Project Profile for A Rooftop Helipad at New Acute Hospital at Kai Tak Development Area

Project Profile

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Submitted to

Wong Tung & Partners Limited

Hospital Authority

Prepared By

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1.0 BASIC INFORMATION

1.1 Project Title

1.1.1 "A Rooftop Helipad at New Acute Hospital at Kai Tak Development Area".

1.2 Purpose and Nature of the Project

Purpose

1.2.1 The New Acute Hospital in Kai Tak Development Area (NAH) will be a major acute hospital in central Kowloon providing a comprehensive range of acute hospital services, with modern service models, technology and facilities to serve the general public. With its strategic location and role delineation in accordance to the long term Clinical Services Plan by the Hospital Authority, the NAH will also be a designated trauma centre to cater for critically ill patients with emergency conditions and respond to major incidents with multiple casualties. In order to provide rapid and seamless transfer of patients/ survivors from special cases for prompt and appropriate treatment, it is essential for the public to have a helipad located at the Acute Block of the NAH, where the Accident & Emergency Department (AED) is located. In addition, the helipad can serve as an effective alternative to convey "quick response" medical teams from the NAH campus within the future health precinct in Kai Tak Development Area (KTDA) to the scenes of distress, if a situation requires to effect the rescue efforts.

Nature

1.2.2 The helipad is intended strictly for "casevac" (casualty evacuation), SAR (Search and Rescue) operations and urgent transportation of organs for transplantation by Government Flying Service (GFS). No commercial flight will be allowed.

1.2.3 The helipad will be installed and operated at the southwest corner on the roof of the proposed Acute Block of NAH, there will be no fuelling facilities provided in the proposed rooftop helipad. The rooftop helipad design will meet the 'ICAO Standards for Heliport Design' and 'Government Flying Service Helicopter Landing Site Specification Guidelines'.

1.2.4 The proposed rooftop helipad is a Designated Project (DP) under Item B.2 of Part I of Schedule 2 of the Environmental Impact Assessment Ordinance (EIAO) by virtue of being a helipad within 300m of planned residential development.

1.2.5 The Project is to construct and operate a helipad on the roof of the Acute Block of the proposed NAH to enhance the overall efficiency and effectiveness of the emergency response of NAH. The proposed helipad is to make use of the rooftop of the Acute Block of the NAH for its construction and operation, and it does not form an integral part of the Acute Block of the NAH. The construction and operation of the Acute Block of the NAH will proceed independently.

1.3 Name of Project Proponent

1.3.1 The Project Proponent is Hospital Authority (HA). The construction and operation of the future New Acute Hospital (NAH), including the proposed helipad will be under the management of the HA.

1.3.2 In September 2017, the Hospital Authority commissioned Wong Tung & Partners Ltd. (Wong Tung) as the Architectural Consultant for the Design of the new Kai Tak Acute Hospital (NAH) at Kai Tak Development (hereinafter called "The Project"). Meinhardt Infrastructure & Environment Ltd (MIEL) was simultaneously appointed by Wong Tung to provide consultancy services in respect of this Project including preparation of this Project Profile (hereinafter called "The Assignment").

1.4 Location and Scale of the Project and History of the Project Site

Location of the Project

1.4.1 The proposed helipad is to be located on the rooftop of the proposed Acute Block of NAH at south of Kai Fuk Road and Kwun Tong Bypass, as shown in **Figure 1.**

Scale of the Project

1.4.2 The helipad will be constructed according to Government Flying Service (GFS) Helicopter Landing Site Specification Guidelines. The helipad will be of circular shape with about 40m in diameter and elevated from the main roof level of the Acute Block, i.e. approximate +117.0mPD, subject to planning constraints as well as design development.

History of the Project Site

1.4.3 The helipad is located at the Acute Block of the New Acute Hospital in the Kai Tak Development Area. The Project Site is zoned as "Government, Institution or Community ("G/IC") on the latest approved Kai Tak Outline Zoning Plan ("OZP") no. S/K22/6.

1.4.4 The NAH Project Site is comprised of Site A and Site B at the South Apron of the Kai Tak Development Area (KTDA) in close vicinity with the Hong Kong Children's Hospital as shown in **Figure 1**.

1.5 The Need of a Helipad at NAH Project Site

1.5.1 The New Acute Hospital in the Kai Tak Development Area (KTDA) will be a new major acute general hospital conveniently located in central Kowloon region serving not only to the community of Kai Tak area, but also providing much needed support to adjacent districts such as Kowloon City, Wong Tai Sin, and Kwun Tong.

1.5.2 According to the Clinical Services Plan for Kowloon Central Cluster (KCC) formulated by the Hospital Authority in 2016, the NAH with a planned capacity of around 2,400 nos. of in-patient and day beds, will be set up with the objectives to meet the long-term rising demand for healthcare services and facilities in Kowloon arising from the growing and aging population. By taking the leading role in coordinating care across hospitals and institutions in KCC, the NAH will offer a full range of comprehensive healthcare services including acute care with contemporary international standard service models, advance technology and state-of-the-art facilities.

1.5.3 The NAH will also serve as a designated trauma centre with 24-hour Accident & Emergency services, integrated with other hospital functional units from critical care areas including Perioperative Centre, Neonatal Intensive Care Unit/ Special Care Baby Unit ("NICU/ SCBU"), Intensive Care Unit ("ICU"), High Dependency Unit ("HDU") and the Helipad.

1.5.4 The helipad at NAH will provide helicopter access for the transfer of critically ill patients to and from the hospital. Since helicopter-borne patients are likely to be in a time critical condition, it is crucial that there will be a safe, fast, and efficient access between the helipad and the AED (With required adjacencies related to the critical care areas mentioned above) – typically via dedicated lifts with override controls for the rapid transfer of patients. With the helipad located on the roof top of the Acute Block building where the AED is directly located on the ground level, the general public will be able to receive a continuum of high quality, efficient and effective emergency response services. Further, the proposed NAH helipad is to serve for emergency services by incorporating with the following advantages:

Location Advantage

1.5.5 The New Acute Hospital at Kai Tak Development with its role delineation as the key acute hospital within KCC and multi-disciplinary range of specialty services, is strategically located at the heart of Kowloon. The provision of the rooftop helipad located at this prime, central location will be an effective means of transporting critically injured persons from the scene of an accident in the outlying islands or in some remote country park areas from the north-east part of New Territories.

Multiple Casualties Transfer

1.5.6 The proposed rooftop helipad at NAH can be operated in conjunction with GFS Kai Tak Division when major disasters occur involving a large number of patients. It would help to cater multiple casualties transfer during master disasters when multiple helicopters are involved by serving as the primary landing site or as an emergency support landing site.

Weather Alternative

1.5.7 The helipads at Pamela Youde Nethersole Eastern Hospital (PYNEH) or proposed New Block of Queen Mary Hospital (QMH) may not be available for operational use from time to time due to poor weather conditions including poor visibility, low cloud base or strong wind condition. In spring and summer months, the foggy weather and localized thunderstorms often result in poor visibility for helicopters to travel. Therefore, it is always better to provide alternatives for GFS to consider should adverse weather condition is encountered flying to PYNEH and QMH. The provision of the rooftop helipad at the Acute Block of NAH provides a good landing point for air ambulance and rescue missions with critically ill patents/ injured survivors by sharing part of the landings for emergency services made to PYNEH and QMH, hence the most optimal flight and effective use of resources is ensured.

1.6 Type of Designated Project

1.6.1 The helipad (excluding the proposed NAH) constitutes a designated project under Item B.2, Part I of Schedule 2 of the Environmental Impact Assessment Ordinance (EIAO) “A helipad within 300m of existing or planned residential development”.

1.6.2 An Environmental Permit is required for the construction and operation of the helipad. This Project Profile is prepared in accordance with Annex 1 of the Technical Memorandum on Environmental Impact Assessment Process (EIAO-TM) for an EIA Study Brief to proceed with EIA study.

1.6.3 The helipad which does not form an integral part of the NAH will be built separately and NAH is not classified as a DP under the EIAO. The Preliminary Environmental Review for the construction and operation of the NAH will be conducted separately.

1.7 Name and Telephone Number of Contact Persons

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Post: Senior Manager (Capital Projects)
Address: Hospital Authority Building, 147B Argyle Street, Kowloon, Hong Kong
Telephone: 2300 6032
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2.0 OUTLINE OF PLANNING AND IMPLEMENTATION PROGRAMME

2.1 Project Planning

2.1.1 The project is being planned and will be implemented by HA.

2.1.2 The design and implementation of the project will be undertaken by HA in conjunction with the consultants and contractors.

2.2 Project Implementation Programme

2.2.1 The construction of the helipad would involve line painting and supporting frame and equipment installations in its final construction stage. All structural works will be installed on the roof of the hospital.

2.2.2 The operation, management and maintenance of the helipad will be undertaken by Hospital Authority. GFS will be the user of this helipad.

2.2.3 The tentative planning and implementation programme for Project are shown **Table 2.1** as follows:

Table 2.1 Tentative Programme of the Project

Activities	Key Milestone Dates
Design of the Project	Since Sep 2017
Construction of the Foundation for the New Acute Hospital	Q3 2018 to Q4 2021
Construction of the Superstructure for the New Acute Hospital	Q4 2021 to Q4 2024
Construction of the Helipad	Q4 2023 to Q4 2024
Operation of the Helipad	2025

2.3 Interfacing with Other Projects

2.3.1 Other potential projects that would have interface with the Project have been identified and are listed below. This list will be revisited during the EIA study to ensure all the latest projects available from the respective stakeholders are considered. Any cumulative impacts from these concurrent projects during both construction and operational phases of the Project, including but not limited to the following as shown in **Table 2.2**, would need to be identified and assessed appropriately.

Table 2.2 Concurrent Projects

Project name	Target work commencement date	Target work completion date
Government Flying Service Kai Tak Division and the cross boundary heliport	Fourth quarter of 2018	First quarter of 2021
Kai Tak Development Stage 3 – Shing Cheong Road & Kai Tak Bridge (D4) (KL2014/03) by CEDD	2015	2020
Slip Road S5 by HyD	2023	2024
Trunk Road T2 by CEDD	2020	2026
Road L10 & L18 by CEDD	2019	2022

3.0 POSSIBLE IMPACTS ON THE ENVIRONMENT

3.1 Potential Environmental Impacts during Construction Phase

Air Quality

3.1.1 The construction of helipad would only involve line painting and supporting frame, landing platform, lighting system and fire services facilities and equipment in its final construction stage. Fugitive construction dust, gaseous emissions and odour impacts during construction phase are anticipated to be minor. With the implementation of suitable dust suppression measures stipulated in the Air Pollution Control (Construction Dust) Regulation, the potential dust impacts are expected to be minimal.

Construction Noise

3.1.2 Construction noise arising from construction of the rooftop helipad will be generated, it will likely be minor as the construction works involve line painting and supporting frame, landing platform, lighting system and fire services facilities and equipment in which noisy construction activities are not expected. As such, with the implementation of the construction noise control measures, significant noise impact is not anticipated during the construction phase.

Water Quality Issue

3.1.3 Potential construction phase water quality impacts would likely be limited to minor construction site runoff and wastewater from some minor concrete works for installation of supporting frames. Wastewater generated from the construction site will be intercepted and treated properly to comply with the criteria in accordance with the Water Pollution Control Ordinance prior to discharge. With implementation of good site practices and appropriate recommended mitigation measures as stipulated in ProPECC Note 1/94 “Construction Site Drainage” and “Recommended Pollution Control Clauses for Construction Contracts”, although there are water sensitive receivers (WSRs) located in the vicinity, including the Kwun Tong Typhoon Shelter and the seawater cooling intake of the EMSD’s District Cooling System, significant water quality impact is not anticipated during the construction phase.

Construction Waste Implications

3.1.4 Construction and Demolition (C&D) materials would be generated from construction activities. However, with the implementation of the good construction practices and proper waste management procedures by the contractor as contractual requirements, significant construction waste issue is not anticipated. Small amount of chemical waste generation is anticipated.

Hazard to Life

3.1.5 No Potential Hazardous Installations (PHI) was found in the vicinity of the proposed Project. Although potential hazard to life impacts from hazardous sources are found in the vicinity of the Project site (e.g. LPG station, Kerry DG warehouse that would be decommissioned by year 2020), there will be no fuelling facilities or storage of fuel or any other kinds of dangerous goods (“DGs”) for construction of the helipad. With the implementation of good site practice for the construction works, e.g. proper handling and disposal of the fuel oils and the proper use of construction equipment, the hazard to life impacts from the construction site to the hazardous sources nearby is insignificant. During the preparation of this Project Profile, the Kerry DG warehouse

would be decommissioned by year 2020, the status of the Kerry DG warehouse would be updated during the EIA study.

Land Contamination

3.1.6 Since the helipad will be constructed on the roof of the new built NAH, no land contamination issue is anticipated for the Project.

Landscape and Visual

3.1.7 The helipad will be constructed on the roof of the future NAH, significant landscape and visual is not anticipated during the construction phase.

Cultural Heritage

3.1.8 There will be no cultural heritage issue around the project site.

Ecology

3.1.9 The helipad will be constructed on the rooftop of the future NAH. Since only installation works of the helipad structure will be conducted, no ecological impact is anticipated.

3.2 Potential Environmental Impacts during Operational Phase

Helicopter Noise

3.2.1 The proposed helipad is intended strictly for life-saving flights such as 'casevac' (casualty evacuation) operations, SAR mission and urgent transportation of organs for transplantation by the Government Flying Service (GFS). No commercial flight will be allowed.

3.2.2 Helicopter noise is bound to be intrusive and requires careful planning. Noise impact will be generated when helicopter approaches and departs from the helipad, manoeuvring on and over the helipad. The noise impact in Lmax levels – the maximum noise level during a noise event at the representative noise sensitive receivers (NSRs) will be assessed in the detailed EIA study with measures recommended, if necessary, to mitigate the impact. Staff quarters would not be provided in NAH and preliminary review revealed that no existing noise sensitive receivers which rely on opened window for ventilation were identified within 300m of the proposed helipad location. The nearest noise sensitive uses are the planned residential area at Cheung Yip Street which is located at 150m away from the helipad.

3.2.3 As the proposed rooftop helipad will be provided solely for emergency use and the patients / survivors will be transferred internally in NAH, there will be no additional road traffic generation.

Air Quality

3.2.4 The helipad is intended for emergency uses only and hence the number of use would not be frequent except unexpected emergency event. Hence, no major dust and odour impacts will be anticipated whilst there may be potential gaseous emissions from the helipad operation. Emissions from helicopter exhausts will be dissipated by the rotor blades efficiently and thus the impact should be minimal. In addition, with operation of the proposed helipad, it is anticipated that the number of use of the

ambulance fleet and the associated gaseous emission will be reduced. The change in air quality impact caused by the operation of the helipad will be assessed in the detailed EIA study. The nearest air sensitive use would be NAH itself; however, the air intakes on the roof of the NAH will be strategically located to avoid direct impacts from helicopter exhausts.

Water Quality

3.2.5 The Firefighting Foam discharge system may be required by Fire Services Department to serve the rooftop helipad of emergency fire accident. However, as the firefighting system is served solely on emergency purpose, the amount of discharge of mixture of foam and water is anticipated to be minimal. Hence, the water quality issue is considered to be insignificant.

3.2.6 There will be no fueling facilities provided. No significant water quality issues including liquid effluents, discharges or contaminated runoff are anticipated.

Waste Implications

3.2.7 The proposed rooftop helipad will be used solely for transporting people for medical treatment in emergency situations. No waste or by-products generation is anticipated.

Hazard to Life

3.2.8 No Potential Hazardous Installations (PHI) was found in the vicinity of the proposed Project. There will be no fuelling facilities or storage of fuel or any other kinds of dangerous goods ("DGs") during the operation of the helipad. There are hazardous sources are found in the vicinity of the Project site (e.g. LPG station, Kerry DG warehouse), however Kerry DG warehouse will be decommissioned and redeveloped to residential uses by Year 2020. Nevertheless, the status of the Kerry DG warehouse would be updated during the EIA study.

Landscape, Visual and Glare

3.2.9 The helipad itself is not an intrusive structure. As it is located on the roof of the proposed Acute Block of NAH, it will not affect the landscape elements or features of the nearby surroundings. Lighting will be provided for the night-time operation of the proposed helipad. However, the helipad is located on the roof of the proposed Acute Block of NAH which would higher than the other development in the vicinity, the glare impact from the lighting is considered minimal.

Cultural Heritage

3.2.10 There will be no cultural heritage issue.

Ecology

3.2.11 There will be no ecological issue.

3.3 Summary of the Potential Environmental Impacts

3.3.1 The potential environmental impacts associated with the construction and operation of the Project have been identified and are summarised in **Table 3.1** as below.

Table 3.1 Potential Environmental Impacts Arising from the Project

Potential Impact	Construction Phase	Operational Phase
Air Quality		
• Gaseous Emission	×	×
• Dust	×	×
• Odour	×	×
Noise		
• Construction Noise	×	×
• Fixed Plant Noise	×	×
• Helicopter Noise	×	✓
Water Quality	✓	×
Waste	✓	×
Hazard to Life	×	×
Land Contamination	×	×
Landscape, Visual and Glare	×	×
Cultural Heritage	×	×
Terrestrial Ecology	×	×

Note:✓ = Possible; × = Not Expected

4.0 MAJOR ELEMENTS OF THE SURROUNDING ENVIRONMENT

4.1 Surrounding Land Use of the Project

4.1.1 As the proposed helipad will be located on the rooftop of the NAH, no sensitive part of the natural environment (e.g. water sensitive uses, fishing ground, wildlife habitat etc.) will be affected by the construction and operation of the helipad.

4.1.2 Preliminary review revealed that no existing noise sensitive receivers which rely on opened window for ventilation were identified within the 300m of the proposed helipad location. In addition, no staff quarters will be provided in NAH.

4.1.3 The representative existing and planned sensitive receivers are listed in **Table 4.1**. The list will be expanded to include other representative sensitive receivers to be identified during the EIA study.

Table 4.1 Representative Sensitive Receivers

Sensitive Receivers	Description	Status	Shortest Horizontal Distance to Project Site Boundary (m)
Air Sensitive Receivers			
ASR 1	Transport Department New Kowloon Bay Vehicle Examination Centre (Planned Commercial Development cum EFLS Depot and Station)	Existing	115
ASR 2	Hong Kong Police Kowloon Bay Vehicle Detention and Examination Centre (Planned Integrated Waste Handling Facility)	Existing	195
ASR 3	Kai Tak Fire Station	Existing	110
ASR 4	Pacific Trade Centre	Existing	200
ASR 5	Octa Tower	Existing	160
Air and Noise Sensitive Receivers			
ASR / NSR 6	Planned Residential Area at Kai Hing Road (Existing Kerry Dangerous Goods Warehouse)	Planned	245
ASR / NSR 7	Planned Residential Area at Cheung Yip Street (Existing Citybus Kowloon Bay Parking Site)	Planned	150
ASR / NSR 8	Planned Residential Area at Cheung Yip Street (Existing Public Works Central Laboratory Building)	Planned	150
ASR / NSR 9	Planned Residential Area at Shing Fung Road	Planned	440
ASR / NSR 10	Planned Residential Area at Shing Fung Road	Planned	400
ASR / NSR 11	Planned Residential Area at Shing Fung Road	Planned	400
ASR / NSR 12	Planned Residential Area at Shing Fung Road	Planned	420
ASR / NSR 13	Planned New Acute Hospital	Planned	Depends on the location of fresh air intake subject to detailed design

Sensitive Receivers	Description	Status	Shortest Horizontal Distance to Project Site Boundary (m)
ASR / NSR 14	Hong Kong Children's Hospital	To be operated in Q4 2018	60
Water Sensitive Receivers			
WSR 1	Kwun Tong Typhoon Shelter	Existing	325
WSR 2	Seawater Intake of Kai Tak District Cooling System (South Plant)	Planned	660

4.2 Major Elements Affecting the Site

4.2.1 A GFS forward base was proposed to be located at the tip of former Kai Tak runway which is away from the proposed helipad at about 1.5km. Given the long separation distance between both helipads, the cumulative hovering noise impact is not anticipated. In addition, GFS confirmed both helipad users would properly communicate in order to avoid overlapping in their flight paths. Nevertheless, cumulative noise impact of both NAH helipad and the operation of helipad at GFS forward base would be considered in the EIA study.

4.2.2 Although there are air pollution sources including Trunk Road T2 portal/ ventilation building and cruise terminal located in the Kai Tai Development area, they are located away from the helipad more than 500m, the cumulative air quality impact is not anticipated.

4.2.3 No major element of the surroundings is considered likely to affect the proposed helipad. The flight path will be designed, in consultation with CAD and GFS, to route away from the existing and planned residential areas as far as possible in order to minimize the disturbance to the neighbourhood.

5.0 ENVIRONMENTAL PROTECTION MEASURES

5.1 Construction Phase

Construction Dust

5.1.1 Good site practices for dust control as stipulated in the Air Pollution Control (Construction Dust) Regulation and necessary dust suppression measures would be implemented by the Contractor of the Project to reduce the fugitive dust impact. These measures would be incorporated into the specifications for the works contract.

Construction Noise

5.1.2 Appropriate noise control measures including the use of quieter Powered Mechanical Equipment (PME), silencers and erection of moveable noise barrier / enclosure will be implemented to minimize the noise impact. Avoiding carrying out concurrent noisy construction activities in accordance with EIAO-TM would further minimize the construction noise levels.

Water Quality

5.1.3 Water pollution control measures would be implemented to alleviate the potential water quality impacts during construction phase. Wastewater generated from the construction site would be properly collected and treated to ensure the effluent complies with Water Pollution Control Ordinance prior to discharge.

Waste Implications

5.1.4 Good construction practices and proper waste management procedures shall be implemented by the contractor.

5.1.5 As it is anticipated that minimal chemical waste (e.g. oil, fuel and batteries) from construction plant / equipment would be generated, no mitigation measures are required. The disposal of chemical waste including oil/lubricant would comply with Waste Disposal (Chemical Waste) (General) Regulations. All chemical wastes will be handled in accordance with the EPD's Code of Practice on the Packaging, Labelling and Storage of Chemical Waste and a licensed collector will be employed for the collection of the chemical waste generated to the licensed disposal facilities (e.g. Chemical Waste Treatment Facility at Tsing Yi). Hence, no adverse environmental impact would be anticipated due to the management of a small quantity of chemical waste to be generated from the Project. Therefore, no impact would be expected from the chemical waste generated by the Project.

Hazard to Life

5.1.6 As there will be no fuelling facilities or storage of fuel or any other kinds of dangerous goods ("DGs") for the construction of the helipad, the hazard to life impact to hazardous sources nearby including LPG filling station and Kerry DG warehouse would be insignificant with the implementation of good site practice for the construction works, e.g. proper handling and disposal of the fuel oils and the proper use of construction equipment.

Landscape and Visual Impact

5.1.7 As it is anticipated that there would be no significant landscape and visual impacts, no mitigation measures are required.

Cultural Heritage

5.1.8 As it is anticipated that there would be no impacts on the cultural heritage, no mitigation measures are required.

Ecology

5.1.9 As it is anticipated that there would be no terrestrial ecology impacts, no mitigation measures are required.

5.2 Operational Phase

Air Quality

5.2.1 Potential gaseous emissions from the helipad are anticipated during operational phase. Mitigation measures (if required) would be considered in the detailed EIA study.

Helicopter Noise

5.2.2 Preliminary review revealed that no existing noise sensitive receivers which rely on opened window for ventilation were identified within the 300m of the proposed helipad location and no staff quarters were proposed in the NAH. The nearest identified planned residential area at Cheung Yip Street which are about 150m from the helipad. The helicopter noise will be assessed in the EIA study with mitigation measures recommended as necessary. Initial discussion with GFS has been made and GFS advised that the flight paths should be designed away from any existing and planned residential areas in order to minimize the noise nuisance.

Water Quality

5.2.3 Routine / annual testing and maintenance is needed for the firefighting system to ensure the system is well equipped when dealing with emergency fire accidents at the helipad. All of the water arising from the firefighting system will be discharged via the foul water collection system.

5.2.4 No wastewater will be generated during the operation of the helipad. Therefore, no mitigation measures would be required.

Waste Management

5.2.5 Waste generation from the helicopter and the helipad during operational phase is not anticipated. Therefore, no mitigation measures would be required.

Hazard to Life

5.2.6 As there will be no fuelling facilities or storage of fuel or any other kinds of dangerous goods (“DGs”) during the operation of the helipad, the hazard to life impact to hazardous sources nearby including LPG filling station and Kerry DG warehouse is not anticipated. Moreover, Kerry DG warehouse will be decommissioned and

redeveloped to residential uses by Year 2020. The status of the Kerry DG warehouse would be updated during the EIA study.

Landscape, Visual and Glare Impact

5.2.7 As it is anticipated that there would be no significant landscape and visual impacts, no mitigation measures would be required. Lighting will be provided for the night-time operation of the proposed helipad. However, the helipad is located on the roof of the proposed Acute Block of NAH which would higher than the other development in the vicinity, the glare impact from the lighting is considered minimal.

Cultural Heritage

5.2.8 As it is anticipated that there would be no impacts on the cultural heritage, no mitigation measures would be required.

Ecology

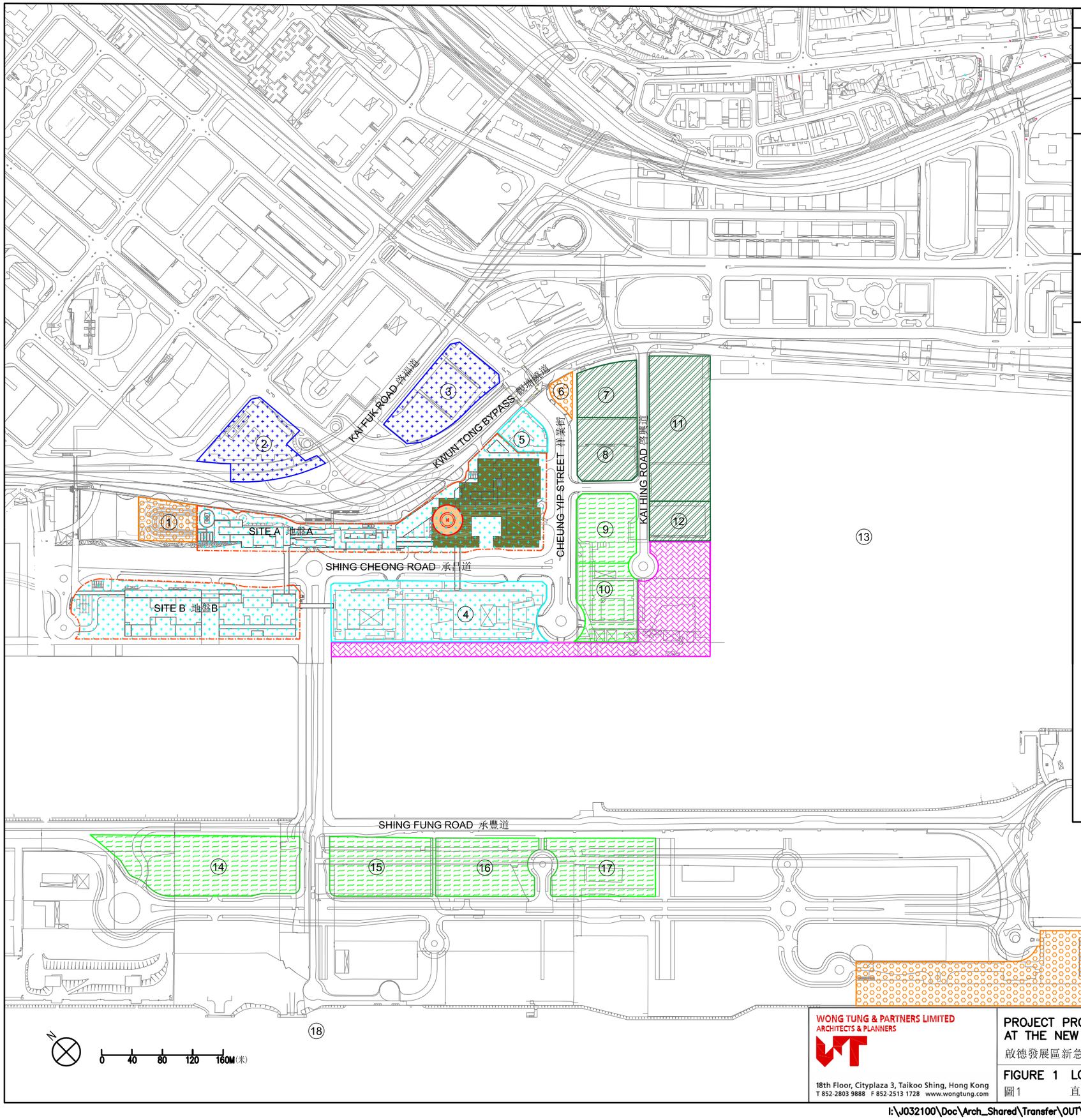
5.2.9 As it is anticipated that there would be no terrestrial ecology impacts, no mitigation measures are required.

6.0 USE OF PREVIOUSLY APPROVED EIA REPORT

6.1.1 Previous EIA reports have been approved for some proposed helipads in Hong Kong and some infrastructure projects in the vicinity of the proposed Project. The following approved EIA reports will be used as references in this study:

- A Rooftop Helipad at the Proposed New Block of Queen Mary Hospital (Register No.: AEIAR-208/2017, approved in March 2017)
- Trunk Road T2 (Register No.: AEIAR-174/2013, approved in September 2013)
- Kai Tak Development (Register No.: AEIAR-130/2009, approved in March 2009)
- Expansion of Heliport Facilities at Macau Ferry Terminal (Register No.: AEIAR-095/2006, approved in February 2006)
- Helipad at Yung Shue Wan, Lamma Island (Register No.: AEIAR-094/2006, approved in January 2006)
- Peng Chau Helipad (Register No.: AEIAR-087/2005, approved in August 2005)

Figures



LEGEND 圖例

BOUNDARY LINE OF NEW ACUTE HOSPITAL AT KAI TAK DEVELOPMENT AREA
啟德發展區新急症醫院地盤邊界

PROPOSED ROOFTOP HELIPAD
擬建頂樓直升機停機坪位置

ACUTE BLOCK
急症大樓

LAND USES ACCORDING TO THE APPROVED KAI TAK OUTLINE ZONING PLAN NO. S/K22/6
按城市規劃委員會已獲核准的啟德分區計劃大綱圖S/K22/6的土地用途

RESIDENTIAL 住宅

COMMERCIAL 商業

OPEN SPACE 休憩用地

GOVERNMENT, INSTITUTION OR COMMUNITY 政府、機構或社區

OTHER SPECIFIED USES 其他指定用途

LAND USES ACCORDING TO THE APPROVED NGAU TAU KOK AND KOWLOON BAY OUTLINE ZONING PLAN NO. S/K13/29
按城市規劃委員會已獲核准的牛頭角及九龍灣分區計劃大綱圖S/K13/29的土地用途

GOVERNMENT, INSTITUTION OR COMMUNITY 政府、機構或社區

① T2 VENTILATION BUILDING T2 通風大樓

② HONG KONG POLICE KOWLOON BAY VEHICLE DETENTION & EXAMINATION CENTRE
(ACCORDING TO THE PRELIMINARY OUTLINE DEVELOPMENT PLAN UNDER PLANNING AND ENGINEERING STUDY FOR THE DEVELOPMENT AT KOWLOON BAY ACTION AREA – FEASIBILITY STUDY, IT IS PROPOSED TO BE REZONED AS "OTHER SPECIFIED USES" ANNOTATED "INTEGRATED WASTE HANDLING FACILITY" ("OU(IWHF)".)
香港警務處九龍灣車輛扣留及驗車中心
(根據九龍灣行動區發展規劃及工程可行性研究初步發展大綱圖，這地區擬改劃為「其他指定用途」註明「綜合廢物處理設施」地帶)

③ TRANSPORT DEPARTMENT NEW KOWLOON BAY VEHICLE EXAMINATION CENTRE
(ACCORDING TO THE PRELIMINARY OUTLINE DEVELOPMENT PLAN UNDER PLANNING AND ENGINEERING STUDY FOR THE DEVELOPMENT AT KOWLOON BAY ACTION AREA - FEASIBILITY STUDY, IT IS PROPOSED TO BE TO BE REZONED AS "OU (COMMERCIAL DEVELOPMENT CUM EFLS DEPOT AND STATION)".)
運輸署新九龍灣驗車中心
(根據九龍灣行動區發展規劃及工程可行性研究初步發展大綱圖，這地區擬改劃為「其他指定用途」註明「商業發展暨環保連接系統車廠及車站」)

④ HONG KONG CHILDREN'S HOSPITAL 香港兒童醫院

⑤ KAI TAK FIRE STATION 啟德消防局

⑥ LPG FILLING STATION 石油氣加氣站

⑦ PACIFIC TRADE CENTRE 太平洋貿易中心

⑧ OCTA TOWER 傲騰廣場

⑨ CITYBUS KOWLOON BAY PARKING SITE (PLANNED RESIDENTIAL AREA AT CHEUNG YIP STREET)
城巴九龍灣泊車場 (祥業街計劃中的住宅用地)

⑩ PUBLIC WORKS CENTRAL LABORATORY BUILDING (PLANNED RESIDENTIAL AREA AT CHEUNG YIP STREET)
工務中央試驗所大樓 (祥業街計劃中的住宅用地)

⑪ KOWLOON GODOWN 九龍貨倉

⑫ KERRY DANGEROUS GOODS WAREHOUSE
(PLANNED RESIDENTIAL AREA AT KAI HING STREET ACCORDING TO THE PLANNING PERMISSION CASE NO. A/K22/13-1)
嘉里危險品貨倉 (按城市規劃委員會已獲核准的規劃許可個案編號A/K22/13-1，啓興道計劃中的住宅用地)

⑬ KWUN TONG TYPHOON SHELTER 觀塘避風塘

⑭ ⑮ ⑯ ⑰ PLANNED RESIDENTIAL AREA AT SHING FUNG ROAD
承豐道計劃中的住宅用地

⑱ SEAWATER INTAKE OF KAI TAK DISTRICT COOLING SYSTEM (SOUTH PLANT)
啟德區域供冷系統海水入口(南座)

⑲ KAI TAK CRUISE TERMINAL 啓德郵輪碼頭

⑳ GOVERNMENT FLYING SERVICE KAI TAK DIVISION 政府飛行服務隊啟德支部

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PROJECT PROFILE FOR A ROOFTOP HELIPAD
AT THE NEW ACUTE HOSPITAL AT KAI TAK DEVELOPMENT AREA
啟德發展區新急症醫院天台直升機坪工程項目簡介

FIGURE 1 LOCATION OF THE HELIPAD
圖1 直升機停機坪位置圖

REV.NO.: 0
修訂: 0

SCALE: AS SHOWN
比例: 如圖示

DATE: JAN 2019
日期: 2019年1月

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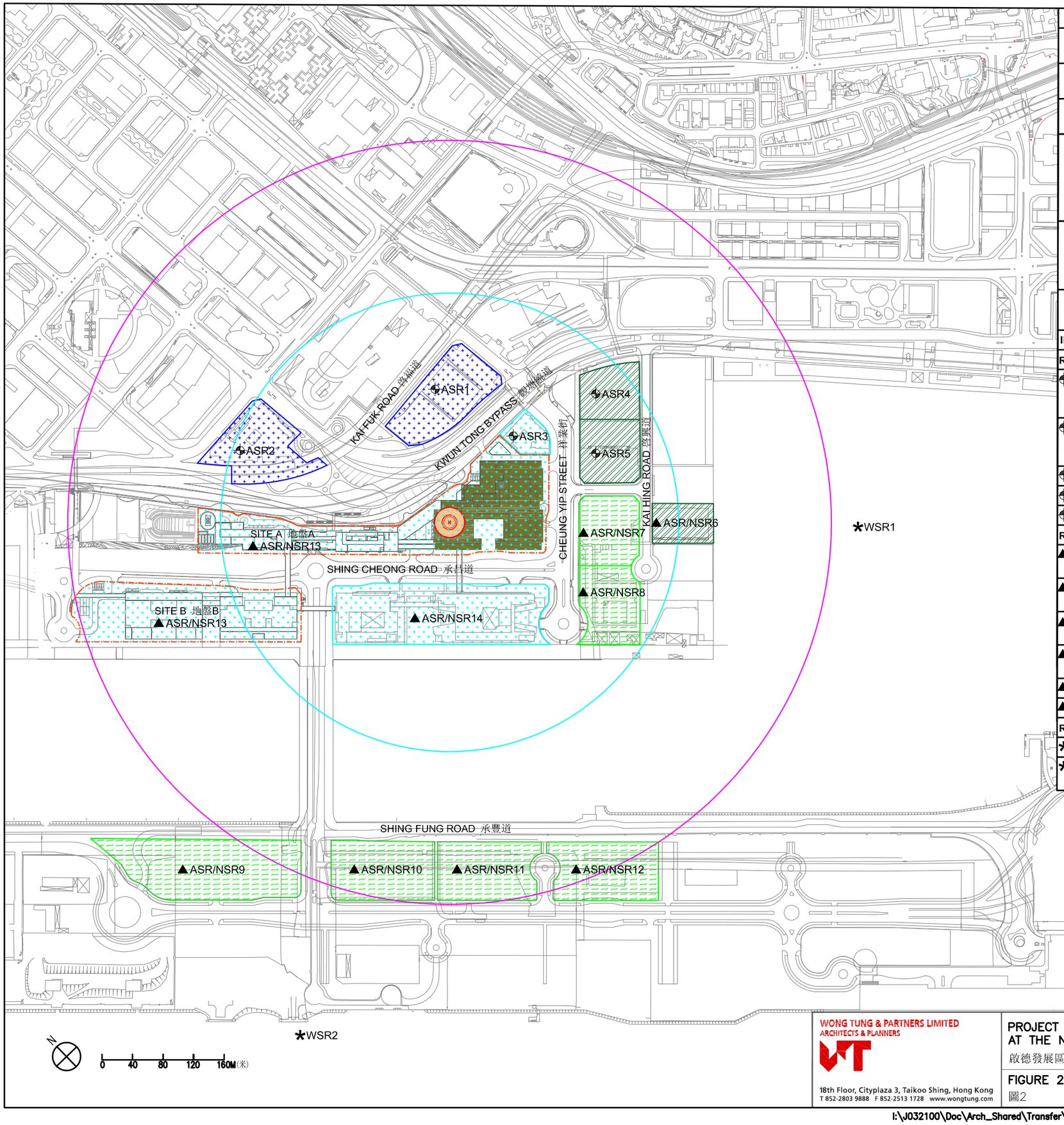

LEGEND 圖例

- BOUNDARY LINE OF NEW ACUTE HOSPITAL AT KAI TAK DEVELOPMENT AREA
  啟德發展區新急症醫院地盤邊界
- PROPOSED ROOFTOP HELIPAD
  擬建頂樓直升機停機坪位置
- ACUTE BLOCK
  急症大樓
- LAND USES ACCORDING TO THE APPROVED KAI TAK OUTLINE ZONING PLAN NO. S/K22/6
  按城市規劃委員會已獲核准的啟德分區計劃大綱圖S/K22/6的土地用途
  - RESIDENTIAL 住宅
  - COMMERCIAL 商業
  - GOVERNMENT, INSTITUTION OR COMMUNITY 政府、機構或社區
- LAND USES ACCORDING TO THE APPROVED NGAU TAU KOK AND KOWLOON BAY OUTLINE ZONING PLAN NO. S/K13/29
  按城市規劃委員會已獲核准的牛頭角及九龍灣分區計劃大綱圖S/K13/29的土地用途
  - GOVERNMENT, INSTITUTION OR COMMUNITY 政府、機構或社區
- 300m NOISE ASSESSMENT AREA 300米噪音研究範圍
- 500m AIR ASSESSMENT AREA 500米空氣質素研究範圍

ID 編號	LOCATION 位置
REPRESENTATIVE AIR SENSITIVE RECEIVER 具代表性的空氣敏感受體	
ASR1	TRANSPORT DEPARTMENT NEW KOWLOON BAY VEHICLE EXAMINATION CENTRE (PLANNED COMMERCIAL DEVELOPMENT CUM EFLS DEPOT AND STATION) 運輸署新九龍灣驗車中心(計劃中的商業發展暨環保連接系統車廠及車站)
ASR2	HONG KONG POLICE KOWLOON BAY VEHICLE DETENTION & EXAMINATION CENTRE (PLANNED INTEGRATED WASTE HANDLING FACILITY) 香港警務處九龍灣車輛扣留及驗車中心(計劃中的綜合廢物處理設施)
ASR3	KAI TAK FIRE STATION 啟德消防局
ASR4	PACIFIC TRADE CENTRE 太平洋貿易中心
ASR5	OCTA TOWER 傲騰廣場
REPRESENTATIVE AIR & NOISE SENSITIVE RECEIVER 具代表性的空氣及噪音敏感受體	
ASR/NSR6	PLANNED RESIDENTIAL AREA AT KAI HING STREET (EXISTING KERRY DANGEROUS GOODS WAREHOUSE) 啓興道計劃中的住宅用地(現存嘉里危險品貨倉)
ASR/NSR7	PLANNED RESIDENTIAL AREA AT CHEUNG YIP STREET (EXISTING CITYBUS KOWLOON BAY PARKING SITE) 祥業街計劃中的住宅用地(現存城巴九龍灣泊車場)
ASR/NSR8	PLANNED RESIDENTIAL AREA AT CHEUNG YIP STREET (EXISTING PUBLIC WORKS CENTRAL LABORATORY BUILDING) 祥業街計劃中的住宅用地(現存工務中央試驗所大樓)
ASR/NSR9,10,11,12	PLANNED RESIDENTIAL AREAS AT SHING FUNG ROAD 承豐道計劃中的住宅用地
ASR/NSR13	PLANNED NEW ACUTE HOSPITAL 計劃中的新急症醫院
ASR/NSR14	HONG KONG CHILDREN'S HOSPITAL 香港兒童醫院
REPRESENTATIVE WATER SENSITIVE RECEIVER 具代表性的水質敏感受體	
WSR1	KWUN TONG TYPHOON SHELTER 觀塘避風塘
WSR2	SEAWATER INTAKE OF KAI TAK DISTRICT COOLING SYSTEM (SOUTH PLANT) 啟德區域供冷系統海水入口(南座)

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FIGURE 2 LOCATION OF THE REPRESENTATIVE SENSITIVE RECEIVERS
圖2 具代表性的敏感受體位置圖

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