APPENDIX IV

Revised Environmental Assessment

Prepared for

New Season Global Limited

Prepared by

Ramboll Hong Kong Limited

SECTION 16 PLANNING APPLICATION FOR THE PRESERVATION AND REVITILISATION OF MARYKNOLL HOUSE, STANLEY, HONG KONG

ENVIRONMENTAL ASSESSMENT

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Project Reference	**CHPSTAMKEI00**
Document No.	**R9524_v1.0**

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1. INTRODUCTION

1.1 Project Background

1.1.1 The Application Site falls within an area zoned "Other Specified Uses (Residential Development with Historic Building Preserved)" ("OU" zone) on the Approved Stanley Outline Zoning Plan No. S/H19/16. The zone is restricted to +64mPD on the lower southwest portion, and +75mPD at the remainder northwest portion reflecting the height of Maryknoll House.

1.1.2 This planning application proposes a residential development which preserves and revitalises the Maryknoll House. The Proposed Scheme envisions to preserve most of the architectural heritage and to maintain a similar use to the original function of the Maryknoll House as an accommodation building. At the same time, the Proposed Scheme seeks to revitalise the Maryknoll House through good planning and design measures for the adaptive reuse of the heritage building and its surrounding environment.

1.1.3 Ramboll Hong Kong Limited has been commissioned by New Season Global Limited (hereinafter referred as "Applicant") to conduct an Environmental Assessment (EA) in support of the S16 planning application. The EA report will assess the major environmental issues (i.e. Air Quality and Noise Impact) of the Application Site and the surrounding area.

1.1.4 A Section 16 Planning Application (A/H19/82) was submitted in 2021 for proposed residential redevelopment at the Application Site. The application was approved by the Town Planning Board (TPB) in the meeting dated 24 December 2021.

1.1.5 Further to the completion year has been changed to Year 2028, the layout plan has been changed, the plot ratio has been proposed to be increased and the building height restriction has been proposed to be increased from 75.0mPD to 75.4mPD, this EA has been assessed with the updated traffic forecast and predicted worst-case scenario for the road traffic noise impact assessment.

1.2 Application Site and its Environ

1.2.1 The Application Site area is about 7646 m^2. The Application Site is located on a small ridge and to the north-western of Stanley Market. The Stanley Knoll development is located to the north and east of the Application Site, while the Carmel Hill development is to the south-eastern of the Application Site. To the south-west and south of the site is a retaining wall followed by a steep vegetated slope. The south-east and south-west boundaries of the site adjoin with the neighbouring area zoned as "Green Belt".

1.2.2 At present, the Application Site is accessible from Stanley Village Road of which is located to the north-eastern of the Application Site and via the internal access road of Stanley Knoll. Carmel Road connecting the Stanley Village Road is located to the south of the Application Site.

1.2.3 **Figure 1.1** shows the location of the Application Site and its environ.

1.3 Existing Development

1.3.1 The Application Site is occupied by the Maryknoll House while it is no longer operating.

1.4 Proposed Scheme

1.4.1 The development mainly consists of residential units and other supporting ancillaries such as underground carpark, private and garden decks, common and private swimming pools. **Appendix 1-1** shows the indicative Master Layout Plan of the Proposed Scheme.

1.5 Appraisal of Environmental Impact

Air Quality

1.5.1 The Application Site is situated on a small ridge, where bounded by Carmel Road and Stanley Village Road. Other carriageways are further away. Compliance with the separation distance requirement has been verified.

1.5.2 Moreover, the district that the Application Site resides is dominated by residential uses, vegetation area, and then school and commercial uses further apart. A survey has therefore been conducted to demonstrate absence of chimney stack in the surrounding.

1.5.3 The potential air quality has been addressed in Chapter 2 of this EA.

Noise

1.5.4 As mentioned, the surrounding area is dominated by residential uses. Few fixed noise sources have be identified at the Stanley Oriental Hotel and Stanley Municipal Services Building, which are MVAC system. The shortest distances between the boundary of the Application Site and the identified fixed noise sources are ~157m and ~201m respectively (as shown in **Figure 1.2**). There are existing noise sensitive receivers (such as Carmel Hill) located closer to the identified fixed noise sources (~74m and ~100m from the fixed noise sources respectively) and with direct line of sight to the identified fixed noise sources. It is believed that the noise impact generated by the identified fixed noise sources should satisfy the noise criteria of Noise Control Ordinance. Therefore, it is anticipated that the noise sensitive receivers of the Proposed Development would not be under adverse impacts from the identified fixed noise source. Moreover, as observed, the noise environment is relatively silent and dominated by the noise from vehicles passing by.

1.5.5 The development is not environmentally polluting in nature and compatible with adjacent land uses. Should there be any fixed noisy facilities (e.g. fan system, HVAC for Common Facilities / E&M) provided in future, it will be designed to follow the HKPSG requirement (i.e. acceptable noise level minus 5 decibels) to ensure that there is no adverse impact on any noise sensitive use in the surrounding.

1.5.6 The proposed development is residential in nature. According to the design of the proposed development, Common Facilities / E&M will be provided. Therefore, there will be the potential fixed noise sources from the centralized air conditioning system and plant rooms (i.e. transformer room). Since there is no detail of the design available for the centralized air-conditioning system (e.g. type and number of equipment, etc.) and the plant room, the above-mentioned potential fixed noise sources will be designed to minimize the fixed noise impact and onsite noise control measures will be provided (if needed) in order to minimize the potential fixed noise impact and comply with HKPSG standard during the detailed design stage. Suitable silencers, acoustic louvers and enclosures will be adopted if required. Such requirement will be incorporated into the future tender so that the contractor for such building services equipment will need to comply with the standard in the detailed design.

1.5.7 Given that there will be increased population and in turn traffic flow induced, roads traffic noise has been assessed in Chapter 3 of this EA, taking into account future flow from carriageways within 300m study area.

1.6 Objectives

1.6.1 The objectives for this Environmental Assessment are listed as follows:

- To evaluate the potential air quality impact due to vehicular and chimney stack emissions sources, if any, in the vicinity of the Application Site; and

1.6.2 To evaluate and assess potential road traffic noise impact on the Proposed Scheme at the Application Site, and propose practicable noise mitigation measures to attenuate the impact;

2. AIR QUALITY IMPACT ASSESSMENT

2.1 Introduction

2.1.1 This section identifies potential air quality constraints arising from the traffic emissions along the road carriageways, chimney emission (if any) from industrial stack surrounding the Application Site and the odour impacts from the potential odour sources during the operation of the Proposed Scheme.

2.2 Assessment Criteria

2.2.1 The Hong Kong Planning Standards and Guidelines (HKPSG) has provided a set of guidelines to assess the potential air quality impacts generated from traffic. **Table 2-1** below is extracted from Table 3.1 in Chapter 9 of HKPSG, which shows the minimum horizontal buffer distance between kerb side of roads and sensitive uses for various types of road.

Table 2-1 Guidelines on Usage of Open Space Site (HKPSG Chapter 9: Environment)

Pollution Source	Parameter	Buffer Distance	Permitted Uses
Road and Highways	*Type of Road*		
	Trunk Road and Primary Distributor	>20 m	Active and passive recreation uses
		3 – 20 m	Passive recreational uses
		<3 m	Amenity area
	District Distributor	>10 m	Active and passive recreation uses
		<10 m	Passive recreational uses
	Local Distributor	>5 m	Active and passive recreation uses
		<5 m	Passive recreational uses
	Under Flyovers		Passive recreational uses
Industrial Areas	*Difference in Height between Industrial Chimney Exit and the Site*		
	<20 m	>200 m	Active and passive recreation uses
		5 – 200 m	Passive recreational uses
	20 – 30 m (*)	>100 m	Active and passive recreation uses
		5 – 100 m	Passive recreational uses
	30 – 40 m	>50 m	Active and passive recreation uses
		5 – 50 m	Passive recreational uses
	>40 m	>10 m	Active and passive recreation uses
Construction and earth moving activities	-	<50 m	Passive recreational uses
		>50 m	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 purpose 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.

(e) *Since there is no specific buffer distance requirement for residential/ domestic premises indicated in the HKPSG, consideration of buffer distance of the Proposed Scheme has been referred to "Open Space" site.*

2.3 Chimney Emission Impact

2.3.1 Since no chimneys are identified within the 200m of the Application Site, the Application Site is not subject to chimney emission impact.

2.3.2 On-site survey was conducted on 8 July 2024 to verify the presence of chimneys.

2.3.3 The surrounding area is dominated by residential use, school development and commercial use. The area within 200m from the Application Site is zoned green belt (GB), Residential (R(A), R(C)), Commercial (C), Open Space (O), Other Specified Uses (OU) and Government, Institution or Community (G/IC). There is no area zoned "industrial" within 200m from the Proposed Scheme. **Figure 2.1** shows the 200m survey area from the boundary of the Application Site.

2.3.4 Based on onsite survey, it was confirmed that there would be no chimney identified within 200m from the Application Site, which complies with recommended separation distance as stipulated in Chapter 9 of HKPSG.

2.3.5 It is anticipated that the Application Site would not be subject to adverse chimney emission impact. It is confirmed that the chimney emission data have been validated and updated by consultant's own survey. It is understood that if there are any errors subsequently found in their chimney data used, the assessment results may be invalidated.

2.4 Vehicular Emission Impact

2.4.1 The Application Site is bounded by Carmel Road and Stanley Village Road. According to the Annual Traffic Census (2022) published by the Transport Department, Carmel Road and Stanley Village Road are classified as Local Distributors. Other carriageways are sited at least 130m away and their associated impact is not likely significant.

2.4.2 **Figure 2.2** shows the buffer distance from the kerb side of Carmel Road and Stanley Village Road to the Application Site. It is confirmed that sufficient buffer distance is provided between the road networks and the Application Site.

2.4.3 There will be no air sensitive use/ fresh air intake/ openable window with inadequate air buffer distance maintained. It is expected that the Application Site would not be subject to adverse vehicular emission impact with respect to the HKPSG.

2.5 Impact arising from Proposed Scheme

2.5.1 The Proposed Scheme is residential in nature and not environmental polluting. No emission sources will be introduced by the Proposed Scheme, therefore there is no adverse air quality impact due to future operation of the Proposed Scheme is anticipated.

2.6 Conclusion

2.6.1 No chimneys were found within 200m from the Application Site. Therefore, no adverse air quality impact due to industrial emission is expected.

2.6.2 For vehicular emissions, either the buffer distance requirement is fulfilled or long vertical separation from roundabout with limited traffic flow is maintained. Therefore, no adverse vehicular emission impact on the Proposed Scheme is anticipated.

2.6.3 The development and associated facilities are not air polluting in nature and will unlikely create any significant air pollution.

3. ROAD TRAFFIC NOISE IMPACT ASSESSMENT

3.1 Introduction

3.1.1 This road traffic noise impact assessment is prepared to address potential road traffic noise impact on the noise sensitive uses of the Proposed Scheme and to recommend mitigation measures where practicable to attenuate the impact.

3.1.2 Based on discussion in **Chapter 1**, among the Proposed Scheme, the residential dwelling will rely on opened window for ventilation purpose whereas Common Facilities will be provided with centralized air conditioning and not rely on opened window for ventilation. Other uses such as carpark and E&M room are not noise sensitive in nature.

3.2 Assessment Criteria

3.2.1 Noise standards are recommended in the Hong Kong Planning Standards and Guidelines (HKPSG) for planning against noise impact from sources such as road traffic, railway and aircraft.

3.2.2 Under the HKPSG, the criterion for road traffic noise impact for dwellings, is $L_{10(1\text{-hour})}$ 70 dB(A). The criteria apply to habitable rooms which rely on openable windows for ventilation.

3.3 Assessment Methodology

3.3.1 The assessment approach and methodology involved the prediction of future noise impacts on Noise Sensitive Receivers (NSRs) arising from traffic flows on existing and future road carriageways situated in the vicinity of the Application Site.

3.3.2 The U.K. Department of Transport's procedure "Calculation of Road Traffic Noise" (CRTN) was used to predict the hourly L_{10} noise levels generated from road traffic at selected representative NSRs.

3.3.3 Worst-case scenario has been considered for this project, any building block of the Application Site have not considered in the noise model. It means that this assessment is not relied on the scheme design. Representative NSRs have been selected along the Application Site boundary, except for a part of the area on the southwest side of the Application Site. No openings, such as windows or doors, for noise-sensitive uses will be proposed within this area (shown in **Figure 3.1**).

3.3.4 Based on the tentative completion date of the proposed residential development (year 2028), traffic forecast for the year 2043 on the road carriageways situated in the vicinity of the Application Site was provided by the Traffic Consultant, CTA Consultants Limited for the prediction of the worst-case traffic noise impact within 15 years from the completion of the development. The projected traffic flows and vehicle composition are shown in **Appendix 3-1.**

3.3.5 The road surfacing type of all the carriageways within 300m assessment area of the Application Site is assumed impervious. Speed limit of 50 km/hr is assumed for all roads.

3.4 Noise Sensitive Receivers

3.4.1 As the layout of the proposed development has not been confirmed yet, representative NSRs have been selected to represent the noise sensitive uses of the proposed development, which are at the location worst affected by road traffic noise in this assessment. All assessment points were taken at 1.2 m above the floor and 1 m away from the façade of openable windows or doors of rooms of sensitive uses (e.g. living room, bedroom).

3.4.2 **Figure 3.1** illustrates the locations of the selected representative NSRs for road traffic noise impact assessment.

3.5 Assessment Result (Base Scenario)

3.5.1 The predicted road traffic noise levels on the selected representative NSRs based on the development scheme without any noise mitigation measures were assessed.

3.5.2 According to the assessment result under base case scenario as presented in **Appendix 3-2**, full compliance of road traffic noise standard is achieved.

3.6 Conclusion

3.6.1 Road traffic noise impact assessment has been carried out by selecting representative NSRs to represent the noise sensitive uses of the proposed development, which are at the location worst affected by road traffic noise.

3.6.2 Based on the road traffic noise impact assessment results, the road traffic noise level complies with relevant standards. Therefore, no adverse noise impact is anticipated. As mentioned above, the representative NSRs have been selected to represent the noise sensitive uses of the proposed development, which are at the location worst affected by road traffic noise. As long as the NSRs of the future layout will not located closer to the road, the NSRs will not be subject to advise road traffic noise impact.

4. CONCLUSION

4.1.1 The environmental air quality and noise impacts have been assessed in this report with respect to the Proposed Scheme which is residential in nature.

Air Quality

4.1.2 For air quality, no chimney stacks were identified within the 200m assessment area.

4.1.3 The buffer distance requirement is fulfilled. Therefore, no adverse vehicular emission impact on the Proposed Scheme is anticipated.

4.1.4 The proposed residential development is not air polluting in nature so that no adverse air quality impact due to its future operation is anticipated.

4.1.5 Based on the mentioned, no adverse air quality impact on or arising from the Proposed Scheme is anticipated.

4.1.6 Among the Proposed Scheme, only residential dwelling will rely on openable window for natural ventilation while other uses (Common Facilities) will be provided with centralized air conditioning.

Road Traffic Noise

4.1.7 The worst-case scenario has been considered for this project. Based on the road traffic noise impact assessment results, the road traffic noise levels comply with relevant standards, and no adverse road traffic noise impact is predicted.

Figures

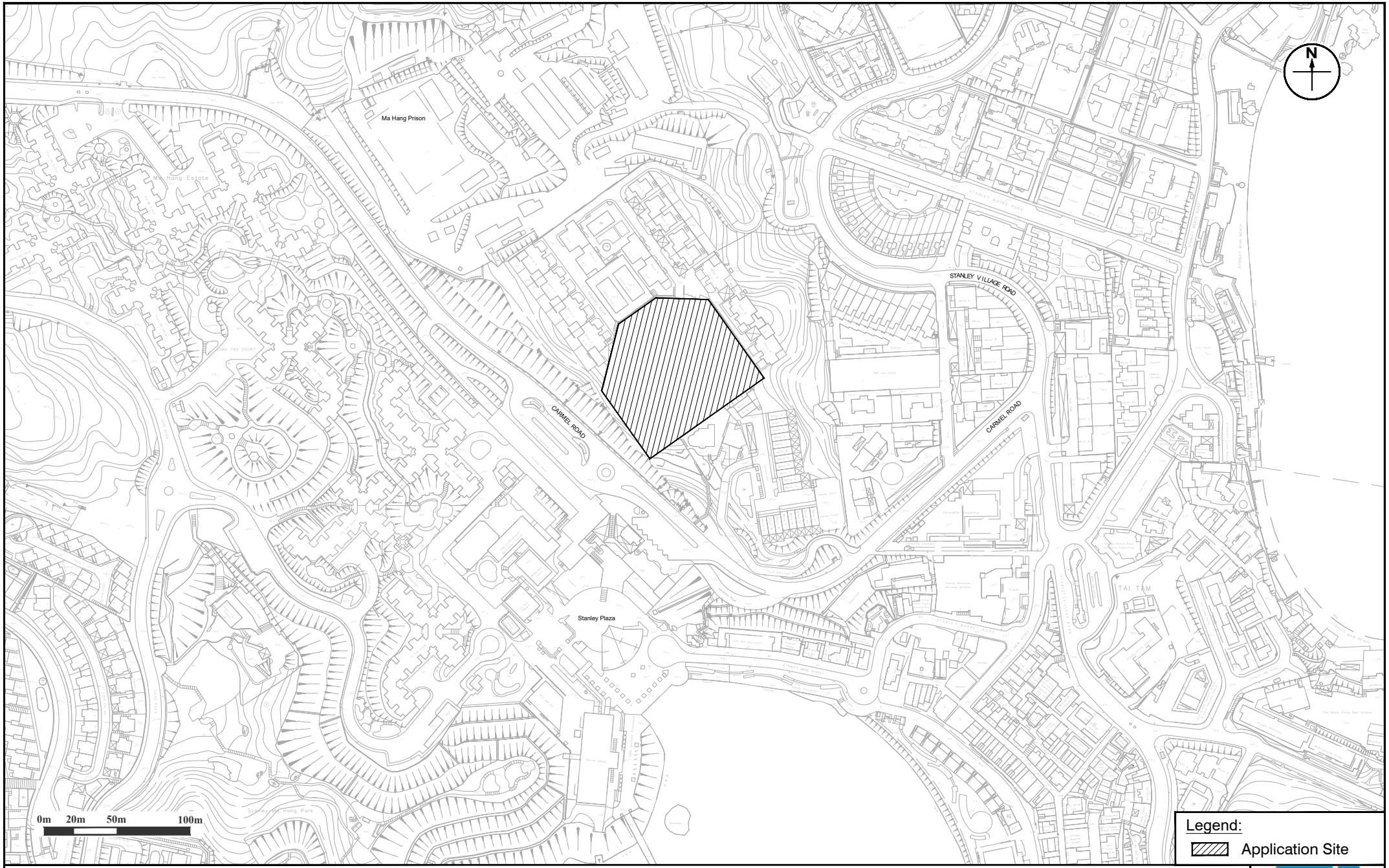

Figure: 1.1

Title: Location of the Application Site and its Environ

Project: Section 16 Planning Application for the Preservation and Revitilisation of Maryknoll House, Stanley, Hong Kong

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Checked by:	BF
Rev.:	1.0
Date:	Jul 2024

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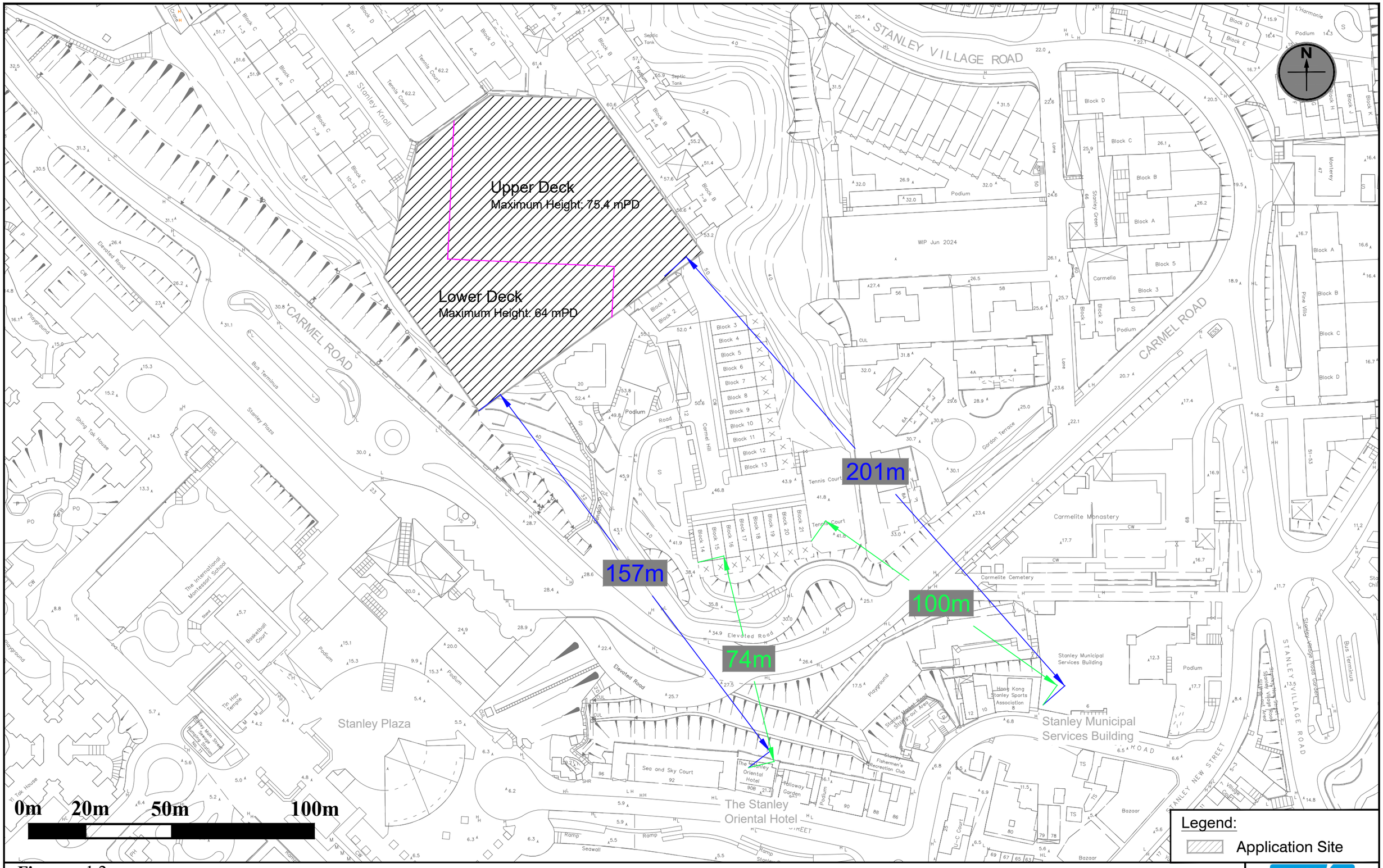

Figure: 1.2

Title: Locations of Identified Fixed Noise Sources

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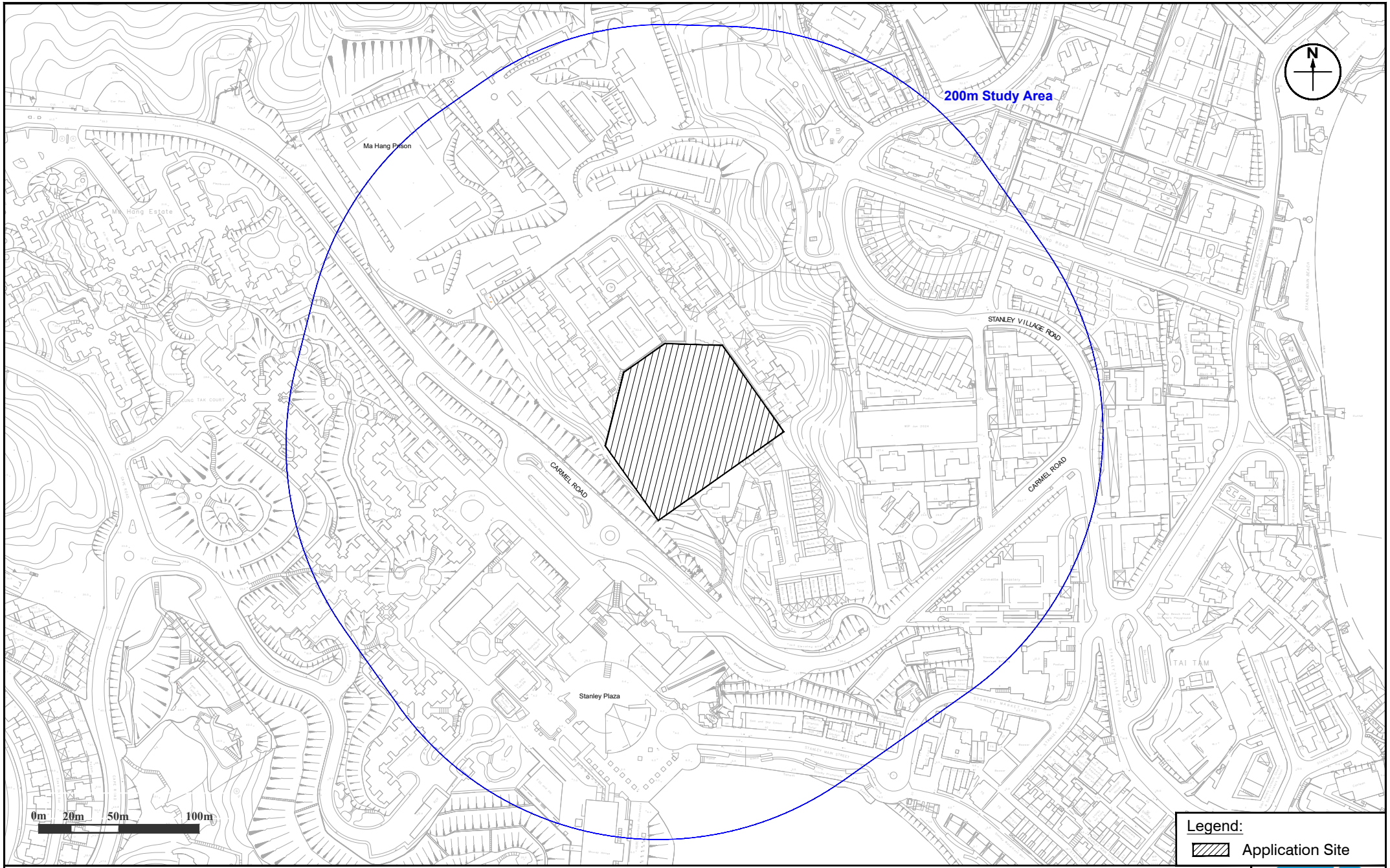

Figure: 2.1

Title: 200m Study Area from the Boundary of the Application Site

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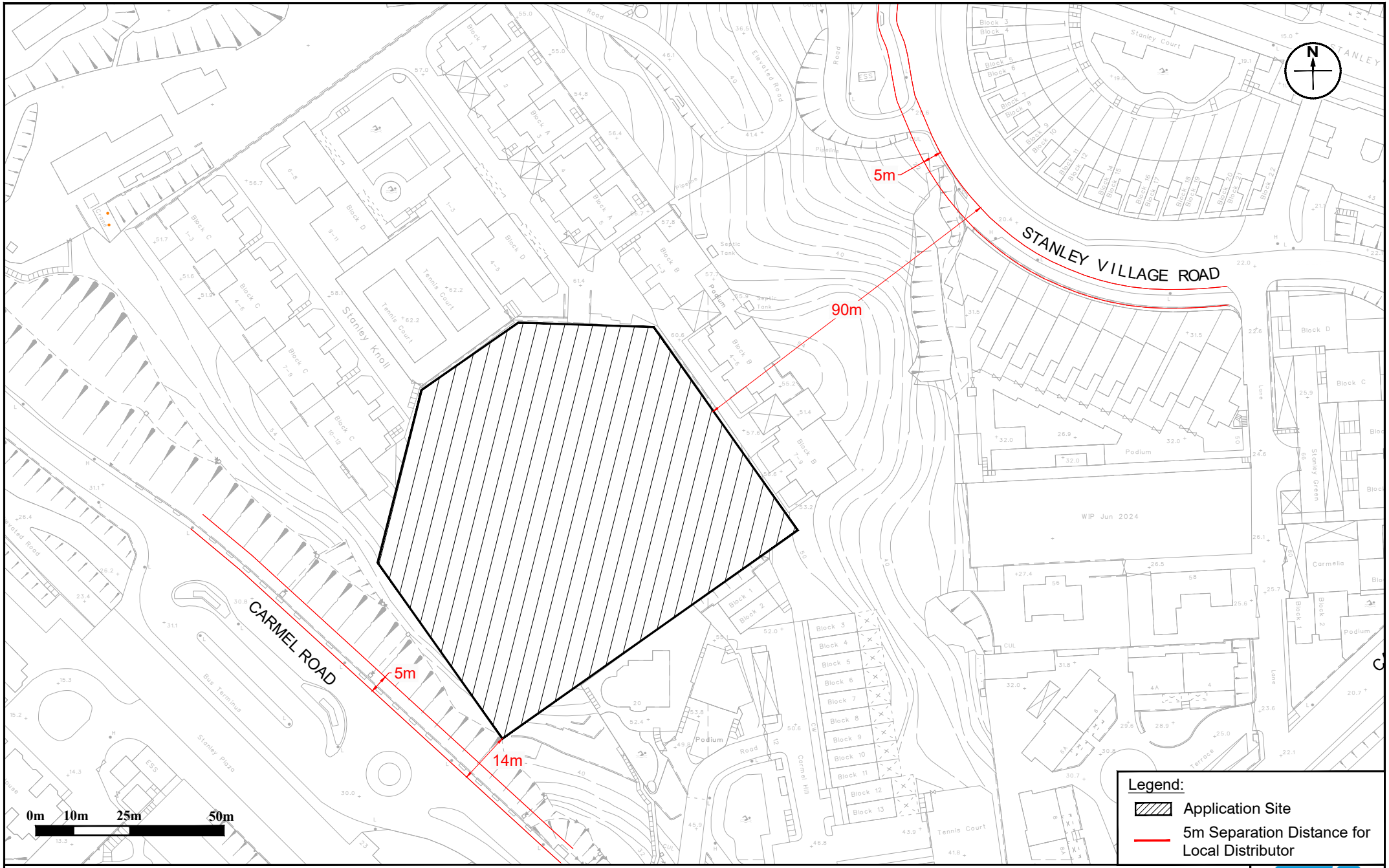

Figure: 2.2

Title: Buffer Distances from Kerb Side of Road Carriageways

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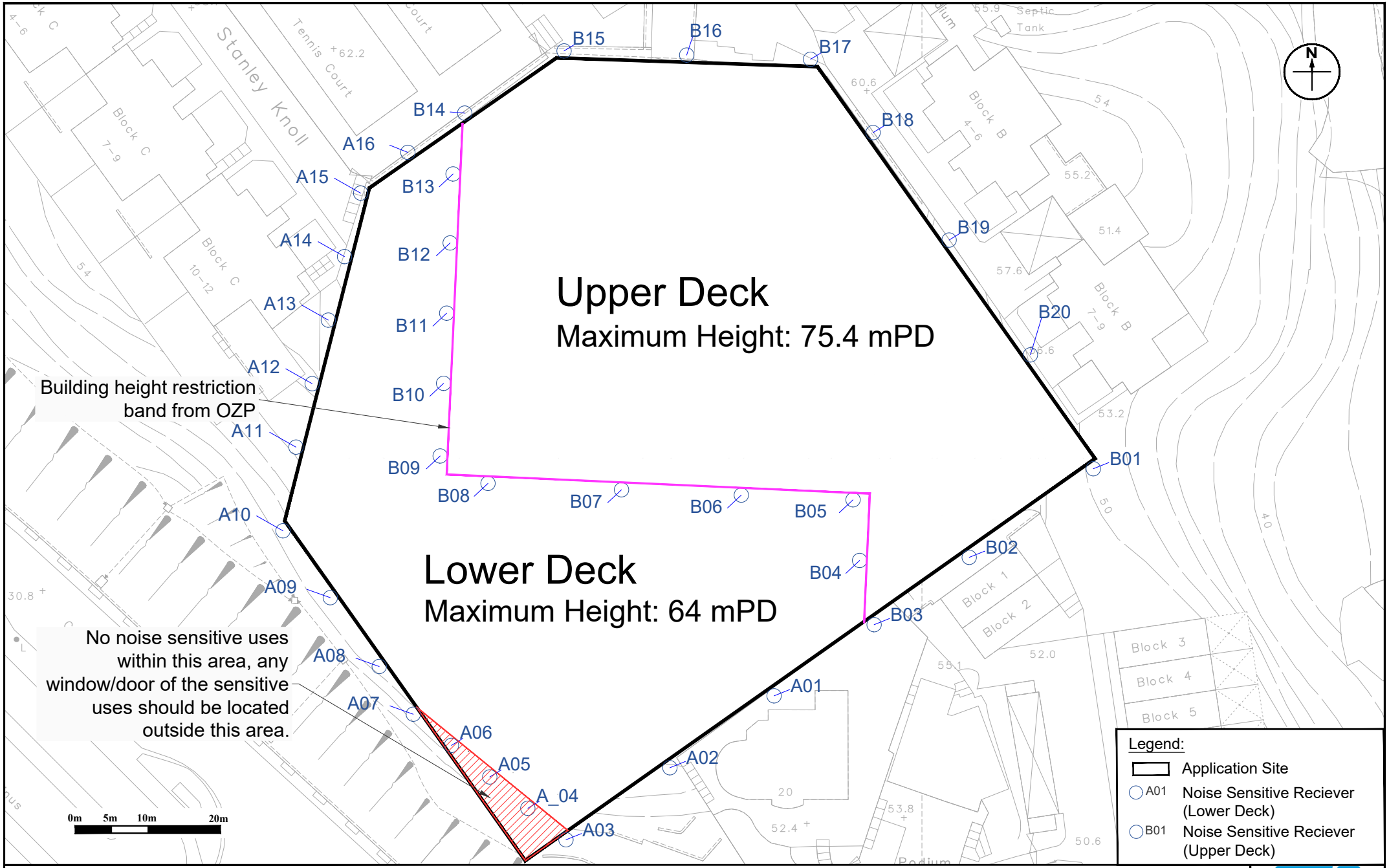

Figure: 3.1	RAMBOLL
Title: Locations of Representative Noise Sensitive Receivers for Road Traffic Noise Impact Assessment	Drawn by: MW
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Project: Section 16 Planning Application for the Preservation and Revitilisation of Maryknoll House, Stanley, Hong Kong	Rev.: 1.0
	Date: Jul 2024

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Appendix 1-1 Indicative Master Layout Plan of the Proposed Scheme

MARYKNOLL BUILDING, STANLEY
MASTER LAYOUT PLAN

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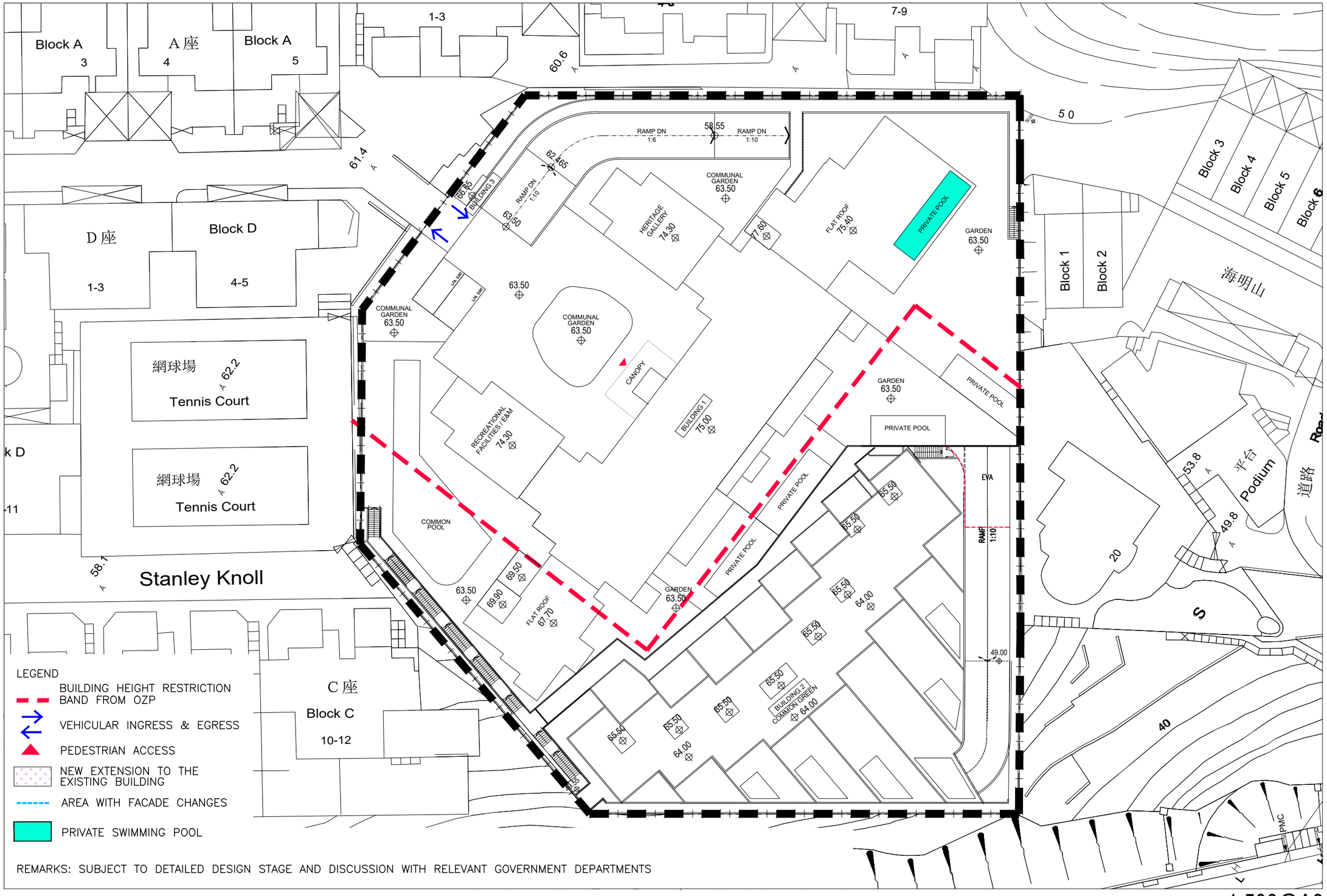

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MARYKNOLL BUILDING, STANLEY
SECTION A

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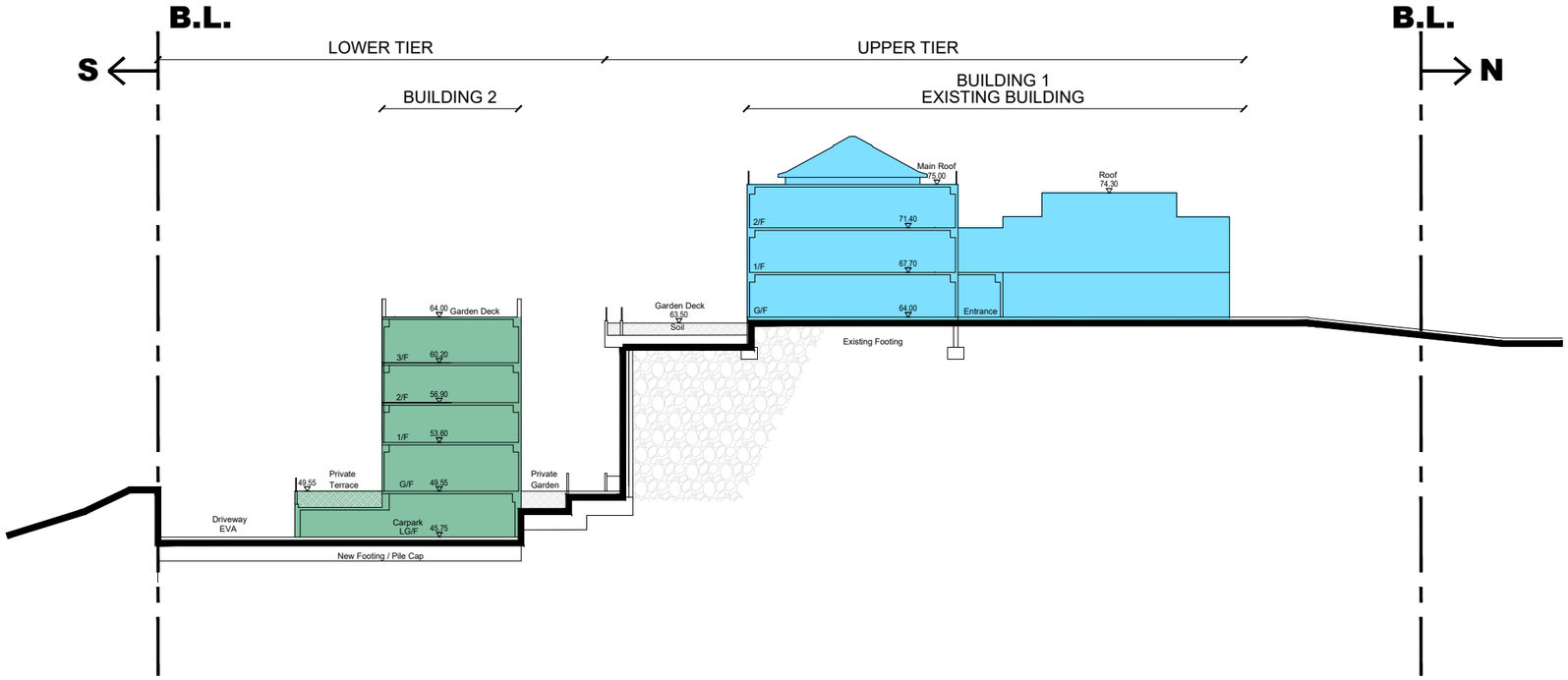

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MARYKNOLL BUILDING, STANLEY
SECTION B

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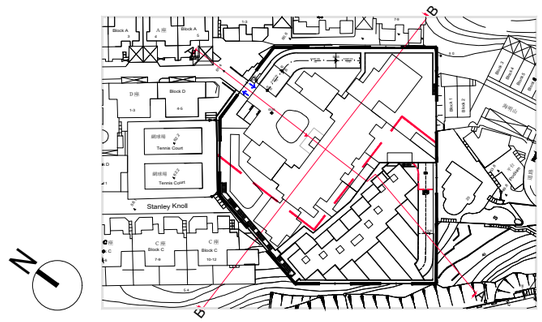

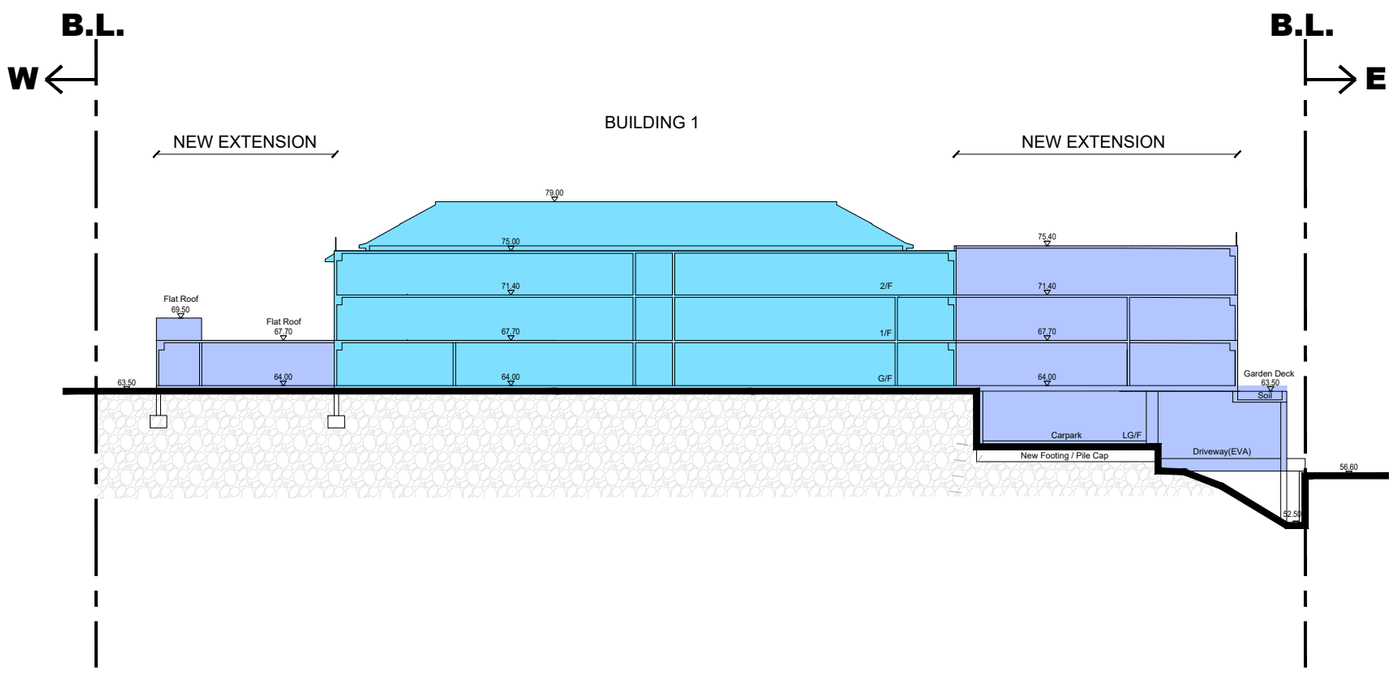

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Appendix 3-1 Year 2043 Traffic Forecast

2043 Traffic Forecasts for Traffic Noise Impact Assessment 17-Jul-24

Preliminary Result

Road Link	Road Name	Direction	Road Speed	AM Peak		PM Peak	
				2043 Peak Hour Traffic Flows	% of HV(1)	2043 Peak Hour Traffic Flows	% of HV(1)
1	Carmel Road	EB	50	220	37%	190	36%
2	Carmel Road	WB	50	220	34%	180	47%
3	Carmel Road	EB	50	240	37%	210	39%
4	Carmel Road	WB	50	200	51%	170	39%
5	Carmel Road	EB	50	240	37%	210	39%
6	Carmel Road	WB	50	200	51%	170	39%
7	Carmel Road	EB	50	240	37%	210	39%
8	Carmel Road	WB	50	200	51%	170	39%
9	Access Road	SB	50	20	10%	20	10%
10	Carmel Road	EB	50	240	37%	210	39%
11	Carmel Road	WB	50	200	51%	170	39%
12	Stanley Village Road	WB	50	510	20%	430	14%
13	Stanley Village Road	EB	50	470	17%	230	17%
14	Stanley Village Road	WB	50	510	20%	430	14%
15	Stanley Village Road	EB	50	470	17%	230	17%
16	Access Road	2-way	50	30	14%	20	10%
17	Stanley Village Road	NB	50	520	20%	440	14%
18	Stanley Village Road	SB	50	470	17%	230	17%
19	Stanley Village Road	NB	50	490	19%	400	14%
20	Stanley Village Road	SB	50	490	17%	250	16%
21	Stanley Mound Road	EB	50	30	26%	40	14%
22	Stanley Beach Road	SB	50	200	34%	130	32%
23	Stanley Village Road	SB	50	530	23%	240	27%
24	Stanley Village Road	NB	50	570	24%	460	19%
25	Stanley New Street	2-way	50	140	10%	160	10%
26	Stanley Market Road	2-way	50	140	10%	160	10%
27	Stanley Market Road	2-way	50	140	10%	160	10%
28	Stanley New Street	2-way	50	10	10%	10	10%
29	Stanley Village Road	NB	50	410	20%	300	13%
30	Stanley Village Road	SB	50	590	23%	230	28%
31	Stanley Village Road	NB	50	430	20%	320	13%
32	Stanley Village Road	SB	50	570	23%	210	28%
33	Stanley Beach Road	SB	50	200	34%	130	32%
34	Cape Road	NB	50	220	37%	190	36%
35	Cape Road	SB	50	220	34%	180	47%

Notes:

(1) Including private light buses, public light buses, medium/heavy goods vehicles, non-franchised buses, single deck franchised bues and double deck franchised buses

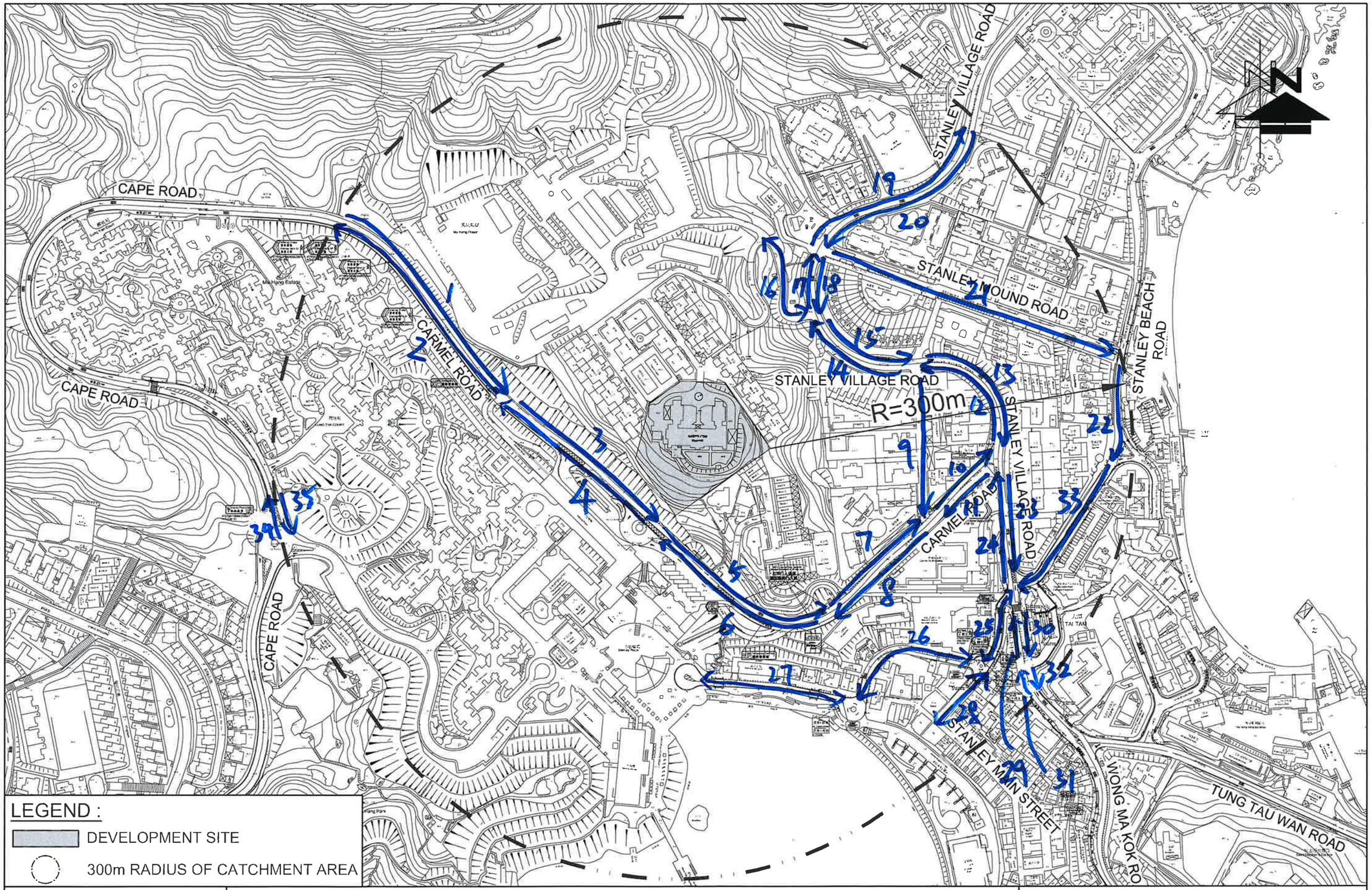

FIGURE NO.: 1	PROJECT TITLE: Section 16 Planning Application for Minor Relaxation of Plot Ratio, Building Height & Site Coverage Restrictions for Proposed Residential Development at 44 Stanley Village Road, Hong Kong
PROJECT NO.: 24048HK	DRAWING TITLE: - Index Plan
SCALE: 1 : 4100 @A4 / DATE: 11 JUL 2024	CTA Consultants Limited 志達顧問有限公司

Appendix 3-2 Results of Road Traffic Noise Impact Assessment (Base Case Scenario)

Predicted Road Traffic Noise Level (L10, dB(A)) at Representative Noise Sensitive Receivers (AM Peak)

Base Case

Lower Deck																	
Floor	mPD	A01	A02	A03	A04	A05	A06	A07	A08	A09	A10	A11	A12	A13	A14	A15	A16
LGF	45.8	58	63	69	69	68	68	68	68	68	68	65	64	60	55	54	54
GF	49.6	59	65	70	70	70	69	69	69	68	68	66	65	61	56	55	55
1F	53.6	60	66	70	70	70	70	70	70	69	69	67	65	62	57	55	55
2F	56.9	60	67	70	70	70	70	70	70	69	69	67	66	63	58	56	56
3F	60.2	61	67	70	70	70	70	70	70	69	69	68	66	64	59	57	57
Exceedance		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Upper Deck																					
Floor	mPD	B01	B02	B03	B04	B05	B06	B07	B08	B09	B10	B11	B12	B13	B14	B15	B16	B17	B18	B19	B20
GF	64.0	58	57	61	60	60	60	63	65	65	64	62	60	59	57	58	53	58	61	54	56
1F	67.7	60	59	62	60	60	61	64	66	66	64	63	61	59	58	59	54	59	61	56	60
2F	71.4	61	60	62	61	61	62	64	66	66	65	63	61	60	59	59	56	60	62	59	62
Exceedance		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Predicted Road Traffic Noise (L10, dB(A)) at Representative Noise Sensitive Receivers (PM Peak)

Base Case

Lower Deck																	
Floor	mPD	A01	A02	A03	A04	A05	A06	A07	A08	A09	A10	A11	A12	A13	A14	A15	A16
LGF	45.8	57	62	68	68	67	67	67	67	67	67	65	63	59	54	52	53
GF	49.6	58	64	69	69	69	68	68	68	67	67	65	64	60	55	53	53
1F	53.6	59	65	69	69	69	69	69	69	68	68	66	64	61	56	54	54
2F	56.9	59	66	69	69	69	69	69	69	68	68	66	65	62	57	55	54
3F	60.2	60	66	69	69	69	69	69	69	68	68	67	65	63	58	55	55
Exceedance		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Upper Deck																					
Floor	mPD	B01	B02	B03	B04	B05	B06	B07	B08	B09	B10	B11	B12	B13	B14	B15	B16	B17	B18	B19	B20
GF	64.0	57	56	60	59	59	59	62	64	64	63	61	59	57	56	56	52	56	59	53	54
1F	67.7	58	57	60	59	59	60	63	64	65	63	62	60	58	56	57	53	57	59	54	58
2F	71.4	60	59	61	60	60	61	63	65	65	64	62	60	59	57	57	54	58	59	57	60
Exceedance		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0