FORM 5

Application No. :
Reference No. :
(For official use)

FORM 5
ENVIRONMENTAL IMPACT ASSESSMENT ORDINANCE
(CHAPTER 499)
SECTION 13(1)

Application for Variation of an Environmental Permit

PART A PREVIOUS APPLICATIONS

☑ No previous application for variation of an environmental permit.

☐ The environmental permit was previously amended.

Application No. : .....

PART B DETAILS OF APPLICANT

B1. Name : (person or company)

Civil Engineering and Development Department

[Note : In accordance with section 13(1) of the Ordinance, the person holding an environmental permit or a person who assumes responsibility for the designated project may apply for variation of the environmental permit.]

B2. Business Registration No. : (if applicable) [redacted]

B3. Correspondence Address : [redacted]

B4. Name of Contact Person : [redacted]

B5. Position of Contact Person : [redacted]

B6. Telephone No. : [redacted]

B7. Fax No. : [redacted]

B8. E-mail Address : (if any) [redacted]

PART C DETAILS OF CURRENT ENVIRONMENTAL PERMIT

C1. Name of the Current Environmental Permit Holder :

Civil Engineering and Development Department

C2. Application No. of the Current Environmental Permit : AEP-553/2018

C3. The Current Environmental Permit was Issued in : month / year

0 2 2 0 1 8

Important Notes : Please submit the application together with

(a) 3 copies of this completed form; and

(b) appropriate fee as stipulated in the Environmental Impact Assessment (Fees) Regulation

to the Environmental Protection Department at the following address :

The EIA Ordinance Register Office,
27th floor, Southorn Centre,130 Hennessy Road,
Wan Chai, Hong Kong.

☐ Tick (✓) the appropriate box

PART D PROPOSED VARIATIONS TO THE CONDITIONS IN CURRENT ENVIRONMENTAL PERMIT

D1. Condition(s) in the Current Environmental Permit :	D2. Proposed Variation(s) :	D3. Reason for Variation(s) :	D4. Describe the environmental changes arising from the proposed variation(s) :	D5. Describe how the environment and the community might be affected by the proposed variation(s) :	D6. Describe how and to what extent the environmental performance requirements set out in the EIA report previously approved or project profile previously submitted for this project may be affected :	D7. Describe any additional measures proposed to eliminate, reduce or control any adverse environmental impact arising from the proposed variation(s) and to meet the requirements in the Technical Memorandum on Environmental Impact Assessment Process :
Figure 1 **Scale and Scope of Designated Project**	To change the partial decking of Kung Um Road and Kiu Hing Road (between Shap Pat Heung Road and Yuen Long Highway) to full decking: **Figure 1** a) Partial Decking (0.8km) is proposed to be divided into two parts (top and bottom). The wording of the top part is proposed to be varied as "Full Decking (0.24km)" and that for the bottom part is proposed to be varied as "Partial Decking (0.56km)". b) Revise the extent of "Partial Decking" to suit the above change. Please refer to revised Figure 1 attached.	In order to provide sufficient safety consideration (desirable sight distance to road-users) and minimise impact to existing private residential developments alongside Kung Um Road, a section of 240m-long proposed partial decking (between Shap Pat Heung Road and Yuen Long Highway) is proposed to be realigned on top on the existing Yuen Long Nullah and full decking is required to achieve this.	**Noise:** To suit the changed alignment of the roadworks due to full decking, the configuration of the originally proposed noise barriers need to be updated. The traffic noise impact from Kung Um Road and Kiu Hing Road might arise from the proposed variation. **Ecological:** The proposed variation would increase the horizontal encroachment at the deck level of the channel and reduce the extent of the beautification works for habitat.	**Noise:** The noise barriers originally proposed would be relocated and suitably modified to fit the revised roadworks due to full decking. The proposed variation is not expected to have impact on noise. **Ecological:** The variation affects the proposed beautification and landscaping works for enhancing the amenity of the existing channels. However, the impact is considered to be insignificant as the channel at this northern section of Yuen Long Nullah is in urban environment and the main purpose of the revitalization of this section is to integrate the urban design and landscape framework. Also, this full decking is far beyond 300m from nearest Conservation Area (Tai Lam Country Park area), and currently some high-rise residential developments have been built and area paved for brownfield operation.	The revised alignments of the noise barriers would not cause adverse noise impact. For the ecological impact and landscape and visual impacts, significant impacts due to the proposed variation is not expected and the findings in the approved EIA report are considered still valid. For details of the assessment extracted from the Environmental Review Report prepared under CE 32/2017 (CE) , please refer to the attached **Annex 1**. The environmental performance of other aspects set out in the approved EIA report will not be affected.	Adverse environmental impact arising from the proposed variation is not expected and the requirements in the Technical Memorandum on Environmental Impact Assessment Process can be fulfilled. Therefore, additional environmental protection measures are not necessary.

PART D PROPOSED VARIATIONS TO THE CONDITIONS IN CURRENT ENVIRONMENTAL PERMIT

D1. Condition(s) in the Current Environmental Permit :	D2. Proposed Variation(s) :	D3. Reason for Variation(s) :	D4. Describe the environmental changes arising from the proposed variation(s) :	D5. Describe how the environment and the community might be affected by the proposed variation(s) :	D6. Describe how and to what extent the environmental performance requirements set out in the EIA report previously approved or project profile previously submitted for this project may be affected :	D7. Describe any additional measures proposed to eliminate, reduce or control any adverse environmental impact arising from the proposed variation(s) and to meet the requirements in the Technical Memorandum on Environmental Impact Assessment Process :
	Scale and Scope of Designated Project The wordings is proposed to be varied as "The Project is to fully deck (0.24km) and partially deck (total length of about 1.96km) and revitalize the Yuen Long Nullah along Kung Um Road and Kiu Hing Road."		**Landscape and Visual:** The proposed variation would affect Landscape Resource 'Channelised Watercourse' and minimize the beautification works with amenity vegetation. Also, the proposed variation would slightly affect the VSRs caused by the visual impact of noise mitigation measures. **Air Quality:** The proposed variation would change the air quality impact due to the change of the alignment of the noise barriers and road works. The proposed variation is not expected to have changes in other environmental aspects.	**Landscape and Visual:** The reduced extent of the beautification works would decrease the landscape value. Nevertheless, the impact is considered low because more land would be created by full decking and the at-grade planting works would be proposed in this land as the substitute of the beautification works. For the mitigation measures for the realigned noise barriers, the measures shall be designed as harmonised works with the surrounding to avoid visual bulkiness. **Air Quality:** The roadworks and the noise barriers originally proposed would be realigned. The road alignment will shift towards an ASR slightly by 2 metres, which would slightly increase the pollutant concentration at this ASR. However, given the minor change in road alignment and based on results of the approved EIA, it is considered that the impact due to the slight road re-alignment would not change the conclusion of compliance with AQO. The proposed variation is not expected to have adverse impact on air quality.		

PART E DECLARATION BY APPLICANT

E1. I hereby certify that the particulars given above are correct and true to the best of my knowledge and belief. I understand the environmental permit may be suspended, varied or cancelled if any information given above is false, misleading, wrong or incomplete.

[redacted] [redacted] [redacted]

Signature of Applicant | Full Name in Block Letters | Position

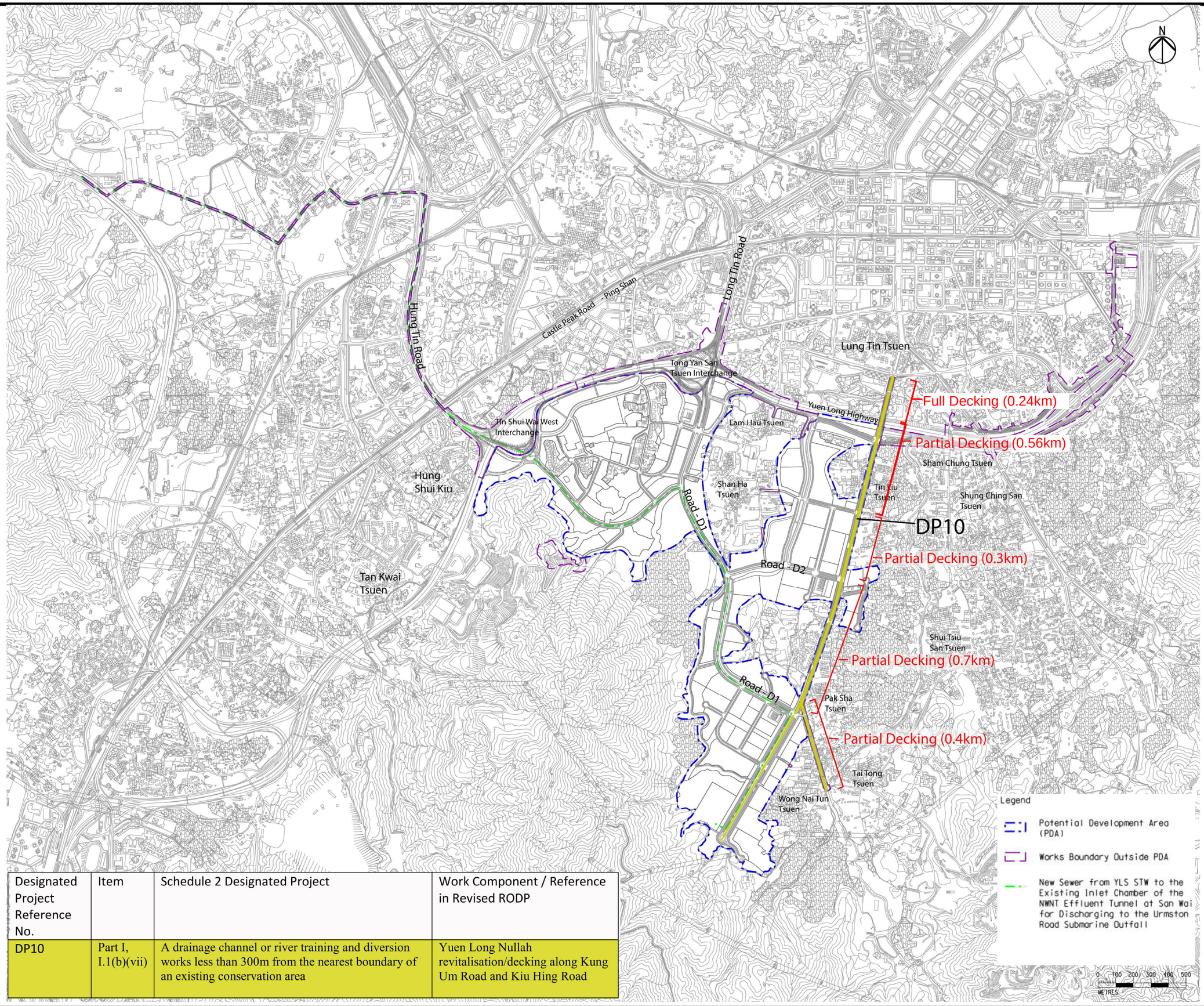
on behalf of Civil Engineering and Development Department _____

Company Name and Chop (as appropriate) | Date

NOTES :

1. A person who constructs or operates a designated project in Part I of Schedule 2 of the Ordinance or decommissions a designated project listed in Part II of Schedule 2 of the Ordinance without an environmental permit or contrary to the permit conditions commits an offence under the Ordinance and is liable to a maximum fine of $5,000,000 and to a maximum imprisonment for 2 years.

2. A person for whom a designated project is constructed, operated or decommissioned and who permits the carrying out of the designated project in contravention of the Ordinance commits an offence and is liable to a maximum fine of $5,000,000 and to a maximum imprisonment for 2 years.



Designated Project Reference No.	Item	Schedule 2 Designated Project	Work Component / Reference in Revised RODP
DP10	Part I, I.1(b)(vii)	A drainage channel or river training and diversion works less than 300m from the nearest boundary of an existing conservation area	Yuen Long Nullah revitalisation/decking along Kung Um Road and Kiu Hing Road

AECOM

PROJECT
項目

YUEN LONG SOUTH DEVELOPMENT - STAGE 1 (DESIGN AND CONSTRUCTION)

CLIENT
業主

土木工程拓展署
Civil Engineering and Development Department

CONSULTANT
下程顧問公司

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS
分判下程顧問公司

ISSUE/REVISION
修訂

I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 核核

STATUS
開設

SCALE 比例

DIMENSION UNIT 尺寸單位

KEY PLAN
索引圖

PROJECT NO. 項目編號: 60566218

CONTRACT NO. 合約編號: CE 32/2017(CE)

SHEET TITLE
圖紙名稱

SHEET NUMBER
圖紙編號: 60566218/

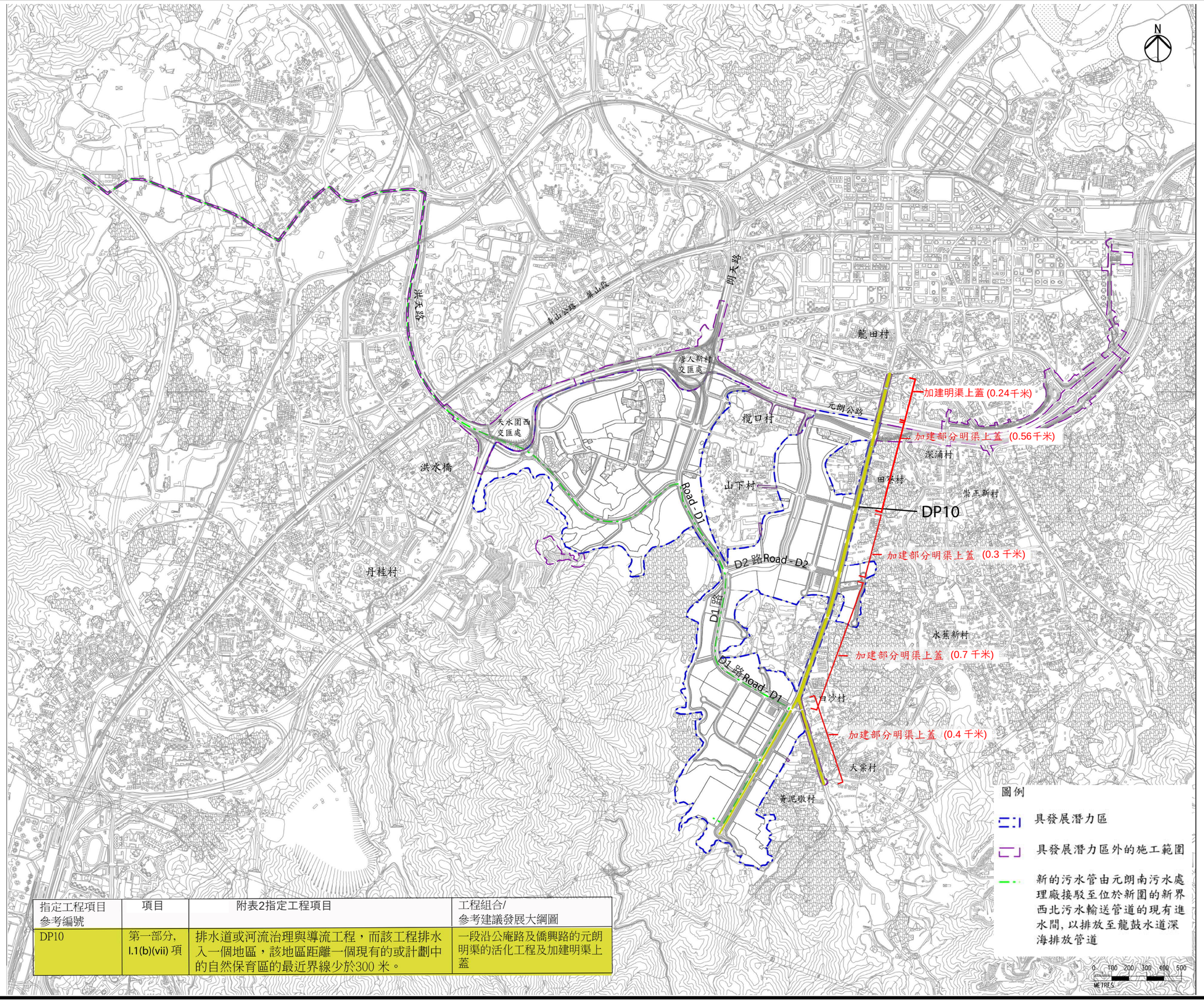
ISO A1 594mm x 841mm

Approved:

Checked:

Designer:

Project Management Initials:



指定工程項目 參考編號	項目	附表2指定工程項目	工程組合/ 參考建議發展大綱圖
DP10	第一部分, I.1(b)(vii) 項	排水道或河流治理與導流工程，而該工程排水入一個地區，該地區距離一個現有的或計劃中的自然保育區的最近界線少於300 米。	一段沿公庵路及僑興路的元朗明渠的活化工程及加建明渠上蓋

Plot File by: $USER$

PATH

$DATE$

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AECOM

PROJECT
項目

YUEN LONG SOUTH DEVELOPMENT - STAGE 1 (DESIGN AND CONSTRUCTION)

CLIENT
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DIMENSION UNIT
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KEY PLAN
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PROJECT NO.
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60566218

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合約編號

CE 32/2017(CE)

SHEET TITLE
圖紙名稱

SHEET NUMBER
圖紙編號

60566218/

Annex 1

Agreement No. CE 32/2017 (CE)
Yuen Long South development – stage 1
– Design and Construction

Environmental Review for Application for VEP (EP-553/2018)

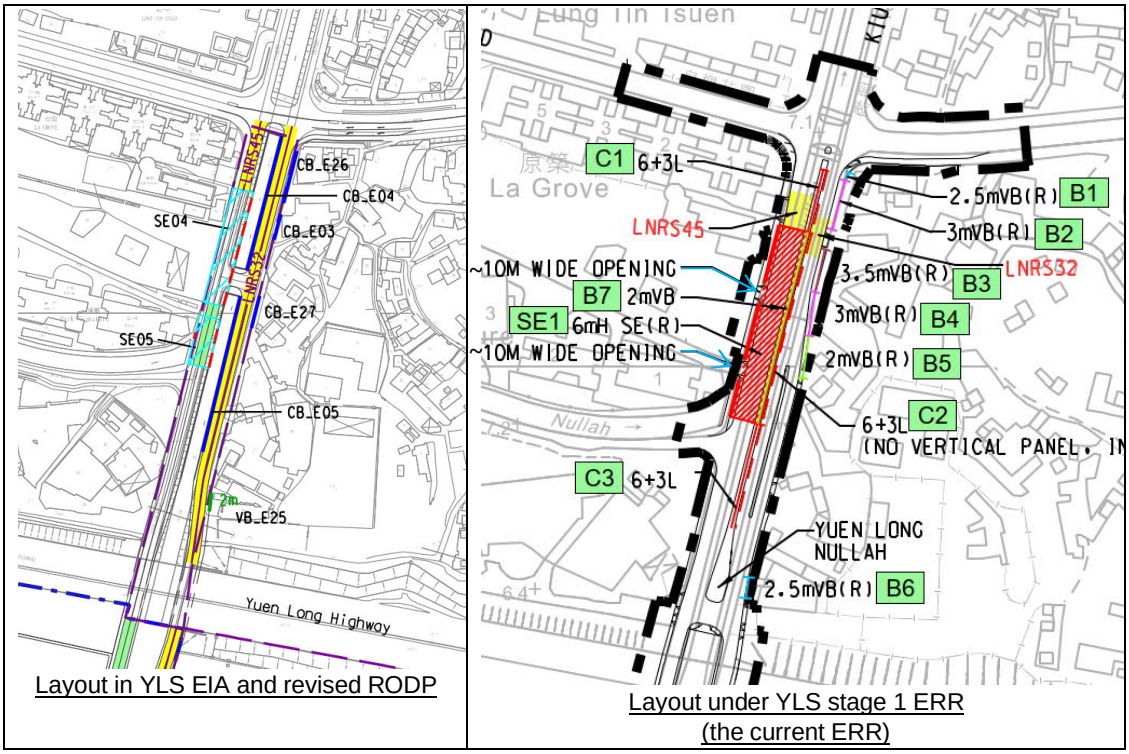
Appendices

1 INTRODUCTION

1.1 Background

1.1.1 The partial decking along Yuen Long Nullah was recommended in the EIA report for Yuen Long South (YLS) development area. In the approved EIA report, the development area covers road improvement works along Kung Um Road/Kiu Hing Road between proposed Road L1 and the Shap Pat Heung Road in stage 1 development.

1.1.2 The proposed decking has been identified as Designated Project (DP10 in the approved EIA report), a total of 2,200m long existing open nullah shall be modified with box culvert and revitalised open channel. Typical section as illustrated in **Plate 1.1** (Right figure) for widened carriageways along the Yuen Long Nullah would improve connectivity between YLS development area and Shap Pat Heung Road to Wong Nai Tun Tsuen Road.



Layout in YLS EIA and revised RODP

Layout under YLS stage 1 ERR (the current ERR)

Plate 1.1 Proposed full decking along Kung Um Road and Kiu Hing Road under ERR for YLS stage 1 works

1.1.3 According to the engineering design for coping with traffic needs, safety, hydraulic performance and constructability considerations, it is revealed that a section of 240m-long proposed partial decking with box culvert and revitalised open channel in **Plate 1.2** (between Shap Pat Heung Road and Yuen Long Highway) will not be feasible to be implemented. In order to provide sufficient safety consideration (desirable sight distance to road-users) and minimise impact to existing private residential developments alongside Kung Um Road, the proposed roadworks would be realigned on top of the existing Yuen Long Nullah. The proposed full decking arrangement as shown in **Plate 1.3** shall anticipate a certain noise impact during the operation phase. However, further review/assessments on the proposed noise mitigation measure shall be required for verifying whether these proposed changes will constitute a variation of Environmental Permit (to EP No 553/2018). The adopted traffic data for traffic noise assessment has been tabulated in **Appendix 1**, this is same as the set of traffic data for the approved YLS EIA report and ERR for Revised RODP Review which had been accepted by TD in 2019 (refer to **Appendix 2**).

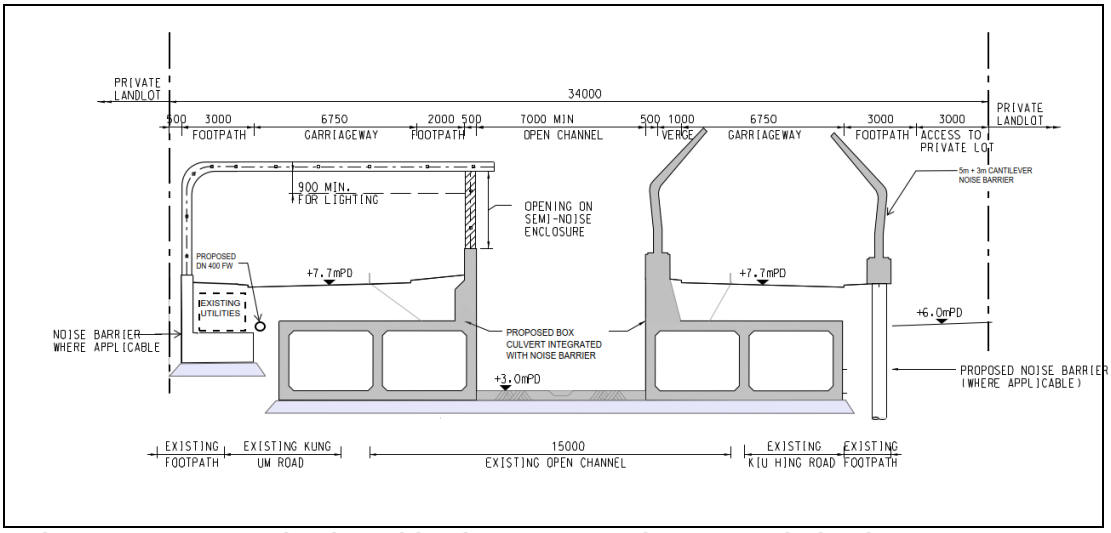


Plate 1.2 Proposed noise mitigation measures in P&E study (EIA)

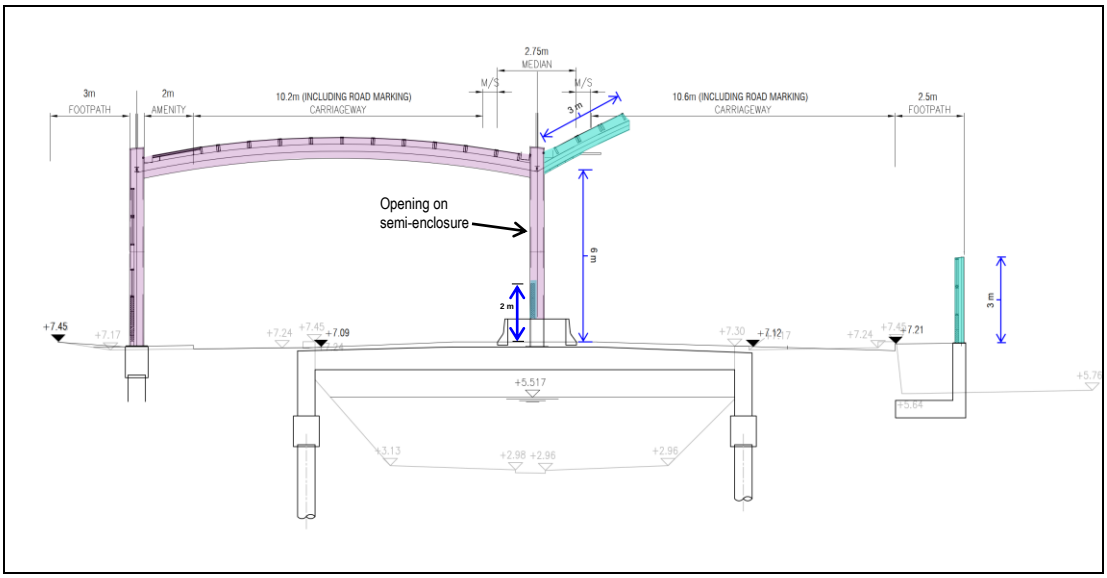


Plate 1.3 Proposed drainage arrangement incorporating traffic / mitigation measures

1.2 Specific Conditions of Environmental Permit (EP)

1.2.1 An Environmental Permit, EP-553/2018, was issued by EPD for the construction works of the Yuen Long Nullah revitalisation/decking (~2200m in length) along Kung Um Road/Kiu Hing Road (see **Plate 1.4** for extent of DP10). The specific conditions for this EP are summarized below:

- Employment of Environmental Monitoring and Audit (EM&A) Personnel;
- Management Organization of Main Construction Companies;
- Submission of Updated Environmental Monitoring and Audit Manual;
- Submission of Location Plans;
- Submission of Supplementary Contamination Assessment Plan (CAP);
- Submission of detailed Landscape and Visual Plan;
- Submission of Egretry Survey Report;
- Submission of Noise Mitigation Measures Plan for Egretry;
- Submission of Traffic Noise Mitigation Plan; and
- Submission of Ecological Survey and Mitigation Plan.

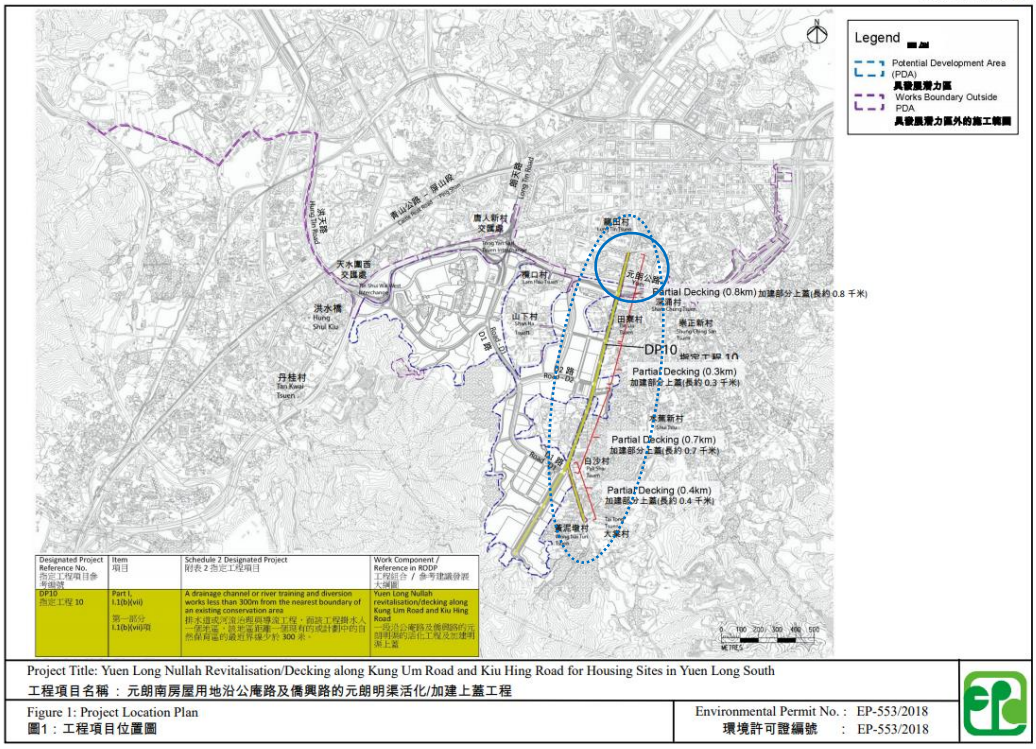


Plate 1.4 Extent of Decking along Kung Um Road and Kiu Hing Road under Environmental Permit No. EP-553/2018 for Yuen Long South development

1.2.2 As illustrated in **Plate 1.5**, the section of the proposed full decking (~240m in length) of Yuen Long Nullah along Kung Um Road and Kiu Hing Road is sited between Shap Pat Heung Road and Yuen Long Highway. This full decking is far beyond 300m from nearest Conservation Area (Tai Lam Country Park area), and currently some high-rise residential developments have been built and area paved for brownfield operation, in view of the location / surrounding developments, apart from the required details as mentioned in the first 4 bullet points of **Section 1.2.1**, the below 2 submissions should be provided according to EP-553/2018 for this section of full decking:

- Submission of detailed Landscape and Visual Plan; and
- Submission of Traffic Noise Mitigation Plan.

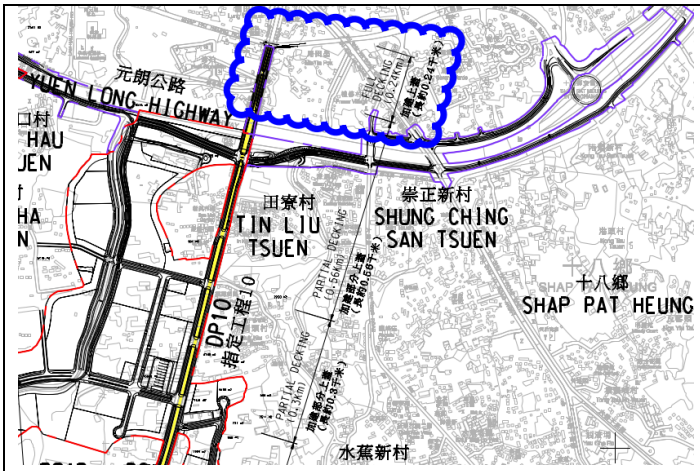


Plate 1.5 Proposed extent of full decking (~240m) under Environmental Permit No. EP-553/2018 for Yuen Long South development

2 REVIEW ON AIR QUALITY IMPACT

2.1.1 Given similar design of the noise mitigation structures, similar air quality impact on both side of nullah is expected but with highest pollutant concentration shifts to other heights according to the structure design. As there would be no change in the traffic flow of the planned roads, hence no additional loadings would be envisaged. Thus the assumptions and findings as stated in the approved YLS EIA report and ERR for Revised RODP remain valid. The road alignment will shift slightly further away from the concerned ASRs A17, A44 and A64 as shown in **Plate 2.1**. It is expected that the air quality impact on A17, A44 and A64 would be lower than the predictions in the previous studies. On the other hand, the road alignment will also shift less than 2 metres towards A18. With reference to the predictions in ERR for the Revised RODP, the cumulative pollutant concentrations at A18 would comply the AQOs, in particular annual NO_2 concentration at 31-36 µg/m^3. The most concerned annual NO_2 contour plots from ERR for the Revised RODP were extracted in **Plate 2.2**. It is considered that the shift of road alignment would increase the pollutant concentrations at A18 but would not cause adverse impact on the ASR.

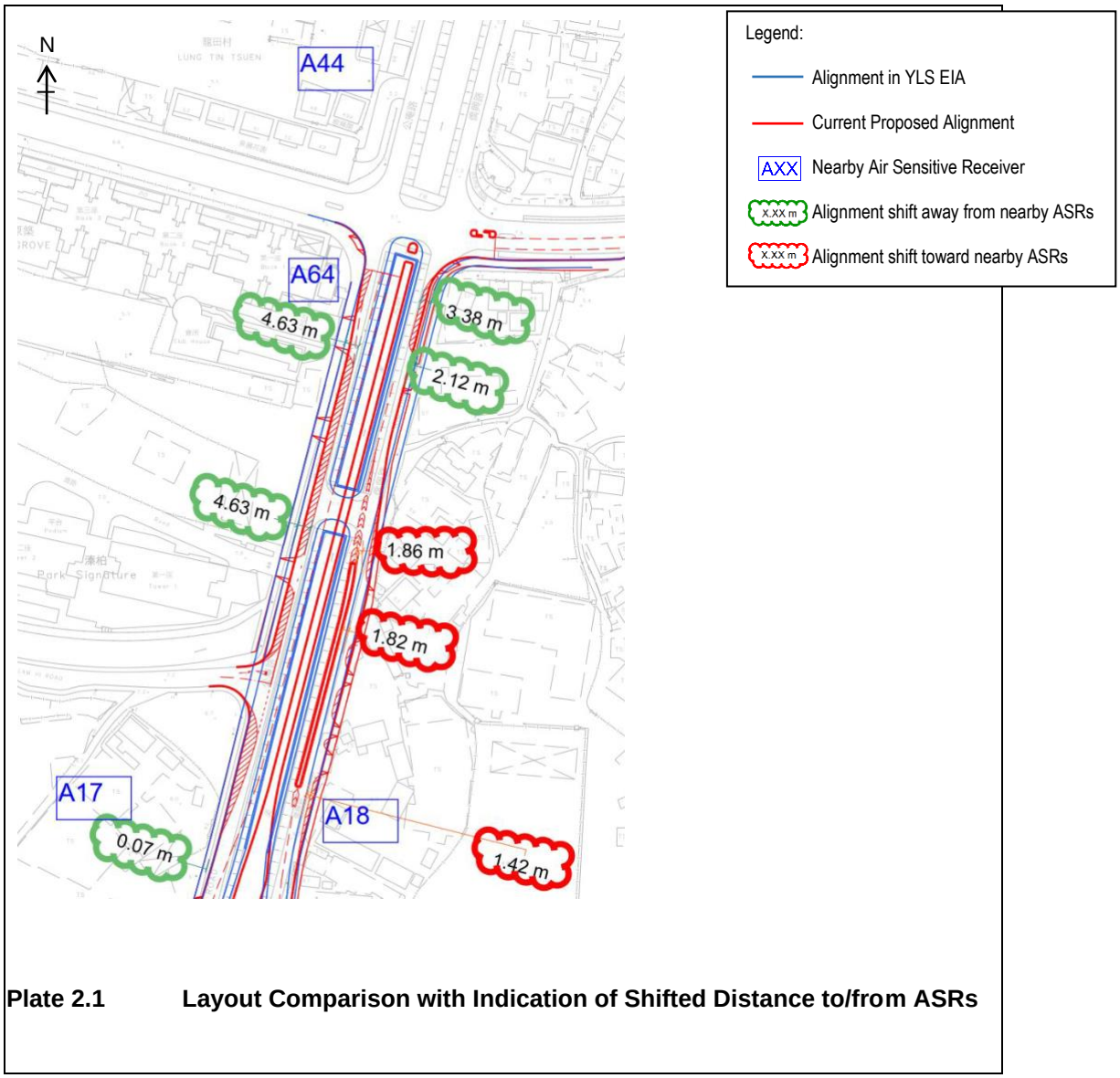


Plate 2.1 Layout Comparison with Indication of Shifted Distance to/from ASRs

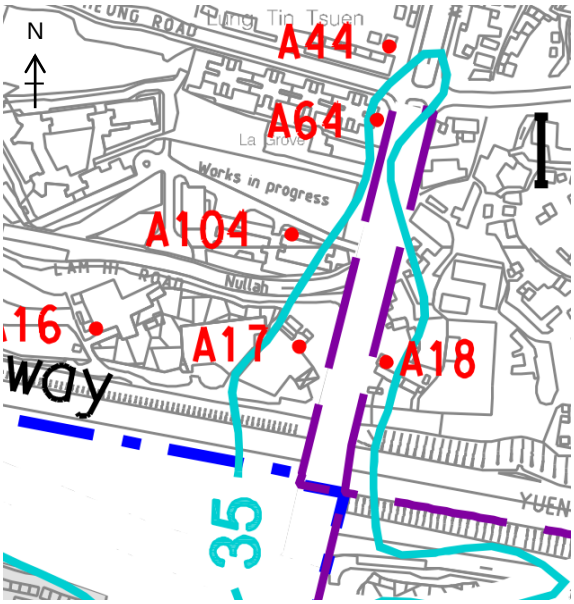


Figure 2.5b of ERR for Revised RODP - Contours of Cumulative Annual NO_2 Concentrations at 1.5m above ground (Year 2028)

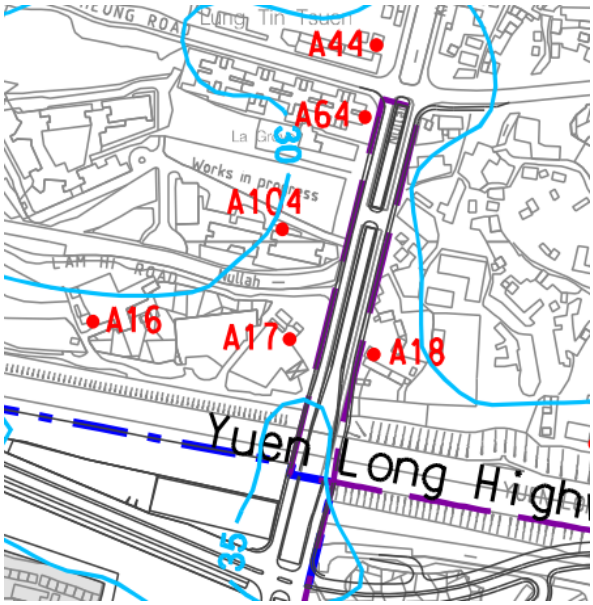


Figure 2.5l of ERR for Revised RODP - Contours of Cumulative Annual NO_2 Concentrations at 1.5m above ground (Year 2043) (DA Area)

Plate 2.2 Contour Plots extracted from ERR for Revised RODP

2.1.2 Apart from the annual NO_2, other similar air quality criteria/impacts have also been reviewed such as hourly NO_2, daily and annual RSP and FSP on the nearby ASRs owing to the roads over the decked Yuen Long nullah. Summary of AQOs is tabulated in **Table 2.1** below:

Table 2.1 Summary of AQOs criteria Recommended Mitigation Measures along Kung Um Road and Kiu Hing Road under ERR stage 1 Works

	AQOs Criteria ($\mu g/m^3$)	YLS Development (Year 2028)	YLS Development (Year 2043)	Figures referring to ERR for Revised RODP of YLS P&E study (#)
NO_2 (1 hour)	200	120	120	2.5a & 2.5k
NO_2 (Annual)	40	35	30	2.5b & 2.5l
RSP (Daily)	100	82	82	2.5c & 2.5m
RSP (Annual)	50	35.5	35.5	2.5d & 2.5n
FSP (Daily)	75	61	62	2.5e & 2.5o
FSP (Annual)	35	25.5	25	2.5f & 2.5p

Note: # Relevant figures extracted from ERR for Revised RODP of YLS P&E study are illustrated in **Appendix 5**.

2.1.3 In view of the findings in **Table 2.1**, no exceedance in NO_2, RSP or FSP was predicted along the proposed full decking with reference to the contour results in the approved YLS EIA report. It is considered that the shift of road alignment would increase the pollutant concentrations at A18 but would not cause adverse impact on the ASR.

3 REVIEW ON NOISE IMPACT

3.1.1 The lengths of some proposed barriers are quite short especially along Kung Um Road and Kiu Hing Road (proposed Road L25) that might induce end effect.

3.1.2 Referring to the site situation, there are lots of road access along the proposed Road L25, that some noise barriers need to be broken down into short segments. There is a proposal to relocate the noise barrier to immediately next to the road kerb, however, due to limitation of sight-line of these road accesses on road safety consideration, this approach is deemed to be impracticable.

3.1.3 According to the draft Yuen Long OZP No. S/YL/24 as gazetted on 29 January 2021, the site between La Grove and Park Signature is zoned "Residential (Group A)1" ("R(A)1"). Semi-enclosures SE04 and SE05 were proposed to alleviate the noise impact to existing private development "La Grove" and "Park Signature", as shown in **Plate 3.1** below. Referring to the finding of Appendix 5.16c of YLS EIA Report, some representative NSRs such as E4_LG_R02, E4_PS_R01 to E4_PS_R03 would still exceed the noise criteria 70dB(A), but exceedance is due to "other roads". The noise contribution from "project road" is less than or equal 0.8dB(A).

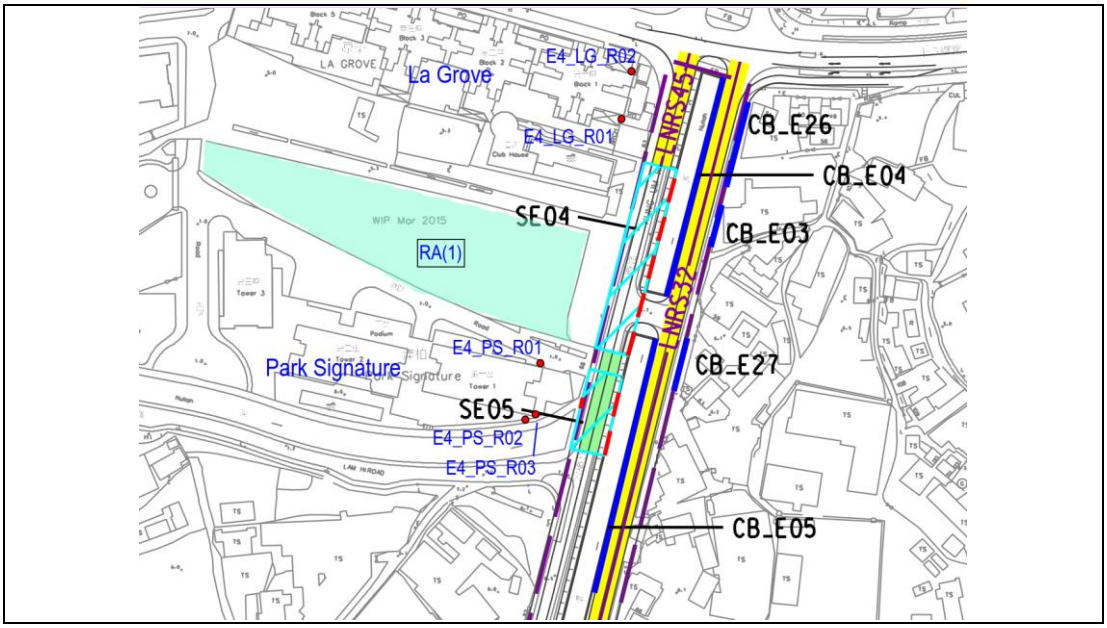


Plate 3.1 Location of Planned R(A)1 and Two Concerned Noise Semi-enclosures

3.1.4 For the noise mitigation measures scheme considered in this review, in order to give a safer driving condition to the road-users (such as sight-line) along the road kerb of Kung Um Road, it is not viable to erect noise barrier at the road kerb by using non-transparent type noise barrier. For providing a safer driving environment to road-users, part of the Kung Um Road and Kiu Hing Road which were re-aligned towards the decked Yuen Long Nullah will be hatched with road marking to keep vehicles away from semi-enclosure/noise barrier. The hatched marking area is indicated in **Plate 3.2.**

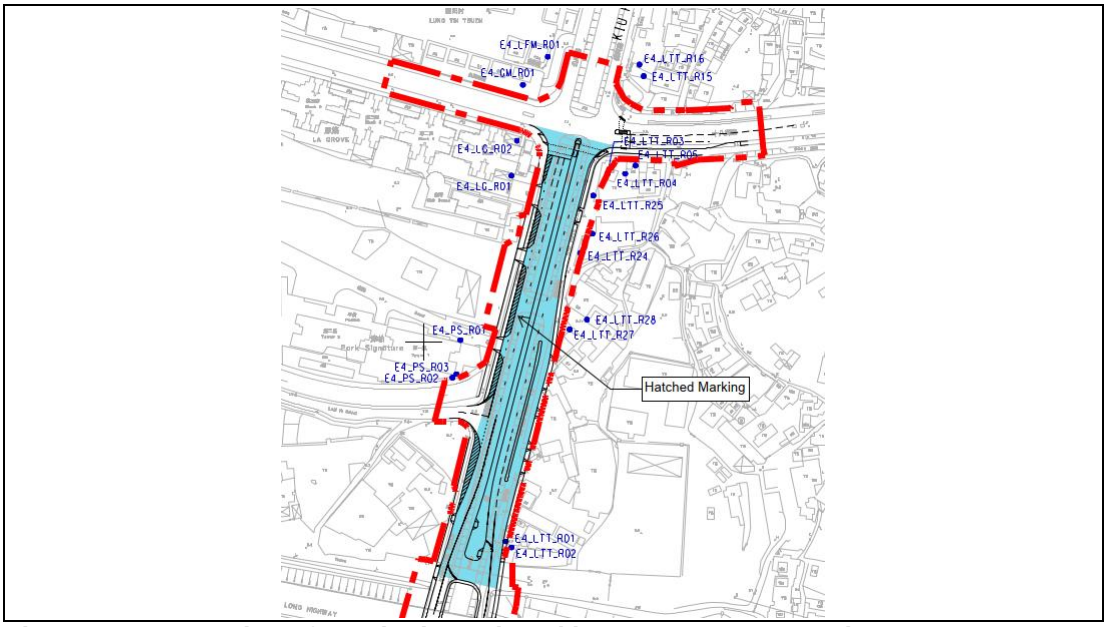


Plate 3.2 Location of Hatched Road Marking on Kung Um Road

3.1.5 As checked with OZP and relevant Government Authorities, there is no planned development for the area next to east of Kiu Hing Road. Considering that there are only low-rise village houses with 1-2 storeys at the east of Kiu Hing Road, noise model has been refined. Assessment results indicated that the cantilevered noise barriers along east of Kiu Hing Road could be replaced by vertical barriers as shown in **Plate 3.3** below.

Road Traffic Noise and Evaluation of Impacts

3.1.6 Although the first population intake under stage 1 works would be targeted in 2028, road traffic noise impact in 2053 (the peak traffic within 15 years after fully operation of road network in YLS) is considered as the worst scenario. Proposed mitigation measures for stage 1 works should be enough to mitigate noise impact in 2053. Therefore, road traffic noise impact would be focused in year 2053. A 10.3m-wide opening for run-in/out of planned R(A)1 Site at Semi-enclosure SE04 has also been taken into account for assessment purposes. To demonstrate that the proposed re-alignment under YLS stage 1 works would not generate adverse road traffic noise impact to representative NSRs, total 2 scenarios in 2053 had been conducted including: -

- ***Base Scenario***: result directly extracted from the ERR for revised RODP (location of mitigation measures is extracted in **Appendix 3**).
- ***Mitigated Scenario***: apply mitigation measures, e.g. noise barriers and LNRS on NSRs that with effect due to the proposed layout (recommended mitigation measures for the proposed alignment) (See **Plate 3.3**).

3.1.7 The predicted road traffic noise level in 2053 are summarized in **Appendix 4** while locations of proposed traffic noise mitigation measures including using of vertical barriers, cantilevered noise barrier, semi-enclosure as well as LNRS on residual impact are shown in **Plate 3.3**.

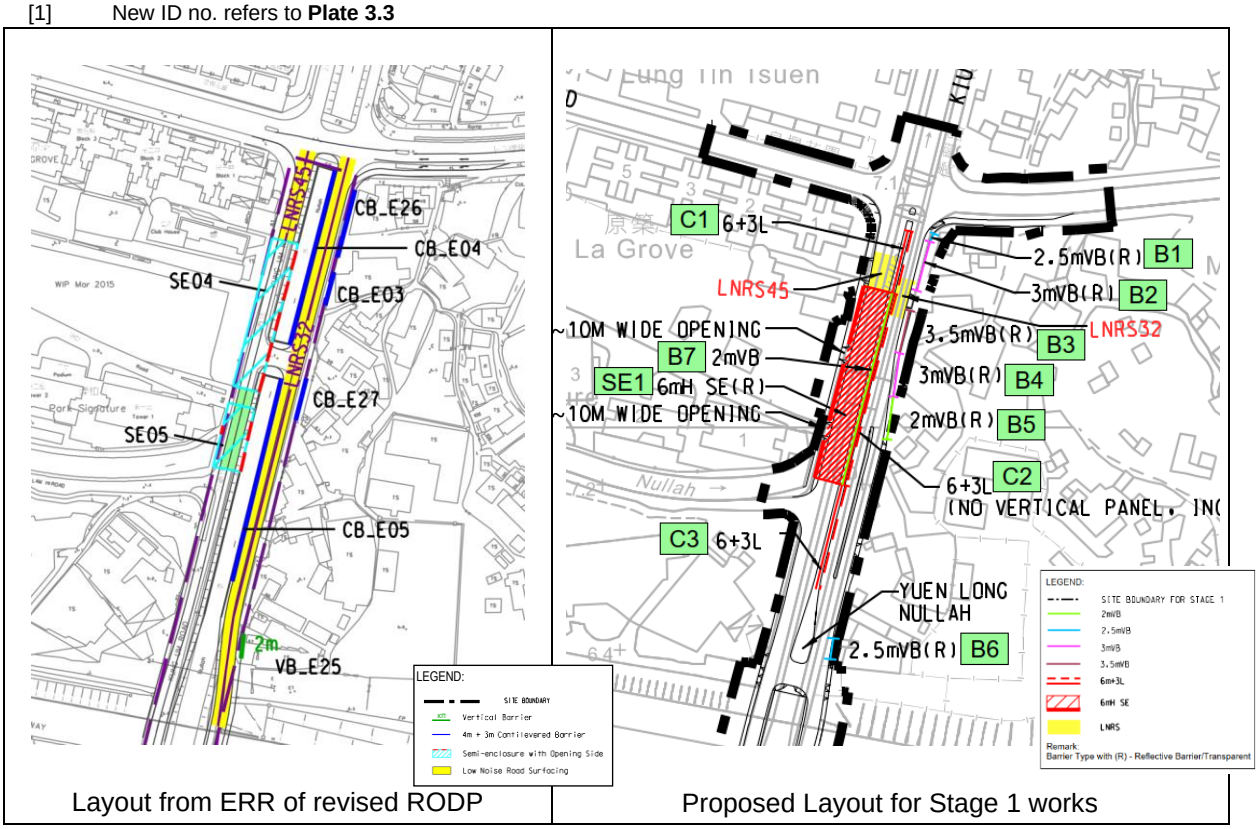
Kung Um Road/Kiu Hing Road (North of Yuen Long Highway)

3.1.8 Summary of the proposed mitigation measures is listed in **Table 3.1** and indicated in **Plate 3.3**.

Table 3.1 Summary of Recommended Mitigation Measures along Kung Um Road and Kiu Hing Road under ERR stage 1 Works

Location	Under ERR for "YLS Stage 1 Works"			Under ERR for Revised RODP		
	New ID No. [1]	Approximate Length, m	Type of Noise Barrier / Remark	ID No.	Approximate Length, m	Type of Noise Barrier
Kung Um Road (North of Yuen Long Highway)						
Yuen Long Nullah - Kung Um Road	SE1	100	Semi-enclosure (with two ~10m wide opening for run-in/out)	SE04 and SE05	70 + 30	Semi-enclosure
	B7	100	Vertical Barrier: 2m			
Proposed Road L25	C1 + C3	30 + 55	Cantilevered Barrier: 6+3m at 45°	CB_E04 and CB_E05	80 + 90	Cantilevered Barrier 4+3m at 45°
	C2	100	Cantilevered Barrier: 6+3m at 45° incorporating with the 6m height SE, i.e. no vertical panel			
Kung Um Road (North of Yuen Long Highway)	LNRS45	20	N/A For residual impact	LNRS45	40	N/A
Kiu Hing Road (North of Yuen Long Highway)						
Proposed Road L25	B1	5	Vertical Barrier: 2.5m (R)	CB_E26	30	Cantilevered Barrier: 4+3m at 45°
	B2	25	Vertical Barrier: 3m (R)			
Proposed Road L25	B3	20	Vertical Barrier: 3.5m (R)	CB_E03	15	Cantilevered Barrier: 4+3m at 45°
	B4	20	Vertical Barrier: 3m (R)			
Proposed Road L25	B5	20	Vertical Barrier: 2m (R)	CB_E27	20	Cantilevered Barrier: 4+3m at 45°
Proposed Road L25	B6	11	Vertical Barrier: 2.5m (R)	VB_E25	11	Vertical Barrier: 2m
Kiu Hing Road (North of Yuen Long Highway)	LNRS32	20	N/A For residual impact	LNRS32	260	N/A

Note:
(R) Reflective Barrier or Transparent Barrier
[1] New ID no. refers to **Plate 3.3**



Layout from ERR of revised RODP | Proposed Layout for Stage 1 works

Plate 3.3 Recommended Mitigation Measures for Kung Um Road and Kiu Hing Road

3.1.9 A section of Kung Um Road and Kiu Hing Road between Shap Pat Heung Road and Yuen Long Highway has been converted into full decking from partial decking. With the further removal of LNRS according to guidance note of HyD (RD/GN/011C), modelling result showed that some NSRs would be affected. However, this noise impact can be solved by adopting further mitigation measures such as noise barrier (semi-enclosed/vertical/cantilever type) or reprovision of LNRS at the concerned road section (as marked in **Plate 3.3**). Since there is no change to the NSRs, it is expected that noise mitigation measures for road traffic noise impact for other sections is still valid under the ERR for revised RODP.

3.1.10 Submission of Traffic Noise Mitigation Plan shall be required for full decking of Yuen Long Nullah no later than one month before the commencement of construction of the Project as per environmental permit no. EP-553/2018.

4 REVIEW ON WATER QUALITY IMPACT

4.1.1 Despite the change for a section of full decking and the proposed works at Yuen Long Nullah, the construction activities would remain the same as in the YLS EIA Report, the potential water quality impacts identified of the construction of the works would remain valid.

4.1.2 In addition, the proposed decking will enlarge the extent of impervious area as identified in the YLS EIA Report. The enlarged impervious area has potential to cause additional non-point source surface run-off during rainfall events, if without proper drainage system. Proper drainage systems with silt traps will be installed for the decking of Yuen Long Nullah as suggested in the YLS EIA Report, therefore, the potential water quality impacts of surface runoff identified in the YLS EIA Report would remain valid.

4.1.3 Since there will be no change on the operation of future housing developments, the potential water quality impacts of sewage discharge as identified in the YLS EIA Report would remain valid.

5 REVIEW ON SEWERAGE AND SEWAGE TREATMENT IMPLICATIONS IMPACT

5.1.1 Since the proposed full decking does not alter the sewage flow estimation nor the proposed sewerage system, the potential sewerage and sewage treatment implications as predicted in the approved YLS EIA Report would be still valid.

6 REVIEW ON ECOLOGICAL IMPACT

6.1.1 While the major habitat affected by the proposed road works is developed area, the full decking proposal would increase the horizontal encroachment at the deck level of the channel and reduce the extent of the beautification works for habitat.

6.1.2 Although the variation affects the proposed beautification and landscaping works for enhancing the amenity of the existing channel, the impact is considered to be insignificant as the channel at this northern section of Yuen Long Nullah is in urban environment and the main purpose of the revitalization of this section is to integrate the urban design and landscape framework. There are no major deviations between current habitat condition and the YLS EIA findings. No specific mitigation measures are required.

6.1.3 Also, this full decking is far beyond 300m from nearest Conservation Area (Tai Lam Country Park area), and currently some high-rise residential developments have been built and area paved for brownfield operation.

7 REVIEW ON FISHERIES IMPACT

7.1.1 The proposed full decking does not overlap with the current fish ponds. Nonetheless, they would be subject to permanent loss in the later stage of development. As these ponds had no fisheries-related uses, no direct impact to fisheries are anticipated.

8 REVIEW ON LANDSCAPE AND VISUAL IMPACT

8.1.1 The proposed full decking would affect Landscape Resource 'Channelised Watercourse' and minimize the beautification works with amenity vegetation.

8.1.2 The reduced extent of the beautification works would decrease the landscape value. Nevertheless, the impact is considered low because more land would be created by full decking and the at-grade planting works would be proposed in this land as the substitute of the beautification works.

8.1.3 The revised noise mitigation measures (noise barrier) shall be designed as harmonised works with the surroundings to avoid bulkiness in accordance with the approved YLS EIA Report.

8.1.4 No major revision to the layout plan was identified. As such, the impact is insignificant as compared with those predicted in the YLS EIA Report and the conclusion of the approved EIA report remain valid.

8.1.5 Submission of detailed Landscape and Visual Plan shall be required for full decking of Yuen Long Nullah no later than one month before the commencement of construction of the Project as per environmental permit no. EP-553/2018.

9 REVIEW ON WASTE MANAGEMENT IMPACT

9.1.1 No adverse residual waste management implications due to the proposed design changes would be anticipated with the proper implementation of the recommended mitigation measures provided in the YLS EIA Report.

10 REVIEW ON LAND CONTAMINATION IMPACT

10.1.1 Based on the review findings, the location of full decking proposal does not fall within the potentially contaminated sites as identified in the YLS EIA Report. Findings and conclusion of the approved YLS EIA Report remain valid.

11 REVIEW ON CULTURAL HERITAGE IMPACT

11.1.1 There are no Sites of Archaeological Interest, Archaeological Potential Areas, declared monument nor historic buildings to be affected by the proposed full decking. Findings and conclusion of the approved YLS EIA Report remain valid.

12 REVIEW ON EM&A REQUIREMENTS

12.1.1 Since it is found that the findings and mitigation measures proposed in YLS EIA Reports for each aspect are still valid for the full decking proposal under Yuen Long South Development – Stage 1. The environmental monitoring and audit requirements recommended in the approved YLS EIA Report are still applicable.

NBFJ0

Original signed

By Fax
2268 3528

運輸署
Transport Department

本署檔案 Our Ref. : (NBFJC) in TD NR182/251-12
來函檔號 Your Ref. :
電　　話 Tel. : 2399 2565
圖文傳真 Fax : 2381 3799
電　　郵 Email : myau@td.gov.hk

12 June 2019

Ove Arup & Partners Hong Kong Ltd
Level 5, Festival Walk
80 Tat Chee Avenue, Kowloon Tong,
Kowloon, Hong Kong
(Attn : Mr. Raman Lee)

Dear Mr. Lee,

Agreement No. CE 35/2012 (CE)
Planning and Engineering Study for Housing Sites in Yuen Long South – Investigation
Draft Technical Note on Traffic Forecasts of Revised RODP for Environmental Review

We refer to your email dated 11 June 2019 regarding the above subject.

We have no comment on the Draft Technical Note on Traffic Forecasts of Revised RODP for Environmental Review from traffic engineering viewpoint.

Yours faithfully,

(Derek M Y AU)
for Commissioner for Transport

c.c.

PM(West), CEDD	(Attn.: Mr. CHUI Wai-lok)	Fax: 2693 2918
PlanD	(Attn.: Mr. Alexander MAK)	Fax: 2868 4497

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Annex 1 of VEP
Appendix 1
Key Map of Traffic Flow and Traffic Data in 2053 and TD Endorsement on Traffic Forest extracted from ERR for RODP

Traffic flow in Year 2033

Traffic ID	Flow, veh/hr	Heavy vehicle, %	Traffic Design Speed, km/h
9190	634	28.4	50
9211	1	0.0	50
9216	592	13.0	50
9218	209	23.0	50
9220	768	15.1	50
9222	768	15.1	50
9230	880	23.1	50
9232	1201	4.0	50
9234	2431	17.4	50
9235	1865	15.3	70
9237	893	21.5	50
9239	950	18.6	50
9240	317	16.4	50
9243	317	16.4	50
9253	26	80.8	50
9257	1	0.0	50
9301	852	19.1	50
9302	624	26.6	70
9303	646	29.1	70
9305	536	44.4	50
9311	799	27.7	80
9312	486	25.1	50
9313	324	19.1	50
9318	2	0.0	50
9319	277	33.6	50
9322	1	0.0	50
9331	1696	27.8	50
9332	1534	25.5	50
9333	3011	31.6	80
9999	1	0.0	50
90231	36	25.0	50
91420	720	17.6	50
91421	276	34.1	50
91560	44	54.5	50
91630	821	23.8	50

Appendix 1
Key Map of Traffic Flow and Traffic Data in 2053 and TD Endorsement on Traffic Forest extracted from ERR for RODP

Agreement No. CE 35/2012 (CE)
Planning and Engineering Study for Housing Sites in Yuen Long South – Investigation

Traffic flow in Year 2053

Traffic ID	Flow, veh/hr	Heavy vehicle, %	Traffic Design Speed, km/h
1	5695	28.9	80
2	6493	34.8	80
3	4285	34.0	80
4	4012	28.4	80
5	5068	30.3	80
6	5576	32.5	80
7	4016	29.8	80
8	4037	36.4	80
9	6040	27.9	80
10	6032	27.9	80
11	5203	27.2	80
13	5946	28.5	80
14	3916	26.3	80
16	4736	27.9	80
19	3873	35.3	50
20	3866	35.7	50
21	2786	37.0	50
22	2649	36.7	50
23	4247	30.0	50
24	4540	42.8	50
25	4087	29.4	50
26	2054	37.4	50
27	56	51.8	50
28	2860	46.0	50
29	1951	39.9	50
30	654	11.8	50
31	1157	19.2	50
32	852	27.8	50
33	1212	19.2	50
34	851	25.6	50
36	975	19.3	50
38	1834	19.6	50
40	1794	20.1	50
44	145	28.3	50
46	1523	17.5	70
47	2578	27.7	70
48	2172	17.8	70
49	3227	30.1	70
50	1494	32.9	70
51	2210	31.9	70
52	1506	32.5	70
53	1392	41.1	70
54	674	52.7	70
55	1544	32.6	70
56	697	36.9	70
57	1603	30.1	70
58	677	32.5	70
60	1821	22.8	70
61	1346	23.3	70
62	896	29.8	70
63	1389	44.9	70
64	842	29.0	70
65	896	29.8	70
66	1412	32.1	70
67	1637	34.9	70
68	2398	33.3	70
69	2939	33.4	70
72	107	26.2	50
73	314	34.1	50
74	119	11.8	50
75	611	31.6	50
76	498	35.1	50
77	498	35.1	50
85	73	31.5	50
86	73	31.5	50
88	182	34.1	50
90	18	44.4	50
91	146	28.8	50

Appendix 1

Key Map of Traffic Flow and Traffic Data in 2053 and TD Endorsement on Traffic Forest extracted from ERR for RODP

Traffic flow in Year 2053

Traffic ID	Flow, veh/hr	Heavy vehicle, %	Traffic Design Speed, km/h
92	673	23.2	50
93	122	19.7	50
98	862	27.1	50
100	169	16.6	50
106	1438	18.4	50
108	2157	22.6	50
110	2007	21.7	50
118	10	0.0	50
120	11	0.0	50
124	82	26.8	50
126	203	41.9	50
128	207	39.1	50
132	14	28.6	50
136	24	16.7	50
140	300	38.7	50
141	307	40.1	50
143	55	21.8	50
144	870	17.9	50
150	640	22.0	50
152	407	37.3	50
154	27	7.4	50
155	10	0.0	50
157	1625	19.4	50
159	1518	21.7	50
161	790	19.7	50
163	246	28.5	50
165	645	22.8	50
167	609	30.2	50
169	168	38.7	50
171	10	0.0	50
177	5	0.0	50
178	10	0.0	50
180	107	19.6	50
185	175	38.9	70
186	545	16.3	70
187	175	38.9	70
188	884	26.4	70
189	197	20.3	70
190	900	22.2	70
192	6	33.3	50
193	621	28.5	50
195	653	26.5	50
199	94	25.5	50
215	751	27.8	50
217	64	6.3	50
219	64	6.3	50
223	64	6.3	50
226	68	11.8	50
228	752	27.8	50
230	370	43.5	50
231	549	35.9	50
233	590	34.4	50
235	591	34.3	50
237	208	10.6	50
239	228	13.6	50
241	250	26.0	50
243	183	23.5	50
244	19	42.1	50
245	19	42.1	50
247	26	61.5	50
249	28	28.6	50
252	19	42.1	50
261	24	16.7	50
264	330	36.4	50
265	1249	31.4	50
266	1077	32.2	50
269	180	31.7	50
271	10	20.0	50
274	66	9.1	50
276	48	16.7	50
296	1057	30.3	50

Traffic flow in Year 2053

Traffic ID	Flow, veh/hr	Heavy vehicle, %	Traffic Design Speed, km/h
300	224	27.7	50
304	835	33.7	50
314	648	18.5	50
315	648	39.8	50
317	648	18.5	50
318	648	39.8	50
319	1430	35.2	50
320	781	43.4	50
321	1560	37.3	50
401	20	0.0	50
402	20	0.0	50
403	20	0.0	50
405	1720	36.7	50
407	24	16.7	50
409	1593	34.1	50
501	1410	13.6	50
503	15	100.0	50
504	1426	14.6	50
505	1587	51.9	50
506	427	44.5	50
507	1301	34.3	50
508	1088	31.1	50
509	1449	16.0	50
511	875	42.6	50
512	1566	43.2	50
513	1409	17.0	50
519	2114	31.0	50
681	987	35.0	70
905	288	10.1	50
914	27	7.4	50
1005	20	0.0	50
1202	169	40.8	50
1260	165	47.9	50
1271	38	15.8	50
1390	531	33.1	50
1391	85	62.4	50
1851	1304	31.7	70
2026	6	66.7	50
2033	742	37.5	50
3060	2868	38.2	50
3061	2547	41.3	50
3062	2282	44.1	50
4026	2264	30.6	50
4027	145	42.8	50
4036	1407	17.8	50
4038	1584	28.7	50
4041	1907	33.2	50
4043	2998	42.4	50
4044	3076	42.4	50
4045	172	18.6	50
4048	1910	37.0	50
4049	1822	28.0	50
4050	1301	34.3	50
9001	10	100.0	50
9002	10	100.0	50
9003	20	100.0	50
9005	20	100.0	50
9007	20	100.0	50
9012	20	100.0	50
9013	1219	28.2	50
9014	20	100.0	50
9016	20	100.0	50
9018	20	100.0	50
9022	1009	19.3	50
9023	491	34.6	50
9024	1030	19.2	50
9025	524	33.4	50
9026	1122	25.2	50
9027	628	28.2	50
9028	741	16.5	50
9031	737	10.7	50

Appendix 1

Key Map of Traffic Flow and Traffic Data in 2053 and TD Endorsement on Traffic Forest extracted from ERR for RODP

Traffic flow in Year 2053

Traffic ID	Flow, veh/hr	Heavy vehicle, %	Traffic Design Speed, km/h
9032	667	8.7	50
9033	577	34.7	50
9034	258	29.1	50
9035	991	15.1	50
9036	925	18.2	50
9037	745	72.2	50
9038	1670	42.3	50
9040	800	30.6	50
9042	969	22.8	50
9046	171	26.9	50
9047	125	25.6	50
9049	700	46.7	50
9050	272	16.5	50
9051	177	79.7	50
9052	309	17.8	50
9055	425	37.4	50
9056	309	17.8	50
9059	425	37.4	50
9060	301	18.3	50
9063	289	46.7	50
9064	301	18.3	50
9067	289	46.7	50
9069	366	38.5	50
9070	346	18.2	50
9073	277	43.7	50
9075	277	43.7	50
9076	346	18.2	50
9079	424	27.1	50
9080	247	13.8	50
9082	191	51.8	50
9084	31	96.8	50
9087	123	48.8	50
9088	103	79.6	50
9090	126	60.3	50
9093	96	47.9	50
9094	174	19.0	50
9096	509	22.0	50
9098	238	25.2	50
9099	18	44.4	50
9102	521	37.0	50
9103	723	26.6	50
9104	723	26.6	50
9105	1057	17.2	50
9108	496	35.1	50
9111	191	33.5	50
9113	127	54.3	50
9115	128	39.1	50
9117	64	39.1	50
9119	64	39.1	50
9121	116	47.4	50
9122	150	37.3	50
9123	118	51.7	50
9124	291	29.2	50
9125	1231	18.0	50
9126	676	36.8	50
9127	1231	18.0	50
9128	672	36.8	50
9129	9	33.3	50
9131	253	45.8	50
9133	417	28.1	50
9135	640	25.0	50
9137	264	22.3	50
9139	288	21.9	50
9141	218	23.9	50
9143	913	32.6	50
9144	1855	18.3	50
9145	503	37.6	50
9146	887	29.0	50
9147	466	37.6	50
9148	781	31.0	50
9149	241	41.9	50

Traffic flow in Year 2053

Traffic ID	Flow, veh/hr	Heavy vehicle, %	Traffic Design Speed, km/h
9150	239	46.0	50
9151	119	51.3	50
9152	137	53.3	50
9153	109	25.7	50
9154	1048	31.9	50
9155	864	31.6	50
9156	1793	27.6	50
9158	1000	22.0	50
9159	246	22.8	50
9160	1324	19.3	50
9161	1964	34.7	50
9163	1410	20.6	50
9164	185	33.0	50
9165	1878	34.3	50
9166	918	36.2	50
9167	1050	15.5	50
9168	2022	24.2	50
9169	931	24.0	50
9170	171	39.8	50
9172	210	31.4	50
9174	73	27.4	50
9176	914	22.2	50
9178	354	16.9	50
9180	342	17.0	50
9182	281	13.2	50
9184	297	15.5	50
9186	410	37.6	50
9188	410	37.6	50
9190	1020	37.9	50
9192	152	35.5	50
9194	170	34.7	50
9196	125	34.4	50
9198	402	14.9	50
9200	464	14.9	50
9201	287	18.8	50
9203	48	33.3	50
9205	341	19.4	50
9207	570	25.4	50
9209	595	25.4	50
9211	906	23.0	50
9216	518	19.5	50
9218	611	38.1	50
9220	1024	30.0	50
9222	1024	30.0	50
9224	16	56.3	50
9226	56	23.2	50
9228	42	16.7	50
9230	571	32.7	50
9232	1995	10.7	50
9234	3249	18.0	50
9235	2172	17.8	50
9236	3227	30.1	50
9237	1981	19.5	50
9239	749	31.9	50
9240	808	38.6	50
9242	653	36.3	50
9243	402	18.2	50
9245	825	39.8	50
9246	424	46.5	50
9247	401	32.7	50
9248	318	25.5	50
9249	829	32.1	50
9250	820	35.7	50
9252	89	38.2	50
9253	33	69.7	50
9257	37	13.5	50
9301	739	35.6	50
9302	757	30.3	70
9303	779	32.2	70
9305	803	45.0	50
9311	880	32.8	80

Appendix 1

Key Map of Traffic Flow and Traffic Data in 2053 and TD Endorsement on Traffic Forest extracted from ERR for RODP

Traffic flow in Year 2053

Traffic ID	Flow, veh/hr	Heavy vehicle, %	Traffic Design Speed, km/h
9312	627	25.8	50
9313	539	27.8	50
9318	23	21.7	50
9319	813	30.3	50
9322	94	27.7	50
9323	381	18.9	50
9331	1956	32.5	50
9332	1878	29.6	50
9333	3658	35.4	80
9999	1	0.0	50
90231	32	28.1	50
91420	1820	17.3	50
91421	806	30.8	50
91560	540	23.1	50
91630	1595	22.1	50

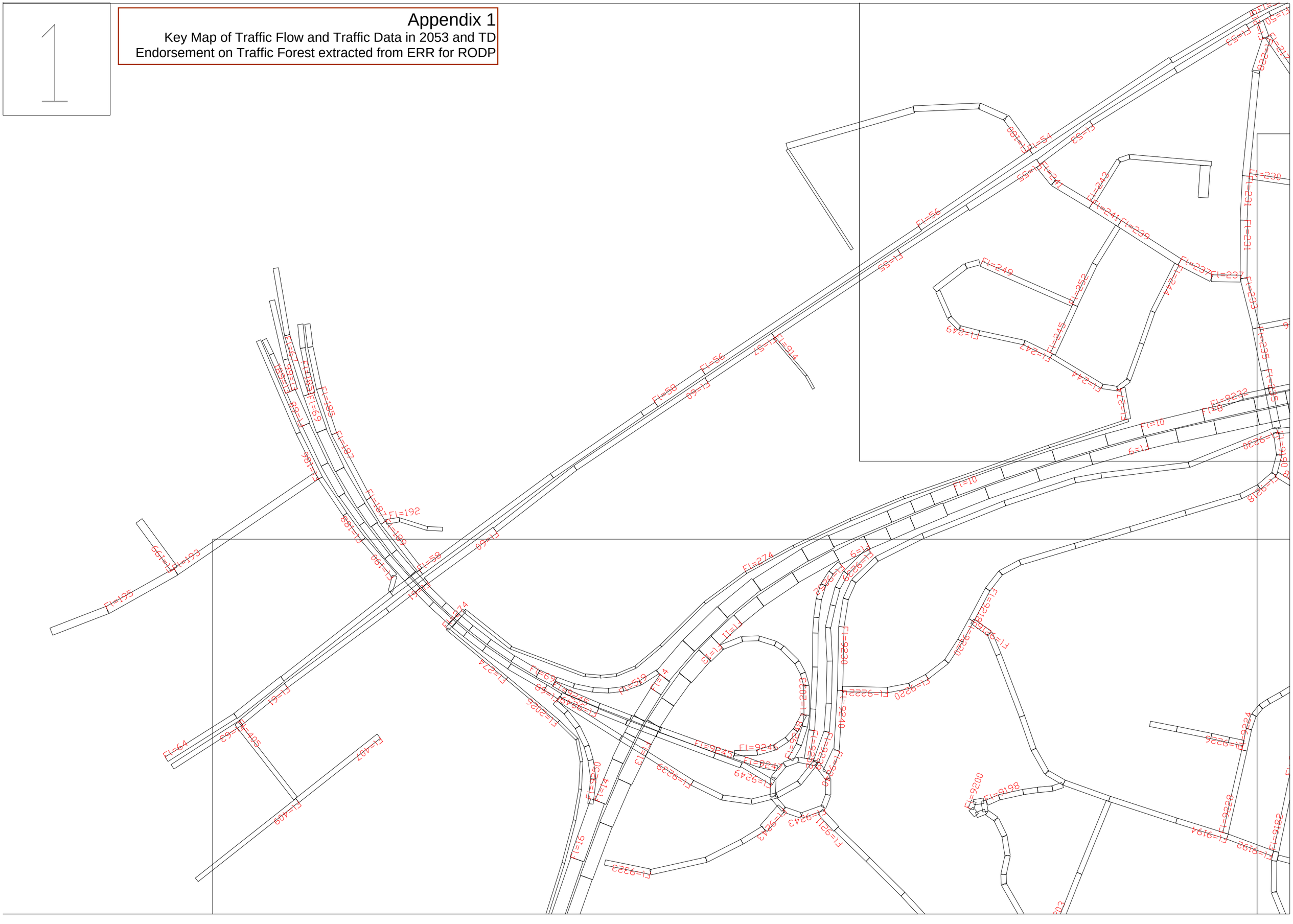
Appendix 1

Key Map of Traffic Flow and Traffic Data in 2053 and TD Endorsement on Traffic Forest extracted from ERR for RODP

1

Appendix 1

Key Map of Traffic Flow and Traffic Data in 2053 and TD Endorsement on Traffic Forest extracted from ERR for RODP



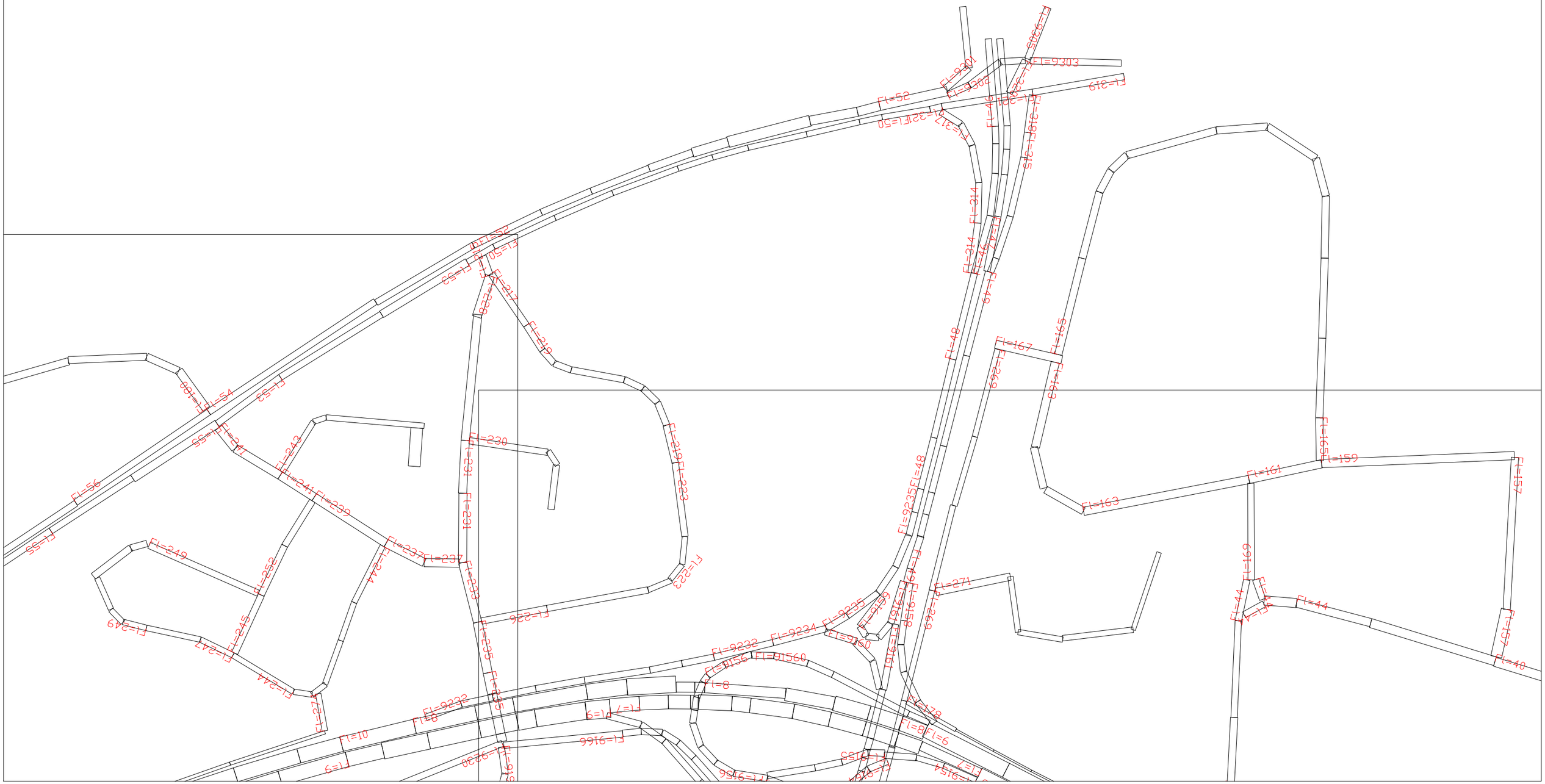
Appendix 1

Key Map of Traffic Flow and Traffic Data in 2053 and TD Endorsement on Traffic Forest extracted from ERR for RODP

3

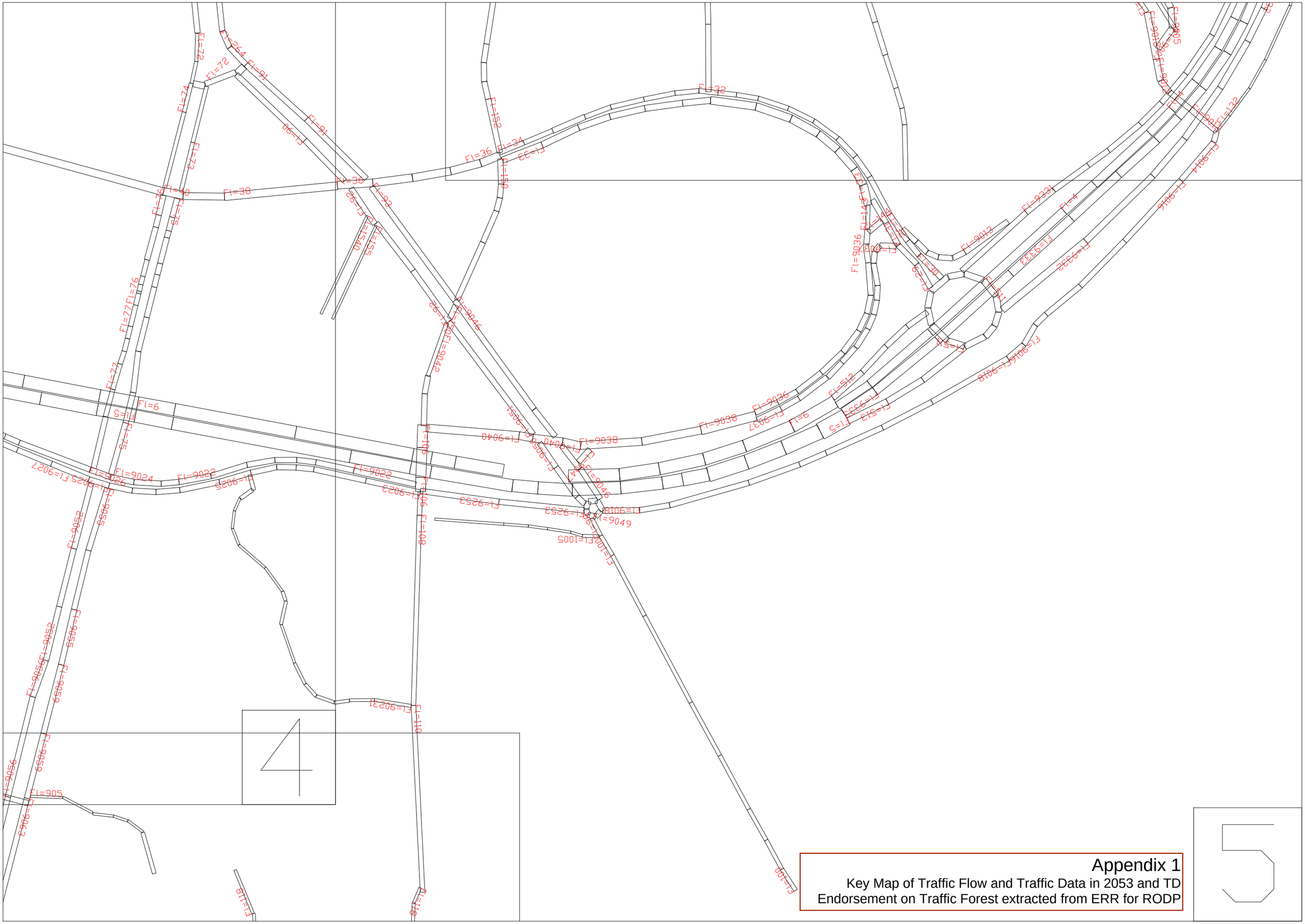
Appendix 1

Key Map of Traffic Flow and Traffic Data in 2053 and TD Endorsement on Traffic Forest extracted from ERR for RODP



Appendix 1

Key Map of Traffic Flow and Traffic Data in 2053 and TD Endorsement on Traffic Forest extracted from ERR for RODP

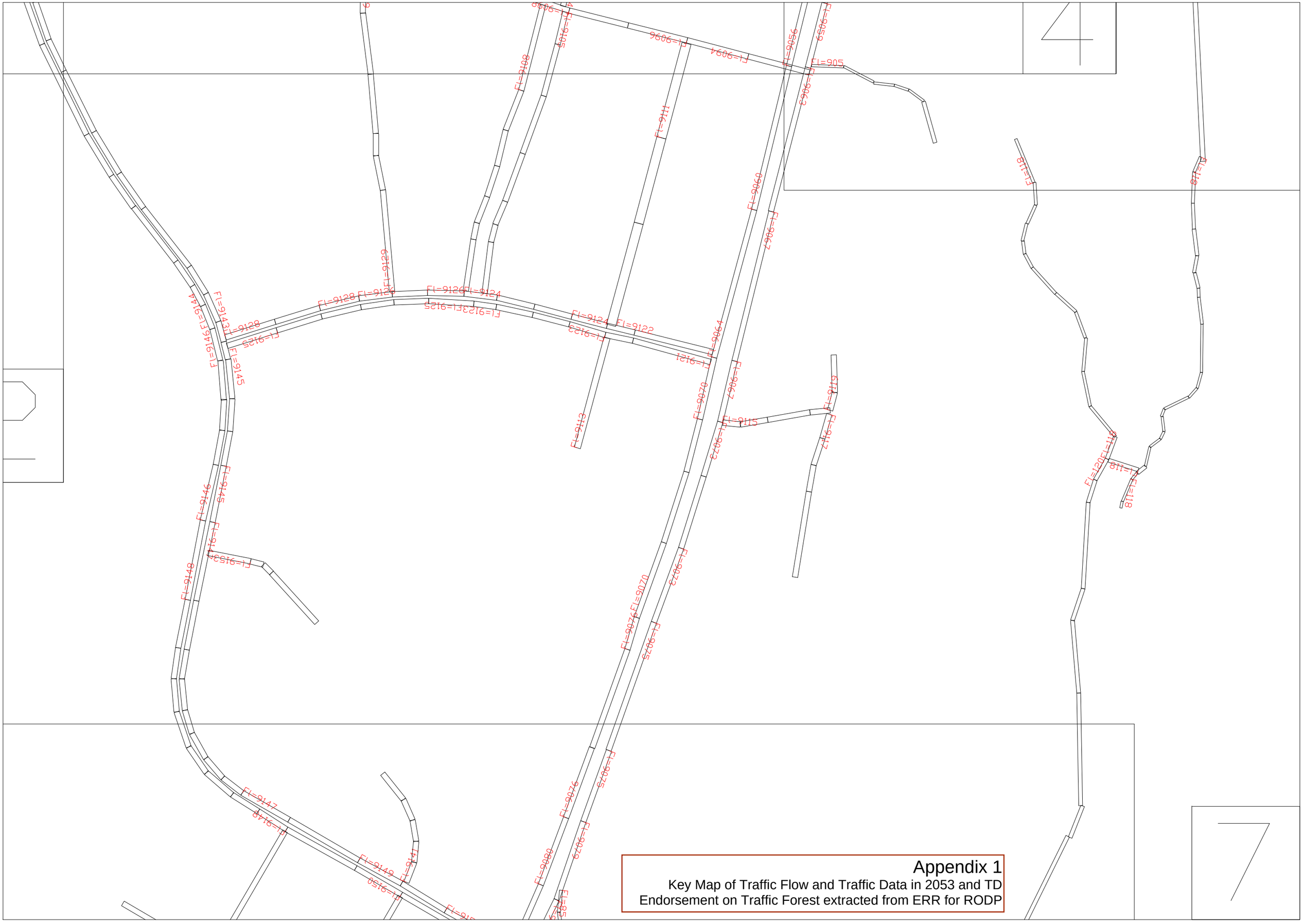


Appendix 1

Key Map of Traffic Flow and Traffic Data in 2053 and TD
Endorsement on Traffic Forest extracted from ERR for RODP

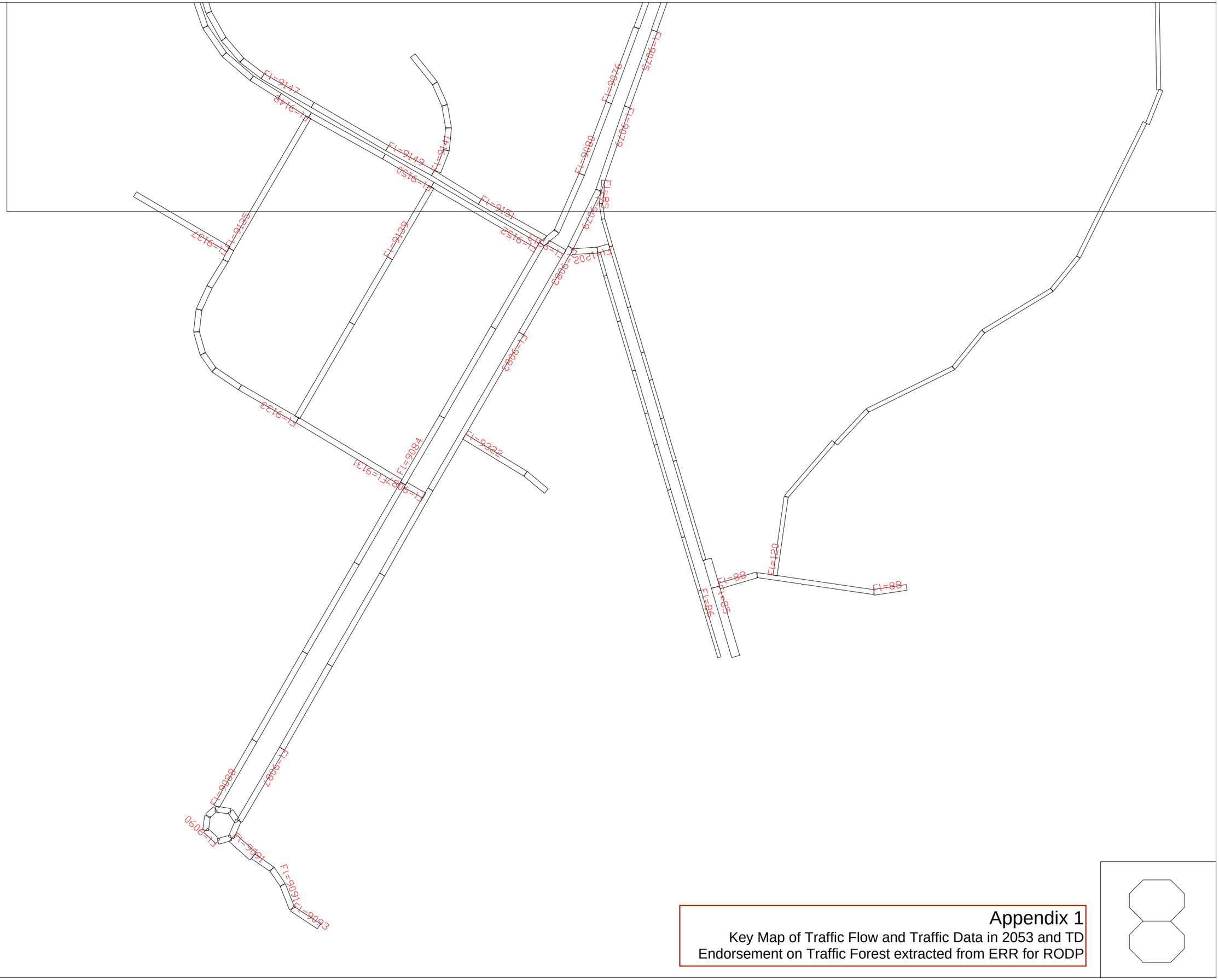
Appendix 1

Key Map of Traffic Flow and Traffic Data in 2053 and TD Endorsement on Traffic Forest extracted from ERR for RODP



Appendix 1

Key Map of Traffic Flow and Traffic Data in 2053 and TD Endorsement on Traffic Forest extracted from ERR for RODP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Annex 1 of VEP

Appendix 2 - Adoption of Traffic Model YLS P&E Study

i) Email dated 20 Feb 2019 from TD/NTW; and

ii) Email dated 1 Feb 2019 from TD/TPD

Helen Ip

From: Derek Man Yu AU <myau@td.gov.hk>
Sent: Wednesday, February 20, 2019 11:29 AM
To: Helen Ip
Cc: Peter Chan LY; Bing Kay CHOW
Subject: [External] Re: RE: RE: Confidential - Agreement No. CE 35/2012 (CE) YLS Study Additional Services -- Technical Note on Modelling Approach, Assumptions and Preliminary Traffic Forecast (Updated)
Attachments: TN on modelling assumptions_20190131_for circulation.pdf; RtC_TTIA_20190131.pdf

Dear Helen,

We have no further comment on the revised Technical Note on Modelling Approach and Assumptions (Version 2 dated 31 January 2019) from traffic engineering viewpoint for the additional services.

Derek Au
E/YLC, TE/NTW, TD
Tel : 2399 2565

From: Helen Ip <helen.ip@arup.com>
To: Derek Man Yu AU <myau@td.gov.hk>,
Cc: Peter Chan LY <peter-ly.chan@arup.com>
Date: 20/02/2019 10:01
Subject: Re: RE: RE: Confidential - Agreement No. CE 35/2012 (CE) YLS Study Additional Services -- Technical Note on Modelling Approach, Assumptions and Preliminary Traffic Forecast (Updated)

Dear Derek,

Do you have any comments on the TN as the email below refers?

CEDD (client) would like us to have your confirmation apart from Nelson's (TPD, TD) reply.

Many thanks!

Regards,
Helen

From: Helen Ip <helen.ip@arup.com>
To: "slau@epd.gov.hk" <slau@epd.gov.hk>, "ets7.rdo@hyd.gov.hk" <ets7.rdo@hyd.gov.hk>, "deylw.nt@hyd.gov.hk" <deylw.nt@hyd.gov.hk>, "se1r11.mw@hyd.gov.hk" <se1r11.mw@hyd.gov.hk>, "e30.mwsd@hyd.gov.hk" <e30.mwsd@hyd.gov.hk>, "rwfchung@pland.gov.hk" <rwfchung@pland.gov.hk>, "jcwkwok@pland.gov.hk" <jcwkwok@pland.gov.hk>, "tcsyeung@pland.gov.hk" <tcsyeung@pland.gov.hk>, "rwktsang@thb.gov.hk" <rwktsang@thb.gov.hk>, "ckcchan@thb.gov.hk" <ckcchan@thb.gov.hk>, "bkchow@td.gov.hk" <bkchow@td.gov.hk>, Derek Man Yu AU <myau@td.gov.hk>, "veronica_li@fso.gov.hk" <veronica_li@fso.gov.hk>, Steven WP HO <steven_ho@fso.gov.hk>, "johnlouie@thb.gov.hk" <johnlouie@thb.gov.hk>
Cc: Peter Chan LY <peter-ly.chan@arup.com>, "fyli@cedd.gov.hk" <fyli@cedd.gov.hk>, "tlcheung@cedd.gov.hk" <tlcheung@cedd.gov.hk>, "awymak@pland.gov.hk" <awymak@pland.gov.hk>, "epklee@pland.gov.hk" <epklee@pland.gov.hk>, "wlchui@cedd.gov.hk" <wlchui@cedd.gov.hk>, "desmondlam@cedd.gov.hk" <desmondlam@cedd.gov.hk>
Date: 14/02/2019 19:20
Subject: [WARNING: MESSAGE ENCRYPTED]RE: RE: Confidential - Agreement No. CE 35/2012 (CE) YLS Study Additional Services -- Technical Note on Modelling Approach, Assumptions and Preliminary Traffic Forecast (Updated)

Dear Sir/ Madam,

Please let us know if you have any further comments / views on the attached Technical Note and the RtC table.

We shall assume you have no further views on it if we do not hear from you on or before **21 Feb 2019**.

Thanks and regards,
Helen

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f +852 2779 8428
www.arup.com

Helen Ip

From: Nelson KB NG <kbng@td.gov.hk>
Sent: Friday, February 1, 2019 5:40 PM
To: Helen Ip
Cc: kingszecheung@td.gov.hk; Raman Lee; ykchiao@td.gov.hk; Rayson Yuk Choi FUNG
Subject: [External] RE: Planning Review for the YLS Development - updated model input assumption - advance copy
Attachments: TN on modelling assumptions_20190131_for circulation.pdf; RtC_TTIA_20190131.pdf

Dear Helen,

I note that our comments had been addressed and my additional comment on removing the texts "as advised by TD..." etc had been removed in your updated RtC and draft below (the project owner or their consultants have the responsibility to check with the relevant offices on the latest development of road improvement works).

Besides, I understand that you will also conduct a model run with the updated modelling assumptions on highway infrastructure as per our telecon today, I therefore have no further comments from a transport planning perspective.

Regards,

Nelson K B NG
E4/TP, TPD, TD
Tel: 2829 5293

From: Helen Ip <helen.ip@arup.com>
To: "kbng@td.gov.hk" <kbng@td.gov.hk>,
Cc: "kingszecheung@td.gov.hk" <kingszecheung@td.gov.hk>, "ykchiao@td.gov.hk" <ykchiao@td.gov.hk>, Raman Lee <raman.lee@arup.com>
Date: 01/02/2019 17:11
Subject: RE: Planning Review for the YLS Development - updated model input assumption - advance copy

---

Dear Nelson,

Please find the updated text and the Rtc Item 11 as attached.
Figures are here: https://arup.sharefile.com/d-sc6a37b47c6c4c07a

Grateful for your review and comments (if any).

Thanks and regards,
Helen

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f +852 2779 8428
www.arup.com

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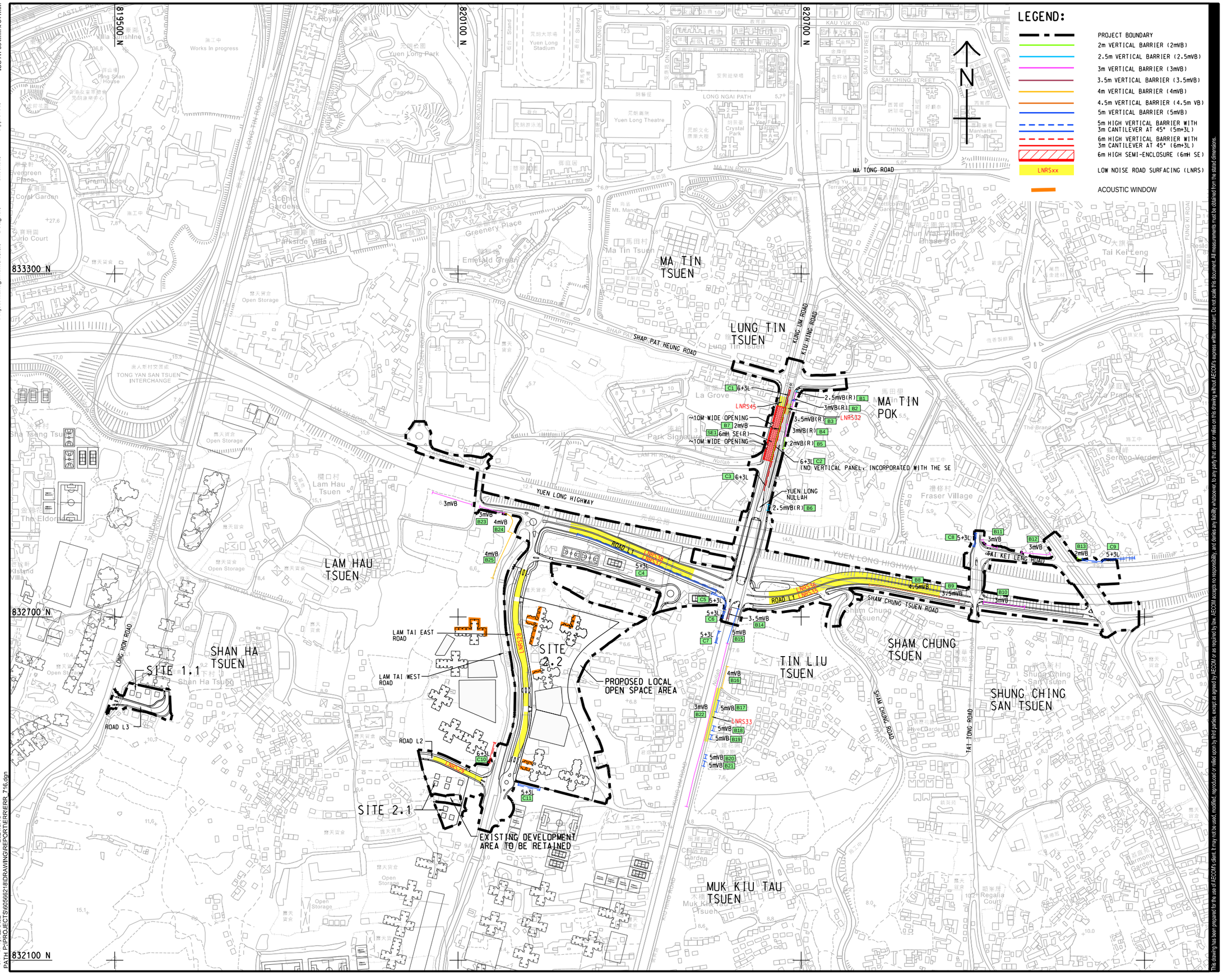
Approved:

Checked:

Designer:

Project Management Initials:



AECOM

PROJECT
項目

YUEN LONG SOUTH DEVELOPMENT - STAGE 1 (DESIGN AND CONSTRUCTION)

CLIENT
業主

土木工程拓展署
Civil Engineering and Development Department

CONSULTANT
工程顧問公司

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS
分判工程顧問公司

ISSUE/REVISION
修訂

I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 復核

STATUS
階段

SCALE 比例
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DIMENSION UNIT 尺寸單位
METRES

KEY PLAN
索引圖

PROJECT NO. 項目編號
60566218

CONTRACT NO. 合約編號
CE 32/2017(CE)

SHEET TITLE
圖紙名稱
LOCATIONS OF ULTIMATE MITIGATION MEASURES

SHEET NUMBER
圖紙編號
APPENDIX 3

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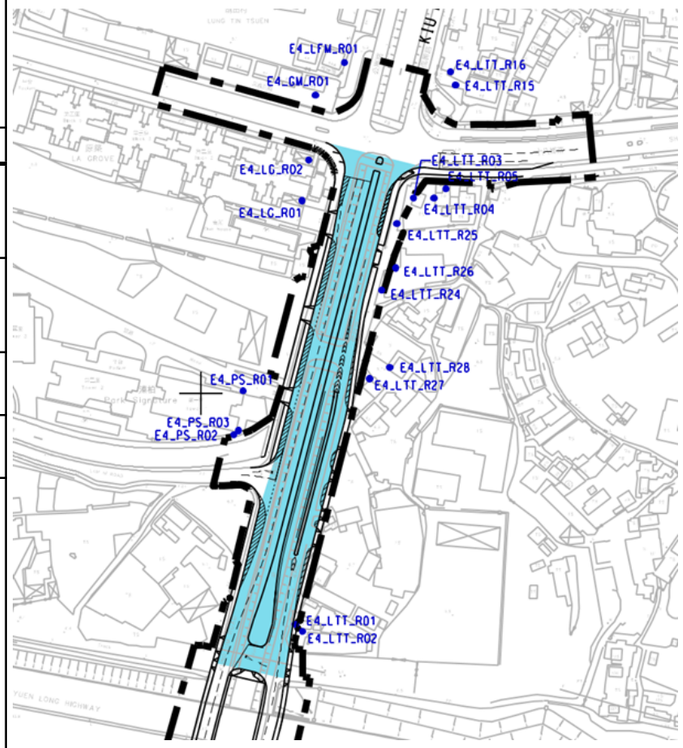
Annex 1 of VEP
Appendix 4
Summary of Predicted Road Traffic Noise Level in Year 2053

NSR ID	Floor	Base Scenario - ERR Report				Mitigated Scenario				Overall >70	New Road > 70?	Contribution >= 1.0 ?	Further Mitigation Measures?	Improvement due to the Revised Alignment?
		Result extracted from ERR for RODP, L10 dB(A)				Predicted Result for using LNRS on Residual Impact, L10 dB(A)								
		Other Rds	Project Rds	Overall	Noise Contribution	Other Rds	Project Rds	Overall	Noise Contribution					
				E		A	B	C	D	C >70	B > 70	D >= 1.0		C<E?
E4_LFM_R01	1	72.6	61.9	72.9	0.3	72.6	64.9	73.3	0.7	Y	N	N	N	-
	2	72.6	61.9	73.0	0.4	72.7	64.9	73.4	0.7	Y	N	N	N	-
	3	72.7	61.8	73.0	0.3	72.7	64.9	73.4	0.7	Y	N	N	N	-
E4_GM_R01	1	71.9	56.4	72.1	0.2	72.0	60.0	72.2	0.2	Y	N	N	N	-
	2	72.6	57.8	72.7	0.1	72.6	61.2	72.9	0.3	Y	N	N	N	-
	3	75.4	63.0	75.6	0.2	75.4	65.8	75.9	0.5	Y	N	N	N	-
E4_LTT_R15	1	59.2	46.1	59.4	-	59.3	49.0	59.7	-	N	N	-	N	-
	2	72.7	61.3	73.0	0.3	72.8	65.0	73.4	0.6	Y	N	N	N	-
E4_LTT_R16	1	59.5	47.0	59.7	-	59.5	50.2	60.0	-	N	N	-	N	-
	2	68.2	59.8	68.8	-	68.2	63.4	69.5	-	N	N	-	N	-
E4_LG_R01	1	59.1	66.2	67.0	-	63.4	68.6	69.7	-	N	N	-	N	-
	2	63.8	66.1	68.1	-	64.1	68.4	69.8	-	N	N	-	N	-
	3	65.4	66.0	68.7	-	66.1	68.3	70.3	-	N	N	-	N	-
	4	65.9	65.8	68.8	-	66.3	68.1	70.3	-	N	N	-	N	-
	5	65.9	65.5	68.7	-	66.3	68.0	70.2	-	N	N	-	N	-
	6	65.8	65.2	68.5	-	66.2	67.8	70.0	-	N	N	-	N	-
	7	65.6	65.0	68.3	-	66.1	67.5	69.9	-	N	N	-	N	-
	8	65.5	64.7	68.1	-	66.0	67.3	69.7	-	N	N	-	N	-
	9	65.5	64.5	68.0	-	65.9	67.1	69.5	-	N	N	-	N	-
	10	65.5	64.3	67.9	-	65.9	66.9	69.4	-	N	N	-	N	-
	11	65.5	64.1	67.8	-	65.9	66.7	69.3	-	N	N	-	N	-
	12	65.6	63.9	67.9	-	66.0	66.5	69.3	-	N	N	-	N	-
	13	65.9	63.8	68.0	-	66.3	66.4	69.3	-	N	N	-	N	-
	14	65.9	63.7	67.9	-	66.2	66.3	69.3	-	N	N	-	N	-
	15	66.0	63.6	68.0	-	66.3	66.1	69.2	-	N	N	-	N	-
	16	66.2	63.6	68.1	-	66.5	66.1	69.3	-	N	N	-	N	-
	17	66.6	63.6	68.3	-	66.8	66.0	69.4	-	N	N	-	N	-
	18	66.8	63.6	68.5	-	67.0	65.9	69.5	-	N	N	-	N	-
	19	67.1	63.7	68.7	-	67.3	65.8	69.6	-	N	N	-	N	-

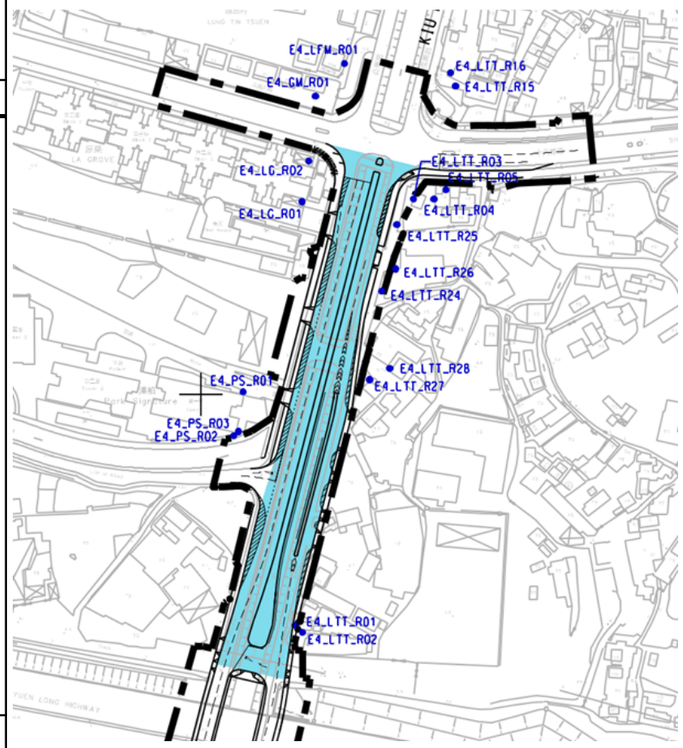


Annex 1 of VEP

Appendix 4

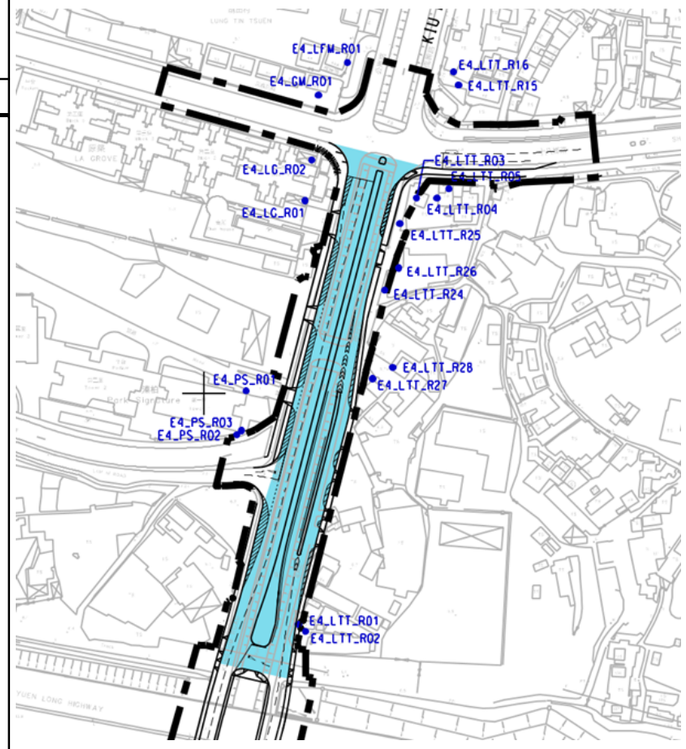
Summary of Predicted Road Traffic Noise Level in Year 2053

NSR ID	Floor	Base Scenario - ERR Report				Mitigated Scenario				Overall >70	New Road > 70?	Contribution >= 1.0 ?	Further Mitigation Measures?	Improvement due to the Revised Alignment?
		Result extracted from ERR for RODP, L10 dB(A)				Predicted Result for using LNRS on Residual Impact, L10 dB(A)								
		Other Rds	Project Rds	Overall	Noise Contribution	Other Rds	Project Rds	Overall	Noise Contribution					
				E		A	B	C	D	C >70	B > 70	D >= 1.0		C<E?
E4_LG_R02	1	77.9	67.2	78.2	0.3	77.3	68.2	77.8	0.5	Y	N	N	N	Y
	2	77.5	67.0	77.9	0.4	76.9	68.1	77.4	0.5	Y	N	N	N	Y
	3	77.0	66.8	77.4	0.4	76.5	67.9	77.1	0.6	Y	N	N	N	Y
	4	76.6	66.5	77.0	0.4	76.1	67.7	76.7	0.6	Y	N	N	N	Y
	5	76.2	66.2	76.6	0.4	75.7	67.4	76.3	0.6	Y	N	N	N	Y
	6	75.7	66.0	76.1	0.4	75.3	67.2	76.0	0.7	Y	N	N	N	Y
	7	75.3	65.7	75.8	0.5	75.0	67.0	75.6	0.6	Y	N	N	N	Y
	8	75.0	65.4	75.4	0.4	74.6	66.7	75.2	0.6	Y	N	N	N	Y
	9	74.6	65.1	75.1	0.5	74.2	66.5	74.9	0.7	Y	N	N	N	Y
	10	74.3	64.9	74.8	0.5	73.9	66.2	74.6	0.7	Y	N	N	N	Y
	11	74.0	64.7	74.5	0.5	73.7	66.0	74.4	0.7	Y	N	N	N	Y
	12	73.8	64.4	74.3	0.5	73.4	65.8	74.1	0.7	Y	N	N	N	Y
	13	73.5	64.3	74.0	0.5	73.1	65.6	73.8	0.7	Y	N	N	N	Y
	14	73.3	64.0	73.8	0.5	72.9	65.4	73.6	0.7	Y	N	N	N	Y
	15	73.0	63.9	73.5	0.5	72.6	65.1	73.4	0.8	Y	N	N	N	Y
	16	72.8	63.7	73.4	0.6	72.4	65.0	73.1	0.7	Y	N	N	N	Y
	17	72.7	63.6	73.2	0.5	72.2	64.8	72.9	0.7	Y	N	N	N	Y
	18	72.5	63.5	73.0	0.5	72.0	64.6	72.7	0.7	Y	N	N	N	Y
	19	72.3	63.4	72.8	0.5	71.8	64.5	72.6	0.8	Y	N	N	N	Y
E4_PS_R01	1	66.0	58.0	66.6	-	67.2	55.5	67.5	-	N	N	-	N	-
	2	66.5	59.2	67.3	-	67.8	56.2	68.1	-	N	N	-	N	-
	3	66.9	59.4	67.6	-	68.3	56.9	68.6	-	N	N	-	N	-
	4	67.2	59.5	67.9	-	68.5	58.0	68.9	-	N	N	-	N	-
	5	67.6	59.6	68.2	-	68.7	59.1	69.1	-	N	N	-	N	-
	6	67.9	59.8	68.5	-	68.9	59.9	69.4	-	N	N	-	N	-
	7	68.2	59.9	68.8	-	69.1	60.3	69.6	-	N	N	-	N	-
	8	68.3	60.0	68.9	-	69.2	60.5	69.7	-	N	N	-	N	-
	9	68.5	60.0	69.1	-	69.3	60.7	69.9	-	N	N	-	N	-
	10	68.8	60.1	69.4	-	69.6	60.9	70.1	-	N	N	-	N	-
	11	69.1	60.1	69.6	-	69.8	61.3	70.3	-	N	N	-	N	-
	12	69.4	60.2	69.8	-	69.9	61.5	70.5	0.6	Y	N	N	N	-
	13	69.5	60.3	70.0	-	70.0	61.9	70.6	0.6	Y	N	N	N	-
	14	69.6	60.5	70.1	-	70.1	62.2	70.8	0.7	Y	N	N	N	-
	15	69.7	60.6	70.2	-	70.1	62.5	70.8	0.7	Y	N	N	N	-
	16	69.7	60.8	70.2	-	70.2	62.7	70.9	0.7	Y	N	N	N	-
	17	69.8	61.0	70.4	-	70.3	62.8	71.0	0.7	Y	N	N	N	-
	18	69.9	61.3	70.4	-	70.3	63.0	71.0	0.7	Y	N	N	N	-
	19	69.9	61.6	70.5	0.6	70.3	63.1	71.0	0.7	Y	N	N	N	-
	20	69.9	61.6	70.5	0.6	70.3	63.2	71.0	0.7	Y	N	N	N	-
	21	69.9	61.7	70.5	0.6	70.3	63.3	71.1	0.8	Y	N	N	N	-
	22	70.0	61.9	70.6	0.6	70.3	63.4	71.1	0.8	Y	N	N	N	-



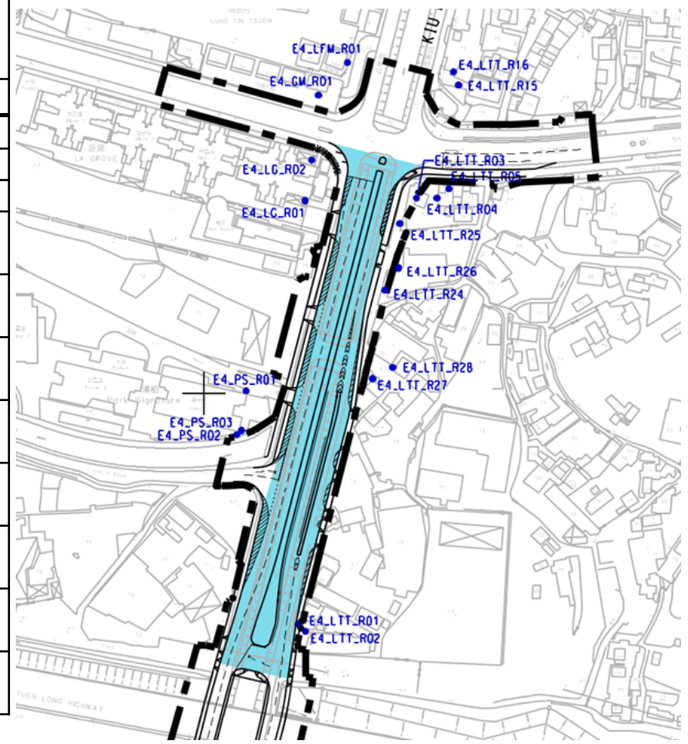
Annex 1 of VEP
Appendix 4
Summary of Predicted Road Traffic Noise Level in Year 2053

NSR ID	Floor	Base Scenario - ERR Report: Result extracted from ERR for RODP, L10 dB(A)				Mitigated Scenario: Predicted Result for using LNRS on Residual Impact, L10 dB(A)				Overall >70	New Road > 70?	Contribution >= 1.0 ?	Further Mitigation Measures?	Improvement due to the Revised Alignment?
		Other Rds	Project Rds	Overall	Noise Contribution	Other Rds	Project Rds	Overall	Noise Contribution					
				E		A	B	C	D	C >70	B > 70	D >= 1.0		C<E?
E4_PS_R02	1	69.0	60.9	69.6	-	69.6	62.7	70.4	-	N	N	-	N	-
	2	69.5	61.9	70.2	-	70.2	62.8	**70.9**	0.7	Y	N	N	N	-
	3	69.7	62.2	70.4	-	70.5	62.9	**71.2**	0.7	Y	N	N	N	-
	4	70.0	62.3	**70.7**	0.7	70.7	63.0	**71.4**	0.7	Y	N	N	N	-
	5	70.3	62.4	**71.0**	0.7	71.0	63.1	**71.7**	0.7	Y	N	N	N	-
	6	70.8	62.5	**71.4**	0.6	71.4	63.3	**72.0**	0.6	Y	N	N	N	-
	7	71.0	62.8	**71.6**	0.6	71.6	63.6	**72.3**	0.7	Y	N	N	N	-
	8	71.5	63.0	**72.0**	0.5	72.0	63.9	**72.6**	0.6	Y	N	N	N	-
	9	72.0	63.2	**72.6**	0.6	72.5	64.2	**73.1**	0.6	Y	N	N	N	-
	10	72.5	63.4	**73.0**	0.5	72.9	64.5	**73.5**	0.6	Y	N	N	N	-
	11	72.8	63.6	**73.3**	0.5	73.2	64.8	**73.8**	0.6	Y	N	N	N	-
	12	73.1	63.8	**73.6**	0.5	73.4	65.1	**74.0**	0.6	Y	N	N	N	-
	13	73.2	64.0	**73.7**	0.5	73.5	65.4	**74.1**	0.6	Y	N	N	N	-
	14	73.4	64.1	**73.9**	0.5	73.7	65.6	**74.3**	0.6	Y	N	N	N	-
	15	73.5	64.2	**74.0**	0.5	73.8	65.8	**74.4**	0.6	Y	N	N	N	-
	16	73.7	64.4	**74.2**	0.5	73.9	65.9	**74.5**	0.6	Y	N	N	N	-
	17	73.7	64.5	**74.2**	0.5	73.9	66.0	**74.6**	0.7	Y	N	N	N	-
	18	73.8	64.7	**74.3**	0.5	74.0	66.1	**74.7**	0.7	Y	N	N	N	-
	19	73.9	64.8	**74.4**	0.5	74.1	66.2	**74.7**	0.6	Y	N	N	N	-
	20	73.9	64.9	**74.4**	0.5	74.1	66.2	**74.8**	0.7	Y	N	N	N	-
	21	74.0	64.9	**74.5**	0.5	74.2	66.3	**74.8**	0.6	Y	N	N	N	-
	22	74.0	65.1	**74.5**	0.5	74.2	66.4	**74.9**	0.7	Y	N	N	N	-
E4_PS_R03	1	68.2	60.8	68.9	-	69.0	62.5	69.8	-	N	N	-	N	-
	2	69.4	62.0	70.1	-	70.3	62.9	**71.0**	0.7	Y	N	N	N	-
	3	69.7	62.3	**70.5**	0.8	70.6	63.0	**71.3**	0.7	Y	N	N	N	-
	4	70.0	62.4	**70.7**	0.7	70.8	63.3	**71.5**	0.7	Y	N	N	N	-
	5	70.3	62.6	**71.0**	0.7	71.1	63.7	**71.8**	0.7	Y	N	N	N	-
	6	70.7	62.7	**71.3**	0.6	71.4	63.9	**72.1**	0.7	Y	N	N	N	-
	7	71.0	62.9	**71.6**	0.6	71.6	64.2	**72.3**	0.7	Y	N	N	N	-
	8	71.3	63.1	**71.9**	0.6	71.9	64.4	**72.6**	0.7	Y	N	N	N	-
	9	71.8	63.3	**72.4**	0.6	72.3	64.7	**73.0**	0.7	Y	N	N	N	-
	10	72.2	63.5	**72.8**	0.6	72.7	64.9	**73.3**	0.6	Y	N	N	N	-
	11	72.5	63.7	**73.0**	0.5	72.9	65.2	**73.6**	0.7	Y	N	N	N	-
	12	72.7	63.9	**73.2**	0.5	73.1	65.5	**73.8**	0.7	Y	N	N	N	-
	13	72.9	64.0	**73.4**	0.5	73.2	65.7	**73.9**	0.7	Y	N	N	N	-
	14	73.1	64.2	**73.6**	0.5	73.4	65.8	**74.1**	0.7	Y	N	N	N	-
	15	73.2	64.3	**73.7**	0.5	73.5	66.0	**74.2**	0.7	Y	N	N	N	-
	16	73.3	64.4	**73.8**	0.5	73.5	66.1	**74.3**	0.8	Y	N	N	N	-
	17	73.4	64.7	**73.9**	0.5	73.6	66.2	**74.3**	0.7	Y	N	N	N	-
	18	73.4	64.8	**73.9**	0.5	73.6	66.2	**74.4**	0.8	Y	N	N	N	-
	19	73.4	64.8	**74.0**	0.6	73.7	66.3	**74.4**	0.7	Y	N	N	N	-
	20	73.5	64.9	**74.1**	0.6	73.7	66.4	**74.5**	0.8	Y	N	N	N	-
	21	73.5	65.1	**74.1**	0.6	73.8	66.5	**74.5**	0.7	Y	N	N	N	-
	22	73.6	65.2	**74.1**	0.5	73.8	66.6	**74.5**	0.7	Y	N	N	N	-



Annex 1 of VEP
Appendix 4
Summary of Predicted Road Traffic Noise Level in Year 2053

NSR ID	Floor	Base Scenario - ERR Report: Result extracted from ERR for RODP, L10 dB(A)				Mitigated Scenario: Predicted Result for using LNRS on Residual Impact, L10 dB(A)				Overall >70	New Road > 70?	Contribution >= 1.0 ?	Further Mitigation Measures?	Improvement due to the Revised Alignment?
		Other Rds	Project Rds	Overall	Noise Contribution	Other Rds	Project Rds	Overall	Noise Contribution					
				E		A	B	C	D	C >70	B > 70	D >= 1.0		C<E?
E4_LHWT_R04	1	63.4	49.6	63.6	-	63.4	50.4	63.6	-	N	N	-	N	-
E4_LTT_R01	1	64.5	66.8	68.8	-	64.4	69.0	70.2	-	N	N	-	N	-
E4_LTT_R02	1	65.9	66.8	69.4	-	65.6	68.5	70.3	-	N	N	-	N	-
E4_LTT_R03	1	73.7	63.4	**74.1**	0.4	58.5	61.5	63.3	-	N	N	-	N	Y
	2	74.6	65.6	**75.1**	0.5	66.4	65.7	69.1	-	N	N	-	N	Y
E4_LTT_R04	1	64.5	49.0	64.6	-	59.2	51.4	59.9	-	N	N	-	N	Y
	2	65.5	52.8	65.8	-	64.9	56.3	65.5	-	N	N	-	N	Y
E4_LTT_R05	1	77.9	53.2	**77.9**	0.0	71.2	51.5	**71.3**	0.1	Y	N	N	N	Y
	2	78.0	55.4	**78.1**	0.1	77.8	57.0	**77.8**	0.0	Y	N	N	N	Y
E4_LTT_R24	1	57.8	63.3	64.4	-	59.6	65.8	66.7	-	N	N	-	N	-
	2	61.1	67.9	68.7	-	62.7	69.0	69.9	-	N	N	-	N	-
E4_LTT_R25	1	65.4	57.3	66.0	-	60.5	64.0	65.6	-	N	N	-	N	Y
	2	66.5	60.5	67.4	-	65.6	67.6	69.7	-	N	N	-	N	-
E4_LTT_R26	1	65.3	64.6	68.0	-	56.6	67.3	67.6	-	N	N	-	N	Y
	2	65.6	67.4	69.6	-	61.2	69.1	69.7	-	N	N	-	N	-
E4_LTT_R27	1	60.2	66.0	67.0	-	59.1	61.4	63.4	-	N	N	-	N	Y
	2	63.0	69.1	70.0	-	62.6	69.4	70.2	-	N	N	-	N	-
E4_LTT_R28	1	61.4	61.3	64.3	-	60.0	59.0	62.5	-	N	N	-	N	Y
	2	64.2	63.9	67.1	-	62.2	63.5	65.9	-	N	N	-	N	Y



Appendix 5 - Extracts from ERR of Revised RODP of YLS P&E Study

Figure 2.5a	Contours of Cumulative 19th highest 1-hour NO_2 Concentrations at 1.5m above ground (Year 2028)
Figure 2.5b	Contours of Cumulative Annual NO_2 Concentrations at 1.5m above ground (Year 2028)
Figure 2.5c	Contours of Cumulative 10th highest 24-hour RSP Concentrations at 1.5m above ground (Year 2028)
Figure 2.5d	Contours of Cumulative Annual RSP Concentrations at 1.5m above ground (Year 2028)
Figure 2.5e	Contours of Cumulative 10th highest 24-hour FSP Concentrations at 1.5m above ground (Year 2028)
Figure 2.5f	Contours of Cumulative Annual FSP Concentrations at 1.5m above ground (Year 2028)
Figure 2.5k	Contours of Cumulative 19th highest 1-hour NO_2 Concentrations at 1.5m above ground (Year 2043)
Figure 2.5l	Contours of Cumulative Annual NO_2 Concentrations at 1.5m above ground (Year 2043)
Figure 2.5m	Contours of Cumulative 10th highest 24-hour RSP Concentrations at 1.5m above Ground (Year 2043)
Figure 2.5n	Contours of Cumulative Annual RSP Concentrations at 1.5m above ground (Year 2043)
Figure 2.5o	Contours of Cumulative 10th highest 24-hour FSP Concentrations at 1.5m above Ground (Year 2043)
Figure 2.5p	Contours of Cumulative Annual FSP Concentrations at 1.5m above ground (Year 2043)

Existing inlet chamber of the NWNT effluent tunnel at San Wai for discharging to the Urmston Road submarine outfall

Concerned Full Decking

San Wai
Sik Kong Wai
Tin Shing Court
Ping Shan
San Sang Tsuen
Castle Peak Road – Ping Shan
Tong Yan San Tsuen Interchange
Yuen Long
Yuen Long Park
Fui Sha Wai
Tin Shui Wai West Interchange
Lam Hau Tsuen
Yuen Long Highway
Lung Tin Tsuen
Sham Chung Tsuen
Shung Ching San Tsuen
Shap Pat Heung
Pok Oi Hospital
YOHO Midtown
Sheung Yau Tin Tsuen
Hung Shui Kiu
Shan Ha Tsuen
Tin Liu Tsuen
Proposed Service Reservoir
Tan Kwai Tsuen
Tong Tau Po Tsuen
Shui Tsiu San Tsuen
Pak Sha Tsuen
Tai Tong Tsuen
Lam Tei Quarry

Legend

- Development Area (DA)
- Works Boundary Outside DA
- New Sewer from YLS STW to the Existing Inlet Chamber of the NWNT Effluent Tunnel at San Wai for Discharging to the Urmston Road Submarine Outfall
- 500m Assessment Area for Operational Phase
- R5 (Existing Development Area within DA to be retained)
- −200− NO_2 Contour, μg/m³
- Planned Air Sensitive Receiver
- Existing Air Sensitive Receiver (within DA)
- Existing Air Sensitive Receiver (outside DA)

Note: The New Sewer From YLS STW To The Existing Inlet Chamber Of The NWNT Effluent Tunnel At San Wai For Discharging To The Urmston Road Submarine Outfall Is No Longer Pursued.

Rev	Description	By	Date
A	FIRST ISSUE	GL	05/19

Consultant: ARUP

Contract No. and Title: Agreement No. CE 35/2012(CE)

Planning and Engineering Study for Housing Sites in Yuen Long South - Investigation

Drawing title: Contours of Cumulative 19th highest 1-hour NO_2 Concentrations at 1.5m above Ground (Year 2028)

Drawing no.	Rev.
Figure 2.5a	A

Drawn	Date	Checked	Approved
GL	05/19	FC	FC

Scale: 1:20000 ON A3
Status: PRELIMINARY

土木工程拓展署 Civil Engineering and Development Department
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0 100 200 300 400 500 METRES

1hr NO_2 Criterion: 200μg/m³

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Filename : \\hkgnts27\C\ENV\env\project\228228\13 Drawing Deliverables\Report\Environmental Review Report\Figure 2.5a - Contours of Cumulative 19th highest 1-hour NO2 Concentrations at 1.5m above Ground (2028).dgn

Existing inlet chamber of the NWNT effluent tunnel at San Wai for discharging to the Urmston Road submarine outfall

No Air Sensitive Use at 1.5mAG within the Exceedance Zone

Concerned Full Decking

Inset 1

Inset 2

Inset 3

Inset 4

Proposed Service Reservoir

No Air Sensitive Use at 1.5mAG within the Exceedance Zone

Annual NO_2 Criterion: 40μg/m³

0 100 200 300 400 500 METRES

Legend

- Development Area (DA)
- Works Boundary Outside DA
- New Sewer from YLS STW to the Existing Inlet Chamber of the NWNT Effluent Tunnel at San Wai for Discharging to the Urmston Road Submarine Outfall
- 500m Assessment Area for Operational Phase
- R5 (Existing Development Area within DA to be retained)
- 40 — NO_2 Contour, μg/m³
- Planned Air Sensitive Receiver
- Existing Air Sensitive Receiver (within DA)
- Existing Air Sensitive Receiver (outside DA)

Note: The New Sewer From YLS STW To The Existing Inlet Chamber Of The NWNT Effluent Tunnel At San Wai For Discharging To The Urmston Road Submarine Outfall Is No Longer Pursued.

Rev	Description	By	Date
A	FIRST ISSUE	GL	05/19

Consultant: ARUP

Contract No. and Title: Agreement No. CE 35/2012(CE)

Planning and Engineering Study for Housing Sites in Yuen Long South - Investigation

Drawing title: Contours of Cumulative Annual NO_2 Concentrations at 1.5m above Ground (Year 2028)

Drawing no.	Rev.
Figure 2.5b	A

Drawn	Date	Checked	Approved
GL	05/19	FC	FC

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規劃署 Planning Department

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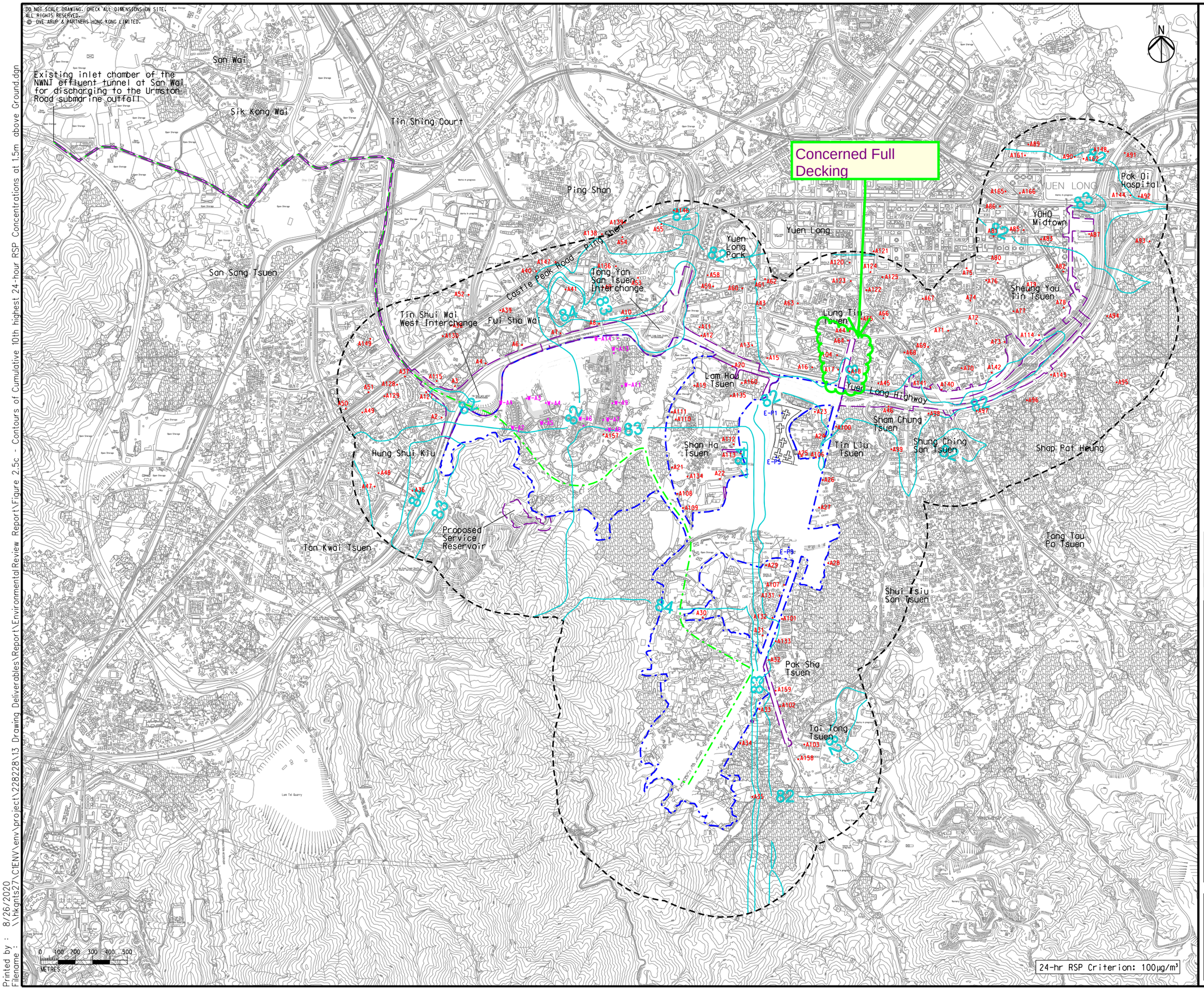
Filename : \\hkgnts27\C\ENV\env\project\228228\13 Drawing Deliverables\Report\Environmental Review Report\Figure 2.5b - Contours of Cumulative Annual NO2 Concentrations at 1.5m above Ground (2028).dgn



Legend

- Development Area (DA)
- Works Boundary Outside DA
- New Sewer from YLS STW to the Existing Inlet Chamber of the NWNT Effluent Tunnel at San Wai for Discharging to the Urmston Road Submarine Outfall
- 500m Assessment Area for Operational Phase
- R5 (Existing Development Area within DA to be retained)
- —100— RSP Contour, μg/m³
- Planned Air Sensitive Receiver
- Existing Air Sensitive Receiver (within DA)
- Existing Air Sensitive Receiver (outside DA)

Note: The New Sewer From YLS STW To The Existing Inlet Chamber Of The NWNT Effluent Tunnel At San Wai For Discharging To The Urmston Road Submarine Outfall Is No Longer Pursued.

Rev	Description	By	Date
A	FIRST ISSUE	GL	05/19

Consultant

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Contract No. and Title

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Planning and Engineering Study for Housing Sites in Yuen Long South - Investigation

Drawing title

Contours of Cumulative 10th highest 24-hour RSP Concentrations at 1.5m above Ground (Year 2028)

Drawing no.	Rev.
Figure 2.5c	A

Drawn	Date	Checked	Approved
GL	05/19	FC	FC

Scale: 1:20000 ON A3

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Filename : \\hkgnts27\C\ENV\env\project\228228\13 Drawing Deliverables\Report\Environmental Review Report\Figure 2.5c - Contours of Cumulative 10th highest 24-hour RSP Concentrations at 1.5m above Ground.dgn

Existing inlet chamber of the NWNT effluent tunnel at San Wai for discharging to the Urmston Road submarine outfall

Concerned Full Decking

San Wai
Sik Kong Wai
Tin Shing Court
Ping Shan
San Sang Tsuen
Castle Peak Road – Ping Shan
Tong Yan San Tsuen Interchange
Yuen Long
Yuen Long Park
Fui Sha Wai
Tin Shui Wai West Interchange
Lung Tin Tsuen
Lam Hau Tsuen
Yuen Long Highway
Sham Chung Tsuen
Shung Ching San Tsuen
Shap Pat Heung
Pok Oi Hospital
YOHO Midtown
Sheung Yau Tin Tsuen
Hung Shui Kiu
Shan Ha Tsuen
Tin Liu Tsuen
Proposed Service Reservoir
Tan Kwai Tsuen
Tong Tau Po Tsuen
Shui Tsiu San Tsuen
Pak Sha Tsuen
Tai Tong Tsuen
Lam Tei Quarry

Legend

- Development Area (DA)
- Works Boundary Outside DA
- New Sewer from YLS STW to the Existing Inlet Chamber of the NWNT Effluent Tunnel at San Wai for Discharging to the Urmston Road Submarine Outfall
- 500m Assessment Area for Operational Phase
- R5 (Existing Development Area within DA to be retained)
- 50 RSP Contour, μg/m³
- Planned Air Sensitive Receiver
- Existing Air Sensitive Receiver (within DA)
- Existing Air Sensitive Receiver (outside DA)

Note: The New Sewer From YLS STW To The Existing Inlet Chamber Of The NWNT Effluent Tunnel At San Wai For Discharging To The Urmston Road Submarine Outfall Is No Longer Pursued.

Rev	Description	By	Date
A	FIRST ISSUE	GL	05/19

Consultant
ARUP

Contract No. and Title
Agreement No. CE 35/2012(CE)
Planning and Engineering Study for Housing Sites in Yuen Long South - Investigation

Drawing title
Contours of Cumulative Annual RSP Concentrations at 1.5m above Ground (Year 2028)

Drawing no.	Rev.
Figure 2.5d	A

Drawn	Date	Checked	Approved
GL	05/19	FC	FC

Scale: 1:20000 ON A3
Status: PRELIMINARY

CEDD 土木工程拓展署 Civil Engineering and Development Department
規劃署 Planning Department

0 100 200 300 400 500 METRES

Annual RSP Criterion: 50μg/m³

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Filename : \\hkgnts27\C\ENV\env\project\228228\13 Drawing Deliverables\Report\Environmental Review Report\Figure 2.5d - Contours of Cumulative Annual RSP Concentrations at 1.5m above Ground.dgn

Existing inlet chamber of the NWNT effluent tunnel at San Wai for discharging to the Urmston Road submarine outfall

Concerned Full Decking

San Wai
Sik Kong Wai
Tin Shing Court
Ping Shan
San Sang Tsuen
Castle Peak Road – Ping Shan
Tong Yan San Tsuen Interchange
Fui Sha Wai
Tin Shui Wai West Interchange
Hung Shui Kiu
Tan Kwai Tsuen
Proposed Service Reservoir
Lam Tei Quarry
Yuen Long
Yuen Long Park
Lung Tin Tsuen
Lam Hau Tsuen
Yuen Long Highway
Shan Ha Tsuen
Tin Liu Tsuen
Sham Chung Tsuen
Shung Ching San Tsuen
Shap Pat Heung
Pok Oi Hospital
YOHO Midtown
Sheung Yau Tin Tsuen
Tong Tau Po Tsuen
Shui Tsiu San Tsuen
Pak Sha Tsuen
Tai Tong Tsuen

0 100 200 300 400 500
METRES

24-hr FSP Criterion: 75μg/m³

Legend

- Development Area (DA)
- Works Boundary Outside DA
- New Sewer from YLS STW to the Existing Inlet Chamber of the NWNT Effluent Tunnel at San Wai for Discharging to the Urmston Road Submarine Outfall
- 500m Assessment Area for Operational Phase
- R5 (Existing Development Area within DA to be retained)
- 75 FSP Contour, μg/m³
- Planned Air Sensitive Receiver
- Existing Air Sensitive Receiver (within DA)
- Existing Air Sensitive Receiver (outside DA)

Note: The New Sewer From YLS STW To The Existing Inlet Chamber Of The NWNT Effluent Tunnel At San Wai For Discharging To The Urmston Road Submarine Outfall Is No Longer Pursued.

Rev	Description	By	Date
A	FIRST ISSUE	GL	05/19

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Contract No. and Title

Agreement No. CE 35/2012(CE)

Planning and Engineering Study for Housing Sites in Yuen Long South - Investigation

Drawing title

Contours of Cumulative 10th highest 24-hour FSP Concentrations at 1.5m above Ground (Year 2028)

Drawing no.	Rev.
Figure 2.5e	A

Drawn	Date	Checked	Approved
GL	05/19	FC	FC

Scale: 1:20000 ON A3
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Filename : \\hkgnts27\CIENV\env\project\228228\13 Drawing Deliverables\Report\Environmental Review Report\Figure 2.5e - Contours of Cumulative 10th highest 24-hour FSP Concentrations at 1.5m above Ground.dgn

Existing inlet chamber of the NWNT effluent tunnel at San Wai for discharging to the Urmston Road submarine outfall

Concerned Full Decking

San Wai
Sik Kong Wai
Tin Shing Court
Ping Shan
San Sang Tsuen
Castle Peak Road – Ping Shan
Tong Yan San Tsuen Interchange
Fui Sha Wai
Tin Shui Wai West Interchange
Hung Shui Kiu
Tan Kwai Tsuen
Proposed Service Reservoir
Lam Tei Quarry
Yuen Long Park
Yuen Long
Lung Tin Tsuen
Lam Hau Tsuen
Yuen Long Highway
Shan Ha Tsuen
Tin Liu Tsuen
Sham Chung Tsuen
Shung Ching San Tsuen
Shap Pat Heung
Pak Sha Tsuen
Tai Tong Tsuen
Shui Tsiu San Tsuen
Tong Tau Po Tsuen
Pok Oi Hospital
YOHO Midtown
Sheung Yau Tin Tsuen
E-P1
E-P2
E-P3
E-P4
E-P5
E-P6
E-P7
E-P8
E-P9

0 100 200 300 400 500
METRES

Annual FSP Criterion: 35μg/m³

N

Legend

- Development Area (DA)
- Works Boundary Outside DA
- New Sewer from YLS STW to the Existing Inlet Chamber of the NWNT Effluent Tunnel at San Wai for Discharging to the Urmston Road Submarine Outfall
- 500m Assessment Area for Operational Phase
- R5 (Existing Development Area within DA to be retained)
- 35 FSP Contour, μg/m³
- Planned Air Sensitive Receiver
- Existing Air Sensitive Receiver (within DA)
- Existing Air Sensitive Receiver (outside DA)

Note: The New Sewer From YLS STW To The Existing Inlet Chamber Of The NWNT Effluent Tunnel At San Wai For Discharging To The Urmston Road Submarine Outfall Is No Longer Pursued.

Rev	Description	By	Date
A	FIRST ISSUE	GL	05/19

Consultant
ARUP

Contract No. and Title
Agreement No. CE 35/2012(CE)
Planning and Engineering Study for Housing Sites in Yuen Long South - Investigation

Drawing title
Contours of Cumulative Annual FSP Concentrations at 1.5m above Ground (Year 2028)

Drawing no.	Rev.
Figure 2.5f	A

Drawn	Date	Checked	Approved
GL	05/19	FC	FC

Scale: 1:20000 ON A3
Status: PRELIMINARY

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Filename : \\hkgnts27\C\ENV\env\project\228228\13 Drawing Deliverables\Report\Environmental Review Report\Figure 2.5f - Contours of Cumulative Annual FSP Concentrations at 1.5m above Ground.dgn

Concerned Full Decking

Castle Peak Road – Ping Shan
Tong Yan San Tsuen Interchange
Yuen Long Park
Yuen Long
YOHO Midtown
Sheung Yau Tin Tsuen
Fui Sha Wai
Tin Shui Wai West Interchange
Lung Tin Tsuen
Lam Hau Tsuen
Yuen Long Highway
Shan Ha Tsuen
Tin Liu Tsuen
Shung Ching San Tsuen
Shop Pat Heung
Hung Shui Kiu
Shum Chung Tsuen
Proposed Service Reservoir
Tan Kwai Tsuen
Tong Tau Po Tsuen
Shui Tsiu San Tsuen
Pak Sha Tsuen
Tai Tong Tsuen
Lam Tei Quarry

0 100 200 300 400 500
METRES

1hr NO_2 Criterion: 200μg/m³

Legend

- Development Area (DA)
- Works Boundary Outside DA
- New Sewer from YLS STW to the Existing Inlet Chamber of the NWNT Effluent Tunnel at San Wai for Discharging to the Urmston Road Submarine Outfall
- R5 (Existing Development Area within DA to be retained)
- —200— NO_2 Contour, μg/m³
- Planned Air Sensitive Receiver
- Existing Air Sensitive Receiver (within DA)
- Existing Air Sensitive Receiver (outside DA)

Note: The New Sewer From YLS STW To The Existing Inlet Chamber Of The NWNT Effluent Tunnel At San Wai For Discharging To The Urmston Road Submarine Outfall Is No Longer Pursued.

Rev	Description	By	Date
A	FIRST ISSUE	GL	05/19

Consultant: ARUP

Contract No. and Title

Agreement No. CE 35/2012(CE)

Planning and Engineering Study for Housing Sites in Yuen Long South - Investigation

Drawing title

Contours of Cumulative 19th highest 1-hour NO_2 Concentrations at 1.5m above Ground (Year 2043) (DA Area)

Drawing no.	Rev.
Figure 2.5k	A

Drawn	Date	Checked	Approved
GL	05/19	FC	FC

Scale: AS SHOWN
Status: PRELIMINARY

土木工程拓展署 Civil Engineering and Development Department
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Printed by : 8/27/2020
Filename : \\hkgnts27\C\ENV\env\project\228228\13 Drawing Deliverables\Report\Environmental Review Report\Figure 2.5k - Contours of Cumulative 19th highest 1-hour NO2 Concentrations at 1.5m above Ground (2043).dgn

Concerned Full Decking

No Air Sensitive Use at 1.5mAG within the Exceedance Zone

Annual NO_2 Criterion: 40μg/m³

0 100 200 300 400 500
METRES

Legend

- Development Area (DA)
- Works Boundary Outside DA
- New Sewer from YLS STW to the Existing Inlet Chamber of the NWNT Effluent Tunnel at San Wai for Discharging to the Urmston Road Submarine Outfall
- R5 (Existing Development Area within DA to be retained)
- 40 — NO_2 Contour, μg/m³
- Planned Air Sensitive Receiver
- Existing Air Sensitive Receiver (within DA)
- Existing Air Sensitive Receiver (outside DA)

Note: The New Sewer From YLS STW To The Existing Inlet Chamber Of The NWNT Effluent Tunnel At San Wai For Discharging To The Urmston Road Submarine Outfall Is No Longer Pursued.

Rev	Description	By	Date
A	FIRST ISSUE	GL	05/19

Consultant

ARUP

Contract No. and Title

Agreement No. CE 35/2012(CE)

Planning and Engineering Study for Housing Sites in Yuen Long South - Investigation

Drawing title

Contours of Cumulative Annual NO_2 Concentrations at 1.5m above Ground (Year 2043) (DA Area)

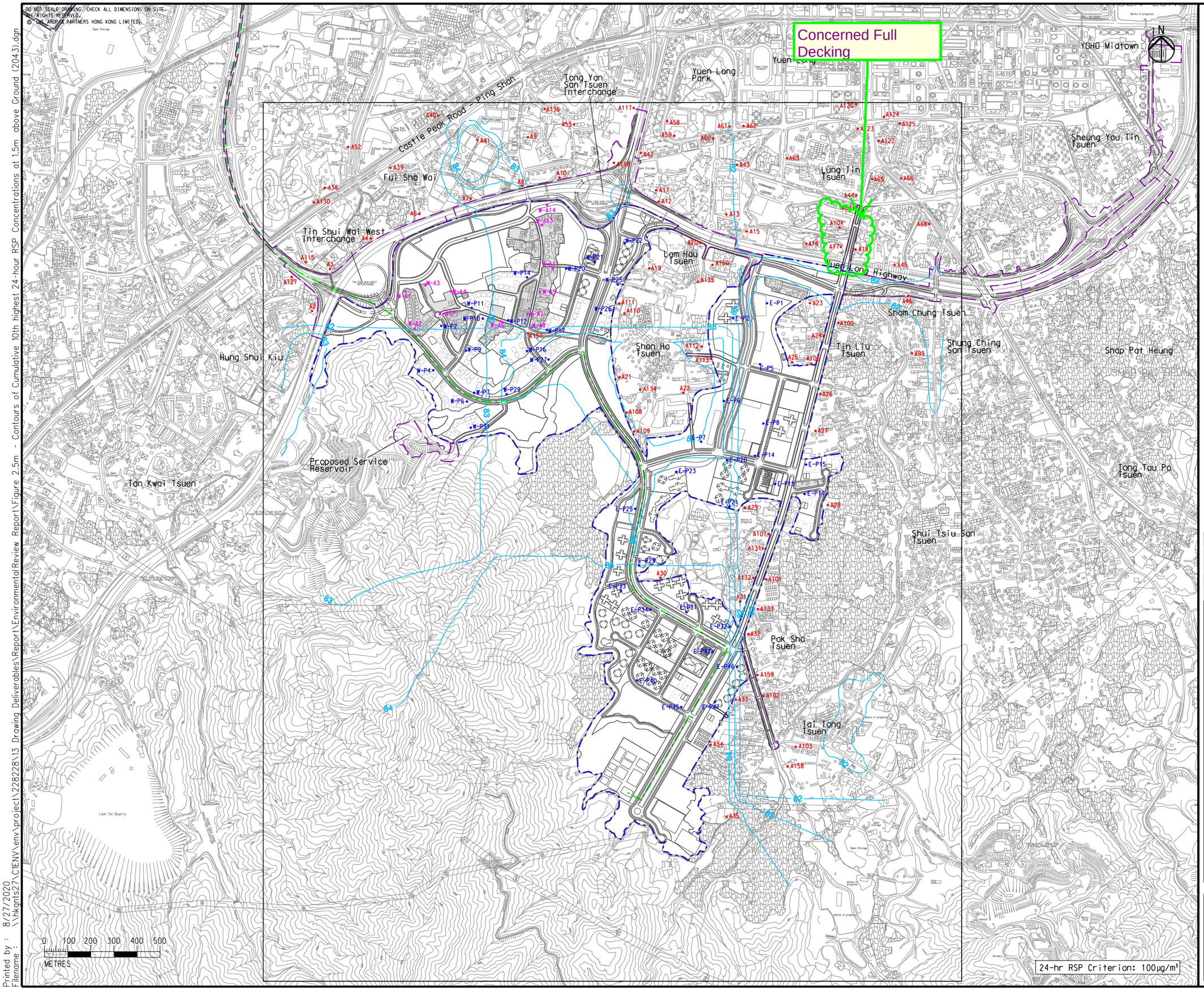
Drawing no.	Rev.
Figure 2.5l	A

Drawn	Date	Checked	Approved
GL	05/19	FC	FC

Scale: AS SHOWN
Status: PRELIMINARY

CEDD 土木工程拓展署 Civil Engineering and Development Department
規劃署 Planning Department

Printed by : 8/27/2020
Filename : \\hkgnts27\C\ENV\env\project\228228\13 Drawing Deliverables\Report\Environmental Review Report\Figure 2.5l - Contours of Cumulative Annual NO2 Concentrations at 1.5m above Ground (2043).dgn



Legend

- Development Area (DA)
- Works Boundary Outside DA
- New Sewer from YLS STW to the Existing Inlet Chamber of the NWNT Effluent Tunnel at San Wai for Discharging to the Urmston Road Submarine Outfall
- R5 (Existing Development Area within DA to be retained)
- −100− RSP Contour, μg/m³
- Planned Air Sensitive Receiver
- Existing Air Sensitive Receiver (within DA)
- Existing Air Sensitive Receiver (outside DA)

Note: The New Sewer From YLS STW To The Existing Inlet Chamber Of The NWNT Effluent Tunnel At San Wai For Discharging To The Urmston Road Submarine Outfall Is No Longer Pursued.

Rev	Description	By	Date
A	FIRST ISSUE	GL	05/19

Consultant

ARUP

Contract No. and Title

Agreement No. CE 35/2012(CE)

Planning and Engineering Study for Housing Sites in Yuen Long South - Investigation

Drawing title

Contours of Cumulative 10th highest 24-hour RSP Concentrations at 1.5m above Ground (Year 2043) (DA Area)

Drawing no.	Rev.
Figure 2.5m	A

Drawn	Date	Checked	Approved
GL	05/19	FC	FC

Scale	Status
AS SHOWN	PRELIMINARY

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Filename : \\hkgnts27\C\ENV\env\project\228228\13 Drawing Deliverables\Report\Environmental Review Report\Figure 2.5m - Contours of Cumulative 10th highest 24-hour RSP Concentrations at 1.5m above Ground (2043).dgn

Concerned Full Decking

Tong Yan San Tsuen Interchange
Yuen Long Park
Yuen Long
YOHO Midtown
Sheung Yau Tin Tsuen
Lung Tin Tsuen
Castle Peak Road - Ping Shan
Pui Sha Wai
Tin Shui Wai West Interchange
Lam Hau Tsuen
Yuen Long Highway
Hung Shui Kiu
Shan Ha Tsuen
Tin Liu Tsuen
Proposed Service Reservoir
Tan Kwai Tsuen
Tong Tau Po Tsuen
Shui Tsiu San Tsuen
Pak Sha Tsuen
Tai Tong Tsuen
Lam Tei Quarry

0 100 200 300 400 500
METRES

Annual RSP Criterion: 50μg/m³

Legend

- Development Area (DA)
- Works Boundary Outside DA
- New Sewer from YLS STW to the Existing Inlet Chamber of the NWNT Effluent Tunnel at San Wai for Discharging to the Urmston Road Submarine Outfall
- R5 (Existing Development Area within DA to be retained)
- 50 RSP Contour, μg/m³
- Planned Air Sensitive Receiver
- Existing Air Sensitive Receiver (within DA)
- Existing Air Sensitive Receiver (outside DA)

Note: The New Sewer From YLS STW To The Existing Inlet Chamber Of The NWNT Effluent Tunnel At San Wai For Discharging To The Urmston Road Submarine Outfall Is No Longer Pursued.

Rev	Description	By	Date
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Consultant: ARUP

Contract No. and Title

Agreement No. CE 35/2012(CE)

Planning and Engineering Study for Housing Sites in Yuen Long South - Investigation

Drawing title

Contours of Cumulative Annual RSP Concentrations at 1.5m above Ground (Year 2043) (DA Area)

Drawing no.	Rev.
Figure 2.5n	A

Drawn	Date	Checked	Approved
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Status: PRELIMINARY

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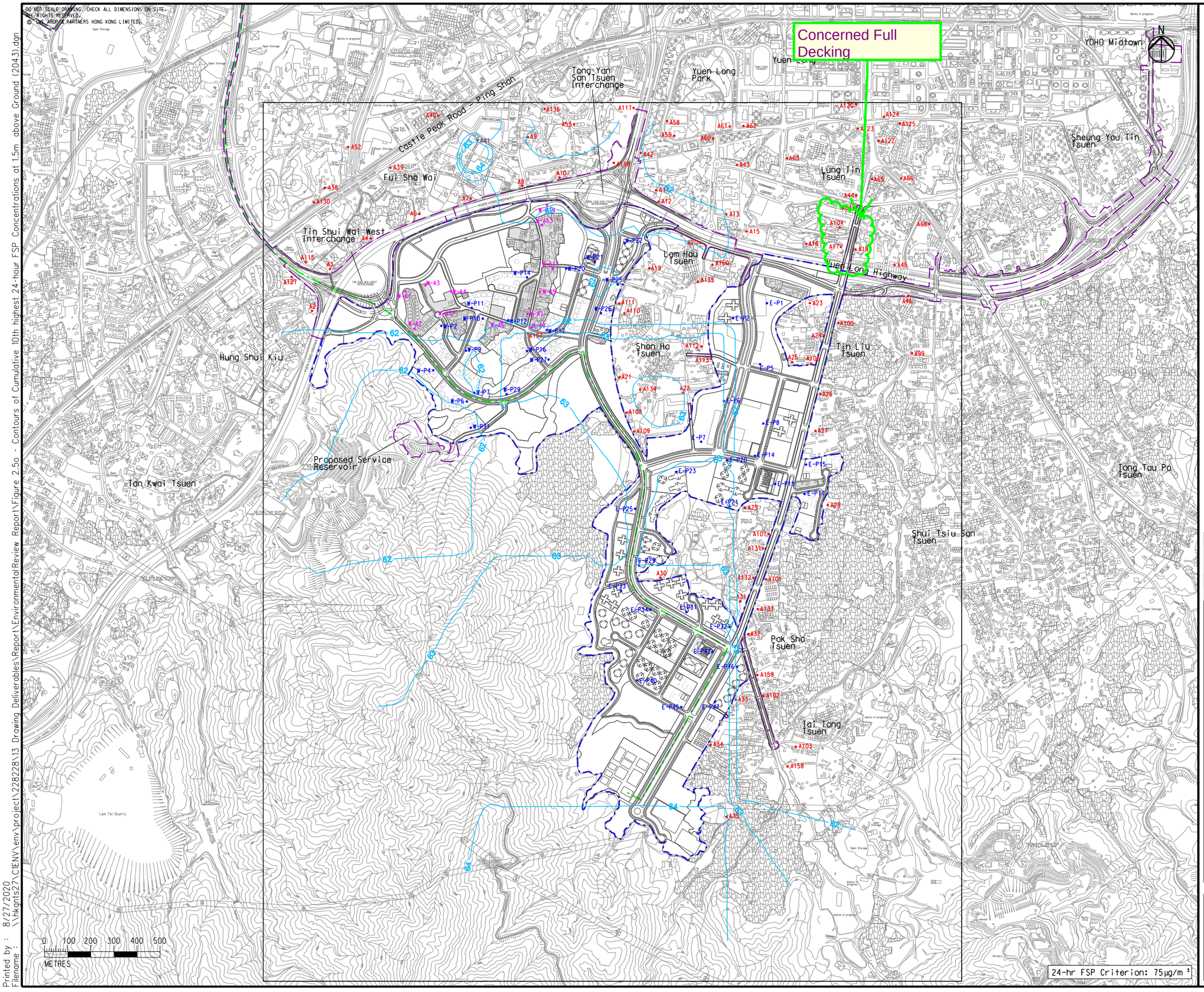

Legend

- Development Area (DA)
- Works Boundary Outside DA
- New Sewer from YLS STW to the Existing Inlet Chamber of the NWNT Effluent Tunnel at San Wai for Discharging to the Urmston Road Submarine Outfall
- R5 (Existing Development Area within DA to be retained)
- 75 — FSP Contour, µg/m³
- Planned Air Sensitive Receiver
- Existing Air Sensitive Receiver (within DA)
- Existing Air Sensitive Receiver (outside DA)

Note: The New Sewer From YLS STW To The Existing Inlet Chamber Of The NWNT Effluent Tunnel At San Wai For Discharging To The Urmston Road Submarine Outfall Is No Longer Pursued.

Rev	Description	By	Date
A	FIRST ISSUE	GL	05/19

Consultant

ARUP

Contract No. and Title

Agreement No. CE 35/2012(CE)

Planning and Engineering Study for Housing Sites in Yuen Long South - Investigation

Drawing title

Contours of Cumulative 10th highest 24-hour FSP Concentrations at 1.5m above Ground (Year 2043) (DA Area)

Drawing no.			Rev.
Figure 2.5o			A
Drawn	Date	Checked	Approved
GL	05/19	FC	FC
Scale		Status	
AS SHOWN		PRELIMINARY	

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Concerned Full Decking

Yuen Long Park
Tong Yan San Tsuen Interchange
Castle Peak Road – Ping Shan
Fuk Shan Wai
Tin Shui Wai West Interchange
Hung Shui Kiu
Tan Kwai Tsuen
Proposed Service Reservoir
Lam Tei Quarry
Lam Hau Tsuen
Shan Ha Tsuen
Lung Tin Tsuen
Yuen Long Highway
Tin Liu Tsuen
Pak Sha Tsuen
Tai Tong Tsuen
Shui Tsiu San Tsuen
Sheung Yau Tin Tsuen
YOHO Midtown
Tong Tau Po Tsuen

25 25.5 26 26.5 27 28

0 100 200 300 400 500
METRES

Annual FSP Criterion: 35μg/m³

Legend

- Development Area (DA)
- Works Boundary Outside DA
- New Sewer from YLS STW to the Existing Inlet Chamber of the NWNT Effluent Tunnel at San Wai for Discharging to the Urmston Road Submarine Outfall
- R5 (Existing Development Area within DA to be retained)
- 35 FSP Contour, μg/m³
- Planned Air Sensitive Receiver
- Existing Air Sensitive Receiver (within DA)
- Existing Air Sensitive Receiver (outside DA)

Note: The New Sewer From YLS STW To The Existing Inlet Chamber Of The NWNT Effluent Tunnel At San Wai For Discharging To The Urmston Road Submarine Outfall Is No Longer Pursued.

Rev	Description	By	Date
A	FIRST ISSUE	GL	05/19

Consultant: ARUP

Contract No. and Title

Agreement No. CE 35/2012(CE)

Planning and Engineering Study for Housing Sites in Yuen Long South - Investigation

Drawing title

Contours of Cumulative Annual FSP Concentrations at 1.5m above Ground (Year 2043) (DA Area)

Drawing no.	Rev.
Figure 2.5p	A

Drawn	Date	Checked	Approved
GL	05/19	FC	FC

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Status: PRELIMINARY

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Filename : \\hkgnts27\C\ENV\env\project\228228\13 Drawing Deliverables\Report\Environmental Review Report\Figure 2.5p - Contours of Cumulative Annual FSP Concentrations at 1.5m above Ground (2043).dgn