Appendix F
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MA WAN PARK PHASE II - S.16 APPLICATION FOR PROPOSED SHORT-TERM ACCOMMODATION IN THE RESTYLED MA WAN VILLAGE

PRELIMINARY ENVIRONMENTAL REVIEW



# MA WAN PARK PHASE II - S.16 APPLICATION FOR PROPOSED SHORT-TERM ACCOMMODATION IN THE RESTYLED MA WAN VILLAGE

#### **ENVIRONMENTAL REVIEW**

Revision 0

Date 10/12/2024

Prepared by

Approved by Tony Cheng

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Ramboll Hong Kong Limited 21/F, BEA Harbour View Centre 56 Gloucester Road, Wan Chai, Hong Kong T +852 3465 2888 F +852 3465 2899

www.ramboll.com



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# 1.0 BACKGROUND

#### 1.1 Introduction

- 1.1.1 Under the Approved MLP, various uses have already been allowed in the Restyled Ma Wan Village to enrich visitors' experience, including 'Eating Place', 'Shop and Services', 'Place of Recreation, Sports or Culture', 'Open Space', 'Amenity Planting' and 'Holiday Camp'. These cover various facilities, such as antique shops, shops, artists' village, forest retreat, food & beverage, museum & craft workshops, fine dining & specialty, and the traditional village, etc, as originated from earlier approved schemes. Various technical assessments have already been conducted under earlier approved schemes to demonstrate the technical feasibility of the Restyled Ma Wan Village. The Restyled Ma Wan Village is already under implementation.
- 1.1.2 Given that there are no changes to the proposed GFA and other development parameters under the current planning application, but only to broaden the uses allowed in the Restyled Ma Wan Village (i.e. 'Hotel (Holiday House)' for guesthouse / short-term accommodation purpose and 'Place of Entertainment' for more innovative types of arts operation), it is anticipated that there would not be any insurmountable problems for the proposed amendments to the Approved MLP to allow greater flexibility in future operation of the Restyled Ma Wan Village."
- 1.1.3 Ramboll Hong Kong Limited is commissioned by the Project Proponent to carry out this environmental review to address the potential environmental impacts upon this proposed conversion use.

### 1.2 The Ma Wan Park Development

- 1.2.1 The proposed Ma Wan Park development is situated on Ma Wan Island to the north of the existing Lantau Link. To the north are the areas proposed for the new village development and residential development. A slip-road to and from the existing Lantau Link will extend to the east of the site. The eastern boundary of the proposed development extends to Tung Wan Beach. The latest Master Layout Plan of the Ma Wan Park development is presented in **Figure 1-1** for reference.
- 1.2.2 In addition to the new village and residential development (Park Island), there is an existing camp site occupied by the Salvation Army. The Ma Wan Park development has been designed on the basis that these two facilities will be independently retained.
- 1.2.3 The retained village houses east of the Solar Tower and Exhibition Centre is used for Short-term Accommodation. The Noah's Ark, the exhibition centre plus short-term accommodation, is located east of the Ma Wan Park.
- 1.2.4 The old Ma Wan village houses, southwest of the Ma Wan Park along the waterfront of the Kung Tsai Wan are designed for art and exhibition use under the current MLP.

### 1.3 Environmental Appraisal

- 1.3.1 **Figure 1-1** also shows the location of the restyled village houses.
- 1.3.2 All the restyled village houses are connected with sewerage network of the Ma Wan Park. Therefore, there should not have any potential water quality impact due to the proposed uses. Sewage impact assessment is carried out in a separate report.
- 1.3.3 All the restyled village houses are located more than 230m from the Lantau Link. The required HKPSG buffer for Trunk Road with 20m is fulfilled. Also, there is no public road connected to these houses. There would not have any adverse air quality impact upon the restyled village houses.



1.3.4 Although air conditioning system will be provided, the visitors of the restyled village houses during short accommodation use may still open the window, and so the occupants may be subject to noise impact. The review of the noise impacts due to different sources will be discussed in the following sections.

# 2.0 RAIL NOISE IMPACT ASSESSMENT

#### 2.1 Relevant Legislation and Standards

#### **Noise Control Ordinance (NCO)**

2.1.1 The Noise Control Ordinance (NCO) provides the statutory controls to restrict and reduce the nuisance caused by environmental noise. The Technical Memorandum for the Assessment of Noise from Places other than Domestic Premises, Public Places or Construction Sites (IND-TM) details the procedures for the measurement and assessment of noise emanating from places other than domestic premises, public places or construction sites. The potential rail noise impact on the noise sensitive receivers (NSR) which rely on opened windows for ventilation within the boundary of the proposed Ma Wan Park development shall comply with the Acceptable Noise Level (ANL) laid down in Table 2 of IND-TM.

## Hong Kong Planning and Standards and Guidelines (HKPSG)

2.1.2 Noise standards are recommended in Chapter 9 of the HKPSG for planning against possible rail traffic noise impacts. For domestic premises use which rely on opened windows for ventilation planned to be within the proposed Ma Wan Park development, the standard for rail noise level expressed in terms of  $L_{eq(24\ hour)}$  and  $L_{max(2300-0700)}$  is recommended not to exceed 65 dB(A) and 85 dB(A) respectively for new dwellings.

#### 2.2 Area Sensitivity Rating for Noise Sensitive Receivers

- 2.2.1 IND-TM under NCO stipulates the compliance with objective technical criteria in the form of ANL for a particular NSR. The determination of an appropriate ANL is dependent upon the type of the area within which the NSR is situated, that is determined by the Area Sensitivity Rating (ASR), and the time of day under consideration.
- 2.2.2 The restyled Ma Wan Village houses are located within the boundary of the proposed Ma Wan Park development and is proposed to be used for short-term accommodation use. Though air-conditionings would be provided for these village houses, they can still rely on opened windows for ventilation and therefore is considered to be sensitive to rail noise impact arising from the running trains of the Tung Chung Line (TCL) and Airport Express Line (AEL) of Mass Transit Railway (MTR) Corporation along the Lantau Link. In view of the nearest NSR which would rely on opened windows for ventilation to the TCL and AEL, N1 is selected as the representative NSR as shown in **Figure 3-1** for the rail noise impact assessment.
- 2.2.3 In determining the ANL of the area containing the concerned NSRs, ASR of Category B has been chosen which is the category for low density residential area consisting of low-rise or isolated high-rise developments in Ma Wan Island and indirectly affected by an influencing factor, which is the Lantau Link for the subject case (refer to **Table 3-1**). Thus, 65 dB(A) for daytime and evening time, and 55 dB(A) for night-time should be the appropriate ANLs for the NSR determined from Table 2 of IND-TM (refer to **Table 3-2**).



Table 1-1 Area Sensitivity Ratings (ASRs)<sup>1</sup>

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

Table 3-2 Acceptable Noise Level (ANL)<sup>2</sup>

	ASR		
Area Sensitivity Ratings in relevant Time Periods	A	В	C
Day (0700 to 1900 hours)	60	65	70
Evening (1900 to 2300 hours)	00	03	/0
Night (2300 to 0700 hours)	50	55	60

#### 2.3 Noise Sensitive Receiver

- 2.3.1 The current planning application is to explore the feasibility to adopt short term accommodation use at the existing restyled village houses. Although these existing village houses will be equipped with air conditioning system for short term accommodation use like hostel/hotel use, the tourists may still open the windows for enjoying the view. These short-term accommodation houses would be considered as noise sensitive receivers.
- 2.3.2 Figure 2.1 shows the location of the restyled village houses. The nearest house (N1) is selected as the representative noise sensitive receiver. The shortest horizontal distance from this house to the railway track is about 238m.

#### 2.4 Operation information of the Railway

2.4.1 The operation details, including the SEL source term of TCL and AEL as presented in the recently approved EIA report for Tung Chung Line Extension (TCL Extension EIA; AEIAR-235/2022) are adopted in the assessment. These are shown in **Table 3-3**.

<sup>&</sup>lt;sup>2</sup> Table 2 of the Technical Memorandum for the Assessment of Noise from Places other than Domestic Premised, Public Places or Construction Sites



<sup>&</sup>lt;sup>1</sup> Table 1 of the Technical Memorandum for the Assessment of Noise from Places other than Domestic Premised, Public Places or Construction Sites

Table 3-3 Operation details of TCL and AEL<sup>3</sup>

Operation Parameter	Train Type		
Operation I arameter	TCL	AEL	
Maximum Train Length, m	184.2	184.2	
No. of car	8	8	
Headway per 30 minutes (both	16 (daytime and evening time) /	8 (daytime and evening time) /	
direction)	8 (night-time)	8 (night-time)	
Maximum SEL for 1 car at 25m at 135 km/h, dB(A)	81.9	81.9	
Maximum SEL for 8 cars at 25m at 135 km/h, dB(A)	90.9	90.9	

2.4.2 Both TCL and AEL are running in the same track underneath the Tsing Ma Bridge. Below is the photo of the railway track under the bridge taking from the location in front of the Restyled village houses. In general, there is no line of sight from the village houses to the train travelling along the track.



## 2.5 Railway Noise Impact Review

- 2.5.1 With the enclosed railway, there is no line of sight from the restyled village houses to the travelling of the TCL and AEL. The buffer distance from the nearest village houses to the TCL and AEL is more than 230m.
- 2.5.2 During the site visit, no noticeable railway noise was heard at the village houses.
- 2.5.3 With the no line of sight and long buffer distance, it is considered the future user of the short-term accommodation at the village houses would not be subject to adverse railway noise impact.

<sup>&</sup>lt;sup>3</sup> Table 4.6.3 and 4.6.4 of the Environmental Impact Assessment Report for Tung Chung Line Extension (AEIAR-235/2022)



# 3.0 AIRCRAFT NOISE IMPACT

## 3.1 Relevant Legislation and Standards

#### Hong Kong Planning and Standards and Guidelines (HKPSG)

3.1.1 Noise criteria for evaluating aircraft noise impact of various land uses are recommended in Chapter 9 of the HKPSG for planning against possible aircraft noise impacts. Aircraft noise standards for planning purposes for various land uses are expressed in terms of Noise Exposure Forecast (NEF). Table 4.1 of HKPSG laid down the noise criteria for various land uses, considering NEF noise contour increments of 25 or 30 NEF. For domestic premises use which rely on opened windows for ventilation, as in the case of the proposed Ma Wan Park development within the boundary, NEF25 contours shall be adopted for aircraft noise criterion.

## 3.2 Assessment Methodology

3.2.1 The Three Runway System Environmental (3RS) Impact Assessment Report (AEIAR-185/2014) (3RS EIA) predicted the NEF25 contours for the concerned areas, three various scenarios have been studied to project the future aircraft noise impact based on the operation mode of the Hong Kong International Airport at Chek Lap Kok. The three scenarios include:

Scenario 1 – Worst Operation Mode (i.e., Year 2030) represents the maximum aircraft noise emission associated with the worst operation mode that is expected to occur within the period when the 3RS commences operation to the year the 3RS reaches and operates at full capacity.

Scenario 2 – Interim Phase (i.e., Year 2021) represents the maximum aircraft noise emission scenario during the interim phase period.

Scenario 3 – Design Capacity (i.e., Year 2032) represents the maximum aircraft noise emission during the full operation at the design capacity of the 3RS.

3.2.2 Table 7.3.19 of the 3RS EIA (refer to **Table 4-1**) tabulated the approximate NEF range at Ma Wan is <25 under Scenario 1, Scenario 2 and Scenario 3, implying Ma Wan is generally close to but outside NEF25 under the three scenarios. The NEF25 contours (green line) under three different scenarios retrieved from the 3RS EIA are given in **Appendix A**.

Table 4-1 Approximate NEF Range at Concerned Areas under Future Scenarios<sup>4</sup>

Concerned Area	Scenario 1 NEF range	Scenario 2 NEF range	Scenario 3 NEF range
Ma Wan	<25	<25	<25

#### 3.3 Assessment Result

3.3.1 With reference to the 3RS EIA Report, the proposed NSRs within the boundary of the proposed Ma Wan Park development are outside the NEF 25 contours under different scenarios. Thus, any NSRs proposed within the Ma Wan Park development would not subject to adverse aircraft noise impact.

<sup>4</sup> Table 7.3.19 of the Three Runway System Environmental Impact Assessment Report (AEIAR-185/2014)



# 4.0 FIXED NOISE IMPACTS

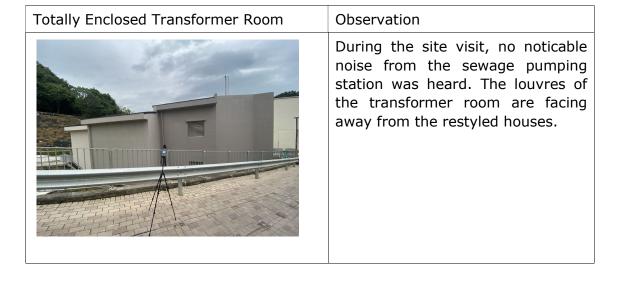
#### 4.1 Introduction

- 4.1.1 The current planning application is to explore the feasibility of convert the restyled village houses for short term accommodation use.
- 4.1.2 From the master layout plan, there are two new fixed noise sources, i.e. an enclosed Transformer Room and an enclosed sewage pumping station, located to close the stylised village houses. The location of the new transformer and sewage pumping station is shown in **Figure 4.1**.
- 4.1.3 The operation of these fixed noise sources may have potential noise impact up on the restyled village houses.

## 4.2 Site Visit

4.2.1 Site visit was carried out on 13 Nov 2024. Below are photos of the two fixed noise sources.

Totally Enclosed Sewage Pumping Station	Observation
	During the site visit, no noticable noise from the sewage pumping station was heard. The louvres of the pumping station are facing away from the restyled houses.



### 4.3 Fixed Noise Review Appraisal

- 4.3.1 Site visit was carried out on 13 Nov 2024. During the site visit, no noticeable noise was heard from these noise source. It is considered that the operation noise would not have any significant impact to the surrounding uses.
- 4.3.2 If the stylized village houses are used for short term accommodation, they will be equipped with airconditioning system. Under normal operation, the occupants usually close the window. In addition,
  the louvres of these infrastructure are located away from the stylized village houses. The visitors of
  the stylized village house for short term accommodation would not be subject to any adverse noise
  impact.



# 5.0 TRAFFIC NOISE IMPACTS

## 5.1 Traffic Noise Impact from the Lantau Link

- 5.1.1 Apart from railway noise impact that has been assessed in Section 3, vehicular related noise impact from the Lantau Link has been considered. Principally, Ma Wan Island will not be adversely affected due to the large horizontal separation between the Lantau Link and the proposed Ma Wan Park development on Ma Wan Island. The distance between the nearest restyled village houses and the Lantau Link is approximately 230m and below the Lantau Link. The bridge structure would act as a barrier to further reduce the traffic noise from reaching the restyled village houses. In addition, air conditioning system will be provided for the restyled village houses, and under normal operation, the window will be closed. These NSRs, hence, would not subject to any unacceptable traffic noise impact.
- 5.1.2 Figure 5-1 shows the location of the Lantau Link and the nearest Restyled Village House which are proposed to be used for short term accommodation.



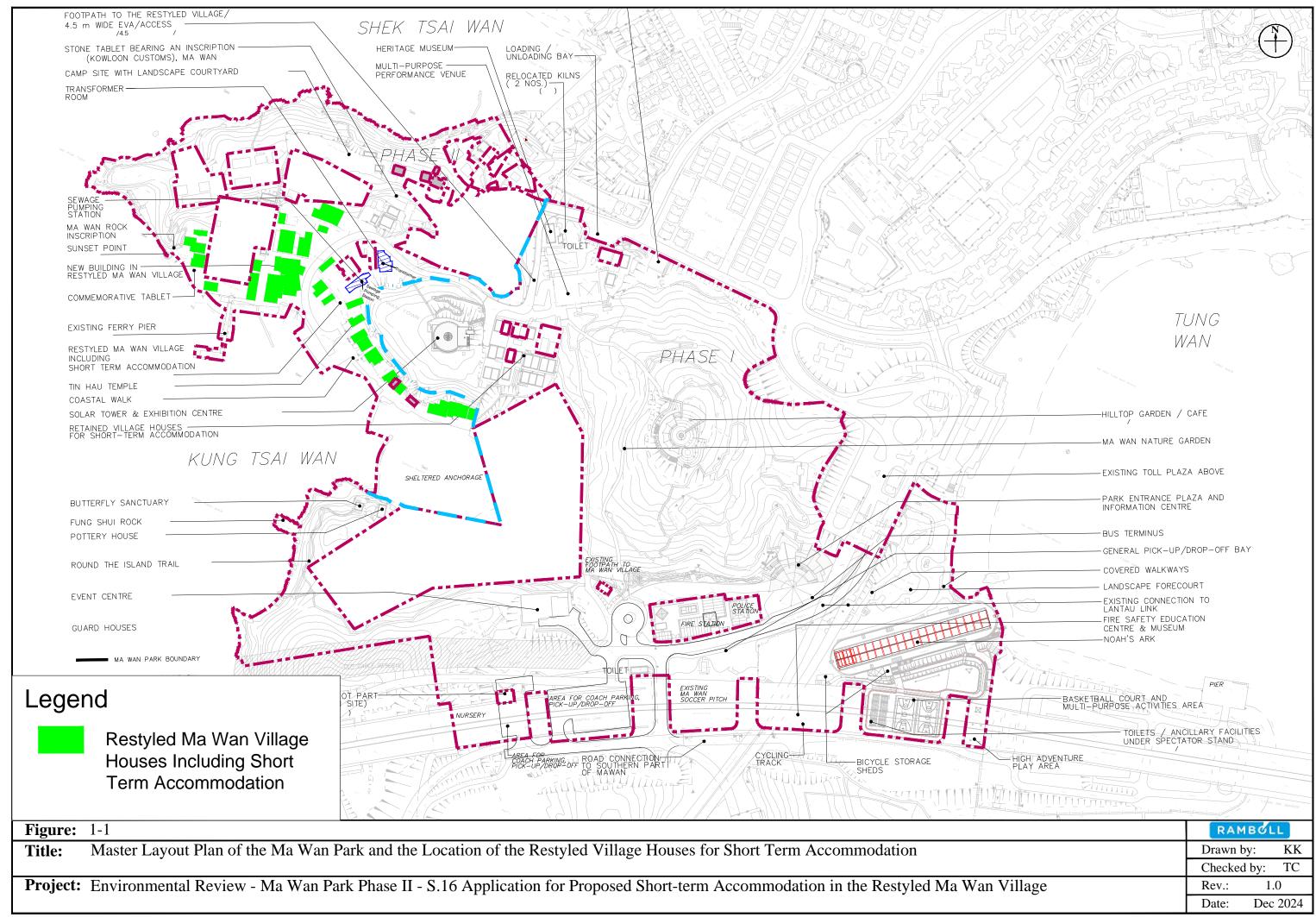
# 6.0 OVERALL ASSESSMENT CONCLUSIONS

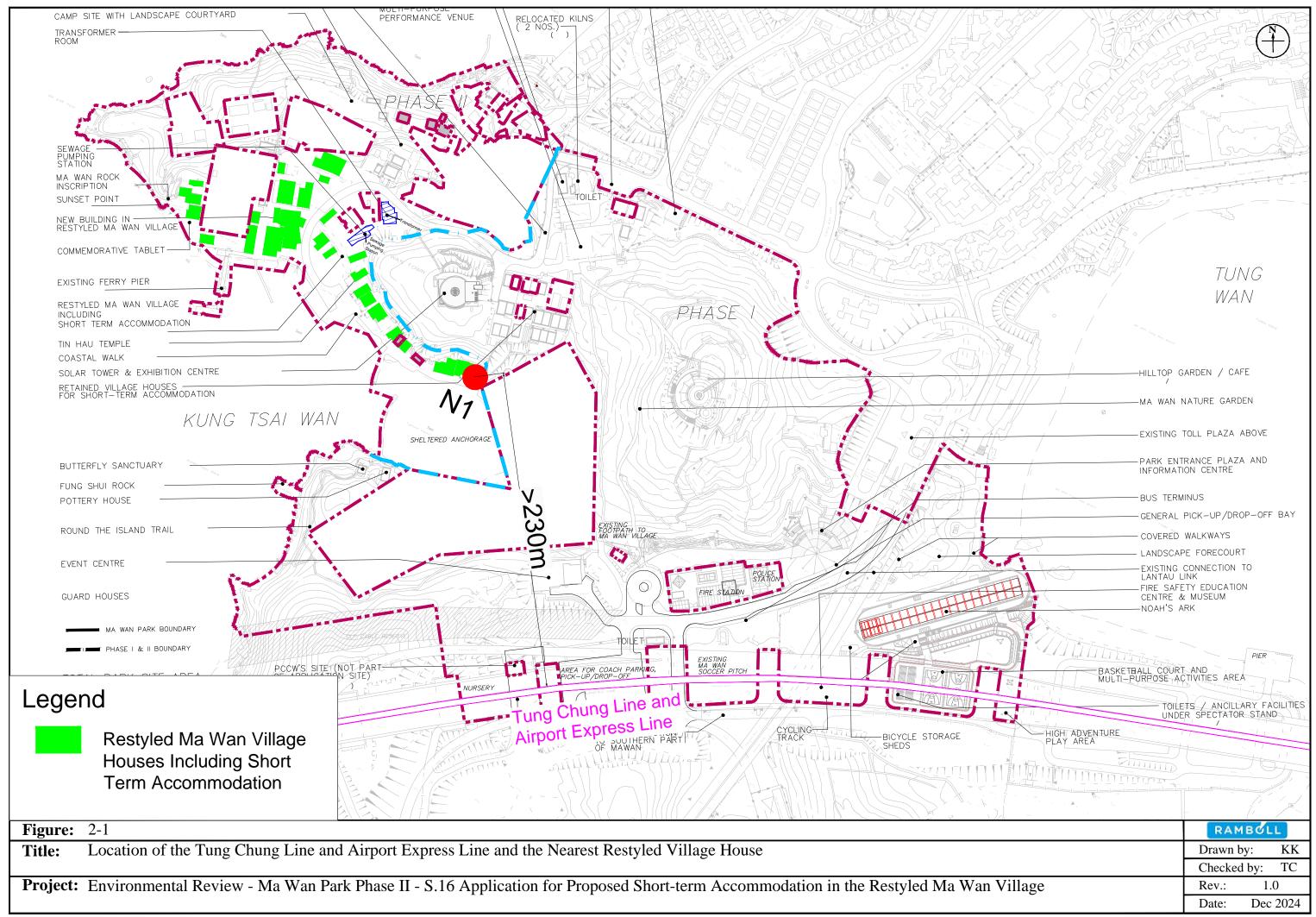
- 6.1.1 An Environmental Review for the proposed short accommodation uses at the restyled village houses at Ma Wan Park development on Ma Wan Island has been conducted. This assessment aims to provide a qualitative review of this proposed use from an environmental point of view.
- 6.1.2 All the restyled village houses are connected with sewerage network of the Ma Wan Park. Therefore, there should not have any potential water quality impact due to the proposed uses. Sewage impact assessment is carried out in a separate report.
- 6.1.3 All the restyled village houses are located more than 230m from the Lantau Link. The required HKPSG buffer for Trunk Road with 20m is fulfilled. Also, there is no public road connected to these houses. There would not have any adverse air quality impact upon the restyled village houses.
- 6.1.4 Although air conditioning system will be provided, the visitors of the restyled village houses during short accommodation use may still open the window, and so the occupants may be subject to noise impact.
- 6.1.5 Noise impacts upon the restyled village houses for short term accommodation use in terms of rail noise, aircraft noise, fixed noise and traffic are found to be insignificant and shall be within an acceptable level.
- 6.1.6 Environmental impact upon the short term accommodation use at the restyled village houses had been studied. No adverse environmental impact is anticipated, and it is feasible for the proposed use from the environmental aspects.

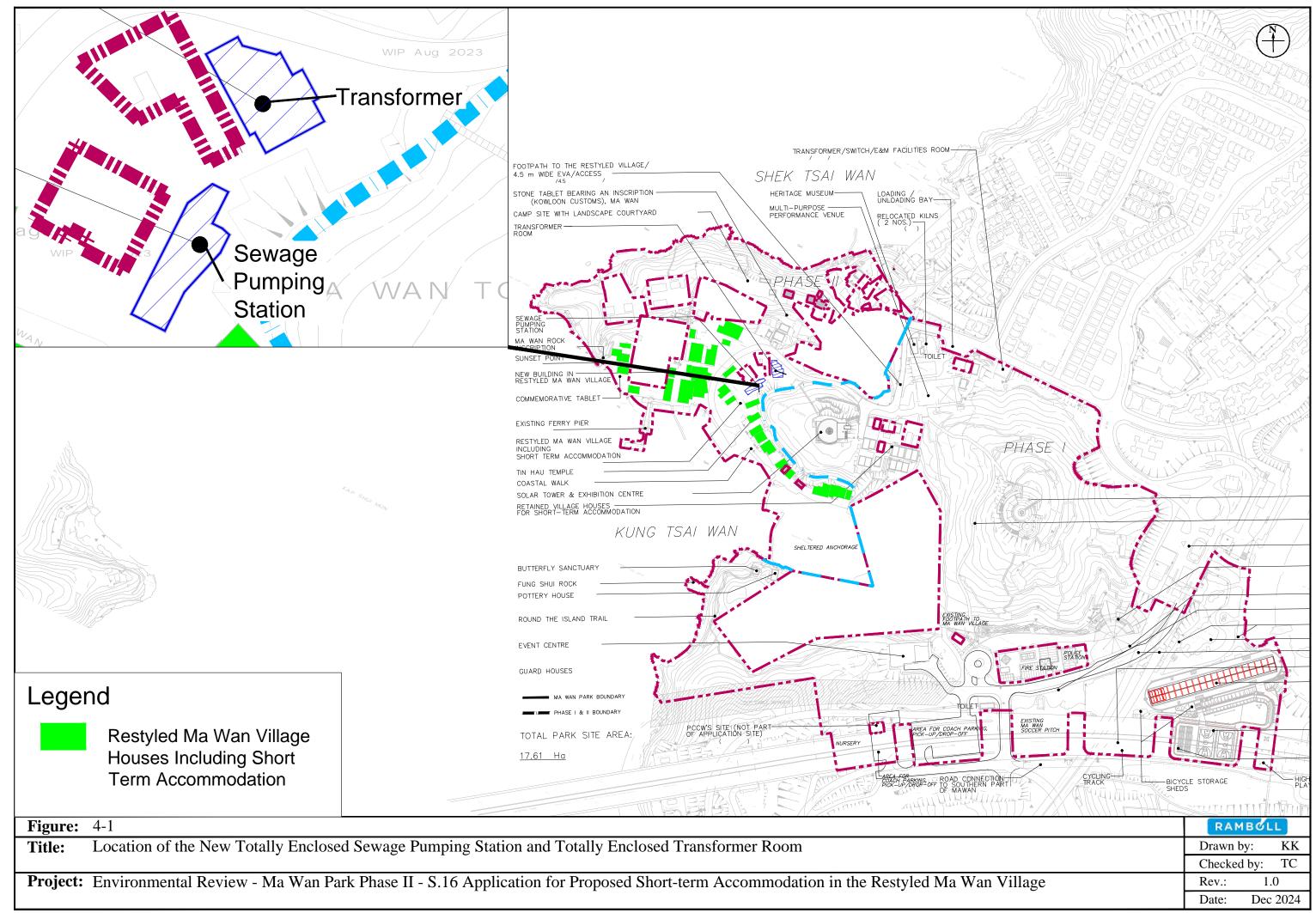


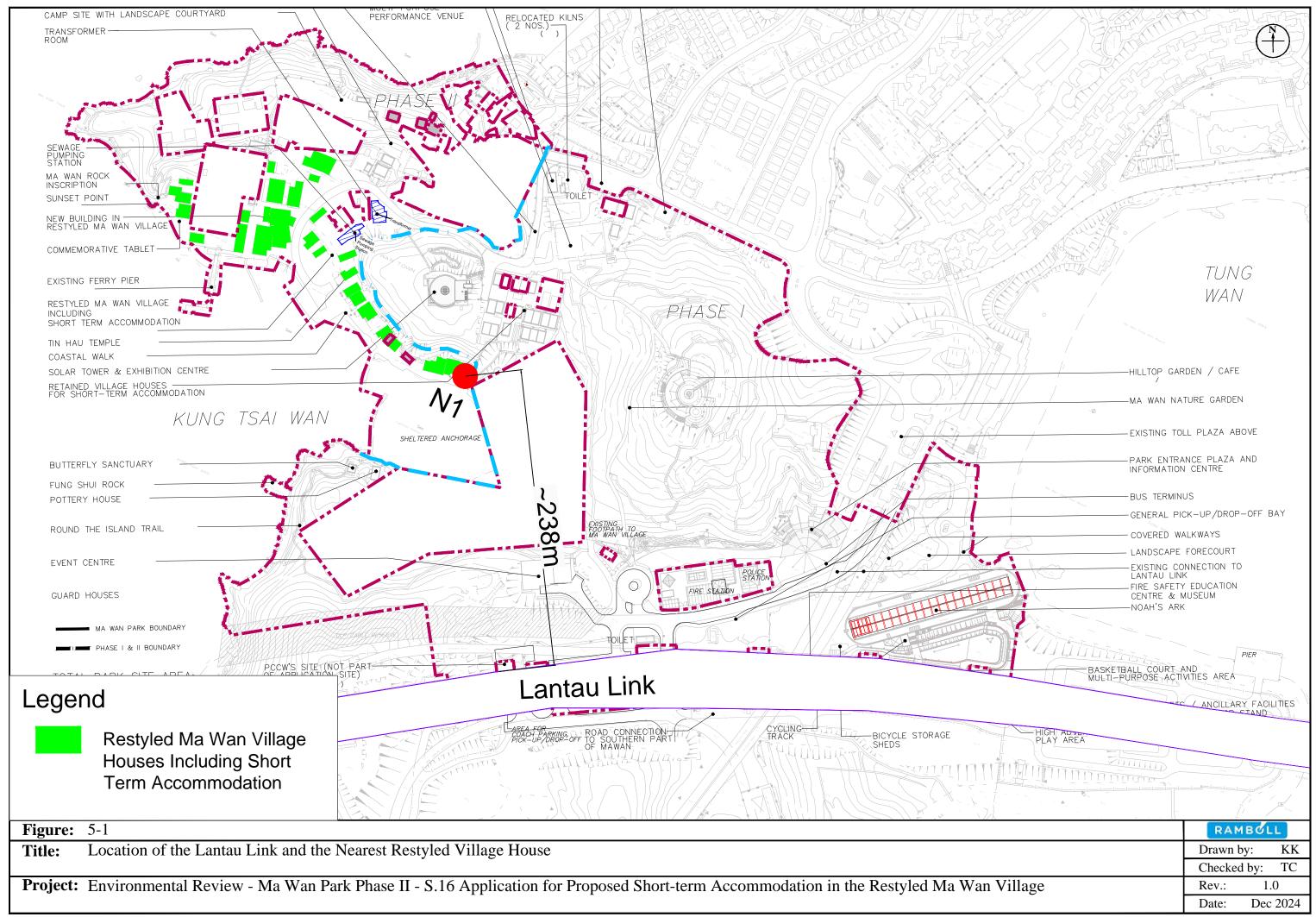
## **FIGURES**











Appendix A

**NEF25 Contours Retrieved from the 3RS EIA Report** 



