



土木工程拓展署  
Civil Engineering and  
Development Department

Agreement No. CE 5/2018 (CE)

# Development of Lok Ma Chau Loop: Main Works Package 1 – Design and Construction

Traffic Noise Mitigation Plan

March 2024



Imagine it.  
Delivered.





土木工程拓展署

Civil Engineering and Development Department

Agreement No. CE 5/2018 (CE)

# Development of Lok Ma Chau Loop: Main Works Package 1 – Design and Construction

## Traffic Noise Mitigation Plan

March 2024

Approved for Issue:

Conrad Ng

14 March 2024

**AECOM ASIA COMPANY LIMITED**

**Disclaimer:**

*This report is prepared for Civil Engineering and Development Department (CEDD) and is given for its sole benefit in relation to and pursuant to Agreement No. CE 5/2018 (CE) Development of Lok Ma Chau Loop: Main Works Package 1 – Design and Construction and may not be disclosed to, quoted to or relied upon by any person other than CEDD without our prior written consent. No person (other than CEDD) into whose possession a copy of this report comes may rely on this report without our express written consent and CEDD may not rely on it for any purpose other than as described above.*

## **TABLE OF CONTENTS**

	<b>PAGE</b>
<b>1. INTRODUCTION .....</b>	<b>1</b>
1.1 Background and Objective of this Traffic Noise Mitigation Plan.....	1
<b>2. REVIEW ON OPERATION PHASE NOISE TRAFFIC MITIGATION MEASURES .....</b>	<b>3</b>
2.1 Introduction.....	3
2.2 Environmental Legislation, Standards and Criteria.....	3
2.3 Representative Noise Sensitive Receivers.....	3
2.4 Traffic Noise Assessment Methodology .....	4
2.5 Operation Phase Road Traffic Noise Impact Assessment.....	6
2.6 Evaluation on Residual Impacts.....	10
2.7 Implementation Programme of Mitigation Measures .....	10
<b>3. REVIEW ON LANDSCAPE AND VISUAL IMPACTS.....</b>	<b>11</b>
3.1 Introduction.....	11
3.2 Environmental Legislation, Standards and Guidelines .....	11
3.3 Proposed Changes of Noise Barrier from Previously Approved EIA Scheme.....	12
3.4 Review of Planning and Development Control Framework .....	12
3.5 Review of Changes to Baseline Findings Prepared under Previously Approved EIA .....	12
3.6 Baseline Landscape Resources and Landscape Character Areas .....	12
3.7 Visually Sensitive Receivers (VSRs).....	12
3.8 Landscape Impact Assessment .....	12
3.9 Visual Impact Assessment.....	15
3.10 Optimization of Aesthetic Design of the Updated Direct Noise Mitigation Measures.....	15
3.11 Landscape and Visual Mitigation Measures .....	15
3.12 Residual Impact.....	15
3.13 Cumulative Impact.....	15
<b>4. CONCLUSION .....</b>	<b>16</b>

## **Appendices**

Appendix 1.1	Predicted Unmitigated Operational Road Traffic Noise in 2042
Appendix 1.2	Summary of Road Traffic Noise Mitigation Proposal for the Project
Appendix 2.1	Existing Photos and Location of the Representative NSRs
Appendix 2.2	Traffic Data at Year 2042 (With Project)
Appendix 2.3	Computer Plot of Road Traffic at 2042 (With Project)
Appendix 2.4	Key Map to Traffic Flow at 2042 (With Project)
Appendix 2.5	Predicted Traffic Noise Levels at NSRs under Revised Mitigated Scenario at year 2042

## **Tables**

Table 2.1	Details of Representative Noise Sensitive Receivers
Table 2.2	Comparison of Noise Barrier Design Along Ha Wan Tsuen Road, Lok Ma Chau Road and Direct Road Link under the Approved EIA Mitigated Scenario, Revised Mitigated Scenario in Environmental Review Report, and Revised Mitigated Scenario with NSRs Removed after Land Resumption under San Tin Technopole Project
Table 2.3	Predicted Road Traffic Noise Levels at Each Identified NSR under Revised Mitigated Scenario at Year 2042
Table 3.1	Proposed Changes in Direct Noise Mitigation Measures and Associated Potential Landscape and Visual Impacts

## **Figures**

Figure 1.1	Locations of Representative Noise Sensitive Receivers along Ha Wan Tsuen Road, Lok Ma Chau Road and Direct Road Link
Figure 1.2	The Recommended Outline Development Plan (RODP) and Tentative Phasing Development Plan of San Tin Technopole



## 1. INTRODUCTION

### 1.1 Background and Objective of this Traffic Noise Mitigation Plan

- 1.1.1 As a result of the training of Shenzhen (SZ) River, which serves as the administrative boundary between Hong Kong Special Administrative Region (HKSAR) and SZ, an area of about 87 hectares, previously lying to the north of the river course, became situated to the south of the re-aligned river and therefore within the boundary of the HKSAR. This area, commonly known as the Loop, was once used as a dumping ground for mud dredged from the river regulation works.
- 1.1.2 The Loop is located near several major cross-boundary transport nodes including the Lok Ma Chau Boundary Control Point, the MTR Lok Ma Chau Station of the Lok Ma Chau Spur Line and the San Tin Interchange. To the north across SZ River is the Huanggang Control Point of SZ. To the southwest is the Mai Po Nature Reserve and to the east is Hoo Hok Wai, comprising fish ponds of high ecological value.
- 1.1.3 The Loop development is one of the ten major infrastructure projects announced in the 2007-08 Policy Address for economic growth. The Planning and Engineering Study (P&E Study), Agreement No. CE 53/2008 (CE) "Planning and Engineering Study on Development of Lok Ma Chau Loop – Investigation", funded under PWP Item No. 735CL, was completed in 2014. The P&E Study investigated the feasibility of and formulated a comprehensive development plan for the Loop, taking into account the prevailing planning circumstances and public views collected through public engagement.
- 1.1.4 The P&E Study development plan comprises Designated Projects under Schedule 3 of the Environmental Impact Assessment Ordinance (EIAO). In October 2013, the Environmental Impact Assessment (EIA) Report for the Loop development (AEIAR-176/2013) was approved by Director of Environmental Protection (DEP) pursuant to the EIAO. The Environmental Permit (EP) (EP No. EP-477/2013) for the Loop to construct and operate the relevant Designated Projects (DP) was granted by DEP on 22 November 2013. An application for a Variation of Environmental Permit (VEP) (VEP No.: VEP-595/2021) was submitted on 16 July 2021 and the Environmental Permit (EP No.: EP-477/2013/A) was issued by DEP on 12 August 2021. An application for a VEP (VEP No.: VEP-629/2023) was submitted on 4 December 2023 and the Environmental Permit (EP No.: EP-477/2013/B) was issued by DEP on 29 December 2023. Predicted unmitigated operational road traffic noise in 2042 was extracted from approved EIA report in **Appendix 1.1**, which demonstrated the necessity of the noise barriers for the noise sensitive receivers along Ha Wan Tsuen Road, Lok Ma Chau Road and Direct Road Link. Based on the data above, a set of traffic noise mitigation measures was developed based on the latest engineering design (**Appendix 1.2** refers).

- 1.1.5 Pursuant to Condition 2.22 (a) of EP-477/2013/B, to mitigate operation stage noise impact, the following noise mitigation measure shall be implemented. Traffic noise mitigation measures including noise barriers and low noise road surfacing at the connecting roads including Ha Wan Tsuen Road, Lok Ma Chau Road and Direct Road Link for the Project shall be implemented during the operation stage of the Project. The Permit Holder shall, no later than one month before the commencement of construction of the traffic noise mitigation measures for the Project, deposit with the DEP three hard copies and one electronic copy of a Traffic Noise Mitigation Plan (TNMP). The TNMP shall include design details of the traffic noise mitigation measures, locations of noise barriers and low noise road surfacing, dimensions of noise barriers, traffic noise mitigation performance and aesthetic design of noise barriers. The TNMP will demonstrate that the traffic noise performance requirements set out in the approved EIA report (Register No.: AEIAR-176/2013) will not be exceeded or violated with the mitigation measures in place. Before submission to the DEP, the TNMP shall be certified by the ET Leader and verified by the IEC as conforming to the relevant information and recommendations contained in the EIA Report and application document for variation of an environmental permit (Application No. VEP-595/2021). All measures as recommended in the TNMP under this condition shall be fully and properly implemented and maintained.
- 1.1.6 This report will form the required submission to the Environmental Protection Department (EPD) for measures to mitigate operation stage noise impact and fulfil the requirement of Condition 2.22 (a) of EP-477/2013/B.

## **2. REVIEW ON OPERATION PHASE NOISE TRAFFIC MITIGATION MEASURES**

### **2.1 Introduction**

2.1.1 This section reviews and addresses potential noise impacts during the operation stage of the Project.

### **2.2 Environmental Legislation, Standards and Criteria**

2.2.1 The criteria for road traffic noise are stipulated in Annex 5, Table 1A “A Summary of Noise Criteria” of the Technical Memorandum on Environmental Impact Assessment Process (EIAO-TM), which defines the criteria  $L_{10(1 \text{ hour})}$  for the road traffic noise at various noise sensitive receivers (NSRs). The relevant criteria are listed below:

- 70 dB(A) at 1m from the external façades of residential dwellings; and
- 65 dB(A) at 1m from the external façades of schools, places of public worship.

### **2.3 Representative Noise Sensitive Receivers**

2.3.1 The approved Lok Ma Chau Loop (LMCL) EIA Report has identified various NSRs. The NSRs located in the vicinity of the Ha Wan Tsuen Road, Lok Ma Chau Road and Direct Road Link are identified as representative NSRs. Their locations are shown in **Figure 1.1** and **Appendix 2.1** and details are summarised in **Table 2.1** below.



**Table 2.1 Details of Representative Noise Sensitive Receivers**

Location of NSRs	Noise Assessment Point ID	Use	Remark
Ha Wan Fisherman San Tsuen	HWFST-2	Residential	Retain
Ha Wan Tsuen <sup>1,3</sup>	HWT-3 to HWT-8	Residential	Will be removed due to land resumption
Ha Wan Tsuen Road <sup>1,2,3</sup>	HWTR-1 to 18	Residential	Will be removed due to land resumption
	HWTR-20	Residential	Will be removed due to land resumption
	HWTR-21	Residential	No longer exist
	HWTR-22 to HWTR-23	Residential	Will be removed due to land resumption
LMC Road <sup>1,2,3,4</sup>	LMCR-1 to LMCR-11	Residential	LMCR-1 to 7 will be removed due to land resumption. LMCR-8 to 11 will be retained.
	LMCR-12	Residential	No longer exist
	LMCR-14 to LMCR-15	Residential	Retain
	LMCR-16	Residential	No longer exist
	LMCR-17	Residential	Will be removed due to land resumption
LMC San Tsuen <sup>3</sup>	LMCST-1 to LMCST- 2	Residential	Retain
San Sham Road <sup>1</sup>	SSR-1 to SSR-2	Residential	Will be removed due to land resumption

Remarks:

1. NSRs No. HWT-3 to 8, HWTR-1 to 18, 20, 22, 23, LMCR-1 to 7, 17, SSR-1, and SSR-2 will be removed due to land resumption.
2. NSRs No. LMCR-12, LMCR-16 and HWTR-21 no longer exists.
3. HWT-3, HWT-7, HWTR-1, HWTR-2, HWTR-4 to 6, HWTR-8, HWTR-17, LMCR-1, LMCR-5, LMCR-17, LMCST-1 were divided into two parts (a and b), please refer to **Appendix 1.1** for detail.
4. LMCR-4 was divided into three parts (a, b and c), please refer to **Appendix 1.1** for detail.

2.3.2 During the meeting of the Committee on Innovation, Technology and Industry Development (CITID) on 7 August 2023, the Secretary for Innovation, Technology and Industry briefed the members on the development of the San Tin Technopole, including the new sites for innovation and technology (I&T) use in the San Tin area and the Hong Kong-Shenzhen Innovation and Technology Park at the Loop. A Recommended Outline Development Plan (RODP) and a tentative phasing development plan of San Tin Technopole (**Figure 1.2**) for the area was formulated and was discussed at the meeting of the Development Panel of the Legislative Council on 23 May 2023. Further to the planning, some existing structures alongside the Ha Wan Tsuen Road and the vicinity of Lok Ma Chau Road, i.e. existing NSRs, will be affected and the Government will proceed the land clearance process. Based on the tentative phasing development plan of San Tin Technopole, it is assumed in this report that the concerned NSRs affected by the development of the San Tin Technopole would be removed by 2027 as a result of the land resumption. After the land resumption under the San Tin Technopole Project, only NSRs HWFST-2, LMCR-8 to 11, 14, 15 and LMCST-1 and 2 would still exist along the Ha Wan Tsuen

Road, Lok Ma Chau Road and Direct Road Link. In this regard, the already installed temporary noise barriers would be relocated, if needed, and maintained during construction phase until the time of removal of the concerned NSRs, which are assumed in this report to be removed by 2027. This is to optimise the use of the installed noise barriers for fulfilling the requirements in the VEP, subject to any modifications and/or changes which are required in the future.

2.3.3 For noise impact assessment purpose under this TNMP, all NSRs listed in **Table 2.1** are considered in the noise modelling exercise, as a worst-case assumption.

## **2.4 Traffic Noise Assessment Methodology**

2.4.1 The assessment methodology and modelling assumptions in this assessment are same as that in the approved LMCL EIA Report, with the details being recapitulated below. Traffic noise assessment was carried out according to the Calculation of Road Traffic Noise, 1988 (CRTN) of UK Department of Transport. Road traffic noise levels are presented in terms of noise levels exceeded for 10% of the one-hour period during the peak hour traffic flow, i.e.  $L_{10(1hr)}$  dB(A). The assessment is based on year 2042 (with project) traffic flow (**Appendix 2.2** refers) and vehicle compositions used in the LMCL EIA study, as the latest design information indicate the traffic data would remain valid. The roads within 300m from the proposed Project alignment are included in the model.

2.4.2 With reference to EIAO-TM and EIAO Guidance Note No. 12/2023, direct mitigation measures are required to reduce the noise from the concerned road project to a level that it:

- is not higher than the standard laid down in Annex 5 of the EIAO-TM; and
- has no significant contribution (less than 1.0 dB(A)  $L_{10(1hr)}$ ) to the overall noise from other existing roads, if the cumulative noise level, i.e. noise from the road project under the subject designated project together with other existing roads, exceeds the standard.

2.4.3 If any façades of NSRs are still exposed to predicted noise levels exceeding the relevant noise criteria after the implementation of all direct mitigation measures, provision of Indirect Technical Remedies (ITRs) in the form of acoustic insulation and air conditioning should be considered under the EIAO-TM and EIAO Guidance Note No. 12/2023. The eligibility for ITRs shall be tested against the following three criteria:

- the predicted overall noise level from the road project together with other road traffic noise in the vicinity must be above the standard laid down in Annex 5 of the EIAO-TM;
- the predicted overall noise level is at least 1.0 dB(A) more than the prevailing traffic noise level, i.e. the total traffic noise level existing before the works to construct the road were commenced; and
- the contribution to the increase in the predicted overall noise level from the road project must be at least 1.0dB(A).

## 2.5 Operation Phase Road Traffic Noise Impact Assessment

### Changes in Noise Barrier Arrangement along Ha Wan Tsuen Road, Lok Ma Chau Road and Direct Road Link

2.5.1 A computer plot of the road scheme and a plan showing the location of designated project roads and other roads and key map to traffic flow are presented in **Appendix 2.3** (Extracted from Appendix 4-11 of the Approved EIA Report) and **Appendix 2.4** (Extracted from Appendix 4-12 of the Approved EIA Report).

2.5.2 **Table 2.2** summarizes the revised mitigated scenario for the noise barriers (NBs). The locations of the direct noise mitigation measures (including both low-noise road surfacing and noise barrier) under the revised mitigated scenario are presented in **Appendix 1.2**.

**Table 2.2 Comparison of Noise Barrier Design Along Ha Wan Tsuen Road, Lok Ma Chau Road and Direct Road Link under the Approved EIA Mitigated Scenario, Revised Mitigated Scenario in Environmental Review Report, and Revised Mitigated Scenario with NSRs Removed after Land Resumption under San Tin Technopole Project**

Noise Barrier	EIA Mitigated Scenario	Revised Mitigated Scenario in Environmental Review Report	Revised Mitigated Scenario with NSRs Removed after Land Resumption under San Tin Technopole Project by 2027
NB 1	Approx. 16m long 0.8m high noise barrier at road kerb	No change (Same as EIA Mitigated Scenario)	Not necessary
NB 2	Approx. 42m long 0.8m high noise barrier at road kerb	No change (Same as EIA Mitigated Scenario)	Not necessary



<b>Noise Barrier</b>	<b>EIA Mitigated Scenario</b>	<b>Revised Mitigated Scenario in Environmental Review Report</b>	<b>Revised Mitigated Scenario with NSRs Removed after Land Resumption under San Tin Technopole Project by 2027</b>
NB 3	Approx. 27m long 0.8m high noise barrier at road kerb	No change (Same as EIA Mitigated Scenario)	Not necessary
NB 4	Approx. 14m long 0.8m high noise barrier at road kerb	No change (Same as EIA Mitigated Scenario)	Not necessary
NB 6	Approx. 50m long 0.8m high noise barrier at road kerb	Approx. 50m long 1m high noise barrier at the edge of footpath	Not necessary
NB 7	Approx. 8m long 0.8m high noise barrier at road kerb	Approx. 8m long 1m high noise barrier at the edge of footpath	Not necessary
NB 8	Approx. 10m long 3m high noise barrier at road kerb	Approx. 10m long 3m high noise barrier at edge of footpath	Not necessary
NB 9	Approx. 33m long 5m high noise barrier at road kerb	Approx. 33m long 5m high noise barrier at the edge of footpath, with a 1.6m wide opening in front of Lun Kee Store	Not necessary
NB 10	Approx. 12m long 3m high noise barrier at road kerb	Approx. 12m long 3m high noise barrier at the edge of footpath	Not necessary
NB 11	Approx. 12m long 5m high noise barrier at road kerb	Approx. 10m long 5m high noise barrier at the edge of footpath	Not necessary
NB 12	Approx. 36m long 3m high noise barrier at road kerb	Approx. 36m long 3m high noise barrier at the edge of footpath	Not necessary
NB 13	Approx. 12m long 3m high noise barrier at road kerb	No change (Same as EIA Mitigated Scenario)	No change (Same as EIA Mitigated Scenario)
NB 14*	Approx. 32m long 0.8m high noise barrier at road kerb	Approx. 30m long 1.2m high noise barrier at the edge of footpath next to the bus stop	No change (Same as Revised Mitigated Scenario)
NB 15	Approx. 27m long 3m high noise barrier at road kerb	Approx. 27m long 3m high noise barrier at the edge of footpath	Not necessary

Noise Barrier	EIA Mitigated Scenario	Revised Mitigated Scenario in Environmental Review Report	Revised Mitigated Scenario with NSRs Removed after Land Resumption under San Tin Technopole Project by 2027
NB 16*	Approx. 57m long 3m high noise barrier at road kerb	Approx. 57m long 3m high noise barrier at the edge of Amenity Area	No change (Same as Revised Mitigated Scenario)
NB19	Approx. 730m long 0.8m high noise barrier at road kerb	Approx. 710m long 0.8m high noise barrier at both sides of road kerb	No change (Same as Revised Mitigated Scenario)
		Approx. 50m long 2m high noise barrier (Part of the original NB19 modified as NB25)	No change (Same as Revised Mitigated Scenario)
NB21	Approx. 47m long, 0.8m high noise barrier at road kerb	No change (Same as EIA Mitigated Scenario)	Not necessary
NB22	Approx. 46m long, 0.8m high noise barrier at road kerb	No change (Same as EIA Mitigated Scenario)	Not necessary
NB 23	Approx. 16m long 3m high noise barrier at road kerb	Approx. 16m long 3m high noise barrier at the edge of footpath	Not necessary
NB 24	Approx. 80m long 0.8m high noise barrier at road kerb	Approx. 80m long 1m high noise barrier at the edge of footpath	Not necessary
NB25	Part of NB19 (0.8m high noise barrier at road kerb)	Approx. 50m long 2m high noise barrier	No change (Same as Revised Mitigated Scenario)

Remarks:

- To avoid sightline issue to traffic, the noise barriers marked with "\*" are proposed to set back by about 2m from the road kerb to the edge of footpath/amenity area.
- Requirements of NB1 to 4, 6 to 12, 15, 21 to 24 alongside the Ha Wan Tsuen Road and the vicinity of Lok Ma Chau Road would subject to the removal of NSRs under the land resumption under San Tin Technopole Project.

2.5.3 The predicted noise levels at the representative NSRs under the revised mitigated scenario with NSRs removed after land resumption under San Tin Technopole Project by year 2027 are summarised in **Table 2.3** and detailed in **Appendix 2.5**.

**Table 2.3 Predicted Road Traffic Noise Levels at Each Identified NSR under Revised Mitigated Scenario at Year 2042**

NSR ID	Criterion	Predicted Overall Noise Level, L10(1hr), dB(A)
*HWFST-2	70	70
HWT-3	70	67
HWT-4	70	68

NSR ID	Criterion	Predicted Overall Noise Level, L10(1hr), dB(A)
HWT-5	70	68
HWT-6	70	67
HWT-7	70	66 - 69
HWT-8	70	65 - 70
HWTR-1	70	58 - 70
HWTR-2	70	62 - 67
HWTR-3	70	57
HWTR-4	70	55 - 65
HWTR-5	70	51 - 64
HWTR-6	70	62 - 66
HWTR-7	70	69
HWTR-8	70	65 - 70
HWTR-9	70	70
HWTR-10	70	70
HWTR-11	70	66
HWTR-12	70	69
HWTR-13	70	67
HWTR-14	70	68
HWTR-15	70	68
HWTR-16	70	67
HWTR-17	70	68 - 70
HWTR-18	70	67
HWTR-20	70	67
HWTR-22	70	70
HWTR-23	70	70
LMCR-1	70	66 - 70
LMCR-2	70	67 - 70
LMCR-3	70	62 - 68
LMCR-4	70	66 - 70
LMCR-5	70	66 - 68
LMCR-6	70	69
LMCR-7	70	67
*LMCR-8	70	69 - 70
*LMCR-9	70	68 - 69
*LMCR-10	70	70
*LMCR-11	70	66
*LMCR-14	70	70
*LMCR-15	70	70
LMCR-17	70	66 - 70
*LMCST-1	70	65 - 66
*LMCST-2	70	68
SSR-1	70	70
SSR-2	70	69 - 70

Remark:

\* Denotes : NSRs would exist after the land resumption under the San Tin Technopole Project.

For NSRs without \*denotes, those would be no longer exist after year 2027 and the predicted overall noise level would be the mitigated scenario at year 2042 according to the data extracted from the Environmental Review Report.

2.5.4 Under the revised mitigated scenario, noise levels at all representative NSRs would comply with the 70 dB(A) road traffic noise criterion for residential dwellings. Therefore, no adverse traffic noise impact would be anticipated at the representative NSRs due to the Project under the revised mitigated scenario with NSRs removed



after land resumption under San Tin Technopole Project by year 2027. No further mitigation measures are required.

- 2.5.5 The purpose of the noise barriers alongside the Ha Wan Tsuen Road and vicinity of the Lok Ma Chau Road (NB1 to 4, 6 to 12, 15, 21 to 24) would be to mitigate the potential adverse road traffic noise impact due to the Project to NSRs alongside the northbound of the WCR. However, in view the NSRs alongside the Ha Wan Tsuen Road and northbound of the Lok Ma Chau Road would be removed under separate project as mentioned in **Section 2.3.2** by year 2027, the erection of noise barriers alongside the Ha Wan Tsuen Road and northbound of the Lok Ma Chau Road would be considered not necessary, subject to the actual removal of the NSRs.

## **2.6 Evaluation on Residual Impacts**

- 2.6.1 During the operational phase, the impact arising from the Project would be mitigated by implementing the proposed noise control measures such as noise barriers and low noise road surfacing. Since noise levels at all representative NSRs would comply with the 70 dB(A) road traffic noise criterion for residential dwellings, no residual road traffic noise impact would be anticipated.

## **2.7 Implementation Programme of Mitigation Measures**

- 2.7.1 As stated in **Section 1.1.5** and Condition 2.22 (a) of EP-477/2013/B from the Environmental Permit, TNMP is required to identify the noise mitigation measures, such as noise barriers, and the specification of noise barriers to be used. This plan shall be certified by the Environmental Team (ET) Leader and verified by the Independent Environmental Checker (IEC) before submission to the DEP.
- 2.7.2 A summary of Road Traffic Noise Mitigation Proposal for the Project, together with the implementation programme, is presented in **Appendix 1.2**.

### **3. REVIEW ON LANDSCAPE AND VISUAL IMPACTS**

#### **3.1 Introduction**

3.1.1 This chapter is to present the findings and recommendations of the landscape and visual impact assessment. The potential landscape and visual impacts during operation of the proposed revised noise barrier design are reviewed in this chapter. The aesthetic design of the updated direct noise mitigating measures, including their landscape and visual characteristics are reviewed and optimized in accordance with the Environmental Permit.

3.1.2 The landscape and visual impacts due to the changes to noise barriers of the Project as compared with the scheme presented in the EIA Report (Register No.: AEIAR-176/2013) approved on 25 October 2013 are reviewed. This review also takes into account any changes in circumstances, including the changes to existing and planned developments.

#### **3.2 Environmental Legislation, Standards and Guidelines**

3.2.1 The following legislation, standards and guidelines which have been identified under the approved EIA Report are still applicable for the evaluation of landscape and visual impacts for this Review Report.

- Environmental Impact Assessment Ordinance (Cap.499 S.16) and the Technical Memorandum on EIA Process (EIAO-TM), particularly Annexes 10 and 18;
- ETWB TC(W) No. 17/2000 – Improvement to the Appearance of Slopes
- Town Planning Ordinance (Cap 131)
- Land Administration Office Instruction (LAOI) Section D-12 – Tree Preservation
- WBTC No.7/2002 – Tree Planting in Public Works
- ETWB TC(W) No. 34/2003 – Community Involvement in Greening Works
- ETWB TC(W) No. 2/2004 – Maintenance of Vegetation and Hard Landscape Features
- ETWB TC(W) No. 11/2004 – Cyber Manual for Greening
- DEVB TC(W) No. 5/2020 – Registration and Preservation of Old and Valuable Trees
- DEVB TC(W) No. 1/2018 – Soft Landscape Provisions for Highway Structures
- DEVB TC(W) No. 4/2020 – Tree Preservation
- Forests and Countryside Ordinance (Cap 96) and its subsidiary legislations
- GEO publication (1999) – Use of Vegetation as Surface Protection on Slopes
- GEO 1/2000 – Technical Guidelines on Landscape Treatment and Bio-engineering of Man-made Slopes and Retaining Walls
- HyD TC No. 7/2006 – Independent vetting of Tree Works under the Maintenance of Highways Department
- Government General Regulation 740 – restrictions on the preservation and felling of trees in Hong Kong

- Hong Kong Planning Standards and Guidelines Chapter 4 and Chapter 11
  - Study on Landscape Value Mapping of Hong Kong
- 3.2.2 The Environmental Impact Assessment Ordinance Guidance Note 8/2002 has been updated since the approval of EIA Report. The Environmental Impact Assessment Ordinance Guidance Note 12/2023 is followed for this study.
- 3.2.3 The Outline Zoning Plans (OZPs) gazetted under the Town Planning Ordinance provides the statutory framework for land use development. Reference has been made to the Approved San Tin Outline Zoning Plan No. S/YL-ST/8 (15/12/2006) and Approved Lok Ma Chau Loop Outline Zoning Plan No. S/LMCL/2 (09/02/2018).
- 3.3 Proposed Changes of Noise Barrier from Previously Approved EIA Scheme**
- 3.3.1 The proposed changes to noise barriers from the previously approved EIA Report are discussed in **Sections 2**.
- 3.3.2 Changes on the proposed noise barriers are reviewed and potential landscape and visual impacts are assessed in the latest section of this chapter.
- 3.4 Review of Planning and Development Control Framework**
- 3.4.1 The approved OZPs of San Tin S/YL-ST/8 (15/12/2006) and Lok Ma Chau Loop S/LMCL/2 (09/02/2018) are reviewed respectively. There is no substantial change in land use and layout in the OZPs within the study area.
- 3.5 Review of Changes to Baseline Findings Prepared under Previously Approved EIA**
- 3.5.1 Baseline Landscape Resources (LRs), Landscape Character Areas (LCAs) and Visually Sensitive Receivers (VSRs) are reviewed following the baseline findings prepared under the previously approved EIA based on site visit, desktop study of topographical maps and site photographs.
- 3.6 Baseline Landscape Resources and Landscape Character Areas**
- 3.6.1 Based on the review of baseline findings of the previously approved EIA Report and recent site visit, desktop study of topographical maps and site photographs, no additional LR and LCAs were identified to be affected by the proposed road scheme and the baseline conditions of LR and LCAs presented in the approved EIA Report would remain valid.
- 3.7 Visually Sensitive Receivers (VSRs)**
- 3.7.1 Based on the review of the latest OZPs of San Tin S/YL-ST/8 (15/12/2006) and Lok Ma Chau Loop S/LMCL/2 (09/02/2018), there is no change in land use or proposed new development that fall within the visual envelope of the project. The baseline findings presented in the approved EIA report would remain valid.
- 3.8 Landscape Impact Assessment**
- 3.8.1 The proposed changes of noise barrier would not cause any discernible changes in impacts on existing landscape resources, including both the existing trees and roadside amenity areas.

- 3.8.2 The impacts on existing trees due to the changes to noise barriers would be the same as those identified in the approved EIA. No additional tree would be directly affected by the changes to noise barriers. Therefore, there would not be any discernible changes in the impacts on landscape resources as assessed in the approved EIA.
- 3.8.3 The proposed changes of noise barriers are considered as minor and would not change the threshold impact significance on LCAs. It is considered that there would not be any discernible changes in impacts on LCAs as identified in the approved EIA.
- 3.8.4 The potential landscape impacts due to the proposed changes are itemized and shown in **Table 3.1**.

**Table 3.1 Proposed Changes in Direct Noise Mitigation Measures and Associated Potential Landscape and Visual Impacts**

Noise Barrier	EIA Mitigated Scenario	Revised Mitigated Scenario in Environmental Review Report	Revised Mitigated Scenario with NSRs Removed after Land Resumption under San Tin Technopole Project by 2027	Potential Landscape and Visual Impact
NB 13	Approx. 12m long 3m high noise barrier at road kerb	No change (Same as EIA Mitigated Scenario)	No change (Same as EIA Mitigated Scenario)	No change in potential Landscape and Visual Impact (Same as Environmental Review Report)
NB 14	Approx. 32m long 0.8m high noise barrier at road kerb	Approx. 30m long 1.2m high noise barrier at the edge of footpath next to the bus stop.	No change (Same as Revised Mitigated Scenario)	No change in potential Landscape and Visual Impact (Same as Environmental Review Report)
NB 16	Approx. 57m long 3m high noise barrier at road kerb	Approx. 57m long 3m high noise barrier at the edge of Amenity Area	No change (Same as Revised Mitigated Scenario)	No change in potential Landscape and Visual Impact (Same as Environmental Review Report)
NB19	Approx. 730m long 0.8m high noise barrier at road kerb	Approx. 710m long 0.8m high noise barrier at both sides of road kerb	No change (Same as Revised Mitigated Scenario)	No change in potential Landscape and Visual

Noise Barrier	EIA Mitigated Scenario	Revised Mitigated Scenario in Environmental Review Report	Revised Mitigated Scenario with NSRs Removed after Land Resumption under San Tin Technopole Project by 2027	Potential Landscape and Visual Impact
		Approx. 50m long 2m high noise barrier (Part of the original NB19 modified as NB25)	No change (Same as Revised Mitigated Scenario)	Impact (Same as Environmental Review Report)
NB25	Part of NB19 (0.8m high noise barrier at road kerb)	Approx. 50m long 2m high noise barrier	No change (Same as Revised Mitigated Scenario)	No change in potential Landscape and Visual Impact (Same as Environmental Review Report)

Remarks:

- As mentioned in Section 2.5.2, the erection of noise barriers NB1 to 4, 6 to 12, 15, 21 to 24 alongside the Ha Wan Tsuen Road and vicinity of the Lok Ma Chau Road were considered not necessary, subject to the actual removal of the relevant NSRs in the land resumption under San Tin Technopole Project.

### **3.9 Visual Impact Assessment**

- 3.9.1 The proposed changes would fall within the works area as identified in the approved EIA Report. The nature of works and scale of development between the current scheme and the approved scheme are the same. Therefore, the findings and recommendations to visual impact on the approved EIA are still valid.
- 3.9.2 Having reviewed the proposed changes as identified in **Section 2**, it is considered that there would not be any insurmountable changes in visual impacts on adjacent VSRs. However, the proposed changes to noise barriers would be the main source of potential visual impacts. The potential visual impacts due to the proposed changes are assessed and described in **Table 3.1**.
- 3.9.3 Based on the review of potential landscape and visual impact, changes to noise barriers are mainly minor adjustments on height and length. No insurmountable adverse impact to the adjacent landscape is envisaged. With the implementation of mitigation measures in the approved EIA, the changes to noise barriers could be mitigated to an acceptable level. The viewpoints as illustrated in the approved EIA report are still valid.

### **3.10 Optimization of Aesthetic Design of the Updated Direct Noise Mitigation Measures**

- 3.10.1 As identified in the approved EIA, the proposed noise barriers have imposed adverse visual impact on road users. Through the design development process, aesthetic design of the updated direct noise mitigation measures including their landscape and visual characteristics are optimised. ACABAS Submission for Noise Barriers along WCR was submitted on 2 June 2020 and the aesthetic design of the noise barriers was agreed in principle during the ACABAS meeting held on 16 June 2020. The aesthetic design of the noise barriers was subsequently considered to be acceptable during the ACABAS meeting held on 18 August 2020.

### **3.11 Landscape and Visual Mitigation Measures**

- 3.11.1 During the design phase, landscape and visual mitigation measures for the proposed road works and associated direct noise mitigation measures have been considered as far as practicable. The opportunity of providing landscape and visual mitigation measures is limited by the need for maintaining a clear sightline for road travellers of the traffic lanes, structural loading constraint, maintaining an open area around the portal for emergency use and maintaining pedestrian-free connection for the public.

### **3.12 Residual Impact**

- 3.12.1 There would not be any discernible changes to the residual impacts on landscape resources and landscape character areas assessed in the approved EIA.

### **3.13 Cumulative Impact**

Key concurrent projects identified in the vicinity of the proposed road scheme in the approved EIA report include the proposed cycle tracks in the North West New Territories and North East New Territories, new development areas in the North East New Territories and the construction of the secondary boundary fence and new sections of primary boundary fence and Boundary Patrol Road. There are no additional concurrent projects identified within the vicinity. There would not be any insurmountable cumulative landscape and visual impacts arisen from the proposed changes to the approved EIA report.

## **4. CONCLUSION**

- 4.1.1 The traffic noise mitigation measures for the Project have been reviewed based on the latest available information of the development layouts. Assessment results indicate that traffic noise performance requirements set out in the approved EIA report (Register No. AEIAR-176/2013) will not be exceeded with the mitigation measures recommended in this Plan in place.
- 4.1.2 All mitigation measures recommended in this Plan will be fully implemented and properly maintained throughout the operational phase(s) of the Project. Pursuant to Condition 2.22(a) of Environmental Permit (EP-477/2013/B), the Permit Holder shall, no later than one month before the commencement of construction of the traffic noise mitigation measures for the Project, deposit with the Director three hard copies and one electronic copy of a Traffic Noise Mitigation Plan (TNMP). Before submission to the Director, the TNMP shall be certified by the ET Leader and verified by the IEC as conforming to the relevant information and recommendations contained in the EIA Report and application document for variation of an environmental permit (Application No. VEP-595/2021).
- 4.1.3 Noise barriers alongside the Ha Wan Tsuen Road and vicinity of the Lok Ma Chau Road (NB1 to 4, 6 to 12, 15, 21 to 24) are considered to be no longer required under operation phase by providing necessary modifications, if needed, and maintenance to the temporary noise barriers during construction phase until the time of removal of the concerned NSRs, which are assumed to be removed by 2027. Further review on the latest land resumption programme under the development of San Tin Technopole shall be carried out in 2027 to verify such assumption. The Permit Holder shall deposit with the DEP three hard copies and one electronic copy of the Plan to clearly show the proposed change(s) due to the latest land resumption programme under the development of San Tin Technopole if the actual removal of the concerned NSRs deviated from the assumed year of 2027 under this Report.



## Figure 1.1

Locations of Representative Noise Sensitive Receivers along Ha Wan Tsuen Road, Lok Ma Chau Road and Direct Road Link

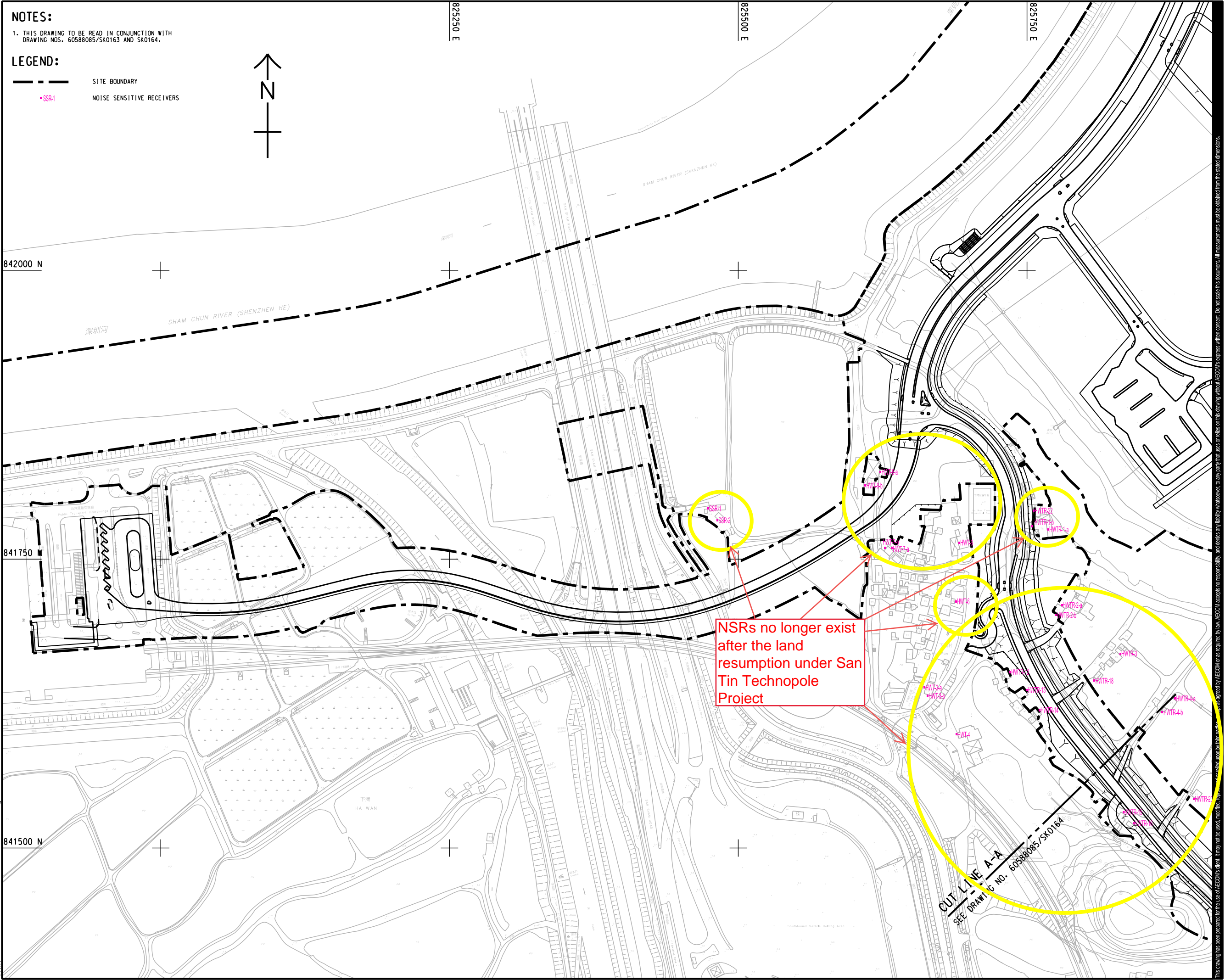
ISO A1 594mm x 841mm  
 Approved:  
 Checked:  
 Designer:  
 Project Management Initials:  
 18/06/2021  
 PATH: P:\PROJECTS\60588085\DRAWING\SET\CH\SK0163.dgn  
 Plot File by: Tsui Wai

**NOTES:**

1. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60588085/SK0163 AND SK0164.

**LEGEND:**

- SITE BOUNDARY
- NOISE SENSITIVE RECEIVERS



**PROJECT**  
 DEVELOPMENT OF  
 LOK MA CHAU LOOP  
 MAIN WORKS PACKAGE 1  
 DESIGN AND  
 CONSTRUCTION

**CLIENT**  
 土木工程拓展署  
 Civil Engineering and  
 Development Department

**CONSULTANT**  
 AECOM Asia Company Ltd.  
 www.aecom.com

**SUB-CONSULTANTS**  
 分列工程師有限公司

**ISSUE/REVISION**

I/R	DATE	DESCRIPTION	CHK.

**STATUS**

**SCALE**      **DIMENSION UNIT**  
 A1 1: 1500      METRES

**KEY PLAN**

**PROJECT NO.**      **CONTRACT NO.**  
 60588085      CE 5/2018(CE)

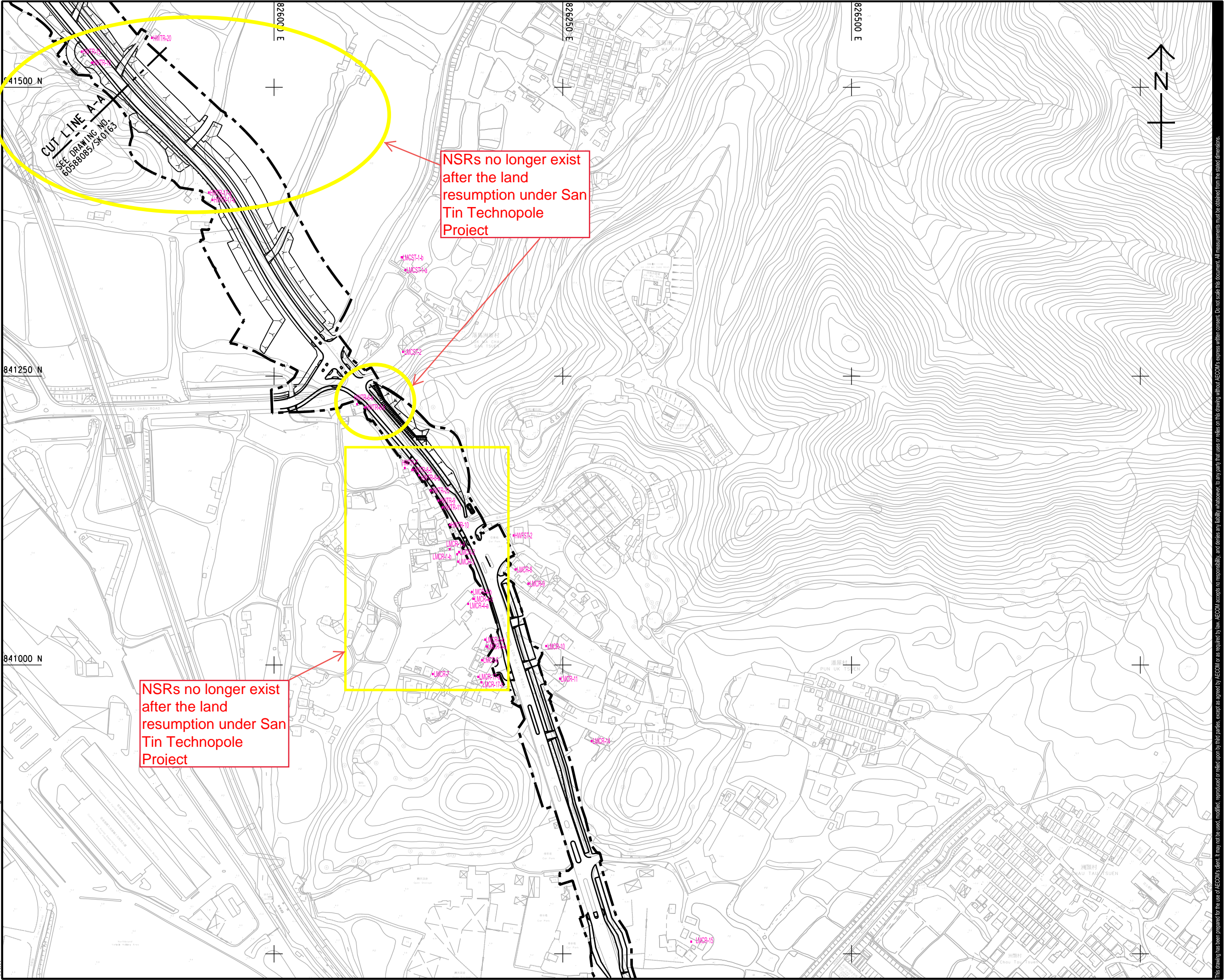
**SHEET TITLE**

LOCATION OF  
 NOISE SENSITIVE RECEIVERS

This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced, or disseminated in any form without AECOM's express written consent. All measurements must be obtained from the stated dimensions.



ISO A1 594mm x 841mm  
 Approved:  
 Checked:  
 Designer:  
 Project Management Initials:



NSRs no longer exist after the land resumption under San Tin Technopole Project

NSRs no longer exist after the land resumption under San Tin Technopole Project



PROJECT  
 項目  
**DEVELOPMENT OF LOK MA CHAU LOOP MAIN WORKS PACKAGE 1 DESIGN AND CONSTRUCTION**

CLIENT  
 客戶  
 土木工程拓展署  
 Civil Engineering and Development Department

CONSULTANT  
 顧問公司  
 AECOM Asia Company Ltd.  
 www.aecom.com

SUB-CONSULTANTS  
 分判工程師/顧問公司

ISSUE/REVISION  
 修訂

I/R	DATE	DESCRIPTION	CHK.

STATUS  
 狀態

SCALE  
 比例  
 A1 1 : 1500

DIMENSION UNIT  
 尺寸單位  
 METRES

KEY PLAN  
 索引圖

PROJECT NO.  
 項目編號  
 60588085

CONTRACT NO.  
 合約編號  
 CE 5/2018(CE)

SHEET TITLE  
 圖紙名稱  
 LOCATION OF NOISE SENSITIVE RECEIVERS

SHEET NUMBER  
 圖紙編號  
 60588085/SK0164

Plot File by: Tsui WY  
 2024/3/12  
 PATH: P:\PROJECTS\60588085\DRAWING\SKETCH\SK0164.dgn

This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and does not warrant, for any part, that uses or relies on this drawing without AECOM's express written consent. All measurements must be obtained from the stated dimensions.

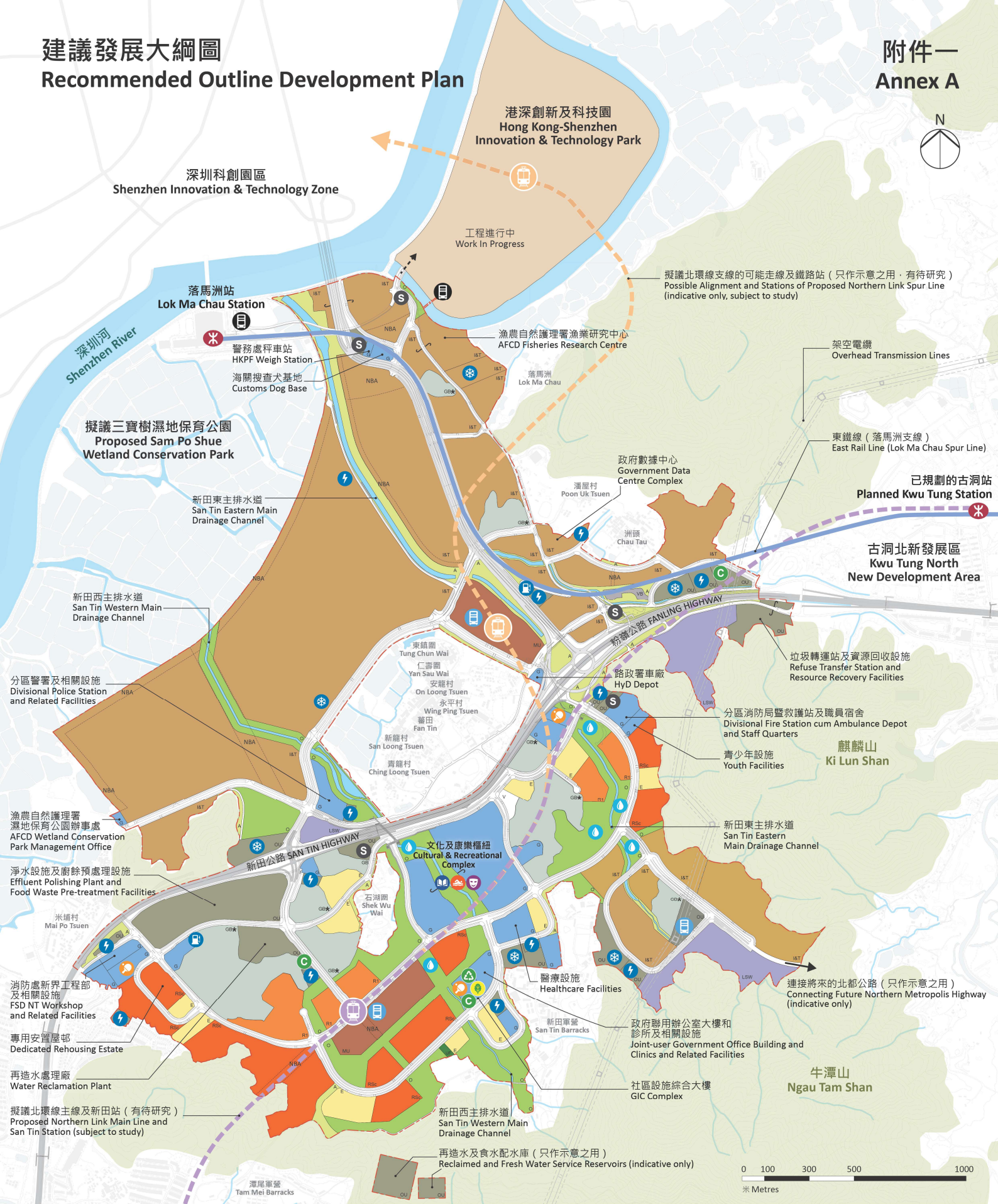
## Figure 1.2

The Recommended Outline Development Plan (RODP) and Tentative Phasing Development Plan of San Tin Technopole



# 建議發展大綱圖 Recommended Outline Development Plan

# 附件一 Annex A



### 圖示 LEGEND

- |   |  |  |  |   |
|---|--|--|--|---|
| <ul style="list-style-type: none"> <li><span style="border: 1px dashed red; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> 項目範圍<br/>Project Boundary</li> <li><span style="background-color: #f96; border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> 公營房屋 (住用地積比率: 6.5)<br/>Public Housing (Domestic Plot Ratio: 6.5)</li> <li><span style="background-color: #f99; border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> 私營房屋 (住用地積比率: 6)<br/>Private Housing (Domestic Plot Ratio: 6)</li> <li><span style="background-color: #f9c; border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> 混合用途 (總地積比率: 7)<br/>Mixed Use (Total Plot Ratio: 7)</li> <li><span style="background-color: #f9f; border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> 創新科技<br/>Innovation and Technology</li> <li><span style="background-color: #e9f; border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> 物流、貯物和工場 (地積比率: 2/5)<br/>Logistics, Storage and Workshop (Plot Ratio: 2/5)</li> <li><span style="background-color: #d9f; border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> 政府、機構或社區<br/>Government, Institution or Community</li> </ul> | <ul style="list-style-type: none"> <li><span style="background-color: #fff9c4; border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> 教育<br/>Education</li> <li><span style="background-color: #fff9e6; border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> 其他指定用途<br/>Other Specified Uses</li> <li><span style="background-color: #fff9f9; border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> 通風大樓<br/>Ventilation Building</li> <li><span style="background-color: #fff9d9; border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> 都市農場<br/>Urban Farm</li> <li><span style="background-color: #fff9c4; border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> 休憩用地<br/>Open Space</li> <li><span style="background-color: #fff9e6; border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> 美化市容地帶<br/>Amenity</li> <li><span style="border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> 鄉村式發展<br/>Village Type Development</li> </ul> | <ul style="list-style-type: none"> <li><span style="background-color: #e9f9e9; border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> 綠化地帶 (*包含認可殯葬區)<br/>Green Belt (*with Permitted Burial Ground)</li> <li><span style="background-color: #f9c9c9; border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> 港深創新及科技園 (工程進行中)<br/>Hong Kong-Shenzhen Innovation &amp; Technology Park (Work In Progress)</li> <li><span style="border-bottom: 1px solid black; display: inline-block; width: 15px; margin-right: 5px;"></span> 道路<br/>Road</li> <li><span style="border-bottom: 1px dashed black; display: inline-block; width: 15px; margin-right: 5px;"></span> 非建築用地<br/>Non-building Area</li> <li><span style="border: 1px solid black; border-radius: 50%; width: 15px; height: 10px; margin-right: 5px;"></span> 擬議運輸交匯樞紐 / 公共運輸交匯處<br/>Proposed Transport Interchange Hub / Public Transport Interchange</li> <li><span style="border: 1px solid black; border-radius: 50%; width: 15px; height: 10px; margin-right: 5px;"></span> 現有 / 已規劃的公共運輸交匯處<br/>Existing / Planned Public Transport Interchange</li> </ul> | <ul style="list-style-type: none"> <li><span style="background-color: #fff9c4; border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> 表演場地及博物館<br/>Performance Venues and Museum</li> <li><span style="background-color: #fff9e6; border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> 圖書館<br/>Library</li> <li><span style="background-color: #fff9f9; border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> 室內運動中心<br/>Indoor Sports Centre</li> <li><span style="background-color: #fff9d9; border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> 游泳池<br/>Swimming Pool Complex</li> <li><span style="background-color: #fff9c4; border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> 街市<br/>Market</li> <li><span style="background-color: #fff9e6; border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> 醫療設施<br/>Healthcare Facilities</li> <li><span style="background-color: #fff9f9; border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> 政府聯用辦公室大樓和診所及相關設施<br/>Joint-user Government Office Building and Clinics and Related Facilities</li> <li><span style="background-color: #fff9d9; border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> 社區設施綜合大樓<br/>GIC Complex</li> </ul> | <ul style="list-style-type: none"> <li><span style="background-color: #e9f9e9; border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> 環保回收站<br/>EcoHub</li> <li><span style="background-color: #fff9c4; border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> 垃圾收集站<br/>Refuse Collection Point</li> <li><span style="background-color: #fff9e6; border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> 潔淨能源站<br/>Green Fuel Station</li> <li><span style="background-color: #fff9f9; border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> 電力支站<br/>Electricity Substation</li> <li><span style="background-color: #fff9d9; border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> 區域供冷系統<br/>District Cooling System</li> <li><span style="background-color: #fff9c4; border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> 蓄洪設施<br/>Flood Attenuation Facilities</li> <li><span style="background-color: #fff9e6; border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> 雨水 / 污水泵房<br/>Stormwater / Sewage Pumping Station</li> </ul> |
|---|--|--|--|---|



## DEVELOPMENT SCHEDULE

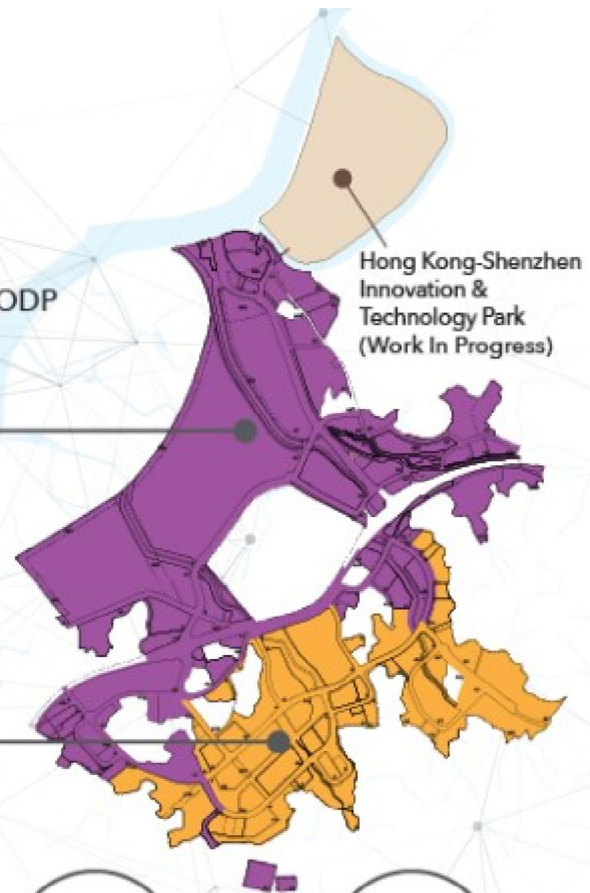
Works for the development area covered by the RODP are planned to be implemented in two phases.

### First Phase

Covers the I&T land parcels to the north of San Tin Highway/Fanling Highway, some residential land to the south and the key infrastructure areas with road connections.

### Second Phase

Covers the remaining area.



Q4  
2024

Site formation for  
I&T land  
will commence

2026

Formed sites coming  
on stream in 2026  
at the earliest

2031

The first population  
intake

2034

Bulk population intake  
around the time when  
NOL Main Line  
commences operation

## Appendix 1.1

### Predicted Unmitigated Operational Road Traffic Noise in 2042

(Extracted from Appendix 4-14 of the Approved EIA  
Report)



Receivers	FL	mP.D.	Without Project		With Project						Major Concerned Roads Causing Exceedance
			Overall noise Level at 2016 dB(A)	Overall noise Level at 2042 dB(A)	Noise Level dB(A)			Noise Criteria	New Road Exceedance (Y/N)	Overall Exceedance (Y/N)	
					EXISTING ROADS at 2042	NEW ROADS at 2042	ALL ROADS at 2042				
BR-1-a	1	4.1	55.6	57	56.7	42.2	56.9	70	N	N	N/A
BR-1-b	1	4.1	61.5	62.9	62.6	42.1	62.7	70	N	N	N/A
BR-2	1	4.4	48.4	49.6	49.4	4.5	49.4	70	N	N	N/A
BR-2	2	7.4	48.4	49.6	49.4	4.6	49.4	70	N	N	N/A
BR-3	1	4.3	36.6	37.8	37.6	32	38.7	70	N	N	N/A
BR-4	1	3.2	0	0	0	37.9	37.9	70	N	N	N/A
BR-4	2	6.2	0	0	0	37.9	37.9	70	N	N	N/A
BR-5	1	7.2	47.8	47.8	0	66.7	66.7	70	N	N	N/A
CTT-1	1	2.6	62.7	64.1	63.4	54.6	63.9	70	N	N	N/A
CTT-1	2	5.6	62.7	64.1	63.4	54.7	63.9	70	N	N	N/A
CTT-1	3	8.6	62.8	64.2	63.5	55.2	64.1	70	N	N	N/A
CTT-2	1	2.6	63	64.5	63.1	61.7	65.5	70	N	N	N/A
CTT-2	2	5.6	63	64.5	63.1	61.7	65.5	70	N	N	N/A
CTT-3	1	3.4	65.2	66.7	65	62.8	67	70	N	N	N/A
CTT-3	2	6.4	65.3	66.7	65	62.8	67	70	N	N	N/A
CTT-3	3	9.4	65.3	66.7	65	62.8	67	70	N	N	N/A
HWFST-2	1	12.0	68.7	68.4	55.2	70.1	70.2	70	N	N	N/A
HWT-3-a	1	3.0	65.2	65.3	65.9	59.5	66.8	70	N	N	N/A
HWT-3-b	1	3.0	66.4	66.6	67.2	53.6	67.4	70	N	N	N/A
HWT-4	1	6.3	67.3	67.4	68	53.2	68.2	70	N	N	N/A
HWT-5	1	4.2	54.1	54.6	53.3	67.7	67.8	70	N	N	N/A
HWT-6	1	3.5	59.2	59.7	59.6	66.2	67	70	N	N	N/A
HWT-7-a	1	3.5	53.6	54	52.9	65.9	66.1	70	N	N	N/A
HWT-7-a	2	6.5	53.6	54	53	66.4	66.6	70	N	N	N/A
HWT-7-b	1	3.5	63.4	63.4	63.5	65.9	67.8	70	N	N	N/A
HWT-7-b	2	6.5	63.4	63.4	63.7	67.1	68.8	70	N	N	N/A
HWTR-1-a	1	2.9	41	41.6	35.9	57.9	57.9	70	N	N	N/A
HWTR-1-b	1	2.9	60	60.3	59.7	71.9	72.1	70	Y	Y	Western Connection Road
HWTR-2-a	1	3.6	45.9	46.6	42.6	62.6	62.6	70	N	N	N/A
HWTR-2-b	1	3.6	60.4	60.7	60.4	66.6	67.5	70	N	N	N/A
HWTR-3	1	3.1	37.2	38	35.2	56.6	56.6	70	N	N	N/A
HWTR-4-a	1	4.7	45.9	47.1	46.7	54.1	54.9	70	N	N	N/A
HWTR-4-b	1	4.7	59.1	59.3	59.4	63.7	65	70	N	N	N/A
HWTR-5-a	1	5.5	46.6	47.8	47.4	49.2	51.4	70	N	N	N/A
HWTR-5-b	1	5.5	57.8	58	57.9	62.7	64	70	N	N	N/A
HWTR-6-a	1	4.0	70.1	70.2	61.4	72.3	72.7	70	Y	Y	Western Connection Road
HWTR-6-b	1	4.0	70.3	70.2	50	74.1	74.1	70	Y	Y	Western Connection Road
HWTR-7	1	5.9	71.3	71.2	60.8	71.9	72.2	70	Y	Y	Western Connection Road
HWTR-8-a	1	5.4	70.4	70.3	44.2	75.5	75.5	70	Y	Y	Western Connection Road
HWTR-8-b	1	5.4	71	70.9	60.5	72.8	73.1	70	Y	Y	Western Connection Road
HWTR-9	1	7.0	71	70.9	47.9	76.2	76.2	70	Y	Y	Western Connection Road
HWTR-10	1	8.4	71.8	71.6	48.6	74.7	74.7	70	Y	Y	Western Connection Road
HWTR-11	1	7.0	69.9	69.8	48.5	76.1	76.1	70	Y	Y	Western Connection Road
HWTR-12	1	3.2	54.2	54.9	44.7	70.5	70.5	70	Y	Y	Western Connection Road
HWTR-13	1	3.2	54.8	55.5	45.5	72.1	72.1	70	Y	Y	Western Connection Road
HWTR-14	1	3.2	54.6	55.3	44.7	72.3	72.3	70	Y	Y	Western Connection Road
HWTR-15	1	3.6	54.9	55.6	44.6	72.9	72.9	70	Y	Y	Western Connection Road
HWTR-16	1	3.6	55.1	55.8	44	73.4	73.4	70	Y	Y	Western Connection Road
HWTR-17-a	1	2.6	57.2	57.9	51.5	72.3	72.4	70	Y	Y	Western Connection Road
HWTR-17-b	1	2.6	60.6	61	59.1	71.3	71.5	70	Y	Y	Western Connection Road
HWTR-18	1	3.5	60.6	60.9	60.2	66.6	67.5	70	N	N	N/A
HWTR-20	1	3.7	59.8	60.1	59.9	66.4	67.2	70	N	N	N/A
HWTR-21	1	3.6	63.3	63.5	62.6	68.8	69.7	70	N	N	N/A
HWTR-22	1	3.6	58.3	58.6	58.3	69.5	69.8	70	N	N	N/A
HWTR-23	1	7.0	72.4	72.3	46.8	75.7	75.7	70	Y	Y	Western Connection Road
HWTR-23	2	10.0	74.9	74.8	47	75.4	75.4	70	Y	Y	Western Connection Road
KTN-50	1	13.3	72.3	74.2	74	59.3	74.2	70	N	Y	Fanling Highway
KTN-50	2	16.3	72.3	74.2	74.1	59.5	74.2	70	N	Y	Fanling Highway
KTN-51	1	11.9	72.4	74.2	73.8	63.6	74.2	70	N	Y	Fanling Highway
KTN-51	2	14.9	72.5	74.3	73.9	63.7	74.3	70	N	Y	Fanling Highway
LMCR-1-a	1	8.0	66.7	66.5	58.6	68	68.4	70	N	N	N/A
LMCR-1-a	2	11.0	67.9	67.6	58.6	68.7	69.1	70	N	N	N/A
LMCR-1-a	3	14.0	68.8	68.6	58.6	69.7	70	70	N	N	N/A
LMCR-1-a	4	17.0	68.9	68.8	58.6	69.7	70	70	N	N	N/A
LMCR-1-b	1	8.0	66.5	66.1	48.1	67.4	67.4	70	N	N	N/A
LMCR-1-b	2	11.0	69.1	68.8	50.3	69.8	69.9	70	N	N	N/A
LMCR-1-b	3	14.0	71.1	70.7	50.6	72.1	72.1	70	Y	Y	Western Connection Road
LMCR-1-b	4	17.0	71.7	71.3	50.8	72.8	72.8	70	Y	Y	Western Connection Road
LMCR-2	1	7.8	68	67.6	52.6	68.5	68.6	70	N	N	N/A
LMCR-2	2	10.8	70.8	70.5	53.8	71.6	71.6	70	Y	Y	Western Connection Road
LMCR-3	1	8.0	65.4	65	38.5	66.9	67	70	N	N	N/A
LMCR-3	2	11.0	65.6	65.2	40	67.1	67.1	70	N	N	N/A
LMCR-3	3	14.0	70.2	69.9	49.9	71.4	71.5	70	Y	Y	Western Connection Road
LMCR-4-a	1	8.0	69	68.6	40.9	70.4	70.4	70	N	N	N/A
LMCR-4-a	2	11.0	68.9	68.6	41.6	70.4	70.4	70	N	N	N/A
LMCR-4-a	3	14.0	68.9	68.5	43.3	70.4	70.4	70	N	N	N/A
LMCR-4-b	1	8.0	71.1	70.7	47.5	72.4	72.4	70	Y	Y	Western Connection Road
LMCR-4-b	2	11.0	71.2	70.8	48.1	72.4	72.5	70	Y	Y	Western Connection Road
LMCR-4-b	3	14.0	71.1	70.7	48.6	72.4	72.4	70	Y	Y	Western Connection Road
LMCR-4-c	1	8.0	70.3	69.9	42.5	71.9	71.9	70	Y	Y	Western Connection Road
LMCR-4-c	2	11.0	70.3	69.9	43.1	71.8	71.8	70	Y	Y	Western Connection Road
LMCR-4-c	3	14.0	70.1	69.8	44.7	71.7	71.7	70	Y	Y	Western Connection Road
LMCR-5-a	1	7.9	71	70.7	48.9	72.4	72.4	70	Y	Y	Western Connection Road
LMCR-5-a	2	10.9	71	70.7	49.1	72.4	72.5	70	Y	Y	Western Connection Road
LMCR-5-b	1	7.9	70.2	69.9	55.7	71.4	71.5	70	Y	Y	Western Connection Road
LMCR-5-b	2	10.9	70.2	69.8	55.8	71.4	71.5	70	Y	Y	Western Connection Road
LMCR-6	1	8.1	69.8	69.4	50.3	71.2	71.2	70	Y	Y	Western Connection Road
LMCR-6	2	11.1	69.8	69.4	50.4	71.1	71.1	70	Y	Y	Western Connection Road
LMCR-7	1	7.3	65	64.6	54.7	66.5	66.8	70	N	N	N/A
LMCR-7	2	10.3	65.1	64.7	54.7	66.6	66.8	70	N	N	N/A
LMCR-8	1	9.1	70.8	70.4	51.8	72.2	72.3	70	Y	Y	Western Connection Road
LMCR-8	2	12.1	70.7	70.4	53.8	72.2	72.2	70	Y	Y	Western Connection Road
LMCR-9	1	9.1	69.5	69.1	48.1	71	71.1	70	Y	Y	Western Connection Road
LMCR-9	2	12.1	69.5	69.1	50.9	71	71	70	Y	Y	Western Connection Road
LMCR-10	1	9.5	68.6	68.3	46.7	70.4	70.4	70	N	N	N/A
LMCR-10	2	12.5	68.6	68.3	47.2	70.3	70.3	70	N	N	N/A
LMCR-11	1	9.5	67.2	66.8	50.7	69.2	69.3	70	N	N	N/A
LMCR-14	1	10.4	70	69.7	51.4	71.3	71.4	70	Y	Y	Western Connection Road
LMCR-14	2	13.4	69.9	69.6	51.4	71.3	71.4	70	Y	Y	Western Connection Road
LMCR-14	3	16.4	69.9	69.6	51.4	71.3	71.3	70	Y	Y	Western Connection Road
LMCR-15	1	3.0	68.2	68.8	60.3	69.6	70.1	70	N	N	N/A
LMCR-15	2	6.0	68.2	68.8	60.3	69.6	70.1	70	N	N	N/A

Title: Road Traffic Noise Assessment Results (2042 Base Case)

Receivers		FL	mP.D.	Without Project		With Project			Noise Criteria	New Road Exceedance (Y/N)	Overall Exceedance (Y/N)	Major Concerned Roads Causing Exceedance
ID				Overall noise Level at 2016 dB(A)	Overall noise Level at 2042 dB(A)	Noise Level dB(A)						
						EXISTING ROADS at 2042	NEW ROADS at 2042	ALL ROADS at 2042				
LMCR-15	3	9.0	68.2	68.7	60.3	69.6	70.1	70	N	N	N/A	
LMCR-16	1	9.0	73.7	73.3	50.6	76.5	76.5	70	Y	Y	Western Connection Road	
LMCR-17-a	1	8.9	67.2	66.9	54.9	68.5	68.7	70	N	N	N/A	
LMCR-17-b	2	11.9	67.2	66.9	54.9	68.6	68.7	70	N	N	N/A	
LMCR-17-b	1	8.9	68.8	68.5	53.1	70.7	70.8	70	Y	Y	Western Connection Road	
LMCR-17-b	2	11.9	68.8	68.5	53.1	70.7	70.8	70	Y	Y	Western Connection Road	
LMCST-1-a	1	4.0	62.7	63.2	61.4	62.7	65.1	70	N	N	N/A	
LMCST-1-b	1	4.0	63.1	64	63.7	61.7	65.8	70	N	N	N/A	
LMCST-2	1	5.5	65.5	65.8	62	66.9	68.1	70	N	N	N/A	
LMCT-1-a	1	4.0	56.8	57.6	56.8	55.9	59.3	70	N	N	N/A	
LMCT-1-a	2	7.0	56.8	57.6	56.8	55.9	59.4	70	N	N	N/A	
LMCT-1-a	3	10.0	56.8	57.6	56.8	56	59.4	70	N	N	N/A	
LMCT-1-b	1	4.0	57.5	58.5	58.3	54.6	59.9	70	N	N	N/A	
LMCT-1-b	2	7.0	57.6	58.5	58.3	54.6	59.9	70	N	N	N/A	
LMCT-1-b	3	10.0	57.6	58.5	58.3	54.6	59.8	70	N	N	N/A	
MTL-2-a	1	9.2	37.9	37.9	51.8	63.8	64	70	N	N	N/A	
MTL-2-b	1	9.2	33	33	54.8	61.1	62	70	N	N	N/A	
MTL-3	1	8.0	36.1	36.9	62.1	63.4	65.8	70	N	N	N/A	
MTL-3	2	11.0	36.2	37	62.3	63.4	65.9	70	N	N	N/A	
MTL-4	1	6.8	32.5	32.5	63.3	61	65.3	70	N	N	N/A	
MTL-5	1	11.0	36.4	38.3	65.4	56.7	65.9	70	N	N	N/A	
MTL-6	1	13.6	35.2	37.7	64.6	53.8	65	70	N	N	N/A	
MTL-7	1	12.0	31.5	34	64.5	0	64.5	70	N	N	N/A	
MTL-7	2	15.0	31.5	34	64.5	0	64.5	70	N	N	N/A	
MTL-20	1	8.0	35.6	36.6	69.3	63.8	70.4	70	N	N	N/A	
MTL-21	1	5.6	36	38.5	70.2	53.1	70.3	70	N	N	N/A	
MTLR-1	1	7.2	46	46	45.5	64.3	64.4	70	N	N	N/A	
MTLR-2	1	5.5	46.7	46.7	53.1	65.5	65.7	70	N	N	N/A	
MTLR-2	2	8.5	46.6	46.6	53.1	65.5	65.7	70	N	N	N/A	
MTLR-3	1	11.5	45.6	45.6	51.7	63.3	63.6	70	N	N	N/A	
MTLR-4	1	7.8	49.7	49.8	43.7	0	43.7	70	N	N	N/A	
MTLR-4	2	10.8	49.7	49.8	43.7	0	43.7	70	N	N	N/A	
MTLR-5	1	25.6	56.4	59.2	58.9	42.8	59	70	N	N	N/A	
MTLR-5	2	28.6	56.4	59.2	58.8	43.3	58.9	70	N	N	N/A	
MTLR-6-a	1	25.4	61.2	65.4	61.9	23.2	61.9	70	N	N	N/A	
MTLR-6-a	2	28.4	61.1	65.2	61.8	26	61.8	70	N	N	N/A	
MTLR-6-b	1	25.4	61.1	65.2	62.1	33.5	62.1	70	N	N	N/A	
MTLR-6-b	2	28.4	61	65	62.1	34.9	62.1	70	N	N	N/A	
MTLR-7	1	22.3	61.2	65.2	63.8	0	63.8	70	N	N	N/A	
MTLR-7	2	25.3	61.3	65.2	63.8	0	63.8	70	N	N	N/A	
MTLST-1	1	18.9	61.5	65.8	63.9	0	63.9	70	N	N	N/A	
MTLSYST-1	1	14.5	49.6	50.4	56.4	56.9	59.7	70	N	N	N/A	
MTLSYST-1	2	17.5	49.4	50.3	56.4	56.9	59.7	70	N	N	N/A	
MTLSYST-2	1	18.8	50.5	52	55.8	52.7	57.5	70	N	N	N/A	
PUT-1	1	6.0	61.6	62.2	55.6	62.5	63.3	70	N	N	N/A	
PUT-1	2	9.0	61.6	62.3	55.6	62.5	63.3	70	N	N	N/A	
PUT-1	3	12.0	61.6	62.2	55.6	62.5	63.3	70	N	N	N/A	
PUT-2	1	8.3	64.6	64.9	56.4	65.8	66.3	70	N	N	N/A	
PUT-2	2	11.3	64.6	64.9	56.4	65.8	66.3	70	N	N	N/A	
PUT-2	3	14.3	64.6	64.9	56.4	65.8	66.3	70	N	N	N/A	
SSR-1	1	2.9	70.7	70.7	71.8	55.6	71.9	70	N	Y	Local Road near San Sham Road	
SSR-1	2	5.9	70.7	70.7	71.8	55.6	71.9	70	N	Y	Local Road near San Sham Road	
SSR-2	1	2.9	70	70	71.1	57.9	71.3	70	N	Y	Local Road near San Sham Road	
SSR-2	2	5.9	70	70	71.1	58.7	71.3	70	N	Y	Local Road near San Sham Road	
TCW-1	1	3.1	60.7	60.9	60.9	0	60.9	70	N	N	N/A	
TCW-1	2	6.1	60.7	61	60.9	0	60.9	70	N	N	N/A	
TCW-1	3	9.1	60.7	61	60.9	0	60.9	70	N	N	N/A	
TWOR-1-a	1	5.5	72.3	72.9	72.7	56.5	72.9	70	N	Y	San Tin Highway	
TWOR-1-a	2	8.5	72.3	72.9	72.8	56.8	72.9	70	N	Y	San Tin Highway	
TWOR-1-a	3	11.5	72.3	72.9	72.8	57.1	72.9	70	N	Y	San Tin Highway	
TWOR-1-b	1	5.5	74.5	75.5	75.4	58.6	75.5	70	N	Y	San Tin Highway	
TWOR-1-b	2	8.5	74.5	75.5	75.5	58.9	75.6	70	N	Y	San Tin Highway	
TWOR-1-b	3	11.5	74.6	75.6	75.5	59.2	75.6	70	N	Y	San Tin Highway	
CDWEA-P1	1	4.3	67.2	66.3	65.2	54.4	65.6	70	N	N	N/A	
CDWEA-P1	2	7.3	67.1	66.2	65.1	54.8	65.5	70	N	N	N/A	
CDWEA-P1	3	10.3	66.9	66	65	55.2	65.4	70	N	N	N/A	
CDWEA-P2	1	3.6	66	65.1	64.1	54	64.5	70	N	N	N/A	
CDWEA-P2	2	6.6	66	65	64.1	54.2	64.5	70	N	N	N/A	
CDWEA-P2	3	9.6	65.9	64.9	64	54.4	64.4	70	N	N	N/A	
CDWEA-P3	1	3.4	65.6	64.5	63.5	52.4	63.8	70	N	N	N/A	
CDWEA-P3	2	6.4	65.6	64.5	63.5	52.5	63.8	70	N	N	N/A	
CDWEA-P3	3	9.4	65.4	64.3	63.3	52.7	63.7	70	N	N	N/A	
CDWEA-P4	1	3.4	65.2	64	62.7	48.4	62.9	70	N	N	N/A	
CDWEA-P4	2	6.4	65.1	63.9	62.6	48.6	62.8	70	N	N	N/A	
CDWEA-P4	3	9.4	65	63.7	62.5	48.9	62.7	70	N	N	N/A	
CTT-P1	1	3.0	68.4	68.4	58.3	69.6	69.9	70	N	N	N/A	
CTT-P1	2	6.0	68.4	68.4	58.3	69.6	69.9	70	N	N	N/A	
CTT-P1	3	9.0	68.4	68.4	58.3	69.6	69.9	70	N	N	N/A	
CTT-P2	1	2.8	68.4	70	67.7	66.7	70.2	70	N	N	N/A	
CTT-P2	2	5.8	68.4	70	67.7	66.7	70.2	70	N	N	N/A	
CTT-P2	3	8.8	68.4	70	67.7	66.7	70.2	70	N	N	N/A	
CTT-P3	1	3.5	70.6	72.3	72	63	72.5	70	N	Y	Fanling Highway	
CTT-P3	2	6.5	70.6	72.4	72	63.1	72.6	70	N	Y	Fanling Highway	
CTT-P3	3	9.5	70.7	72.4	72.1	63.1	72.6	70	N	Y	Fanling Highway	
EL-P1	1	18.0	46.2	46.2	0	70.8	70.8	70	Y	Y	Eastern Connection Road	
EL-P2	1	27.0	42.7	42.7	0	66.5	66.5	70	N	N	N/A	
EL-P3	1	13.0	46.3	46.3	0	71.8	71.8	70	Y	Y	Eastern Connection Road	
EL-P4	1	10.0	45.6	45.6	0	70.8	70.8	70	Y	Y	Eastern Connection Road	
EL-P5	1	20.0	45.6	45.6	0	69.2	69.2	70	N	N	N/A	
ELKPS-P1	1	14.6	51.4	54.2	58.3	0	58.3	70	N	N	N/A	
HHW-P1	1	3.6	40.3	40.5	38.3	63	63	70	N	N	N/A	
HHW-P1	2	6.6	40.3	40.5	38.2	63	63	70	N	N	N/A	
HHW-P1	3	9.6	40.3	40.5	38.2	63	63.1	70	N	N	N/A	
HHW-P2	1	3.6	0	0	0	62.3	62.3	70	N	N	N/A	
HHW-P2	2	6.6	0	0	0	62.3	62.3	70	N	N	N/A	
HHW-P2	3	9.6	0	0	0	62.3	62.3	70	N	N	N/A	
HHW-P3	1	18.0	38.9	39.4	39.8	60.8	60.8	70	N	N	N/A	
HHW-P3	2	21.0	38.9	39.4	39.8	60.8	60.8	70	N	N	N/A	
HHW-P3	3	24.0	38.9	39.4	39.8	60.8	60.8	70	N	N	N/A	
KTN F1-3	1	6.2	23.9	23.9	67.1	50.7	67.2	70	N	N	N/A	
KTN F1-3	2	9.2	23.9	23.9	67.1	50.8	67.2	70	N	N	N/A	
KTN F1-3	3	12.2	23.9	23.9	67	50.7	67.1	70	N	N	N/A	
KTN F1-3	4	15.2	23.9	23.9	67	50.7	67.1	70	N	N	N/A	

Title: Road Traffic Noise Assessment Results (2042 Base Case)

Receivers		Without Project			With Project			Noise Criteria	New Road Exceedance (Y/N)	Overall Exceedance (Y/N)	Major Concerned Roads Causing Exceedance
ID	FL	mP.D.	Overall noise Level at 2016 dB(A)	Overall noise Level at 2042 dB(A)	Noise Level dB(A)						
					EXISTING ROADS at 2042	NEW ROADS at 2042	ALL ROADS at 2042				
KTN F1-3	5	18.2	23.9	23.9	66.9	50.7	67	70	N	N	N/A
KTN F1-3	6	21.2	23.9	23.9	66.8	50.7	66.9	70	N	N	N/A
KTN F1-3	7	24.2	23.9	23.9	66.7	50.6	66.8	70	N	N	N/A
KTN F1-3	8	27.2	23.9	23.9	66.6	50.6	66.7	70	N	N	N/A
KTN F1-3	9	30.2	23.9	23.9	66.4	50.5	66.5	70	N	N	N/A
KTN F1-3	10	33.2	23.9	23.9	66.3	50.4	66.4	70	N	N	N/A
LMCTE-P1	1	4.1	63	64.3	63.8	57.7	64.8	70	N	N	N/A
LMCTE-P1	2	7.1	62.9	64.3	63.7	57.7	64.7	70	N	N	N/A
LMCTE-P1	3	10.1	62.6	63.9	63.4	57.8	64.5	70	N	N	N/A
LMCTE-P2	1	3.1	62.3	63.7	63.4	54.8	64	70	N	N	N/A
LMCTE-P2	2	6.1	62.2	63.6	63.3	54.8	63.9	70	N	N	N/A
LMCTE-P2	3	9.1	62	63.3	63	54.8	63.6	70	N	N	N/A
LMCTE-P3	1	3.1	62.1	63.5	63.2	40.5	63.2	70	N	N	N/A
LMCTE-P3	2	6.1	62	63.4	63.1	40.7	63.1	70	N	N	N/A
LMCTE-P3	3	9.1	61.7	63.1	62.8	41.2	62.8	70	N	N	N/A
LMCTE-P4	1	4.5	63.4	64.7	64.5	32.6	64.5	70	N	N	N/A
LMCTE-P4	2	7.5	63.3	64.6	64.4	38.5	64.4	70	N	N	N/A
LMCTE-P4	3	10.5	63	64.3	64	39.9	64	70	N	N	N/A
LMCTE-P5	1	4.5	63.6	65	64.7	44.2	64.7	70	N	N	N/A
LMCTE-P5	2	7.5	63.5	64.8	64.6	44.4	64.7	70	N	N	N/A
LMCTE-P5	3	10.5	63.2	64.5	64.3	44.6	64.3	70	N	N	N/A
LMCTE-P6	1	5.6	57.2	58.5	56.9	51.9	58.1	70	N	N	N/A
LMCTE-P6	2	8.6	57.3	58.6	57.1	51.9	58.2	70	N	N	N/A
LMCTE-P6	3	11.6	57.3	58.6	57	52	58.2	70	N	N	N/A
LMCTE-P7	1	13.6	59.3	60.3	59.3	56.2	61	70	N	N	N/A
LMCTE-P7	2	16.6	59.2	60.2	59.2	56.2	61	70	N	N	N/A
LMCTE-P7	3	19.6	59.1	60.1	59.1	56.2	60.9	70	N	N	N/A
LMCTE-P8	1	5.6	58.8	59.8	58.3	56	60.3	70	N	N	N/A
LMCTE-P8	2	8.6	58.9	59.9	58.4	56	60.4	70	N	N	N/A
LMCTE-P8	3	11.6	59	60	58.5	56.1	60.5	70	N	N	N/A
LMCTE-P9	1	13.6	57.7	59.1	58.1	51.3	58.9	70	N	N	N/A
LMCTE-P9	2	16.6	57.5	58.9	57.9	51.3	58.8	70	N	N	N/A
LMCTE-P9	3	19.6	57.2	58.6	57.7	51.3	58.6	70	N	N	N/A
LMCTE-P10	1	5.6	56.6	57.9	56.1	53	57.8	70	N	N	N/A
LMCTE-P10	2	8.6	56.9	58.1	56.4	53	58	70	N	N	N/A
LMCTE-P10	3	11.6	57.1	58.3	56.6	53	58.2	70	N	N	N/A
LMCTE-P11	1	13.6	59.6	60.8	59.9	49.1	60.3	70	N	N	N/A
LMCTE-P11	2	16.6	59.5	60.7	59.8	49.1	60.2	70	N	N	N/A
LMCTE-P11	3	19.6	59.4	60.5	59.7	49.1	60.1	70	N	N	N/A
LMCTE-P12	1	10.0	56.4	57.5	55.9	50.5	57	70	N	N	N/A
LMCTE-P12	2	13.0	56.4	57.6	56	50.5	57.1	70	N	N	N/A
LMCTE-P12	3	16.0	56.3	57.4	55.8	50.5	57	70	N	N	N/A
LMCTE-P13	1	13.6	58.5	59.7	58.9	42.7	59	70	N	N	N/A
LMCTE-P13	2	16.6	58.5	59.7	58.9	42.8	59	70	N	N	N/A
LMCTE-P13	3	19.6	58.3	59.5	58.7	42.8	58.8	70	N	N	N/A
LMCTE-P14	1	10.0	60	61.3	60	47.8	60.3	70	N	N	N/A
LMCTE-P14	2	13.0	59.9	61.2	59.9	47.8	60.2	70	N	N	N/A
LMCTE-P14	3	16.0	59.6	61	59.7	47.8	59.9	70	N	N	N/A
LMCTE-P15	1	13.6	60.5	61.8	60.7	39.1	60.8	70	N	N	N/A
LMCTE-P15	2	16.6	60.3	61.6	60.5	39.1	60.5	70	N	N	N/A
LMCTE-P15	3	19.6	60	61.3	60.2	39.1	60.3	70	N	N	N/A
LMCTE-P16	1	10.0	57.6	59	57.9	41.1	58	70	N	N	N/A
LMCTE-P16	2	13.0	57.4	58.8	57.7	41.1	57.8	70	N	N	N/A
LMCTE-P16	3	16.0	57.2	58.6	57.5	41.1	57.6	70	N	N	N/A
LMCTE-P17	1	10.0	56.8	58.2	57.1	37.2	57.1	70	N	N	N/A
LMCTE-P17	2	13.0	56.6	58	56.9	37.2	56.9	70	N	N	N/A
LMCTE-P17	3	16.0	56.3	57.7	56.6	37.2	56.7	70	N	N	N/A
LMCTE-P18	1	10.0	56.7	58	57	36.9	57	70	N	N	N/A
LMCTE-P18	2	13.0	56.5	57.8	56.8	36.9	56.9	70	N	N	N/A
LMCTE-P18	3	16.0	56.2	57.5	56.6	36.9	56.6	70	N	N	N/A
LMCL-P1	1	9.8	-	51	50.5	75.5	75.5	70	Y	Y	LMC Loop Road M1
LMCL-P1	2	13.3	-	50.9	50.4	75.2	75.2	70	Y	Y	LMC Loop Road M1
LMCL-P1	3	16.8	-	50.9	50.4	74.7	74.7	70	Y	Y	LMC Loop Road M1
LMCL-P1	4	20.3	-	50.9	50.4	74.2	74.2	70	Y	Y	LMC Loop Road M1
LMCL-P1	5	23.8	-	50.8	50.4	73.7	73.7	70	Y	Y	LMC Loop Road M1
LMCL-P1	6	27.3	-	50.8	50.3	73.2	73.2	70	Y	Y	LMC Loop Road M1
LMCL-P1	7	30.8	-	50.7	50.3	72.7	72.8	70	Y	Y	LMC Loop Road M1
LMCL-P1	8	34.3	-	50.7	50.2	72.3	72.3	70	Y	Y	LMC Loop Road M1
LMCL-P2	1	9.8	-	49.6	48.5	75.7	75.7	70	Y	Y	LMC Loop Road M1
LMCL-P2	2	13.3	-	49.6	48.5	75.3	75.3	70	Y	Y	LMC Loop Road M1
LMCL-P2	3	16.8	-	49.5	48.4	74.8	74.8	70	Y	Y	LMC Loop Road M1
LMCL-P2	4	20.3	-	49.5	48.4	74.3	74.3	70	Y	Y	LMC Loop Road M1
LMCL-P2	5	23.8	-	49.5	48.4	73.8	73.8	70	Y	Y	LMC Loop Road M1
LMCL-P2	6	27.3	-	49.4	48.3	73.3	73.3	70	Y	Y	LMC Loop Road M1
LMCL-P2	7	30.8	-	49.4	48.3	72.9	72.9	70	Y	Y	LMC Loop Road M1
LMCL-P2	8	34.3	-	49.3	48.2	72.5	72.5	70	Y	Y	LMC Loop Road M1
LMCL-P3	1	9.8	-	46.3	45.2	72.1	72.1	70	Y	Y	LMC Loop Road M1
LMCL-P3	2	13.3	-	46.3	45.2	71.8	71.8	70	Y	Y	LMC Loop Road M1
LMCL-P3	3	16.8	-	46.3	45.2	71.4	71.5	70	Y	Y	LMC Loop Road M1
LMCL-P3	4	20.3	-	46.3	45.2	71.1	71.1	70	Y	Y	LMC Loop Road M1
LMCL-P3	5	23.8	-	46.2	45.1	70.7	70.8	70	Y	Y	LMC Loop Road M1
LMCL-P3	6	27.3	-	46.2	45.1	70.4	70.4	70	N	N	N/A
LMCL-P3	7	30.8	-	46.1	45	70	70.1	70	N	N	N/A
LMCL-P3	8	34.3	-	46.1	45	69.7	69.7	70	N	N	N/A
LMCL-P4	1	9.7	-	30.3	-0.1	58.6	58.6	70	N	N	N/A
LMCL-P4	2	13.2	-	30.3	0.4	58.4	58.4	70	N	N	N/A
LMCL-P4	3	16.7	-	30.3	1	58.2	58.2	70	N	N	N/A
LMCL-P4	4	20.2	-	30.3	1.6	58	58	70	N	N	N/A
LMCL-P4	5	23.7	-	30.3	2.3	57.7	57.7	70	N	N	N/A
LMCL-P4	6	27.2	-	30.3	2.8	57.5	57.5	70	N	N	N/A
LMCL-P4	7	30.7	-	30.3	3.5	57.2	57.2	70	N	N	N/A
LMCL-P4	8	34.2	-	30.3	4.2	57	57	70	N	N	N/A
LMCL-P4	9	37.7	-	30.2	4.8	56.7	56.7	70	N	N	N/A
LMCL-P4	10	41.2	-	30.2	5.5	56.5	56.5	70	N	N	N/A
LMCL-P5	1	9.7	-	0	0	54.3	54.3	70	N	N	N/A
LMCL-P5	2	13.2	-	0	0	54.2	54.2	70	N	N	N/A
LMCL-P5	3	16.7	-	0	0	54.1	54.1	70	N	N	N/A
LMCL-P5	4	20.2	-	0	0	54	54	70	N	N	N/A
LMCL-P5	5	23.7	-	0	0	53.9	53.9	70	N	N	N/A
LMCL-P5	6	27.2	-	0	0	53.7	53.7	70	N	N	N/A
LMCL-P5	7	30.7	-	0	0	53.4	53.4	70	N	N	N/A
LMCL-P5	8	34.2	-	0	0	53.2	53.2	70	N	N	N/A
LMCL-P5	9	37.7	-	0	0	52.9	52.9	70	N	N	N/A

Title: Road Traffic Noise Assessment Results (2042 Base Case)

Receivers		Without Project			With Project					Major Concerned Roads Causing Exceedance	
ID	FL	mP.D.	Overall noise Level at 2016 dB(A)	Overall noise Level at 2042 dB(A)	Noise Level dB(A)			Noise Criteria	New Road Exceedance (Y/N)		Overall Exceedance (Y/N)
					EXISTING ROADS	NEW ROADS	ALL ROADS				
					at 2042	at 2042	at 2042				
LMCL-P6	1	9.7	-	38.4	28	54.8	54.8	70	N	N	N/A
LMCL-P6	2	13.2	-	38.5	28.3	54.7	54.7	70	N	N	N/A
LMCL-P6	3	16.7	-	38.5	28.6	54.5	54.5	70	N	N	N/A
LMCL-P6	4	20.2	-	38.5	29	54.3	54.4	70	N	N	N/A
LMCL-P6	5	23.7	-	38.6	29.7	54.2	54.2	70	N	N	N/A
LMCL-P6	6	27.2	-	38.6	30.4	54	54	70	N	N	N/A
LMCL-P6	7	30.7	-	38.6	31.6	53.7	53.7	70	N	N	N/A
LMCL-P6	8	34.2	-	38.7	34.4	53.4	53.4	70	N	N	N/A
LMCL-P6	9	37.7	-	38.7	37.4	53	53.1	70	N	N	N/A
LMCL-P7	1	9.7	-	39	9.8	55.7	55.7	70	N	N	N/A
LMCL-P7	2	13.2	-	39	11.4	55.4	55.4	70	N	N	N/A
LMCL-P7	3	16.7	-	39	13.6	55.2	55.2	70	N	N	N/A
LMCL-P7	4	20.2	-	39	16.3	54.9	54.9	70	N	N	N/A
LMCL-P7	5	23.7	-	39	19.8	54.7	54.7	70	N	N	N/A
LMCL-P7	6	27.2	-	39	24.5	54.4	54.4	70	N	N	N/A
LMCL-P7	7	30.7	-	39	30.3	54.2	54.2	70	N	N	N/A
LMCL-P7	8	34.2	-	39	37.5	54	54.1	70	N	N	N/A
LMCL-P7	9	37.7	-	39	38.7	53.5	53.7	70	N	N	N/A
LMCL-P8	1	9.8	-	47.8	36	58	58	70	N	N	N/A
LMCL-P8	2	13.3	-	48	38.5	57.9	57.9	70	N	N	N/A
LMCL-P8	3	16.8	-	48.1	39.7	57.8	57.9	70	N	N	N/A
LMCL-P8	4	20.3	-	48.2	40.2	57.7	57.8	70	N	N	N/A
LMCL-P8	5	23.8	-	48.2	40.5	57.6	57.7	70	N	N	N/A
LMCL-P8	6	27.3	-	48.2	40.6	57.5	57.6	70	N	N	N/A
LMCL-P9	1	9.8	-	32.1	-0.5	55.8	55.8	70	N	N	N/A
LMCL-P9	2	13.3	-	32.1	-0.5	55.6	55.6	70	N	N	N/A
LMCL-P9	3	16.8	-	32.1	-0.2	55.3	55.3	70	N	N	N/A
LMCL-P9	4	20.3	-	32.1	0.6	55.1	55.1	70	N	N	N/A
LMCL-P9	5	23.8	-	32.1	1.8	54.8	54.8	70	N	N	N/A
LMCL-P9	6	27.3	-	32.1	3.1	54.5	54.5	70	N	N	N/A
LMCL-P10	1	9.8	-	26.8	-4.5	55.8	55.8	70	N	N	N/A
LMCL-P10	2	13.3	-	26.8	-4.5	55.6	55.6	70	N	N	N/A
LMCL-P10	3	16.8	-	26.8	-4	55.3	55.3	70	N	N	N/A
LMCL-P10	4	20.3	-	26.8	-2.4	55	55	70	N	N	N/A
LMCL-P10	5	23.8	-	26.8	-0.7	54.7	54.7	70	N	N	N/A
LMCL-P10	6	27.3	-	26.8	1.1	54.5	54.5	70	N	N	N/A
LMCL-P11	1	9.8	-	24.8	-6.8	54.9	54.9	70	N	N	N/A
LMCL-P11	2	13.3	-	24.8	-6	54.7	54.7	70	N	N	N/A
LMCL-P11	3	16.8	-	24.8	-4.7	54.5	54.5	70	N	N	N/A
LMCL-P11	4	20.3	-	24.8	-3.7	54.3	54.3	70	N	N	N/A
LMCL-P11	5	23.8	-	24.8	-2.8	54.1	54.1	70	N	N	N/A
LMCL-P11	6	27.3	-	24.8	-1.9	53.9	53.9	70	N	N	N/A
LMCL-P12	1	9.8	-	45.5	44.4	71.8	71.8	70	Y	Y	LMC Loop Road M1
LMCL-P12	2	13.3	-	45.5	44.4	71.5	71.5	70	Y	Y	LMC Loop Road M1
LMCL-P12	3	16.8	-	45.5	44.4	71.1	71.1	70	Y	Y	LMC Loop Road M1
LMCL-P12	4	20.3	-	45.5	44.4	70.8	70.8	70	Y	Y	LMC Loop Road M1
LMCL-P12	5	23.8	-	45.4	44.3	70.4	70.4	70	N	N	N/A
LMCL-P12	6	27.3	-	45.4	44.3	70.1	70.1	70	N	N	N/A
LMCL-P12	7	30.8	-	45.4	44.3	69.7	69.8	70	N	N	N/A
LMCL-P12	8	34.3	-	45.3	44.2	69.4	69.4	70	N	N	N/A
LMCL-P13	1	9.8	-	49.8	48.6	75.7	75.7	70	Y	Y	LMC Loop Road M1
LMCL-P13	2	13.3	-	49.7	48.6	75.3	75.3	70	Y	Y	LMC Loop Road M1
LMCL-P13	3	16.8	-	49.7	48.6	74.8	74.8	70	Y	Y	LMC Loop Road M1
LMCL-P13	4	20.3	-	49.7	48.6	74.3	74.3	70	Y	Y	LMC Loop Road M1
LMCL-P13	5	23.8	-	49.6	48.5	73.8	73.8	70	Y	Y	LMC Loop Road M1
LMCL-P13	6	27.3	-	49.6	48.5	73.4	73.4	70	Y	Y	LMC Loop Road M1
LMCL-P13	7	30.8	-	49.5	48.4	72.9	72.9	70	Y	Y	LMC Loop Road M1
LMCL-P13	8	34.3	-	49.5	48.3	72.5	72.5	70	Y	Y	LMC Loop Road M1
LMCL-P14	1	9.8	-	49.6	48.5	75.4	75.4	70	Y	Y	LMC Loop Road M1
LMCL-P14	2	13.3	-	49.6	48.5	75	75	70	Y	Y	LMC Loop Road M1
LMCL-P14	3	16.8	-	49.5	48.4	74.6	74.6	70	Y	Y	LMC Loop Road M1
LMCL-P14	4	20.3	-	49.5	48.4	74.1	74.1	70	Y	Y	LMC Loop Road M1
LMCL-P14	5	23.8	-	49.5	48.4	73.6	73.6	70	Y	Y	LMC Loop Road M1
LMCL-P14	6	27.3	-	49.4	48.3	73.2	73.2	70	Y	Y	LMC Loop Road M1
LMCL-P14	7	30.8	-	49.4	48.3	72.7	72.7	70	Y	Y	LMC Loop Road M1
LMCL-P14	8	34.3	-	49.3	48.2	72.3	72.3	70	Y	Y	LMC Loop Road M1
LMCL-P15	1	9.8	-	45.8	44.7	70.6	70.6	70	Y	Y	LMC Loop Road M1
LMCL-P15	2	13.3	-	45.8	44.7	70.4	70.4	70	N	N	N/A
LMCL-P15	3	16.8	-	45.8	44.7	70.2	70.2	70	N	N	N/A
LMCL-P15	4	20.3	-	45.7	44.6	69.8	69.8	70	N	N	N/A
LMCL-P15	5	23.8	-	45.7	44.6	69.5	69.5	70	N	N	N/A
LMCL-P15	6	27.3	-	45.7	44.6	69.2	69.3	70	N	N	N/A
LMCL-P15	7	30.8	-	45.6	44.5	68.9	68.9	70	N	N	N/A
LMCL-P15	8	34.3	-	45.6	44.5	68.6	68.6	70	N	N	N/A
LMCL-P16	1	9.8	-	40.6	34.2	60.5	60.5	70	N	N	N/A
LMCL-P16	2	13.3	-	40.6	34.2	60.5	60.5	70	N	N	N/A
LMCL-P16	3	16.8	-	40.6	34.2	60.5	60.5	70	N	N	N/A
LMCL-P16	4	20.3	-	40.6	34.2	60.5	60.5	70	N	N	N/A
LMCL-P16	5	23.8	-	40.6	34.2	60.4	60.4	70	N	N	N/A
LMCL-P16	6	27.3	-	40.6	34.2	60.4	60.4	70	N	N	N/A
LMCL-P16	7	30.8	-	40.6	34.1	60.4	60.4	70	N	N	N/A
LMCL-P16	8	34.3	-	40.6	34.1	60.4	60.4	70	N	N	N/A
LMCL-P16	9	37.8	-	40.6	34.1	60.4	60.4	70	N	N	N/A
LMCL-P16	10	41.3	-	40.6	34.1	60.3	60.4	70	N	N	N/A
LMCL-P17	1	9.8	-	0	0	49.4	49.4	70	N	N	N/A
LMCL-P17	2	13.3	-	0	0	49.4	49.4	70	N	N	N/A
LMCL-P17	3	16.8	-	0	0	49.4	49.4	70	N	N	N/A
LMCL-P17	4	20.3	-	0	0	49.4	49.4	70	N	N	N/A
LMCL-P17	5	23.8	-	0	0	49.4	49.4	70	N	N	N/A
LMCL-P17	6	27.3	-	0	0	49.4	49.4	70	N	N	N/A
LMCL-P17	7	30.8	-	0	0	49.4	49.4	70	N	N	N/A
LMCL-P17	8	34.3	-	0	0	49.4	49.4	70	N	N	N/A
LMCL-P17	9	37.8	-	0	0	49.4	49.4	70	N	N	N/A
LMCL-P17	10	41.3	-	0	0	49.5	49.5	70	N	N	N/A
LMCL-P18	1	9.7	-	0	0	53.2	53.2	70	N	N	N/A
LMCL-P18	2	13.2	-	0	0	53.3	53.3	70	N	N	N/A
LMCL-P18	3	16.7	-	0	0	53.3	53.3	70	N	N	N/A
LMCL-P18	4	20.2	-	0	0	53.4	53.4	70	N	N	N/A
LMCL-P18	5	23.7	-	0	0	53.4	53.4	70	N	N	N/A
LMCL-P18	6	27.2	-	0	0	53.5	53.5	70	N	N	N/A
LMCL-P18	7	30.7	-	0	0	53.6	53.6	70	N	N	N/A
LMCL-P18	8	34.2	-	0	0	53.7	53.7	70	N	N	N/A
LMCL-P18	9	37.7	-	0	0	53.8	53.8	70	N	N	N/A

Title: Road Traffic Noise Assessment Results (2042 Base Case)

Receivers		Without Project			With Project					Major Concerned Roads Causing Exceedance	
ID	FL	mP.D.	Overall noise Level at 2016 dB(A)	Overall noise Level at 2042 dB(A)	Noise Level dB(A)			Noise Criteria	New Road Exceedance (Y/N)		Overall Exceedance (Y/N)
					EXISTING ROADS	NEW ROADS	ALL ROADS				
					at 2042	at 2042	at 2042				
LMCL-P19	1	9.7	-	0	0	54.9	54.9	70	N	N	N/A
LMCL-P19	2	13.2	-	0	0	54.9	54.9	70	N	N	N/A
LMCL-P19	3	16.7	-	0	0	54.8	54.8	70	N	N	N/A
LMCL-P19	4	20.2	-	0	0	54.8	54.8	70	N	N	N/A
LMCL-P19	5	23.7	-	0	0	54.8	54.8	70	N	N	N/A
LMCL-P19	6	27.2	-	0	0	54.7	54.7	70	N	N	N/A
LMCL-P19	7	30.7	-	0	0	54.6	54.6	70	N	N	N/A
LMCL-P19	8	34.2	-	0	0	54.5	54.5	70	N	N	N/A
LMCL-P19	9	37.7	-	0	0	54.4	54.4	70	N	N	N/A
LMCL-P20	1	9.7	-	0	0	55.7	55.7	70	N	N	N/A
LMCL-P20	2	13.2	-	0	0	55.5	55.5	70	N	N	N/A
LMCL-P20	3	16.7	-	0	0	55.3	55.3	70	N	N	N/A
LMCL-P20	4	20.2	-	0	0	55.1	55.1	70	N	N	N/A
LMCL-P20	5	23.7	-	0	0	54.9	54.9	70	N	N	N/A
LMCL-P20	6	27.2	-	0	0	54.8	54.8	70	N	N	N/A
LMCL-P20	7	30.7	-	0	0	54.7	54.7	70	N	N	N/A
LMCL-P20	8	34.2	-	0	0	54.8	54.8	70	N	N	N/A
LMCL-P20	9	37.7	-	0	0	55.1	55.1	70	N	N	N/A
LMCL-P21	1	9.7	-	29.8	29.6	53.8	53.8	70	N	N	N/A
LMCL-P21	2	13.2	-	29.8	29.6	53.8	53.8	70	N	N	N/A
LMCL-P21	3	16.7	-	29.8	29.6	53.6	53.6	70	N	N	N/A
LMCL-P21	4	20.2	-	29.7	29.5	53.5	53.5	70	N	N	N/A
LMCL-P21	5	23.7	-	29.7	29.5	53.3	53.3	70	N	N	N/A
LMCL-P21	6	27.2	-	29.7	29.5	53.1	53.1	70	N	N	N/A
LMCL-P21	7	30.7	-	29.7	29.5	52.8	52.9	70	N	N	N/A
LMCL-P21	8	34.2	-	29.7	29.5	52.5	52.5	70	N	N	N/A
LMCL-P21	9	37.7	-	29.7	29.5	52.2	52.2	70	N	N	N/A
LMCL-P22	1	9.7	-	30.7	29.7	54	54	70	N	N	N/A
LMCL-P22	2	13.2	-	30.7	29.7	54	54	70	N	N	N/A
LMCL-P22	3	16.7	-	30.7	29.7	53.9	53.9	70	N	N	N/A
LMCL-P22	4	20.2	-	30.6	29.6	53.8	53.8	70	N	N	N/A
LMCL-P22	5	23.7	-	30.6	29.6	53.7	53.7	70	N	N	N/A
LMCL-P22	6	27.2	-	30.6	29.6	53.5	53.5	70	N	N	N/A
LMCL-P22	7	30.7	-	30.6	29.6	53.2	53.3	70	N	N	N/A
LMCL-P22	8	34.2	-	30.6	29.6	53	53	70	N	N	N/A
LMCL-P22	9	37.7	-	30.6	29.6	52.8	52.8	70	N	N	N/A
LMCL-P23	1	9.7	-	26.7	-5.1	56.6	56.6	70	N	N	N/A
LMCL-P23	2	13.2	-	26.7	-4.6	56.5	56.5	70	N	N	N/A
LMCL-P23	3	16.7	-	26.7	-3.9	56.3	56.3	70	N	N	N/A
LMCL-P23	4	20.2	-	26.7	-3.3	56.2	56.2	70	N	N	N/A
LMCL-P23	5	23.7	-	26.7	-2.7	56	56	70	N	N	N/A
LMCL-P23	6	27.2	-	26.7	-2.1	55.9	55.9	70	N	N	N/A
LMCL-P23	7	30.7	-	26.7	-1.5	55.8	55.8	70	N	N	N/A
LMCL-P23	8	34.2	-	26.7	-1	55.6	55.6	70	N	N	N/A
LMCL-P23	9	37.7	-	26.7	-0.3	55.4	55.4	70	N	N	N/A
LMCL-P24	1	9.8	-	33.8	4.8	60.6	60.6	70	N	N	N/A
LMCL-P24	2	13.3	-	33.8	5.1	60.3	60.3	70	N	N	N/A
LMCL-P24	3	16.8	-	33.8	5.6	60	60	70	N	N	N/A
LMCL-P24	4	20.3	-	33.8	6.1	59.7	59.7	70	N	N	N/A
LMCL-P24	5	23.8	-	33.8	6.7	59.5	59.5	70	N	N	N/A
LMCL-P24	6	27.3	-	33.8	7.3	59.3	59.3	70	N	N	N/A
LMCL-P24	7	30.8	-	33.8	7.9	59.2	59.2	70	N	N	N/A
LMCL-P24	8	34.3	-	33.8	8.5	59	59	70	N	N	N/A
LMCL-P24	9	37.8	-	33.8	9.2	58.9	58.9	70	N	N	N/A
LMCL-P24	10	41.3	-	33.8	9.9	58.7	58.7	70	N	N	N/A
LMCL-P25	1	9.8	-	40.2	37.3	67.9	67.9	70	N	N	N/A
LMCL-P25	2	13.3	-	40.2	37.3	67.4	67.4	70	N	N	N/A
LMCL-P25	3	16.8	-	40.2	37.3	66.8	66.8	70	N	N	N/A
LMCL-P25	4	20.3	-	40.2	37.3	66.3	66.3	70	N	N	N/A
LMCL-P25	5	23.8	-	40.2	37.3	65.8	65.8	70	N	N	N/A
LMCL-P25	6	27.3	-	40.2	37.3	65.3	65.3	70	N	N	N/A
LMCL-P25	7	30.8	-	40.2	37.3	65	65	70	N	N	N/A
LMCL-P25	8	34.3	-	40.2	37.3	64.6	64.6	70	N	N	N/A
LMCL-P25	9	37.8	-	40.2	37.3	64.3	64.3	70	N	N	N/A
LMCL-P25	10	41.3	-	40.2	37.3	64	64	70	N	N	N/A
LMCL-P26	1	9.7	-	22.9	-7.6	54.1	54.1	70	N	N	N/A
LMCL-P26	2	13.2	-	22.9	-6.9	54	54	70	N	N	N/A
LMCL-P26	3	16.7	-	22.9	-6.1	53.8	53.8	70	N	N	N/A
LMCL-P26	4	20.2	-	22.9	-5.4	53.7	53.7	70	N	N	N/A
LMCL-P26	5	23.7	-	22.9	-4.7	53.6	53.6	70	N	N	N/A
LMCL-P26	6	27.2	-	22.9	-3.9	53.4	53.4	70	N	N	N/A
LMCL-P27	1	9.7	-	0	0	55.2	55.2	70	N	N	N/A
LMCL-P27	2	13.2	-	0	0	55	55	70	N	N	N/A
LMCL-P27	3	16.7	-	0	0	54.9	54.9	70	N	N	N/A
LMCL-P27	4	20.2	-	0	0	54.8	54.8	70	N	N	N/A
LMCL-P27	5	23.7	-	0	0	54.7	54.7	70	N	N	N/A
LMCL-P27	6	27.2	-	0	0	54.6	54.6	70	N	N	N/A
LMCL-P28	1	9.7	-	0	0	55.5	55.5	70	N	N	N/A
LMCL-P28	2	13.2	-	0	0	55.2	55.2	70	N	N	N/A
LMCL-P28	3	16.7	-	0	0	55.1	55.1	70	N	N	N/A
LMCL-P28	4	20.2	-	0	0	54.8	54.8	70	N	N	N/A
LMCL-P28	5	23.7	-	0	0	54.7	54.7	70	N	N	N/A
LMCL-P28	6	27.2	-	0	0	54.4	54.4	70	N	N	N/A

## Appendix 1.2

### Summary of Road Traffic Noise Mitigation Proposal for the Project

(Extracted from Appendix 4.2 of the Environmental  
Review Report submitted under VEP-595/2021  
dated 16 July 2021)

<b>Permanent Noise Barrier</b>	<b>Anticipated Completion of Construction by</b>
NB13	Oct 2024
NB14	Oct 2024
NB16	Oct 2024
NB19	Oct 2024
NB25	Oct 2024



ISO A1 594mm x 841mm  
Approved: \_\_\_\_\_  
Checked: \_\_\_\_\_  
Designer: \_\_\_\_\_  
Project Management Initials: \_\_\_\_\_  
18/05/2021  
PATH: P:\PROJECTS\60588085\DRAWING\SKETCH\CHSK0208.dgn  
Plot File by: Tsuiyuy

### LEGEND:

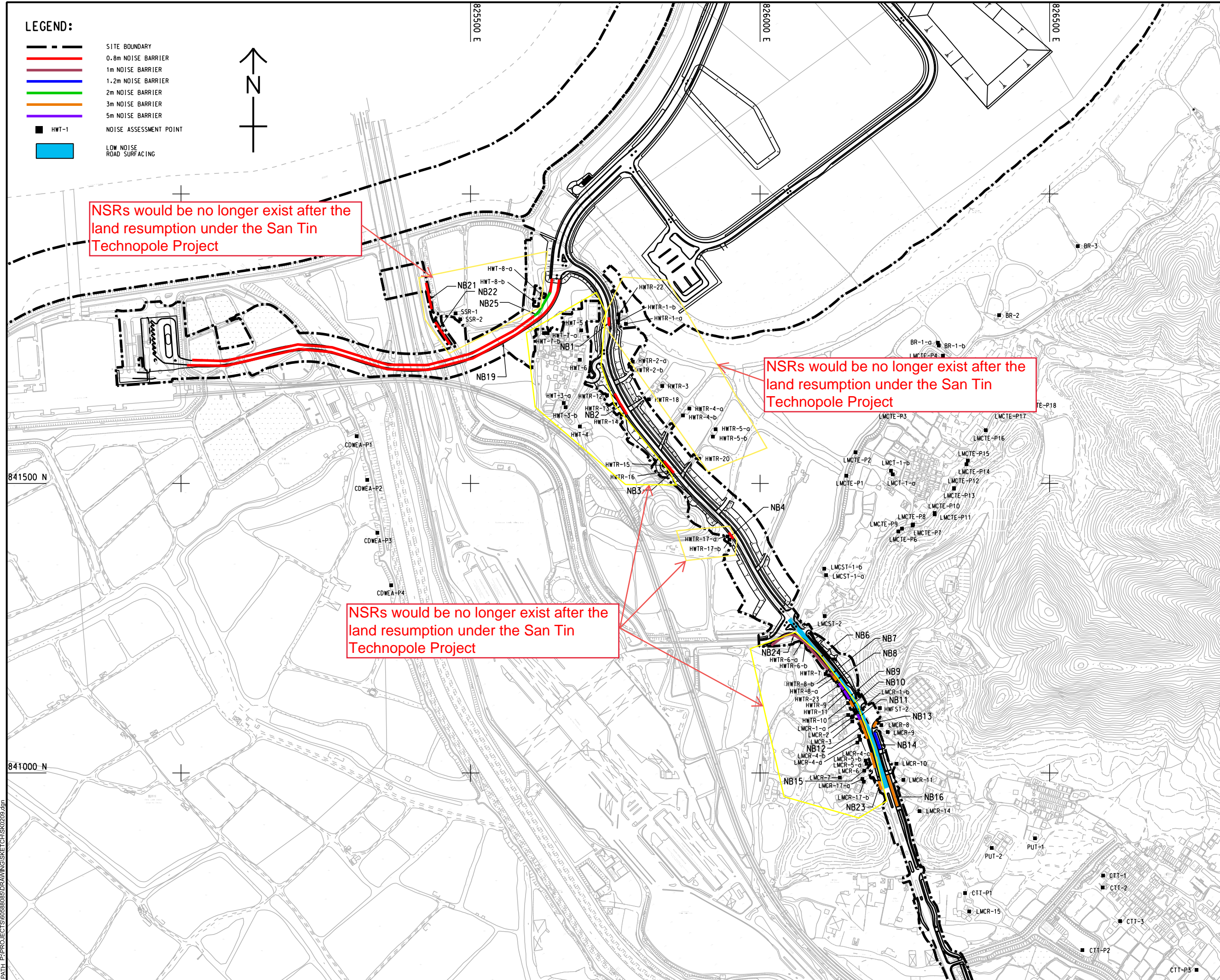
- SITE BOUNDARY
- 0.8m NOISE BARRIER
- 1m NOISE BARRIER
- 1.2m NOISE BARRIER
- 2m NOISE BARRIER
- 3m NOISE BARRIER
- 5m NOISE BARRIER
- HWT-1
- NOISE ASSESSMENT POINT
- LOW NOISE ROAD SURFACING



NSRs would be no longer exist after the land resumption under the San Tin Technopole Project

NSRs would be no longer exist after the land resumption under the San Tin Technopole Project

NSRs would be no longer exist after the land resumption under the San Tin Technopole Project



# AECOM

### PROJECT

DEVELOPMENT OF LOK MA CHAU LOOP  
MAIN WORKS PACKAGE 1  
DESIGN AND CONSTRUCTION

### CLIENT

土木工程拓展署  
Civil Engineering and Development Department

### CONSULTANT

AECOM Asia Company Ltd.  
www.aecom.com

### SUB-CONSULTANTS

设计工程顾问公司

### ISSUE/REVISION

I/R	DATE	DESCRIPTION	CHK.

### STATUS

01/01

### SCALE

A1 1: 3000

### DIMENSION UNIT

METRES

### KEY PLAN

01/01

### PROJECT NO.

60588085

### CONTRACT NO.

CE 5/2018(CE)

### SHEET TITLE

EXTENTS AND LOCATIONS OF OPERATIONAL ROAD TRAFFIC NOISE BARRIER


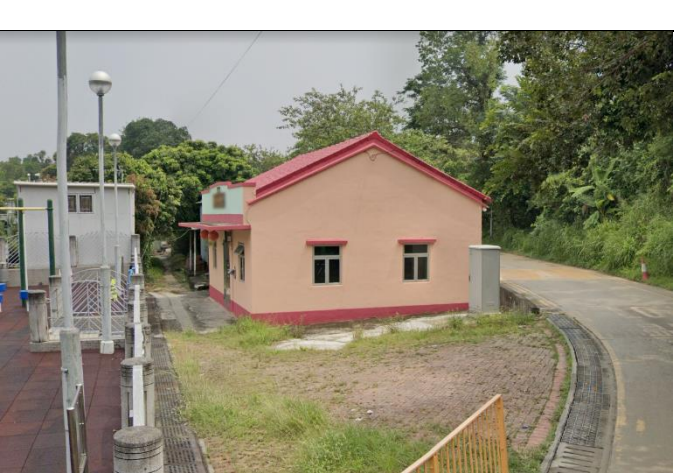

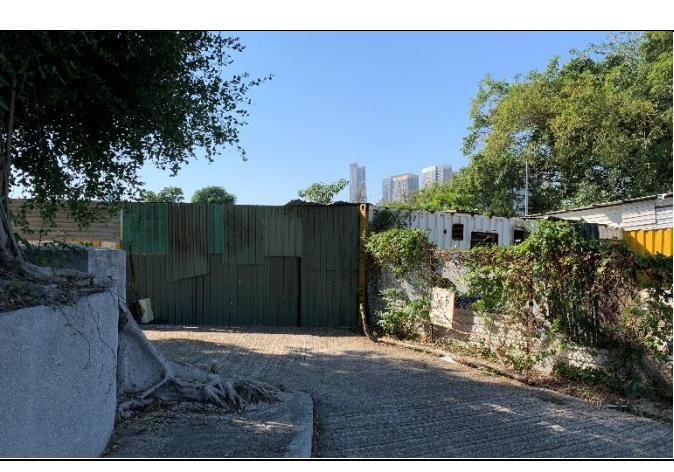
This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and disclaims all liability, whatsoever, for any error, omission or inaccuracy in this drawing without AECOM's express written consent. All measurements must be obtained from the master dimensions.



## Appendix 2.1





# Locations of the Representative Noise Sensitive Receivers

Photos of Representative Noise Sensitive Receivers along WCR and for the two slip roads





NSR No.	Location	Photo
HWFST-2	Village house, Ha Wan Fisherman San Tsuen	
HWT-3	Village house, Ha Wan Tsuen	
HWT-4	Village house, Ha Wan Tsuen	
HWT-5	Village house, Ha Wan Tsuen	



Photos of Representative Noise Sensitive Receivers along WCR and for the two slip roads





NSR No.	Location	Photo
HWT-6	Village house, Ha Wan Tsuen	
HWT-7	Village house, Ha Wan Tsuen	
HWT-8	Village house, Ha Wan Tsuen	
HWTR-1	Village house, Ha Wan Tsuen Road	

Photos of Representative Noise Sensitive Receivers along WCR and for the two slip roads





NSR No.	Location	Photo
HWTR-2	Village house, Ha Wan Tsuen Road	
HWTR-3	Village house, Ha Wan Tsuen Road	
HWTR-4	Village house, Ha Wan Tsuen Road	
HWTR-5	Village house, Ha Wan Tsuen Road	



Photos of Representative Noise Sensitive Receivers along WCR and for the two slip roads





NSR No.	Location	Photo
HWTR-6	Village house, Ha Wan Tsuen Road	
HWTR-7	Village house, Ha Wan Tsuen Road	
HWTR-8	Village house, Ha Wan Tsuen Road	
HWTR-9	Village house, Ha Wan Tsuen Road	

Photos of Representative Noise Sensitive Receivers along WCR and for the two slip roads

NSR No.	Location	Photo
HWTR-10	Village house, Ha Wan Tsuen Road	
HWTR-11	Village house, Ha Wan Tsuen Road	
HWTR-12	Village house, Ha Wan Tsuen Road	
HWTR-13	Village house, Ha Wan Tsuen Road	







Photos of Representative Noise Sensitive Receivers along WCR and for the two slip roads





NSR No.	Location	Photo
HWTR-14	Village house, Ha Wan Tsuen Road	
HWTR-15	Village house, Ha Wan Tsuen Road	
HWTR-16	Village house, Ha Wan Tsuen Road	
HWTR-17	Village house, Ha Wan Tsuen Road	



Photos of Representative Noise Sensitive Receivers along WCR and for the two slip roads




NSR No.	Location	Photo
HWTR-18	Village house, Ha Wan Tsuen Road	
HWTR-20	Village house, Ha Wan Tsuen Road	
HWTR-22	Village house, Ha Wan Tsuen Road	
HWTR-23	Village house, Ha Wan Tsuen Road	

Photos of Representative Noise Sensitive Receivers along WCR and for the two slip roads

NSR No.	Location	Photo
LMCR-1	Village house, Lok Ma Chau Road	
LMCR-2	Village house, Lok Ma Chau Road	
LMCR-3	Village house, Lok Ma Chau Road	
LMCR-4	Village house, Lok Ma Chau Road	







Photos of Representative Noise Sensitive Receivers along WCR and for the two slip roads

NSR No.	Location	Photo
LMCR-5	Village house, Lok Ma Chau Road	
LMCR-6	Village house, Lok Ma Chau Road	
LMCR-7	Village house, Lok Ma Chau Road	
LMCR-8	Village house, Lok Ma Chau Road	



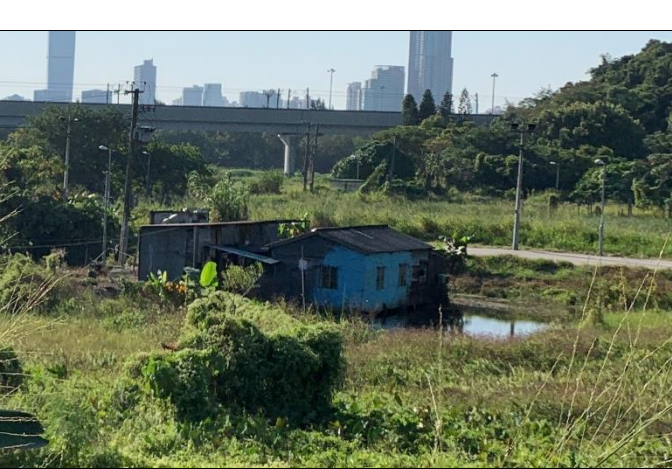
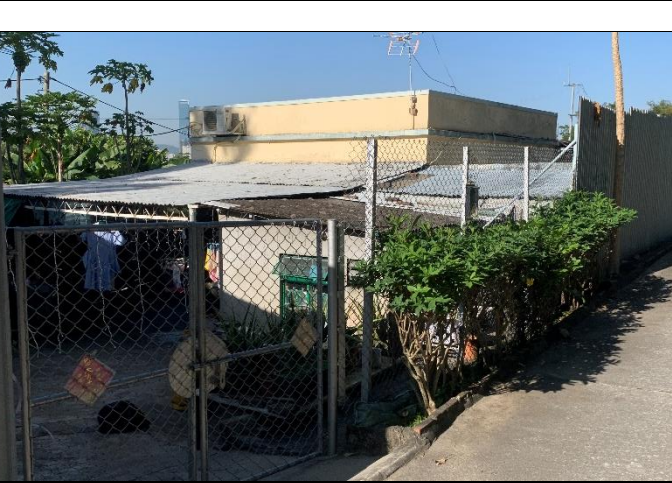


Photos of Representative Noise Sensitive Receivers along WCR and for the two slip roads

NSR No.	Location	Photo
LMCR-9	Village house, Lok Ma Chau Road	
LMCR-10	Village house, Lok Ma Chau Road	
LMCR-11	Village house, Lok Ma Chau Road	
LMCR-14	Village house, Lok Ma Chau Road	



Photos of Representative Noise Sensitive Receivers along WCR and for the two slip roads

NSR No.	Location	Photo
LMCR-15	Village house, Lok Ma Chau Road	
LMCR-17	Village house, Lok Ma Chau Road	
LMCST-1	Village house, Lok Ma Chau San Tsuen	
LMCST-2	Village house, Lok Ma Chau San Tsuen	

Photos of Representative Noise Sensitive Receivers along WCR and for the two slip roads

NSR No.	Location	Photo
SSR-1	Village house, San Shan Road	
SSR-2	Village house, San Shan Road	

## Appendix 2.2

### Traffic Data at Year 2042 (With Project)

(Extracted from Appendix 4-13 of the Approved EIA  
Report)



Project: 209840-03 Planning and Engineering Study on Development of Lok Ma Chau Loop - Investigation																		
Title: Traffic Data for Main Roads for the Year 2042 (Peak)																		
ID	TIA ID	Street	From	To	Dir	2042 (in Veh/hr)											Total	
						M/C	P/C	Taxi	LGV	MGV	HGV	PLB	NFB	FBSD	FBDD	Elect Bus	Veh/hr	% HV
1	1	Border Road	Track near Border Road	Lok Ma Chau Station	2-way	0	8	2	2	0	0	0	0	0	0	0	12	16.7
3	3	Border Road	Lok Ma Chau Station	Lok Ma Chau Station	2-way	0	8	2	2	0	0	0	0	0	0	12	16.7	
5	5	Roads within Lok Ma Chau Station	Roads within Lok Ma Chau Station	Roads within Lok Ma Chau Station	WB	0	0	0	0	0	0	14	44	4	12	74	100.0	
6	6	Roads within Lok Ma Chau Station	Roads within Lok Ma Chau Station	Roads within Lok Ma Chau Station	SB	0	0	0	0	0	0	14	44	4	12	74	100.0	
7	7	Roads within Lok Ma Chau Station	Roads within Lok Ma Chau Station	Roads within Lok Ma Chau Station	SB	0	0	0	0	0	0	22	44	4	12	82	100.0	
8	8	Roads within Lok Ma Chau Station	Roads within Lok Ma Chau Station	Roads within Lok Ma Chau Station	NB	0	0	0	0	0	0	22	44	4	12	82	100.0	
9	9	Roads within Lok Ma Chau Station	Roads within Lok Ma Chau Station	Roads within Lok Ma Chau Station	NB	2	96	546	9	7	1	0	0	0	0	661	2.6	
10	10	Roads within Lok Ma Chau Station	Roads within Lok Ma Chau Station	Roads within Lok Ma Chau Station	WB	1	76	440	14	11	2	0	0	0	0	544	5.0	
11	11+12	Roads within Lok Ma Chau Station	Roads within Lok Ma Chau Station	Roads within Lok Ma Chau Station	2-way	3	172	986	23	18	3	0	0	0	0	1205	3.7	
13	13	Lok Ma Chau Station Local Road	Lok Ma Chau Station Local Road	Lok Ma Chau Station Local Road	WB	0	4	0	54	0	0	0	0	0	0	58	93.1	
14	14	Lok Ma Chau Station Local Road	Lok Ma Chau Station Local Road	Lok Ma Chau Station Local Road	EB	0	4	0	25	0	0	0	0	0	0	29	86.2	
15	15	Border Road	Lok Ma Chau Station	Tun Yu Road	2-way	7	176	899	25	18	3	19	90	5	15	1257	13.9	
17	17	Tun Yu Road	Border Road	Castle Peak Road - Chau Tau	2-way	3	53	10	4	2	0	0	0	0	0	72	8.3	
19	19	Border Road	Tun Yu Road	Border Road Roundabout	2-way	7	176	899	25	18	3	19	90	5	15	1257	13.9	
21	21	Border Road	Border Road Roundabout	Village Road near Ha Wan Tsuen	2-way	5	7	4	0	0	0	0	0	0	0	16	0.0	
27	27	Border Road	Lok Ma Chau Road	Border Road	2-way	6	8	4	2	0	0	0	0	0	0	20	10.0	
33	33	Track near Ha Wan Tsuen	Lok Ma Chau Road	Road near Ha Wan Tsuen	2-way	6	18	10	4	2	0	0	0	0	0	40	15.0	
37	37	Track near Ha Wan Tsuen	Road near Ha Wan Tsuen	Road near Ha Wan Tsuen	2-way	4	14	8	2	2	0	0	0	0	0	30	13.3	
41	41	Lung Hau Road	Ha Wan Tsuen Road	Lok Ma Chau Road	WB	4	98	499	10	7	1	9	45	2	7	682	11.9	
42	42	Lung Hau Road	Lok Ma Chau Road	Ha Wan Tsuen Road	NB	3	78	396	15	11	2	10	45	3	8	571	16.5	
43	43	Border Road	Ha Wan Tsuen Road	Base Case	2-way	10	15	8	17	0	0	0	0	0	0	50	34.0	
45	45	Road near Lok Ma Chau San Tsuen	Lok Ma Chau Road	Near Lok Ma Chau Tsuen	2-way	2	10	6	2	0	0	0	0	0	0	20	10.0	
49	49	Lok Ma Chau Road	Track near Lok Ma Chau Road	Lok Ma Chau Road	WB	1	5	3	1	0	0	0	0	0	0	10	10.0	
50	50	Lok Ma Chau Road	Lok Ma Chau Road	Track near Lok Ma Chau Road	EB	1	5	3	1	0	0	0	0	0	0	10	10.0	
51	51	Lok Ma Chau Road	Lok Ma Chau Road	End of Lok Ma Chau Road	EB	1	2	1	0	0	0	0	0	0	0	4	0.0	
52	52	Lok Ma Chau Road	End of Lok Ma Chau Road	Lok Ma Chau Road	WB	1	2	1	0	0	0	0	0	0	0	4	0.0	
53	53	Track near Lok Ma Chau Road	Lok Ma Chau Road	Ha Wan Fisherman San Tsuen	2-way	2	6	4	2	0	0	0	0	0	0	14	14.3	
57	57	Road near Pun Uk Tsuen	Lok Ma Chau Road	Pun Uk Tsuen	2-way	4	14	8	2	2	0	0	0	0	0	30	13.3	
61	61	Chau Tau West Road	Lok Ma Chau Road	Chau Tau South Road	2-way	2	25	5	0	0	0	0	0	0	0	32	0.0	
64	64	Lok Ma Chau Road	Castle Peak Road - Chau Tau	Chau Tau West Road	NB	3	92	468	26	20	8	78	45	34	54	828	32.0	
65	65	Chau Tau West Road	Chau Tau South Road	Chau Tau Tsuen	2-way	3	49	9	16	7	2	0	0	0	0	86	29.1	
67	67	Chau Tau West Road	Chau Tau West Road	Chau Tau Tsuen	2-way	3	52	9	16	7	2	0	0	0	0	89	28.1	
69	69	Local Road near Chau Tau	Chau Tau South Road	Road near Castle Peak Road - Chau Tau	2-way	6	91	17	30	14	3	0	1	0	0	162	29.6	
71	71	Castle Peak Road - Chau Tau	Lok Ma Chau Road	Road near Pak Shek Au	EB	13	159	125	21	11	8	14	5	0	1	357	16.8	
72	72	Castle Peak Road - Chau Tau	Road near Pak Shek Au	Lok Ma Chau Road	WB	14	199	174	24	32	22	9	4	0	1	479	19.2	
77	77	Eastern Road Option	Eastern Road Option	Eastern Road Option	EB	31	495	93	1	1	0	0	3	13	0	637	2.8	
78	78	Eastern Road Option	Eastern Road Option	Eastern Road Option	WB	21	342	64	3	2	1	0	2	13	0	448	4.7	
79	79	Eastern Road Option	Eastern Road Option	Eastern Road Option	WB	21	342	64	3	2	1	0	2	13	0	448	4.7	
80	80	Eastern Road Option	Eastern Road Option	Eastern Road Option	EB	31	495	93	1	1	0	0	3	13	0	637	2.8	
81	81	Eastern Road Option	Eastern Road Option	Eastern Road Option	SB	32	506	95	5	3	1	0	3	13	0	658	3.8	
82	82	Eastern Road Option	KTN	Eastern Road Option	NB	22	348	65	6	3	1	0	2	13	0	460	5.4	
83	83	Border Road	Border Road	Ma Tso Lung Road	2-way	0	0	0	0	0	0	0	0	0	0	0	0.0	
87	87	Local Road near Tai Shek Mo	Border Road	Local Road near Liu Pok	2-way	3	49	10	11	7	3	0	0	0	0	83	25.3	
99	99	Fanling Highway	Road near Castle Peak Road - Chau Tau	San Tin Interchange	EB	110	2,685	314	457	570	294	59	67	3	20	4579	32.1	
100	100	Fanling Highway	San Tin Interchange	Road near Castle Peak Road - Chau Tau	WB	136	3,013	366	571	485	249	81	76	4	22	5003	29.7	
102	102	Slip Road from Fanling Highway	Road near Cross Boundary Shuttle Bus San Tin Terminus	Fanling Highway	EB	55	687	138	131	166	28	0	7	0	0	1212	27.4	
103	103	San Tin Highway	Fanling Highway	San Tin Highway	WB	107	2,282	317	439	462	247	73	57	3	17	4004	32.4	
104	104	San Tin Highway	San Tin Highway	Fanling Highway	EB	91	2,314	233	444	297	236	89	65	3	20	3792	30.4	
105	105	San Sham Road	San Tin Interchange	BCP	SB	0	672	0	5	7	154	0	7	0	0	845	20.5	
106	106	San Sham Road	BCP	San Tin Interchange	NB	5	386	0	0	1	2	0	4	0	0	398	1.8	
107	107	Slip Road from San Tin Interchange	San Tin Interchange	San Tin Highway	WB	52	951	160	84	133	90	20	22	1	6	1519	23.4	

Project: 209840-03 Planning and Engineering Study on Development of Lok Ma Chau Loop - Investigation																			
Title: Traffic Data for Main Roads for the Year 2042 (Peak)																			
ID	TIA ID	Street	From	To	Dir	2042 (in Veh/hr)												Total	
						M/C	P/C	Taxi	LGV	MGV	HGV	PLB	NFB	FBSD	FBDD	Elect Bus	Veh/hr	% HV	
108	108	San Sham Road	BCP	San Tin Interchange	NB	41	866	129	108	59	68	22	29	24	6	0	1352	23.4	
221	221	Slip Road from San Tin Interchange	Road near Castle Peak Road - San Tin	San Tin Interchange	EB	5	184	15	61	66	70	2	4	0	1	0	408	50.0	
222	222	Kwu Tung Road	Road between Kwu Tung Road and Slip Road from Fanling Highway	Road between Kwu Tung Road and Slip Road from Fanling Highway	WB	10	100	5	48	67	46	0	1	0	0	0	277	58.5	
225	225	Road between Kwu Tung Road and Slip Road from Fanling Highway	Kwu Tung Road	Fanling Highway	NB	5	187	15	61	67	70	2	4	0	1	0	412	49.8	
226	226	Kwu Tung Road	Road between Kwu Tung Road and Slip Road from Fanling Highway	Road South of Kwu Tung Road	WB	11	101	6	48	68	46	0	1	0	0	0	281	58.0	
228	228	Kwu Tung Road	Road South of Kwu Tung Road	Road between Kwu Tung Road and Slip Road from Fanling Highway	EB	0	0	0	0	2	1	0	0	0	0	0	3	100.0	
233	233	Kwu Tung Road	Road South of Kwu Tung Road	Slip Road from San Tin Interchange	WB	5	165	13	64	67	62	2	4	0	1	0	383	52.2	
234	234	Kwu Tung Road	Slip Road from San Tin Interchange	Road South of Kwu Tung Road	EB	5	51	3	27	47	57	0	1	0	0	0	191	69.1	
236	236	Kwu Tung Road	Slip Road from San Tin Interchange	Ka Lung Road	SB	6	110	11	44	39	48	1	4	0	1	0	264	51.9	
237	237	Slip Road to San Sham Road	Slip Road to San Sham Road	San Sham Road	NB	6	112	7	26	67	69	0	1	0	0	0	288	56.6	
240	240	Kwu Tung Road	Kwu Tung Road near Fanling Highway	Kwu Tung Road near San Tin Highway	WB	6	106	10	43	38	47	1	4	0	1	0	256	52.3	
241	241	Kwu Tung Road	Kwu Tung Road near San Tin Highway	Kwu Tung Road near Fanling Highway	EB	6	114	7	26	69	70	0	1	0	0	0	293	56.7	
242	242	Slip Road from San Tin Interchange	Slip Road from Fanling Highway	Kwu Tung Road	SB	16	163	22	18	56	56	0	2	0	0	0	333	39.6	
243	243	Kwu Tung Road	Road near Kwu Tung Road	Slip Road from San Tin Interchange	WB	15	214	24	30	67	102	1	5	0	1	0	459	44.9	
244	244	Kwu Tung Road	Slip Road from San Tin Interchange	Road near Kwu Tung Road	NB	0	145	11	8	44	101	0	1	0	0	0	310	49.7	
245	245	Slip Road from San Tin Interchange	Kwu Tung Road	Kwu Tung Road near Fanling Highway	NB	0	3	1	1	1	2	0	0	0	0	0	8	50.0	
246	246	Slip Road from San Tin Interchange	Slip Road from San Tin Interchange	Slip Road from San Tin Highway	WB	32	807	144	56	72	60	19	20	1	6	0	1217	19.2	
247	247	Castle Peak Road - Chau Tau	Lok Ma Chau Road	Local Road near Wing Ping Tsuen	WB	24	388	73	52	23	12	11	47	20	2	0	652	25.6	
248	248	Castle Peak Road - Chau Tau	Local Road near Wing Ping Tsuen	Lok Ma Chau Road	EB	30	476	89	96	43	23	12	47	0	2	0	818	27.3	
249	249	Local Road near Wing Ping Tsuen	Wing Ping Tsuen	Castle Peak Road - Chau Tau	2-way	31	107	66	57	26	6	0	1	0	0	0	294	30.6	
251	251	Castle Peak Road - Chau Tau	Local Road near Wing Ping Tsuen	Castle Peak Road - San Tin	WB	24	387	73	157	71	28	20	47	0	4	0	811	40.3	
252	252	Castle Peak Road - San Tin	Castle Peak Road - San Tin	Local Road near Wing Ping Tsuen	EB	28	455	85	130	59	23	14	47	0	3	0	844	32.7	
253	253	Slip Road from San Tin Interchange	San Tin Highway	San Tin Interchange	EB	8	535	73	19	15	11	4	8	0	1	0	674	8.6	
254	254	Slip Road from San Tin Interchange	Slip Road from San Tin Interchange	Castle Peak Road - Chau Tau	NB	0	340	67	16	3	23	31	7	0	2	0	489	16.8	
255	255	San Tin Highway	San Tin Highway	San Tin Highway	EB	102	3,202	358	481	342	307	105	88	5	27	0	5017	27.0	
256	256	San Tin Highway	San Tin Highway	San Tin Highway	WB	140	3,103	462	501	563	270	92	77	4	22	0	5234	29.2	
301	301	Slip Road to San Sham Road	San Tin Highway	San Sham Road	NB	0	0	0	1	5	57	0	0	0	0	0	63	100.0	
302	302	Slip Road from San Tin Interchange	Castle Peak Road - Chau Tau	San Tin Interchange	SB	23	334	60	88	33	67	19	13	23	11	0	671	37.9	
303	303	Slip Road from Fanling Highway	San Tin Highway	San Sham Road	NB	0	0	0	0	42	23	0	0	0	0	0	65	100.0	
304	304	San Sham Road	Slip Road from Fanling Highway	San Sham Road	NB	0	0	0	33	49	59	0	0	0	0	0	141	100.0	
402	402	San Shan Road	San Tin Interchange	Castle Peak Road - Chau Tau	NB	89	307	188	5	36	110	0	3	0	0	0	738	20.9	
403	403	Slip Road to Fanling Highway	Road near Cross Boundary Shuttle Bus San Tin Terminus	Fanling Highway	EB	91	1,201	145	153	197	33	4	12	23	3	0	1862	22.8	
404	404	Lok Ma Chau Road	Lok Ma Chau Road	Castle Peak Road - Chau Tau	SB	1	4	19	1	1	0	0	0	0	0	0	26	7.7	
405	405	Lok Ma Chau Road	Lok Ma Chau Road	Castle Peak Road - Chau Tau	SB	5	34	173	21	16	6	0	44	17	27	0	343	38.2	
406	406	Lok Ma Chau Road	Castle Peak Road - Chau Tau	Lok Ma Chau Road	NB	13	151	491	29	22	9	0	1	22	21	0	759	13.7	
407	407	Lok Ma Chau Road	Castle Peak Road - Chau Tau	Lok Ma Chau Road	NB	1	3	18	0	0	0	1	44	0	1	0	88	67.6	
408	408	Track near Ha Wan Tsuen	Track near Ha Wan Tsuen	Local Road near San Sham Road	2-way	4	14	8	2	2	0	0	0	0	0	0	30	13.3	
410	410	Track near Ha Wan Tsuen	Track near Ha Wan Tsuen	Track near Ha Wan Tsuen	2-way	4	14	8	2	2	0	0	0	0	0	0	30	13.3	
414	414	Local Road near LMC Station	LMC Station	Border Road	NB	1	76	395	14	11	2	10	45	3	8	0	565	16.5	
415	415	Local Road near LMC Station	Border Road	LMC Station	SB	2	96	501	9	7	1	9	45	2	7	0	679	11.8	
416	416	Local Road near LMC Loop	Border Road	Loop Internal Road	EB	4	5	3	1	0	0	0	0	0	0	0	13	7.7	
417	417	Local Road near LMC Loop	Loop Internal Road	Border Road	WB	5	7	3	1	0	0	0	0	0	0	0	16	6.3	

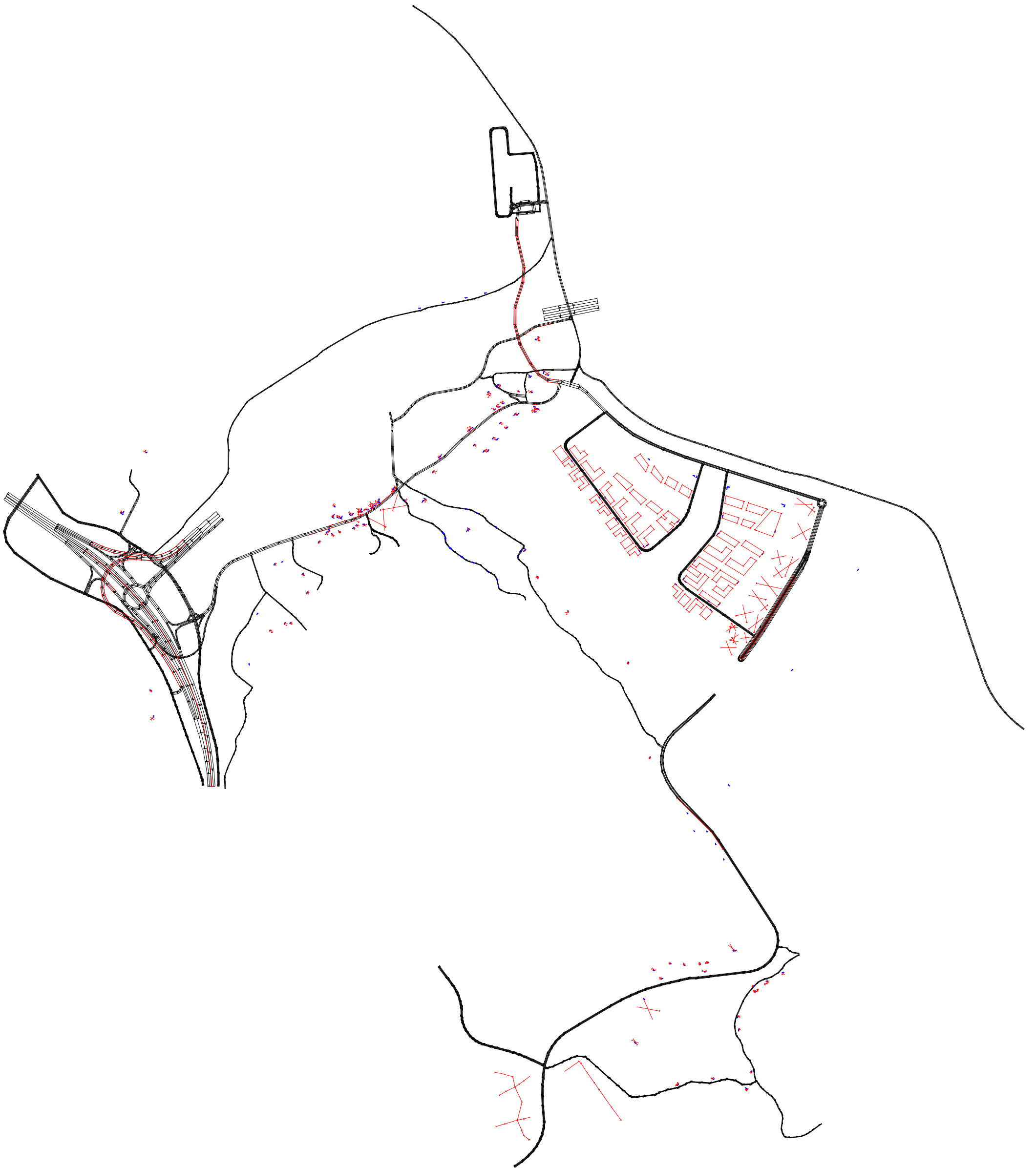
Project: 209840-03 Planning and Engineering Study on Development of Lok Ma Chau Loop - Investigation																		
Title: Traffic Data for Main Roads for the Year 2042 (Peak)																		
ID	TIA ID	Street	From	To	Dir	2042 (in Veh/hr)											Total	
						M/C	P/C	Taxi	LGV	MGV	HGV	PLB	NFB	FBSD	FBDD	Elect Bus	Veh/hr	% HV
418	418	San Sham Road	Castle Peak Road - Chau Tau	San Sham Road	NB	9	138	26	1	5	16	0	1	0	0	0	196	11.7
419	419	San Sham Road	San Sham Road	San Sham Road	NB	29	467	88	1	6	18	0	3	0	0	612	4.6	
552	552	Loop Internal Road	Loop Internal Road	Loop Internal Road	EB	1	12	2	0	0	0	0	0	0	0	15	0.0	
553	553	Loop Internal Road	Loop Internal Road	Loop Internal Road	WB	1	17	3	0	0	0	0	0	0	0	21	0.0	
554	554	Loop Internal Road	Loop Internal Road	Loop Internal Road	EB	11	184	34	2	1	0	0	1	0	0	126	35.9	
555	555	Loop Internal Road	Loop Internal Road	Loop Internal Road	WB	22	352	66	3	1	0	0	3	0	0	126	57.3	
556	556	Loop Internal Road	Loop Internal Road	Loop Internal Road	EB	1	9	2	0	0	0	0	0	0	0	12	0.0	
557	557	Loop Internal Road	Loop Internal Road	Loop Internal Road	WB	1	16	3	0	0	0	0	0	0	0	20	0.0	
558	558	Loop Internal Road	Loop Internal Road	Loop Internal Road	EB	10	166	31	1	0	0	0	1	0	0	126	33.5	
559	559	Loop Internal Road	Loop Internal Road	Loop Internal Road	WB	21	340	64	3	1	0	0	2	0	0	126	55.7	
605	605	Direct Link to LMC Station	Direct Link to LMC Station	Direct Link to LMC Station	NB	0	0	0	0	0	0	0	0	0	0	126	100.0	
606	606	Direct Link to LMC Station	Direct Link to LMC Station	Direct Link to LMC Station	SB	0	0	0	0	0	0	0	0	0	0	126	100.0	
607	607	Road to San Tin Interchange	LMC Road	San Tin Interchange	SB	20	334	168	35	16	6	37	17	28	22	0	683	23.6
608	608	Slip Road to San Sham Road	Fanling Highway	San Tin Interchange	WB	13	484	31	111	94	22	0	5	0	0	0	760	30.5
609	609	Slip near San Tin Interchange	Kwu Tung Road	Slip Road to San Tin Interchange	NB	4	117	3	25	46	23	0	1	0	0	0	219	43.4
614	614	Slip Road from Fanling Highway	Fanling Highway	Slip Road from Fanling Highway	WB	0	0	0	0	40	23	0	0	0	0	0	63	100.0
615	615	Loop Internal Road	Loop Internal Road	Loop Internal Road	NB	11	183	34	1	1	0	0	1	0	0	126	35.7	
616	616	Loop Internal Road	Loop Internal Road	Loop Internal Road	SB	22	349	66	3	1	0	0	3	0	0	126	57.0	
617	617	Loop Internal Road	Loop Internal Road	Loop Internal Road	WB	3	45	8	1	0	0	0	0	0	0	126	18.3	
618	618	Loop Internal Road	Loop Internal Road	Loop Internal Road	EB	2	27	5	1	0	0	0	0	0	0	126	16.1	
620	620	San Tin Interchange	San Tin Interchange	San Tin Interchange	EB	25	716	72	99	65	149	8	24	2	10	0	1170	30.5
624	624	LMC Road	LMC Road	LMC Road	SB	21	371	354	58	33	13	68	61	54	29	0	1062	29.8
625	625	Loop Internal Road	Loop Internal Road	Loop Internal Road	WB	23	362	68	5	2	1	0	3	12	0	126	60.2	
626	626	Loop Internal Road	Loop Internal Road	Loop Internal Road	EB	30	473	89	2	1	0	0	3	12	0	126	73.6	
630	630	Loop Internal Road	Loop Internal Road	Loop Internal Road	EB	6	101	19	2	1	0	0	1	0	0	0	130	3.1
631	631	Loop Internal Road	Loop Internal Road	Loop Internal Road	WB	12	187	35	1	0	0	0	1	0	0	0	236	0.8
632	632	Loop Internal Road	Loop Internal Road	Loop Internal Road	EB	6	96	18	2	1	0	0	1	0	0	0	124	3.2
633	633	Loop Internal Road	Loop Internal Road	Loop Internal Road	WB	9	146	27	1	0	0	0	1	0	0	0	184	1.1
634	634	Loop Internal Road	Loop Internal Road	Loop Internal Road	EB	2	26	5	1	0	0	0	0	0	0	0	34	2.9
635	635	Loop Internal Road	Loop Internal Road	Loop Internal Road	WB	5	80	15	1	0	0	0	1	0	0	0	102	2.0
650	650	Slip Road from Castle Peak Road	Castle Peak Road - Chau Tau	Slip Road from Fanling Highway	SB	4	11	56	4	3	1	0	0	0	0	0	79	10.1
651	651	Slip Road to Castle Peak Road	Slip Road from Fanling Highway	Castle Peak Road - Chau Tau	NB	26	447	273	64	29	15	0	4	0	0	0	858	13.1
652	652	Slip Road to Castle Peak Road	Slip Road from Fanling Highway	Castle Peak Road - Chau Tau	NB	20	351	215	27	12	6	0	4	0	0	0	635	7.7
653	653	Slip Road to Castle Peak Road	Slip Road from Fanling Highway	Castle Peak Road - Chau Tau	NB	6	96	58	37	17	9	0	1	0	0	0	224	28.6
1141	1141	Internal Road of KTN	Internal Road of KTN	Internal Road of KTN	NB	22	128	42	17	13	5	0	1	12	2	0	242	20.7
1142	1142	Internal Road of KTN	Internal Road of KTN	Internal Road of KTN	SB	6	44	18	9	7	3	0	0	12	0	0	99	31.3
1147	1147	Internal Road of KTN	Internal Road of KTN	Internal Road of KTN	EB	43	247	81	10	8	3	0	2	0	0	0	394	5.8
1148	1148	Internal Road of KTN	Internal Road of KTN	Internal Road of KTN	WB	67	457	186	18	13	5	0	5	0	3	0	754	5.8
1163	1163	Internal Road of KTN	Internal Road of KTN	Local Road near Tai Shek Mo	NB	3	11	4	6	4	2	0	0	0	0	0	30	40.0
1164	1164	Internal Road of KTN	Local Road near Tai Shek Mo	Internal Road of KTN	SB	7	25	10	5	3	1	0	0	0	0	0	51	17.6
1200	25+26	Road between Border Road and Lung Hau Road	Border Road	Lung Hau Road	2-way	7	176	895	25	18	3	19	90	5	15	0	1253	14.0
1201	31+32	Border Road	Border Road	Ha Wan Tsuen Road	2-way	35	486	99	3	2	0	0	5	38	0	0	668	7.2
1202	39+40	Ha Wan Tsuen Road	Road near Ha Wan Tsuen	Lung Hau Road	2-way	37	506	103	5	3	0	0	5	38	0	0	697	7.3
1203	41+42	Lung Hau Road	Ha Wan Tsuen Road	Lok Ma Chau Road	2-way	7	176	895	25	18	3	19	90	5	15	0	1253	14.0
1204	47+48	Lok Ma Chau Road	Road near Lok Ma Chau San Tsuen	Lok Ma Chau Road	2-way	7	208	1059	33	26	6	10	90	32	25	0	1496	14.8
1205	55+56	Lok Ma Chau Road	Lok Ma Chau Road	Road near Pun Uk Tsuen	2-way	9	227	1161	44	33	6	11	90	33	25	0	1639	14.8
1206	59+60	Lok Ma Chau Road	Road near Pun Uk Tsuen	Chau Tau West Road	2-way	9	231	1181	46	34	6	11	90	33	26	0	1667	14.8
1207	63+64	Lok Ma Chau Road	Chau Tau West Road	Castle Peak Road - Chau Tau	2-way	4	129	654	49	37	15	109	89	60	61	0	1207	34.8
1208	550+551	Loop Internal Road	Loop Internal Road	Western Approach Road	2-way	37	500	102	3	2	0	0	5	40	0	228	917	30.3
1209	601+602	Western Approach Road	Loop Internal Road	Ha Wan Tsuen Road	2-way	30	493	97	3	2	0	0	5	40	0	252	922	32.8
1210	603+604	Direct Link to LMC Station	LMC Station	Ha Wan Tsuen Road	2-way	0	0	0	0	0	0	0	0	0	0	0	252	100.0
1211	64+624	LMC Road	LMC Road	LMC Road	2-way	24	463	822	84	53	21	146	106	88	83	0	1890	30.7



## Appendix 2.3

### Computer Plot of Road Traffic at 2042 (With Project)

(Extracted from Appendix 4-11 of the Approved EIA Report)



## Appendix 2.4

### Key Map to Traffic Flow at 2042 (With Project)

(Extracted from Appendix 4-12 of the Approved EIA Report)

N  
↑

2

3

6

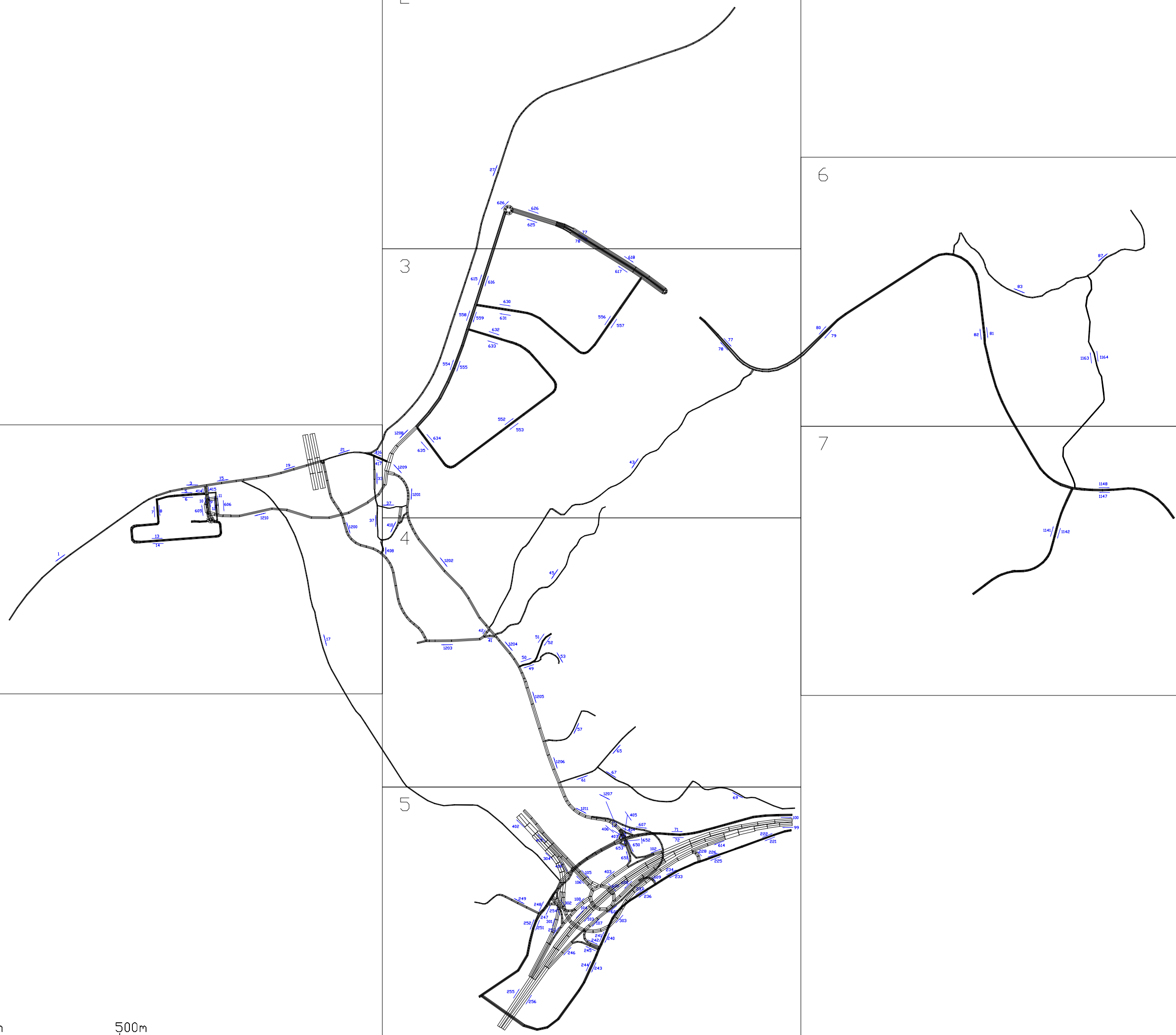
1

7

4

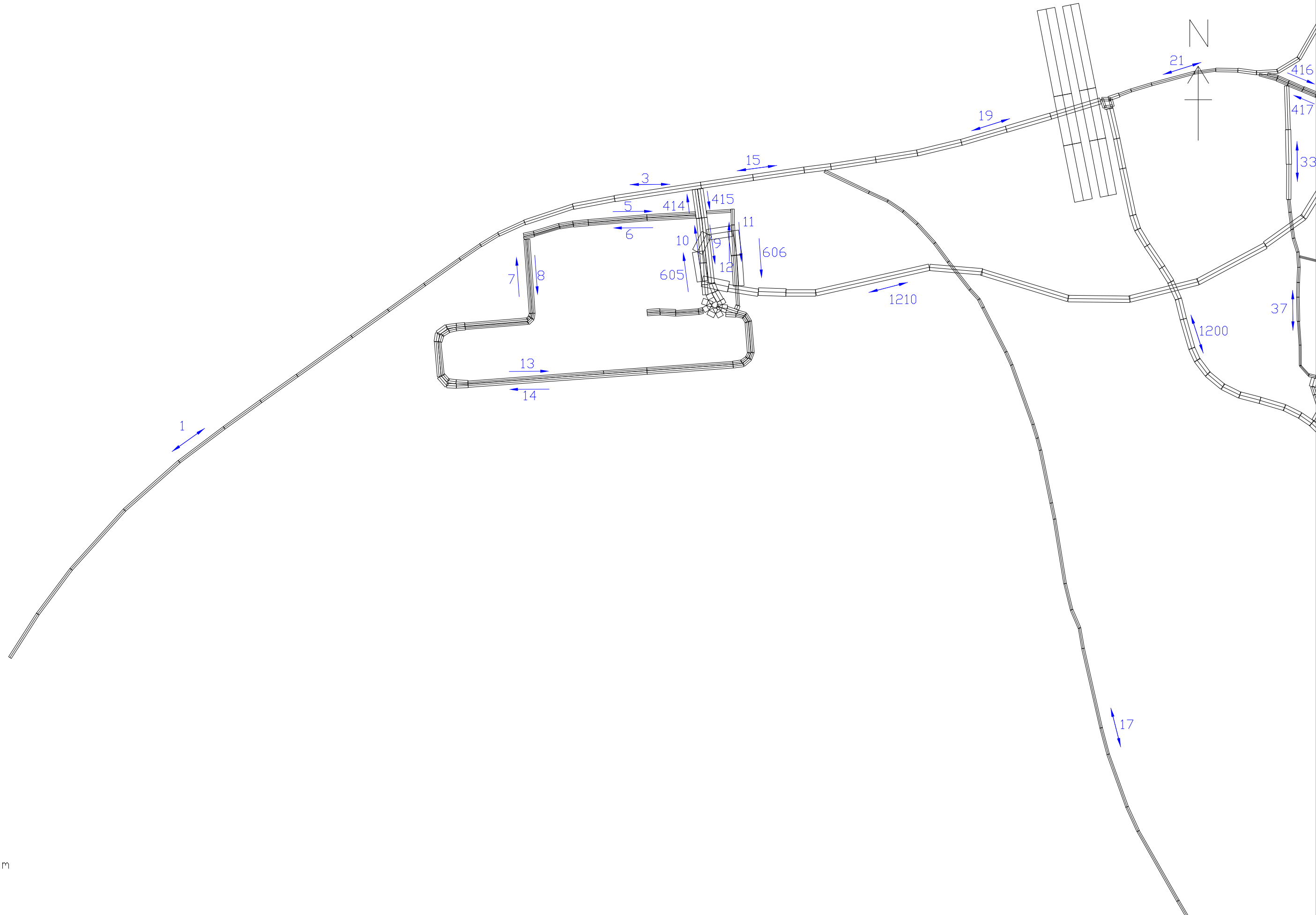
5

0m 500m



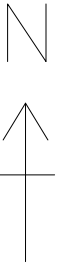


1



0m 100m

2



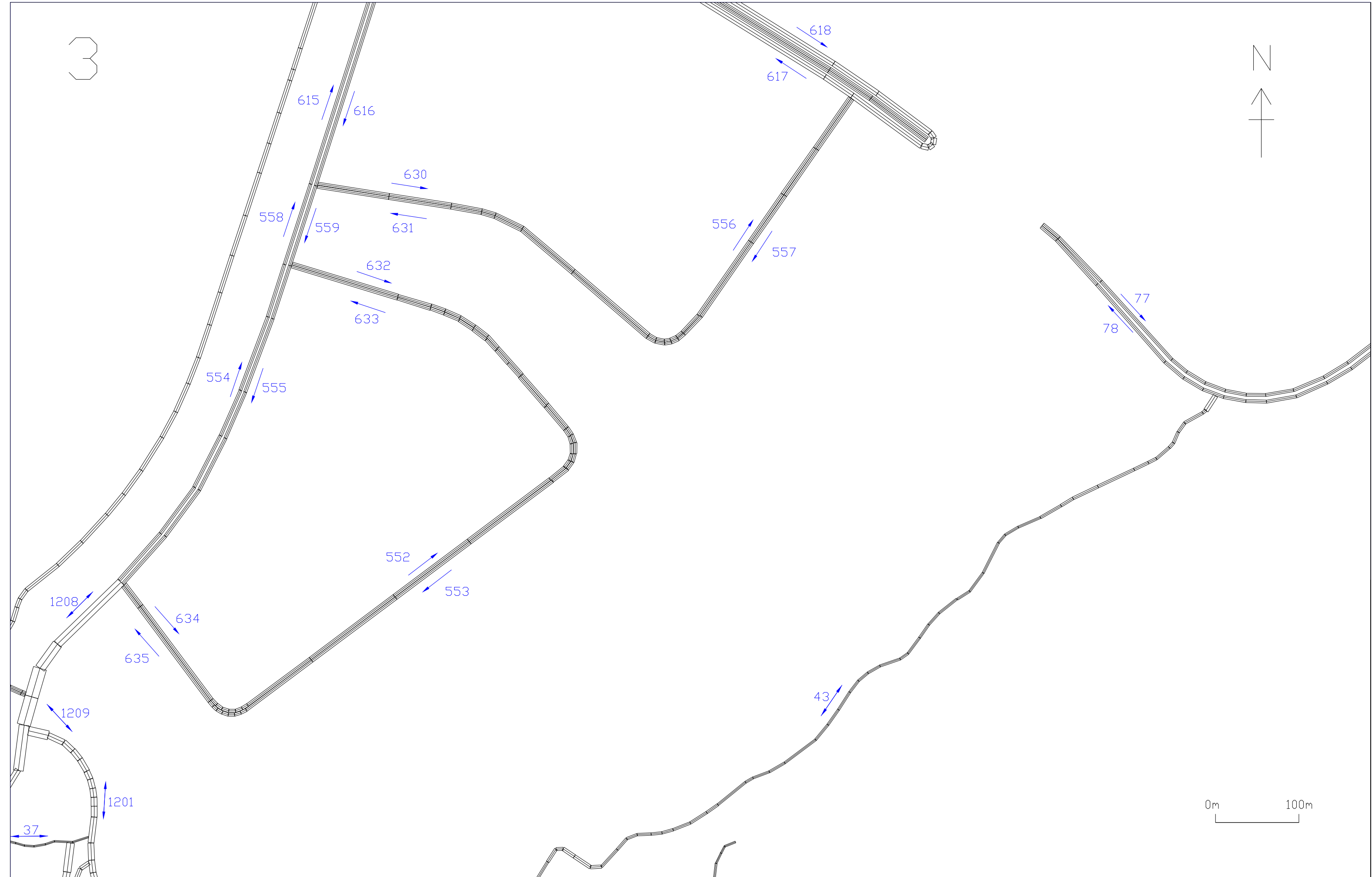
0m 100m

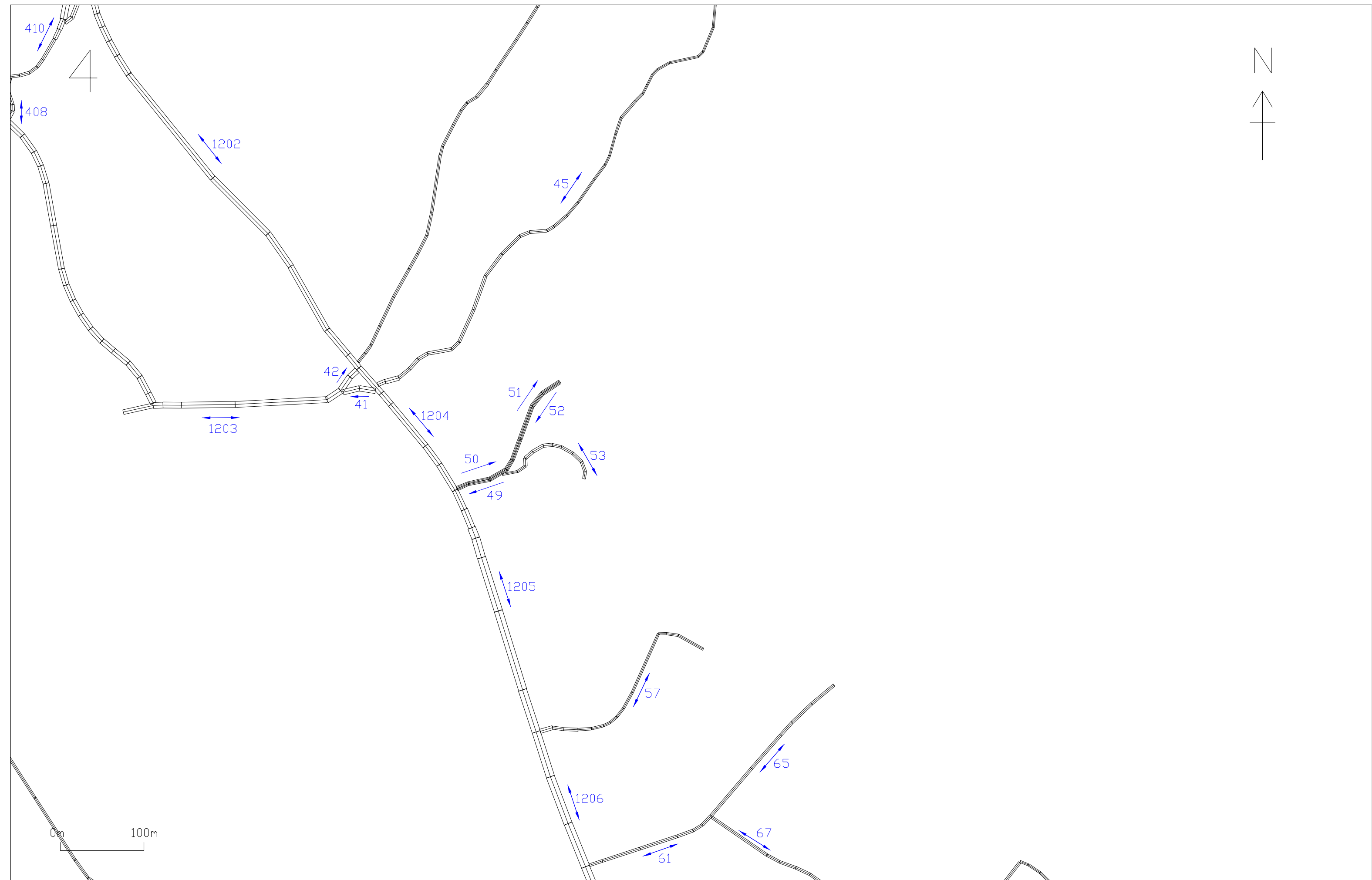


3



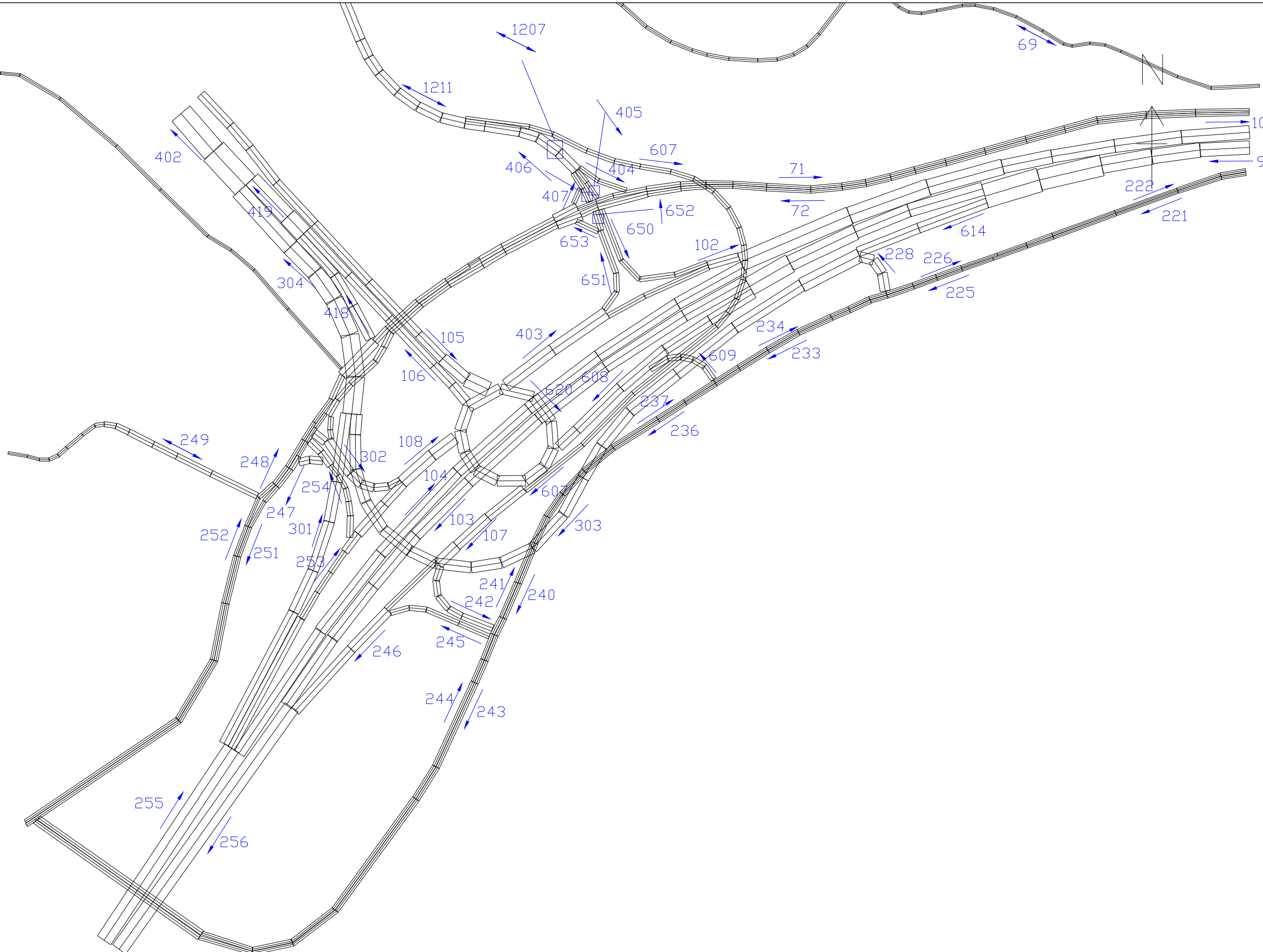
0m 100m





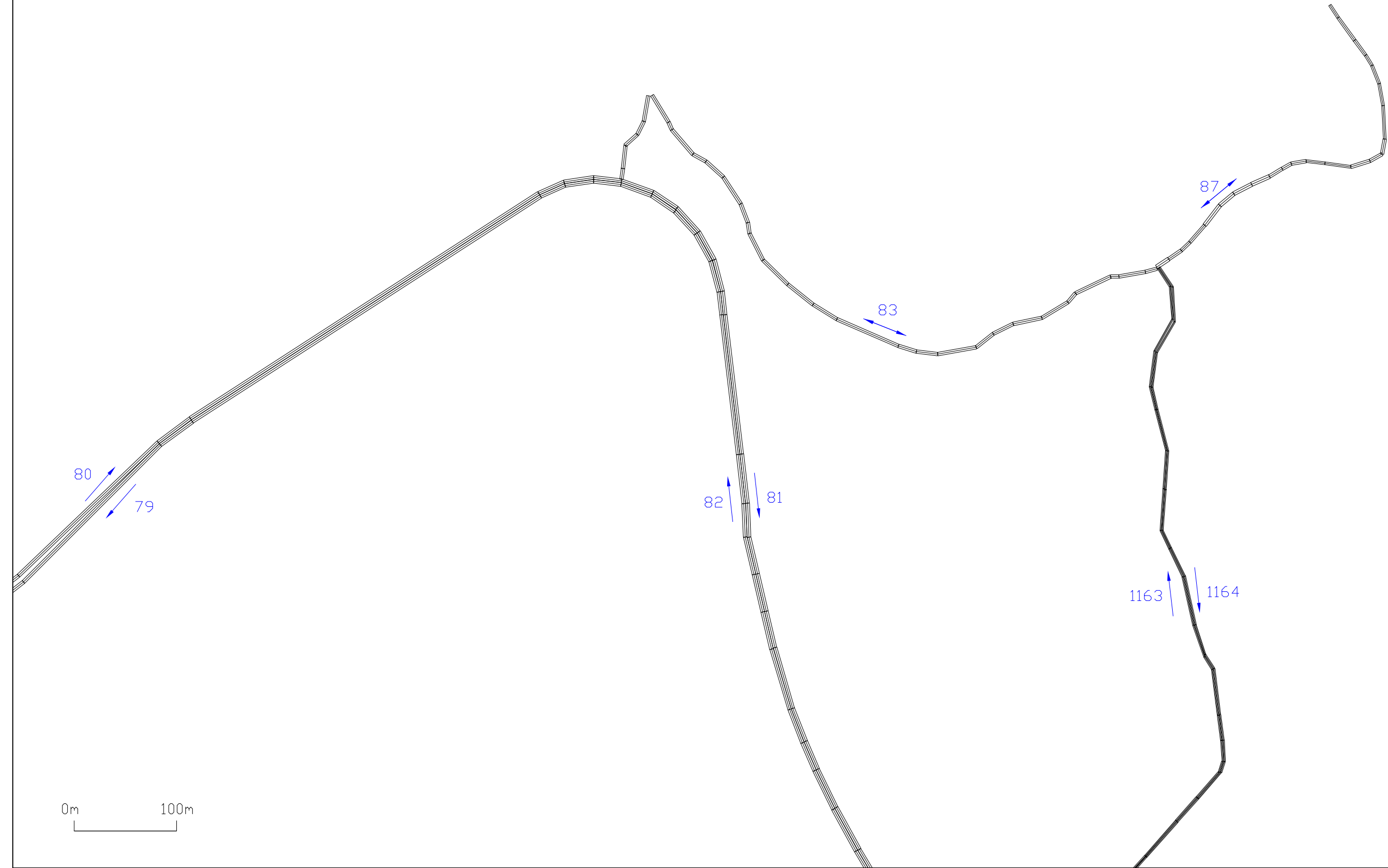
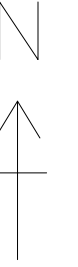


5



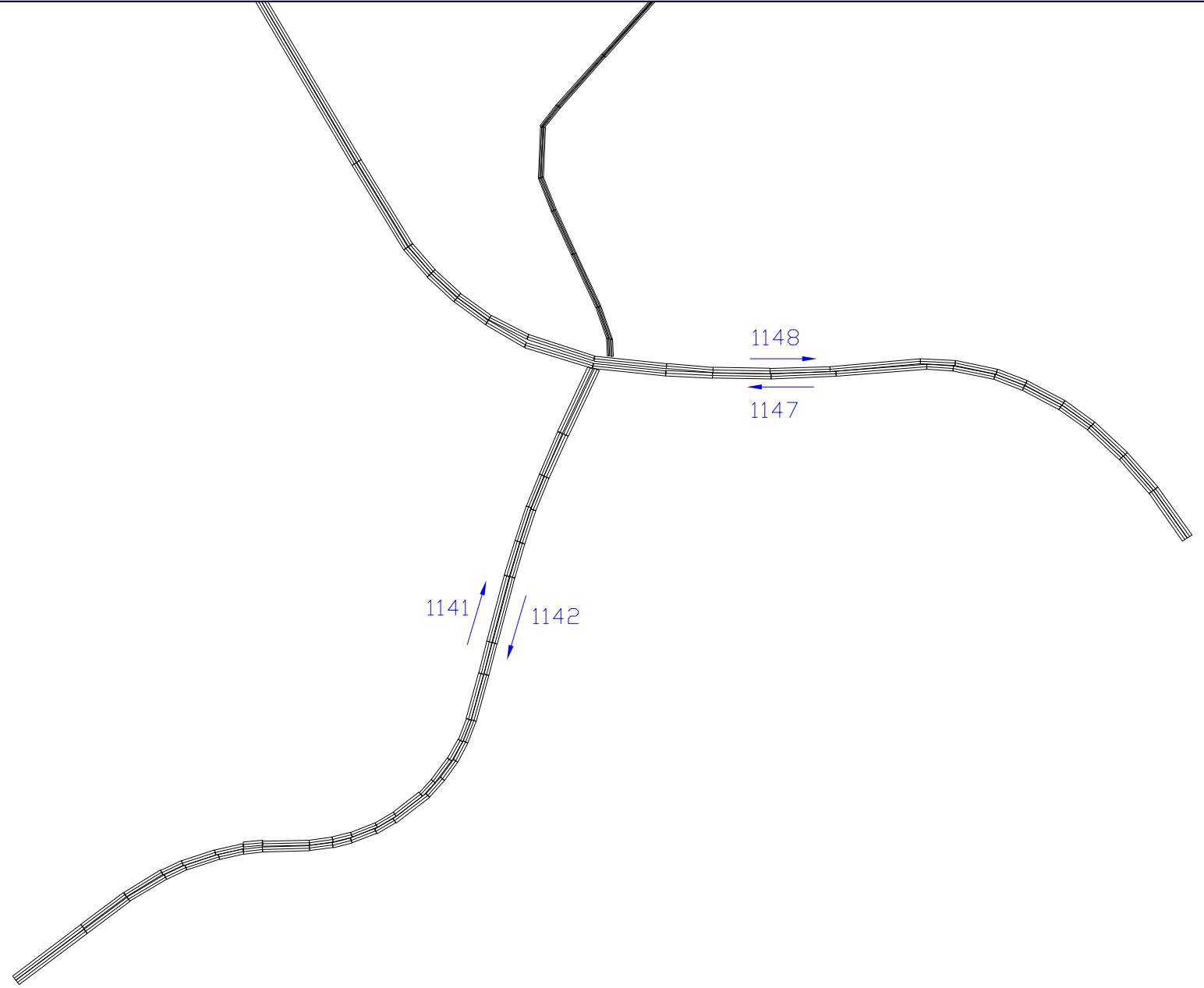
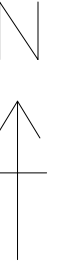
0m 100m

6



0m 100m

7



0m 100m

## Appendix 2.5

### Predicted Traffic Noise Levels at NSRs under Revised Mitigated Scenario at year 2042

(Extracted from Appendix 4.3 of the Environmental  
Review Report submitted under VEP-595/2021  
dated 16 July 2021)



**Appendix 2.5 Predicted Traffic Noise Levels at NSRs under Revised Mitigated Scenario at Year 2042**

Receiver ID	Floor Level	Use	Criteria, L10(1hr), dB(A)	Staus	Noise Level, L10(1hr), dB(A)		Overall Noise Level, L10(1hr), dB(A)	Project Contribution	Project Contribution <1.0 dB(A)	Overall Compliance to Criteria
					Existing Road	Project Road				
HWFST-2	1	Residential	70	Existing	55	70	70	15.3	No	Yes
HWT-3-a	1	Residential	70	Existing	66	60	67	1.0	No	Yes
HWT-3-b	1	Residential	70	Existing	67	53	67	0.2	Yes	Yes
HWT-4	1	Residential	70	Existing	68	53	68	0.2	Yes	Yes
HWT-5	1	Residential	70	Existing	53	68	68	14.5	No	Yes
HWT-6	1	Residential	70	Existing	60	66	67	7.0	No	Yes
HWT-7-a	1	Residential	70	Existing	52	66	66	14.6	No	Yes
	2	Residential	70	Existing	52	67	67	15.1	No	Yes
HWT-7-b	1	Residential	70	Existing	63	66	68	5.0	No	Yes
	2	Residential	70	Existing	63	67	69	5.8	No	Yes
HWT-8-a	1	Residential	70	Existing	<50	69	69	26.8	No	Yes
	2	Residential	70	Existing	<50	70	70	23.8	No	Yes
HWT-8-b	1	Residential	70	Existing	63	62	65	2.5	No	Yes
	2	Residential	70	Existing	63	64	67	3.6	No	Yes
HWTR-1-a	1	Residential	70	Existing	<50	58	58	22.0	No	Yes
HWTR-1-b	1	Residential	70	Existing	58	69	70	11.2	No	Yes
HWTR-2-a	1	Residential	70	Existing	<50	62	62	19.8	No	Yes
HWTR-2-b	1	Residential	70	Existing	60	67	67	7.8	No	Yes
HWTR-3	1	Residential	70	Existing	<50	57	57	22.2	No	Yes
HWTR-4-a	1	Residential	70	Existing	<50	55	55	8.6	No	Yes
HWTR-4-b	1	Residential	70	Existing	59	64	65	5.9	No	Yes
HWTR-5-a	1	Residential	70	Existing	<50	<50	51	3.9	No	Yes
HWTR-5-b	1	Residential	70	Existing	58	63	64	6.3	No	Yes
HWTR-6-a	1	Residential	70	Existing	57	66	66	9.5	No	Yes
HWTR-6-b	1	Residential	70	Existing	<50	62	62	23.3	No	Yes
HWTR-7	1	Residential	70	Existing	61	69	69	8.9	No	Yes
HWTR-8-a	1	Residential	70	Existing	<50	65	65	23.9	No	Yes
HWTR-8-b	1	Residential	70	Existing	60	69	70	9.3	No	Yes
HWTR-9	1	Residential	70	Existing	<50	70	70	32.7	No	Yes
	2	Residential	70	Existing	<50	70	70	28.7	No	Yes
HWTR-10	1	Residential	70	Existing	<50	70	70	26.9	No	Yes
HWTR-11	1	Residential	70	Existing	<50	66	66	26.8	No	Yes
HWTR-12	1	Residential	70	Existing	<50	69	69	24.2	No	Yes
HWTR-13	1	Residential	70	Existing	<50	67	67	21.5	No	Yes
HWTR-14	1	Residential	70	Existing	<50	68	68	24.4	No	Yes
HWTR-15	1	Residential	70	Existing	<50	68	68	26.2	No	Yes
HWTR-16	1	Residential	70	Existing	<50	67	67	27.6	No	Yes
HWTR-17-a	1	Residential	70	Existing	<50	68	68	20.1	No	Yes
HWTR-17-b	1	Residential	70	Existing	59	69	70	10.5	No	Yes
HWTR-18	1	Residential	70	Existing	60	67	67	7.8	No	Yes
HWTR-20	1	Residential	70	Existing	60	66	67	7.7	No	Yes
HWTR-22	1	Residential	70	Existing	57	69	70	12.8	No	Yes
HWTR-23	1	Residential	70	Existing	<50	70	70	30.3	No	Yes
	2	Residential	70	Existing	<50	70	70	27.0	No	Yes
LMCR-1-a	1	Residential	70	Existing	59	67	68	9.0	No	Yes
	2	Residential	70	Existing	59	68	68	9.6	No	Yes
	3	Residential	70	Existing	59	68	69	10.0	No	Yes
LMCR-1-b	1	Residential	70	Existing	<50	66	66	18.0	No	Yes
	2	Residential	70	Existing	50	68	69	18.2	No	Yes
	3	Residential	70	Existing	51	70	70	19.6	No	Yes
LMCR-2	1	Residential	70	Existing	53	67	67	14.7	No	Yes
	2	Residential	70	Existing	54	70	70	16.0	No	Yes
LMCR-3	1	Residential	70	Existing	<50	62	62	28.8	No	Yes
	2	Residential	70	Existing	<50	63	63	25.0	No	Yes
	3	Residential	70	Existing	<50	68	68	18.0	No	Yes
LMCR-4-a	1	Residential	70	Existing	<50	68	68	30.5	No	Yes
	2	Residential	70	Existing	<50	68	68	28.3	No	Yes
	3	Residential	70	Existing	<50	69	69	25.7	No	Yes
LMCR-4-b	1	Residential	70	Existing	<50	66	66	24.9	No	Yes
	2	Residential	70	Existing	<50	67	67	19.9	No	Yes
	3	Residential	70	Existing	<50	68	68	19.8	No	Yes
LMCR-4-c	1	Residential	70	Existing	<50	69	69	28.3	No	Yes
	2	Residential	70	Existing	<50	70	70	27.1	No	Yes
	3	Residential	70	Existing	<50	70	70	25.3	No	Yes
LMCR-5-a	1	Residential	70	Existing	<50	68	68	20.8	No	Yes
	2	Residential	70	Existing	<50	68	68	20.4	No	Yes
LMCR-5-b	1	Residential	70	Existing	56	66	66	10.8	No	Yes
	2	Residential	70	Existing	56	66	67	10.9	No	Yes
LMCR-6	1	Residential	70	Existing	<50	69	69	19.8	No	Yes
	2	Residential	70	Existing	<50	69	69	19.5	No	Yes
LMCR-7	1	Residential	70	Existing	55	67	67	12.2	No	Yes
	2	Residential	70	Existing	55	67	67	12.1	No	Yes

Result

NoiseBarrierVEP20210609.xlsx

P:\60588085\Others\Air Noise\Noise model\201911211 Noise Barrier VEP\

## Appendix 2.5 Predicted Traffic Noise Levels at NSRs under Revised Mitigated Scenario at Year 2042

Receiver ID	Floor Level	Use	Criteria, L10(1hr), dB(A)	Staus	Noise Level, L10(1hr), dB(A)		Overall Noise Level, L10(1hr), dB(A)	Project Contribution	Project Contribution <1.0 dB(A)	Overall Compliance to Criteria
					Existing Road	Project Road				
LMCR-8	1	Residential	70	Existing	<50	69	69	23.1	No	Yes
	2	Residential	70	Existing	52	70	70	18.0	No	Yes
LMCR-9	1	Residential	70	Existing	<50	68	68	22.8	No	Yes
	2	Residential	70	Existing	<50	69	69	20.2	No	Yes
LMCR-10	1	Residential	70	Existing	<50	70	70	23.6	No	Yes
	2	Residential	70	Existing	<50	70	70	23.1	No	Yes
LMCR-11	1	Residential	70	Existing	<50	66	66	20.1	No	Yes
LMCR-14	1	Residential	70	Existing	51	70	70	18.4	No	Yes
	2	Residential	70	Existing	51	70	70	18.4	No	Yes
	3	Residential	70	Existing	51	70	70	18.5	No	Yes
LMCR-15	1	Residential	70	Existing	60	70	70	9.8	No	Yes
	2	Residential	70	Existing	60	70	70	9.8	No	Yes
	3	Residential	70	Existing	60	70	70	9.8	No	Yes
LMCR-17-a	1	Residential	70	Existing	55	66	66	11.6	No	Yes
	2	Residential	70	Existing	55	66	67	11.6	No	Yes
LMCR-17-b	1	Residential	70	Existing	53	70	70	17.2	No	Yes
	2	Residential	70	Existing	53	70	70	17.2	No	Yes
LMCST-1-a	1	Residential	70	Existing	61	63	65	3.9	No	Yes
LMCST-1-b	1	Residential	70	Existing	64	62	66	2.2	No	Yes
LMCST-2	1	Residential	70	Existing	62	67	68	6.2	No	Yes
SSR-1	1	Residential	70	Existing	70	55	70	0.2	Yes	Yes
	2	Residential	70	Existing	70	56	70	0.2	Yes	Yes
SSR-2	1	Residential	70	Existing	69	58	69	0.3	Yes	Yes
	2	Residential	70	Existing	70	59	70	0.4	Yes	Yes