

Parameter	Value
No. of Population (resident)	630 (advised by applicant)
Unit Flow Factor	0.37 (GESF)
No. of Population (office)	60 (advised by applicant)
Unit Flow Factor	1.58 (GESF)
No. of Population (Cultural, Leisure and Entertainment)	770 (Based on GFA 7703 meter sq. / 10)
Unit Flow Factor	0.015 (GESF)

7.2.2 Based on the assumptions in Table 7.1, the estimated total flow for the catchment is calculated to be 339.45m^3/ day.

7.2.3 A Sewage Impact Assessment (SIA) was conducted for the Proposed Site in 2018, based on the results from the previous SIA for the Approved Scheme, the estimated flow of the catchment was calculated 512.02m^3 /day, which exceed the estimation for the Proposed Development.

7.2.4 Given that the site layout, existing condition and the sewage system have not been changed since that time, it is assumed that the Proposed Development will result in a lower sewage discharge rate when compared to the pervious approved Scheme.

7.3 Conclusion: Sewage

7.3.1 Based on the preliminary calculation, the estimated total number of flow is 339.45m^3/ day, which is lower than the previously Approved Scheme of 512.02m^3 /day. Since there have been no change or update to the site conditions or the underground sewage system, this calculation indicates that there should be no unacceptable impact on the existing downstream sewage system, under the worst-case scenario for existing flows and the peak sewage discharge from the proposed development.

7.3.2 A detailed Sewage Impact Assessment will be conducted in the detailed design stages.

8. CONCLUSIONS: OVERALL

8.1.1 This Environmental Assessment (EA) has indicated that the Proposed Development will not generate any unacceptable environmental impacts during construction and operation phases, provided that all the recommended mitigation measures and good site practice are strictly implemented. The Applicant of the Proposed Development is committed to provide, implement and maintain all the mitigation measures as recommended in this EA Report.

8.1.2 Specific conclusions for air quality, noise, water quality, waste management, land contamination and sewage impact are as follows:

Air Quality

8.1.3 With the implementation of the air quality control measures and good site practice, unacceptable impacts during the construction phases are not anticipated. No further mitigation measures are needed.

8.1.4 Overall, therefore, no adverse air quality impact is anticipated during the construction phases of the Proposed Development.

8.1.5 A quantitative air quality impact assessment has been carried out separately to confirm that no adverse air quality impact on the Proposed Development will occur during operation phase (see Appendix 6 of Planning Statement).

Noise

8.1.6 During the construction phase, with the implementation of the recommended mitigation measures, the construction noise impacts on the NSRs shall be minimized.

8.1.7 During the operational phase of the Proposed Development, the E&M equipment of the Proposed Development will be designed to ensure compliance with the NCO and HKPSG, and the noise from the events will be controlled through appropriate management practices. As such, no adverse fixed noise impact will be anticipated from the Proposed Development and the noise from the exhibition use will not cause nuisance.

8.1.8 The traffic noise impact on the Proposed Development has been preliminary assessed. Appropriate building design and feasible mitigation measures described in ProPECC PN 5/23 will be implemented during the detailed design stage to fully mitigate the adverse road traffic noise impact.

8.1.9 Overall, therefore, the noise impact shall be minimised during the construction or operation phases of the Proposed Development.

Water Quality

8.1.10 During construction, water quality impacts will be properly controlled with the implementation of good site practice. Portable toilets, when necessary, will be provided for constructions workers on-site. Provided these measures are implemented, adverse water quality impact is not anticipated during the construction phase. The Contractor shall apply for a Discharge Licence under the WPCO and the effluent discharged from the construction site shall comply with the terms and conditions of the Discharge Licence.

8.1.11 During operation, no adverse water quality impact is anticipated from the Proposed Development since all the wastewater will be discharged to the public sewerage system. Besides, no adverse water quality impact from the basement carpark and water feature on the podium is anticipated with the implementation of the recommended mitigation measures.

8.1.12 Proper drainage system including grit and debris traps at the terminal manhole will be provided to remove grit and debris before discharge to the storm drain. With the provision of the mitigation measure, adverse water quality impact is not anticipated.

8.1.13 Overall, therefore, no adverse water quality impact is anticipated during the construction or operational phases of the Proposed Development.

Waste Management

8.1.14 The types of wastes generated during the construction and operation phases have been assessed, recommendations have been provided to minimise waste arising, and offsite disposal of each type of waste have been suggested.

8.1.15 C&D materials will inevitably be produced during the construction phase of the Project. Wastes generated from construction activities include inert and non-inert C&D materials, chemical waste and general refuse. Mitigation measures have been proposed following the avoidance-minimization-recycling-reuse-treatment-disposal hierarchy.

8.1.16 Wastes generated during construction phase can be minimised through careful planning during the detailed design and with good site practice during construction. The potential for reuse of inert C&D materials within the Project will be rigorously explored throughout the course of the Project in an effort to minimise offsite disposal. C&D materials is suggested to be recycled on-site as much as possible. Various waste management measures and good site practices have been provided to reduce the volume of waste.

8.1.17 During the operational phase, no significant waste implication is expected from housing residents and the commercial activities from the development. The quantity of general refuse arising from the operation phase can be minimised by implementing an effectual waste handling system and waste reduction programme, and by hiring a reputable waste collector. As such it is considered to have no adverse environmental impacts.

8.1.18 Provided that the wastes are managed by implementing all the recommended mitigation measures, there would be no significant environmental impact anticipated during the construction and operation phases of the Project.

Land Contamination

8.1.19 The potential contaminated area at the Project Site is determined according to historical and current land uses and activities potentially leading to soil or groundwater contamination.

8.1.20 Based on the aerial photographs, the Application Site was not formed until the 1980s by reclamation. Eastern and mid-portion of the Application Site operated as an open car park since the Site was formed until 2000, where containers and barging activities were observed. The portion became an open car park again in 2010 and remains in operation till present day. Western portion of the Site remained vacant since its formation till 2017 with piling activities observed. Piling activities were completed before 2024 with no structures built. The portion remains vacant till present day. No potential land contamination issues are observed and identified from the historical land use of the Application Site.

8.1.21 Based on the site inspection, no source of potential contamination within the Application Site was found. Potential land contamination issues are not anticipated, and hence no site investigation works will be required.

Sewage Impact

8.1.22 Preliminary study indicates that there will be no adverse Sewage Impact arising from the development. Detailed study will be conducted for the next stage of development.

Section 16 Application

8.1.23 Should the TPB accept the proposal to permit residential development on this site, a Section 16 application would need to be submitted and approved. The Section 16 application will be a detailed proposal including flat layouts and implementation of feasible mitigation measures to fully mitigate the adverse traffic noise impact.

Appendix A Background Noise Monitoring Results

Measurement Location – BG1 - Quarry Bay Park Phase I

Set-up Photo

Measurement Date : 5 October 2018 (Friday)
Measurement Location: BG1 - Quarry Bay Park Phase I

Period	Measurement Height (mAG)			Period	Measurement Height (mAG)			Period	Measurement Height (mAG)			Period	Measurement Height (mAG)			Period	Measurement Height (mAG)			Period	Measurement Height (mAG)		
	2m	10m	15m		2m	10m	15m		2m	10m	15m		2m	10m	15m		2m	10m	15m		2m	10m	15m
	LAeq [dB]	LAeq [dB]	LAeq [dB]		LAeq [dB]	LAeq [dB]	LAeq [dB]		LAeq [dB]	LAeq [dB]	LAeq [dB]		LAeq [dB]	LAeq [dB]	LAeq [dB]		LAeq [dB]	LAeq [dB]	LAeq [dB]		LAeq [dB]	LAeq [dB]	LAeq [dB]
00:00 - 00:05	53.1	58.8	56.6	04:00 - 04:05	49.5	53.1	51.9	08:00 - 08:05	58.7	63.4	61.3	12:00 - 12:05	58.5	61.4	59.6	16:00 - 16:05	59.5	61.1	60.2	20:00 - 20:05	61.2	62.3	61.2
00:05 - 00:10	52.6	57.4	55.1	04:05 - 04:10	48.9	53.0	51.2	08:05 - 08:10	59.1	63.2	61.3	12:05 - 12:10	58.5	62.1	60.5	16:05 - 16:10	59.8	61.0	59.7	20:05 - 20:10	57.0	60.4	58.6
00:10 - 00:15	53.2	57.6	55.8	04:10 - 04:15	49.5	52.8	51.5	08:10 - 08:15	60.7	62.6	60.7	12:10 - 12:15	57.7	61.6	59.5	16:10 - 16:15	64.4	61.8	62.4	20:10 - 20:15	56.7	60.3	58.3
00:15 - 00:20	52.4	57.0	55.0	04:15 - 04:20	49.8	53.5	51.9	08:15 - 08:20	57.8	62.0	59.9	12:15 - 17:20	58.7	61.7	59.8	16:15 - 16:20	67.2	63.1	64.6	20:15 - 20:20	56.7	60.5	58.1
00:20 - 00:25	52.6	57.2	55.3	04:20 - 04:25	49.7	53.4	52.0	08:20 - 08:25	57.3	61.7	59.8	12:20 - 14:25	59.2	62.1	60.5	16:20 - 16:25	65.8	61.9	63.3	20:20 - 20:25	57.3	60.2	58.4
00:25 - 00:30	53.1	57.8	55.9	04:25 - 04:30	49.3	53.1	51.6	08:25 - 08:30	57.8	61.8	59.9	12:25 - 11:30	60.4	62.1	60.7	16:25 -16:30	60.6	60.7	59.7	20:25 - 20:30	58.6	61.0	59.3
01:30 - 01:35	52.2	56.5	54.6	04:30 - 04:35	49.8	53.8	52.5	08:30 - 08:35	58.2	61.9	59.9	12:30 - 10:35	58.5	61.4	59.7	1630 - 16:35	59.8	61.5	60.1	21:30 - 21:35	57.0	60.1	58.1
00:35 - 00:40	53.0	57.8	55.8	04:35 - 04:40	49.5	53.3	51.8	08:35 - 08:40	57.9	61.5	59.7	12:35 - 11:40	59.2	62.2	60.5	16:35 - 16:40	67.7	65.4	65.6	20:35 - 20:40	56.5	60.4	58.3
00:40 - 00:45	52.7	57.0	55.2	04:40 - 04:45	49.3	52.7	51.4	08:40 - 08:45	57.4	61.2	59.6	12:40 - 10:45	60.3	62.1	60.8	16:40 - 16:45	69.1	66.9	67.9	20:40 - 20:45	57.6	60.6	59.0
00:45 - 00:50	52.3	56.7	54.5	04:45 - 04:50	48.5	51.9	50.5	08:45 - 08:50	56.8	60.6	58.7	12:45 - 10:50	59.4	61.6	60.0	16:45 - 16:50	66.4	64.8	65.5	20:45 - 20:50	56.3	59.9	57.8
00:50 - 00:55	51.8	56.5	54.6	04:50 - 04:55	48.9	52.2	50.8	08:50 - 08:55	56.9	61.2	59.2	12:50 - 12:55	60.6	61.4	60.7	16:50 - 16:55	61.5	61.7	61.2	20:50 - 20:55	58.6	60.2	58.8
00:55 - 01:00	51.5	56.1	54.0	04:55 - 05:00	48.8	52.9	51.2	08:55 - 09:00	57.4	61.4	59.6	12:55 - 13:00	61.7	73.8	69.4	16:55 - 17:00	62.7	62.2	61.5	20:55 - 21:00	59.7	60.9	59.7
01:00 - 01:05	51.5	55.5	53.7	05:00 - 05:05	48.7	52.3	50.8	09:00 - 09:05	56.7	61.1	59.2	13:00 - 13:05	62.6	62.9	61.8	17:00 - 17:05	63.9	62.3	62.1	21:00 - 21:05	57.4	59.8	58.4
01:05 - 01:10	51.3	55.5	53.8	05:05 - 05:10	49.6	53.5	51.8	09:05 - 09:10	57.2	61.6	59.6	13:05 - 13:10	62.9	62.7	62.2	17:05 - 17:10	64.2	63.0	62.9	21:05 - 21:10	58.5	60.6	59.3
01:10 - 01:15	51.3	55.9	53.9	05:10 - 05:15	49.3	53.1	51.3	09:10 - 09:15	57.7	61.9	60.2	13:10 - 13:15	63.5	61.8	61.2	17:10 -17:15	61.9	62.1	61.4	21:10 - 21:15	58.4	60.1	58.7
01:15 - 01:20	52.5	56.3	54.8	05:15 - 05:20	49.7	53.8	51.7	09:15 - 09:20	57.7	62.1	60.3	13:15 - 12:20	61.3	61.9	60.3	17:15 - 17:20	62.6	62.2	61.5	21:15 - 21:20	58.3	60.1	58.5
01:20 - 01:25	51.0	55.4	53.5	05:20 - 05:25	49.3	53.0	51.4	09:20 - 09:25	58.2	62.9	60.9	13:20 - 13:25	61.1	62.4	60.8	17:20 - 17:25	62.9	62.5	62.1	21:20 - 21:25	59.1	60.6	59.1
01:25 - 01:30	50.8	54.8	53.0	05:25 - 05:30	49.9	53.8	52.0	09:25 - 09:30	60.0	63.4	61.7	13:25 - 13:30	60.2	63.7	62.6	17:25 - 17:30	64.0	62.7	62.7	21:25 - 21:30	57.4	60.3	58.4
01:30 - 01:35	50.9	55.0	53.1	05:30 - 05:35	49.0	52.7	50.9	09:30 - 09:35	59.2	63.1	61.4	13:30 - 13:35	59.3	62.2	61.0	17:30 - 17:35	64.1	62.9	62.8	21:30 - 21:35	56.8	60.4	58.7
01:35 - 01:40	50.9	55.0	53.3	05:35 - 05:40	49.1	52.8	51.2	09:35 - 09:40	58.5	62.7	60.9	13:35 - 12:40	59.0	62.6	60.7	17:35 - 17:40	62.0	61.7	61.1	21:35 - 21:40	56.3	60.0	58.0
01:40 - 01:45	50.4	54.5	52.5	05:40 - 05:45	50.3	54.4	52.6	09:40 - 09:45	58.6	62.8	60.9	13:40 - 13:45	58.8	62.6	60.8	17:40 - 17:45	63.9	63.0	63.0	21:40 - 21:45	56.4	60.3	58.1
01:45 - 01:50	49.9	54.1	52.3	05:45 - 05:50	49.8	53.4	51.9	09:45 - 09:50	58.6	63.1	61.2	13:45 - 14:50	58.5	62.4	60.5	17:45 - 17:50	61.3	62.2	61.1	21:45 - 21:50	56.5	60.4	58.3
01:50 - 01:55	51.0	54.8	53.0	05:50 - 05:55	51.4	55.5	53.4	09:50 - 09:55	58.9	62.9	61.2	13:50 - 14:55	57.6	61.9	60.1	17:50 - 17:55	60.3	61.4	60.2	21:50 - 21:55	56.5	60.1	58.2
01:55 - 02:00	50.5	54.3	52.6	05:55 - 06:00	50.6	54.2	52.6	09:55 - 10:00	58.0	62.5	60.8	13:55 - 14:00	57.3	62.1	60.2	17:55 - 18:00	60.0	61.5	60.2	21:55 - 22:00	55.6	59.4	57.3
02:00 - 02:05	51.5	55.9	54.0	06:00 - 06:05	52.0	54.7	52.9	10:00 - 10:05	58.2	62.8	60.9	14:00 - 14:05	57.5	62.0	59.9	18:00 - 18:05	60.3	61.4	60.1	22:00 - 22:05	58.5	61.5	60.1
02:05 - 02:10	52.9	56.5	55.5	06:05 - 06:10	52.0	55.5	53.9	10:05 - 10:10	58.1	62.3	60.5	14:05 - 14:10	57.7	61.9	59.9	18:05 - 18:10	63.0	62.3	61.9	22:05 - 22:10	56.5	60.3	58.6
02:10 - 02:15	49.6	53.4	51.7	06:10 - 06:15	52.7	56.1	55.6	10:10 - 10:15	57.9	62.4	60.4	14:10 - 14:15	58.3	62.0	60.0	18:10 - 18:15	58.1	61.3	59.7	22:10 - 22:15	57.6	60.5	58.8
02:15 - 02:20	49.7	53.9	52.1	06:15 - 06:20	53.7	57.2	56.3	10:15 - 10:20	57.3	61.7	59.7	14:15 - 14:20	57.9	62.2	60.5	18:15 - 18:20	58.7	60.7	59.1	22:15 - 22:20	57.2	59.8	57.8
02:20 - 02:25	50.1	54.1	52.5	06:20 - 06:25	52.8	56.6	54.6	10:20 - 10:25	57.3	61.7	59.6	14:20 - 14:25	57.3	62.0	60.1	18:20 - 18:25	60.0	62.8	62.4	22:20 - 22:25	57.9	60.8	58.7
02:25 - 02:30	50.2	53.9	52.5	06:25 - 06:30	53.9	57.0	55.2	10:25 - 10:30	57.3	62.0	59.9	14:25 - 14:30	57.0	61.6	59.5	18:25 - 18:30	60.1	61.8	60.8	22:25 - 22:30	57.6	60.4	58.6
02:30 - 02:35	50.9	54.3	53.2	06:30 - 06:35	56.1	59.1	57.3	10:30 - 10:35	58.0	62.5	60.6	14:30 - 14:35	57.5	61.7	59.6	18:30 - 18:35	60.6	61.6	60.6	22:30 - 22:35	57.8	60.5	58.9
02:35 - 02:40	50.0	53.9	52.3	06:35 - 06:40	55.5	58.9	56.9	10:35 - 10:40	58.6	62.7	60.9	14:35 - 14:40	58.4	61.6	59.5	18:35 - 18:40	58.5	60.9	59.4	22:35 - 22:40	56.9	59.7	58.0
02:40 - 02:45	49.6	53.5	51.9	06:40 - 06:45	55.5	59.6	57.6	10:40 - 10:45	58.3	62.8	61.0	14:40 - 14:45	62.2	62.1	60.6	18:40 - 18:45	58.0	61.0	59.2	22:40 - 22:45	58.6	60.3	58.9
02:45 - 02:50	49.7	53.6	52.0	05:45 - 06:50	57.2	60.3	58.5	10:45 - 10:50	58.0	62.4	60.6	14:45 - 14:50	62.2	62.1	60.6	18:45 - 18:50	57.1	61.6	59.4	22:45 - 22:50	57.2	59.9	58.3
02:50 - 02:55	49.8	53.4	51.9	06:50 - 06:55	56.2	60.3	58.4	10:50 - 10:55	57.7	61.9	60.0	14:50 - 14:55	61.6	61.4	60.2	18:50 - 18:55	58.3	60.4	58.6	22:50 - 22:55	56.5	59.8	58.0
02:55 - 03:00	49.8	53.4	51.8	06:55 - 07:00	55.8	59.8	57.6	10:55 - 11:00	57.5	61.9	60.0	14:55 - 15:00	62.4	61.3	60.1	18:55 - 19:00	57.6	60.4	58.6	22:55 -23:00	56.4	59.4	57.5
03:00 - 03:05	50.9	53.3	52.1	07:00 - 07:05	56.3	60.7	58.7	11:00 - 11:05	58.4	62.2	60.7	15:00 - 15:05	62.2	61.7	60.2	19:00 - 19:05	57.5	60.4	58.7	23:00 - 23:05	55.7	60.0	57.9
03:05 - 03:10	50.2	54.2	52.7	07:05 - 07:10	56.8	61.3	59.0	11:05 - 11:10	60.6	62.9	61.3	15:05 - 15:10	61.4	61.0	59.5	19:05 - 19:10	57.6	60.0	58.5	23:05 -23:10	55.4	60.1	57.9
03:10 - 03:15	50.1	53.8	52.0	07:10 - 07:15	57.6	63.6	59.9	11:10 - 11:15	58.9	62.0	60.2	15:10 - 15:15	61.8	61.2	59.8	19:10 - 19:15	59.1	60.8	59.3	23:10 -23:15	54.8	59.3	57.4
03:15 - 03:20	51.9	53.9	52.9	07:15 - 07:20	57.2	61.7	59.3	11:15 - 11:20	60.8	62.2	60.6	15:15 - 15:20	57.7	61.4	59.5	19:15 - 19:20	60.1	61.1	60.1	23:15 - 23:20	53.9	58.7	56.5
03:20 - 02:25	49.2	52.9	51.5	07:20 - 07:25	60.9	66.4	63.4	11:20 - 11:25	62.2	62.7	61.6	15:20 - 15:25	57.7	61.8	59.8	19:20 - 19:25	59.0	61.0	59.4	23:20 - 23:25	54.6	58.9	56.6
02:25 - 02:30	49.9	53.3	51.9	07:25 - 07:30	58.6	64.1	60.9	11:25 - 11:30	65.1	62.5	61.9	15:25 - 15:30	57.1	61.3	59.2	19:25 - 19:30	58.4	60.5	58.6	23:25 - 23:30	54.0	59.2	56.9
02:30 - 02:35	49.9	53.0	51.8	07:30 - 07:35	58.1	62.5	60.3	11:30 - 11:35	64.8	63.2	62.8	15:30 - 15:35	56.2	60.4	58.2	19:30 - 19:35	58.4	61.0	59.3	23:30 - 23:35	53.4	58.6	56.1
02:35 - 02:40	48.7	51.9	50.7	07:35 - 07:40	58.5	62.6	60.2	11:35 - 11:40	61.2	62.6	61.7	15:35 - 15:40	55.9	60.4	58.2	19:35 - 19:40	57.8	60.5	58.8	23:35 - 23:40	55.0	59.7	57.7
02:40 - 02:45	49.8	53.4	52.0	07:40 - 07:45	58.7	62.9	60.6	11:40 - 11:45	60.9	62.5	61.3	15:40 - 15:45	56.8	60.4	58.4	19:40 - 19:45	59.1	61.1	59.5	23:40 - 23:45	53.6	58.5	56.3
02:45 - 02:55	51.2	54.3	53.0	07:45 - 07:55	58.5	62.9	60.9	11:45 - 11:55	61.4	62.0	61.1	15:45 - 15:55	59.2	60.9	59.4	19:45 - 19:55	59.6	61.6	60.2	23:45 -23:50	53.9	58.6	56.4
03:50 - 03:55	48.9	52.1	50.9	07:50 - 07:55	58.7	63.0	61.2	11:50 - 11:55	58.1	61.9	60.3	15:50 - 15:55	59.0	61.1	59.5	19:50 - 19:55	61.5	62.2	61.0	23:50 - 23:55	53.6	58.6	56.3
03:55 - 04:00	49.2	53.0	51.8	07:55 - 08:00	58.7	63.4	61.4	11:55 - 12:00	57.9	61.9	60.1	15:55 - 16:00	61.5	61.0	60.3	19:55 - 20:00	61.8	62.0	61.2	23:55 - 00:00	52.7	57.5	55.2

Measurement Date : 6 October 2018 (Saturday)
Measurement Location: BG1 - Quarry Bay Park Phase I

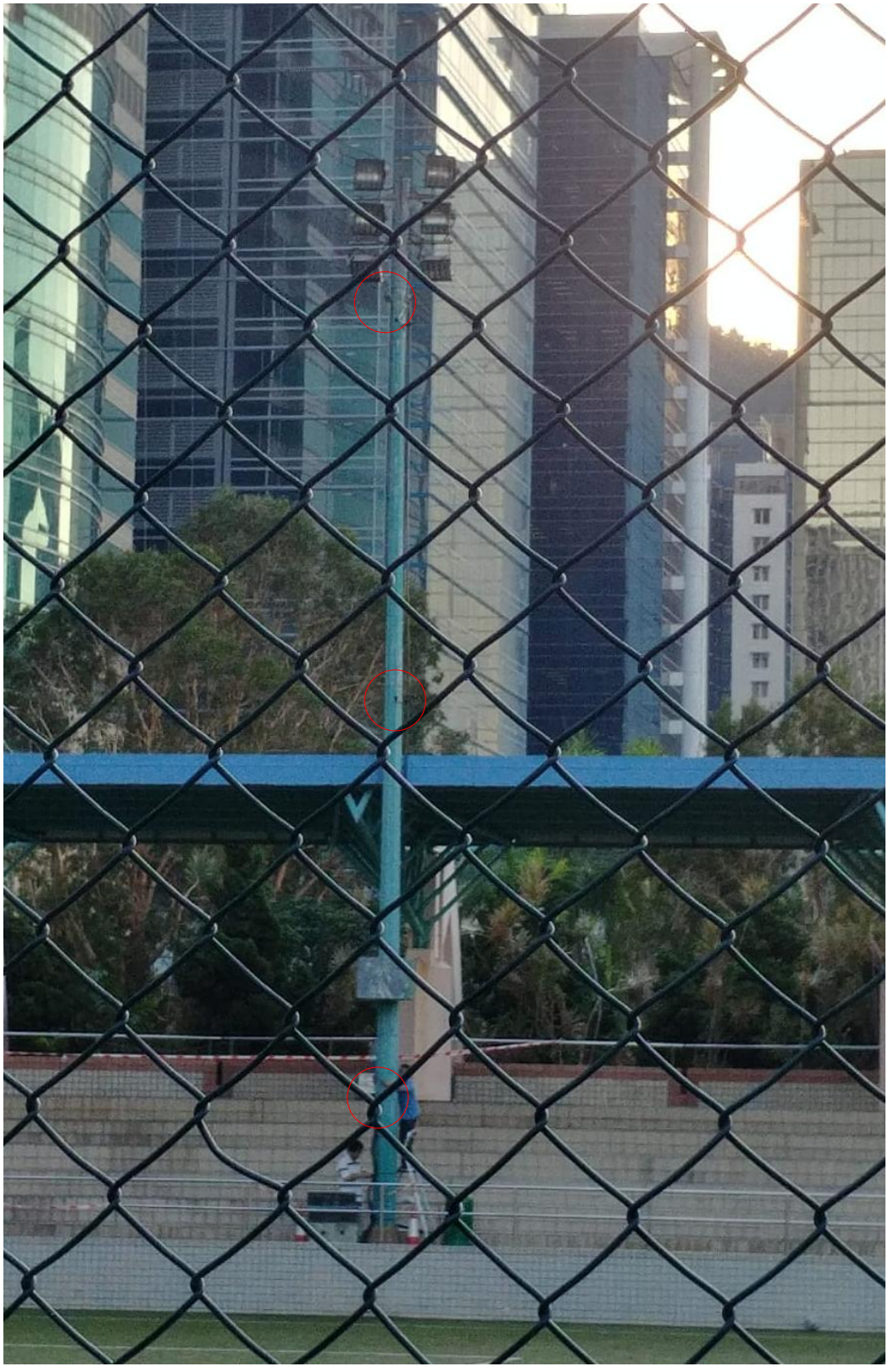
Period	Measurement Height (mAG)			Period	Measurement Height (mAG)			Period	Measurement Height (mAG)			Period	Measurement Height (mAG)			Period	Measurement Height (mAG)			Period	Measurement Height (mAG)		
	2m LAeq [dB]	10m LAeq [dB]	15m LAeq [dB]		2m LAeq [dB]	10m LAeq [dB]	15m LAeq [dB]		2m LAeq [dB]	10m LAeq [dB]	15m LAeq [dB]		2m LAeq [dB]	10m LAeq [dB]	15m LAeq [dB]		2m LAeq [dB]	10m LAeq [dB]	15m LAeq [dB]		2m LAeq [dB]	10m LAeq [dB]	15m LAeq [dB]
00:00 - 00:05	53.8	56.4	58.5	04:00 - 04:05	49.9	52.5	55.0	08:00 - 08:05	66.0	61.8	61.4	12:00 - 12:05	58.8	58.8	60.4	16:00 - 16:05	58.0	59.2	61.3	20:00 - 20:05	64.2	62.1	61.6
00:05 - 00:10	53.3	56.1	58.0	04:05 - 04:10	49.1	51.5	53.6	08:05 - 08:10	71.6	66.5	63.5	12:05 - 12:10	59.2	59.5	60.9	16:05 - 16:10	58.6	59.2	60.8	20:05 - 20:10	61.1	59.3	59.7
00:10 - 00:15	53.6	56.2	58.2	04:10 - 04:15	51.7	54.0	56.6	08:10 - 08:15	66.0	65.1	63.6	12:10 - 12:15	56.8	58.1	59.8	16:10 - 16:15	60.4	60.3	61.6	20:10 - 20:15	61.7	59.6	59.8
00:15 - 00:20	54.0	56.8	58.8	04:15 - 04:20	49.9	52.8	55.0	08:15 - 08:20	69.3	64.3	62.8	12:15 - 17:20	57.5	58.3	59.9	16:15 - 16:20	59.7	60.6	61.8	20:15 - 20:20	62.2	59.4	59.6
00:20 - 00:25	53.1	55.6	57.7	04:20 - 04:25	49.2	51.4	53.5	08:20 - 08:25	69.6	65.3	63.3	12:20 - 14:25	57.2	58.6	60.3	16:20 - 16:25	58.8	59.6	61.0	20:20 - 20:25	60.4	58.4	59.3
00:25 - 00:30	52.4	55.1	57.2	04:25 - 04:30	48.4	50.6	52.3	08:25 - 08:30	68.7	64.5	63.3	12:25 - 11:30	56.5	58.3	60.2	16:25 -16:30	60.1	60.7	61.7	20:25 - 20:30	58.7	58.7	59.3
01:30 - 01:35	52.4	55.0	57.2	04:30 - 04:35	48.7	50.9	52.7	08:30 - 08:35	70.5	65.4	63.2	12:30 - 10:35	59.5	58.5	59.9	1630 - 16:35	60.5	59.9	61.1	21:30 - 21:35	60.6	58.5	58.8
00:35 - 00:40	51.6	54.1	56.4	04:35 - 04:40	48.6	51.2	53.2	08:35 - 08:40	73.8	68.3	64.5	12:35 - 11:40	59.6	59.6	61.0	16:35 - 16:40	62.1	60.4	61.2	20:35 - 20:40	60.8	59.1	59.3
00:40 - 00:45	52.6	54.8	56.8	04:40 - 04:45	49.3	51.6	53.5	08:40 - 08:45	80.2	72.9	67.7	12:40 - 10:45	61.1	60.7	61.6	16:40 - 16:45	61.1	59.7	60.7	20:40 - 20:45	58.6	58.4	59.5
00:45 - 00:50	51.8	54.3	56.5	04:45 - 04:50	48.5	51.0	52.9	08:45 - 08:50	71.3	70.0	65.0	12:45 - 10:50	59.8	59.9	61.3	16:45 - 16:50	60.5	59.5	60.6	20:45 - 20:50	61.7	60.3	60.6
00:50 - 00:55	52.1	54.9	57.2	04:50 - 04:55	48.1	50.3	52.0	08:50 - 08:55	75.7	70.2	66.3	12:50 - 12:55	60.0	59.5	61.4	16:50 - 16:55	57.9	58.6	60.3	20:50 - 20:55	62.5	59.2	59.9
00:55 - 01:00	51.7	53.9	56.1	04:55 - 05:00	50.1	52.4	54.2	08:55 - 09:00	68.7	65.1	63.4	12:55 - 13:00	61.7	60.8	61.9	16:55 - 17:00	56.9	58.2	60.2	20:55 - 21:00	57.6	58.9	59.7
01:00 - 01:05	51.9	54.2	56.4	05:00 - 05:05	49.4	51.3	53.3	09:00 - 09:05	71.9	65.7	64.0	13:00 - 13:05	66.9	62.9	61.2	17:00 - 17:05	56.4	58.0	60.0	21:00 - 21:05	61.0	59.4	60.0
01:05 - 01:10	51.3	53.9	56.3	05:05 - 05:10	49.8	52.5	54.6	09:05 - 09:10	70.9	66.8	64.9	13:05 - 13:10	62.0	60.3	60.5	17:05 - 17:10	57.0	58.6	60.5	21:05 - 21:10	59.7	58.2	58.9
01:10 - 01:15	51.3	53.2	55.4	05:10 - 05:15	49.2	51.4	53.4	09:10 - 09:15	64.3	62.4	62.7	13:10 - 13:15	58.4	59.1	60.8	17:10 -17:15	56.6	58.6	60.6	21:10 - 21:15	59.0	58.6	59.4
01:15 - 01:20	52.3	54.4	56.5	05:15 - 05:20	48.6	51.2	53.1	09:15 - 09:20	70.5	66.1	64.5	13:15 - 12:20	60.1	59.9	61.1	17:15 - 17:20	57.0	59.0	60.7	21:15 - 21:20	59.6	59.9	60.6
01:20 - 01:25	52.2	54.7	57.3	05:20 - 05:25	49.2	51.2	53.3	09:20 - 09:25	69.0	65.5	64.3	13:20 - 13:25	59.8	59.8	61.1	17:20 - 17:25	57.0	58.8	60.6	21:20 -21:25	59.9	60.1	60.9
01:25 - 01:30	51.8	54.3	56.4	05:25 - 05:30	50.1	52.5	54.5	09:25 - 09:30	69.6	65.6	64.5	13:25 - 13:30	58.6	59.2	60.9	17:25 - 17:30	57.0	59.2	61.2	21:25 - 21:30	60.0	59.6	60.5
01:30 - 01:35	52.1	54.3	56.4	05:30 - 05:35	49.6	51.8	53.6	09:30 - 09:35	67.3	63.8	63.0	13:30 - 13:35	58.4	59.2	60.6	17:30 - 17:35	57.6	59.0	61.0	21:30 - 21:35	61.4	60.9	61.0
01:35 - 01:40	52.0	54.8	56.8	05:35 - 05:40	49.0	51.2	53.3	09:35 - 09:40	64.5	62.7	61.9	13:35 - 12:40	58.2	59.1	60.5	17:35 - 17:40	58.3	58.7	60.3	21:35 - 21:40	61.1	58.6	59.1
01:40 - 01:45	51.2	53.7	55.8	05:40 - 05:45	49.5	51.6	53.7	09:40 - 09:45	60.3	60.6	61.6	13:40 - 13:45	60.5	59.8	60.7	17:40 - 17:45	57.8	58.8	60.5	21:40 - 21:45	64.1	61.1	61.1
01:45 - 01:50	51.6	54.1	56.4	05:45 - 05:50	50.2	52.4	54.5	09:45 - 09:50	58.5	59.8	61.7	13:45 - 14:50	60.9	60.5	61.4	17:45 - 17:50	57.0	58.7	60.5	21:45 - 21:50	63.7	60.3	60.4
01:50 - 01:55	50.7	53.4	55.6	05:50 - 05:55	49.8	51.6	53.7	09:50 - 09:55	58.2	60.1	62.0	13:50 - 14:55	58.1	59.2	60.8	17:50 - 17:55	56.6	58.5	60.4	21:50 - 21:55	60.2	58.6	59.5
01:55 - 02:00	52.3	55.3	57.4	05:55 - 06:00	49.8	51.5	53.3	09:55 - 10:00	57.5	59.4	61.5	13:55 - 14:00	59.3	59.6	60.8	17:55 - 18:00	56.9	58.0	60.0	21:55 - 22:00	57.8	57.9	59.1
02:00 - 02:05	50.9	53.4	55.5	06:00 - 06:05	52.4	53.0	54.9	10:00 - 10:05	58.0	59.3	61.3	14:00 - 14:05	57.9	58.8	60.3	18:00 - 18:05	59.1	58.4	60.1	22:00 - 22:05	58.8	58.7	59.8
02:05 - 02:10	50.8	53.2	55.5	06:05 - 06:10	51.1	52.9	55.0	10:05 - 10:10	60.4	61.2	62.5	14:05 - 14:10	58.6	59.0	60.6	18:05 - 18:10	57.3	58.4	60.0	22:05 - 22:10	68.4	63.9	62.0
02:10 - 02:15	50.4	53.1	55.3	06:10 - 06:15	52.8	53.7	55.3	10:10 - 10:15	59.2	60.6	62.1	14:10 - 14:15	58.6	59.3	60.8	18:10 - 18:15	56.8	57.6	59.5	22:10 - 22:15	56.8	57.8	59.5
02:15 - 02:20	50.4	52.9	55.1	06:15 - 06:20	53.7	54.4	55.8	10:15 - 10:20	59.1	60.0	61.6	14:15 - 14:20	60.4	60.3	61.3	18:15 - 18:20	56.9	57.4	59.1	22:15 - 22:20	54.3	56.5	58.6
02:20 - 02:25	50.7	53.0	55.0	06:20 - 06:25	53.2	54.3	55.9	10:20 - 10:25	58.9	59.9	61.6	14:20 - 14:25	58.4	59.0	60.8	18:20 - 18:25	57.4	57.8	59.5	22:20 - 22:25	55.1	57.0	59.2
02:25 - 02:30	50.8	53.5	55.6	06:25 - 06:30	55.3	56.4	57.6	10:25 - 10:30	59.4	60.2	61.8	14:25 - 14:30	59.6	61.1	61.5	18:25 - 18:30	57.9	58.0	59.3	22:25 - 22:30	56.0	57.9	59.8
02:30 - 02:35	49.8	52.3	54.6	06:30 - 06:35	55.7	58.1	60.6	10:30 - 10:35	60.5	61.3	62.7	14:30 - 14:35	58.4	58.8	60.6	18:30 - 18:35	57.1	58.0	59.6	22:30 - 22:35	55.3	57.1	59.1
02:35 - 02:40	50.4	52.8	54.9	06:35 - 06:40	55.0	56.5	59.2	10:35 - 10:40	58.7	59.8	61.5	14:35 - 14:40	58.0	58.6	60.2	18:35 - 18:40	58.0	58.2	59.7	22:35 - 22:40	54.7	56.6	58.9
02:40 - 02:45	49.9	52.5	54.5	06:40 - 06:45	55.2	56.7	58.5	10:40 - 10:45	58.7	59.7	61.5	14:40 - 14:45	57.2	58.5	60.3	18:40 - 18:45	60.4	59.7	60.6	22:40 - 22:45	55.3	57.2	59.6
02:45 - 02:50	51.9	54.1	56.3	05:45 - 06:50	53.5	55.2	57.1	10:45 - 10:50	57.7	59.5	61.3	14:45 - 14:50	58.9	59.4	60.8	18:45 - 18:50	63.1	62.5	62.7	22:45 - 22:50	55.7	57.6	59.7
02:50 - 02:55	51.0	53.6	55.5	06:50 - 06:55	54.4	55.8	57.9	10:50 - 10:55	58.3	59.9	61.7	14:50 - 14:55	58.6	59.0	60.4	18:50 - 18:55	62.1	60.8	61.0	22:50 - 22:55	55.5	57.2	59.3
02:55 - 03:00	50.1	52.5	54.4	06:55 - 07:00	53.6	55.5	57.9	10:55 - 11:00	58.0	59.5	61.4	14:55 - 15:00	58.2	58.9	60.5	18:55 - 19:00	64.5	62.5	62.9	22:55 -23:00	57.4	58.9	60.3
03:00 - 03:05	51.0	53.4	55.1	07:00 - 07:05	56.2	56.9	58.7	11:00 - 11:05	59.0	59.9	61.5	15:00 - 15:05	58.6	59.2	61.0	19:00 - 19:05	67.0	66.4	64.5	23:00 - 23:05	54.5	56.4	58.7
03:05 - 03:10	51.7	54.1	56.6	07:05 - 07:10	55.9	57.2	59.3	11:05 - 11:10	62.2	61.1	62.1	15:05 - 15:10	60.3	59.6	60.9	19:05 - 19:10	66.8	64.9	64.6	23:05 -23:10	56.2	57.7	60.2
03:10 - 03:15	49.6	52.1	54.0	07:10 - 07:15	57.0	57.3	59.0	11:10 - 11:15	59.4	60.2	61.8	15:10 - 15:15	58.2	59.7	61.5	19:10 - 19:15	65.5	63.8	63.5	23:10 -23:15	54.8	57.6	60.3
03:15 - 03:20	49.3	51.8	53.9	07:15 - 07:20	56.0	56.8	58.8	11:15 - 11:20	59.3	59.7	61.4	15:15 - 15:20	59.7	61.1	62.0	19:15 - 19:20	65.1	63.3	62.8	23:15 - 23:20	53.7	56.2	58.6
03:20 - 02:25	49.0	51.5	53.7	07:20 - 07:25	57.1	57.6	59.5	11:20 - 11:25	59.0	59.7	61.4	15:20 - 15:25	58.9	59.8	61.2	19:20 - 19:25	59.2	59.0	60.2	23:20 - 23:25	53.4	55.9	58.4
02:25 - 02:30	49.1	51.6	53.9	07:25 - 07:30	60.6	59.2	59.9	11:25 - 11:30	58.2	59.2	61.1	15:25 - 15:30	57.8	59.5	61.4	19:25 - 19:30	65.4	63.8	63.0	23:25 - 23:30	53.1	55.6	58.1
02:30 - 02:35	52.9	55.4	57.0	07:30 - 07:35	61.6	59.4	59.9	11:30 - 11:35	58.5	59.4	61.1	15:30 - 15:35	60.0	60.1	61.6	19:30 - 19:35	65.8	63.8	62.7	23:30 - 23:35	52.9	55.3	57.9
02:35 - 02:40	50.0	52.6	54.6	07:35 - 07:40	67.4	63.0	61.8	11:35 - 11:40	58.2	59.2	61.0	15:35 - 15:40	59.9	59.5	60.7	19:35 - 19:40	65.5	63.3	63.9	23:35 - 23:40	52.7	55.0	57.4
02:40 - 02:45	49.2	51.5	53.4	07:40 - 07:45	63.3	60.9	60.8	11:40 - 11:45	58.1	59.1	60.9	15:40 - 15:45	60.1	60.2	61.3	19:40 - 19:45	64.9	63.0	63.2	23:40 - 23:45	52.7	55.2	57.6
02:45 - 02:55	49.3	51.9	54.1	07:45 - 07:55	62.2	60.0	60.7	11:45 - 11:55	58.5	58.8	60.3	15:45 - 15:55	60.4	60.1	61.0	19:45 - 19:55	67.3	64.6	64.7	23:45 -23:50	52.8	55.1	57.4
03:50 - 03:55	48.7	50.8	52.5	07:50 - 07:55	62.3	60.7	60.8	11:50 - 11:55	57.7	58.9	60.6	15:50 - 15:55	59.3	59.3	60.7	19:50 - 19:55	68.2	64.4	63.1	23:50 - 23:55	53.0	55.4	57.7
03:55 - 04:00	48.9	51.3	53.3	07:55 - 08:00	62.3	60.6	61.2	11:55 - 12:00	57.5	58.8	60.4	15:55 - 16:00	61.9	62.3	63.0	19:55 - 20:00	64.1	62.2	62.0	23:55 - 00:00	52.1	54.7	56.8

Measurement Date : 7 October 2018 (Sunday)
Measurement Location: BG1 - Quarry Bay Park Phase I

Period	Measurement Height (mAG)			Period	Measurement Height (mAG)			Period	Measurement Height (mAG)			Period	Measurement Height (mAG)			Period	Measurement Height (mAG)			Period	Measurement Height (mAG)		
	2m LAeq [dB]	10m LAeq [dB]	15m LAeq [dB]		2m LAeq [dB]	10m LAeq [dB]	15m LAeq [dB]		2m LAeq [dB]	10m LAeq [dB]	15m LAeq [dB]		2m LAeq [dB]	10m LAeq [dB]	15m LAeq [dB]		2m LAeq [dB]	10m LAeq [dB]	15m LAeq [dB]		2m LAeq [dB]	10m LAeq [dB]	15m LAeq [dB]
00:00 - 00:05	52.5	54.8	57.3	04:00 - 04:05	49.9	51.8	53.4	08:00 - 08:05	57.0	57.5	59.1	12:00 - 12:05	58.0	59.2	60.0	16:00 - 16:05	65.0	63.4	63.2	20:00 - 20:05	58.0	58.1	59.0
00:05 - 00:10	53.2	55.9	58.1	04:05 - 04:10	49.2	51.2	52.9	08:05 - 08:10	57.5	58.3	59.5	12:05 - 12:10	58.8	59.6	60.7	16:05 - 16:10	68.7	65.9	64.5	20:05 - 20:10	57.9	58.2	59.2
00:10 - 00:15	52.5	54.9	57.2	04:10 - 04:15	49.1	51.0	52.7	08:10 - 08:15	56.6	57.9	59.4	12:10 - 12:15	56.9	58.0	59.4	16:10 - 16:15	68.4	65.4	64.4	20:10 - 20:15	57.5	57.7	59.0
00:15 - 00:20	52.1	54.7	56.9	04:15 - 04:20	49.4	51.9	53.9	08:15 - 08:20	55.7	57.0	58.8	12:15 - 17:20	57.0	57.8	59.3	16:15 - 16:20	67.0	66.2	64.8	20:15 - 20:20	59.7	60.2	60.8
00:20 - 00:25	51.7	54.1	56.2	04:20 - 04:25	48.6	50.5	52.2	08:20 - 08:25	56.0	57.9	59.8	12:20 - 14:25	59.4	59.5	60.4	16:20 - 16:25	66.8	65.3	64.5	20:20 - 20:25	59.5	59.1	59.4
00:25 - 00:30	51.7	54.0	56.2	04:25 - 04:30	49.4	51.5	53.2	08:25 - 08:30	57.6	58.8	60.6	12:25 - 11:30	58.3	59.0	60.1	16:25 -16:30	68.5	66.1	65.1	20:25 - 20:30	60.0	59.3	60.0
01:30 - 01:35	51.3	53.5	55.6	04:30 - 04:35	48.7	50.9	52.5	08:30 - 08:35	55.7	57.0	58.9	12:30 - 10:35	60.9	59.2	60.1	1630 - 16:35	66.3	64.6	64.0	21:30 - 21:35	59.2	60.5	60.7
00:35 - 00:40	51.2	53.6	55.7	04:35 - 04:40	48.5	50.7	52.3	08:35 - 08:40	57.0	57.9	59.7	12:35 - 11:40	60.6	59.1	60.3	16:35 - 16:40	67.9	65.6	64.5	20:35 - 20:40	57.8	58.4	59.3
00:40 - 00:45	51.6	53.8	56.0	04:40 - 04:45	48.9	50.6	52.1	08:40 - 08:45	56.8	58.2	59.9	12:40 - 10:45	61.2	59.7	60.2	16:40 - 16:45	64.2	63.1	62.9	20:40 - 20:45	59.1	59.5	60.1
00:45 - 00:50	50.9	53.2	55.2	04:45 - 04:50	49.2	51.1	52.8	08:45 - 08:50	57.3	58.2	59.7	12:45 - 10:50	62.6	61.5	61.8	16:45 - 16:50	64.8	64.0	63.9	20:45 - 20:50	61.1	61.7	62.0
00:50 - 00:55	50.8	52.9	54.7	04:50 - 04:55	48.2	50.3	51.9	08:50 - 08:55	58.7	58.7	60.1	12:50 - 12:55	60.8	59.8	60.3	16:50 - 16:55	64.9	63.7	63.6	20:50 - 20:55	56.3	57.5	59.1
00:55 - 01:00	51.1	53.1	54.9	04:55 - 05:00	48.6	50.4	51.9	08:55 - 09:00	58.3	58.8	60.2	12:55 - 13:00	65.9	61.8	61.3	16:55 - 17:00	63.0	62.0	62.3	20:55 - 21:00	59.9	59.9	60.7
01:00 - 01:05	50.7	52.7	54.3	05:00 - 05:05	49.3	51.0	52.8	09:00 - 09:05	57.0	57.8	59.3	13:00 - 13:05	66.4	63.9	62.6	17:00 - 17:05	64.0	62.4	62.7	21:00 - 21:05	60.2	60.3	60.8
01:05 - 01:10	51.5	53.8	56.0	05:05 - 05:10	48.8	50.9	52.6	09:05 - 09:10	58.6	59.0	60.4	13:05 - 13:10	63.3	60.0	60.5	17:05 - 17:10	63.8	63.2	63.0	21:05 - 21:10	60.2	60.3	61.3
01:10 - 01:15	50.7	52.8	54.6	05:10 - 05:15	48.1	50.2	51.7	09:10 - 09:15	59.0	59.2	60.5	13:10 - 13:15	61.2	60.2	60.6	17:10 -17:15	64.9	63.7	63.8	21:10 - 21:15	60.7	60.8	61.3
01:15 - 01:20	50.5	52.8	54.7	05:15 - 05:20	49.4	51.4	52.9	09:15 - 09:20	58.4	58.6	60.1	13:15 - 12:20	65.6	62.6	61.9	17:15 - 17:20	64.9	63.5	63.3	21:15 - 21:20	60.9	60.4	60.9
01:20 - 01:25	51.1	53.0	54.7	05:20 - 05:25	50.3	52.6	54.4	09:20 - 09:25	58.8	58.9	60.1	13:20 - 13:25	60.4	59.1	59.8	17:20 - 17:25	64.4	63.4	63.5	21:20 -21:25	60.7	60.7	61.0
01:25 - 01:30	50.4	52.4	54.3	05:25 - 05:30	48.7	51.0	52.7	09:25 - 09:30	60.8	61.3	62.6	13:25 - 13:30	62.4	60.4	61.0	17:25 - 17:30	65.8	64.6	64.4	21:25 - 21:30	59.5	60.0	61.3
01:30 - 01:35	51.1	53.1	54.8	05:30 - 05:35	49.0	51.2	53.2	09:30 - 09:35	56.9	58.2	60.0	13:30 - 13:35	59.8	59.1	60.2	17:30 - 17:35	63.5	63.0	63.2	21:30 - 21:35	59.6	60.7	61.5
01:35 - 01:40	50.7	52.6	54.5	05:35 - 05:40	49.9	52.0	53.7	09:35 - 09:40	57.1	58.8	60.4	13:35 - 12:40	59.9	59.7	60.4	17:35 - 17:40	64.3	63.3	63.5	21:35 - 21:40	57.9	58.4	59.8
01:40 - 01:45	50.8	53.1	55.1	05:40 - 05:45	50.6	52.5	54.4	09:40 - 09:45	58.5	59.0	60.6	13:40 - 13:45	60.9	59.9	60.6	17:40 - 17:45	67.0	64.6	64.1	21:40 - 21:45	58.3	58.6	59.7
01:45 - 01:50	52.5	53.2	55.2	05:45 - 05:50	49.9	51.6	53.0	09:45 - 09:50	58.4	59.5	61.1	13:45 - 14:50	61.4	59.3	59.9	17:45 - 17:50	67.7	65.0	64.5	21:45 - 21:50	59.7	59.7	60.8
01:50 - 01:55	52.4	57.2	59.9	05:50 - 05:55	50.0	51.9	53.7	09:50 - 09:55	58.6	59.9	61.3	13:50 - 14:55	61.7	59.4	60.0	17:50 - 17:55	66.5	64.6	64.5	21:50 - 21:55	59.3	59.4	60.0
01:55 - 02:00	50.6	52.6	54.6	05:55 - 06:00	50.4	52.4	54.2	09:55 - 10:00	60.3	60.5	61.7	13:55 - 14:00	63.4	60.9	61.2	17:55 - 18:00	70.1	68.1	66.9	21:55 - 22:00	57.9	58.5	59.6
02:00 - 02:05	51.2	53.7	55.4	06:00 - 06:05	54.1	53.7	55.2	10:00 - 10:05	58.4	59.4	60.3	14:00 - 14:05	64.2	61.5	62.1	18:00 - 18:05	69.2	67.7	66.3	22:00 - 22:05	59.5	59.1	60.1
02:05 - 02:10	50.6	52.5	54.3	06:05 - 06:10	53.0	54.6	55.9	10:05 - 10:10	59.1	59.5	60.5	14:05 - 14:10	64.1	60.9	60.4	18:05 - 18:10	66.1	64.8	64.3	22:05 - 22:10	57.4	58.6	59.7
02:10 - 02:15	50.8	53.5	55.3	06:10 - 06:15	55.7	55.9	57.5	10:10 - 10:15	59.6	60.3	61.4	14:10 - 14:15	62.3	60.4	60.8	18:10 - 18:15	62.8	62.6	62.4	22:10 - 22:15	60.5	59.9	60.1
02:15 - 02:20	50.1	52.1	54.0	06:15 - 06:20	59.4	59.8	61.5	10:15 - 10:20	58.5	59.1	60.5	14:15 - 14:20	67.7	63.0	62.2	18:15 - 18:20	60.5	60.8	61.6	22:15 - 22:20	57.8	59.0	60.0
02:20 - 02:25	50.8	53.3	55.2	06:20 - 06:25	54.2	54.5	55.6	10:20 - 10:25	58.9	59.9	61.0	14:20 - 14:25	62.2	60.9	61.2	18:20 - 18:25	58.0	58.9	60.2	22:20 - 22:25	56.9	57.5	58.8
02:25 - 02:30	50.0	52.0	53.8	06:25 - 06:30	53.9	55.0	56.7	10:25 - 10:30	58.6	59.5	60.5	14:25 - 14:30	61.8	60.3	60.5	18:25 - 18:30	57.2	57.8	59.6	22:25 - 22:30	61.5	60.4	59.9
02:30 - 02:35	49.7	51.9	53.7	06:30 - 06:35	53.0	55.1	56.1	10:30 - 10:35	57.9	59.0	60.4	14:30 - 14:35	60.6	58.8	60.1	18:30 - 18:35	57.6	58.5	60.0	22:30 - 22:35	60.1	60.8	61.2
02:35 - 02:40	50.2	51.7	53.4	06:35 - 06:40	53.7	55.3	56.9	10:35 - 10:40	59.5	59.8	60.8	14:35 - 14:40	64.5	62.0	61.8	18:35 - 18:40	57.6	58.4	59.8	22:35 - 22:40	60.5	59.6	60.5
02:40 - 02:45	52.1	52.3	54.1	06:40 - 06:45	54.3	56.3	58.2	10:40 - 10:45	60.5	60.3	61.2	14:40 - 14:45	63.8	61.7	61.6	18:40 - 18:45	56.8	58.1	59.7	22:40 - 22:45	60.4	60.0	60.5
02:45 - 02:50	50.2	54.5	56.2	05:45 - 06:50	54.0	55.5	57.6	10:45 - 10:50	60.1	60.6	61.6	14:45 - 14:50	71.5	64.2	62.4	18:45 - 18:50	58.1	58.9	60.2	22:45 - 22:50	60.7	59.1	60.0
02:50 - 02:55	50.7	52.1	53.9	06:50 - 06:55	54.2	55.9	57.6	10:50 - 10:55	61.1	60.8	61.5	14:50 - 14:55	70.5	64.4	61.7	18:50 - 18:55	56.7	57.8	59.4	22:50 - 22:55	58.1	58.1	58.9
02:55 - 03:00	58.8	59.9	60.1	06:55 - 07:00	55.5	57.4	59.2	10:55 - 11:00	60.2	60.5	61.5	14:55 - 15:00	71.5	65.3	63.0	18:55 - 19:00	57.2	58.2	59.7	22:55 -23:00	57.0	57.3	58.3
03:00 - 03:05	56.4	56.1	56.9	07:00 - 07:05	55.5	57.6	59.3	11:00 - 11:05	58.3	58.8	60.2	15:00 - 15:05	70.7	65.8	63.5	19:00 - 19:05	56.5	57.4	59.1	23:00 - 23:05	56.2	56.3	57.3
03:05 - 03:10	49.6	52.9	54.3	07:05 - 07:10	53.8	54.9	56.7	11:05 - 11:10	58.0	58.6	60.1	15:05 - 15:10	69.2	66.1	64.4	19:05 - 19:10	57.0	57.7	59.1	23:05 -23:10	57.5	58.1	59.2
03:10 - 03:15	49.4	51.4	53.2	07:10 - 07:15	56.9	58.6	60.6	11:10 - 11:15	60.2	60.0	61.3	15:10 - 15:15	69.0	66.4	64.9	19:10 - 19:15	56.4	57.6	59.4	23:10 -23:15	54.9	55.7	57.7
03:15 - 03:20	51.6	53.3	55.1	07:15 - 07:20	55.2	57.6	59.8	11:15 - 11:20	59.1	60.3	61.4	15:15 - 15:20	64.5	63.3	63.2	19:15 - 19:20	58.4	58.5	59.6	23:15 - 23:20	54.7	56.7	58.4
03:20 - 02:25	49.7	52.6	54.4	07:20 - 07:25	56.9	57.7	59.4	11:20 - 11:25	57.9	58.6	60.1	15:20 - 15:25	67.8	65.8	64.7	19:20 - 19:25	58.5	58.4	59.8	23:20 - 23:25	53.5	55.2	57.0
02:25 - 02:30	49.8	51.9	53.1	07:25 - 07:30	56.6	57.3	58.8	11:25 - 11:30	58.2	58.5	60.0	15:25 - 15:30	67.0	65.7	64.7	19:25 - 19:30	59.0	59.3	60.3	23:25 - 23:30	52.7	54.9	56.7
02:30 - 02:35	49.8	51.7	53.3	07:30 - 07:35	55.8	56.6	58.0	11:30 - 11:35	57.4	58.0	59.6	15:30 - 15:35	67.3	65.4	64.7	19:30 - 19:35	58.5	59.2	60.1	23:30 - 23:35	52.8	54.3	56.1
02:35 - 02:40	51.7	52.9	54.0	07:35 - 07:40	56.4	57.3	58.8	11:35 - 11:40	59.9	58.5	59.7	15:35 - 15:40	67.0	65.0	64.3	19:35 - 19:40	59.0	59.2	60.1	23:35 - 23:40	52.7	54.1	55.9
02:40 - 02:45	49.3	51.3	52.8	07:40 - 07:45	56.3	57.5	59.1	11:40 - 11:45	59.3	59.2	60.2	15:40 - 15:45	66.9	66.3	65.0	19:40 - 19:45	56.1	57.2	58.6	23:40 - 23:45	52.7	54.4	56.1
02:45 - 02:55	49.4	51.1	52.9	07:45 - 07:55	59.5	59.4	60.9	11:45 - 11:55	59.2	58.6	59.9	15:45 - 15:55	66.2	64.7	63.9	19:45 - 19:55	59.2	59.4	59.8	23:45 -23:50	52.9	54.6	56.5
03:50 - 03:55	49.5	51.3	53.0	07:50 - 07:55	56.7	57.1	58.5	11:50 - 11:55	60.7	60.2	61.3	15:50 - 15:55	66.7	64.7	63.5	19:50 - 19:55	59.6	60.5	61.5	23:50 - 23:55	52.0	53.4	54.9
03:55 - 04:00	48.7	50.6	52.0	07:55 - 08:00	57.5	58.3	60.0	11:55 - 12:00	59.8	60.2	61.3	15:55 - 16:00	66.4	65.2	63.9	19:55 - 20:00	59.1	59.2	60.0	23:55 - 00:00	52.9	54.3	56.3

Measurement Location – BG2 - Quarry Bay Park Phase II

Set-up Photo



Measurement Date : 28 September 2018 (Friday)
Measurement Location: BG2 - Quarry Bay Park Phase II

Period	Measurement Height (mAG)			Period	Measurement Height (mAG)			Period	Measurement Height (mAG)			Period	Measurement Height (mAG)			Period	Measurement Height (mAG)			Period	Measurement Height (mAG)		
	2m	10m	20m		2m	10m	20m		2m	10m	20m		2m	10m	20m		2m	10m	20m		2m	10m	20m
	LAeq [dB]	LAeq [dB]	LAeq [dB]		LAeq [dB]	LAeq [dB]	LAeq [dB]		LAeq [dB]	LAeq [dB]	LAeq [dB]		LAeq [dB]	LAeq [dB]	LAeq [dB]		LAeq [dB]	LAeq [dB]	LAeq [dB]		LAeq [dB]	LAeq [dB]	LAeq [dB]
00:00 - 00:05	54.4	56.7	58.2	04:00 - 04:05	50.5	51.6	53.4	08:00 - 08:05	60.0	61.4	63.2	12:00 - 12:05	62.9	63.6	66.7	16:00 - 16:05	60.6	61.4	63.3	20:00 - 20:05	62.9	62.9	63.7
00:05 - 00:10	54.9	56.6	58.4	04:05 - 04:10	54.0	56.0	58.0	08:05 - 08:10	58.7	60.3	62.4	12:05 - 12:10	60.4	61.2	63.0	16:05 - 16:10	61.7	61.6	63.2	20:05 - 20:10	62.2	62.3	63.5
00:10 - 00:15	52.8	54.4	56.3	04:10 - 04:15	50.9	52.5	54.2	08:10 - 08:15	59.5	60.8	62.7	12:10 - 12:15	60.2	61.3	63.2	16:10 - 16:15	61.4	62.0	63.4	20:10 - 20:15	59.6	60.6	62.4
00:15 - 00:20	53.1	54.8	56.5	04:15 - 04:20	51.7	53.1	54.8	08:15 - 08:20	59.6	60.9	62.8	12:15 - 17:20	61.1	61.8	63.2	16:15 - 16:20	61.2	61.9	63.2	20:15 - 20:20	58.9	59.7	61.5
00:20 - 00:25	52.9	54.7	56.6	04:20 - 04:25	51.9	53.4	55.2	08:20 - 08:25	60.1	61.3	63.1	12:20 - 14:25	60.9	61.4	63.3	16:20 - 16:25	62.2	62.5	63.9	20:20 - 20:25	58.5	59.4	61.2
00:25 - 00:30	52.5	54.4	56.6	04:25 - 04:30	51.8	52.7	54.4	08:25 - 08:30	61.0	61.7	63.2	12:25 - 11:30	61.0	61.6	63.2	16:25 -16:30	62.2	63.0	64.5	20:25 - 20:30	59.7	60.1	61.9
01:30 - 01:35	53.7	55.7	57.7	04:30 - 04:35	51.6	53.1	55.1	08:30 - 08:35	60.0	61.3	63.2	12:30 - 10:35	62.8	63.0	64.6	1630 - 16:35	63.4	63.6	64.4	21:30 - 21:35	59.8	60.2	61.8
00:35 - 00:40	51.5	53.3	55.4	04:35 - 04:40	52.7	54.2	55.9	08:35 - 08:40	60.9	61.7	63.5	12:35 - 11:40	61.1	61.3	63.0	16:35 - 16:40	64.9	64.1	65.0	20:35 - 20:40	59.8	60.0	69.7
00:40 - 00:45	53.8	55.8	57.5	04:40 - 04:45	51.0	52.1	53.9	08:40 - 08:45	59.8	61.0	62.7	12:40 - 10:45	59.9	60.6	62.2	16:40 - 16:45	62.5	61.5	62.6	20:40 - 20:45	61.5	60.5	61.5
00:45 - 00:50	52.2	54.2	56.0	04:45 - 04:50	52.4	53.9	55.5	08:45 - 08:50	59.2	60.5	62.2	12:45 - 10:50	59.9	60.7	62.5	16:45 - 16:50	61.1	61.5	63.0	20:45 - 20:50	62.9	61.2	62.2
00:50 - 00:55	54.0	56.2	57.8	04:50 - 04:55	50.7	51.7	53.4	08:50 - 08:55	59.7	61.0	62.8	12:50 - 12:55	71.1	71.9	74.2	16:50 - 16:55	62.5	61.7	63.4	20:50 - 20:55	60.8	61.2	62.5
00:55 - 01:00	54.0	56.3	58.1	04:55 - 05:00	51.8	52.9	54.6	08:55 - 09:00	60.0	61.1	62.8	12:55 - 13:00	60.3	61.5	63.7	16:55 - 17:00	60.7	61.5	63.6	20:55 - 21:00	59.1	59.8	61.5
01:00 - 01:05	54.1	56.1	57.9	05:00 - 05:05	51.4	52.6	54.5	09:00 - 09:05	59.8	61.1	62.8	13:00 - 13:05	62.4	64.0	66.0	17:00 - 17:05	60.5	61.7	63.8	21:00 - 21:05	59.7	60.2	62.0
01:05 - 01:10	51.0	52.6	54.4	05:05 - 05:10	51.9	53.2	54.9	09:05 - 09:10	61.7	63.5	65.5	13:05 - 13:10	63.7	65.0	66.7	17:05 - 17:10	61.3	61.5	62.6	21:05 - 21:10	62.0	61.5	63.3
01:10 - 01:15	52.4	54.3	56.1	05:10 - 05:15	53.1	54.8	56.5	09:10 - 09:15	59.7	61.0	62.9	13:10 - 13:15	62.3	63.3	65.2	17:10 -17:15	59.5	59.9	61.6	21:10 - 21:15	60.8	61.0	62.7
01:15 - 01:20	51.0	52.6	54.8	05:15 - 05:20	51.7	53.0	54.9	09:15 - 09:20	60.4	61.7	63.7	13:15 - 12:20	60.4	61.4	63.1	17:15 - 17:20	60.9	61.5	63.4	21:15 - 21:20	59.1	59.9	61.7
01:20 - 01:25	50.9	52.3	54.5	05:20 - 05:25	52.1	53.6	55.3	09:20 - 09:25	65.4	68.0	69.9	13:20 - 13:25	61.0	61.6	63.1	17:20 - 17:25	59.7	60.4	62.1	21:20 -21:25	59.2	59.6	61.4
01:25 - 01:30	51.9	53.8	55.7	05:25 - 05:30	53.0	55.2	56.6	09:25 - 09:30	60.4	61.2	62.9	13:25 - 13:30	60.9	61.5	62.9	17:25 - 17:30	59.8	60.4	62.2	21:25 - 21:30	59.9	59.8	61.7
01:30 - 01:35	50.8	52.4	54.0	05:30 - 05:35	51.6	52.9	54.6	09:30 - 09:35	61.2	61.9	63.5	13:30 - 13:35	59.0	60.0	61.9	17:30 - 17:35	60.4	61.1	63.1	21:30 - 21:35	60.7	61.2	62.9
01:35 - 01:40	50.6	52.0	53.7	05:35 - 05:40	52.3	53.9	55.5	09:35 - 09:40	60.9	61.7	63.5	13:35 - 12:40	60.6	61.4	63.1	17:35 - 17:40	60.2	60.4	62.1	21:35 - 21:40	61.2	62.0	63.9
01:40 - 01:45	55.5	58.0	60.2	05:40 - 05:45	53.8	55.4	57.1	09:40 - 09:45	59.3	60.3	62.0	13:40 - 13:45	59.6	60.2	62.0	17:40 - 17:45	59.6	60.7	62.8	21:40 - 21:45	58.4	59.2	61.1
01:45 - 01:50	52.8	54.8	56.6	05:45 - 05:50	51.8	53.0	54.9	09:45 - 09:50	61.6	62.9	64.0	13:45 - 14:50	60.6	61.1	62.9	17:45 - 17:50	58.8	59.8	61.7	21:45 - 21:50	60.1	60.3	61.9
01:50 - 01:55	51.0	52.8	54.5	05:50 - 05:55	53.6	55.2	57.2	09:50 - 09:55	59.7	61.0	62.6	13:50 - 14:55	60.5	61.2	62.8	17:50 - 17:55	59.0	60.0	61.9	21:50 - 21:55	63.4	65.4	67.8
01:55 - 02:00	53.4	55.4	57.0	05:55 - 06:00	54.1	56.0	57.3	09:55 - 10:00	58.7	60.4	62.1	13:55 - 14:00	60.4	61.2	63.0	17:55 - 18:00	60.1	60.7	62.7	21:55 - 22:00	59.5	60.1	61.7
02:00 - 02:05	49.5	51.0	52.7	06:00 - 06:05	54.6	55.8	57.1	10:00 - 10:05	58.9	60.4	62.2	14:00 - 14:05	59.7	60.6	62.4	18:00 - 18:05	59.3	60.6	62.6	22:00 - 22:05	58.7	59.1	60.7
02:05 - 02:10	50.5	51.9	53.6	06:05 - 06:10	53.9	55.2	56.9	10:05 - 10:10	59.8	60.9	62.5	14:05 - 14:10	59.1	60.4	62.3	18:05 - 18:10	59.7	60.1	62.1	22:05 - 22:10	59.8	60.4	62.0
02:10 - 02:15	50.2	52.0	53.8	06:10 - 06:15	54.4	55.5	57.0	10:10 - 10:15	59.4	60.6	62.6	14:10 - 14:15	59.5	60.7	62.5	18:10 - 18:15	59.3	60.7	62.7	22:10 - 22:15	59.4	60.4	62.1
02:15 - 02:20	51.0	52.8	54.8	06:15 - 06:20	55.6	57.3	59.5	10:15 - 10:20	61.0	62.3	64.1	14:15 - 14:20	60.0	61.3	63.2	18:15 - 18:20	58.9	60.0	61.7	22:15 - 22:20	60.0	60.6	62.0
02:20 - 02:25	51.2	52.7	54.4	06:20 - 06:25	55.7	57.1	59.0	10:20 - 10:25	60.3	61.1	63.0	14:20 - 14:25	60.0	61.2	63.2	18:20 - 18:25	60.0	61.0	62.4	22:20 - 22:25	59.5	60.6	61.9
02:25 - 02:30	50.5	52.2	54.0	06:25 - 06:30	56.2	57.6	59.3	10:25 - 10:30	63.2	64.0	65.4	14:25 - 14:30	58.8	59.9	61.8	18:25 - 18:30	60.0	60.8	62.3	22:25 - 22:30	59.3	60.4	62.0
02:30 - 02:35	50.4	52.1	54.0	06:30 - 06:35	57.5	59.2	61.2	10:30 - 10:35	60.9	62.0	63.8	14:30 - 14:35	58.8	60.0	62.5	18:30 - 18:35	60.6	61.1	62.6	22:30 - 22:35	59.3	60.4	62.3
02:35 - 02:40	51.8	53.7	55.4	06:35 - 06:40	58.0	59.9	61.8	10:35 - 10:40	61.9	63.1	64.6	14:35 - 14:40	63.3	64.2	65.5	18:35 - 18:40	60.7	61.5	62.9	22:35 - 22:40	59.3	60.1	62.1
02:40 - 02:45	52.0	53.6	55.5	06:40 - 06:45	57.3	59.2	61.0	10:40 - 10:45	61.9	63.2	64.9	14:40 - 14:45	60.5	60.8	62.6	18:40 - 18:45	60.4	61.1	63.0	22:40 - 22:45	58.6	59.5	61.2
02:45 - 02:50	51.5	52.8	54.7	05:45 - 06:50	58.1	59.5	61.4	10:45 - 10:50	61.9	63.1	64.9	14:45 - 14:50	60.0	61.0	62.8	18:45 - 18:50	59.9	60.5	62.4	22:45 - 22:50	58.8	59.5	61.5
02:50 - 02:55	51.8	53.0	54.7	06:50 - 06:55	57.6	58.6	60.5	10:50 - 10:55	62.4	63.5	65.2	14:50 - 14:55	64.2	64.1	64.5	18:50 - 18:55	58.7	59.6	60.9	22:50 - 22:55	59.2	59.8	61.4
02:55 - 03:00	52.0	53.4	55.1	06:55 - 07:00	57.0	58.2	60.1	10:55 - 11:00	61.8	62.9	64.8	14:55 - 15:00	65.2	64.2	64.8	18:55 - 19:00	60.4	61.0	62.5	22:55 -23:00	58.4	59.3	60.7
03:00 - 03:05	52.5	53.6	55.7	07:00 - 07:05	57.5	58.7	60.6	11:00 - 11:05	61.4	62.2	64.2	15:00 - 15:05	61.7	62.4	63.6	19:00 - 19:05	60.3	61.3	63.1	23:00 - 23:05	57.9	59.0	60.2
03:05 - 03:10	51.0	52.2	54.1	07:05 - 07:10	58.8	59.6	61.5	11:05 - 11:10	60.2	61.6	63.5	15:05 - 15:10	59.2	60.5	62.1	19:05 - 19:10	59.7	61.3	62.9	23:05 -23:10	56.1	57.6	59.7
03:10 - 03:15	51.4	52.4	54.0	07:10 - 07:15	58.0	59.4	61.2	11:10 - 11:15	59.8	61.0	62.5	15:10 - 15:15	60.0	60.9	62.5	19:10 - 19:15	58.8	60.0	61.7	23:10 -23:15	56.2	57.7	59.6
03:15 - 03:20	53.7	55.6	57.2	07:15 - 07:20	58.2	59.6	61.5	11:15 - 11:20	60.9	61.6	63.3	15:15 - 15:20	62.8	63.0	63.9	19:15 - 19:20	60.8	61.4	62.4	23:15 - 23:20	54.8	56.2	58.2
03:20 - 02:25	51.3	52.2	54.1	07:20 - 07:25	58.0	59.4	61.2	11:20 - 11:25	63.5	64.1	65.7	15:20 - 15:25	60.2	61.3	63.0	19:20 - 19:25	61.1	61.3	62.4	23:20 - 23:25	54.8	56.3	58.3
02:25 - 02:30	51.4	52.6	54.3	07:25 - 07:30	58.3	59.6	61.5	11:25 - 11:30	61.1	61.7	63.7	15:25 - 15:30	59.9	61.1	62.8	19:25 - 19:30	59.6	60.6	62.1	23:25 - 23:30	56.3	57.9	59.8
02:30 - 02:35	51.8	53.3	55.0	07:30 - 07:35	58.0	59.2	61.1	11:30 - 11:35	60.6	61.4	62.4	15:30 - 15:35	62.7	63.3	64.2	19:30 - 19:35	60.8	61.5	62.7	23:30 - 23:35	54.8	56.4	58.7
02:35 - 02:40	50.7	51.7	53.4	07:35 - 07:40	58.6	59.9	61.6	11:35 - 11:40	60.4	61.0	62.6	15:35 - 15:40	60.2	61.1	62.8	19:35 - 19:40	60.3	60.6	62.0	23:35 - 23:40	54.4	56.1	58.1
02:40 - 02:45	51.9	53.5	55.4	07:40 - 07:45	58.4	59.6	61.2	11:40 - 11:45	60.1	61.0	62.5	15:40 - 15:45	60.2	61.0	62.7	19:40 - 19:45	60.0	60.5	61.8	23:40 - 23:45	54.7	56.5	58.3
02:45 - 02:55	51.6	52.8	54.5	07:45 - 07:55	59.4	60.8	62.2	11:45 - 11:55	60.4	61.4	63.2	15:45 - 15:55	61.1	61.7	63.4	19:45 - 19:55	59.1	60.3	61.9	23:45 -23:50	54.4	55.9	58.2
03:50 - 03:55	50.6	51.7	53.4	07:50 - 07:55	58.6	59.9	61.7	11:50 - 11:55	60.4	61.2	62.7	15:50 - 15:55	60.0	60.8	62.7	19:50 - 19:55	60.1	60.8	62.2	23:50 - 23:55	55.3	56.9	59.1
03:55 - 04:00	52.4	53.8	55.4	07:55 - 08:00	58.8	60.2	62.0	11:55 - 12:00	60.1	60.8	62.4	15:55 - 16:00	61.1	61.2	62.7	19:55 - 20:00	60.4	61.3	62.8	23:55 - 00:00	55.0	56.9	58.7

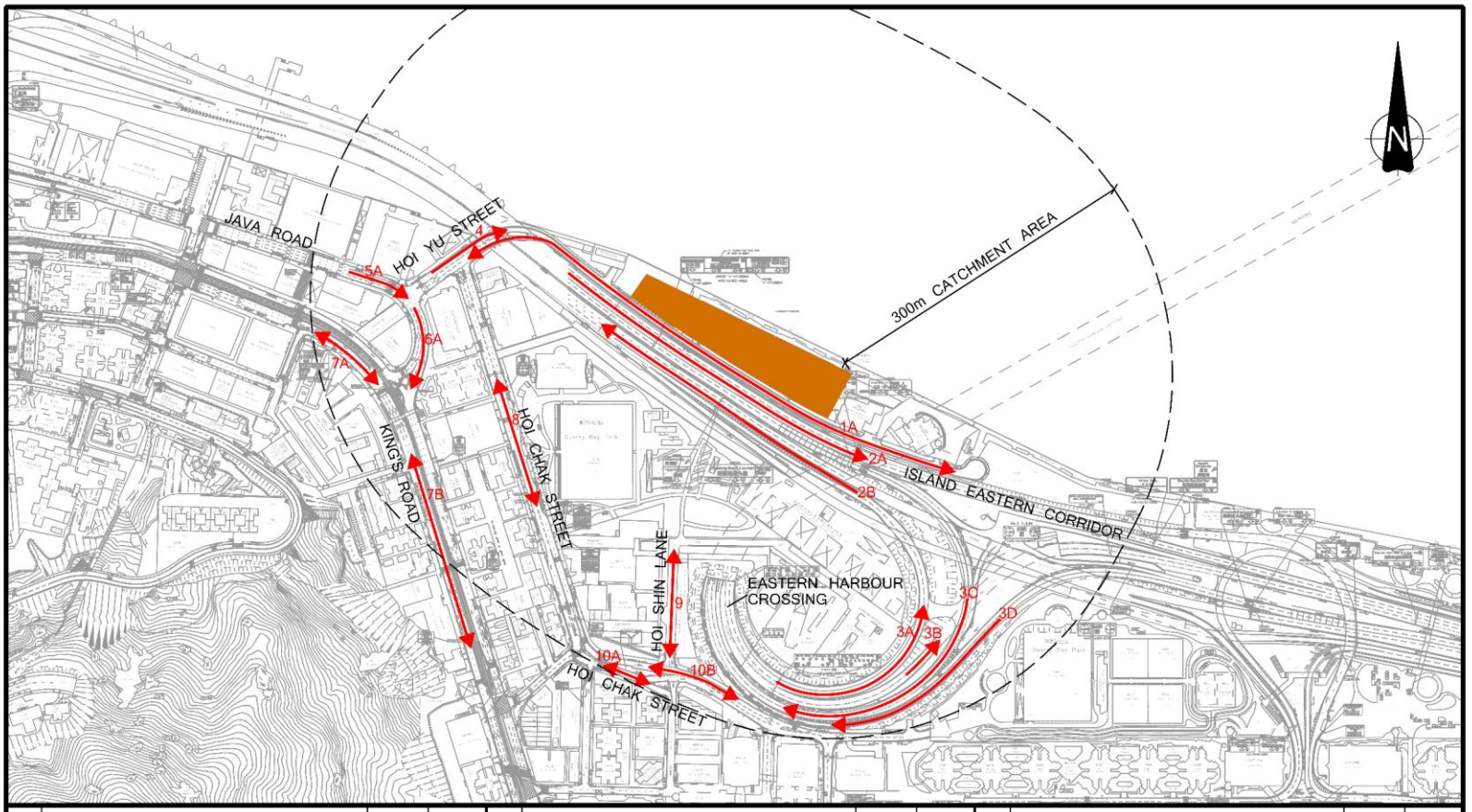
Measurement Date : 29 September 2018 (Saturday)
Measurement Location: BG2 - Quarry Bay Park Phase II

Period	Measurement Height (mAG)			Period	Measurement Height (mAG)			Period	Measurement Height (mAG)			Period	Measurement Height (mAG)			Period	Measurement Height (mAG)			Period	Measurement Height (mAG)		
	2m	10m	20m		2m	10m	20m		2m	10m	20m		2m	10m	20m		2m	10m	20m		2m	10m	20m
	LAeq [dB]	LAeq [dB]	LAeq [dB]		LAeq [dB]	LAeq [dB]	LAeq [dB]		LAeq [dB]	LAeq [dB]	LAeq [dB]		LAeq [dB]	LAeq [dB]	LAeq [dB]		LAeq [dB]	LAeq [dB]	LAeq [dB]		LAeq [dB]	LAeq [dB]	LAeq [dB]
00:00 - 00:05	53.3	54.9	56.9	04:00 - 04:05	52.1	53.0	54.6	08:00 - 08:05	57.8	59.3	61.2	12:00 - 12:05	58.5	59.7	61.4	16:00 - 16:05	65.0	65.3	66.2	20:00 - 20:05	57.3	58.9	60.7
00:05 - 00:10	53.2	54.6	56.6	04:05 - 04:10	53.1	55.0	56.7	08:05 - 08:10	57.9	59.1	60.9	12:05 - 12:10	61.0	62.7	64.3	16:05 - 16:10	66.1	66.0	66.8	20:05 - 20:10	60.2	60.4	61.3
00:10 - 00:15	54.2	55.5	58.1	04:10 - 04:15	51.9	52.9	54.6	08:10 - 08:15	59.7	60.7	62.1	12:10 - 12:15	58.7	60.1	62.3	16:10 - 16:15	66.9	67.5	67.5	20:10 - 20:15	57.4	58.4	60.1
00:15 - 00:20	53.2	54.6	56.8	04:15 - 04:20	52.6	53.9	55.4	08:15 - 08:20	59.6	60.9	63.1	12:15 - 17:20	59.3	60.5	62.2	16:15 - 16:20	66.6	67.2	67.4	20:15 - 20:20	57.4	58.4	60.5
00:20 - 00:25	54.2	55.4	57.2	04:20 - 04:25	52.7	53.8	55.5	08:20 - 08:25	61.3	62.1	64.3	12:20 - 14:25	59.1	60.0	61.6	16:20 - 16:25	65.2	65.4	65.9	20:20 - 20:25	60.4	60.9	61.9
00:25 - 00:30	55.3	57.1	58.7	04:25 - 04:30	51.7	52.8	54.3	08:25 - 08:30	62.1	62.7	65.1	12:25 - 11:30	59.6	60.7	62.5	16:25 -16:30	65.6	65.2	65.8	20:25 - 20:30	57.2	57.9	59.8
01:30 - 01:35	54.1	55.8	57.9	04:30 - 04:35	52.9	53.8	55.5	08:30 - 08:35	61.8	62.4	64.6	12:30 - 10:35	59.0	60.0	61.7	1630 - 16:35	65.1	65.5	65.8	21:30 - 21:35	61.1	61.4	62.3
00:35 - 00:40	54.0	54.9	57.3	04:35 - 04:40	52.4	53.0	54.4	08:35 - 08:40	62.4	62.6	64.7	12:35 - 11:40	59.3	60.1	61.5	16:35 - 16:40	66.8	67.0	67.6	20:35 - 20:40	58.7	58.7	60.1
00:40 - 00:45	53.8	55.4	57.2	04:40 - 04:45	53.9	55.1	56.6	08:40 - 08:45	61.9	62.3	64.1	12:40 - 10:45	58.4	59.0	60.6	16:40 - 16:45	66.5	68.1	68.4	20:40 - 20:45	57.4	58.6	60.4
00:45 - 00:50	53.5	55.2	57.0	04:45 - 04:50	52.5	53.7	55.1	08:45 - 08:50	61.4	61.6	63.2	12:45 - 10:50	60.6	61.5	63.6	16:45 - 16:50	65.6	67.9	67.6	20:45 - 20:50	57.8	58.6	60.4
00:50 - 00:55	52.8	54.3	56.3	04:50 - 04:55	53.2	54.0	55.8	08:50 - 08:55	61.2	61.5	63.1	12:50 - 12:55	58.1	59.1	60.7	16:50 - 16:55	63.6	63.8	64.7	20:50 - 20:55	57.9	58.8	60.6
00:55 - 01:00	52.9	54.6	56.5	04:55 - 05:00	52.9	53.8	55.3	08:55 - 09:00	60.6	60.8	62.5	12:55 - 13:00	60.7	61.8	63.4	16:55 - 17:00	62.8	62.9	64.4	20:55 - 21:00	56.8	57.7	59.7
01:00 - 01:05	52.1	53.5	55.6	05:00 - 05:05	52.5	53.7	55.3	09:00 - 09:05	60.1	60.1	61.9	13:00 - 13:05	57.8	59.0	60.6	17:00 - 17:05	64.4	64.4	65.7	21:00 - 21:05	57.9	58.8	60.2
01:05 - 01:10	53.0	54.6	56.5	05:05 - 05:10	52.3	53.3	54.8	09:05 - 09:10	60.5	61.4	63.4	13:05 - 13:10	58.8	60.0	61.8	17:05 - 17:10	64.8	65.4	66.2	21:05 - 21:10	58.4	59.3	60.8
01:10 - 01:15	53.8	55.3	57.2	05:10 - 05:15	53.2	54.1	55.5	09:10 - 09:15	60.0	61.0	63.1	13:10 - 13:15	59.4	61.3	63.6	17:10 -17:15	65.4	65.9	66.5	21:10 - 21:15	57.5	58.6	60.5
01:15 - 01:20	52.8	54.4	56.3	05:15 - 05:20	53.4	53.9	55.4	09:15 - 09:20	61.5	62.3	64.0	13:15 - 12:20	58.8	59.8	61.5	17:15 - 17:20	65.8	65.9	66.6	21:15 - 21:20	57.7	58.8	60.7
01:20 - 01:25	52.5	54.1	56.1	05:20 - 05:25	53.9	55.1	57.0	09:20 - 09:25	61.3	62.1	63.9	13:20 - 13:25	59.3	60.1	62.1	17:20 - 17:25	67.0	68.2	68.4	21:20 -21:25	58.1	59.3	60.8
01:25 - 01:30	52.8	54.4	56.7	05:25 - 05:30	52.8	53.7	55.4	09:25 - 09:30	58.6	59.8	61.3	13:25 - 13:30	59.6	60.5	62.4	17:25 - 17:30	65.9	67.2	67.4	21:25 - 21:30	58.1	59.4	61.3
01:30 - 01:35	53.7	55.1	56.7	05:30 - 05:35	54.2	55.2	57.0	09:30 - 09:35	59.9	61.2	62.6	13:30 - 13:35	61.2	62.0	64.1	17:30 - 17:35	65.7	65.9	66.6	21:30 - 21:35	58.4	59.8	62.0
01:35 - 01:40	52.3	53.7	55.6	05:35 - 05:40	52.8	53.6	55.4	09:35 - 09:40	61.1	62.0	63.0	13:35 - 12:40	60.3	61.2	62.7	17:35 - 17:40	67.2	67.2	67.5	21:35 - 21:40	58.1	59.1	60.7
01:40 - 01:45	51.5	53.1	55.2	05:40 - 05:45	53.8	55.3	57.2	09:40 - 09:45	61.8	62.4	63.7	13:40 - 13:45	59.7	61.3	63.0	17:40 - 17:45	69.2	68.6	69.1	21:40 - 21:45	58.6	59.5	61.2
01:45 - 01:50	54.5	56.1	58.0	05:45 - 05:50	53.1	54.6	56.5	09:45 - 09:50	61.4	62.3	63.8	13:45 - 14:50	59.4	60.1	61.9	17:45 - 17:50	68.9	68.4	68.5	21:45 - 21:50	58.9	60.2	62.3
01:50 - 01:55	52.5	54.0	55.9	05:50 - 05:55	53.9	55.5	57.2	09:50 - 09:55	62.1	62.9	64.3	13:50 - 14:55	61.0	61.3	63.1	17:50 - 17:55	65.4	65.3	65.5	21:50 - 21:55	58.5	59.6	62.9
01:55 - 02:00	52.8	54.4	56.3	05:55 - 06:00	54.0	55.6	57.2	09:55 - 10:00	62.9	63.4	64.4	13:55 - 14:00	60.8	61.2	63.0	17:55 - 18:00	62.3	62.9	64.5	21:55 - 22:00	59.0	60.8	62.4
02:00 - 02:05	50.8	52.2	54.2	06:00 - 06:05	55.0	55.8	57.4	10:00 - 10:05	63.9	63.9	65.5	14:00 - 14:05	59.8	62.4	63.3	18:00 - 18:05	62.2	62.7	64.2	22:00 - 22:05	57.6	58.8	60.4
02:05 - 02:10	51.7	53.0	55.0	06:05 - 06:10	54.3	54.8	55.9	10:05 - 10:10	62.1	63.1	64.4	14:05 - 14:10	63.0	64.3	65.3	18:05 - 18:10	61.1	62.0	63.9	22:05 - 22:10	58.0	59.1	60.7
02:10 - 02:15	51.7	53.3	55.6	06:10 - 06:15	54.9	55.8	57.8	10:10 - 10:15	64.7	66.9	67.7	14:10 - 14:15	62.3	63.8	64.3	18:10 - 18:15	61.6	62.8	64.3	22:10 - 22:15	56.9	58.4	60.2
02:15 - 02:20	51.6	53.0	55.1	06:15 - 06:20	55.1	56.0	57.8	10:15 - 10:20	66.5	67.7	68.9	14:15 - 14:20	61.7	62.8	63.9	18:15 - 18:20	60.9	61.8	63.9	22:15 - 22:20	58.3	59.8	61.3
02:20 - 02:25	52.1	53.4	55.2	06:20 - 06:25	55.9	56.7	58.9	10:20 - 10:25	63.8	65.9	66.8	14:20 - 14:25	60.2	61.0	62.6	18:20 - 18:25	61.5	62.2	64.1	22:20 - 22:25	56.0	57.0	58.9
02:25 - 02:30	51.0	52.3	54.2	06:25 - 06:30	55.4	56.2	58.1	10:25 - 10:30	64.6	65.5	66.7	14:25 - 14:30	59.7	61.4	62.4	18:25 - 18:30	59.8	60.7	63.3	22:25 - 22:30	57.3	58.4	60.2
02:30 - 02:35	51.9	53.4	55.3	06:30 - 06:35	55.0	56.1	57.9	10:30 - 10:35	61.9	63.2	64.8	14:30 - 14:35	60.2	60.9	62.5	18:30 - 18:35	59.6	60.6	63.0	22:30 - 22:35	59.3	60.6	61.9
02:35 - 02:40	51.4	52.8	54.8	06:35 - 06:40	54.9	56.0	57.6	10:35 - 10:40	61.4	62.4	63.7	14:35 - 14:40	60.5	61.7	63.3	18:35 - 18:40	59.4	60.4	62.7	22:35 - 22:40	56.3	57.4	59.5
02:40 - 02:45	52.7	54.2	56.1	06:40 - 06:45	55.0	55.9	57.7	10:40 - 10:45	60.5	61.5	62.8	14:40 - 14:45	58.8	59.9	61.8	18:40 - 18:45	59.1	60.1	62.3	22:40 - 22:45	56.3	57.2	59.1
02:45 - 02:50	51.0	52.3	54.1	05:45 - 06:50	57.0	58.7	60.6	10:45 - 10:50	61.8	62.8	63.5	14:45 - 14:50	60.3	61.0	63.2	18:45 - 18:50	59.1	60.3	62.2	22:45 - 22:50	56.4	57.7	59.6
02:50 - 02:55	51.3	52.8	54.8	06:50 - 06:55	57.5	59.0	61.0	10:50 - 10:55	62.3	65.6	66.1	14:50 - 14:55	62.1	62.1	64.7	18:50 - 18:55	58.4	59.4	61.5	22:50 - 22:55	56.2	57.4	59.3
02:55 - 03:00	50.7	52.1	54.3	06:55 - 07:00	57.4	58.2	60.2	10:55 - 11:00	63.5	64.7	65.7	14:55 - 15:00	61.4	61.8	63.6	18:55 - 19:00	59.3	60.1	62.0	22:55 -23:00	56.2	57.9	62.0
03:00 - 03:05	53.0	54.1	56.0	07:00 - 07:05	56.6	57.3	59.4	11:00 - 11:05	63.6	65.2	66.2	15:00 - 15:05	62.3	62.8	63.9	19:00 - 19:05	61.1	61.9	63.7	23:00 - 23:05	59.5	60.4	62.5
03:05 - 03:10	52.2	53.1	55.3	07:05 - 07:10	56.6	57.1	58.9	11:05 - 11:10	63.6	64.0	64.0	15:05 - 15:10	64.5	64.8	65.8	19:05 - 19:10	59.2	59.7	61.8	23:05 -23:10	65.8	67.1	68.6
03:10 - 03:15	52.7	53.9	55.7	07:10 - 07:15	55.8	56.9	58.6	11:10 - 11:15	61.7	63.5	65.3	15:10 - 15:15	64.8	66.2	67.2	19:10 - 19:15	58.1	58.8	60.6	23:10 -23:15	60.7	63.1	64.8
03:15 - 03:20	53.2	54.3	56.2	07:15 - 07:20	56.8	57.9	59.7	11:15 - 11:20	62.1	62.5	63.6	15:15 - 15:20	62.9	64.6	65.3	19:15 - 19:20	57.5	58.5	60.3	23:15 - 23:20	55.3	57.2	59.7
03:20 - 02:25	52.4	53.5	55.3	07:20 - 07:25	57.7	58.8	60.6	11:20 - 11:25	63.7	63.3	64.1	15:20 - 15:25	63.1	63.8	65.1	19:20 - 19:25	57.8	59.0	60.8	23:20 - 23:25	55.5	57.2	59.1
02:25 - 02:30	51.6	52.6	54.3	07:25 - 07:30	58.3	59.1	60.5	11:25 - 11:30	62.2	63.0	63.9	15:25 - 15:30	63.4	63.6	64.9	19:25 - 19:30	58.6	59.6	61.1	23:25 - 23:30	54.4	56.5	58.6
02:30 - 02:35	51.5	52.3	54.0	07:30 - 07:35	57.8	59.1	60.5	11:30 - 11:35	60.5	61.4	64.0	15:30 - 15:35	63.5	63.7	64.9	19:30 - 19:35	56.9	57.9	59.6	23:30 - 23:35	54.7	56.4	59.3
02:35 - 02:40	53.1	54.4	56.2	07:35 - 07:40	59.7	60.3	61.3	11:35 - 11:40	60.5	61.7	63.9	15:35 - 15:40	63.9	64.3	65.4	19:35 - 19:40	57.8	58.8	60.3	23:35 - 23:40	55.1	57.2	62.5
02:40 - 02:45	53.4	54.6	56.3	07:40 - 07:45	57.8	58.9	60.6	11:40 - 11:45	60.2	61.6	63.7	15:40 - 15:45	63.2	63.4	64.6	19:40 - 19:45	57.4	58.8	60.7	23:40 - 23:45	53.8	55.5	59.4
02:45 - 02:55	51.6	52.6	54.2	07:45 - 07:55	57.4	58.9	60.7	11:45 - 11:55	59.3	60.6	62.3	15:45 - 15:55	63.0	63.2	64.5	19:45 - 19:55	57.6	59.0	60.4	23:45 -23:50	54.2	56.0	59.2
03:50 - 03:55	52.3	53.5	55.2	07:50 - 07:55	57.5	59.1	60.8	11:50 - 11:55	60.1	61.6	63.1	15:50 - 15:55	65.5	65.9	66.8	19:50 - 19:55	57.8	59.0	60.7	23:50 - 23:55	53.7	55.5	57.4
03:55 - 04:00	51.7	52.9	54.5	07:55 - 08:00	58.0	59.1	61.0	11:55 - 12:00	60.8	62.0	62.6	15:55 - 16:00	65.2	66.3	66.9	19:55 - 20:00	56.5	57.7	59.5	23:55 - 00:00	54.9	56.8	63.0

Measurement Date : 30 September 2018 (Sunday)
Measurement Location: BG2 - Quarry Bay Park Phase II

Period	Measurement Height (mAG)			Period	Measurement Height (mAG)			Period	Measurement Height (mAG)			Period	Measurement Height (mAG)			Period	Measurement Height (mAG)			Period	Measurement Height (mAG)		
	2m	10m	20m		2m	10m	20m		2m	10m	20m		2m	10m	20m		2m	10m	20m		2m	10m	20m
	LAeq [dB]	LAeq [dB]	LAeq [dB]		LAeq [dB]	LAeq [dB]	LAeq [dB]		LAeq [dB]	LAeq [dB]	LAeq [dB]		LAeq [dB]	LAeq [dB]	LAeq [dB]		LAeq [dB]	LAeq [dB]	LAeq [dB]		LAeq [dB]	LAeq [dB]	LAeq [dB]
00:00 - 00:05	55.1	56.9	63.3	04:00 - 04:05	53.0	54.3	55.9	08:00 - 08:05	62.9	63.7	63.9	12:00 - 12:05	60.5	61.2	62.8	16:00 - 16:05	58.2	59.0	60.9	20:00 - 20:05	57.1	58.6	60.1
00:05 - 00:10	53.9	55.7	58.5	04:05 - 04:10	53.3	54.3	56.0	08:05 - 08:10	57.4	58.6	59.8	12:05 - 12:10	59.3	60.4	61.8	16:05 - 16:10	58.2	59.0	60.8	20:05 - 20:10	56.9	58.6	60.4
00:10 - 00:15	55.2	57.0	62.0	04:10 - 04:15	52.5	53.5	55.2	08:10 - 08:15	57.6	58.5	60.0	12:10 - 12:15	62.9	63.4	64.1	16:10 - 16:15	59.4	59.8	61.6	20:10 - 20:15	56.7	58.2	60.3
00:15 - 00:20	58.7	60.9	62.9	04:15 - 04:20	52.6	53.9	55.4	08:15 - 08:20	58.5	59.3	61.2	12:15 - 17:20	61.3	62.7	63.5	16:15 - 16:20	60.5	60.3	61.7	20:15 - 20:20	56.8	58.2	60.2
00:20 - 00:25	56.2	57.6	59.4	04:20 - 04:25	53.4	54.5	56.5	08:20 - 08:25	59.2	60.0	61.6	12:20 - 14:25	62.2	63.0	64.2	16:20 - 16:25	62.0	61.4	62.6	20:20 - 20:25	57.0	58.0	59.6
00:25 - 00:30	54.2	56.1	60.1	04:25 - 04:30	51.7	52.5	54.1	08:25 - 08:30	57.4	58.4	60.2	12:25 - 11:30	61.3	61.8	63.3	16:25 -16:30	63.8	62.7	63.1	20:25 - 20:30	57.3	58.4	60.0
01:30 - 01:35	55.2	56.9	58.6	04:30 - 04:35	52.3	53.3	54.9	08:30 - 08:35	57.9	58.8	60.4	12:30 - 10:35	59.2	60.0	61.8	1630 - 16:35	63.6	62.7	64.1	21:30 - 21:35	56.9	58.0	59.9
00:35 - 00:40	52.8	54.5	56.2	04:35 - 04:40	53.3	55.0	56.6	08:35 - 08:40	59.8	60.2	61.4	12:35 - 11:40	57.7	59.0	61.1	16:35 - 16:40	62.8	61.8	63.1	20:35 - 20:40	56.6	58.0	59.9
00:40 - 00:45	54.8	55.9	58.4	04:40 - 04:45	53.2	54.2	56.3	08:40 - 08:45	61.7	61.7	62.5	12:40 - 10:45	58.1	59.4	61.1	16:40 - 16:45	59.1	59.9	61.6	20:40 - 20:45	57.8	58.7	60.2
00:45 - 00:50	54.6	56.4	58.3	04:45 - 04:50	52.0	53.2	54.8	08:45 - 08:50	61.1	61.2	62.3	12:45 - 10:50	58.0	59.3	61.1	16:45 - 16:50	60.4	60.6	62.1	20:45 - 20:50	56.5	57.7	59.6
00:50 - 00:55	53.4	55.0	56.8	04:50 - 04:55	51.8	52.8	54.6	08:50 - 08:55	59.8	60.1	61.5	12:50 - 12:55	58.5	59.6	61.2	16:50 - 16:55	60.2	60.2	62.1	20:50 - 20:55	57.4	58.4	60.1
00:55 - 01:00	54.5	56.1	58.3	04:55 - 05:00	53.2	54.2	55.7	08:55 - 09:00	60.6	60.6	61.8	12:55 - 13:00	58.3	59.6	61.5	16:55 - 17:00	60.0	60.5	62.6	20:55 - 21:00	57.0	58.3	60.1
01:00 - 01:05	51.9	53.5	55.9	05:00 - 05:05	51.7	52.5	54.0	09:00 - 09:05	62.5	62.9	63.7	13:00 - 13:05	58.5	59.4	61.1	17:00 - 17:05	61.1	62.0	63.9	21:00 - 21:05	56.6	57.6	59.5
01:05 - 01:10	56.7	58.2	59.7	05:05 - 05:10	52.5	53.4	55.2	09:05 - 09:10	61.2	62.1	62.8	13:05 - 13:10	57.9	59.0	62.1	17:05 - 17:10	60.7	61.2	62.7	21:05 - 21:10	56.6	57.8	59.9
01:10 - 01:15	52.0	53.8	55.9	05:10 - 05:15	52.4	53.1	54.8	09:10 - 09:15	62.0	63.1	63.9	13:10 - 13:15	58.8	59.7	60.9	17:10 -17:15	62.3	62.2	63.2	21:10 - 21:15	58.1	59.1	60.8
01:15 - 01:20	52.4	54.0	58.1	05:15 - 05:20	53.7	54.5	56.5	09:15 - 09:20	62.0	62.7	63.4	13:15 - 12:20	58.5	59.4	61.4	17:15 - 17:20	63.7	63.2	63.8	21:15 - 21:20	56.7	57.9	59.8
01:20 - 01:25	53.6	55.2	56.9	05:20 - 05:25	56.3	58.4	60.4	09:20 - 09:25	62.2	63.2	63.6	13:20 - 13:25	58.3	59.2	61.2	17:20 - 17:25	61.9	62.2	63.6	21:20 -21:25	57.3	58.2	59.6
01:25 - 01:30	52.9	54.7	56.7	05:25 - 05:30	54.3	55.6	57.7	09:25 - 09:30	60.6	61.6	62.4	13:25 - 13:30	58.0	59.0	60.6	17:25 - 17:30	60.9	61.5	63.4	21:25 - 21:30	56.6	57.8	59.8
01:30 - 01:35	51.7	53.3	55.4	05:30 - 05:35	52.4	53.2	55.1	09:30 - 09:35	61.2	62.2	62.6	13:30 - 13:35	60.7	60.9	61.5	17:30 - 17:35	62.3	63.0	64.4	21:30 - 21:35	56.6	57.9	59.6
01:35 - 01:40	51.5	53.3	55.8	05:35 - 05:40	54.7	56.3	57.9	09:35 - 09:40	58.2	59.1	60.9	13:35 - 12:40	58.2	58.9	60.5	17:35 - 17:40	61.0	61.5	62.6	21:35 - 21:40	58.1	59.2	60.7
01:40 - 01:45	51.8	53.6	55.7	05:40 - 05:45	52.7	53.5	55.3	09:40 - 09:45	59.2	60.7	62.0	13:40 - 13:45	58.4	59.0	60.6	17:40 - 17:45	62.7	63.4	64.6	21:40 - 21:45	56.8	57.9	59.8
01:45 - 01:50	52.4	54.1	56.0	05:45 - 05:50	52.3	53.2	54.4	09:45 - 09:50	59.7	60.7	62.4	13:45 - 14:50	59.4	59.7	61.5	17:45 - 17:50	62.9	63.6	65.1	21:45 - 21:50	56.3	57.4	59.4
01:50 - 01:55	51.8	53.6	55.6	05:50 - 05:55	53.7	54.8	56.7	09:50 - 09:55	58.8	60.3	61.4	13:50 - 14:55	61.7	61.5	63.0	17:50 - 17:55	60.6	61.4	63.3	21:50 - 21:55	57.7	58.7	60.3
01:55 - 02:00	51.1	52.9	54.8	05:55 - 06:00	54.1	54.8	56.2	09:55 - 10:00	59.8	62.1	62.1	13:55 - 14:00	60.0	60.6	62.2	17:55 - 18:00	60.3	61.1	62.9	21:55 - 22:00	57.6	58.9	60.9
02:00 - 02:05	52.6	54.1	55.8	06:00 - 06:05	53.6	54.5	56.4	10:00 - 10:05	59.6	61.0	61.7	14:00 - 14:05	59.8	60.1	61.5	18:00 - 18:05	61.1	61.6	63.1	22:00 - 22:05	58.9	60.7	62.0
02:05 - 02:10	51.2	52.9	54.8	06:05 - 06:10	54.1	54.7	56.7	10:05 - 10:10	59.5	60.6	62.1	14:05 - 14:10	59.6	60.2	62.8	18:05 - 18:10	60.6	61.0	62.7	22:05 - 22:10	57.6	58.9	60.8
02:10 - 02:15	51.4	53.1	55.7	06:10 - 06:15	56.5	57.8	59.3	10:10 - 10:15	59.3	60.2	61.9	14:10 - 14:15	58.9	59.8	61.7	18:10 - 18:15	59.4	60.3	62.3	22:10 - 22:15	56.5	57.9	59.8
02:15 - 02:20	53.2	55.0	56.6	06:15 - 06:20	56.5	57.2	58.7	10:15 - 10:20	58.3	59.6	60.9	14:15 - 14:20	58.6	59.7	61.3	18:15 - 18:20	61.0	61.7	63.8	22:15 - 22:20	56.7	58.4	60.5
02:20 - 02:25	51.6	53.5	55.2	06:20 - 06:25	56.2	57.9	59.6	10:20 - 10:25	59.1	61.6	61.5	14:20 - 14:25	58.6	60.1	61.8	18:20 - 18:25	60.8	61.1	62.9	22:20 - 22:25	58.2	59.4	60.7
02:25 - 02:30	55.5	57.7	59.3	06:25 - 06:30	55.2	56.4	58.0	10:25 - 10:30	59.7	61.4	62.5	14:25 - 14:30	58.6	59.5	62.3	18:25 - 18:30	59.4	60.5	62.7	22:25 - 22:30	57.6	58.6	60.0
02:30 - 02:35	52.1	53.5	55.3	06:30 - 06:35	55.2	55.7	57.4	10:30 - 10:35	58.2	59.3	60.8	14:30 - 14:35	58.5	59.4	61.7	18:30 - 18:35	60.0	61.1	63.1	22:30 - 22:35	56.1	57.6	59.8
02:35 - 02:40	53.6	55.2	57.0	06:35 - 06:40	55.1	55.8	57.4	10:35 - 10:40	57.7	58.6	60.4	14:35 - 14:40	59.1	60.0	62.1	18:35 - 18:40	59.5	60.6	62.7	22:35 - 22:40	56.3	58.0	59.9
02:40 - 02:45	52.7	53.9	55.9	06:40 - 06:45	55.3	56.5	58.1	10:40 - 10:45	57.6	58.6	60.5	14:40 - 14:45	58.7	59.5	62.4	18:40 - 18:45	59.0	59.9	62.3	22:40 - 22:45	56.8	58.4	60.3
02:45 - 02:50	52.1	53.6	55.4	05:45 - 06:50	56.3	57.4	59.3	10:45 - 10:50	58.5	59.6	61.3	14:45 - 14:50	60.1	60.7	62.5	18:45 - 18:50	57.6	58.7	60.7	22:45 - 22:50	55.4	57.2	59.2
02:50 - 02:55	52.2	53.5	55.4	06:50 - 06:55	56.3	57.7	59.4	10:50 - 10:55	59.4	60.3	62.2	14:50 - 14:55	58.8	60.0	61.7	18:50 - 18:55	58.1	59.0	61.2	22:50 - 22:55	57.3	58.9	60.9
02:55 - 03:00	52.7	54.1	56.0	06:55 - 07:00	56.1	57.0	59.0	10:55 - 11:00	59.1	60.3	62.0	14:55 - 15:00	62.8	63.4	64.3	18:55 - 19:00	60.4	60.4	62.8	22:55 -23:00	55.9	58.1	59.9
03:00 - 03:05	51.7	53.0	54.7	07:00 - 07:05	55.9	57.3	59.1	11:00 - 11:05	57.8	59.2	61.0	15:00 - 15:05	63.0	63.7	64.4	19:00 - 19:05	59.7	59.9	62.2	23:00 - 23:05	55.3	57.3	59.3
03:05 - 03:10	53.1	54.4	56.0	07:05 - 07:10	56.8	57.9	59.4	11:05 - 11:10	57.7	59.1	60.7	15:05 - 15:10	57.7	58.9	61.2	19:05 - 19:10	59.3	59.7	61.5	23:05 -23:10	59.4	61.6	63.4
03:10 - 03:15	53.1	54.4	55.9	07:10 - 07:15	57.3	58.9	60.5	11:10 - 11:15	58.4	59.5	61.1	15:10 - 15:15	61.3	62.3	63.0	19:10 - 19:15	57.5	58.9	60.7	23:10 -23:15	54.7	56.5	58.5
03:15 - 03:20	53.8	55.0	56.9	07:15 - 07:20	56.9	58.2	59.6	11:15 - 11:20	58.4	59.7	61.7	15:15 - 15:20	58.6	59.7	61.4	19:15 - 19:20	57.4	58.4	60.1	23:15 - 23:20	53.8	55.6	57.7
03:20 - 02:25	54.1	55.6	57.3	07:20 - 07:25	57.9	59.0	60.0	11:20 - 11:25	61.0	61.9	63.5	15:20 - 15:25	58.3	59.2	61.2	19:20 - 19:25	57.6	58.8	60.4	23:20 - 23:25	54.0	56.0	57.9
02:25 - 02:30	52.5	53.2	54.9	07:25 - 07:30	56.5	57.7	59.4	11:25 - 11:30	60.8	61.4	62.4	15:25 - 15:30	61.7	62.3	63.3	19:25 - 19:30	57.2	58.7	60.6	23:25 - 23:30	54.1	56.1	58.1
02:30 - 02:35	52.7	53.8	55.5	07:30 - 07:35	56.1	57.3	59.1	11:30 - 11:35	59.7	60.8	62.3	15:30 - 15:35	58.9	59.8	61.3	19:30 - 19:35	56.6	58.1	60.0	23:30 - 23:35	53.7	55.8	57.6
02:35 - 02:40	54.4	55.8	57.8	07:35 - 07:40	58.7	59.3	60.3	11:35 - 11:40	58.6	59.8	61.4	15:35 - 15:40	58.8	59.9	61.8	19:35 - 19:40	57.3	58.5	60.2	23:35 - 23:40	53.5	55.4	57.4
02:40 - 02:45	52.9	54.0	55.8	07:40 - 07:45	57.9	58.9	60.0	11:40 - 11:45	61.1	62.3	63.3	15:40 - 15:45	59.1	59.7	61.4	19:40 - 19:45	58.0	58.4	60.1	23:40 - 23:45	55.1	56.9	58.5
02:45 - 02:55	52.9	53.9	58.3	07:45 - 07:55	57.6	58.8	60.4	11:45 - 11:55	59.7	60.8	62.2	15:45 - 15:55	58.5	59.3	61.0	19:45 - 19:55	57.6	59.2	61.2	23:45 -23:50	53.6	55.7	58.2
03:50 - 03:55	52.9	54.1	55.5	07:50 - 07:55	59.4	60.3	62.7	11:50 - 11:55	59.6	60.9	62.2	15:50 - 15:55	57.7	58.8	60.5	19:50 - 19:55	59.4	60.3	61.4	23:50 - 23:55	54.3	56.3	58.2
03:55 - 04:00	54.2	55.7	57.5	07:55 - 08:00	57.7	58.5	60.9	11:55 - 12:00	58.9	59.8	61.6	15:55 - 16:00	58.5	59.3	61.4	19:55 - 20:00	58.0	59.4	61.0	23:55 - 00:00	53.8	56.0	58.0

Appendix B Peak Traffic Flow in Year 2045 with the Proposed Development



Rev.	Description	Checked	Date
-	-	-	-

Rev.	Description	Checked	Date
-	-	-	-

Rev.	Description	Checked	Date
-	-	-	-

Project Title

S12 PLANING APPLICATION FOR PROPOSED RESIDENTIAL DEVELOPMENT AT HOI YU STREET

Drawing Title

INDEX PLAN OF ROAD LINK FOR EIA

Designed	Checked	Scale	Date	Drawing No.	Rev.
NLY	WCY	1:5000(A4)	JUN 2024	**SK1**	-

SYSTRA MVA

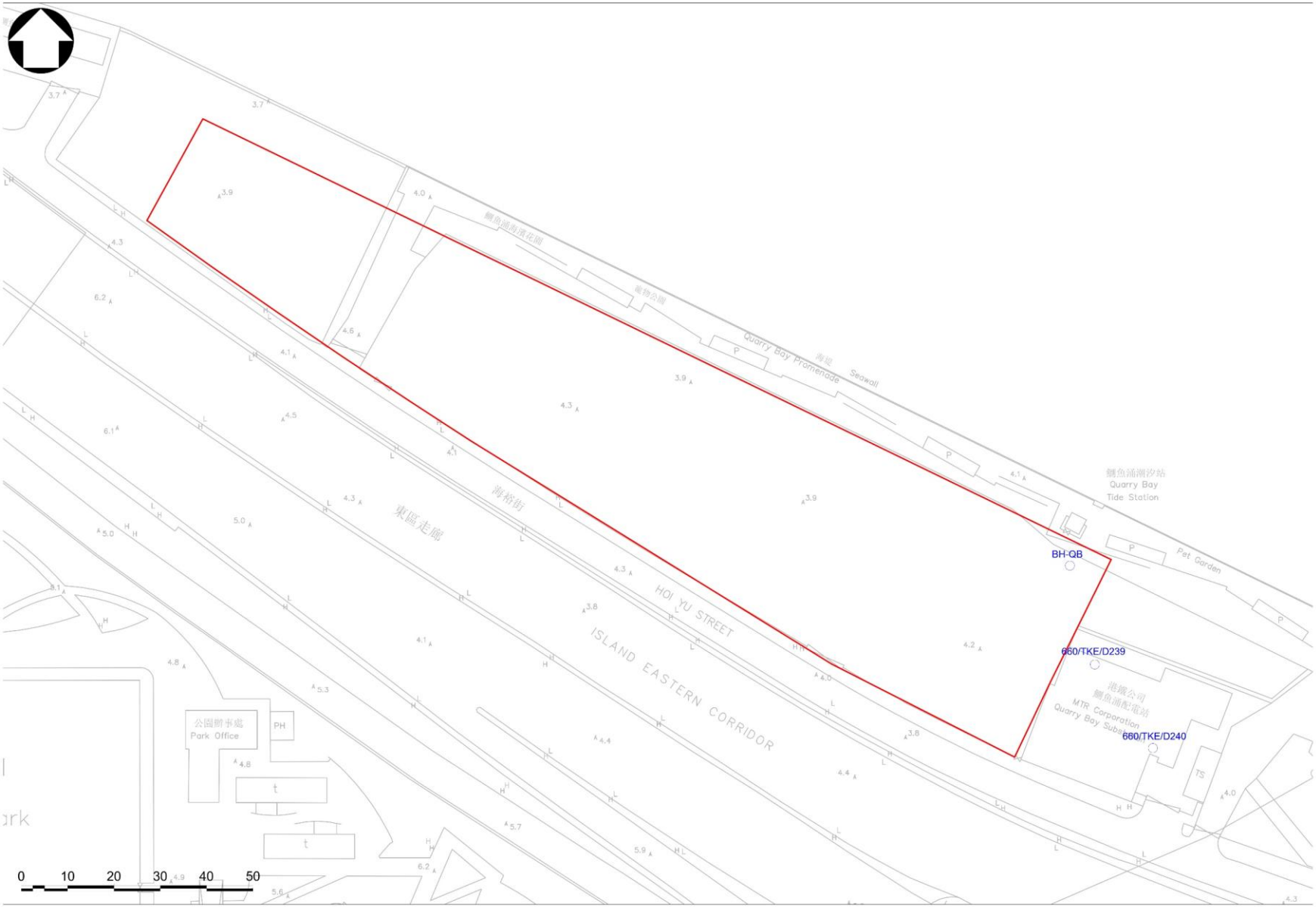
CHK50793710/EIA/SK1.DGN/TKH/17JUN/24

Original Size : A4

Year 2045 EIA Peak Traffic Flows Heavy Vehicle (With Development)

Road Section Index * / (Direction)	Road	Road Type	Road Speed Limit (km/hr)	AM		PM	
				Traffic Flow(veh/hr)	HV(%)	Traffic Flow(veh/hr)	HV(%)
1A / (EB)	Hoi Yu Street(Hoi Chak St-Hoi Yu St end)	Local Road	50	55	18.2%	45	11.1%
1A / (WB)	Hoi Yu Street(Hoi Chak St-Hoi Yu St end)	Local Road	50	45	11.9%	45	4.5%
2A / (EB)	Island Eastern Corridor	Expressway	70	3210	12.6%	3350	7.7%
2B / (WB)	Island Eastern Corridor	Expressway	70	4420	12.6%	4620	7.8%
3A / (NB)	Eastern Harbour Crossing (to IEC WB)	Tunnel	50	1765	12.5%	2075	7.8%
3B / (SB)	Eastern Harbour Crossing (to IEC EB)	Tunnel	50	900	12.6%	895	7.9%
3C / (EB)	Eastern Harbour Crossing (from IEC EB)	Tunnel	50	1995	11.0%	1610	6.5%
3D / (WB)	Eastern Harbour Crossing (from IEC WB)	Tunnel	50	945	11.0%	1270	6.7%
4 / (EB)	Hoi Yu Street(Java Rd-Hoi Chak St)	Local Road	50	1085	8.9%	610	7.6%
4 / (WB)	Hoi Yu Street(Java Rd-Hoi Chak St)	Local Road	50	230	19.0%	290	5.2%
5A / (EB)	Java Road East	District Distributor	50	1070	22.1%	1170	8.6%
6A / (SB)	Java Road(Hoi Yu St-King's Rd)	District Distributor	50	1940	14.9%	1485	9.1%
7A / (EB)	King's Road(Model Lane-Java Rd)	Primary Distributor	50	90	96.6%	80	97.5%
7A / (WB)	King's Road(Model Lane-Java Rd)	Primary Distributor	50	1295	21.6%	1510	16.3%
7B / (NB)	King's Road (Java Rd-Finnie St)	Primary Distributor	50	595	34.9%	550	23.8%
7B / (SB)	King's Road (Java Rd-Finnie St)	Primary Distributor	50	745	22.3%	820	24.0%
8 / (NB)	Hoi Chak Street (Hoi Yu St-Finnie St)	Local Road	50	1035	8.7%	565	7.4%
8 / (SB)	Hoi Chak Street (Hoi Yu St-Finnie St)	Local Road	50	195	21.5%	250	5.6%
9 / (NB)	Hoi Shing Lane	Local Road	50	20	11.8%	85	4.9%
9 / (SB)	Hoi Shing Lane	Local Road	50	10	25.0%	35	6.1%
10A / (EB)	Hoi Tai Street (Finnie St-Hoi Shing Lane)	Local Road	50	810	6.3%	455	4.9%
10A / (WB)	Hoi Tai Street (Finnie St-Hoi Shing Lane)	Local Road	50	425	13.5%	590	5.6%
10B / (EB)	Hoi Tai Street West	Local Road	50	910	7.1%	585	4.6%
10B / (WB)	Hoi Tai Street West	Local Road	50	180	15.3%	285	5.6%

Appendix C Previous Drillhole Records



Related Uses"
Prepared for Masterplan Limited

ENPACK (H.K.) LTD. DRILLHOLE RECORD

W. O. PW 7/2/28.110
HOLE NO. BH-QB
SHEET 1 of 5
DATE from 3/9/91 to 12/9/91

PROJECT CESD CONTRACT NO. GC/89/06
INSTALLATION OF BENCH MARK

METHOD Rotary	CO-ORDINATES	ROCK COREBIT T2
MACHINE & No. DR-39	E 840011.15 N 816893.14	HOLE DIA. P, H
FLUSHING MEDIUM Water	ORIENTATION VERTICAL	GROUND-LEVEL +3.88 mPD

Drilling Progress	Casing depth/size	Water level/ time/ date	Water Recovery %	Total core Recovery %	Solid core Recovery %	R. Q. D.	Fracture Index	Tests	Samples	Reduced Level	Depth (m)	Legend	Grade	Zone	Description
3/9	P		90						Inspection pit	+3.73	0.15				Surface concrete
				58					T2		1.00				
								(6,3 2,4,2,2) N=10	1		1.75				
3/9											2.00				
4/9		1.90m at 8:00		93					T2		2.35				
				83							3.00				
											3.10				
											3.90				GRAVELS and BOULDERS occasional with cobbles and with 6 layer of very clayey SILT, sandy gravelly SILT, at depth 0.00-1.75m, 2.30-3.10m, 3.90-4.32m, 4.62-5.80m, 6.20-7.76m respectively, plastic film and woods are visible, boulder of angular slightly decomposed granite and volcanic rock, size up to 330mm, cobbles of angular moderately to slightly decomposed granite or concrete block, from 70mm to 130mm typical 70-90mm, gravels of angular and subround moderately decompased granite, volcanic tuff, and concrete blocks size from 5mm-60mm typical 30-50mm
											4.62				
				75				(4,4 4,3,4,6) N=17	2		5.00				
											5.80				
											6.00				
											6.20				
				75							7.00				
								(4,4 7,12,10,4) N=33	3		7.76				(FILL)
											8.00				
											8.36				
											9.00				
								(4,2 1,2,2,2) N=7	4						
4/9	P		90							-6.12	10.00				

- Small disturbed sample
- Large disturbed sample
- SPT liner sample
- U76 undisturbed sample
- U100 undisturbed sample
- Mazier sample
- P/S Piston sample
- Water sample
- Water level
- Standard penetration test
- Permeability test
- Piezometer tip
- In-situ vane shear test

LOGGED F.S. Woo
DATE 12/9/91
CHECKED
DATE 12/9/91

REMARKS

ENPACK (H.K.) LTD. DRILLHOLE RECORD

W. O. PW 7/2/28.110
HOLE NO. BH-QB
SHEET 2 of 5
DATE from 3/9/91 to 12/9/91

PROJECT CESD CONTRACT NO. GC/89/06
INSTALLATION OF BENCH MARK

METHOD Rotary	CO-ORDINATES	ROCK COREBIT T2
MACHINE & No. DR-39	E 840011.15 N 816893.14	HOLE DIA. P, H
FLUSHING MEDIUM Water	ORIENTATION VERTICAL	GROUND-LEVEL +3.88 mPD

Drilling Progress	Casing depth/size	Water level/ time/ date	Water Recovery %	Total core Recovery %	Solid core Recovery %	R. Q. D.	Fracture Index	Tests	Samples	Reduced Level	Depth (m)	Legend	Grade	Zone	Description
4/9	P		90					(11,17 19,11,10,7) N=47	5		11.00				
											12.00				Detail on sheet 1 of 5
4/9		0.30m at 18:00									13.00				
5/9		1.83m at 8:00						(6,13 11,9,14,12) N=46	6		13.50				
				80							14.00				
				90							14.50				
				78							15.00				GRAVELS & COBBLES with some steel and fiber bag, gravels of concrete, bricks and angular moderately to slightly decomposed granite size from 4mm to 50mm typical 10-30mm, cobbles of concrete, brick and angular slightly decomposed granite size from 80mm-160mm typical 80-90mm
				67							15.83 16.00				(FILL)
5/9		1.40m at 18:00									16.80				
6/9		1.63m at 8:00		88							17.00				
				100							17.25				GRAVELS & COBBLES angular moderately to slightly decomposed granite with some volcanic rock and bricks, gravels size from 5mm to 60mm typical 20-40mm cobbles size from 70mm to 80mm
				80							17.85 18.00				(FILL)
		2.30m at 18:00		100							18.35				
6/9										-14.92	18.80				
9/9		1.72m at 8:00						(10,5 4,5,5,8) N=22	7		19.00				Soft, wet, dark yellow and yellowish grey slightly gravelly, silty CLAY with a little shell fragment (MARINE MUD)
9/9	P		90							-16.12	20.00				

- Small disturbed sample
- Large disturbed sample
- SPT liner sample
- U78 undisturbed sample
- U100 undisturbed sample
- Mazier sample
- P/S Piston sample
- Water sample
- Water level
- Standard penetration test
- Permeability test
- Piezometer tip
- In-situ vane shear test

LOGGED F.S. Woo
DATE 12/9/91
CHECKED W
DATE 12/9/91

REMARKS

ENPACK (H.K.) LTD. DRILLHOLE RECORD

W. O. PW 7/2/28.110
HOLE NO. BH–QB
SHEET 3 of 5
DATE from 3/9/91 to 12/9/91

PROJECT CESD CONTRACT NO. GC/89/06
INSTALLATION OF BENCH MARK

METHOD Rotary	CO–ORDINATES	ROCK COREBIT T2
MACHINE & No. DR–39	E 840011.15 N 816893.14	HOLE DIA. P, H
FLUSHING MEDIUM Water	ORIENTATION VERTICAL	GROUND–LEVEL +3.88 mPD

Drilling Progress	Casing depth/size	Water level/ time/ date	Water Recovery %	Total core Recovery %	Solid core Recovery %	R. Q. D.	Fracture Index	Tests	Samples	Reduced Level	Depth (m)	Legend	Grade	Zone	Description
9/9	P		9D					(5,5 5,4,5,8) N=22	8		21.00				Detail on sheet 2 of 5
	23.00 P H	0.30m at 18:00									22.00				Medium dense, wet, yellow and white, coarse SAND with some shell fragment (MARINE SAND)
9/9								(4,5 8,5,6,7) N=24	9		23.00				
10/9		1.88m at 8:00									24.00				
								(9,7 6,5,6,10) N=27	10		25.00				
											26.00				Medium dense, wet, yellow, fine to medium SAND with some shell fragment (MARINE SAND)
								(5,8 10,9,10,11) N=40	11		27.00				
											28.00				
								(5,8 10,10,11,10) N=41	12		29.00				Dense, wet, yellow, coarse SAND with some shell fragment (MARINE SAND)
10/9	H		9D							26.12	30.00				

- Small disturbed sample
- Large disturbed sample
- SPT liner sample
- U76 undisturbed sample
- U100 undisturbed sample
- Mazier sample
- P/S Piston sample
- Water sample
- Water level
- Standard penetration test
- Permeability test
- Piezometer tip
- In–situ vane shear test

LOGGED F.S.Woo
DATE 12/9/91
CHECKED
DATE 12/9/91

REMARKS

ENPACK (H.K.) LTD. DRILLHOLE RECORD

W. O. PW 7/2/28.110
HOLE NO. BH–QB
SHEET 4 of 5
DATE from 3/9/91 to 12/9/91

PROJECT CESD CONTRACT NO. GC/89/06
INSTALLATION OF BENCH MARK

METHOD Rotary	CO–ORDINATES	ROCK COREBIT T2
MACHINE & No. DR–39	E 840011.15 N 816893.14	HOLE DIA. P, H
FLUSHING MEDIUM Water	ORIENTATION VERTICAL	GROUND–LEVEL +3.88 mPD

Drilling Progress	Casing depth/size	Water level/time/date	Water Recovery %	Total core Recovery %	Solid core Recovery %	R. Q. D.	Fracture Index	Tests	Samples	Reduced Level	Depth (m)	Legend	Grade	Zone	Description
10/9	H		90												Detail on sheet 3 of 5
								(5,6 10,14,17,26) N=67	13	-27.12	31.00				
								(7,14 15,20,22,27) N=84	14		32.00				
											33.00				
											34.00				
								(9,13 14,16,24,31) N=85	15		35.00		V		Extremely weak, moist, yellow , mottled with white and black, completely decomposed medium to coarse grained GRANITE (silty SAND)
											36.00				
								(8,12 12,16,24,32) N=84	16		37.00				
											38.00				
								(8,11 23,36,54,83) N=206	17		39.00				
10/9	H	0.40m at 18:00	90							-36.12	40.00				

Small disturbed sample
Large disturbed sample
SPT liner sample
U76 undisturbed sample
U100 undisturbed sample
Mazier sample
P/S Piston sample
Water sample
Water level
Standard penetration test
Permeability test
Piezometer tip
In–situ vane shear test

LOGGED F.S.W/60
DATE 12/9/91
CHECKED
DATE 12/9/91

REMARKS

ENPACK (H.K.) LTD. DRILLHOLE RECORD

W. O. PW 7/2/28.110
HOLE NO. BH–QB
SHEET 5 of 5
DATE from 3/9/91 to 12/9/91

PROJECT CESD CONTRACT NO. GC/89/06
INSTALLATION OF BENCH MARK

METHOD Rotary	CO–ORDINATES	ROCK COREBIT T2
MACHINE & No. DR–39	E 840011.15 N 816893.14	HOLE DIA. P, H
FLUSHING MEDIUM Water	ORIENTATION VERTICAL	GROUND–LEVEL +3.88 mPD

Drilling Progress	Casing depth/size	Water level/ time/ date	Water Recovery %	Total core Recovery %	Solid core Recovery %	R. Q. D.	Fracture Index	Tests	Samples	Reduced Level	Depth (m)	Legend	Grade	Zone	Description
11/9	H	1.96m at 8:00	90								41.00				Detail on sheet 4 of 5
	41.20 H							200 blo 0.04 m	18	-37.12	41.14		IV/III		Moderately weak to moderately strong, pinkish brown highly to moderately decomposed coarse grained GRANITE, highly fractured
				95	78	52	6				41.72				
											42.00		III		Moderately strong, light pink, mottled with black, moderately decomposed coarse grained GRANITE, with rough stepped closely–to medium spaced joints dipping 10–15, 25–30, 70 iron stained along joints
		3.60m at 18:00		100	100	81	5				43.00				
11/9											43.20				
12/9		2.08m at 8:00		94	94	87	2		T2		44.00				
											44.69				Moderately strong/strong light pink, mottled with black or dark green, moderately/slightly decomposed coarse grained GRANITE, with rough stepped medium spaced joints dipping 15, 45, 75 partially stained along the joints
				100	100	96	2				45.00		III/ II		
											46.00				
											46.20				
				100	100	83	3				47.00				
12/9			90							-43.52	47.40				End of investigation hole at 47.40m
											48.00				
											49.00				
											50.00				

- Small disturbed sample
- Large disturbed sample
- SPT liner sample
- U76 undisturbed sample
- U100 undisturbed sample
- Mazier sample
- P/S Piston sample
- Water sample
- Water level
- Standard penetration test
- Permeability test
- Piezometer tip
- In–situ vane shear test

LOGGED F.S.Wo
DATE 12/9/91
CHECKED
DATE 12/9/91

REMARKS

DRILLHOLE RECORD

lam	CONTRACT NO. 660 LG21748/19	HOLE NO. 660/TKE/D239
		SHEET 1 of 5
PROJECT	Ancillary Buildings (Quarry Bay Infeed Substation)	
METHOD	Rotary	CO-ORDINATES E 840016.49 N 816871.81
MACHINE & No.	Longyear L38, D5	WORKS ORDER No. 19 Ph.IVB
FLUSHING MEDIUM	Water	DATE from 23/03/98 to 31/03/98
ORIENTATION	Vertical	GROUND-LEVEL 3.95 mPD

Drilling Progress	Casing depth/size	Water level at end/start of shift	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index	Tests	Samples	Reduced Level	Depth (m)	Legend	Grade	Description
23/03/98	Sw							A, B, C, D, E (INSPECTION PIT)		0.50, 1.00, 1.50, 2.00, 2.50			Brown becoming grey (2.00m) slightly clayey silty fine to coarse SAND with some angular medium to coarse gravel sized moderately strong and strong rock fragments (FILL)
									1.35	2.60			
			29					T2.101					Grey and pinkish grey, angular fine to coarse GRAVEL and COBBLE sized moderately strong and strong rock, concrete, wood, iron and plastic fragments (FILL)
			39				△	T2.101		3.80			
	Pw		50					T2.101		4.70			
			58					T2.101		5.40			
			44					T2.101		6.00			
			45					T2.101		6.80			
		2.00m						T2.101		7.80			
24/03/98		2.20m	40					T2.101		8.30			
			44					T2.101					
									-5.16	9.10			
			100				68blS (2,3, 3,7,	1, 2		9.30, 9.80			Medium dense, silty fine to medium sand with some fine to medium gravel (FILL)

SMALL DISTURBED SAMPLE
PISTON SAMPLE
U76 UNDISTURBED SAMPLE
U100 UNDISTUBED SAMPLE
MAZIER SAMPLE
SPT LINER SAMPLE
WATER SAMPLE

STANDARD PENETRATION TEST
IN-SITU VANE SHEAR TEST
PERMEABILITY TEST
IMPRESSION PACKER TEST
PACKER TEST
PIEZOMETER TIP
OBSERVATION WELL TIP

LOGGED K.Y.Kwok
DATE 01/04/98
CHECKED Ken Ma
DATE 14/04/98

REMARKS
1. Inspection pit excavated to 2.50m depth.
2. Constant head permeability tests carried out at 29.00m-30.00m 34.50m-35.50m depths.
3. Water sample taken at 4.00m depth.
4. Core loss in core run from 35.65m-36.70m assumed to be grade V/IV granite.

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DRILLHOLE RECORD

lam	CONTRACT NO. 660 LG21748/19	HOLE NO. 660/TKE/D239
		SHEET 2 of 5
PROJECT	Ancillary Buildings (Quarry Bay Infeed Substation)	
METHOD	Rotary	CO-ORDINATES E 840016.49 N 816871.81
MACHINE & No.	Longyear L38, D5	WORKS ORDER No. 19 Ph.IVB
FLUSHING MEDIUM	Water	DATE from 23/03/98 to 31/03/98
ORIENTATION	Vertical	GROUND-LEVEL 3.95 mPD

Drilling Progress	Casing depth/size	Water level at end/start of shift	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index	Tests	Samples	Reduced Level	Depth (m)	Legend	Grade	Description
							7,10) N=27	3	-6.36	10.25 10.30			As sheet 1 of 5
11			50					T2.101		10.80			Grey and pinkish grey, angular fine to coarse GRAVEL and COBBLE sized moderately strong to strong rock, concrete brick fragments (FILL)
			56					T2.101					
12			43					T2.101		11.60			
			58					T2.101		12.30			
13			50					T2.101		12.90			
			57					T2.101		13.70			
14								T2.101	-10.46	14.40			
			100				101bls	4		14.60			Dense, grey, gravelly fine to coarse SAND with some shell fragments and fine quartz gravel (FILL)
15		2.00m						5		15.10			
		2.50m					(3,8, 10,12, 8,8) N=38	6		15.55			
16 25/03/98								7					
			100				32bls	8	-12.66	16.60			Soft to firm, dark grey, sandy silty CLAY with some shell fragments (MARINE DEPOSIT)
17			100					9	-13.16	17.10			Soft to firm, yellow, sandy silty CLAY (ALLUVIUM)
								10					
18			100				26bls	11	-14.16	18.10			Medium dense, light brown, silty clayey fine to coarse SAND (ALLUVIUM)
								12					
19			100					13		18.55			
								14	-15.16	19.10			Firm to stiff, greenish grey and light brown, sandy silty CLAY (ALLUVIUM)
20													

SMALL DISTURBED SAMPLE
PISTON SAMPLE
U76 UNDISTURBED SAMPLE
U100 UNDISTUBED SAMPLE
MAZIER SAMPLE
SPT LINER SAMPLE
WATER SAMPLE
STANDARD PENETRATION TEST
IN-SITU VANE SHEAR TEST
PERMEABILITY TEST
IMPRESSION PACKER TEST
PACKER TEST
PIEZOMETER TIP
OBSERVATION WELL TIP

LOGGED K.Y.Kwok
DATE 01/04/98
CHECKED Ken Ma
DATE 14/04/98

REMARKS

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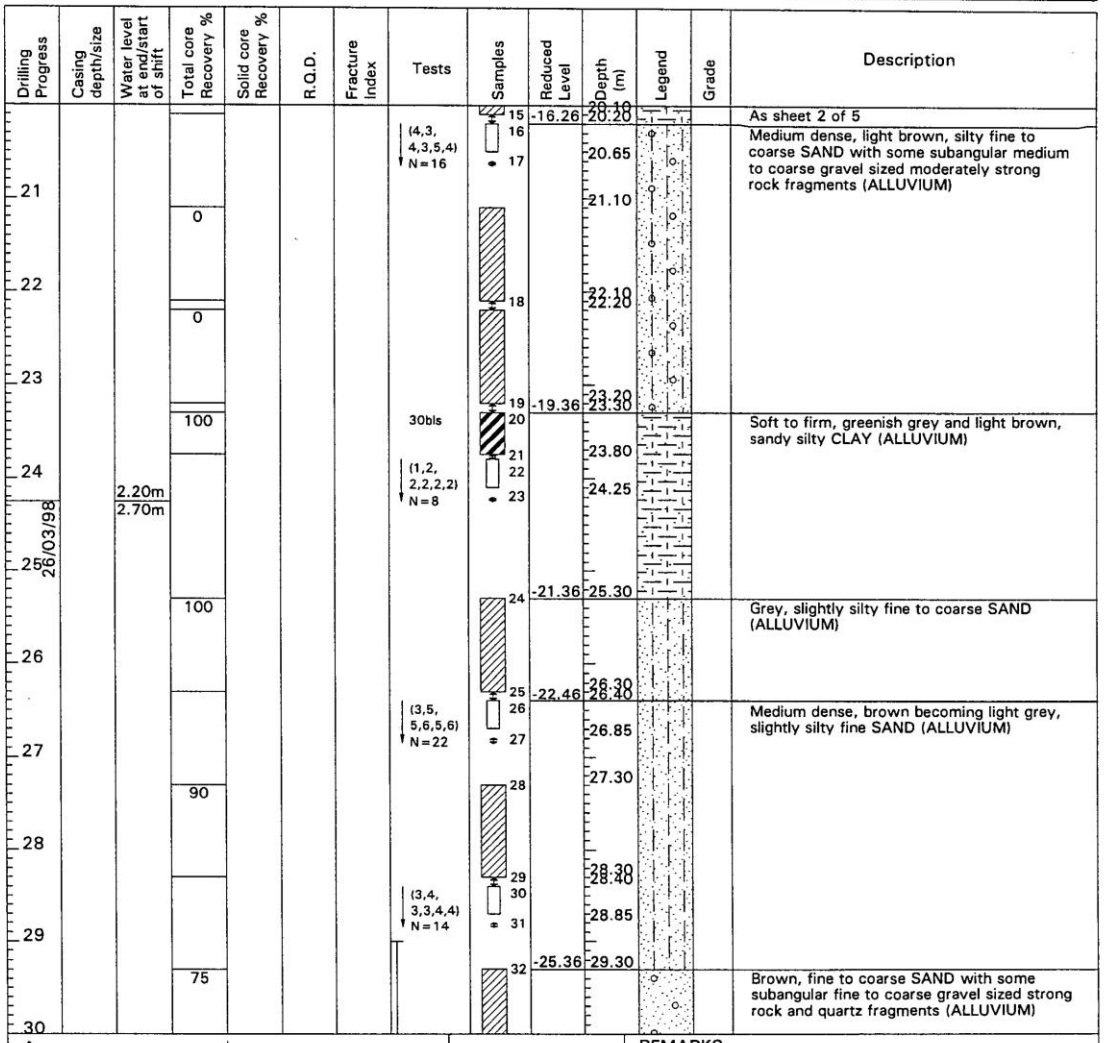
DRILLHOLE RECORD

lam	CONTRACT NO. 660 LG21748/19	HOLE NO. 660/TKE/D239	SHEET 3 of 5
PROJECT	Ancillary Buildings (Quarry Bay Infeed Substation)		
METHOD	Rotary	CO-ORDINATES E 840016.49 N 816871.81	WORKS ORDER No. 19 Ph.IVB
MACHINE & No.	Longyear L38, D5		DATE from 23/03/98 to 31/03/98
FLUSHING MEDIUM	Water	ORIENTATION Vertical	GROUND-LEVEL 3.95 mPD



SMALL DISTURBED SAMPLE
PISTON SAMPLE
U76 UNDISTURBED SAMPLE
U100 UNDISTUBED SAMPLE
MAZIER SAMPLE
SPT LINER SAMPLE
WATER SAMPLE
STANDARD PENETRATION TEST
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PERMEABILITY TEST
IMPRESSION PACKER TEST
PACKER TEST
PIEZOMETER TIP
OBSERVATION WELL TIP

LOGGED K.Y.Kwok
DATE 01/04/98
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DATE 14/04/98

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DRILLHOLE RECORD

Lam	CONTRACT NO. 660 LG21748/19	HOLE NO. 660/TKE/D239
		SHEET 4 of 5
PROJECT	Ancillary Buildings (Quarry Bay Infeed Substation)	
METHOD	Rotary	CO-ORDINATES E 840016.49 N 816871.81
MACHINE & No.	Longyear L38, D5	WORKS ORDER No. 19 Ph.IVB
FLUSHING MEDIUM	Water	DATE from 23/03/98 to 31/03/98
ORIENTATION	Vertical	GROUND-LEVEL 3.95 mPD

Drilling Progress	Casing depth/size	Water level at end/start of shift	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index	Tests	Samples	Reduced Level	Depth (m)	Legend	Grade	Description
										30.30			As sheet 3 of 5
		2.50m						33		30.40			
			0					34	-26.61	30.55			
27/03/98	Hw	2.80m					100bls (10,18, 21,29, 51,72) N=173	35		31.00		V	Extremely weak, brownish grey, completely decomposed medium to coarse grained GRANITE (Very dense, silty fine to coarse SAND with some limonite stained relict joints and fine quartz gravel)
31								36					
32			100					37		32.40			
33								38		33.40			
								39		33.50			
34							(6,9, 11,13, 16,20) N=60	40		33.95			
			90					41		34.40			
35													
		2.80m						42		35.40			
							48/100mm			35.50			
								43	-31.71	35.65			
28/03/98		3.00m	87	52	17	>20						III	Weak to moderately weak, brownish grey, highly to moderately decomposed medium to coarse grained GRANITE with closely spaced rough planar limonite and manganese oxide stained joints, dipping at 50°-60°
36						NR			-32.16	36.10		IV/III	
						15.2		T2.101	-32.30	36.24		V/IV	
						0			-32.63	36.57		IV/III	
37			100	100	95			T2.101		36.70		II	35.65-35.85m: moderately weak and moderately decomposed
						>20							36.10-36.24m: inferred completely to highly decomposed granite
			100	100	100	0		T2.101		37.30			Strong, pinkish grey spotted black, slightly decomposed medium to coarse grained GRANITE with closely and widely spaced rough planar limonite stained and clean joints, dipping at 10°-20° and 40°-50°
38						4.8							37.90-38.50m: fine grained GRANITE
		3.00m								38.20			
		3.20m	100	100	100								
30/03/98						0		T2.101					
39													
						9.1				39.65		III/II	39.42-39.50m: moderately strong to strong and moderately to slightly decomposed
			100	100	100	0		T2.101				II	39.63-39.73m: moderately strong to strong
40												III/II	

SMALL DISTURBED SAMPLE
PISTON SAMPLE
U76 UNDISTURBED SAMPLE
U100 UNDISTUBED SAMPLE
MAZIER SAMPLE
SPT LINER SAMPLE
WATER SAMPLE
STANDARD PENETRATION TEST
IN-SITU VANE SHEAR TEST
PERMEABILITY TEST
IMPRESSION PACKER TEST
PACKER TEST
PIEZOMETER TIP
OBSERVATION WELL TIP

LOGGED K.Y.Kwok
DATE 01/04/98
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DRILLHOLE RECORD

Lam	CONTRACT NO. 660 LG21748/19	HOLE NO. 660/TKE/D239
		SHEET 5 of 5
PROJECT	Ancillary Buildings (Quarry Bay Infeed Substation)	
METHOD	Rotary	CO-ORDINATES E 840016.49 N 816871.81
MACHINE & No.	Longyear L38, D5	WORKS ORDER No. 19 Ph.IVB
FLUSHING MEDIUM	Water	DATE from 23/03/98 to 31/03/98
ORIENTATION	Vertical	GROUND-LEVEL 3.95 mPD

Drilling Progress	Casing depth/size	Water level at end/start of shift	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index	Tests	Samples	Reduced Level	Depth (m)	Legend	Grade	Description
41								T2.101				II	and moderately to slightly decomposed
			100	95	95	13.6				41.15		III/II	41.18-41.30m: moderately strong to strong and moderately to slightly decomposed
42						0		T2.101	-38.22	42.16		II	End of investigation hole at 42.16m
43													
44													
45													
46													
47													
48													
49													
50													

SMALL DISTURBED SAMPLE	STANDARD PENETRATION TEST
PISTON SAMPLE	IN-SITU VANE SHEAR TEST
U76 UNDISTURBED SAMPLE	PERMEABILITY TEST
U100 UNDISTUBED SAMPLE	IMPRESSION PACKER TEST
MAZIER SAMPLE	PACKER TEST
SPT LINER SAMPLE	PIEZOMETER TIP
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LOGGED K.Y.Kwok
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DRILLHOLE RECORD

lam	CONTRACT NO. 660 LG21748/19	HOLE NO. 660/TKE/D240
		SHEET 1 of 5
PROJECT	Ancillary Buildings (Quarry Bay Infeed Substation)	
METHOD	Rotary	CO-ORDINATES E 840029.03 N 816853.78
MACHINE & No.	Longyear L38, D5	WORKS ORDER No. 19 Ph.IVB
FLUSHING MEDIUM	Water	ORIENTATION Vertical
		DATE from 13/03/98 to 20/03/98
		GROUND-LEVEL 4.27 mPD

Drilling Progress	Casing depth/size	Water level at end/start of shift	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index	Tests	Samples	Reduced Level	Depth (m)	Legend	Grade	Description
13/03/98	Sw							A		0.00			Medium dense, light brown and brown, silty fine to coarse SAND with some angular fine to coarse gravel sized moderately strong and strong rock fragments (FILL)
1								B		0.50			
								C		1.00			
								Inspection pit D		1.50			
2								E		2.00			
								F		2.50			
3			100				55bls	1		3.00			
							(2,2, 5,4,7,6) N=22	2 3 4		3.50			
4									0.07	3.95			
			47					T2.101		4.20			Grey, angular coarse GRAVEL sized strong rock and concrete brick and steel fragments (FILL)
5			36					T2.101		4.80			
6			44					T2.101		5.90			
									-2.54	6.80			
7			89				30bls	5		7.00			Medium dense, light brown, silty fine to coarse SAND with some angular medium to coarse gravel sized strong rock fragments (FILL)
							(1,2, 2,4,5,4) N=15	6 7		7.50			
8	Pw							8		7.95			
9			100				66bls	9		9.00			
							(1,1, 5,8,5,1)	10		9.50			
10								11		9.95			

SMALL DISTURBED SAMPLE
PISTON SAMPLE
U76 UNDISTURBED SAMPLE
U100 UNDISTUBED SAMPLE
MAZIER SAMPLE
SPT LINER SAMPLE
WATER SAMPLE

STANDARD PENETRATION TEST
IN-SITU VANE SHEAR TEST
PERMEABILITY TEST
IMPRESSION PACKER TEST
PACKER TEST
PIEZOMETER TIP
OBSERVATION WELL TIP

LOGGED K.Y.Kwok
DATE 01/04/98
CHECKED Ken Ma
DATE 02/04/98

REMARKS
1. Inspection pit excavated to 3.00m depth.
2. Constant head permeability test carried out at 9.00m-10.00m, 13.50m-14.50m, 21.00m-22.00m and 34.50m-35.50m depths.
3. Standpipes installed to 10.00m depths.

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DRILLHOLE RECORD

CONTRACT NO. 660 LG21748/19	HOLE NO. 660/TKE/D240
	SHEET 2 of 5
PROJECT Ancillary Buildings (Quarry Bay Infeed Substation)	
METHOD Rotary	CO-ORDINATES E 840029.03 N 816853.78
	WORKS ORDER No. 19 Ph.IVB
MACHINE & No. Longyear L38, D5	DATE from 13/03/98 to 20/03/98
FLUSHING MEDIUM Water	ORIENTATION Vertical
	GROUND-LEVEL 4.27 mPD

Drilling Progress	Casing depth/size	Water level at end/start of shift	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index	Tests	Samples	Reduced Level	Depth (m)	Legend	Grade	Description
							N=19						As sheet 1 of 5
11			0				75bls	12		11.00			
			100				47bls	13		11.50			
12							(1,2, 3,3,5,5) N=16	14 15 16		12.00			
13			57						-8.84	13.10			Grey, angular medium to coarse GRAVEL occasionally COBBLE sized strong rock, concrete and wood fragments (FILL)
							T2.101		-9.54	13.80			
14		DRY								14.00			Medium dense, light brown and grey, clayey fine to coarse SAND (FILL)
14/03/98		2.50m	100				78bls	17					
15							(9,8, 5,3,3,9) N=20	18 19 20		14.50 14.95			
16									-11.74	16.00			
			0				69bls	21	-12.24	16.50			Grey, fine to coarse SAND with some subangular coarse gravel sized moderately strong rock fragments (FILL)
			100				(3,4, 5,5, 12,10) N=39 T=22kPa	22					Firm, grey, silty CLAY with a little shell fragments (MARINE DEPOSIT)
17		2.00m						23	-12.74	17.00			
16/03/98		2.70m	90					24					Firm to stiff, grey mottled pink and brown, slightly sandy silty CLAY (ALLUVIUM)
18							B>34kPa (2,3, 3,4,5,4) N=16	25 26 27		18.00 18.45			
19			100					28		19.00			
20										20.00			

SMALL DISTURBED SAMPLE
PISTON SAMPLE
U76 UNDISTURBED SAMPLE
U100 UNDISTUBED SAMPLE
MAZIER SAMPLE
SPT LINER SAMPLE
WATER SAMPLE

STANDARD PENETRATION TEST
IN-SITU VANE SHEAR TEST
PERMEABILITY TEST
IMPRESSION PACKER TEST
PACKER TEST
PIEZOMETER TIP
OBSERVATION WELL TIP

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DRILLHOLE RECORD

CONTRACT NO. 660 LG21748/19			HOLE NO. 660/TKE/D240
			SHEET 3 of 5
PROJECT	Ancillary Buildings (Quarry Bay Infeed Substation)		
METHOD	Rotary	CO-ORDINATES E 840029.03 N 816853.78	WORKS ORDER No. 19 Ph.IVB
MACHINE & No.	Longyear L38, D5		DATE from 13/03/98 to 20/03/98
FLUSHING MEDIUM	Water	ORIENTATION Vertical	GROUND-LEVEL 4.27 mPD

Drilling Progress	Casing depth/size	Water level at end/start of shift	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index	Tests	Samples	Reduced Level	Depth (m)	Legend	Grade	Description
							(2,2, 4,4,3,3) N=14	29 30 31		20.10			As sheet 2 of 5
21			100					32		20.55 21.00			
22		2.50m 3.70m					(2,2, 3,5,5,6) N=19	33 34 35		22.00 22.10 22.55			
17/03/98 23			100					36	-18.74	23.00			Medium dense, brownish grey, very silty clayey fine to coarse SAND (ALLUVIUM)
24							(2,3, 3,3,4,6) N=16	37 38 39		24.00 24.10 24.55			
25			100					40		25.00			
26							(3,3, 6,7, 13,19) N=45	41 42 43	-21.84	26.00 26.10			Dense, pinkish and brownish grey, slightly clayey silty fine to coarse SAND with some subangular fine to coarse gravel sized moderately strong and strong rock and quartz fragments (ALLUVIUM)
27			50					44		26.55 27.00			
28			85					45 46		28.00 28.10			
29								47	-24.94	29.10 29.20			
30							(4,4, 6,7, 9,14) N=36	48 49		29.65		V	Extremely weak, yellowish grey and yellowish brown, completely decomposed medium to coarse grained GRANITE (Dense to very dense, silty fine to coarse SAND

- SMALL DISTURBED SAMPLE
- PISTON SAMPLE
- U76 UNDISTURBED SAMPLE
- U100 UNDISTUBED SAMPLE
- MAZIER SAMPLE
- SPT LINER SAMPLE
- WATER SAMPLE
- STANDARD PENETRATION TEST
- IN-SITU VANE SHEAR TEST
- PERMEABILITY TEST
- IMPRESSION PACKER TEST
- PACKER TEST
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DRILLHOLE RECORD

CONTRACT NO. 660 LG21748/19	HOLE NO. 660/TKE/D240
	SHEET 4 of 5
PROJECT Ancillary Buildings (Quarry Bay Infeed Substation)	
METHOD Rotary	CO-ORDINATES E 840029.03 N 816853.78
MACHINE & No. Longyear L38, D5	WORKS ORDER No. 19 Ph.IVB
FLUSHING MEDIUM Water	DATE from 13/03/98 to 20/03/98
ORIENTATION Vertical	GROUND-LEVEL 4.27 mPD

Drilling Progress	Casing depth/size	Water level at end/start of shift	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index	Tests	Samples	Reduced Level	Depth (m)	Legend	Grade	Description
31		3.40m	100					50		30.10			with some fine quartz gravel)
		3.80m						51		31.10			
18/03/98							(5,6, 8,10, 12,12) N=42	52		31.20			
32								53		31.65			
			100					54		32.10			
33	Hw						(3,7, 8,10, 14,20) N=52	55		33.10			
								56		33.20			
								57		33.65			
34			100					58					34.10-35.20m: completely decomposed fine grained GRANITE
35							21, 59, 100 /50mm	59		35.10			
								60		35.20			
										35.40			
36			99	95	95	>20 0.4		T2.101	-31.64	35.90		III II	Strong, pinkish grey spotted black, slightly decomposed medium to coarse grained GRANITE with widely to very widely spaced rough planar limonite stained joints, dipping at 10°
		3.50m								36.50			35.90-39.93m: moderately strong and moderately decomposed
19/03/98		3.80m	100	100	100			T2.101					36.22-36.55m: fine grained GRANITE
37													37.60-37.70m: fine grained GRANITE
								T2.101		37.75			38.15-38.70m: moderately strong and moderately decomposed
38			86	79	78							III	38.70-38.78m: weak to moderately weak, highly to moderately decomposed and highly fractured
								T2.101	-34.52	38.78			38.78-38.98m: inferred completely to highly decomposed granite
39						NI NR 9.1			-34.72	38.98		IV/III V/IV	38.98-39.07m: moderately strong and moderately decomposed
								T2.101	-34.81	39.07		III	Strong, pinkish grey spotted black, slightly decomposed fine to medium grained GRANITE with widely and very widely occasionally closely spaced rough planar limonite stained chlorite and kaolin infilled
			100	100	100	0.3				39.20		III/II II	
40								T2.101					

SMALL DISTURBED SAMPLE
PISTON SAMPLE
U76 UNDISTURBED SAMPLE
U100 UNDISTUBED SAMPLE
MAZIER SAMPLE
SPT LINER SAMPLE
WATER SAMPLE

STANDARD PENETRATION TEST
IN-SITU VANE SHEAR TEST
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DRILLHOLE RECORD

lam	CONTRACT NO. 660 LG21748/19	HOLE NO. 660/TKE/D240
		SHEET 5 of 5
PROJECT	Ancillary Buildings (Quarry Bay Infeed Substation)	
METHOD	Rotary	CO-ORDINATES E 840029.03 N 816853.78
MACHINE & No.	Longyear L38, D5	WORKS ORDER No. 19 Ph.IVB
FLUSHING MEDIUM	Water	DATE from 13/03/98 to 20/03/98
ORIENTATION	Vertical	GROUND-LEVEL 4.27 mPD

Drilling Progress	Casing depth/size	Water level at end/start of shift	Total core Recovery %	Solid core Recovery %	R.Q.D.	Fracture Index	Tests	Samples	Reduced Level	Depth (m)	Legend	Grade	Description
41			100	100	100			T2.101					occasionally clean joints, dipping at 10° and 75°
			100	100	100			T2.101		41.01			39.07-39.45m: moderately strong to strong and moderately to slightly decomposed 41.00-40.10m: pegmatite 41.98-42.20m: moderately strong to strong and moderately to slightly decomposed
42		3.50m								41.98		III/II	41.70-41.80m: pegmatite
20/03/98		3.20m	100	100	100	→20 0		T2.101				II	
43			100	100	100			T2.101		42.96			43.32-43.64m: pegmatite
			100	100	100			T2.101		43.66			
44								T2.101					44.12-44.96m: medium to coarse grained GRANITE
45		21.00m							-40.70	44.96			End of investigation hole at 44.96m
46													
47													
48													
49													
50													

SMALL DISTURBED SAMPLE	STANDARD PENETRATION TEST
PISTON SAMPLE	IN-SITU VANE SHEAR TEST
U76 UNDISTURBED SAMPLE	PERMEABILITY TEST
U100 UNDISTUBED SAMPLE	IMPRESSION PACKER TEST
MAZIER SAMPLE	PACKER TEST
SPT LINER SAMPLE	PIEZOMETER TIP
WATER SAMPLE	OBSERVATION WELL TIP

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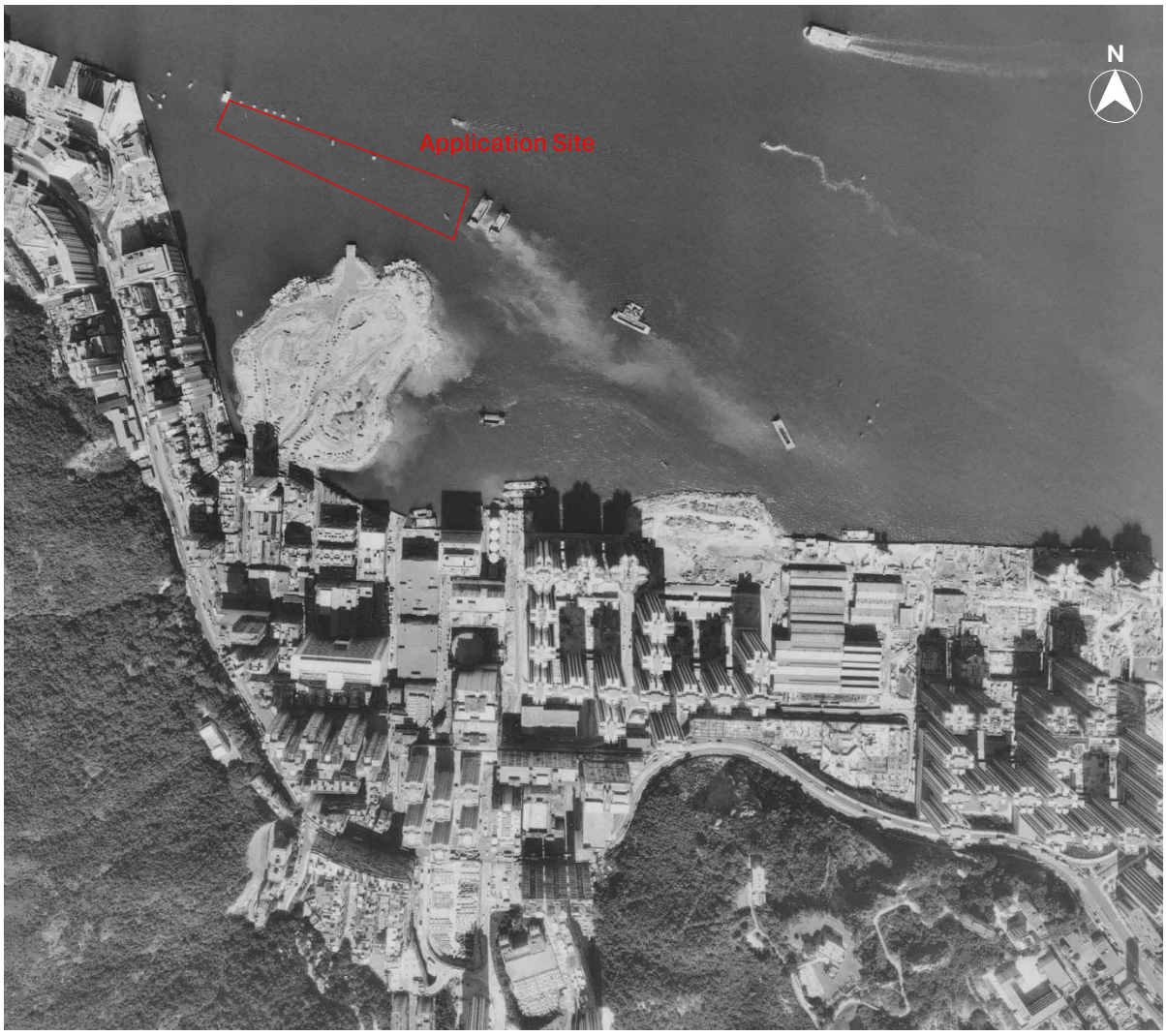
Appendix D Aerial Photos in Years 1980, 1985, 1990, 2000, 2010, 2017, and 2024

Figure D-1 Aerial Photo in Year 1980



In 1980, land reclamation was in progress and the Application Site was not yet formed.

Figure D-2 Aerial Photo in Year 1985

The Application Site was formed by reclamation between 1980 and 1985. Western part of the Application Site was observed vacant. The remaining part of the Application Site was used as an open carpark. No activities likely to result in land contamination were observed.

Figure D-3 Aerial Photo in Year 1990

In 1990, the majority of the Application Site was vacant. A small portion of the Application Site was used as an open carpark. No activities likely to result in land contamination were observed.

Figure D-4 Aerial Photo in Year 2000

In 2000, the majority of the Application Site was used as a barging point operation and the remaining part was vacant. No activities likely to result in land contamination were observed.

Figure D-5 Aerial Photo in Year 2010

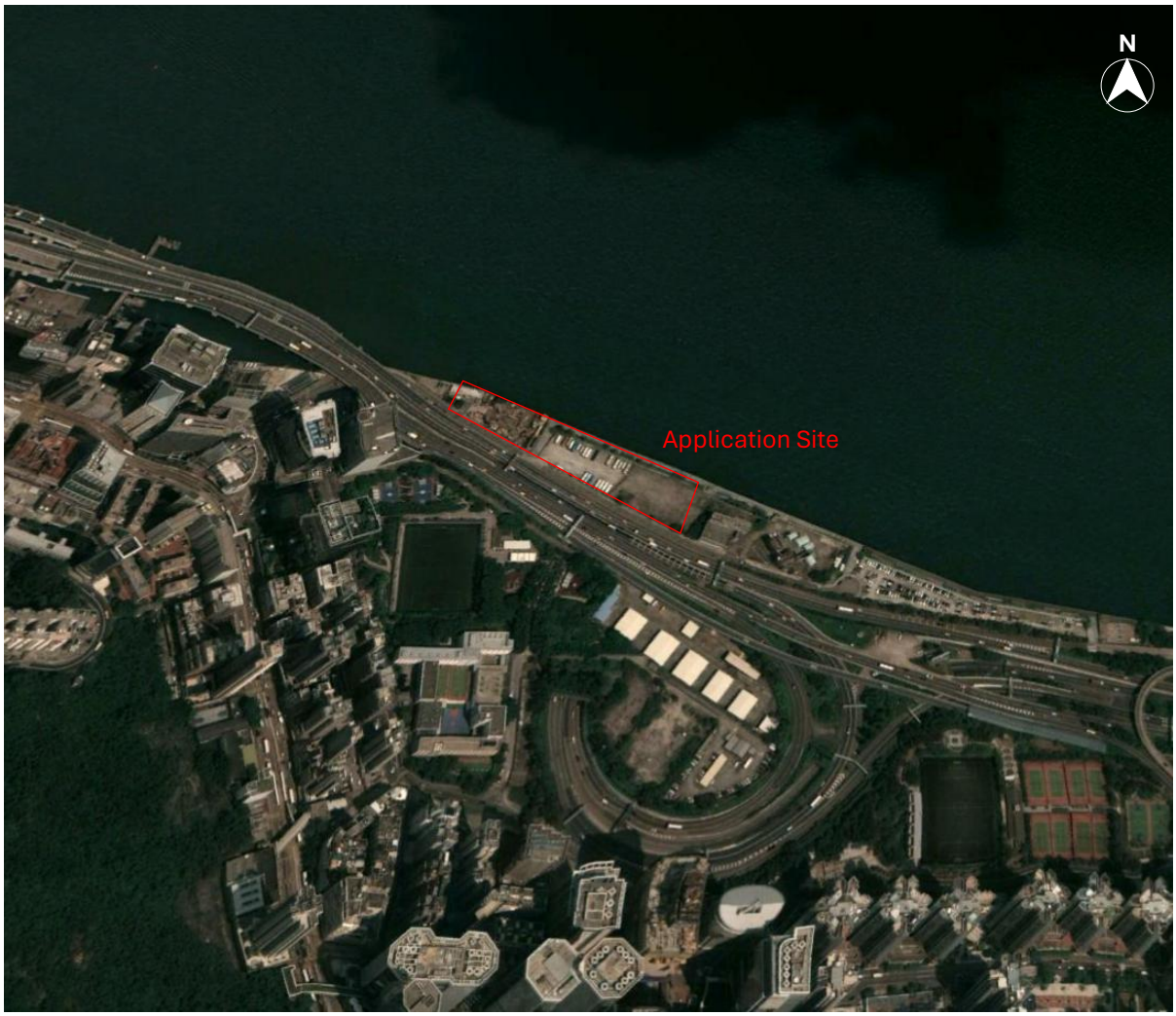
In 2010, majority of the Application Site was vacant but part of it was used as an open carpark. No activities likely to result in land contamination were observed.

Figure D-6 Aerial Photo in January 2017

Source: Google

In January 2017, majority of the Application Site was used as an open carpark with the western portion remained vacant. No activities likely to result in land contamination were observed.

Figure D-7 Aerial Photo in September 2017



Source: Google

In September 2017, piling works was commenced at the western portion of the Application Site. The southern potion was used as an open carpark. No activities likely to result in land contamination were observed.

Figure D-8 Aerial Photo in March 2024

Source: Land's Department Aerial Photo E221443C

In March 2024, the western portion of the site became vacant again, whilst the open car park remains in operation in the eastern and mid-portion of the Application. No activities likely to result in land contamination were observed.

Appendix E Site Walkover Checklist and Survey Photos in Oct 2024

Annex C1
Site Walkover Checklist

GENERAL SITE DETAILS

SITE OWNER/CLIENT MBK Partners (MBK)

PROPERTY ADDRESS Hoi Yu Street, Quarry Bay

PERSON CONDUCTING THE QUESTIONNAIRE

NAME Tonny KONG / Michael LING

POSITION Environmental Consultant

AUTHORIZED OWNER/CLIENT REPRESENTATIVE (IF APPLICABLE)

NAME Rock Li

POSITION Associate.

TELEPHONE 22960058

SITE ACTIVITIES

Briefly describe activities carried out on site, including types of products/chemicals/materials handled. **Obtain a flow schematic if possible.**

Number of employees: Full-time: /

Part-time: /

Temporary/Seasonal: /

Maximum no. of people on site at any time: /

Typical hours of operation: N/A

Number of shifts: NA

Days per week: NA

Weeks per year: NA

Scheduled plant shut-down: NA

Detail the main sources of energy at the site:

Gas	Yes/No
Electricity	Yes/No
Coal	Yes/No
Oil	Yes/No
Other	Yes/No

SITE DESCRIPTION

This section is intended to gather information on site setting and environmental receptors on, adjacent or close to the site.

What is the total site area: 8532 .

What area of the site is covered by buildings (%): NA.

Please list all current and previous owners/occupiers if possible.

Is a site plan available? If yes, please attach. Yes/No

Are there any other parties on site as tenants or sub-tenants? Yes/No

If yes, identify those parties:

Describe surrounding land use (residential, industrial, rural, etc.) and identify neighbouring facilities and types of industry.

North: Water front, facing Victoria Harbour

South: Commercial Buildy, football field, School (>500m) Surrondy by mixed residential + Commercial high rise buildy

East: Eastern Harbour Crossing Queen Bay Ventilation Buildy (QVB)

West: Commercial Buildy, nearest hotel is 400m away from the site., Surrondied by high rise buildy

Annex C1
Site Walkover Checklist

Describe the topography of the area (flat terrain, rolling hills, mountains, by a large body of water, vegetation, etc.).

The site is primarily flat, with overgrown vegetation including tall grass and shrubs.

State the size and location of the nearest residential communities.

Harbour Plaza North Point, located 350m from the site, (719rooms), Lai King Court, (450m)

Are there any sensitive habitats nearby, such as nature reserves, parks, wetlands or sites of special scientific interest?

There is no sensitive habitats nearby. The site is position in Quarry Bay, which surrouded by mix of commercial and residental development.

Questionnaire with Existing/Previous Site Owner or Occupier

		Yes/No	Notes
1.	What are the main activities/operations at the above address?	/	Undeveloped one side and Car Park other
2.	How long have you been occupying the site?	N	
3.	Were you the first occupant on site? (If yes, what was the usage of the site prior to occupancy.)	N	
4.	Prior to your occupancy, who occupied the site?	N	Undevelop. / Car Park
5.	What were the main activities/operations during their occupancy?	N	Car Park
6.	Have there been any major changes in operations carried out at the site in the last 10 years?	N	No change
7.	Have any polluting activities been carried out in the vicinity of the site in the past?	N	
8.	To the best of your knowledge, has the site ever been used as a petrol filling station/car service garage?	N	
9.	Are there any boreholes/wells or natural springs either on the site or in the surrounding area?	N	
10.	Do you have any registered hazardous installations as defined under relevant ordinances? (If yes, please provide details.)	N	
11.	Are any chemicals used in your daily operations? (If yes, please provide details.)	N	
	• Where do you store these chemicals?	/	
12.	Material inventory lists, including quantities and locations available? (If yes, how often are these inventories updated?)	N	
13.	Has the facility produced a separate hazardous substance inventory?	N	
14.	Have there ever been any incidents or accidents (e.g. spills, fires, injuries, etc.) involving any of these materials? (If yes, please provide details.)	N	

		Yes/No	Notes
15.	How are materials received (e.g. rail, truck, etc.) and stored on site (e.g. drums, tanks, carboys, bags, silos, cisterns, vaults and cylinders)?	N	
16.	Do you have any underground storage tanks? (If yes, please provide details.)	N	
	• How many underground storage tanks do you have on site?	/	
	• What are the tanks constructed of?	/	
	• What are the contents of these tanks?	/	
	• Are the pipelines above or below ground?	/	
	• If the pipelines are below ground, has any leak and integrity testing been performed?	/	
	• Have there been any spills associated with these tanks?	/	
17.	Are there any disused underground storage tanks?	N	
18.	Do you have regular check for any spillage and monitoring of chemicals handled? (If yes, please provide details.)	N	
19.	How are the wastes disposed of?	N	
20.	Have you ever received any notices of violation of environmental regulations or received public complaints? (If yes, please provide details.)	N	
21.	Have any spills occurred on site? (If yes, please provide details.)	N	
	• When did the spill occur?	/	
	• What were the substances spilled?	/	
	• What was the quantity of material spilled?	/	
	• Did you notify the relevant departments of the spill?	/	
	• What were the actions taken to clean up the spill?	/	
	• What were the areas affected?	/	
22.	Do you have any records of major renovation of your site or re-arrangement of underground utilities, pipe work/underground tanks (If yes, please provide details.)	N	
23.	Have disused underground tanks been removed or otherwise secured (e.g. concrete, sand, etc.)?	N	
24.	Are there any known contaminations on site? (If yes, please provide details.)	N	
25.	Has the site ever been remediated? (If yes, please provide details.)	N	

Annex C1
Site Walkover Checklist

Observations

		Yes/No	Notes
1.	Are chemical storage areas provided with secondary containment (i.e. bund walls and floors)?	✓	
2.	What are the conditions of the bund walls and floors?	NA	
3.	Are any surface water drains located near to drum storage and unloading areas?	✓	
4.	Are any solid or liquid waste (other than wastewater) generated at the site? (If yes, please provide details.)	✓	
5.	Is there a storage site for the wastes?	✓	
6.	Is there an on-site landfill?	✓	
7.	Were any stressed vegetation noted on site during the site reconnaissance? (If yes, please indicate location and approximate size.)	✓	
8.	Were any stained surfaces noted on-site during the site reconnaissance? (If yes, please provide details.)	✓	
9.	Are there any potential off-site sources of contamination?	✓	
10.	Does the site have any equipment which might contain polychlorinated biphenyls (PCBs)?	✓	
11.	Are there any sumps, effluent pits, interceptors or lagoons on site?	✓	
12.	Any noticeable odours during site walkover?	✓	
13.	Are any of the following chemicals used on site: fuels, lubricating oils, hydraulic fluids, cleaning solvents, used chemical solutions, acids, anti-corrosive paints, thinners, coal, ash, oily tanks and bilge sludge, metal wastes, wood preservatives and polyurethane foam?	✓	

Figure E-1 Site Survey Photos in Sep 2024

The north portion of the Application Site has not been developed and is currently not in use. No activities likely to result in land contamination were observed.

The middle portion of the Application Site is currently an open carpark. No activities likely to result in land contamination were observed.

The south-eastern portion of the Application Site is currently vacant land. No activities likely to result in land contamination were observed.

Appendix F Information from Governmental Department

Our Ref: 7076998/L31191/AG/ML/TK/rw

15 August 2024

Environmental Protection Department
Environmental Compliance Division
Regional Office (South)
Eastern
3rd Floor, Chinaachem Exchange Square
1 Hoi Wan Street, Quarry Bay
Hong Kong

By Email
(winniewyko@epd.gov.hk)

Attn: Ms. KO Wai Ying, Winnie

Dear Madam

Planning Application for the Proposed Waterfront Development Project, Hoi Yu Street, Quarry Bay
Request for Information – Environmental Assessment

Masterplan Limited has been appointed by the MBK Partners as the Lead Consultant and we have been appointed by Masterplan Limited as the Environmental Consultant to undertake an Environmental Assessment for the captioned project. A copy of appointment letters (ref: 17601076-0869/L31156/JY/AG/KL/ML/rw) dated 5 August 2024 regarding the appointment of the captioned project is enclosed for your information. The location of the subject site is shown in the figure enclosed with this letter.

We would be grateful if you could provide us with the following information in support of our land contamination study:

1. A list of record of Chemical Waste Producers Registration; and
2. Record of chemical spillage/leakage, etc. relating to the Site, if any.

Should you have any enquiries regarding the above, please do not hesitate to contact the undersigned on tel. [redacted] or to [redacted] or our Mr Tommy KONG to [redacted].

Yours faithfully

Alex GBAGUIDI
Director

Encl.

cc: MBK attn: Mr Jackie HO (By email: [redacted])
Masterplan attn: Miss Heather Yuen (By email: [redacted])

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North Point, Hong Kong
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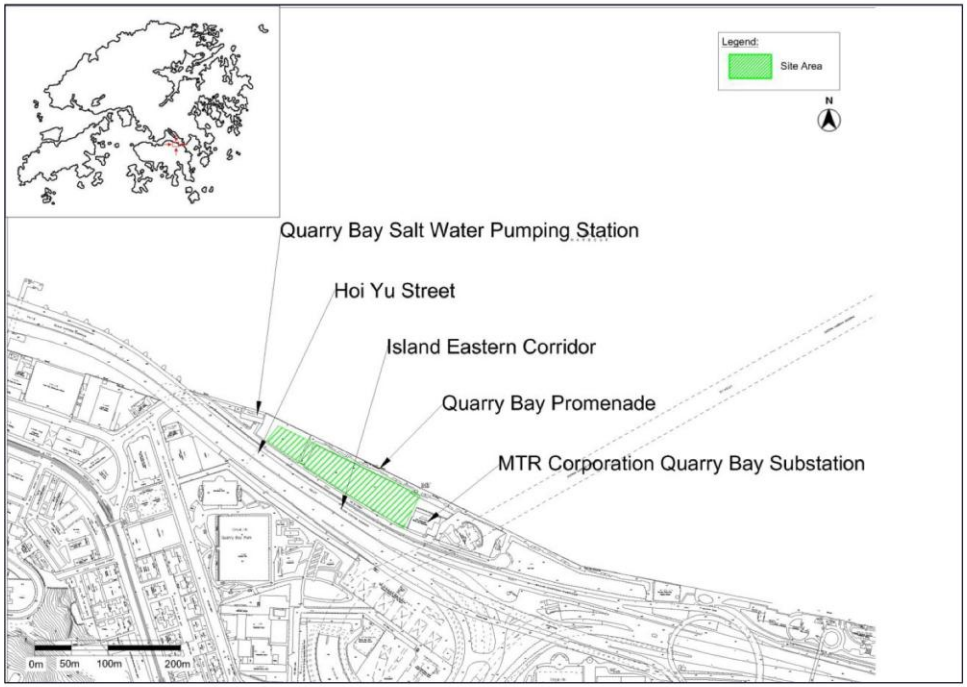
E hongkong@smec.com
W www.smec.com

Site Location Plan



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Appointment Letters

Our ref: 17601076-0869/L31156/JY/AG/KL/ML/rw

5 August 2024

Masterplan Limited
Room 3516B, 35/F., China Merchants Tower Shun Tak Centre
200 Connaught Road Centre, Central
Hong Kong

By Emai

Attention: Miss Heather YUEN

Dear Madam

SMEC - Technical and Fee Proposal
Invitation of Quotation Environmental Consultancy services –
Planning Application for the Proposed Waterfront Development Project, Hoi Yu Street, Quarry Bay

Thank you for your invitation. Further to your email on 15 January 2024 with the brief description of the Environmental Consultancy Services, we are pleased to provide this Proposal including our scope of services and the fees, as appended to this letter, for your consideration.

We look forward to receiving your formal instruction to proceed by providing a signed copy of this letter, a work order/purchase order, or a letter confirming your acceptance of the attached proposal.

Should you have any queries regarding this proposal, please do not hesitate to contact our Mr. Michael LING on [redacted] or to [redacted] or the undersigned on [redacted] or to [redacted]

Signed and agreed
for and on behalf of
SMEC Asia Limited

Alex GBAGUIDI
Director - Environment & Sustainability

Encl

Signed and agreed
for and on behalf of
Masterplan Limited

Name: IAN BROWNLEE
Position: MANAGING DIRECTOR

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Michelle CHEUNG

From: paddypyszeto@epd.gov.hk
Sent: Friday, 16 August 2024 11:03
To: Tommy KONG
Cc: [redacted]

Subject: Fw: 7076998 - Waterfront Development Project, Hoi Yu Street, Quarry Bay - Environmental Consultancy Services for EA - Request for Information

This message Is From an External Sender

Please do not click the links or attachments and do not respond to this message if you are unsure of its origin.

Dear Tommy,

Thank you for your email. Please see below our response to your request:

1. A list of records of Chemical Waste Producers Registration
3 Chemical Waste Producers Registration was recorded, one for the then temporary Quarry Bay Public Fill Barging Point registered on 12 August 2005, and two for the Construction Site of Proposed Industrial Development on I.L. 8590 RP & 8723 RP registered on 30 November 2011 and 28 June 2017 respectively.

2. Record of chemical spillage/leakage, etc. relating to the Site, if any
No such incident has been recorded.

Regards,
Paddy Szeto
E(RS)24, EPD
Tel.: 2516 1728

----- Forwarded by Paddy PY SZETO/EPD/HKSARG on 16/08/2024 10:35 -----

From: Tommy KONG <[redacted]>
To: "winniewyko@epd.gov.hk" <winniewyko@epd.gov.hk>
Cc: [redacted]
Date: 15/08/2024 14:49
Subject: 7076998 - Waterfront Development Project, Hoi Yu Street, Quarry Bay - Environmental Consultancy Services for EA - Request for Information

Dear Madam,

We have been appointed by Masterplan Limited as the Environmental Consultant to undertake an Environmental Assessment ("EA") for the Planning Application for the Proposed Waterfront Development Project, Hoi Yu Street, Quarry Bay.
The location of the Subject Site is shown in the figure enclosed with the attached letter.
Indicative location of the site: https://www.map.gov.hk/gm/s/hk80/816934/839859

We would be grateful if you could provide us the following information in support of our EA study:

1. A list of records of Chemical Waste Producers Registration; and
2. Record of chemical spillage/leakage, etc. relating to the Site, if any.

Should you have any enquiries regarding the above, please contact the undersigned on tel. [redacted].

Thank you.

Regards,
Tommy Kong
Assistant Environmental Consultant, Environmental & Sustainability, I+E
[redacted]
41/F, AIA Tower, 183 Electric Road, North Point, Hong Kong

[attachment "240815_EPD_LCA CWP Info Request_L31191.pdf" deleted by Paddy PY SZETO/EPD/HKSARG]

Our Ref: 7076998/L31193/AG/ML/TK/rw

15 August 2024

Fire Service Department
Corporate Strategy Command
Corporate Services Division
9/F, Fire Services Headquarters Building
1 Hong Chong Road, Tsim Sha Tsui East
Kowloon, Hong Kong

By Email
(hkfsdenq@hkfsd.gov.hk)

Attn: Mr. CHAN Wai Ping

Dear Sir

Planning Application for the Proposed Waterfront Development Project, Hoi Yu Street, Quarry Bay
Request for Information – Environmental Assessment

Masterplan Limited has been appointed by the MBK Partners as the Lead Consultant and we have been appointed by Masterplan Limited as the Environmental Consultant to undertake an Environmental Assessment for the captioned project. A copy of appointment letters (ref: 17601076-0869/L31156/JY/AG/KL/ML/rw) dated 5 August 2024 regarding the appointment of the captioned project is enclosed for your information. The location of the subject site is shown in the figure enclosed with this letter.

We would be grateful if you could provide us with the following information in support of our land contamination study:

1. A list of past and current records of dangerous goods license;
2. Information related to the use and/ or storage of dangerous goods; and
3. Record of reported chemical spillage/ leakage of dangerous goods, etc. relating to the Site, if any.

Should you have any enquiries regarding the above, please do not hesitate to contact the undersigned on tel. [redacted] or to [redacted] or our Tommy KONG to [redacted]

Yours faithfully

Alex GBAGUIDI
Director

Encl.

cc: MBK attn: Mr Jackie HO (By email: [redacted]
Masterplan attn: Miss Heather Yuen (By email:

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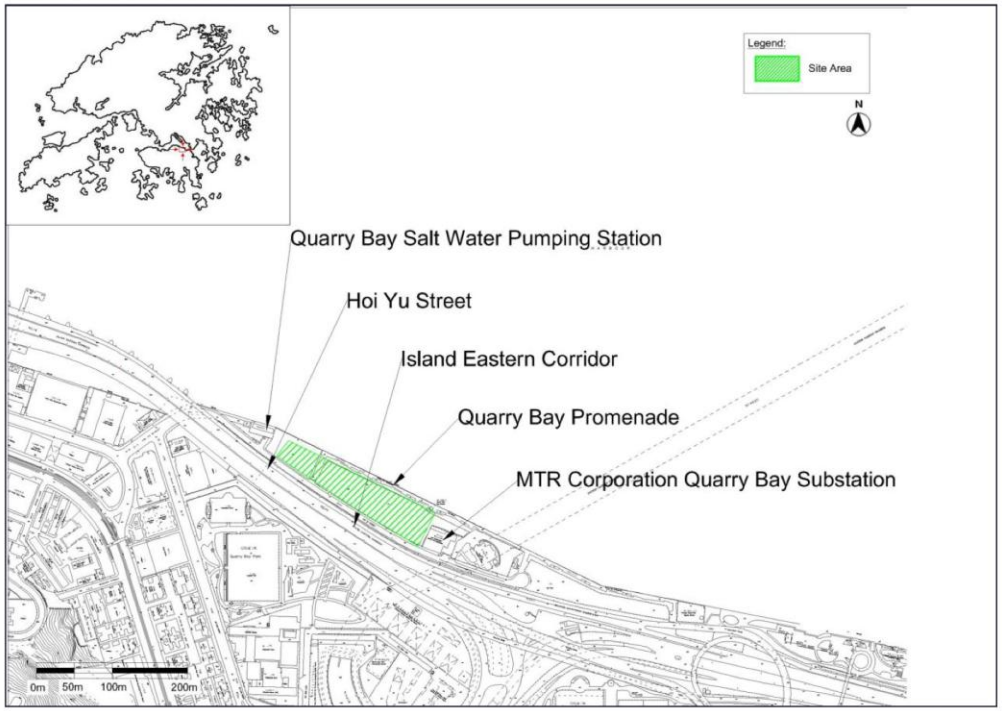
Site Location Plan



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Appointment Letters

Our ref: 17601076-0869/L31156/JY/AG/KL/ML/rw

5 August 2024

Masterplan Limited
Room 3516B, 35/F., China Merchants Tower Shun Tak Centre
200 Connaught Road Centre, Central
Hong Kong

By Emai

Attention: Miss Heather YUEN

Dear Madam

SMEC - Technical and Fee Proposal
Invitation of Quotation Environmental Consultancy services –
Planning Application for the Proposed Waterfront Development Project, Hoi Yu Street, Quarry Bay

Thank you for your invitation. Further to your email on 15 January 2024 with the brief description of the Environmental Consultancy Services, we are pleased to provide this Proposal including our scope of services and the fees, as appended to this letter, for your consideration.

We look forward to receiving your formal instruction to proceed by providing a signed copy of this letter, a work order/purchase order, or a letter confirming your acceptance of the attached proposal.

Should you have any queries regarding this proposal, please do not hesitate to contact our Mr. Michael LING or [redacted]; or the undersigned or [redacted]

Signed and agreed
for and on behalf of
SMEC Asia Limited

Alex GBAGUIDI
Director - Environment & Sustainability

Encl

Signed and agreed
for and on behalf of
Masterplan Limited

Name: IAN BROWNLEE
Position: MANAGING DIRECTOR

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FIRE SERVICES DEPARTMENT
FIRE SERVICES HEADQUARTERS BUILDING,
No.1 Hong Chong Road,
Tsim Sha Tsui East, Kowloon,
Hong Kong.

本處檔號 **OUR REF.** : (243) in FSD GR 6-5/4 R Pt. 54
來函檔號 **YOUR REF.** : 7076998/L31193/AG/ML/TK/rw
電子郵件 **E-mail** : hkfsdenq@hkfsd.gov.hk
圖文傳真 **FAX NO.** : 2988 1196
電　　話 **TEL NO.** : 2733 7896

10 September 2024

SMEC Asia Limited
27/F Ford Glory Plaza,
37-39 Wing Hong Street,
Cheung Sha Wan, Kowloon, Hong Kong.
(Attn: Mr. Alex GBAGUIDI, Director)

Dear Mr. GBAGUIDI,

Planning Application for
the Proposed Waterfront Development Project,
- Hoi Yu Street, Quarry Bay
Request for Information of Dangerous Goods & Incident Records Records

I refer to your letter of 15.8.2024 regarding the captioned request and reply below in response to your questions:-

Please be advised that neither records of dangerous goods license, and incidents of spillage / leakage of dangerous goods were found in connection with the given conditions of your request at the subject location.

If you have further questions, please feel free to contact the undersigned.

Yours sincerely,

(AU Ting-hin)
for Director of Fire Service

Ref. number and date should be quoted in reference to this letter
凡 提 及 本 信 時 請 引 述 編 號 及 日 期

SMEC Hong Kong

41/F, AIA Tower, 183 Electric Road, North Point, Hong Kong

Phone: 3995 8100

Email: hongkong@smec.com

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