

**For discussion
on 25 February 2019**

**LEGISLATIVE COUNCIL
PANEL ON ENVIRONMENTAL AFFAIRS**

832TH – Retrofitting of Noise Barriers on Long Tin Road

PURPOSE

This paper seeks Members' views on the proposal to upgrade Public Works Programme (PWP) Item No. **832TH** "Retrofitting of Noise Barriers on Long Tin Road" to Category A at an estimated cost of \$304.0 million in money-of-the-day (MOD) prices for retrofitting noise barriers on the section of Long Tin Road between Parkside Villa and Park Royale.

PROJECT SCOPE

2. The proposed project includes –
 - (a) retrofitting of the following noise barriers on the section of Long Tin Road and its slip road between Parkside Villa and Park Royale:
 - (i) a section of 7.5 metres high and about 170 metres in length cantilevered noise barrier along the verge of southbound carriageway of Long Tin Road;
 - (ii) a section of 7.5 metres high and about 250 metres in length cantilevered noise barrier along the footpath of southbound Long Tin Road;
 - (iii) a section of 3 metres high and about 100 metres in length vertical noise barrier along the verge of the southbound carriageway of Long Tin Road; and
 - (iv) a section of 3 metres high and about 115 metres in length vertical noise barrier along the verge of the slip road to the southbound carriageway of Long Tin Road;

- (b) implementation of associated works including lighting, slope, drainage, traffic aids, utilities and landscaping works; and
- (c) implementation of an environmental monitoring and audit (EM&A) programme for the works in (a) and (b) above.

The layout plan and section plan of the proposed works are at **Enclosures 1 and 2** respectively.

3. Subject to funding approval of the Finance Committee (FC), we plan to commence the construction works in the third quarter of 2019 for completion in the second half of 2023.

JUSTIFICATIONS

4. To mitigate the traffic noise impact of existing roads on neighbouring residents, it is the Government's policy, where practicable and subject to availability of resources, to study the implementation of direct noise mitigation measures on existing roads generating traffic noise at neighbouring residents at levels exceeding 70 dB(A)¹. Such measures include retrofitting of noise barriers and enclosures on roads, and road resurfacing with low noise materials.

5. A total of some 550 dwellings near the section of Long Tin Road between Parkside Villa and Park Royale are affected by traffic noise level exceeding 70 dB(A). The proposed project comprises retrofitting barriers on the above road section to mitigate the traffic noise impact of the affected dwellings. With the proposed retrofitting of noise barriers, about 440 dwellings will be benefitted with significant reduction in traffic noise levels up to 13 dB(A) in maximum. Details of the traffic noise improvement of the proposed project are at **Enclosure 3**.

¹ Road traffic noise level is specified in terms of $L_{10}(1 \text{ hour})$ which is the noise level exceeded for 10% of a one-hour period and is generally measured at peak traffic flow. The traffic noise limit of 70 dB(A) for residential premises as stipulated in the Hong Kong Planning Standards and Guidelines is adopted as the criterion for studying the implementation of noise mitigation measures under existing policy.

FINANCIAL IMPLICATIONS

6. We estimate that the capital cost of the proposed project will be \$304.0 million in MOD prices.

ENVIRONMENTAL IMPLICATIONS

7. The proposed project is not a designated project under the Environmental Impact Assessment Ordinance (Cap. 499). We have conducted an environmental review and the conclusion is that the works concerned will benefit neighbouring residents with reduction in traffic noise levels after completion and will not cause other adverse environmental impact.

8. To minimise short-term impacts during construction, we will implement mitigation measures to control the nuisances caused by construction noise, dust and site run-off in compliance with the established standards and guidelines. We will also carry out the EM&A programme to ensure proper implementation of the recommendations of the environmental review.

9. At the planning and design stage, we have considered the design and construction sequences of the proposed works to reduce the generation of construction waste where possible. In addition, we will require the contractor to reuse inert construction waste (e.g. excavated soil) on site or in other suitable construction sites as far as possible, in order to minimise the disposal of inert construction waste at public fill reception facilities². We will encourage the contractor to maximise the use of recycled or recyclable inert construction waste and the use of non-timber formwork to further reduce the generation of construction waste.

² Public fill reception facilities are specified in Schedule 4 of the Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N). Disposal of inert construction waste at public fill reception facilities requires a licence issued by the Director of Civil Engineering and Development.

10. At the construction stage, we will require the contractor to submit for approval a waste management plan, which will include appropriate mitigation means to avoid, reduce, reuse and recycle inert construction waste. We will ensure that the day-to-day operations on site comply with the approved plan, and will require the contractor to separate the inert portion from non-inert construction waste on site and deliver for disposal at appropriate facilities. We will control the disposal of inert and non-inert construction waste at public fill reception facilities and landfills respectively through implementing a trip-ticket system.

11. We estimate that the proposed works will generate in total 17 300 tonnes of construction waste. We will reuse about 5 100 tonnes of inert construction waste (29%) on site and deliver around 12 100 tonnes of inert construction waste (70%) to public fill reception facilities for subsequent reuse. We will dispose of the remaining 100 tonnes of non-inert construction waste (1%) at landfills. For the proposed works, the total cost for disposal of the construction waste at public fill reception facilities and landfills is estimated to be about \$0.88 million (based on a unit charge rate of \$71 per tonne for disposal at public fill reception facilities and \$200 per tonne at landfills as stipulated in the Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N)).

12. The aesthetic design of the proposed noise barriers will be in harmony with the surrounding environment. Translucent panels will be used as far as possible provided that the noise reduction performance of the barriers will not be affected. We consulted the Advisory Committee on the Appearance of Bridges and Associated Structures (ACABAS)³ on the design in July 2018, and received support and endorsement from the committee.

³ The ACABAS comprises representatives of the Hong Kong Institute of Architects, the Hong Kong Institution of Engineers, the Hong Kong Institute of Planners, academic institutions, Architectural Services Department, Highways Department, Housing Department and Civil Engineering and Development Department. It is responsible for vetting the design of bridges and other structures associated with the highway system, including noise barriers and enclosures, from the aesthetic and visual impact points of view.

13. There are some 95 trees, which are common local species and not trees of large size or important trees⁴, within the proposed works boundary. Nine of these trees will be preserved and 42 will be transplanted. The remaining 44 trees have to be felled as they will block the project of retrofitting noise barriers and are considered not suitable for transplantation after survey. We propose to compensate them by planting about 75 trees and 3 200 shrubs, and this planting proposal will be incorporated into the proposed project.

HERITAGE IMPLICATIONS

14. The project will not affect any heritage site, i.e. all declared monuments, proposed monuments, graded historic sites / buildings, sites of archaeological interest and government historic sites identified by the Antiquities and Monuments Office.

LAND ACQUISITION

15. No land resumption is required for the proposed project.

PUBLIC CONSULTATION

16. The Environmental Improvement Committee of the Yuen Long District Council was consulted on the proposed project on 19 March 2018, and its members agreed that the project should be carried out to alleviate the traffic noise impact on nearby residents. The scheme and plans of the proposed project were gazetted under the Roads (Works, Use and Compensation) Ordinance

⁴ An “important tree” refers to trees on the Register of Old and Valuable Trees, or any other trees that meet one or more of the following criteria –

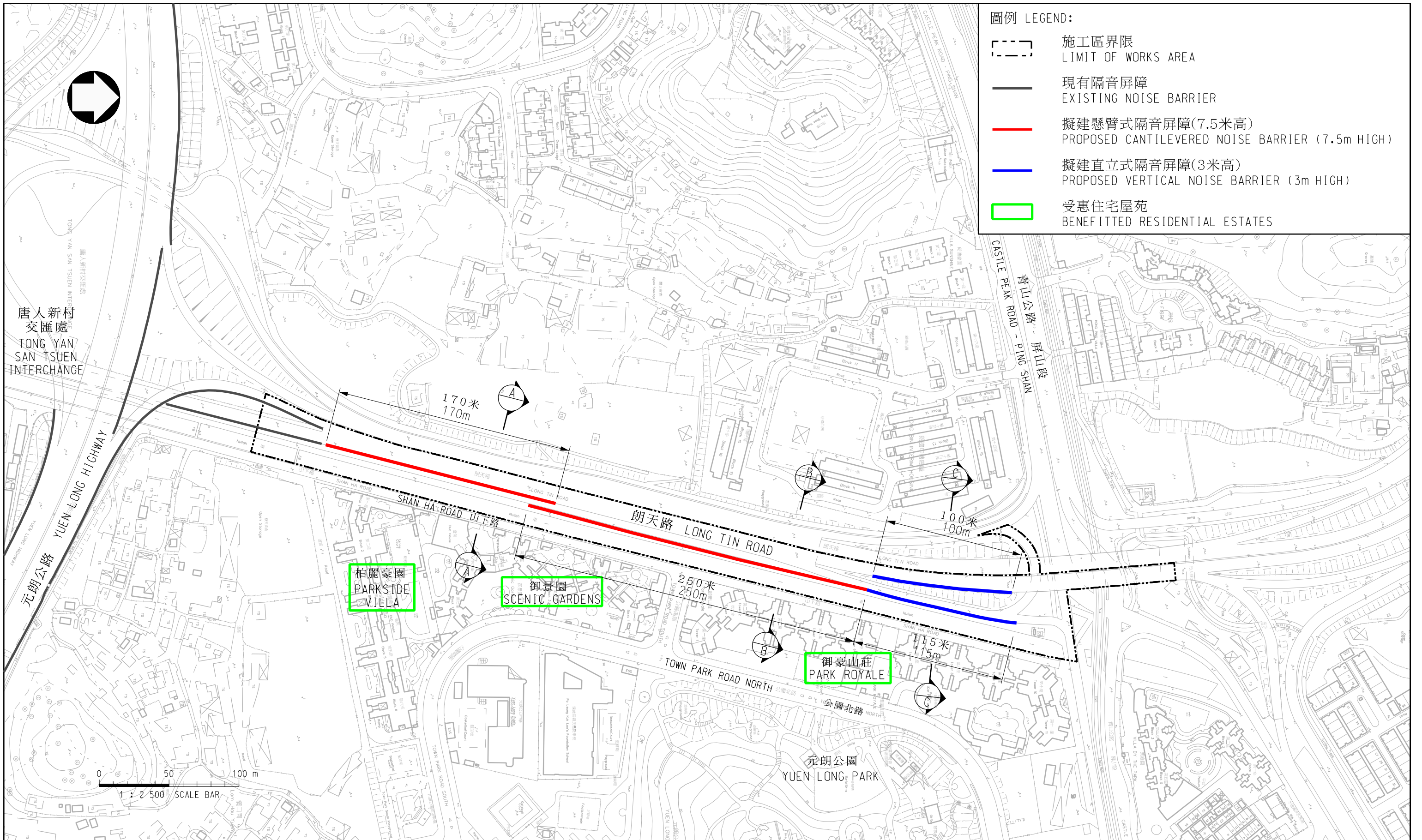
- (a) trees of over 100 years old or above;
- (b) trees of cultural, historical or memorable significance e.g. Fung Shui trees, trees as landmark of monastery or heritage monument, and trees in memory of an important person or event;
- (c) trees of precious or rare species;
- (d) trees of outstanding form (taking account of overall tree sizes, shape and any special features) e.g. trees with curtain-like aerial roots, trees growing in unusual habitat; or
- (e) trees with trunk diameter equal or exceeding 1.0 m (measured at 1.3 m above ground level), or with height/canopy spread equal or exceeding 25 m.

(Cap. 370) (the Ordinance) on 27 July and 3 August 2018 respectively. No objection was received during the statutory period. Hence the project was authorised under the Ordinance with the notice of authorisation gazetted on 30 November and 7 December 2018.

WAY FORWARD

17. We plan to seek funding approval from the FC for the proposed works under **832TH** in 2019 after consulting the Public Works Subcommittee. Members are invited to comment on the proposed funding application.

**Environment Bureau
Highways Department
February 2019**



圖例 LEGEND:

- 施工區界限
LIMIT OF WORKS AREA
- 現有隔音屏障
EXISTING NOISE BARRIER
- 擬建懸臂式隔音屏障(7.5米高)
PROPOSED CANTILEVERED NOISE BARRIER (7.5m HIGH)
- 擬建直立式隔音屏障(3米高)
PROPOSED VERTICAL NOISE BARRIER (3m HIGH)
- 受惠住宅屋苑
BENEFITTED RESIDENTIAL ESTATES

圖則名稱 drawing title

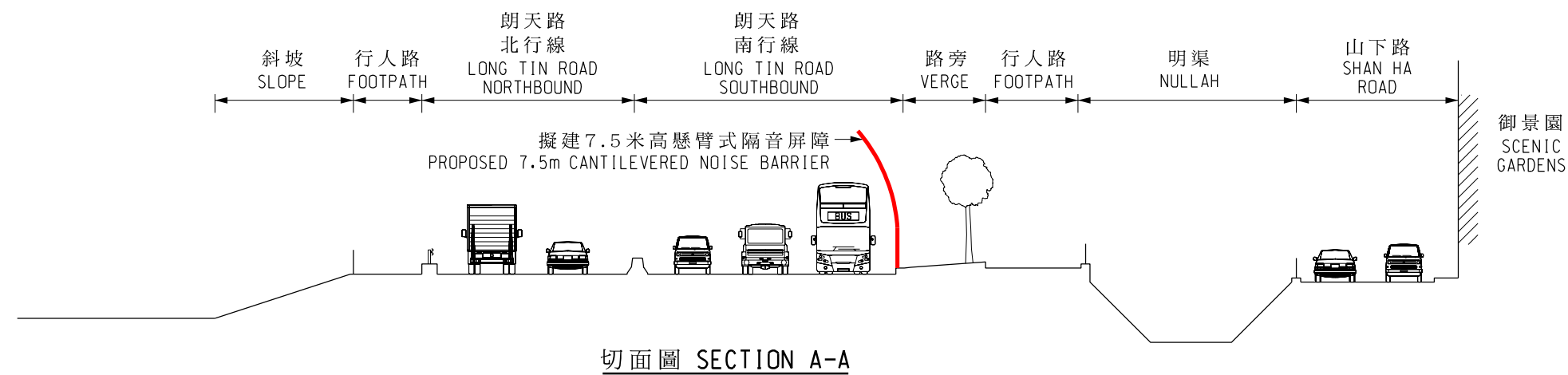
工務計劃項目第832TH號 - 朗天路加建隔音屏障工程 - 平面圖

PUBLIC WORKS PROGRAMME ITEM NO. 832TH - RETROFITTING OF NOISE BARRIERS ON LONG TIN ROAD - LAYOUT PLAN

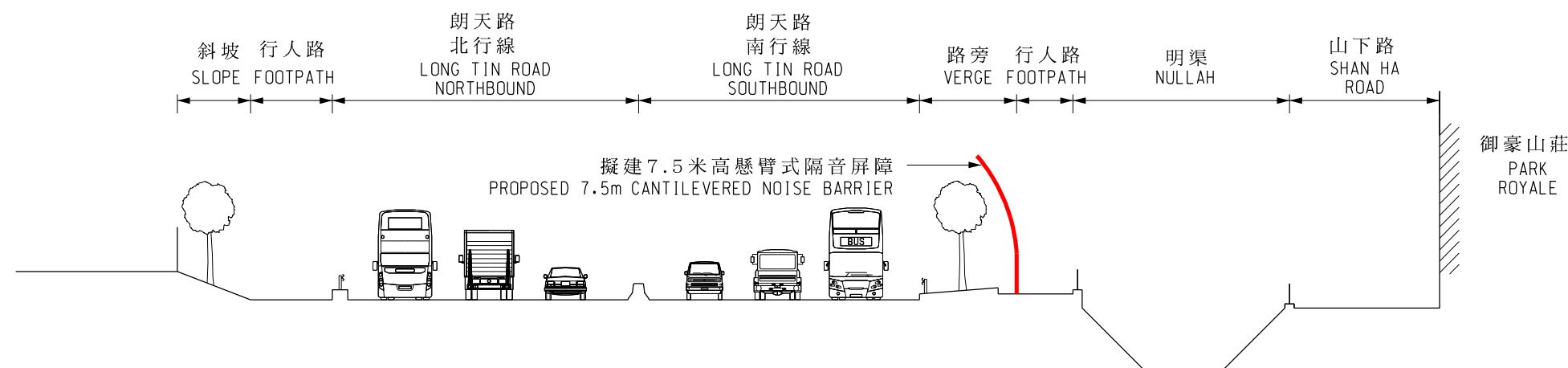
圖則編號 drawing no. HMW6832TH-SK0027 比例 scale 1:2500

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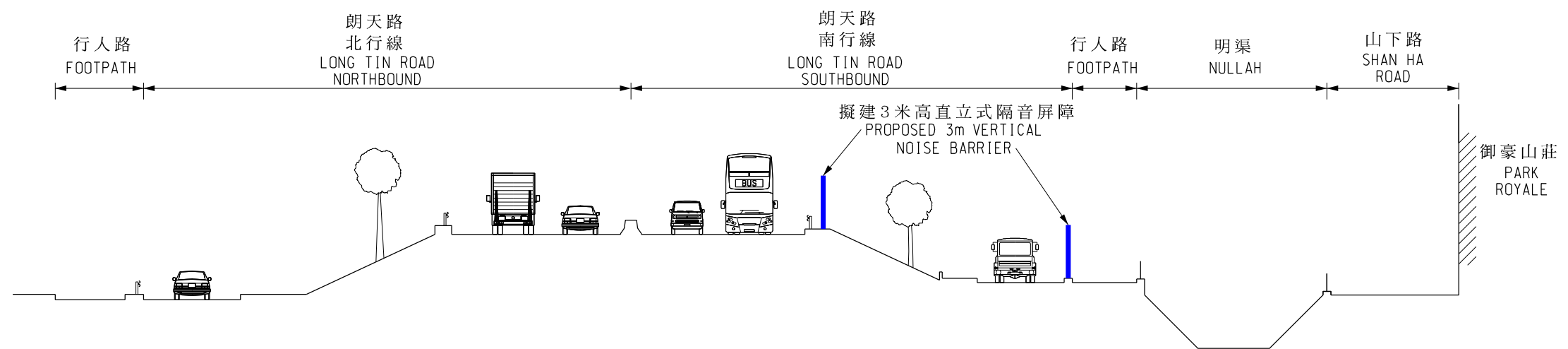




切面圖 SECTION A-A



切面圖 SECTION B-B



切面圖 SECTION C-C

圖則名稱 drawing title

工務計劃項目第 832TH 號 - 朗天路加建隔音屏障工程 - 切面圖

PUBLIC WORKS PROGRAMME ITEM NO. 832TH - RETROFITTING OF NOISE BARRIERS ON LONG TIN ROAD - SECTIONS

圖則編號 drawing no.

HMW6832TH-SK0028

比例 scale

示意圖
DIAGRAMMATIC

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HIGHWAYS
DEPARTMENT
HONG KONG

路政署
香港

**PWP Item No. 832TH - Retrofitting of noise barriers on
Long Tin Road**

**Breakdown of the number of benefitted dwellings by
the respective level of reduction in traffic noise**

Reduction in Traffic Noise (dB(A))	Number of Dwellings
10 – 13	36
7 – 9	40
4 – 6	91
1 – 3	273
Total	440

**Breakdown of the number of affected dwellings by
the respective traffic noise level**

Traffic Noise Level (dB(A))	Number of Dwellings	
	Before Implementation of Mitigation Measures	After Implementation of Mitigation Measures
77	71	0
75 – 76	186	129
73 – 74	251	103
71 – 72	37	141
70 or below	N/A	172
Total	545	545