

Environmental Permit No. EP-457/2013/C


Central Kowloon Route

Independent Environmental Checker Verification

Works Contract:	Yau Ma Tei East (HY/2014/08)
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Reference Document/Plan	
Document/Plan to be Certified / Verified:	Construction Noise Mitigation Measure Plan
Date of Report:	- (Rev. 13.0)
Date received by IEC:	31 January 2020

Reference EP Condition	
Environmental Permit Condition:	2.9
<p>To further reduce the air-borne construction noise impacts on Yau Ma Tei Catholic Primary School (Hoi Wang Road), Tak Cheong Building, Prosperous Garden Block 1, The Coronation Tower 1, Ko Fai House of Kwun Fat Court, Grand Waterfront Tower 3 and Hang Chien Court Block J, the Permit Holder shall, no later than one month before the commencement of construction of the corresponding component(s) of the Project, submit to the Director for approval four hard copies and one electronic copy of an updated Construction Noise Mitigation Measure Plan (CNMMP). The plan shall include:-</p> <ul style="list-style-type: none">(a) a schedule of construction works to be carried out at the works areas of the Project within 300m from the NSRs;(b) an updated construction methodology of the construction works;(c) an updated powered mechanical equipment (PME) list for the construction works;(d) an updated proposal of air-borne construction noise mitigation measures for the Noise Sensitive Receivers as mentioned above, including the provision of noise barriers, enclosures;(e) other initiatives proposed by the Permit Holder; and(f) an updated prediction of noise levels in accordance with the above updated information and mitigation proposals in place. <p>Before submission to the Director, the CNMMP shall be certified by the ET and verified by the IEC as conforming to the relevant information and recommendations contained in the EIA Report. The approved CNMMP shall be fully and properly implemented.</p>	

IEC Verification	
I hereby verify that the above referenced document /plan complies with the above referenced condition of EP-457/2013/C.	
	
Ms Mandy To Independent Environmental Checker	Date: 4 February 2020

Build King – SKEC Joint Venture

Central Kowloon Route Contract HY/2014/08

Yau Ma Tei East Section

Construction Noise Mitigation Measures Plan

Rev.13.0

Certified by:

Kevin Li 

Position: Environmental Team Leader

Date: 4 February 2020

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PART A GENERAL

1.0 Background

1.1 Project Description

Central Kowloon Route (CKR) was proposed in the West Kowloon Reclamation Transport Study that a route in tunnel should be developed to link the West Kowloon Highway since 1990.

Highways Department (HyD) commissioned the Design and Construction Assignment for the Central Kowloon Route in June 1998. CKR is a dual 3-lane trunk road across central Kowloon linking the West Kowloon in the west and the proposed Kai Tak Development (KTD) in the east. The CKR will be about 4.7km long with an underground tunnel section of about 3.9km long, in particular, there will be an underwater tunnel of about 370m long in Kowloon Bay to the north of the To Kwa Wan Typhoon Shelter. It will connect the West Kowloon Highway at Yau Ma Tei Interchange with the road network at Kowloon Bay and the future Trunk Road T2 at KTD which will connect to the future Tseung Kwan O – Lam Tin Tunnel (TKO-LTT) and Cross Bay Link (CBL). CKR, Trunk Road T2 and TKO-LTT will form a strategic highway link, namely Route 6, connecting West Kowloon and Tseung Kwan O. Consultancy studies for Trunk Road T2, TKO-LTT and CBL have been commissioned by CEDD. In addition, 3 ventilation buildings, which will be located in Yau Ma Tei, Ho Man Tin and ex-Kai Tak airport area, are proposed to ensure acceptable air quality within the tunnel.

The Central Kowloon Route – Design and Construction Environmental Impact Assessment Report (Register No.: AEIAR-171/2013) was approved with conditions by the Environmental Protection Department (EPD) on 11 July 2013. An Environmental Permit (EP-457/2013) was issued on 9 August 2013. Variations of EP (VEP) was subsequently applied for and the latest EP (EP-457/2013/C) was issued by EPD on 16 January 2017.

Build King - SKEC Joint Venture (BKSKJV) was commissioned by Highways Department as the appointed main contractor for Contract No. HY/2014/08: Central Kowloon Route – Yau Ma Tei East (YMTE).

The Works to be executed under this Contract included, but not exclusively, the following items:

- Construction of approximately 390m long cut-and-cover tunnel between Yau Cheung Road and Shanghai Street;
- Construction and subsequent handover of Yau Ma Tei Access Shaft for facilitating the access and using by the contractor of CKR – Central Tunnel contract for the construction of tunnelling works of CKR;
- Construction and maintenance of a composite building for the temporary Public Library cum Jade Hawker Bazaar and a building for the temporary Maternal and Child Health Centre;
- Re-provisioning of a Methadone Clinic in the Yau Ma Tei Jockey Club Polyclinic Building;
- Demolition of the existing Yau Ma Tei Multi-storey Carpark Building, the existing Yau Ma Tei Specialist Clinic Extension Building and the existing Yau Ma Tei Jade Hawker Bazaars;
- Demolition of existing Subway No. KS55 and ancillary buildings of existing Yau Ma Tei Police Station;
- Design and construction of the Noise Barrier Works
- Demolition and re-provisioning of a section of Gascoigne Road Flyover (GRF) between Nathan Road and Ferry Street. Implementation of temporary measures for maintaining the normal operation of the GRF during the contract period;
- Other civil works

A Site Layout showing the site boundary is shown in **Appendix A**.

1.2 Requirements for Construction Noise Mitigation Measure Plan (CNMMP)

According to the condition 2.9 of the EP-457/2013/C, the Permit Holder shall, no later than one month before the commencement of construction of the Project, submit to the Director of Environmental Protection (DEP) for approval four hard copies and one electronic copies of an update Construction Noise Mitigation Measure Plan (CNMMP) to further reduce the air-borne construction noise impacts on Yau Ma Tei Catholic Primary School (Hoi Wang Road), Tak Cheong Building, Prosperous Garden Block 1, The Coronation Tower 1, Ko Fai House of Kwun Fat Court, Grand Waterfront Tower 3 and Hang Chien Court Block J. In view of the worksites location under this contract and their respective distance to the above NSRs (300 meters study area according to the EIA methodology), predicted noise impact on Yau Ma Tei Catholic Primary School (Hoi Wang Road), Tak Cheong Building, Prosperous Garden Block 1, The Coronation Tower 1 are studied in this CNMMP, while that of Ko Fai House of Kwun Fat Court, Grand Waterfront Tower 3 and Hang Chien Court Block J would be assessed in other Sections of the Central Kowloon Route according to their worksite location.

The CNMMP shall include:

- A schedule of construction works to be carried out at the works areas of the Project within 300m from the Noise Sensitive Receivers (NSRs);
- An updated construction methodology of the construction works;
- An updated powered mechanical equipment (PME) list for the proposed construction works;
- An updated proposal of air-borne construction noise mitigation measures for the Noise Sensitive Receivers as mentioned above, including the provision of noise barriers, enclosures;
- Other initiatives proposed by the Permit Holder; and
- An updated prediction of noise levels in accordance with the above updated information and mitigation proposals in place.

Before submission to the Director, the CNMMP shall be certified by the ET and verified by the IEC as conforming to the relevant information and recommendations contained in the EIA Report (Register No. AEIAR-171/2013).

2.0 Description of Construction Works in the Study Area

2.1 Noise Sensitive Receivers

According to Further Environmental Permit No. FEP-02/457/2013/C for CKR-YMTE, 4 Noise Sensitive Receivers (NSRs) would be addressed in this CNMMP. The 4 NSRs are Yau Ma Tei Catholic Primary School (Hoi Wang Road) (W-N1A), Tak Cheong Building (W-N8A), Prosperous Garden Block 1 (W-N25A) and The Coronation Tower 1 (W-P11).

The list of NSRs are shown in **Table 2.1**. The Layout plans of the works area showing the NSRs and their distance to the works area are provided in **Appendix A and Appendix D**.

Table 2.1 List of Noise Sensitive Receivers (NSRs)

NSRID	NSR Description	Use ^[1]	Criterion, dB(A) ^[2]	Maximum Construction Noise Levels, dB(A) ^[3]		Noise exceedance, dB(A) ^[3]
				Unmitigated	Mitigated	
W-N1A	Yau Ma Tei Catholic Primary School (Hoi Wang Road)	E	70(65)	82	70 (69)	-(4)
W-N8A	Tak Cheong Building	R	75	95	82	7
W-N25A	Prosperous Garden Block 1	R	75	93	81	6
W-P11	The Coronation (West Façade)	R	75	88	77	2

Notes:

[1] R- Residential; E- Educational Institution; GIC- Government, institution and community

[2] Values in parentheses indicate the noise criterion during examination period of educational institution

[3] Data are extracted from Tables 5.13 and 5.16 of approved EIA Report”

2.2 Construction Methodology

The proposed construction methodology is generally following that presented in Section 3.5 of the approved CKREIA Report (Register No. AEIAR-171/2013). The tunnel section of Yau Ma Tei (from Hoi Wang Road to Shanghai Street) will be constructed by ‘top-down’ cut-and-cover method to reduce impact upon the surrounding area, pedestrians and road traffic.

A breakdown of the major construction activities in sequence to be carried out within the contract are provided in **Appendix B**.

2.3 Updated Preliminary Construction Programme

The updated preliminary construction programme prepared by BKSKJV has been used in this CNMMP and has been presented on a monthly basis for the duration of the construction works in corresponding worksites.

Since the commencement of the project has been delayed for 3 years., the potential concurrent projects have been reviewed. Upon reviewing the concurrent projects close to YMTE, other than YMTW section under CKR itself, there is no additional potential concurrent projects which would have cumulative construction noise impacts on the NSRs during the construction phase. The concurrent effect on noise impact contributed by YMTW section is also considered.

The construction schedule has been adjusted such that to minimize concurrent construction works to be carried out in the vicinity as far as practicable. The updated preliminary construction programme is provided in **Appendix B**.

2.4 Updated Powered Mechanical Equipment List

The updated Powered Mechanical Equipment (PME) list for the construction works is provided in **Table 2.2**. The Sound Power Levels (SWL) for the PMEs have been adopted from EPD’s Technical Memorandum on Noise from Construction Work Other than Percussive Piling (GW-TM), list of SWLs of other commonly used PME or British Standard 5228 - Part 1:2009 Code of Practice for Noise and Vibration Control on Construction and Open Sites. It should be noted that the PMEs

proposed are commonly available in Hong Kong market. The PME's to be adopted for individual construction activities for this contract are provided in **Appendix C**.

Taking into account the latest construction programme and PME inventory, extra quiet PME for dump truck, roller and vibratory are proposed in addition to the quiet PME proposed in the Approved CKR EIA Report. The quiet PME as listed in Table 2.2 could be found in Hong Kong. However, if the exact model specified in the references of the listed quiet PME are not available during the construction period, the model with SWL not higher than the listed SWL shall be adopted. BKSKJV has also confirmed that the programme and plant inventory are reasonable and practicable for completing the works of CKR-YMTE within the scheduled timeframe.

Table 2.2: List of Updated Powered Mechanical Equipment (PME)

PME Description	TM Ref./ Other Ref. ^(a)/ BS 5228 Ref. ^(b)/ QPME ID Code ^(c)	Unit Sound Power Level, SWL dB(A)
Air Compressor	CNP003	104
Asphalt Paver	EPD-01226	104
Bar Bender and Cutter	CNP021	90
Bored Piling Crane mounted auger	BS D4-37	111
Breaker, Excavator Mounted (Hydraulic)	BS D8-13	110
Bulldozer	CNP030	115
Compactor, vibratory	CNP050	105
Concrete Lorry Mixer	CNP044	109
Concrete pump	CNP047	109
Concrete crusher, excavator mounted	CNP055	103
Crane Mobile	BS D7-114	101
Dump Truck with Grab	CNP069	105
Excavator/Loader, Wheeled/Tracked	EPD-01145	99
Generator	CNP103	95
Grout mixer	CNP105	90
Grout pump	CNP106	105
Lorry	CNP142	105
Piling, Diaphragm Wall, Bentonite	CNP162	105

Filtering Plant		
Piling, large dia bored, oscillator	CNP165	115
Poker, Vibratory, Hand Held	CNP173	102
Rock Crusher	Reference to approved West Island Line EIA report	118
Rock drill, crawler mounted (pneumatic)	SIL EIA	108
Rock Drill	SIL EIA	108
Road Roller	EPD-01183	97
Saw, Circular Wood	BS D7-79	103
Saw, Wire	CNP205	101
Tracked crane	BS D7-114	101
Ventilation Fan	CNP241	108
Water Pump, Submersible (Electric)	CNP283	85

Note:

- (a) Other references refer to the approved West Island Line EIA Report/South Island Line (East) EIA Report/SWLs of other commonly used PME provided in the document prepared by the Noise Control Authority
http://www.epd.gov.hk/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf
- (b) BS 5228 Ref. refers to British Standard 5228 - Part 1:2009 Code of Practice for Noise and Vibration Control on Construction and Open Sites
- (c) QPME ID Code refer to Quiet Powered Mechanical Equipment from EPD's website
http://www.epd.gov.hk/cgi-bin/npg/qpme/search_gen.pl?lang=eng

3.0 Noise Assessment and Proposed Mitigation Measures

3.1 Assessment Methodology and Assumptions

The scope of this plan does not cover all the construction works of West Portion of CKR Project. This Plan only includes the noise assessment for CKR-YMTE's works area and the remaining works areas shall be addressed by another CKR contract namely CKR-YMTW. However, the cumulative effect from YMTW will be considered in the noise assessment of this Plan. Worksite S13 is located within the site boundary of both YMTE and YMTW. However, the construction of landscape deck at worksite S13 will be carried out by YMTW only and thus the noise assessment is not included in this plan, but the noise assessment is included in the cumulative effect of this plan. Besides, according to the contract information provided by HyD, some construction activities at worksites are different from those mentioned in EIA report or not included in the scope of works of YMTE contract. Worksite S9 is construction of Community Liaison Centre for CKR project and worksite S7 is the construction of Temporary Library & Temporary Jade Market. Activities in worksites S48 is the construction of Ferry Street Subway, which is not the scope of works under YMTE contract as per the contract information.

The construction noise assessment has been carried out in accordance with the methodology used in the approved CKR EIA Report (Register No. AEIAR-171/2013). Notional source distances adopted in the calculation has made reference to those used in the CKR EIA Report (Register No. AEIAR-171/2013) except worksite S3, S4, S5 and S13 according to the updated construction layout as provided in **Appendix A**. The updated distance between NSRs and worksite are tabled in **Appendix D**.

The percentage on-time for each PME has been estimated individually for each construction activity to ensure practicality and is consistent with assumptions made in CKR EIA Report (Register No. AEIAR-171/2013).

The BKSKJV has confirmed that the programme and plant inventory are reasonable and practicable for completing the Works Contract within the scheduled timeframe.

All mitigation measures and their effectiveness proposed in the CKR EIA Report (Register No. AEIAR-171/2013) including the use of temporary movable noise barrier and enclosure (with

sufficient ventilation) for relatively static plant, acoustic mat and quiet plant have been considered in this CNMMP. The use of quiet plant associated with construction work is prescribed in British Standard "Code of practice for noise and vibration control on construction and open sites, BS5228" which contains the SWLs for specific quiet PME.

Central Kowloon Route – Yau Ma Tei West (CKR-YMTW) is identified to be concurrent projects of the works at CKR-YMTE. CKR-YMTW commenced in November 2018 and is estimated to complete in October 2024. Cumulative construction noise impact from construction activities of CKR-YMTW is addressed in this CNMMP and detail assessment is shown in Appendix C. For the construction works for two noise enclosures at Gascoigne Road Flyover, they will be carried out under our contract.

3.2 Proposed Mitigation Strategy and Noise Assessment Results

The mitigation measures proposed in the approved CKR EIA report (Register No. AEIAR-171/2013) have been adopted.

Movable temporary noise barriers that can be located close to noisy plant and be moved concurrently with the plant along a worksite can be very effective for screening noise from NSRs. A typical design which has been used locally is a wooden framed barrier with a small-cantilevered on a skid footing with 25mm thick internal sound absorptive lining. This measure is particularly effective for low level zone of NSRs. A cantilevered top cover would be required to achieve screening benefits at upper floors of NSRs. Movable barriers will be used for some PME (e.g. asphalt paver, excavator etc). It is anticipated that suitably designed barriers could achieve at least 5 - 10dB(A) reduction. For a conservative assessment, only a reduction of 5dB(A) is assumed. The use of enclosure (with sufficient ventilation and surface mass at least 10 kg/m²) has been considered in this assessment to shelter relatively static plant including air compressor, generator. The enclosures barriers can provide about 10dB(A) noise reduction. For ventilation fan, enclosure namely SilentCUBE would be used as noise mitigation and -15 dB(A) would be applied in the assessment for conservatism. The details of the noise enclosure are showed in **Appendix F**. BKSKJV shall ensure the practicability to block the line-of-sight for nearby NSRs during the usage of noise barriers.

The construction activities to be carried out under traffic deck or underground, will adopt -20dB(A) screening effect has PMEs, except ventilation fan will be located at grade.

For one of the mucking out points in CKR project, the temporary full noise enclosure will be constructed after the access shaft completion to screen off the future construction activities for tunnelling works with the noise reduction of -15dB(A).

For the demolition works of the Yau Ma Tei Multi-storey Carpark Building, temporary noise barrier will be erected at the floor to be demolished surrounding the 4 sides of the building. The temporary noise barriers can provide about 10dB(A) noise reduction. Details of the acoustic noise barriers are shown in **Appendix E**.

The predicted noise levels at identified NSRs after implementation of mitigation measures, including quiet plants, noise enclosure/shed, movable barriers and acoustic fabric are shown in **Appendix C** and summarised in Table 3.1. The mitigation measures and noise control design will be implemented by the frontline staff of the contractor, supervised by the Environmental Officer/ Site Engineer and checked by the ET, IEC and RE during routine site inspection under the EM&A programme. Some of the construction activities will not involve PME and thus are not shown in noise assessment such as worksites S17 and S31 which are decanting of Library and Government Offices in MSCB and YMT Police Station respectively.

Site records, including photos and measurement reports, for substantiating proper implementation of the Plan shall be well kept by the Contractor on site for review/checking by ET/IEC/EPD at any time.

The implementation schedule of proposed mitigation measures is showed in Appendix G.

Table 3.1 Summary of Noise Assessment Result

NSR ID	NSR Description	Predicted Max. Noise Level ^(a) , dB(A)	Noise Criteria ^(b) , dB(A)	Exceedance, dB(A)	Duration (month) of Exceedance ^(c)
W-N1A	Yau Ma Tei Catholic Primary School (Hoi Wang Road)	67(67)	70(65)	-(2)	-(2)
W-N8A	Tak Cheong Building	81	75	6	22
W-N25A	Prosperous Garden Block 1	80	75	5	3
W-P11	The Coronation	75	75	-	-

Note:

- (a) Bolded values mean exceedance of the relevant noise criteria.
- (b) Values in parentheses indicate the noise criterion during examination period of educational institution.
- (c) Typical examination period is in May, June, November and December. The exceedance duration is subject to the examination schedule when available.

With the implementation of the above-mentioned mitigation measures, residual impacts exceeding the construction noise criterion are still expected. The comparison of residual impacts between CKR EIA Report and this CNMMP is shown in Table 3.2.

Table 3.2 Comparison of Residual Impacts between CKR EIA Report and this CNMMP (Residential Premises)

NSR	EIA Prediction					CNMMP Prediction				
	Max. Noise Level, dB(A)	Duration (month) of Exceedance				Max. Noise Level, dB(A)	Duration (month) of Exceedance			
		1-4 dB(A)	5 dB(A)	6 dB(A)	7 dB(A)		1-4 dB(A)	5 dB(A)	6 dB(A)	7 dB(A)
W-N8A	82	26	5	4	2	82	13	4	5	-
W-N25A	81	6	-	3	-	80	-	3	-	-
W-P11	77	4	-	-	-	75	-	-	-	-

Table 3.3 Comparison of Residual Impacts between CKR EIA Report and this CNMMP (Educational Institution During Examination Period)

NSR	EIA Prediction (during exam period)								CNMMP Prediction (during exam period)							
	Duration (month) of Exceedance								Duration (month) of Exceedance							
	1 dB(A)	2 dB(A)	3 dB(A)	4 dB(A)	5 dB(A)	6 dB(A)	7 dB(A)	≥8 dB(A)	1 dB(A)	2 dB(A)	3 dB(A)	4 dB(A)	5 dB(A)	6 dB(A)	7 dB(A)	≥8 dB(A)
W-N1A	2	3	-	1	-	-	-	-	-	2	-	-	-	-	-	-

Table 3.4 Comparison of Residual Impacts between CKR EIA Report and this CNMMP (Educational Institution During Normal Period)

NSR	EIA Prediction (during normal period)								CNMMP Prediction (during normal period)							
	Duration (month) of Exceedance								Duration (month) of Exceedance							
	1 dB(A)	2 dB(A)	3 dB(A)	4 dB(A)	5 dB(A)	6 dB(A)	7 dB(A)	≥8 dB(A)	1 dB(A)	2 dB(A)	3 dB(A)	4 dB(A)	5 dB(A)	6 dB(A)	7 dB(A)	8 dB(A)
W-N1A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

When comparing with the predicted noise impact in the EIA study, the residual impacts predicted in this CNMMP would either remain unchanged or reduced in respect of both exceedances and duration with the implementation of mitigation measures proposed in this CNMMP. Number of months of Examination periods for Yau Ma Tei Catholic Primary School (Hoi Wang Road) predicted to exceed the criterion for school examination periods was reduced from 6 from EIA report to 2 from this CNMMP. Number of months for Tak Cheong Building (W-N8A) predicted to experience the max. noise level (i.e. 82 dB(A)) was reduced from 2 months from EIA report to nil from this CNMMP. The duration (month) of exceedance would also be reduced from 37 from EIA report to 22 from this CNMMP. The predicted max. noise level at Prosperous Garden Block 1 (W-N25A) would be

reduced from 81 dB(A) from EIA report to 80 dB(A) in this CNMMP and the duration of exceedance would be reduced from 9 months from EIA report to 3 months from this CNMMP. Number of months for The Coronation Block 1 (W-P11) predicted to exceed the noise criteria was reduced from 4 months from EIA report to nil from this CNMMP.

Specific measures will be implemented for Tak Cheong Building (W-N8A), which is predicted to experience the most severe exceedance for the longest period. BKSKJV will well plan the working programme for those work sites close to W-N8A and try the best to shorten the working hours at weekends or avoid to carry out noisy activities at sensitive hours (0700 – 0900 & 1700 – 1900).

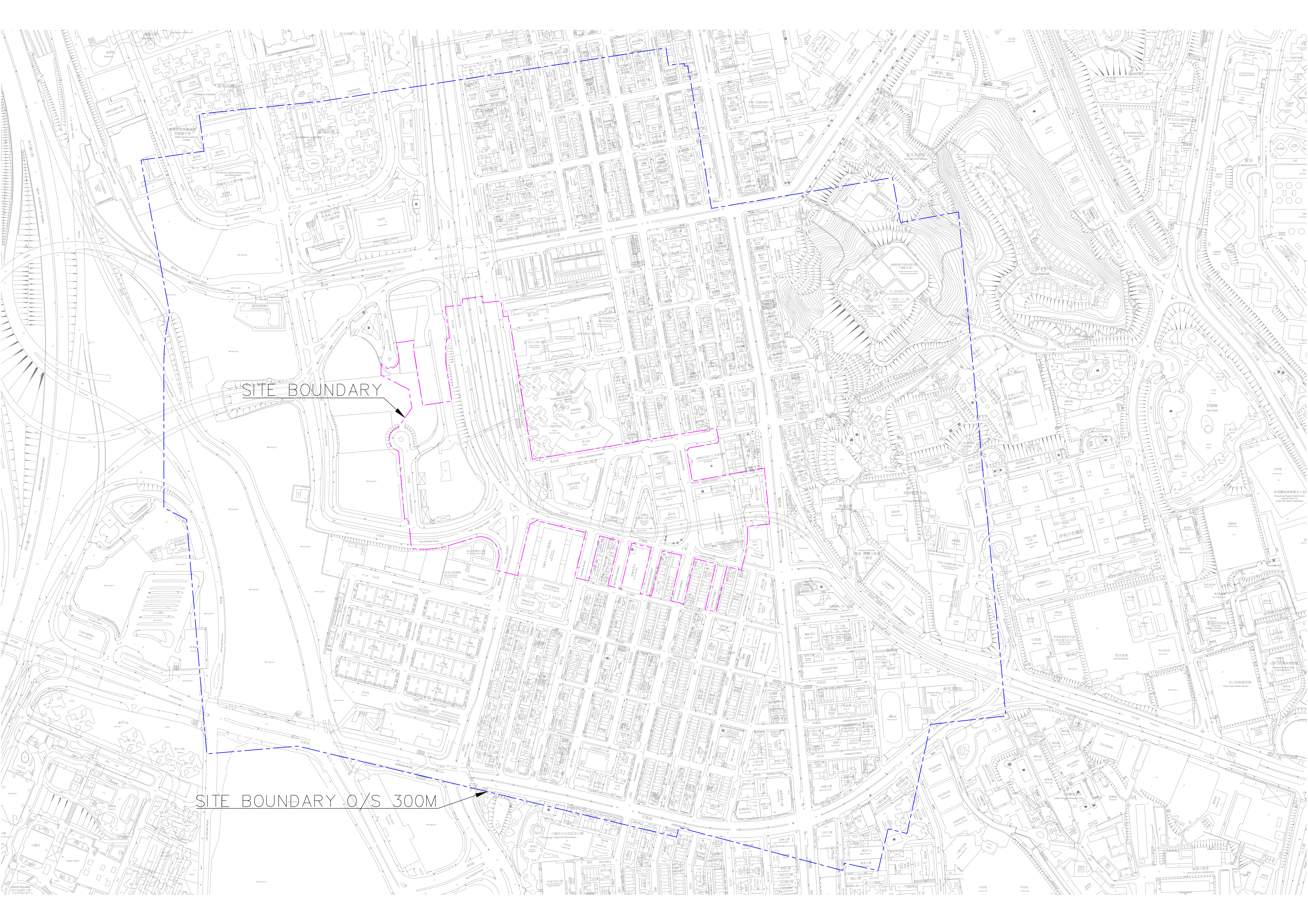
4.0 Conclusion

The CNMMP has predicted the construction noise impact from CKR-YMTE to identified NSRs. This plan has taken into account the updated information on PMEs and works programme which would be adopted by BKSKJV. With the implementation of mitigation measures in form of quiet plants, barrier and acoustic fabrics, the construction noise impact are predicted would either remain unchanged or to be reduced in respect of both exceedances and duration.

Further review and update will be performed with a frequency of at least every 6 months during the construction phase and liaison with affected parties is recommended to minimise the construction noise impacts as far as practicable.

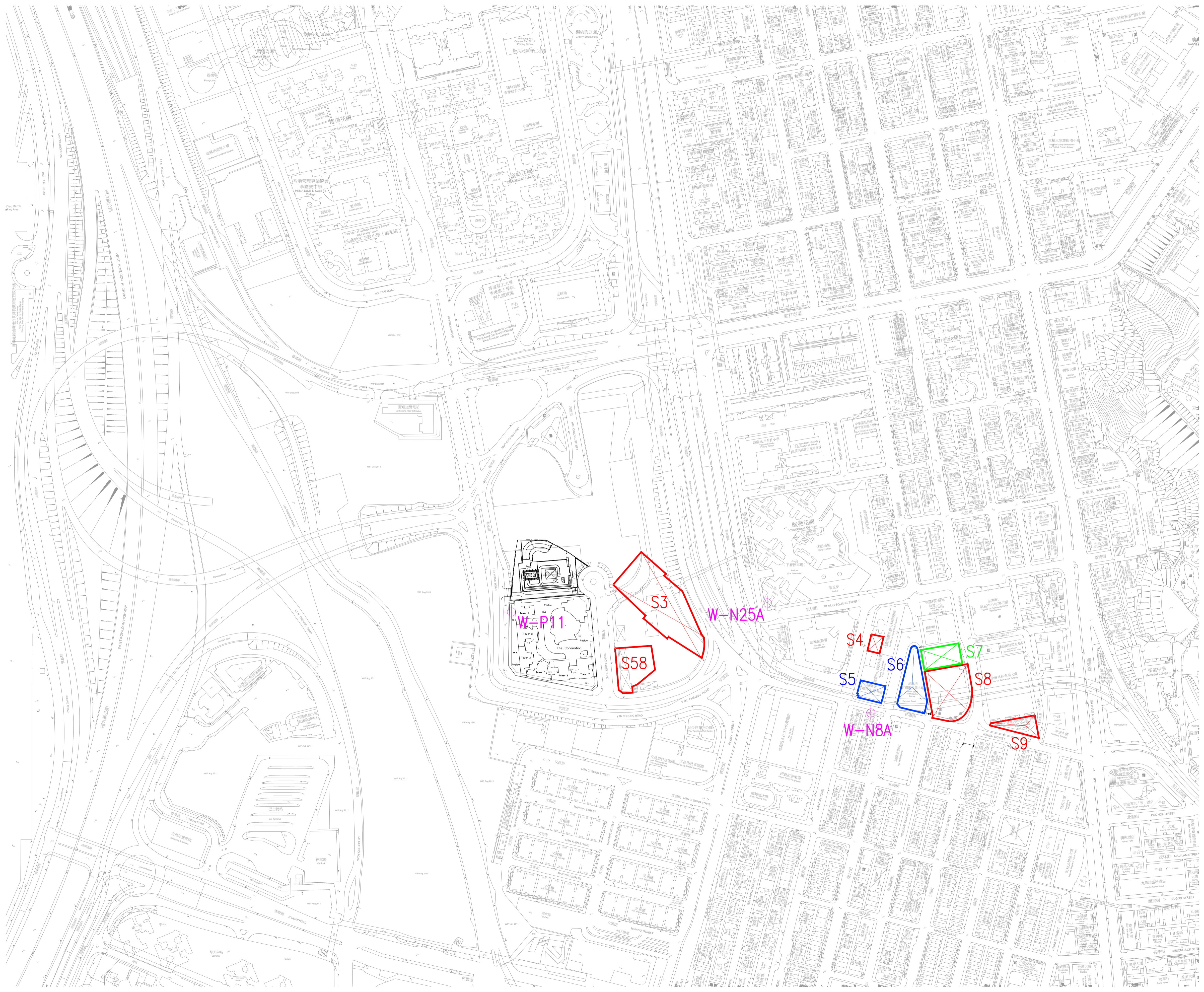
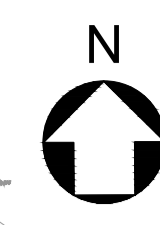
Appendix A

Site Layout and NSR Locations



SITE BOUNDARY

SITE BOUNDARY O/S 300M



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A	SUBMISSION	PC	03/19
-	SUBMISSION	PC	06/18
Rev.	Description	By	Date
修訂	內容摘要	設計	日期

Contractor
承建商



BUILD KING - SKEC JOINT VENTURE

Project title
工程名稱

Contract No. HY/2014/08

Central Kowloon Route -
Yau Ma Tei East

Drawing title
圖紙名稱

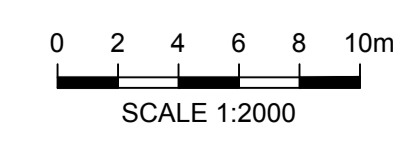
**APPENDIX
LOCATIONS OF NSR'S AND
NOTIONAL SOURCES
(WEST PORTION - STAGE 1)**

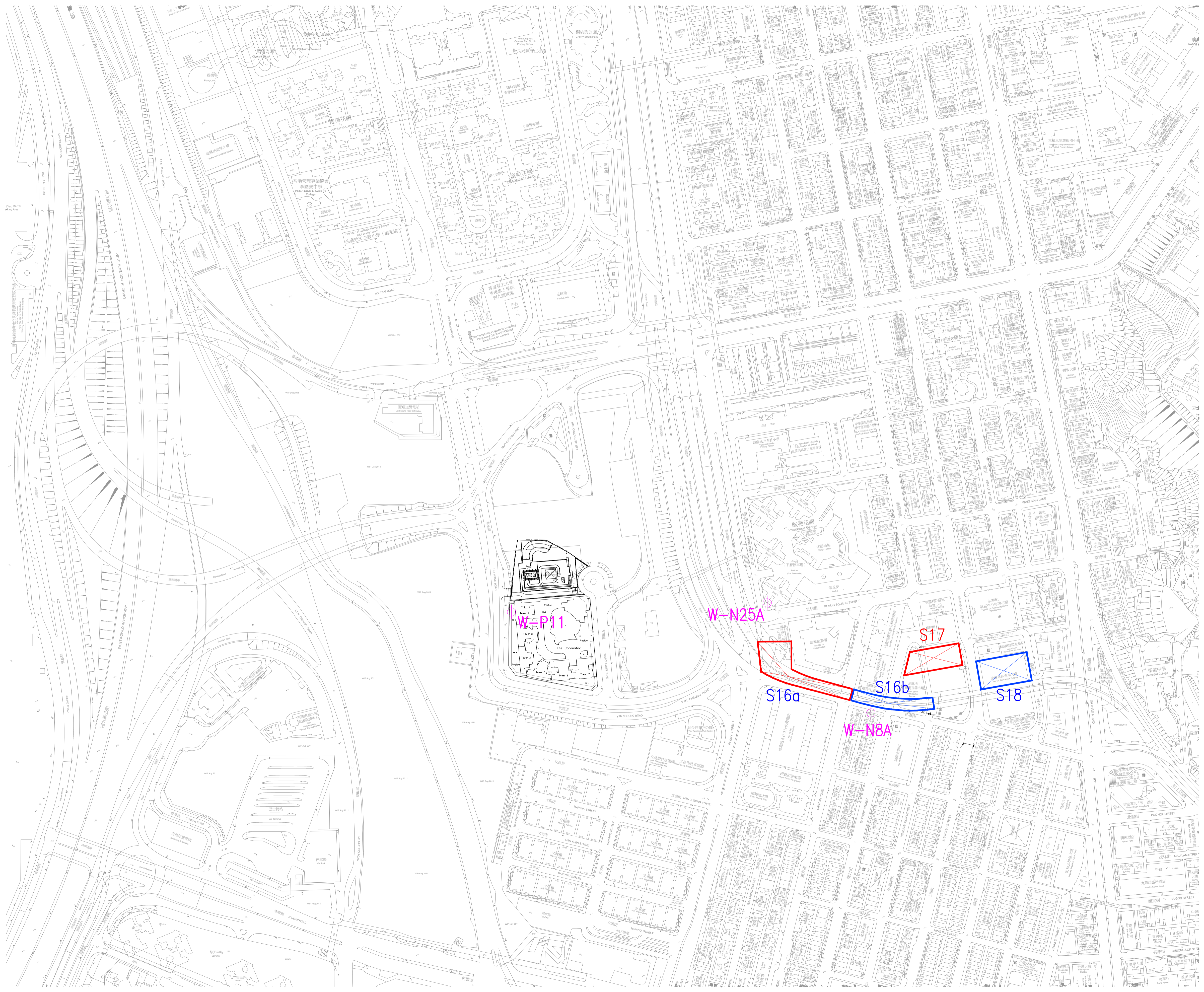
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**路政署
HIGHWAYS DEPARTMENT**
主要工程管理處
MAJOR WORKS PROJECT MANAGEMENT OFFICE





A	SUBMISSION	PC	03/19
-	SUBMISSION	PC	06/18
Rev. 修訂	Description 內容摘要	By 設計	Date 日期

Contractor
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BUILD KING - SKEC JOINT VENTURE

Project title
 工程名稱

Contract No. HY/2014/08

Central Kowloon Route -
 Yau Ma Tei East

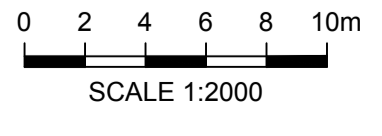
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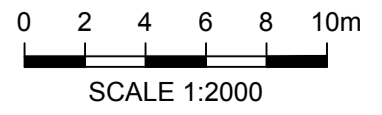
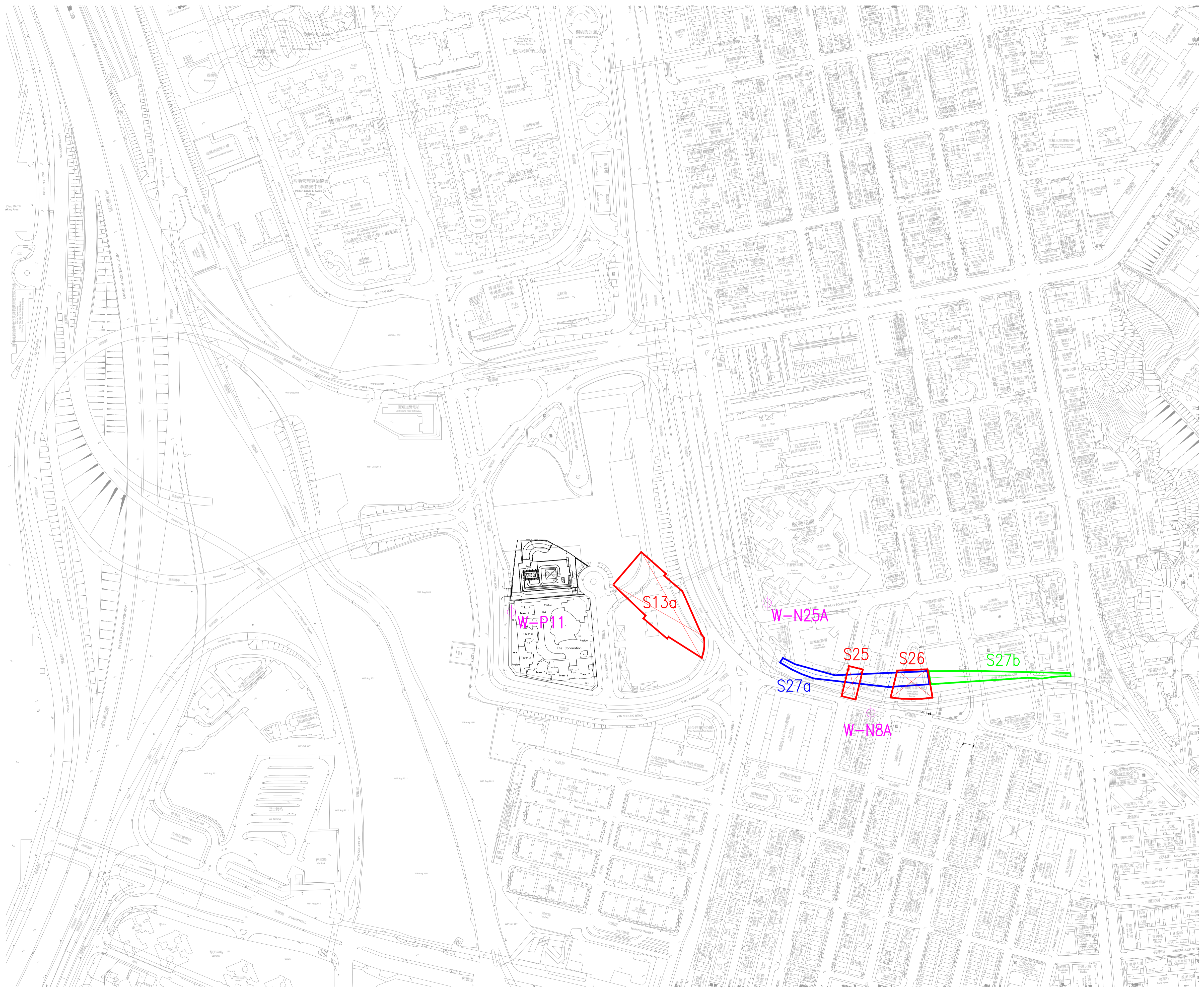
**APPENDIX
 LOCATIONS OF NSR'S AND
 NOTIONAL SOURCES
 (WEST PORTION - STAGE 2)**

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Rev. 修訂	Description 內容摘要	By 設計	Date 日期

Contractor
 承建商



BUILD KING - SKEC JOINT VENTURE

Project title
 工程名稱

Contract No. HY/2014/08

**Central Kowloon Route -
 Yau Ma Tei East**

Drawing title
 圖紙名稱

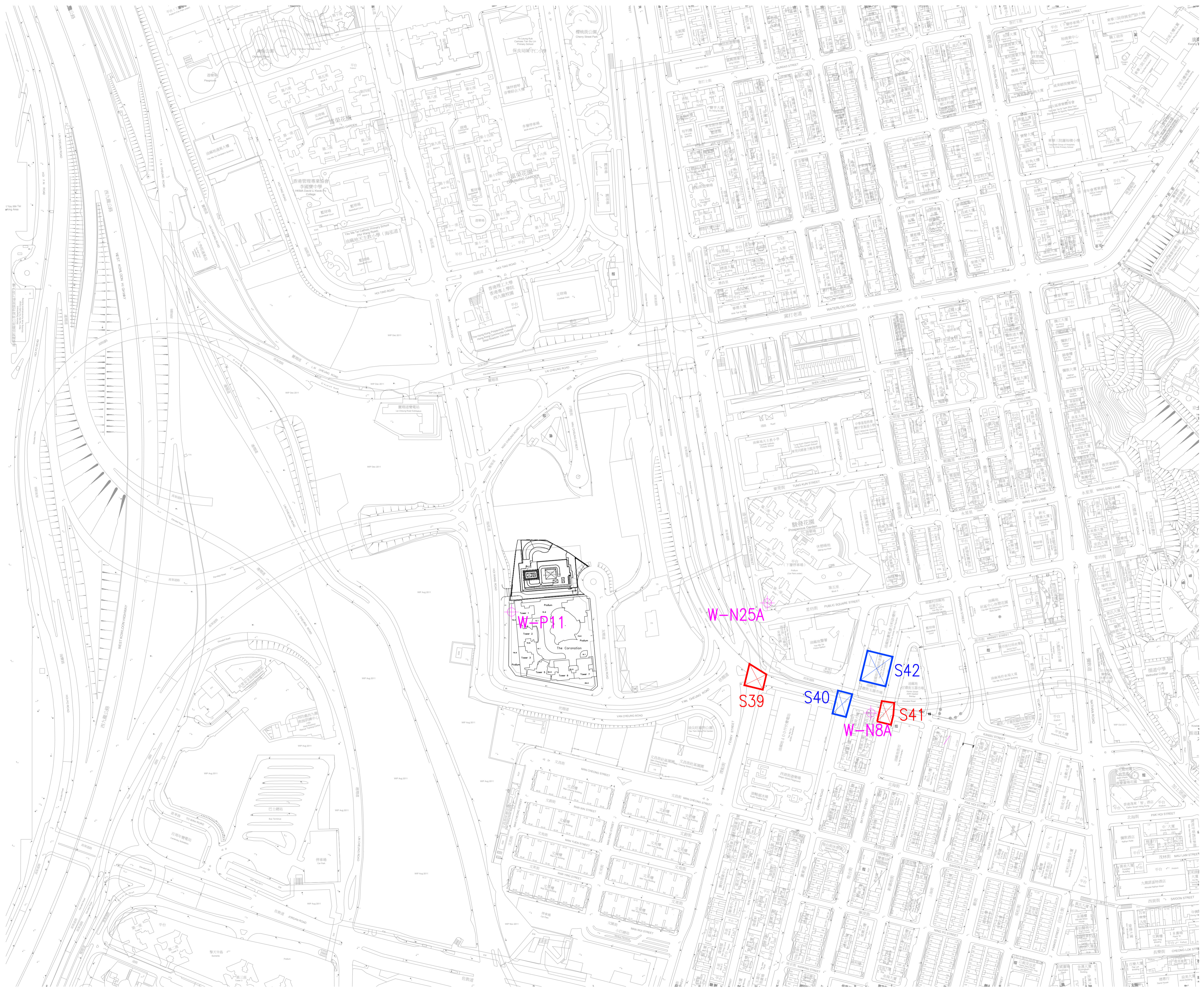
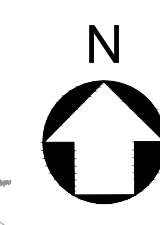
**APPENDIX
 LOCATIONS OF NSR'S AND
 NOTIONAL SOURCES
 (WEST PORTION - STAGE 3)**

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BUILD KING - SKEC JOINT VENTURE

Project title
工程名稱

Contract No. HY/2014/08

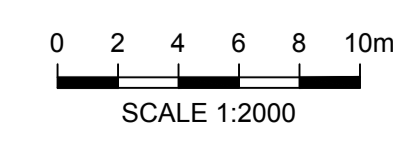
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Yau Ma Tei East

Drawing title
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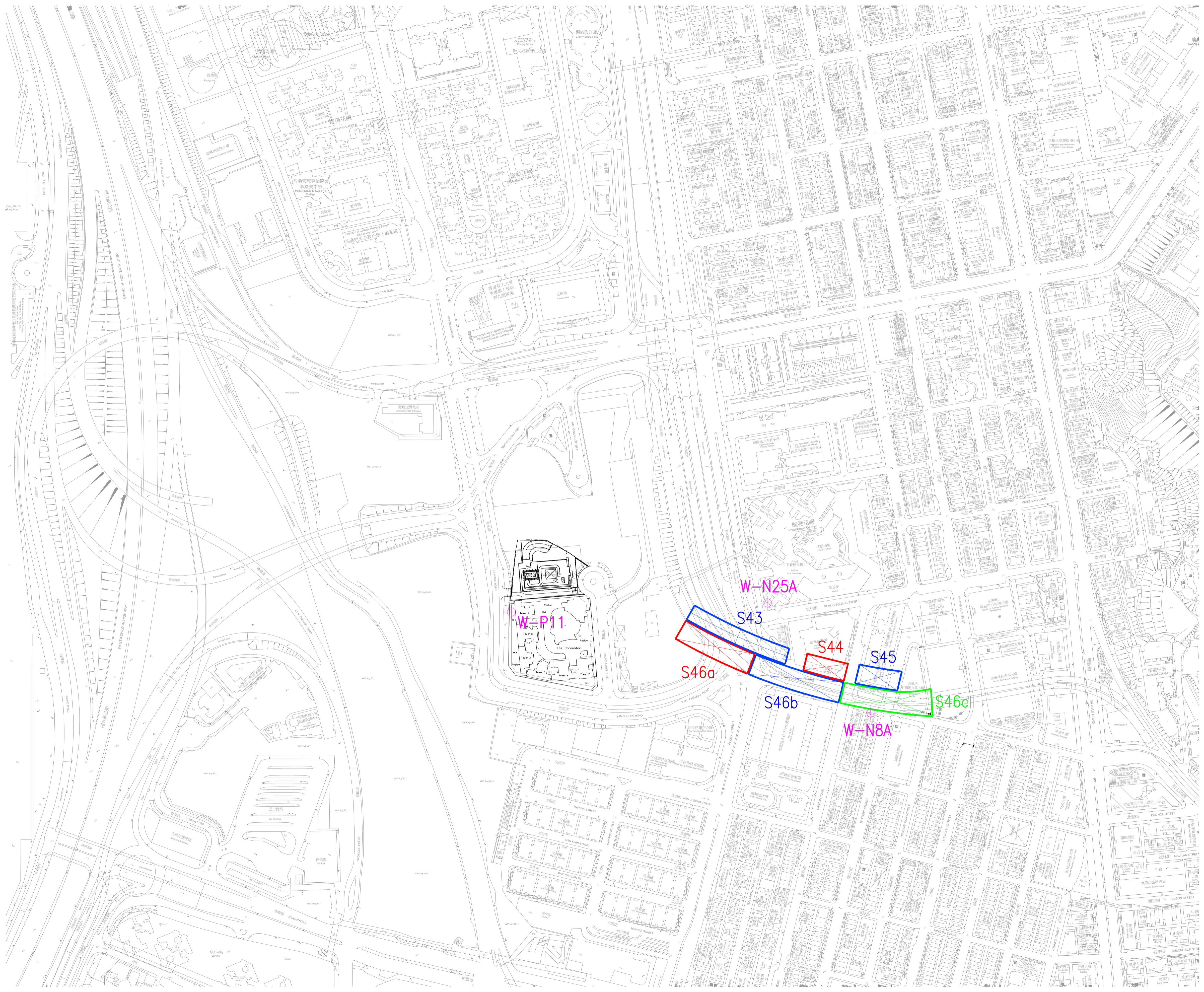
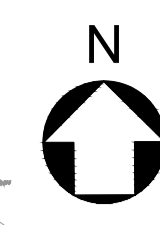
**APPENDIX
LOCATIONS OF NSR'S AND
NOTIONAL SOURCES
(WEST PORTION - STAGE 5)**

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BUILD KING - SKEC JOINT VENTURE

Project title
工程名稱

Contract No. HY/2014/08

Central Kowloon Route -
Yau Ma Tei East

Drawing title
圖紙名稱

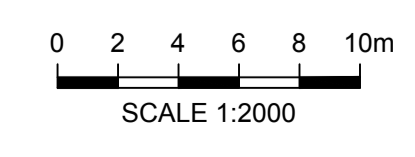
**APPENDIX
LOCATIONS OF NSR'S AND
NOTIONAL SOURCES
(WEST PORTION - STAGE 6)**

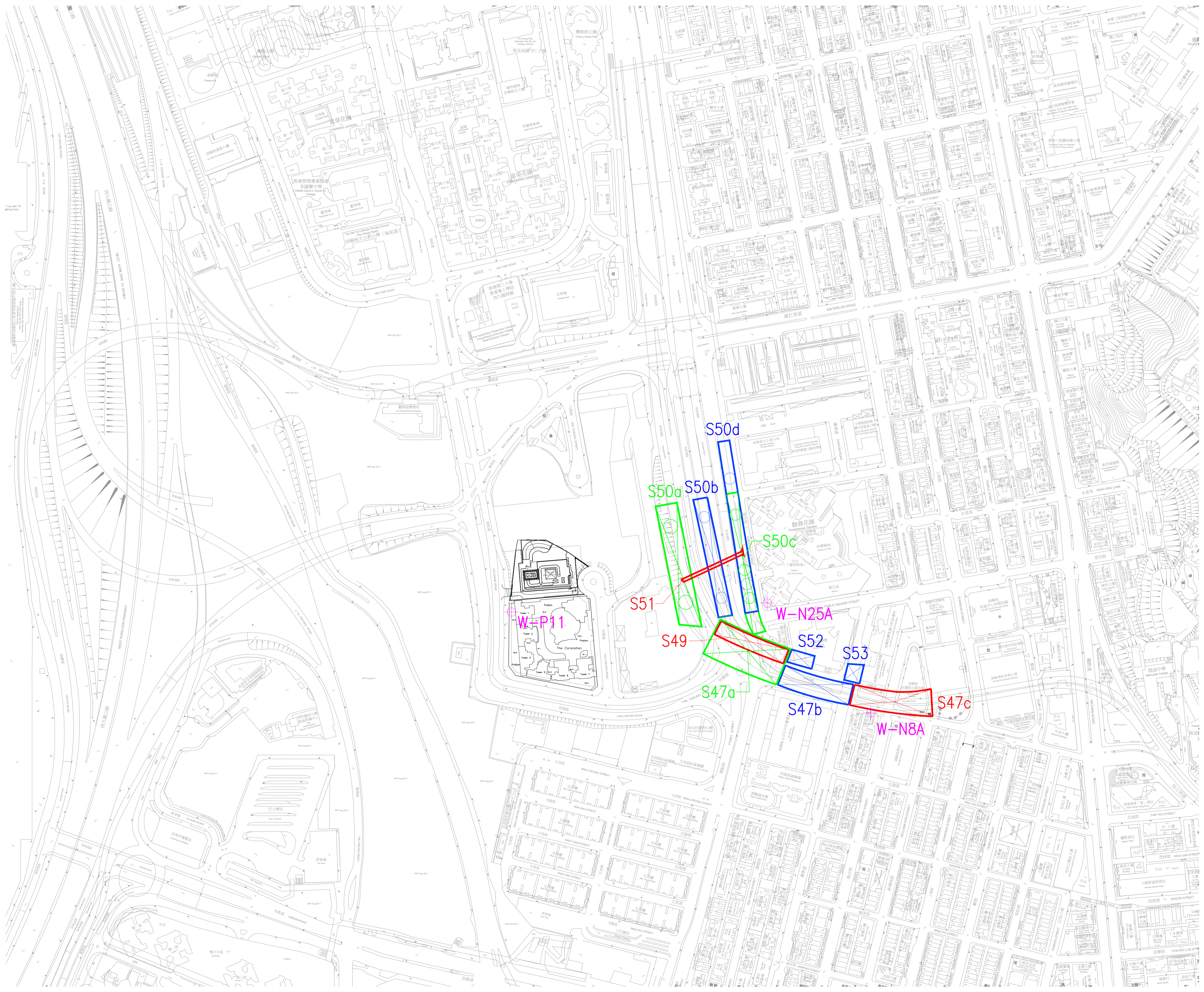
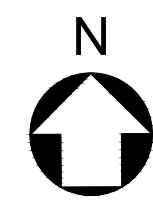
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BUILD KING - SKEC JOINT VENTURE

Project title
 工程名稱

Contract No. HY/2014/08

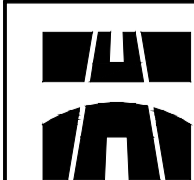
Central Kowloon Route -
 Yau Ma Tei East

Drawing title
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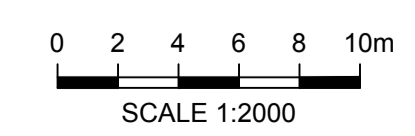
**APPENDIX
 LOCATIONS OF NSR'S AND
 NOTIONAL SOURCES
 (WEST PORTION - STAGE 7)**

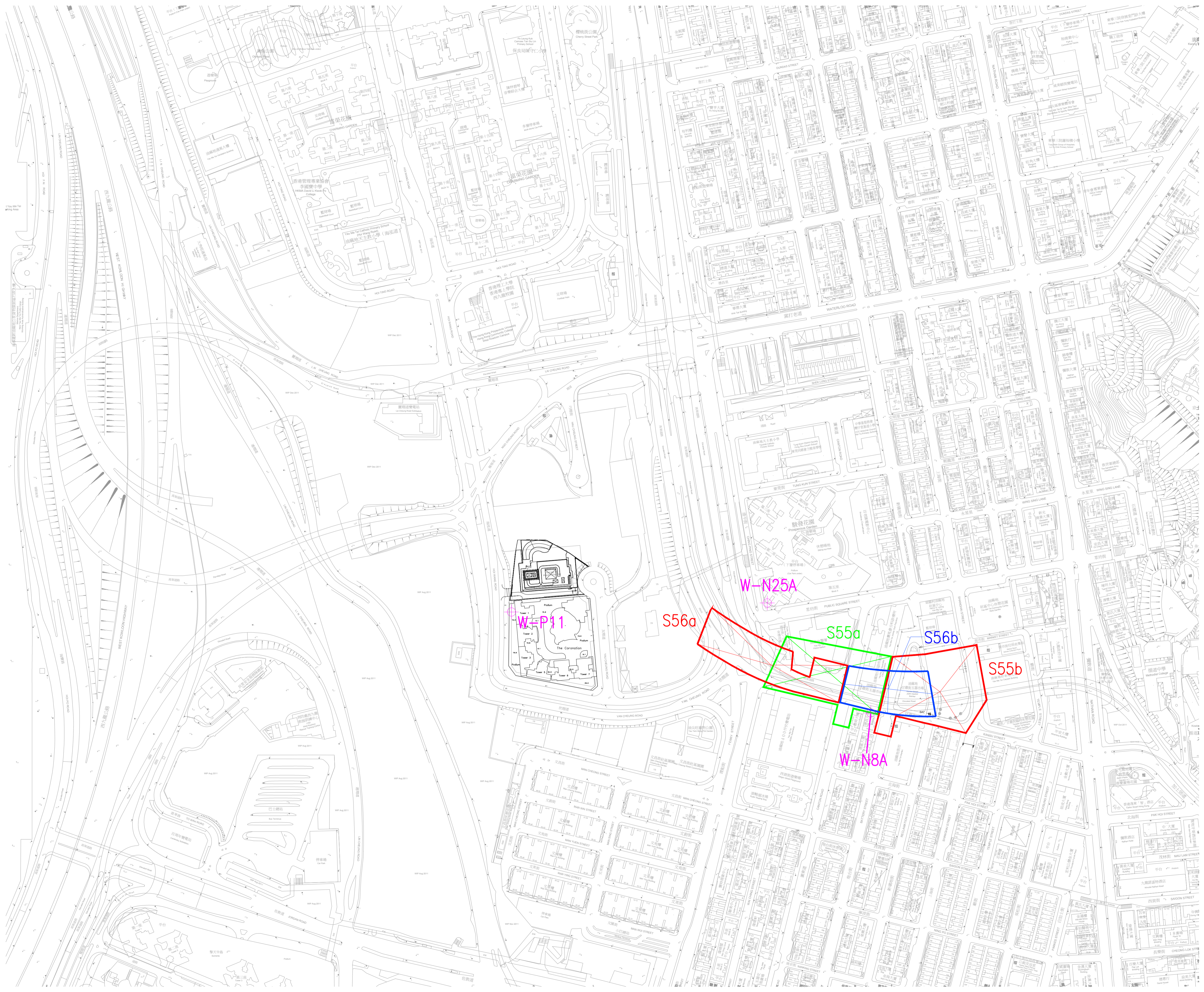
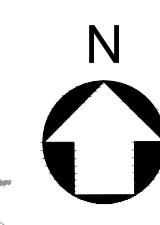
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承建商



BUILD KING - SKEC JOINT VENTURE

Project title
工程名稱

Contract No. HY/2014/08

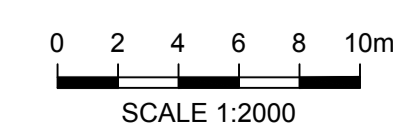
Central Kowloon Route -
Yau Ma Tei East

Drawing title
圖紙名稱

**APPENDIX
LOCATIONS OF NSR'S AND
NOTIONAL SOURCES
(WEST PORTION - STAGE 8)**

Drawing no. 圖紙編號	BKSK/YMTE/C/10008	Rev. 修訂	A
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Appendix B

Updated Preliminary Construction Programme

Appendix C

Detailed Construction Noise Assessment

Build King - SKEC Joint Venture

Construction Noise Assessment

Period: 0700 to 1900 (except general holidays)

Noise Sensitive Receiver: W-N1A Yau Ma Tei Catholic Primary School (Hoi Wang Road)

Mitigation Measures Scenario

Noise Criteria: 70dB(A), 65dB(A) during exam

Worksite	Activity	Period	PME	TM Ref. / other Ref.	Unit Quiet Plant SWL	On-time, %	Time Factor	Quiet Plant SWL with on-time %	No. of plants	Total SWL	Distance from Notional Sources, m	Distance Attenuation	Façade Correction, dB(A)	Barrier Correction, dB(A)	Predicted Noise Level, dB(A)	Total Predicted Noise Level for each group, dB(A)			
S3	Construct Dwall and Traffic Deck - Piling for King Post	Jul-18	Concrete Lorry Mixer	CNP044	109	60	-2	107	1	107	300	-58	3	-5	47	51			
			Concrete pump	CNP047	109	80	-1	108	1	108	300	-58	3	-5	43				
			Dump Truck with Grab	CNP069	105	70	-2	103	1	103	300	-58	3	-5	44				
			Generator	CNP103	95	100	0	95	2	98	300	-58	3	-10	33				
			Lorry	CNP142	105	60	-2	103	1	103	300	-58	3	-5	43				
			or																
			Generator	CNP103	95	100	0	95	2	98	300	-58	3	-10	33				
			Lorry	CNP142	105	60	-2	103	1	103	300	-58	3	-5	43				
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	300	-58	3	-5	40				
			Bored Piling Crane mounted auger	BS D4-37	111	70	-2	109	2	112	300	-58	3	-10	48				
	Construct Dwall and Traffic Deck - Diaphragm Walls	Aug 2018 - Nov 2018	Excavator/Loader, Wheeled/Tracked	EPD-01145	99	70	-2	97	1	97	300	-58	3	-5	38	50			
			Bar Bender and Cutter	CNP021	90	70	-2	88	1	88	300	-58	3	0	34				
			Concrete Lorry Mixer	CNP044	109	60	-2	107	1	107	300	-58	3	-5	47				
			Concrete pump	CNP047	109	80	-1	108	1	108	300	-58	3	-10	43				
			Generator	CNP103	95	100	0	95	2	98	300	-58	3	-10	33				
			Lorry	CNP142	105	70	-2	103	1	103	300	-58	3	-5	44				
			Poker, Vibratory, Hand Held	CNP173	102	60	-2	100	1	100	300	-58	3	-5	40				
			or																
			Dump Truck with Grab	CNP069	105	70	-2	103	1	103	300	-58	3	-5	44				
			Generator	CNP103	95	100	0	95	2	98	300	-58	3	-10	33				
	Construct Southern Dwall & Traffic Deck - Excavation for Diaphragm Walls	Nov 2018 - Jan 2019	Crane Mobile	BS D7-114	101	70	-2	99	1	99	300	-58	3	-5	40	47			
			Excavator/Loader, Wheeled/Tracked	CNP162	105	90	0	105	1	105	300	-58	3	-10	40				
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	60	-2	97	1	97	300	-58	3	-5	37				
			Dump Truck with Grab	CNP069	105	70	-2	103	1	103	300	-58	3	-5	44				
			Generator	CNP103	95	100	0	95	1	95	300	-58	3	-10	30				
			Lorry	CNP142	105	70	-2	103	1	103	300	-58	3	-5	44				
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	300	-58	3	-5	40				
			Excavator/Loader, Wheeled/Tracked	CNP162	105	90	0	105	1	105	300	-58	3	-10	40				
Excavator/Loader, Wheeled/Tracked			EPD-01145	99	60	-2	97	1	97	300	-58	3	-5	37					
Bar Bender and Cutter			CNP021	90	70	-2	88	1	88	300	-58	3	0	34					
Construct Southern Dwall & Traffic Deck - Concreting for Diaphragm Walls	Feb-19	Concrete Lorry Mixer	CNP044	109	60	-2	107	1	107	300	-58	3	-5	47	49				
		Concrete pump	CNP047	109	80	-1	108	1	108	300	-58	3	-10	43					
		Generator	CNP103	95	70	-2	93	1	93	300	-58	3	-10	29					
Construct Southern Dwall & Traffic Deck - Temporary Traffic Deck	Mar-19	Lorry	CNP142	105	90	0	105	1	105	300	-58	3	-5	45	47				
		Excavator/Loader, Wheeled/Tracked	EPD-01145	99	70	-2	97	1	97	300	-58	3	-5	38					
		Crane Mobile	BS D7-114	101	70	-2	99	1	99	300	-58	3	-5	40					
S13a	Removal of Excavated Material through West End Portal	Apr 2019 - Mar 2020	Dump Truck with Grab	CNP069	105	70	-2	103	10	113	300	-58	3	-5	54	54			

Worksite	Activity	Period	PME	TM Ref. / other Ref.	Unit Quiet Plant SWL	On-time, %	Time Factor	Quiet Plant SWL with on-time %	No. of plants	Total SWL	Distance from Notional Sources, m	Distance Attenuation	Façade Correction, dB(A)	Barrier Correction, dB(A)	Predicted Noise Level, dB(A)	Total Predicted Noise Level for each group, dB(A)		
S3	Construct Dwell and Traffic Deck - Piling for King Post	Jul-18	Concrete Lorry Mixer	CNP044	109	60	-2	107	1	107	110	-49	3	-5	56	60		
			Concrete pump	CNP047	109	80	-1	108	1	108	110	-49	3	-10	52			
	Dump Truck with Grab	CNP069	105	70	-2	103	1	103	110	-49	3	-5	53					
	Generator	CNP103	95	100	0	95	2	98	110	-49	3	-10	42					
	Lorry or		Generator	CNP142	105	60	-2	103	1	103	110	-49	3	-5	52	59		
			Lorry	CNP142	105	60	-2	103	1	103	110	-49	3	-5	52			
	Crane Mobile	BS D7-114	101	70	-2	99	1	99	110	-49	3	-5	49					
	Bored Piling Crane mounted auger	BS D4-37	111	70	-2	109	2	112	110	-49	3	-10	57					
	Construct Dwell and Traffic Deck - Diaphragm Walls	Aug 2018 - Nov 2018		Excavator/Loader, Wheeled/Tracked	EPD-01145	99	70	-2	97	1	97	110	-49	3	-5	47	59	
				Bar Bender and Cutter	CNP021	90	70	-2	88	1	88	110	-49	3	0	43		
		Concrete Lorry Mixer	CNP044	109	60	-2	107	1	107	110	-49	3	-5	56				
		Concrete pump	CNP047	109	70	-2	107	1	107	110	-49	3	-5	56				
		Generator		Lorry	CNP103	95	100	0	95	2	98	110	-49	3	-10	42	59	
				Lorry	CNP142	105	70	-2	103	1	103	110	-49	3	-5	53		
		Poker, Vibratory, Hand Held	CNP173	102	60	-2	100	1	100	110	-49	3	-5	49				
		Dump Truck with Grab	CNP069	105	70	-2	103	1	103	110	-49	3	-5	53				
Generator			Crane Mobile	CNP103	95	100	0	95	2	98	110	-49	3	-10	42	56		
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	110	-49	3	-5	49			
Piling, Diaphragm Wall, Bentonite Filtering		CNP162	105	90	0	105	1	105	110	-49	3	-10	49					
Excavator/Loader, Wheeled/Tracked		EPD-01145	99	60	-2	97	1	97	110	-49	3	-5	46					
Construct Southern Dwell & Traffic Deck - Excavation for Diaphragm Walls		Nov 2018 - Jan 2019		Dump Truck with Grab	CNP069	105	70	-2	103	1	103	110	-49	3	-5	53	57	
				Generator	CNP103	95	100	0	95	1	95	110	-49	3	-10	39		
		Lorry	CNP142	105	70	-2	103	1	103	110	-49	3	-5	53				
	Crane Mobile	BS D7-114	101	70	-2	99	1	99	110	-49	3	-5	49					
	Piling, Diaphragm Wall, Bentonite Filtering		Excavator/Loader, Wheeled/Tracked	EPD-01145	99	60	-2	97	1	97	110	-49	3	-10	49	57		
			Bar Bender and Cutter	CNP021	90	70	-2	88	1	88	110	-49	3	0	43			
	Concrete Lorry Mixer	CNP044	109	60	-2	107	1	107	110	-49	3	-5	56					
	Concrete pump	CNP047	109	80	-1	108	1	108	110	-49	3	-10	52					
	Construct Southern Dwell & Traffic Deck - Temporary Traffic Deck	Mar-19		Generator	CNP103	95	70	-2	93	1	93	110	-49	3	-10	38	56	
				Lorry	CNP142	105	90	0	105	1	105	110	-49	3	-5	54		
				Excavator/Loader, Wheeled/Tracked	EPD-01145	99	70	-2	97	1	97	110	-49	3	-5	47		
	Crane Mobile	BS D7-114	101	70	-2	99	1	99	110	-49	3	-5	49					
	Construction of Methodone Clinic	Apr 2018 - Jan 2019		Bar Bender and Cutter	CNP021	90	60	-2	88	1	88	120	-50	3	0	41	61.3	
Concrete Lorry Mixer				CNP044	109	60	-2	107	1	107	120	-50	3	-5	56			
Concrete pump		CNP047	109	70	-2	107	1	107	120	-50	3	-5	56					
Generator		CNP103	95	100	0	95	1	95	120	-50	3	-10	38					
Crane Mobile			Crane Mobile	BS D7-114	101	50	-3	98	1	98	120	-50	3	-5	46	61.3		
			Poker, Vibratory, Hand Held	CNP173	102	50	-3	99	3	104	120	-50	3	-5	52			
Saw, Circular Wood		BS D7-79	103	50	-3	100	2	103	120	-50	3	-5	51					
Excavator/Loader, Wheeled/Tracked		EPD-01145	99	70	-2	97	1	97	120	-50	3	-5	46					
Decant and demolish existing Jade Market		Mar-20		Breaker, Excavator Mounted (Hydraulic)	BS D8-13	110	60	-2	108	1	108	135	-51	3	-5	55	58.6	
				Dump Truck with Grab	CNP069	105	50	-3	102	2	105	135	-51	3	-5	52		
		Concrete crusher, excavator mounted	CNP055	103	70	-2	101	1	101	135	-51	3	-5	49				
		Crane Mobile	BS D7-114	101	100	0	101	1	101	135	-51	3	-5	48				
	Saw, Wire		Saw, Wire	CNP205	101	50	-3	98	2	101	135	-51	3	-5	48	57.5		
			Breaker, Excavator Mounted (Hydraulic)	BS D8-13	110	80	-1	109	1	109	170	-53	3	-5	54			
	Dump Truck with Grab	CNP069	105	70	-2	103	2	106	170	-53	3	-5	52					
	Concrete crusher, excavator mounted	CNP055	103	90	0	103	1	103	170	-53	3	-5	48					
	Decant and demolish existing Jade Market	Apr-20		Crane Mobile	BS D7-114	101	70	-2	99	1	99	170	-53	3	-5	48	57.5	
				Saw, Wire	CNP205	101	50	-3	98	2	101	170	-53	3	-5	46		
		Breaker, Excavator Mounted (Hydraulic)	BS D8-13	110	80	-1	109	1	109	170	-53	3	-5	54				
		Dump Truck with Grab	CNP069	105	70	-2	103	2	106	170	-53	3	-5	52				
		Construction of Temporary Library & Temporary Jade Market - Foundation	May 2019 - Oct 2019		Bar Bender and Cutter	CNP021	90	60	-2	88	1	88	180	-53	3	0	38	58.0
					Concrete Lorry Mixer	CNP044	109	50	-3	106	3	111	180	-53	3	-5	56	
Concrete pump			CNP047	109	70	-2	107	1	107	180	-53	3	-10	47				
Generator			CNP103	95	100	0	95	2	98	180	-53	3	-10	38				
Crane Mobile				Crane Mobile	BS D7-114	101	50	-3	98	2	101	180	-53	3	-5	46	58.0	
				Poker, Vibratory, Hand Held	CNP173	102	50	-3	99	3	104	180	-53	3	-5	49		
Saw, Circular Wood			BS D7-79	103	50	-3	100	2	103	180	-53	3	-5	48				
Excavator/Loader, Wheeled/Tracked			EPD-01145	99	70	-2	97	1	97	180	-53	3	-5	42				
Construction of Temporary Library & Temporary Jade Market - Superstructure			Nov 2019 - Feb 2020		Bar Bender and Cutter	CNP021	90	60	-2	88	2	91	180	-53	3	0	41	55.7
	Concrete Lorry Mixer				CNP044	109	50	-3	106	2	109	180	-53	3	-5	54		
	Concrete pump	CNP047	109	40	-4	105	1	105	180	-53	3	-10	45					
	Generator	CNP103	95	100	0	95	2	98	180	-53	3	-10	38					
	Crane Mobile		Crane Mobile	BS D7-114	101	50	-3	98	1	98	180	-53	3	-5	43	55.7		
			Saw, Circular Wood	BS D7-79	103	50	-3	100	2	103	180	-53	3	-5	48			
	Dump Truck with Grab	CNP069	105	50	-3	102	2	105	205	-54	3	-5	49					
	Generator	CNP103	95	100	0	95	3	100	205	-54	3	-10	39					
	Construction of Western Access Shaft - Excavation of Diaphragm Walls	Apr-18		Lorry	CNP142	105	70	-2	103	1	103	205	-54	3	-5	47	54	
				Crane Mobile	BS D7-114	101	50	-3	98	2	101	205	-54	3	-5	45		
		Piling, Diaphragm Wall, Bentonite Filtering Plant	CNP162	105	90	0	105	3	109	205	-54	3	-10	48				
Excavator/Loader, Wheeled/Tracked		EPD-01145	99	60	-2	97	1	97	205	-54	3	-5	41					
Construct Western Access Shaft - Concreting of Diaphragm Wall		May-18		Bar Bender and Cutter	CNP021	90	60	-2	88	1	88	205	-54	3	0	37	56	
				Concrete Lorry Mixer	CNP044	109	50	-3	106	3	111	205	-54	3	-5	55		
				Concrete pump	CNP047	109	70	-2	107	1	107	205	-54	3	-10	46		
Generator		CNP103	95	100	0	95	3	100	205	-54	3	-10	39					
Lorry			Lorry	CNP142	105	70	-2	103	1	103	205	-54	3	-5	47	56		
			Crane Mobile	BS D7-114	101	50	-3	98	2	101	205	-54	3	-5	45			
Dump Truck		CNP069	105	50	-3	102	2	105	205	-54	3	-5	49					
Generator		CNP103	95	100	0	95	2	98	205	-54	3	-10	37					
Construct Western Access Shaft - Soil Excavation of Access Shaft		Dec-19		Lorry	CNP142	105	50	-3	102	1	102	205	-54	3	-5	46	53	
	Tracked crane			BS D7-114	101	70	-2	99	1	99	205	-54	3	-5	43			
	Excavator/Loader, Wheeled/Tracked	EPD-01145	99	60	-2	97	3	102	205	-54	3	-5	45					
	Water Pump, Submersible (Electric)	CNP283	85	100	0	85	5	92	205	-54	3	0	41					
	Ventilation Fan	CNP241	108	90	0	108	2	111	205	-54	3	-15	44	53				
	Breaker, Excavator Mounted (Hydraulic)	BS D8-13	110	60	-2	108	3	113	205	-54	3	0	61					
	Rock drill, excavator mounted	SIL EIA	108	50	-3	105	3	110	205	-54	3	0	59					
	Splitter, excavator mounted	BS C12/2	101	50	-3	98	3	103	205	-54	3	0	52					
	Construct Western Access Shaft - Rock Excavation of Access Shaft	Jan 2020 - Mar 2020		Dump Truck	CNP069	105	50	-3	102	2	105	205	-54	3	-5	49	64	
				Generator	CNP103	95	100	0	95	2	98	205	-54	3	-10	37		
		Lorry	CNP142	105	50	-3	102	1	102	205	-54	3	-5	46				
Tracked crane		BS D7-114	101	70	-2	99	1	99	205	-54	3	-5	43					
Ventilation Fan			Ventilation Fan	CNP241	108	90	0	108	2	111	205	-54	3	-15	44	64		
			Bar Bender and Cutter	CNP021	90	60	-2	88	3	93	205	-54	3	0	41			

Build King - SKEC Joint Venture

Construction Noise Assessment
Period: 0700 to 1900 (except general holidays)
Noise Sensitive Receiver: W-N25A Prosperous Garden Block 1
Mitigation Measures Scenario

Noise Criteria: 75dB(A)

Worksite	Activity	Period	PME	TM Ref. / other Ref.	Unit Quiet Plant SWL	On-time, %	Time Factor	Quiet Plant SWL with on-time %	No. of plants	Total SWL	Distance from Notional Sources, m	Distance Attenuation	Facade Correction, dB(A)	Barrier Correction, dB(A)	Predicted Noise Level, dB(A)	Total Predicted Noise Level for each group, dB(A)	
16a	Construct Dwall and Traffic Deck - Piling for King Post	Nov-19	Concrete Lorry Mixer	CNP044	109	60	-2	107	1	107	80	-46	3	-5	59	62	
			Concrete pump	CNP047	109	80	-1	108	1	108	80	-46	3	-10	55		
			Dump Truck with Grab	CNP069	105	70	-2	103	1	103	80	-46	3	-5	55		
			Generator	CNP103	95	100	0	95	2	98	80	-46	3	-10	45		
			Lorry	CNP142	105	60	-2	103	1	103	80	-46	3	-5	55		
	Construct Middle Dwall and Traffic Deck - Diaphragm Walls	Dec 2019 - Apr 2020	Generator	CNP103	95	100	0	95	2	98	80	-46	3	-10	45	62	
			Lorry	CNP142	105	60	-2	103	1	103	80	-46	3	-5	51		
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	80	-46	3	-5	51		
			Bored Piling Crane mounted auger	BS D4-37	111	70	-2	109	2	112	80	-46	3	-10	59		
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	70	-2	97	1	97	80	-46	3	-5	49		
	Construct Middle Dwall and Traffic Deck - Temporary Traffic Deck	May-20	Bar Bender and Cutter	CNP021	90	70	-2	88	1	88	80	-46	3	0	45	62.1	
			Concrete Lorry Mixer	CNP044	109	60	-2	107	1	107	80	-46	3	-5	59		
			Concrete pump	CNP047	109	80	-1	108	1	108	80	-46	3	-10	55		
			Generator	CNP103	95	100	0	95	2	98	80	-46	3	-10	45		
			Lorry	CNP142	105	70	-2	103	1	103	80	-46	3	-5	55		
16b	Construct Dwall and Traffic Deck - Piling for King Post	Jul-20	Poker, Vibratory, Hand Held	CNP173	102	60	-2	100	1	100	80	-46	3	-5	52	62.1	
			Dump Truck with Grab	CNP069	105	70	-2	103	1	103	80	-46	3	-5	55		
			Generator	CNP103	95	100	0	95	2	98	80	-46	3	-10	45		
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	80	-46	3	-5	51		
			Bored Piling Crane mounted auger	BS D4-37	111	70	-2	109	2	112	80	-46	3	-10	59		
	Construct Middle Dwall and Traffic Deck - Diaphragm Walls	Aug 2020 - Dec 2020	Excavator/Loader, Wheeled/Tracked	EPD-01145	99	60	-2	97	1	97	80	-46	3	-5	49	56	
			Generator	CNP103	95	70	-2	93	1	93	80	-46	3	-10	34		
			Lorry	CNP142	105	90	0	105	1	105	80	-46	3	-5	56		
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	70	-2	97	1	97	80	-46	3	-5	49		
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	80	-46	3	-5	51		
	Construct Middle Dwall and Traffic Deck - Temporary Traffic Deck	Jan-21	Bar Bender and Cutter	CNP021	90	70	-2	88	1	88	160	-52	3	0	39	56.1	
			Concrete Lorry Mixer	CNP044	109	60	-2	107	1	107	160	-52	3	-5	53		
			Concrete pump	CNP047	109	80	-1	108	1	108	160	-52	3	-10	49		
			Generator	CNP103	95	100	0	95	2	98	160	-52	3	-10	39		
			Lorry	CNP142	105	70	-2	103	1	103	160	-52	3	-5	49		
S18	Demolish Multi-storey Carpark Building (partially)	Nov 2020 - Apr 2021	Poker, Vibratory, Hand Held	CNP173	102	60	-2	100	1	100	160	-52	3	-5	46	52.6	
			Dump Truck with Grab	CNP069	105	70	-2	103	1	103	160	-52	3	-5	49		
			Generator	CNP103	95	100	0	95	2	98	160	-52	3	-10	39		
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	160	-52	3	-5	45		
			Piling, Diaphragm Wall, Bentonite Filtering Plant	CNP162	105	90	0	105	1	105	160	-52	3	-10	45		
	Construct Middle Dwall and Traffic Deck - Temporary Traffic Deck	Jan-21	Excavator/Loader, Wheeled/Tracked	EPD-01145	99	60	-2	97	1	97	160	-52	3	-5	43	52.3	
			Generator	CNP103	95	70	-2	93	1	93	160	-52	3	-10	34		
			Lorry	CNP142	105	90	0	105	1	105	160	-52	3	-5	50		
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	70	-2	97	1	97	160	-52	3	-5	43		
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	160	-52	3	-5	45		
	S25	Demolish Multi-storey Carpark Building (partially)	Nov 2020 - Apr 2021	Breaker, Excavator Mounted (Hydraulic)	BS D8-13	110	60	-2	108	1	108	245	-56	3	-5	50	53.9
				Dump Truck with Grab	CNP069	105	70	-2	103	2	106	245	-56	3	-5	49	
				Concrete crusher, excavator mounted	CNP055	103	70	-2	101	2	104	245	-56	3	-5	47	
				Crane Mobile	BS D7-114	101	70	-2	99	1	99	245	-56	3	-5	42	
				Saw, Wire	CNP205	101	60	-2	99	1	99	245	-56	3	-5	41	
Construct Middle Dwall and Traffic Deck (cross road sections) - Diaphragm Walls		Jun-20	Bar Bender and Cutter	CNP021	90	70	-2	88	1	88	120	-50	3	0	42	60.1	
			Concrete Lorry Mixer	CNP044	109	60	-2	107	1	107	120	-50	3	-5	55		
			Concrete pump	CNP047	109	80	-1	108	1	108	120	-50	3	-10	51		
			Dump Truck with Grab	CNP069	105	70	-2	103	1	103	120	-50	3	-5	52		
			Generator	CNP103	95	100	0	95	1	95	120	-50	3	-10	38		
Construction Middle Dwall and Traffic Deck (cross road sections) - Temporary Traffic Deck		Jul 2020 - Aug 2020	Lorry	CNP142	105	70	-2	103	1	103	120	-50	3	-5	52	54.8	
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	120	-50	3	-5	48		
			Piling, Diaphragm Wall, Bentonite Filtering Plant	CNP162	105	90	0	105	1	105	120	-50	3	-10	48		
			Poker, Vibratory, Hand Held	CNP173	102	60	-2	100	1	100	120	-50	3	-5	48		
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	60	-2	97	1	97	120	-50	3	-5	45		
S26	Construct Proposed GRF Flyover (two lanes) on Northern Side and the Temporary Deck (From Reclamation Street to Ferry Street) - Foundation and pier	Jun-20	Generator	CNP103	95	70	-2	93	1	93	165	-52	3	-10	37	57.3	
			Lorry	CNP142	105	90	0	105	1	105	165	-52	3	-5	53		
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	70	-2	97	1	97	165	-52	3	-5	43		
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	165	-52	3	-5	48		
			Bar Bender and Cutter	CNP021	90	70	-2	88	1	88	165	-52	3	0	39		
	Construct Middle Dwall and Traffic Deck (cross road sections) - Diaphragm Walls	Jun-20	Concrete Lorry Mixer	CNP044	109	60	-2	107	1	107	165	-52	3	-5	57	57.3	
			Concrete pump	CNP047	109	80	-1	108	1	108	165	-52	3	-10	49		
			Dump Truck with Grab	CNP069	105	70	-2	103	1	103	165	-52	3	-5	49		
			Generator	CNP103	95	100	0	95	1	95	165	-52	3	-10	36		
			Lorry	CNP142	105	70	-2	103	1	103	165	-52	3	-5	49		
	Construct Middle Dwall and Traffic Deck (cross road sections) - Temporary Traffic Deck	Jul 2020 - Aug 2020	Crane Mobile	BS D7-114	101	70	-2	99	1	99	165	-52	3	-5	45	52.0	
			Piling, Diaphragm Wall, Bentonite Filtering Plant	CNP162	105	90	0	105	1	105	165	-52	3	-10	45		
			Poker, Vibratory, Hand Held	CNP173	102	60	-2	100	1	100	165	-52	3	-5	45		
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	60	-2	97	1	97	165	-52	3	-5	42		
			Generator	CNP103	95	70	-2	93	1	93	165	-52	3	-10	34		
S27a	Construct Proposed GRF Flyover (two lanes) on Northern Side and the Temporary Deck (From Reclamation Street to Ferry Street) - Foundation and pier	Jun 2020 - Dec 2020	Lorry	CNP142	105	90	0	105	1	105	210	-54	3	-5	50	66.2	
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	70	-2	97	1	97	210	-54	3	-5	43		
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	210	-54	3	-5	45		
			Concrete Lorry Mixer	CNP044	109	60	-2	107	2	110	80	-46	3	-5	58		
			Dump Truck with Grab	CNP069	105	60	-2	103	2	106	80	-46	3	-5	51		
	Construct Proposed GRF Flyover (two lanes) on Northern Side and the Temporary Deck (From Reclamation Street to Ferry Street) - Bridge Deck	May 2021 - Jul 2021	Generator	CNP103	95	100	0	95	3	100	80	-46	3	-10	47	59.8	
			Crane Mobile	BS D7-114	101	60	-2	99	2	102	80	-46	3	-5	54		
			Bar Bender and Cutter	CNP021	90	70	-2	88	1	88	80	-46	3	-10	47		
			Concrete pump	CNP047	109	70	-2	107	1	107	80	-46	3	-10	54		
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	50	-3	96	2	99	80	-46	3	-5	51		
	Construct Proposed GRF Flyover (two lanes) on Northern Side and the Temporary Deck (From Reclamation Street to Ferry Street) - Surfacing, MJ, noise barriers	Jul 2023 - Dec 2023	Crane Mobile	BS D7-114	101	60	-2	99	2	102	80	-46	3	-5	54	56.8	
			Asphalt Paver	EPD-01126	104	50	-3	101	1	101	80	-46	3	-5	53		
			Road Roller	EPD-01183	97	60	-2	95	1	95	80	-46	3	-5	47		
			Concrete Lorry Mixer	CNP044	109	60	-2	107	2	110	210	-54	3	-5	53		
			Dump Truck with Grab	CNP069	105	60	-2	103	2	106	210	-54	3	-5	49		
S27b	Construct Proposed GRF Flyover (two lanes) on Northern Side and the Temporary Deck (From Reclamation Street) - Bridge Deck	Oct 2020 - Apr 2021	Generator	CNP103	95	100	0	95	3	100	210	-54	3	-10	38	57.4	
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	50	-3	96	2	99	210	-54	3	-5	43		
			Crane Mobile	BS D7-114	101	60	-2	99	2	102	210	-54	3	-5	45		
			Bar Bender and Cutter	CNP021	90	70	-2	88	1	88	210	-54	3	-5	37		
			Concrete pump	CNP047	109	70	-2	107	1	107	210	-54	3	-10	46		
	Construct Proposed GRF Flyover (two lanes) on Northern Side and the Temporary Deck (From Reclamation Street) - Bridge Deck	May 2021 - Jul 2021	Bored Piling Crane mounted auger	BS D4-37	111	80	-1	110	2	113	210	-54	3	-10	52	51.5	
			Poker, Vibratory, Hand Held	CNP173	102	50	-3	99	3	104	210	-54	3	-5	47		
			Crane Mobile	BS D7-114	101	60	-2	99	2	102	210	-54	3	-5	45		
			Generator	CNP103	95	100	0	95	3	100	210	-54	3	-10	38		
			Bar Bender and Cutter	CNP021	90	70	-2	88	1	88	210	-54	3	0	37		
	Construct Proposed GRF Flyover (two lanes) on Northern Side and the Temporary Deck (From Reclamation Street) - Surfacing, MJ, noise barriers	Jul 2023 - Dec 2023	Concrete pump	CNP047	109	70	-2	107	1	107	210	-54	3	-10	46	48.4	
			Asphalt Paver	EPD-01126	104	50	-3	101	1	101	210	-54	3	-5	45		
			Road Roller	EPD-01183	97	60	-2	95	1	95	210	-54	3	-5	38		
			Crane Mobile	BS D7-114	101	60	-2	99	2	102	210	-54	3	-5	45		
			Concrete Lorry Mixer	CNP044	109	60	-2	107	2	110	210	-54	3	-5	53		

Build King - SKEC Joint Venture

Construction Noise Assessment
 Period: 0700 to 1900 (except general holidays)
 Noise Sensitive Receiver: W-N25A Prosperous Garden Block 1
 Mitigation Measures Scenario

Noise Criteria: 75dB(A)

Worksite	Activity	Period	PME	TM Ref. / other Ref.	Unit Quiet Plant SWL	On-time, %	Time Factor	Quiet Plant SWL with on-time %	No. of plants	Total SWL	Distance from Notional Sources, m	Distance Attenuation	Façade Correction, dB(A)	Barrier Correction, dB(A)	Predicted Noise Level, dB(A)	Total Predicted Noise Level for each group, dB(A)
S28	Diversion of Ferry Street Junction	Jul 2019 - Sep 2019	Asphalt Paver	EPD-01126	104	80	-1	103	1	103	85	-47	3	-5	54	65.3
			Concrete Lorry Mixer	CNP044	109	60	-2	107	2	110	85	-47	3	-5	61	
			Dump Truck with Grab	CNP069	105	70	-2	103	2	106	85	-47	3	-5	58	
			Generator	CNP103	95	100	0	95	3	100	85	-47	3	-10	46	
			Poker, Vibratory, Hand Held	CNP173	102	70	-2	100	3	105	85	-47	3	-5	57	
			Road Roller	EPD-01183	97	70	-2	95	2	98	85	-47	3	-5	50	
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	70	-2	97	2	100	85	-47	3	-5	52	
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	85	-47	3	-5	51	
			Bar Bender and Cutter	CNP021	90	70	-2	88	1	88	85	-47	3	0	45	
			Concrete pump	CNP047	109	80	-1	108	1	108	85	-47	3	-10	54	
S29	Construct Southern Dwall & Dwall Crossing Ferry Street - Piling for King Post	Nov-19	Generator	CNP103	95	100	0	95	1	95	45	-41	3	-10	47	64.9
			Lorry	CNP142	105	60	-2	103	1	103	45	-41	3	-5	60	
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	45	-41	3	-5	56	
			Bored Piling Crane mounted auger	BS D4-37	111	70	-2	109	1	109	45	-41	3	-10	61	
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	70	-2	97	1	97	45	-41	3	-5	54	
	Construct Southern Dwall & Dwall Crossing Ferry Street - Grouting for King post	Nov-19	Concrete Lorry Mixer	CNP044	109	60	-2	107	1	107	45	-41	3	-5	64	65.2
			Concrete pump	CNP047	109	80	-1	108	1	108	45	-41	3	-10	60	
			Generator	CNP103	95	100	0	95	1	95	45	-41	3	-10	47	
			Lorry	CNP142	105	60	-2	103	1	103	45	-41	3	-5	60	
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	45	-41	3	-5	56	
S29	Construct Southern Dwall & Dwall Crossing Ferry Street - Excavation for Diaphragm Walls	Dec 2019 - Mar 2020	Dump Truck with Grab	CNP069	105	70	-2	103	1	103	45	-41	3	-5	60	65.3
			Generator	CNP103	95	100	0	95	1	95	45	-41	3	-10	47	
			Lorry	CNP142	105	70	-2	103	1	103	45	-41	3	-5	60	
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	45	-41	3	-5	56	
			Piling, Diaphragm Wall, Bentonite Filtering Plant	CNP162	105	90	0	105	1	105	45	-41	3	-10	56	
	Construct Southern Dwall & Dwall Crossing Ferry Street - Concreting for Diaphragm Walls	Apr-20	Excavator/Loader, Wheeled/Tracked	EPD-01145	99	60	-2	97	1	97	45	-41	3	-5	54	65.4
			Bar Bender and Cutter	CNP021	90	70	-2	88	1	88	45	-41	3	0	50	
			Concrete Lorry Mixer	CNP044	109	60	-2	107	1	107	45	-41	3	-5	64	
			Concrete pump	CNP047	109	80	-1	108	1	108	45	-41	3	-10	60	
			Generator	CNP103	95	70	-2	93	1	93	45	-41	3	-10	45	
S30	Construct Southern Dwall & Dwall Crossing Ferry Street - Temporary Traffic Deck	May-20	Lorry	CNP142	105	90	0	105	1	105	45	-41	3	-5	61	63.3
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	70	-2	97	1	97	45	-41	3	-5	54	
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	45	-41	3	-5	56	
			Grout mixer	CNP105	90	70	-2	88	2	91	70	-45	3	-5	51	
			Grout pump	CNP106	105	70	-2	103	2	106	70	-45	3	-5	60	
	Underpinning Works for YMT Police Station - Grouting	Mar 2019 - Jun 2019	Generator	CNP103	95	100	0	95	1	95	70	-45	3	-10	43	59.7
			Lorry	CNP142	105	60	-2	103	1	103	70	-45	3	-5	56	
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	70	-45	3	-5	53	
			Drill rig, rotary type (diesel)	CNP 072	110	70	-2	108	1	108	70	-45	3	-10	57	
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	70	-2	97	1	97	70	-45	3	-5	51	
S30	Underpinning Works for YMT Police Station - Sokcet H Piling	Dec-18	Grout mixer	CNP105	90	40	-4	86	1	86	70	-45	3	-5	39	61.5
			Grout pump	CNP106	105	40	-4	101	1	101	70	-45	3	-5	54	
			Generator	CNP103	95	100	0	95	1	95	70	-45	3	-10	43	
			Lorry	CNP142	105	60	-2	103	1	103	70	-45	3	-5	56	
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	70	-45	3	-5	53	
	Underpinning Works for YMT Police Station - micro-piling	Aug 2019 - Feb 2020	Drill rig, rotary type (diesel)	CNP 072	110	70	-2	108	1	108	70	-45	3	-10	57	60.5
			Grout mixer	CNP105	90	40	-4	86	1	86	70	-45	3	-5	39	
			Grout pump	CNP106	105	40	-4	101	1	101	70	-45	3	-5	54	
			Dump Truck with Grab	CNP069	105	80	-1	104	1	104	70	-45	3	-5	57	
			Generator	CNP103	95	100	0	95	1	95	70	-45	3	-10	43	
S30	Underpinning Works for YMT Police Station - excavation	Jan 2020 - Feb 2020	Excavator/Loader, Wheeled/Tracked	EPD-01145	99	80	-1	98	1	98	70	-45	3	-5	51	58.2
			Generator	CNP103	95	100	0	95	1	95	70	-45	3	-10	43	
			Lorry	CNP142	105	60	-2	103	1	103	70	-45	3	-5	56	
			Drill rig, rotary type (diesel)	CNP 072	110	70	-2	108	1	108	70	-45	3	-10	57	
			Grout mixer	CNP105	90	40	-4	86	1	86	70	-45	3	-5	39	
	Underpinning Works for YMT Police Station - pipe piling	Mar 2020 - Nov 2020	Grout mixer	CNP105	90	40	-4	86	1	86	70	-45	3	-5	39	60.5
			Grout pump	CNP106	105	40	-4	101	1	101	70	-45	3	-5	54	
			Generator	CNP103	95	100	0	95	1	95	70	-45	3	-10	43	
			Lorry	CNP142	105	60	-2	103	1	103	70	-45	3	-5	56	
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	70	-45	3	-5	53	
S30	Underpinning Works for YMT Police Station - tam grouting	Dec 2020 - Feb 2021	Grout mixer	CNP105	90	70	-2	88	2	91	70	-45	3	-5	45	59.7
			Grout pump	CNP106	105	70	-2	103	2	106	70	-45	3	-5	60	
			Bar Bender and Cutter	CNP021	90	60	-2	88	2	91	70	-45	3	0	49	
			Concrete Lorry Mixer	CNP044	109	40	-4	105	2	108	70	-45	3	-5	61	
			Concrete pump	CNP047	109	80	-1	108	1	108	70	-45	3	-10	52	
	Underpinning Works for YMT Police Station - Construct underpinning beam and slab	Mar 2021 - Jun 2021	Generator	CNP103	95	100	0	95	1	95	70	-45	3	-10	43	63.2
			Lorry	CNP142	105	60	-2	103	1	103	70	-45	3	-5	56	
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	70	-45	3	-5	53	
			Saw, Circular Wood	BS D7-79	103	50	-3	100	2	103	70	-45	3	-5	56	
			Generator	CNP103	95	100	0	95	1	95	95	-48	3	-10	40	
S32	Construct Southern Dwall & Dwall Crossing Ferry Street - Piling for King Post	Nov-21	Lorry	CNP142	105	60	-2	103	1	103	95	-48	3	-5	53	58.4
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	95	-48	3	-5	50	
			Bored Piling Crane mounted auger	BS D4-37	111	70	-2	109	1	109	95	-48	3	-10	55	
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	70	-2	97	1	97	95	-48	3	-5	48	
			Concrete Lorry Mixer	CNP044	109	60	-2	107	1	107	95	-48	3	-5	57	
	Construct Southern Dwall & Dwall Crossing Ferry Street - Grouting	Nov-21	Concrete pump	CNP047	109	80	-1	108	1	108	95	-48	3	-10	53	58.8
			Dump Truck with Grab	CNP069	105	70	-2	103	1	103	95	-48	3	-5	54	
			Generator	CNP103	95	100	0	95	1	95	95	-48	3	-10	40	
			Lorry	CNP142	105	70	-2	103	1	103	95	-48	3	-5	54	
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	95	-48	3	-5	50	
S32	Construct Southern Dwall & Dwall Crossing Ferry Street - Excavation for Diaphragm Walls	Sep 2021 - Oct 2021	Piling, Diaphragm Wall, Bentonite Filtering Plant	CNP162	105	90	0	105	1	105	95	-48	3	-10	50	58.8
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	60	-2	97	1	97	95	-48	3	-5	47	
			Bar Bender and Cutter	CNP021	90	70	-2	88	1	88	95	-48	3	0	44	
			Concrete Lorry Mixer	CNP044	109	60	-2	107	1	107	95	-48	3	-5	57	
			Concrete pump	CNP047	109	80	-1	108	1	108	95	-48	3	-10	53	
	Construct Southern Dwall & Dwall Crossing Ferry Street - Temporary Traffic Deck	Jan-22	Generator	CNP103	95	70	-2	93	1	93	95	-48	3	-10	39	56.8
			Lorry	CNP142	105	90	0	105	1	105	95	-48	3	-5	55	
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	70	-2	97	1	97	95	-48	3	-5	48	
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	95	-48	3	-5	50	
			Generator	CNP103	95	100	0	95	1	95	150	-52	3	-10	36	
S33	Construct Southern Dwall & Dwall Crossing Ferry Street - Piling for King Post	Jan-21	Lorry	CNP142	105	60	-2	103	1	103	150	-52	3	-5	49	54.4
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	150	-52	3	-5	46	
			Bored Piling Crane mounted auger	BS D4-37	111	70	-2	109	1	109	150	-52	3	-10	51	
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	70	-2	97	1	97	150	-52	3	-5	44	
			Concrete Lorry Mixer	CNP044												

Build King - SKEC Joint Venture
Construction Noise Assessment

Period: 0700 to 1900 (except general holidays)
Noise Sensitive Receiver: W-N25A Prosperous Garden Block 1
Mitigation Measures Scenario

Noise Criteria: 75dB(A)

Worksite	Activity	Period	PME	TM Ref. / other Ref.	Unit Quiet Plant SWL	On-time, %	Time Factor	Quiet Plant SWL with on- time %	No. of plants	Total SWL	Distance from Notional Sources, m	Distance Attenuation	Façade Correction, dB(A)	Barrier Correction, dB(A)	Predicted Noise Level, dB(A)	Total Predicted Noise Level for each group, dB(A)
S35	Demolish Multi-storey Carpark Building (remaining part)	May 2022 - Jul 2022	Breaker, Excavator Mounted (Hydraulic)	BS D8-13	110	60	-2	103	1	108	265	-56	3	-5	49	53.7
			Dump Truck with Grab	CNP069	105	70	-2	103	3	108	265	-56	3	-5	50	
			Concrete crusher, excavator mounted	CNP055	103	70	-2	101	2	104	265	-56	3	-5	46	
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	265	-56	3	-5	41	
			Saw, Wire	CNP205	101	60	-2	99	2	102	265	-56	3	-5	43	
			Generator	CNP103	95	70	-2	93	2	96	265	-56	3	-10	33	
			Breaker, Excavator Mounted (Hydraulic)	BS D8-13	110	60	-2	108	1	108	115	-49	3	-5	57	
S36a	Demolish existing flyover	Mar 2021 - Sep 2021	Dump Truck with Grab	CNP069	105	70	-2	103	1	103	115	-49	3	-5	52	59.3
			Concrete crusher, excavator mounted	CNP055	103	70	-2	101	1	101	115	-49	3	-5	50	
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	115	-49	3	-5	48	
			Saw, Wire	CNP205	101	60	-2	99	1	99	115	-49	3	-5	48	
			Breaker, Excavator Mounted (Hydraulic)	BS D8-13	110	60	-2	108	1	108	205	-54	3	-5	52	
			Dump Truck with Grab	CNP069	105	70	-2	103	1	103	205	-54	3	-5	47	
			Concrete crusher, excavator mounted	CNP055	103	70	-2	101	1	101	205	-54	3	-5	45	
S36b	Demolish existing flyover	Oct 2021 - Jun 2022	Crane Mobile	BS D7-114	101	70	-2	99	1	99	205	-54	3	-5	43	54.3
			Saw, Wire	CNP205	101	60	-2	99	1	99	205	-54	3	-5	43	
			Concrete Lorry Mixer	CNP044	109	60	-2	107	2	110	80	-46	3	-5	62	
			Dump Truck with Grab	CNP069	105	60	-2	103	2	106	80	-46	3	-5	58	
			Generator	CNP103	95	100	0	95	3	100	80	-46	3	-10	47	
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	50	-3	96	2	99	80	-46	3	-5	51	
			Crane Mobile	BS D7-114	101	60	-2	99	2	102	80	-46	3	-5	54	
S37a	Construct Proposed GRF Flyover (the remain Part from Reclamation Street to Ferry Street) - Foundation and pier	Sep 2021 - Dec 2021	Bar Bender and Cutter	CNP021	90	70	-2	88	1	88	80	-46	3	0	45	65.8
			Concrete pump	CNP047	109	70	-2	107	1	107	80	-46	3	-10	54	
			Bored Piling Crane mounted auger	BS D4-37	111	60	-1	110	2	113	80	-46	3	-10	60	
	Construct Proposed GRF Flyover (the remain Part from Reclamation Street to Ferry Street) - Bridge Deck	Oct 2021 - Dec 2021	Poker, Vibratory, Hand Held	CNP173	102	50	-3	99	3	104	80	-46	3	-5	56	
			Crane Mobile	BS D7-114	101	60	-2	99	2	102	80	-46	3	-5	54	
			Generator	CNP103	95	100	0	95	3	100	80	-46	3	-10	47	
			Bar Bender and Cutter	CNP021	90	70	-2	88	1	88	80	-46	3	0	45	
Construct Proposed GRF Flyover (the remain Part from Reclamation Street to Ferry Street) - Surfacing, MJ, noise barriers	Jan 2024 - Jul 2024	Concrete pump	CNP047	109	70	-2	107	1	107	80	-46	3	-10	54		
		Asphalt Paver	EPD-01126	104	50	-3	101	1	101	80	-46	3	-5	53		
		Road Roller	EPD-01183	97	60	-2	95	1	95	80	-46	3	-5	47		
S37b	Construct Proposed GRF Flyover (the remain Part from Reclamation Street to Ferry Street) - Foundation and pier	May 2021 - Oct 2021	Crane Mobile	BS D7-114	101	60	-2	99	2	102	230	-55	3	-5	45	56.6
			Concrete Lorry Mixer	CNP044	109	60	-2	107	2	110	230	-55	3	-5	53	
			Dump Truck with Grab	CNP069	105	60	-2	103	2	106	230	-55	3	-5	49	
	Construct Proposed GRF Flyover (the remain Part from Reclamation Street to Ferry Street) - Bridge Deck	Aug 2021 - Oct 2021	Generator	CNP103	95	100	0	95	3	100	230	-55	3	-10	38	
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	50	-3	96	2	99	230	-55	3	-5	42	
			Crane Mobile	BS D7-114	101	60	-2	99	2	102	230	-55	3	-5	45	
			Bar Bender and Cutter	CNP021	90	70	-2	88	1	88	230	-55	3	0	36	
Construct Proposed GRF Flyover (the remain Part from Reclamation Street to Ferry Street) - Surfacing, MJ, noise barriers	Jan 2024 - Jul 2024	Concrete pump	CNP047	109	70	-2	107	1	107	230	-55	3	-10	45		
		Bored Piling Crane mounted auger	BS D4-37	111	60	-1	110	2	113	230	-55	3	-10	51		
		Poker, Vibratory, Hand Held	CNP173	102	50	-3	99	3	104	230	-55	3	-5	47		
S39	Construct Southern Dwall and Traffic Deck (cross road sections) - Diaphragm Walls	Jan 2022 - Feb 2022	Crane Mobile	BS D7-114	101	60	-2	99	2	102	230	-55	3	-5	45	64.2
			Bar Bender and Cutter	CNP021	90	70	-2	88	1	88	75	-46	3	0	46	
			Concrete Lorry Mixer	CNP044	109	60	-2	107	1	107	75	-46	3	-5	59	
	Construct Southern Dwall and Traffic Deck (cross road sections) - Temporary Traffic Deck	Mar-22	Concrete pump	CNP047	109	60	-1	108	1	108	75	-46	3	-10	56	
			Dump Truck with Grab	CNP069	105	70	-2	103	1	103	75	-46	3	-5	56	
			Generator	CNP103	95	100	0	95	1	95	75	-46	3	-10	42	
			Lorry	CNP142	105	70	-2	103	1	103	75	-46	3	-5	56	
S40	Construct Southern Dwall and Traffic Deck (cross road sections) - Diaphragm Walls	Jan 2022 - Feb 2022	Crane Mobile	BS D7-114	101	70	-2	99	1	99	75	-46	3	-5	52	59.4
			Piling, Diaphragm Wall, Bentonite Filtering Plant	CNP162	105	90	0	105	1	105	75	-46	3	-10	52	
			Poker, Vibratory, Hand Held	CNP173	102	60	-2	100	1	100	75	-46	3	-5	52	
	Construct Southern Dwall and Traffic Deck (cross road sections) - Temporary Traffic Deck	Mar-22	Excavator/Loader, Wheeled/Tracked	EPD-01145	99	60	-2	97	1	97	75	-46	3	-5	49	
			Generator	CNP103	95	70	-2	93	1	93	75	-46	3	-10	41	
			Lorry	CNP142	105	90	0	105	1	105	75	-46	3	-5	57	
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	70	-2	97	1	97	75	-46	3	-5	50	
S41	Construct Southern Dwall and Traffic Deck (cross road sections) - Diaphragm Walls	Jan 2022 - Feb 2022	Crane Mobile	BS D7-114	101	70	-2	99	1	99	75	-46	3	-5	52	57.3
			Bar Bender and Cutter	CNP021	90	70	-2	88	1	88	130	-50	3	0	41	
			Concrete Lorry Mixer	CNP044	109	60	-2	107	1	107	130	-50	3	-5	55	
	Construct Southern Dwall and Traffic Deck (cross road sections) - Temporary Traffic Deck	Mar-22	Concrete pump	CNP047	109	60	-1	108	1	108	130	-50	3	-10	51	
			Dump Truck with Grab	CNP069	105	70	-2	103	1	103	130	-50	3	-5	51	
			Generator	CNP103	95	100	0	95	1	95	130	-50	3	-10	38	
			Lorry	CNP142	105	70	-2	103	1	103	130	-50	3	-5	51	
S42	Construct Southern Dwall and Traffic Deck (cross road sections) - Diaphragm Walls	Jan 2022 - Feb 2022	Crane Mobile	BS D7-114	101	70	-2	99	1	99	130	-50	3	-5	47	59.4
			Piling, Diaphragm Wall, Bentonite Filtering Plant	CNP162	105	90	0	105	1	105	130	-50	3	-10	47	
			Poker, Vibratory, Hand Held	CNP173	102	60	-2	100	1	100	130	-50	3	-5	48	
	Construct Southern Dwall and Traffic Deck (cross road sections) - Temporary Traffic Deck	Mar-22	Excavator/Loader, Wheeled/Tracked	EPD-01145	99	60	-2	97	1	97	130	-50	3	-5	45	
			Generator	CNP103	95	70	-2	93	1	93	130	-50	3	-10	36	
			Lorry	CNP142	105	90	0	105	1	105	130	-50	3	-5	52	
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	70	-2	97	1	97	130	-50	3	-5	45	
S43	Demolish special clinic extension building	May 2020 - Aug 2020	Crane Mobile	BS D7-114	101	70	-2	99	1	99	130	-50	3	-5	47	60.9
			Bar Bender and Cutter	CNP021	90	70	-2	88	1	88	165	-52	3	0	39	
			Concrete Lorry Mixer	CNP044	109	60	-2	107	1	107	165	-52	3	-5	52	
	Excavation of Tunnel Tubes (under cover of traffic deck)	Oct 2020 - Jul 2021	Concrete pump	CNP047	109	60	-1	108	1	108	165	-52	3	-10	49	
			Dump Truck with Grab	CNP069	105	70	-2	103	1	103	165	-52	3	-5	46	
			Generator	CNP103	95	100	0	95	1	95	165	-52	3	-10	36	
			Lorry	CNP142	105	70	-2	103	1	103	165	-52	3	-5	49	
S44	Construct Southern Dwall & Dwall Crossing Ferry Street - Piling for King Post	Apr-20	Crane Mobile	BS D7-114	101	70	-2	99	1	99	85	-47	3	-5	51	62.4
			Bored Piling Crane mounted auger	BS D4-37	111	70	-2	109	3	114	85	-47	3	-10	61	
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	70	-2	97	1	97	85	-47	3	-5	49	
	Construct Southern Dwall & Dwall Crossing Ferry Street - Grouting	Apr-20	Concrete Lorry Mixer	CNP044	109	60	-2	107	2	110	85	-47	3	-5	61	
			Concrete pump	CNP047	109	60	-1	108	1	108	85	-47	3	-10	54	
			Dump Truck with Grab	CNP069	105	70	-2	103	1	103	85	-47	3	-5	55	
			Generator	CNP103	95	100	0	95	4	101	85	-47	3	-10	47	
Construct Southern Dwall & Traffic Deck - Excavation for Diaphragm Walls	May 2020 - Jun 2020	Lorry	CNP142	105	70	-2	103	1	103	85	-47	3	-5	55		
		Crane Mobile	BS D7-114	101	70	-2	99	1	99	85	-47	3	-5	51		
		Piling, Diaphragm Wall, Bentonite Filtering Plant	CNP162	105	90	0	105	2	108	85	-47	3	-10	54		
S45	Construct Southern Dwall & Traffic Deck - Concreting for Diaphragm Walls	Jul-20	Excavator/Loader, Wheeled/Tracked	EPD-01145	99	60	-2	97	1	97	85	-47	3	-5	48	62.1
			Bar Bender and Cutter	CNP021	90	70	-2	88	1	88	85	-47	3	0	45	
			Concrete Lorry Mixer	CNP044	109	60	-2	107	2	110	85	-47	3	-5	61	
	Construct Southern Dwall & Traffic Deck - Temporary Traffic Deck	Aug-20	Concrete pump	CNP047	109	60	-1	108	1	108	85	-47	3	-10	54	
			Generator	CNP103	95	70	-2	93	1	93	85	-47	3	-10	40	
			Lorry	CNP142	105	90	0	105	2	108	85	-4				

Worksite	Activity	Period	PME	TM Ref. / other Ref.	Unit Quiet Plant SWL	On-time, %	Time Factor	Quiet Plant SWL with on-time %	No. of plants	Total SWL	Distance from Notional Sources, m	Distance Attenuation	Façade Correction, dB(A)	Barrier Correction, dB(A)	Predicted Noise Level, dB(A)	Total Predicted Noise Level for each group, dB(A)	
																	Generator
S45	Construct Southern Dwall & Dwall Crossing Ferry Street - Piling for King Post	Oct-20	Generator	CNP103	95	100	0	95	3	100	130	-50	3	-10	42	58.5	
			Lorry	CNP142	105	60	-2	103	1	103	130	-50	3	-5	51		
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	130	-50	3	-5	47		
			Bored Piling Crane mounted auger	BS D4-37	111	70	-2	109	3	114	130	-50	3	-10	57		
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	70	-2	97	1	97	130	-50	3	-5	45		
			Concrete Lorry Mixer	CNP044	109	60	-2	107	2	110	130	-50	3	-5	58		
	Construct Southern Dwall & Dwall Crossing Ferry Street - Grouting	Oct-20	Concrete pump	CNP047	109	80	-1	108	1	108	130	-50	3	-10	51	58.3	
			Dump Truck with Grab	CNP069	105	70	-2	103	1	103	130	-50	3	-5	51		
			Generator	CNP103	95	100	0	95	4	101	130	-50	3	-10	44		
			Lorry	CNP142	105	70	-2	103	1	103	130	-50	3	-5	51		
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	130	-50	3	-5	47		
			Piling, Diaphragm Wall, Bentonite Filtering Plant	CNP162	105	90	0	105	2	108	130	-50	3	-10	50		
S46a	Excavation of Tunnel Tubes (under cover of traffic deck)	Oct 2021 - Jan 2022	Excavator/Loader, Wheeled/Tracked	EPD-01145	99	60	-2	97	1	97	130	-50	3	-5	45	58.4	
			Bar Bender and Cutter	CNP021	90	70	-2	88	1	88	130	-50	3	0	41		
			Concrete Lorry Mixer	CNP044	109	60	-2	107	2	110	130	-50	3	-5	58		
			Concrete pump	CNP047	109	80	-1	108	1	108	130	-50	3	-10	51		
			Generator	CNP103	95	70	-2	93	1	93	130	-50	3	-10	36		
			Lorry	CNP142	105	90	0	105	2	108	130	-50	3	-5	55		
	Construct Southern Dwall & Traffic Deck - Temporary Traffic Deck	Feb-21	Excavator/Loader, Wheeled/Tracked	EPD-01145	99	70	-2	97	1	97	130	-50	3	-5	45	56.8	
			Crane Mobile	BS D7-114	101	70	-2	99	2	102	130	-50	3	-5	50		
			Generator	CNP103	95	100	0	95	4	101	65	-44	3	-20	40		
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	80	-1	98	2	101	65	-44	3	-20	40		
			SIL EIA	SIL EIA	108	80	-1	107	2	110	80	-46	3	-20	38		
			Ventilation Fan	CNP241	108	90	0	108	3	112	80	-46	3	-15	54		
S46b	Excavation of Tunnel Tubes (under cover of traffic deck)	Feb 2022 - May 2022	Water Pump, Submersible (Electric)	CNP283	85	100	0	85	4	91	80	-46	3	-20	37	55.2	
			Generator	CNP103	95	100	0	95	3	100	80	-46	3	-20	38		
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	80	-1	98	2	101	80	-46	3	-20	38		
			Rock drill, crawler mounted (pneumatic)	SIL EIA	108	80	-1	107	2	110	80	-46	3	-20	47		
			Ventilation Fan	CNP241	108	90	0	108	3	112	80	-46	3	-15	54		
			Water Pump, Submersible (Electric)	CNP283	85	100	0	85	4	91	80	-46	3	-20	37		
	Excavation of Tunnel Tubes (under cover of traffic deck)	Jun 2022 - Sep 2022	Generator	CNP103	95	100	0	95	3	100	80	-46	3	-20	38	49.1	
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	80	-1	98	2	101	155	-52	3	-20	32		
			Rock drill, crawler mounted (pneumatic)	SIL EIA	108	80	-1	107	2	107	155	-52	3	-20	38		
			Ventilation Fan	CNP241	108	90	0	108	3	112	155	-52	3	-15	49		
			Water Pump, Submersible (Electric)	CNP283	85	100	0	85	4	91	155	-52	3	-20	22		
			Generator	CNP103	95	100	0	95	1	95	45	-41	3	-20	37		
S47a	Underpinning of Existing Bridges (under cover of traffic deck)	Jun 2020 - Apr 2021	Bar Bender and Cutter	CNP021	90	70	-2	88	1	88	45	-41	3	-20	30	56.8	
			Concrete Lorry Mixer	CNP044	109	60	-2	107	1	107	45	-41	3	-20	49		
			Concrete pump	CNP047	109	80	-1	108	1	108	45	-41	3	-20	50		
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	45	-41	3	-20	41		
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	60	-2	97	1	97	45	-41	3	-20	39		
			Ventilation Fan	CNP241	108	90	0	108	1	108	45	-41	3	-15	54		
	Construction of the Cut and Cover Tunnel (under cover of traffic deck)	Feb 2022 - Nov 2022	Water Pump, Submersible (Electric)	CNP283	85	100	0	85	4	91	45	-41	3	-20	27	61.3	
			Generator	CNP103	95	100	0	95	1	95	45	-41	3	-20	30		
			Bar Bender and Cutter	CNP021	90	70	-2	88	1	88	45	-41	3	-20	30		
			Concrete Lorry Mixer	CNP044	109	60	-2	107	1	107	45	-41	3	-20	49		
			Concrete pump	CNP047	109	80	-1	108	1	108	45	-41	3	-20	50		
			Generator	CNP103	95	100	0	95	2	98	45	-41	3	-20	40		
S47b	Underpinning of Existing Bridges (under cover of traffic deck)	Oct 2020 - Apr 2021	Crane Mobile	BS D7-114	101	70	-2	99	1	99	95	-48	3	-20	41	50.3	
			Poker, Vibratory, Hand Held	CNP173	102	70	-2	100	1	100	95	-48	3	-20	42		
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	70	-2	97	1	97	95	-48	3	-20	39		
			Ventilation Fan	CNP241	108	90	0	108	4	114	95	-48	3	-15	60		
			Water Pump, Submersible (Electric)	CNP283	85	100	0	85	4	91	95	-48	3	-20	33		
			Generator	CNP103	95	100	0	95	1	95	95	-48	3	-20	30		
	Construction of the Cut and Cover Tunnel (under cover of traffic deck)	Jun 2022 - Mar 2023	Bar Bender and Cutter	CNP021	90	70	-2	88	1	88	95	-48	3	-20	24	54.8	
			Concrete Lorry Mixer	CNP044	109	60	-2	107	1	107	95	-48	3	-20	42		
			Concrete pump	CNP047	109	80	-1	108	1	108	95	-48	3	-20	43		
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	95	-48	3	-20	35		
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	60	-2	97	1	97	95	-48	3	-20	32		
			Ventilation Fan	CNP241	108	90	0	108	1	108	95	-48	3	-15	48		
S47c	Underpinning of Existing Bridges (under cover of traffic deck)	May 2020 - Sep 2020	Water Pump, Submersible (Electric)	CNP283	85	100	0	85	1	85	95	-48	3	-20	20	46.1	
			Generator	CNP103	95	100	0	95	1	95	155	-52	3	-20	26		
			Bar Bender and Cutter	CNP021	90	70	-2	88	1	88	155	-52	3	-20	20		
			Concrete Lorry Mixer	CNP044	109	60	-2	107	1	107	155	-52	3	-20	38		
			Concrete pump	CNP047	109	80	-1	108	1	108	155	-52	3	-20	39		
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	155	-52	3	-20	31		
	Construction of the Cut and Cover Tunnel (under cover of traffic deck)	Oct 2022 - Jul 2023	Excavator/Loader, Wheeled/Tracked	EPD-01145	99	60	-2	97	1	97	155	-52	3	-20	28	50.6	
			Ventilation Fan	CNP241	108	90	0	108	1	108	155	-52	3	-15	44		
			Water Pump, Submersible (Electric)	CNP283	85	100	0	85	1	85	155	-52	3	-20	16		
			Bar Bender and Cutter	CNP021	90	70	-2	88	1	88	155	-52	3	-20	19		
			Concrete Lorry Mixer	CNP044	109	60	-2	107	1	107	155	-52	3	-20	38		
			Concrete pump	CNP047	109	80	-1	108	1	108	155	-52	3	-20	39		
S49	Underpinning of Existing Bridges (under cover of traffic deck)	Feb 2021 - Nov 2021	Generator	CNP103	95	100	0	95	2	98	95	-48	3	-20	33	57.9	
			Bar Bender and Cutter	CNP021	90	70	-2	88	1	88	95	-48	3	-20	30		
			Concrete Lorry Mixer	CNP044	109	60	-2	107	1	107	95	-48	3	-20	42		
			Concrete pump	CNP047	109	80	-1	108	1	108	95	-48	3	-20	43		
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	95	-48	3	-20	42		
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	60	-2	97	1	97	95	-48	3	-20	40		
	Foundation (west side) for noise enclosure on GRF Flyover (Ferry Street Section)	Dec 2021 - May 2022	Ventilation Fan	CNP241	108	90	0	108	1	108	40	-40	3	-15	56	67.9	
			Water Pump, Submersible (Electric)	CNP283	85	100	0	85	1	85	40	-40	3	-20	28		
			Concrete Lorry Mixer	CNP044	109	60	-2	107	2	110	75	-46	3	-5	62		
			Concrete pump	CNP047	109	80	-1	108	1	108	75	-46	3	-10	56		
			Lorry	CNP142	105	70	-2	103	2	106	75	-46	3	-5	59		
			Crane Mobile	BS D7-114	101	60	-2	99	3	104	75	-46	3	-5	56		
S50a	Construct noise barriers and noise enclosure on GRF Flyover (Ferry Street Section) and along Ting Ping Street	Nov 2022 - Feb 2023	Bored Piling Crane mounted auger	BS D4-37	111	80	-1	110	2	113	75	-46	3	-10	61	57.5	
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	70	-2	97	2	100	75	-46	3	-5	53		
			Compactor, vibratory	CNP050	105	70	-2	103	3	108	75	-46	3	-5	61		
			Dump Truck with Grab	CNP069	105	70	-2	103	1	103	75	-46	3	-5	56		
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	75	-46	3	-5	52		
			Generator	CNP103	95	100	0	95	1	95	75	-46	3	-10	42		
	Foundation (west side) for noise enclosure on GRF Flyover (Ferry Street Section)	Jul 2021 - Jul 2022	Lorry	CNP142	105	70	-2	103	1	103	75	-46	3	-5	56	70.6	
			Concrete Lorry Mixer	CNP044	109	60	-2	107	2	110	55	-43	3	-5	65		
			Concrete pump	CNP047	109	80	-1	108	1	108	55	-43	3	-10	58		
			Generator	CNP103	95												

Build King - SKEC Joint Venture

Construction Noise Assessment
 Period: 0700 to 1900 (except general holidays)
 Noise Sensitive Receiver: W-N25A Prosperous Garden Block 1
 Mitigation Measures Scenario

Noise Criteria: 75dB(A)

Worksite	Activity	Period	PME	TM Ref. / other Ref.	Unit Quiet Plant SWL	On-time, %	Time Factor	Quiet Plant SWL with on-time %	No. of plants	Total SWL	Distance from Notional Sources, m	Distance Attenuation	Facade Correction, dB(A)	Barrier Correction, dB(A)	Predicted Noise Level, dB(A)	Total Predicted Noise Level for each group, dB(A)
SS0c	Foundation (west side) for noise enclosure on GRF Flyover (Ferry Street Section)	Jul 2022 - Sep 2022	Concrete Lorry Mixer	CNP044	109	60	-2	107	1	107	16	-32	3	-5	72	79.4
			Concrete pump	CNP047	109	80	-1	108	1	108	16	-32	3	-10	89	
			Generator	CNP103	95	100	0	95	3	100	16	-32	3	-10	60	
			Lorry	CNP142	105	70	-2	103	1	103	16	-32	3	-5	69	
			Crane Mobile	BS D7-114	101	60	-2	99	2	102	16	-32	3	-5	67	
			Bored Piling Crane mounted auger	BS D4-37	111	80	-1	110	2	113	16	-32	3	-10	74	
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	70	-2	97	2	100	16	-32	3	-5	66	
			Compactor, vibratory	CNP050	105	50	-3	102	2	105	16	-32	3	-5	71	
			Dump Truck with Grab	CNP069	105	70	-2	103	1	103	16	-32	3	-5	69	
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	16	-32	3	-5	65	
SS0d	Road works for re-align Ferry Street at-grade road	Apr 2023 - Sep 2023	Generator	CNP103	95	100	0	95	1	95	16	-32	3	-10	56	70.7
			Lorry	CNP142	105	70	-2	103	1	103	16	-32	3	-5	69	
			Asphalt Paver	EPD-01126	104	80	-1	103	1	103	25	-36	3	-5	65	
			Concrete Lorry Mixer	CNP044	109	60	-2	107	1	107	25	-36	3	-5	69	
			Concrete pump	CNP047	109	80	-1	108	1	108	25	-36	3	-10	65	
			Dump Truck with Grab	CNP069	105	70	-2	103	1	103	25	-36	3	-5	65	
			Generator	CNP103	103	100	0	103	1	103	25	-36	3	-10	60	
			Poker, Vibratory, Hand Held	CNP173	102	70	-2	100	2	100	25	-36	3	-10	57	
			Road Roller	EPD-01183	97	80	-1	96	1	96	25	-36	3	-5	58	
			Bored Piling Crane mounted auger	BS D4-37	111	80	-1	110	1	110	25	-36	3	-10	67	
S51	Demolish the Existing Ferr Street Subway	May-21	Excavator/Loader, Wheeled/Tracked	EPD-01145	99	70	-2	97	1	97	25	-36	3	-5	59	64.8
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	25	-36	3	-5	61	
			Breaker, Excavator Mounted (Hydraulic)	BS D8-13	110	50	-3	107	1	107	65	-44	3	-5	61	
			Dump Truck with Grab	CNP069	105	70	-2	103	2	106	65	-44	3	-5	60	
			Concrete crusher, excavator mounted	CNP055	103	80	-1	102	1	102	65	-44	3	-5	56	
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	65	-44	3	-5	53	
			Saw, Wire	CNP205	101	70	-2	99	1	99	65	-44	3	-5	53	
			Dump Truck with Grab	CNP069	105	70	-2	103	1	103	65	-44	3	-5	57	
			Generator	CNP103	95	100	0	95	1	95	65	-44	3	-10	44	
			Lorry	CNP142	105	70	-2	103	1	103	65	-44	3	-5	57	
S52	Construct Northern Dwall & Traffic Deck (cross road sections) - Excavation for Diaphragm Walls	Feb 2021 - Mar 2021	Crane Mobile	BS D7-114	101	70	-2	99	1	99	65	-44	3	-5	53	62.1
			Piling, Diaphragm Wall, Bentonite Filtering Plant	CNP162	105	90	0	105	1	105	65	-44	3	-10	53	
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	60	-2	97	1	97	65	-44	3	-5	51	
			Bar Bender and Cutter	CNP021	90	70	-2	88	1	88	65	-44	3	0	47	
			Concrete Lorry Mixer	CNP044	109	60	-2	107	1	107	65	-44	3	-5	61	
			Concrete pump	CNP047	109	80	-1	108	1	108	65	-44	3	-10	57	
			Generator	CNP103	95	70	-2	93	1	93	65	-44	3	-10	42	
			Lorry	CNP142	105	90	0	105	1	105	65	-44	3	-5	58	
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	70	-2	97	1	97	65	-44	3	-5	51	
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	65	-44	3	-5	53	
S53	Construct Northern Dwall & Traffic Deck (cross road sections) - Excavation for Diaphragm Walls	Feb 2021 - Mar 2021	Dump Truck with Grab	CNP069	105	70	-2	103	1	103	115	-49	3	-5	52	57.1
			Generator	CNP103	95	100	0	95	1	95	115	-49	3	-10	39	
			Lorry	CNP142	105	70	-2	103	1	103	115	-49	3	-5	52	
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	115	-49	3	-5	48	
			Piling, Diaphragm Wall, Bentonite Filtering Plant	CNP162	105	90	0	105	1	105	115	-49	3	-10	48	
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	60	-2	97	1	97	115	-49	3	-5	46	
			Bar Bender and Cutter	CNP021	90	70	-2	88	1	88	115	-49	3	0	42	
			Concrete Lorry Mixer	CNP044	109	60	-2	107	1	107	115	-49	3	-5	56	
			Concrete pump	CNP047	109	80	-1	108	1	108	115	-49	3	-10	52	
			Generator	CNP103	95	70	-2	93	1	93	115	-49	3	-10	37	
S55a	Reinstate the affected roads and footpaths	Nov 2023 - Feb 2024	Excavator/Loader, Wheeled/Tracked	EPD-01145	99	70	-2	97	1	97	75	-46	3	-5	49	62.2
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	75	-46	3	-5	52	
			Asphalt Paver	EPD-01126	104	80	-1	103	1	103	75	-46	3	-5	56	
			Concrete Lorry Mixer	CNP044	109	60	-2	107	1	107	75	-46	3	-5	59	
			Generator	CNP103	95	100	0	95	1	95	75	-46	3	-10	42	
			Poker, Vibratory, Hand Held	CNP173	102	60	-2	100	2	100	75	-46	3	-10	50	
			Road Roller	EPD-01183	97	80	-1	96	1	96	75	-46	3	-5	48	
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	70	-2	97	1	97	75	-46	3	-5	50	
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	75	-46	3	-5	52	
			Asphalt Paver	EPD-01126	104	80	-1	103	1	103	75	-46	3	-5	56	
S55b	Road works for Section between Ferry Street and Nathan Road	Mar 2024 - Nov 2024	Concrete Lorry Mixer	CNP044	109	60	-2	107	2	110	75	-46	3	-5	62	64.6
			Concrete pump	CNP047	109	80	-1	108	1	108	75	-46	3	-10	56	
			Generator	CNP103	95	100	0	95	2	98	75	-46	3	-10	46	
			Poker, Vibratory, Hand Held	CNP173	102	70	-2	100	2	103	75	-46	3	-10	51	
			Road Roller	EPD-01183	97	80	-1	96	1	96	75	-46	3	-5	49	
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	70	-2	97	1	97	75	-46	3	-5	50	
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	75	-46	3	-5	52	
			Asphalt Paver	EPD-01126	104	80	-1	103	1	103	175	-53	3	-5	48	
			Concrete Lorry Mixer	CNP044	109	60	-2	107	1	107	175	-53	3	-5	52	
			Concrete pump	CNP047	109	80	-1	108	1	108	175	-53	3	-10	48	
S55b	Reinstate the affected roads and footpaths	Nov 2023 - Feb 2024	Generator	CNP103	95	100	0	95	1	95	175	-53	3	-10	35	54.7
			Poker, Vibratory, Hand Held	CNP173	102	60	-2	100	1	100	175	-53	3	-10	36	
			Road Roller	EPD-01183	97	80	-1	96	1	96	175	-53	3	-10	40	
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	70	-2	97	1	97	175	-53	3	-5	43	
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	175	-53	3	-5	45	
			Asphalt Paver	EPD-01126	104	80	-1	103	1	103	175	-53	3	-5	48	
			Concrete Lorry Mixer	CNP044	109	60	-2	107	1	107	175	-53	3	-5	52	
			Concrete pump	CNP047	109	80	-1	108	1	108	175	-53	3	-10	48	
			Generator	CNP103	95	100	0	95	1	95	175	-53	3	-10	35	
			Poker, Vibratory, Hand Held	CNP173	102	70	-2	100	1	100	175	-53	3	-10	41	
S56a	Construction of the Cut and Cover Tunnel (under cover of traffic deck)	Mar 2022 - Dec 2023	Road Roller	EPD-01183	97	80	-1	96	1	96	135	-51	3	-20	20	53.0
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	70	-2	97	2	110	135	-51	3	-20	42	
			Concrete Lorry Mixer	CNP044	109	60	-2	107	2	110	135	-51	3	-20	20	
			Concrete pump	CNP047	109	80	-1	108	1	107	135	-51	3	-20	42	
			Generator	CNP103	95	100	0	95	3	100	135	-51	3	-20	32	
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	135	-51	3	-20	40	
			Poker, Vibratory, Hand Held	CNP173	102	70	-2	100	1	98	135	-51	3	-20	39	
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	70	-2	97	2	100	135	-51	3	-20	33	
			Ventilation Fan	CNP241	108	80	-1	107	6	115	135	-51	3	-15	52	
			Water Pump, Submersible (Electric)	CNP283	85	100	0	85	6	93	135	-51	3	-20	25	
S56b	Backfilling on Top of Cut and Cover Tunnel (under cover of traffic deck)	Jan 2024 - Apr 2024	Compactor, vibratory	CNP050	105	70	-2	103	1	103	135	-51	3	-20	36	38.8
			Generator	CNP103	95	100	0	95	2	98	135	-51	3	-20	30	
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	70	-2	97	2	100	135	-51	3	-20	35	
			Road Roller	EPD-01183	97	80	-1	96	1	96	135	-51	3	-20	39	
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	70	-2	97	1	97	160	-52	3	-5	45	
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	160	-52	3	-5	43	
			Bar Bender and Cutter	CNP021	90	60	-2	88	2	91	160	-52	3	0	42	
			Concrete Lorry Mixer	CNP044	109											

Build King - SKEC Joint Venture

Construction Noise Assessment

Period: 0700 to 1900 (except general holidays)

Noise Sensitive Receiver: W-P11 The Coronation (West Façade)

Mitigation Measures Scenario

Noise Criteria: 75dB(A)

Worksite	Activity	Period	PME	TM Ref. / other Ref.	Unit Quiet Plant SWL	On-time, %	Time Factor	Quiet Plant SWL with on- time %	No. of plants	Total SWL	Distance from Notional Sources, m	Distance Attenuation	Façade Correction, dB(A)	Barrier Correction, dB(A)	Predicted Noise Level, dB(A)	Total Predicted Noise Level for each group, dB(A)		
S3	Construct Dwall and Traffic Deck - Piling for King Post	Jul-18	Concrete Lorry Mixer	CNP044	109	60	-2	107	1	107	165	-52	3	-5	52	56		
			Concrete pump	CNP047	109	80	-1	108	1	108	165	-52	3	-10	49			
			Dump Truck with Grab	CNP069	105	70	-2	103	1	103	165	-52	3	-5	49			
			Generator	CNP103	95	100	0	95	2	98	165	-52	3	-10	39			
			Lorry	CNP142	105	60	-2	103	1	103	165	-52	3	-5	48			
		Generator	CNP103	95	100	0	95	2	98	165	-52	3	-10	39	55			
		Lorry	CNP142	105	60	-2	103	1	103	165	-52	3	-5	48				
		Crane Mobile	BS D7-114	101	70	-2	99	1	99	165	-52	3	-5	45				
		Bored Piling Crane mounted auger	BS D4-37	111	70	-2	109	2	112	165	-52	3	-10	53				
		Excavator/Loader, Wheeled/Tracked	EPD-01145	99	70	-2	97	1	97	165	-52	3	-5	43				
	Construct Dwall and Traffic Deck - Diaphragm Walls	Aug 2018 Nov 2018	Bar Bender and Cutter	CNP021	90	70	-2	88	1	88	165	-52	3	0	39	56		
			Concrete Lorry Mixer	CNP044	109	60	-2	107	1	107	165	-52	3	-5	52			
			Concrete pump	CNP047	109	80	-1	108	1	108	165	-52	3	-10	49			
			Generator	CNP103	95	100	0	95	2	98	165	-52	3	-10	39			
			Lorry	CNP142	105	70	-2	103	1	103	165	-52	3	-5	49			
		Poker, Vibratory, Hand Held	CNP173	102	60	-2	100	1	100	165	-52	3	-5	45	52			
		Dump Truck with Grab	CNP069	105	70	-2	103	1	103	165	-52	3	-5	49				
		Generator	CNP103	95	100	0	95	2	98	165	-52	3	-10	39				
		Crane Mobile	BS D7-114	101	70	-2	99	1	99	165	-52	3	-5	45				
		Piling, Diaphragm Wall, Bentonite Filtering	CNP162	105	90	0	105	1	105	165	-52	3	-10	45				
	Construct Southern Dwall & Traffic Deck - Excavation for Diaphragm Walls	Nov 2018 Jan 2019	Excavator/Loader, Wheeled/Tracked	EPD-01145	99	60	-2	97	1	97	165	-52	3	-5	42	54		
			Dump Truck with Grab	CNP069	105	70	-2	103	1	103	165	-52	3	-5	49			
			Generator	CNP103	95	100	0	95	1	95	165	-52	3	-10	36			
			Lorry	CNP142	105	70	-2	103	1	103	165	-52	3	-5	49			
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	165	-52	3	-5	45			
		Piling, Diaphragm Wall, Bentonite Filtering	CNP162	105	90	0	105	1	105	165	-52	3	-10	45	54			
Excavator/Loader, Wheeled/Tracked		EPD-01145	99	60	-2	97	1	97	165	-52	3	-5	42					
Bar Bender and Cutter		CNP021	90	70	-2	88	1	88	165	-52	3	0	39					
Concrete Lorry Mixer		CNP044	109	60	-2	107	1	107	165	-52	3	-5	52					
Concrete pump		CNP047	109	80	-1	108	1	108	165	-52	3	-10	49					
Construct Southern Dwall & Traffic Deck - Concreting for Diaphragm Walls	Feb-19	Generator	CNP103	95	70	-2	93	1	93	165	-52	3	-10	34	54			
		Lorry	CNP142	105	90	0	105	1	105	165	-52	3	-5	50				
		Excavator/Loader, Wheeled/Tracked	EPD-01145	99	70	-2	97	1	97	165	-52	3	-5	43				
		Crane Mobile	BS D7-114	101	70	-2	99	1	99	165	-52	3	-5	45				
		Dump Truck with Grab	CNP069	105	70	-2	103	1	103	165	-52	3	-5	49				
	Construct Southern Dwall & Traffic Deck - Temporary Traffic Deck	Mar-19	Generator	CNP103	95	70	-2	93	1	93	165	-52	3	-10	34	52		
			Lorry	CNP142	105	90	0	105	1	105	165	-52	3	-5	50			
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	70	-2	97	1	97	165	-52	3	-5	43			
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	165	-52	3	-5	45			
			Dump Truck with Grab	CNP069	105	70	-2	103	1	103	165	-52	3	-5	49			
S13a	Removal of Excavated Material through West End Portal	Apr 2019 - Mar 2020	Dump Truck with Grab	CNP069	105	70	-2	103	10	113	165	-52	3	-5	59	59		
			Concrete Lorry Mixer	CNP044	109	60	-2	107	1	107	285	-57	3	-5	48	16a		
Construct Dwall and Traffic Deck - Piling for King Post	Jul-18	Concrete pump	CNP047	109	80	-1	108	1	108	285	-57	3	-10	44	51			
		Dump Truck with Grab	CNP069	105	70	-2	103	1	103	285	-57	3	-5	44				
		Generator	CNP103	95	100	0	95	2	98	285	-57	3	-10	34				
		Lorry	CNP142	105	60	-2	103	1	103	285	-57	3	-5	44				
		Crane Mobile	BS D7-114	101	70	-2	99	1	99	285	-57	3	-5	40				
		Bored Piling Crane mounted auger	BS D4-37	111	70	-2	109	2	112	285	-57	3	-10	48				
		Excavator/Loader, Wheeled/Tracked	EPD-01145	99	70	-2	97	1	97	285	-57	3	-5	44				
		Bar Bender and Cutter	CNP021	90	70	-2	88	1	88	285	-57	3	0	34				
		Concrete Lorry Mixer	CNP044	109	60	-2	107	1	107	285	-57	3	-5	48				
		Concrete pump	CNP047	109	80	-1	108	1	108	285	-57	3	-10	44				
	Construct Middle Dwall and Traffic Deck - Diaphragm Walls	Oct 2018 - Jan 2019	Generator	CNP103	95	100	0	95	2	98	285	-57	3	-10	34		51	
			Lorry	CNP142	105	70	-2	103	1	103	285	-57	3	-5	44			
			Poker, Vibratory, Hand Held	CNP173	102	60	-2	100	1	100	285	-57	3	-5	41			
			Dump Truck with Grab	CNP069	105	70	-2	103	1	103	285	-57	3	-5	44			
			Generator	CNP103	95	100	0	95	2	98	285	-57	3	-10	34			
		Construct Middle Dwall and Traffic Deck - Temporary Traffic Deck	Feb 2019	Lorry	CNP142	105	90	0	105	1	105	285	-57	3	-5		45	48
				Excavator/Loader, Wheeled/Tracked	EPD-01145	99	70	-2	97	1	97	285	-57	3	-5		38	
				Crane Mobile	BS D7-114	101	70	-2	99	1	99	285	-57	3	-5		40	
				Piling, Diaphragm Wall, Bentonite Filtering Plant	CNP162	105	90	0	105	1	105	285	-57	3	-10		40	
				Excavator/Loader, Wheeled/Tracked	EPD-01145	99	60	-2	97	1	97	285	-57	3	-5		38	
	Diversion of Ferry Street Junction		Jul 2019 - Sep 2019	Generator	CNP103	95	70	-2	93	1	93	285	-57	3	-10		29	47
				Lorry	CNP142	105	90	0	105	1	105	285	-57	3	-5		45	
				Excavator/Loader, Wheeled/Tracked	EPD-01145	99	70	-2	97	1	97	285	-57	3	-5		38	
				Crane Mobile	BS D7-114	101	70	-2	99	1	99	285	-57	3	-5		40	
				Asphalt Paver	EPD-01126	104	80	-1	103	1	103	150	-52	3	-5		50	
		Construct Southern Dwall & Dwall Crossing Ferry Street - Piling for King Post	Jul-19	Concrete Lorry Mixer	CNP044	109	60	-2	107	2	110	150	-52	3	-5	56	60	
Dump Truck with Grab				CNP069	105	70	-2	103	2	106	150	-52	3	-5	53			
Generator				CNP103	95	100	0	95	3	105	150	-52	3	-10	41			
Poker, Vibratory, Hand Held				CNP173	102	60	-2	100	3	105	150	-52	3	-5	52			
Road Roller				EPD-01183	97	70	-2	95	2	98	150	-52	3	-5	45			
Construct Southern Dwall & Dwall Crossing Ferry Street - Grouting for King post	Aug-19		Excavator/Loader, Wheeled/Tracked	EPD-01145	99	70	-2	97	2	100	150	-52	3	-5	47	52		
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	150	-52	3	-5	46			
			Bar Bender and Cutter	CNP021	90	70	-2	88	1	88	150	-52	3	0	40			
			Concrete pump	CNP047	109	80	-1	108	1	108	150	-52	3	-10	50			
			Generator	CNP103	95	100	0	95	1	95	215	-55	3	-10	33			
	Construct Southern Dwall & Dwall Crossing Ferry Street - Concreting for Diaphragm Walls	Sep 2019 Nov 2019	Lorry	CNP142	105	60	-2	103	1	103	215	-55	3	-5	46	51		
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	215	-55	3	-5	43			
			Bored Piling Crane mounted auger	BS D4-37	111	70	-2	109	1	109	215	-55	3	-10	48			
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	70	-2	97	1	97	215	-55	3	-5	41			
			Concrete Lorry Mixer	CNP044	109	60	-2	107	1	107	215	-55	3	-5	50			
Construct Southern Dwall & Dwall Crossing Ferry Street - Temporary Traffic Deck		Jan-20	Concrete pump	CNP047	109	80	-1	108	1	108	215	-55	3	-10	46	52		
			Dump Truck with Grab	CNP069	105	70	-2	103	1	103	215	-55	3	-5	47			
			Generator	CNP103	95	100	0	95	1	95	215	-55	3	-10	33			
			Lorry	CNP142	105	70	-2	103	1	103	215	-55	3	-5	47			
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	215	-55	3	-5	43			
	Construct Southern Dwall & Dwall Crossing Ferry Street - Piling for King Post	Jul-19	Piling, Diaphragm Wall, Bentonite Filtering Plant	CNP162	105	90	0	105	1	105	215	-55	3	-10	43	52		
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	60	-2	97	1	97	215	-55	3	-5	40			
			Bar Bender and Cutter	CNP021	90	70	-2	88	1	88	215	-55	3	0	37			
			Concrete Lorry Mixer	CNP044	109	60	-2	107	1	107	215	-55	3	-5	50			
			Concrete pump	CNP047	109	80	-1	108	1	108	215	-55	3	-10	46			
Construct Southern Dwall & Dwall Crossing Ferry Street - Temporary Traffic Deck		Jan-20	Generator	CNP103	95	70	-2	93	1	93	215	-55	3	-10	32	50		
			Lorry	CNP142	105	90	0	105	1	105	215	-55	3	-5	48			
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	70	-2	97	1	97	215	-55	3	-5	41			

Worksite	Activity	Period	PME	TM Ref. / other Ref.	Unit Quiet Plant SWL	On-time, %	Time Factor	Quiet Plant SWL with on-time %	No. of plants	Total SWL	Distance from Notional Sources, m	Distance Attenuation	Façade Correction, dB(A)	Barrier Correction, dB(A)	Predicted Noise Level, dB(A)	Total Predicted Noise Level for each group, dB(A)	
S39	Construct Southern Dwall and Traffic Deck (cross road sections) - Diaphragm Walls	Mar 2020 - Apr 2020	Bar Bender and Cutter	CNP021	90	70	-2	88	1	88	260	-56	3	0	35	53	
			Concrete Lorry Mixer	CNP044	109	60	-2	107	1	107	260	-56	3	-5	48		
			Concrete pump	CNP047	109	80	-1	108	1	108	260	-56	3	-10	45		
			Dump Truck with Grab	CNP069	105	70	-2	103	1	103	260	-56	3	-5	45		
			Generator	CNP103	95	100	0	95	1	95	260	-56	3	-10	32		
			Lorry	CNP142	105	70	-2	103	1	103	260	-56	3	-5	45		
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	260	-56	3	-5	41		
			Piling, Diaphragm Wall, Bentonite Filtering Plant	CNP162	105	90	0	105	1	105	260	-56	3	-10	41		
			Poker, Vibratory, Hand Held	CNP173	102	60	-2	100	1	100	260	-56	3	-5	41		
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	60	-2	97	1	97	260	-56	3	-5	38		
S39	Construct Southern Dwall and Traffic Deck (cross road sections) - Temporary Traffic Deck	May 2020	Generator	CNP103	95	70	-2	93	1	93	260	-56	3	-10	30	48	
			Lorry	CNP142	105	90	0	105	1	105	260	-56	3	-5	46		
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	70	-2	97	1	97	260	-56	3	-5	39		
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	260	-56	3	-5	41		
			Generator	CNP103	95	100	0	95	10	105	210	-54	3	-20	34		
S43	Excavation of Tunnel Tubes (under cover of traffic deck)	Sep 2020 - Apr 2022	Excavator/Loader, Wheeled/Tracked	EPD-01145	99	80	-1	98	5	105	210	-54	3	-20	34	52	
			Rock drill, crawler mounted (pneumatic)	SIL EIA	108	80	-1	107	5	114	210	-54	3	-20	43		
			Ventilation Fan	CNP241	108	90	0	108	10	118	210	-54	3	-15	51		
			Water Pump, Submersible (Electric)	CNP283	85	100	0	85	12	96	210	-54	3	-20	24		
			Concrete Lorry Mixer	CNP044	109	60	-2	107	3	112	210	-54	3	-20	40		
		Dec 2020 - Jul 2022	Concrete pump	CNP047	109	80	-1	108	1	108	210	-54	3	-20	37		48
			Generator	CNP103	95	100	0	95	6	103	210	-54	3	-20	31		
			Crane Mobile	BS D7-114	101	70	-2	99	4	105	210	-54	3	-20	34		
			Bored Piling Crane mounted auger	BS D4-37	111	90	0	111	6	118	210	-54	3	-20	47		
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	70	-2	97	2	100	210	-54	3	-20	29		
S46a	Excavation of Tunnel Tubes (under cover of traffic deck)	Sep 2020 - Apr 2022	Generator	CNP103	95	100	0	95	4	101	195	-54	3	-20	30	48	
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	80	-1	98	2	101	195	-54	3	-20	30		
			Rock drill, crawler mounted (pneumatic)	SIL EIA	108	80	-1	107	2	110	195	-54	3	-20	39		
			Ventilation Fan	CNP241	108	90	0	108	4	114	195	-54	3	-15	48		
			Water Pump, Submersible (Electric)	CNP283	85	100	0	85	4	91	195	-54	3	-20	20		
		Dec 2020 - Jul 2022	Concrete Lorry Mixer	CNP044	109	60	-2	107	1	107	195	-54	3	-20	26		45
			Concrete pump	CNP047	109	80	-1	108	1	108	195	-54	3	-20	37		
			Generator	CNP103	95	100	0	95	2	98	195	-54	3	-20	27		
			Crane Mobile	BS D7-114	101	70	-2	99	2	102	195	-54	3	-20	32		
			Bored Piling Crane mounted auger	BS D4-37	111	90	0	111	2	114	195	-54	3	-20	43		
S46b	Excavation of Tunnel Tubes (under cover of traffic deck)	Sep 2020 - Apr 2022	Excavator/Loader, Wheeled/Tracked	EPD-01145	99	80	-1	98	2	101	275	-57	3	-20	27	44	
			Generator	CNP103	95	100	0	95	3	100	275	-57	3	-20	26		
			Rock drill, crawler mounted (pneumatic)	SIL EIA	108	80	-1	107	2	110	275	-57	3	-20	36		
			Ventilation Fan	CNP241	108	90	0	108	3	112	275	-57	3	-15	44		
			Water Pump, Submersible (Electric)	CNP283	85	100	0	85	4	91	275	-57	3	-20	17		
		Dec 2020 - Jul 2022	Concrete Lorry Mixer	CNP044	109	60	-2	107	1	107	275	-57	3	-20	33		42
			Concrete pump	CNP047	109	80	-1	108	1	108	275	-57	3	-20	34		
			Generator	CNP103	95	100	0	95	2	98	275	-57	3	-20	24		
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	275	-57	3	-20	26		
			Bored Piling Crane mounted auger	BS D4-37	111	90	0	111	2	114	275	-57	3	-20	40		
S47a	Underpinning of Existing Bridges (under cover of traffic deck)	Nov 2020 - Apr 2021	Excavator/Loader, Wheeled/Tracked	EPD-01145	99	70	-2	97	1	97	275	-57	3	-20	24	43	
			Generator	CNP103	95	100	0	95	1	95	225	-55	3	-20	23		
			Bar Bender and Cutter	CNP021	90	70	-2	88	1	88	225	-55	3	-20	16		
			Concrete Lorry Mixer	CNP044	109	60	-2	107	1	107	225	-55	3	-20	35		
			Concrete pump	CNP047	109	80	-1	108	1	108	225	-55	3	-20	36		
		Aug 2020 - Nov 2022	Crane Mobile	BS D7-114	101	70	-2	99	1	99	225	-55	3	-20	27		47
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	60	-2	97	1	97	225	-55	3	-20	23		
			Generator	CNP103	95	100	0	95	2	98	225	-55	3	-20	26		
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	225	-55	3	-20	27		
			Poker, Vibratory, Hand Held	CNP173	102	70	-2	100	1	100	225	-55	3	-20	28		
S49	Underpinning of Existing Bridges (under cover of traffic deck)	Sep 2020 - Apr 2021	Excavator/Loader, Wheeled/Tracked	EPD-01145	99	70	-2	97	1	97	230	-55	3	-20	25	43	
			Generator	CNP103	95	100	0	95	1	95	230	-55	3	-20	23		
			Bar Bender and Cutter	CNP021	90	70	-2	88	1	88	230	-55	3	-20	16		
			Concrete Lorry Mixer	CNP044	109	60	-2	107	1	107	230	-55	3	-20	35		
			Concrete pump	CNP047	109	80	-1	108	1	108	230	-55	3	-20	36		
		Aug 2020 - Nov 2022	Crane Mobile	BS D7-114	101	70	-2	99	1	99	230	-55	3	-20	27		60
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	60	-2	97	1	97	230	-55	3	-20	25		
			Generator	CNP103	95	100	0	95	3	100	180	-53	3	-10	40		
			Lorry	CNP142	105	70	-2	103	2	106	180	-53	3	-5	51		
			Crane Mobile	BS D7-114	101	60	-2	99	3	104	180	-53	3	-5	48		
S50a	Foundation (west side) for noise enclosure on GRF Flyover (Ferry Street Section)	Jan 2022 - Mar 2022	Bored Piling Crane mounted auger	BS D4-37	111	80	-1	110	2	113	180	-53	3	-10	53	50	
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	70	-2	97	2	100	180	-53	3	-5	45		
			Compactor, vibratory	CNP050	105	70	-2	103	3	108	180	-53	3	-5	53		
			Dump Truck with Grab	CNP069	105	70	-2	103	1	103	180	-53	3	-5	48		
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	180	-53	3	-5	44		
		Oct 2022 - Apr 2023	Generator	CNP103	95	100	0	95	1	95	180	-53	3	-10	35		59
			Lorry	CNP142	105	70	-2	103	1	103	180	-53	3	-5	48		
			Concrete Lorry Mixer	CNP044	109	60	-2	107	2	110	215	-55	3	-5	53		
			Concrete pump	CNP047	109	80	-1	108	1	108	215	-55	3	-10	46		
			Generator	CNP103	95	100	0	95	3	100	215	-55	3	-10	38		
S50b	Foundation (west side) for noise enclosure on GRF Flyover (Ferry Street Section)	Apr 2022 - Jun 2022	Lorry	CNP142	105	70	-2	103	2	106	215	-55	3	-5	50	48	
			Crane Mobile	BS D7-114	101	60	-2	99	3	104	215	-55	3	-5	47		
			Bored Piling Crane mounted auger	BS D4-37	111	80	-1	110	2	113	215	-55	3	-10	51		
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	70	-2	97	2	100	215	-55	3	-5	44		
			Compactor, vibratory	CNP050	105	70	-2	103	3	108	215	-55	3	-5	52		
		Oct 2022 - Apr 2023	Dump Truck with Grab	CNP069	105	70	-2	103	1	103	215	-55	3	-5	47		48
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	215	-55	3	-5	43		
			Generator	CNP103	95	100	0	95	1	95	215	-55	3	-10	33		
			Lorry	CNP142	105	70	-2	103	1	103	215	-55	3	-5	47		
			Concrete Lorry Mixer	CNP044	109	60	-2	107	1	107	250	-56	3	-5	49		
S50c	Foundation (west side) for noise enclosure on GRF Flyover (Ferry Street Section)	Jul 2022 - Sep 2022	Concrete pump	CNP047	109	80	-1	108	1	108	250	-56	3	-10	45	56	
			Generator	CNP103	95	100	0	95	3	100	250	-56	3	-10	37		
			Lorry	CNP142	105	70	-2	103	1	103	250	-56	3	-5	45		
			Crane Mobile	BS D7-114	101	60	-2	99	2	102	250	-56	3	-5	44		
			Bored Piling Crane mounted auger	BS D4-37	111	80	-1	110	2	113	250	-56	3	-10	50		
		Oct 2022 - Apr 2023	Excavator/Loader, Wheeled/Tracked	EPD-01145	99	70	-2	97	2	100	250	-56	3	-5	43		47
			Compactor, vibratory	CNP050	105	70	-2	103	2	106	250	-56	3	-5	49		
			Dump Truck with Grab	CNP069	105	70	-2	103	1	103	250	-56	3	-5	45		
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	250	-56	3	-5	41		
			Generator	CNP103	95	100	0	95	1	95	250	-56	3	-10			

Build King - SKEC Joint Venture

Construction Noise Assessment

Period: 0700 to 1900 (except general holidays)

Noise Sensitive Receiver: W-P11 The Coronation (West Façade)

Mitigation Measures Scenario

Noise Criteria: 75dB(A)

Worksite	Activity	Period	PME	TM Ref. / other Ref.	Unit Quiet Plant SWL	On-time, %	Time Factor	Quiet Plant SWL with on-time %	No. of plants	Total SWL	Distance from Notional Sources, m	Distance Attenuation	Façade Correction, dB(A)	Barrier Correction, dB(A)	Predicted Noise Level, dB(A)	Total Predicted Noise Level for each group, dB(A)
S50d	Road works for re-align Ferry Street at-grade road	Jan 2022 - Jun 2022	Asphalt Paver	EPD-01126	104	80	-1	103	1	103	245	-56	3	-5	45	55
			Concrete Lorry Mixer	CNP044	109	60	-2	107	1	107	245	-56	3	-5	49	
			Concrete pump	CNP047	109	80	-1	108	1	108	245	-56	3	-10	45	
			Dump Truck with Grab	CNP069	105	70	-2	103	1	103	245	-56	3	-5	46	
			Generator	CNP103	103	100	0	103	1	103	245	-56	3	-10	40	
			Poker, Vibratory, Hand Held	CNP173	102	70	-2	100	1	100	245	-56	3	-10	38	
			Road Roller	EPD-01183	97	80	-1	96	1	96	245	-56	3	-5	38	
			Bored Piling Crane mounted auger	BS D4-37	111	80	-1	110	1	110	245	-56	3	-10	47	
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	70	-2	97	1	97	245	-56	3	-5	40	
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	245	-56	3	-5	42	
S51	Demolish the Existing Ferr Street Subway	Jul 2022 - Aug 2022	Breaker, Excavator Mounted (Hydraulic)	BS D8-13	110	50	-3	107	1	107	200	-54	3	-5	51	55
			Dump Truck with Grab	CNP069	105	70	-2	103	2	106	200	-54	3	-5	50	
			Concrete crusher, excavator mounted	CNP055	103	80	-1	102	1	102	200	-54	3	-5	46	
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	200	-54	3	-5	43	
			Saw, Wire	CNP205	101	70	-2	99	1	99	200	-54	3	-5	43	
S56a	Construction of the Cut and Cover Tunnel (under cover of traffic deck)	Apr 2020 - Nov 2022	Bar Bender and Cutter	CNP021	90	60	-2	88	1	88	235	-55	3	-20	15	49
			Concrete Lorry Mixer	CNP044	109	60	-2	107	2	110	235	-55	3	-20	37	
			Concrete pump	CNP047	109	80	-1	108	1	108	235	-55	3	-20	36	
			Generator	CNP103	95	100	0	95	3	100	235	-55	3	-20	27	
			Crane Mobile	BS D7-114	101	70	-2	99	1	99	235	-55	3	-20	27	
			Poker, Vibratory, Hand Held	CNP173	102	70	-2	100	1	100	235	-55	3	-20	28	
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	70	-2	97	1	97	235	-55	3	-20	25	
			Ventilation Fan	CNP241	108	90	0	108	6	115	235	-55	3	-15	48	
			Water Pump, Submersible (Electric)	CNP283	85	100	0	85	6	93	235	-55	3	-20	20	
			Compactor, vibratory	CNP050	105	70	-2	103	1	103	235	-55	3	-20	31	
			Generator	CNP103	95	100	0	95	2	98	235	-55	3	-20	26	
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	70	-2	97	2	100	235	-55	3	-20	28	
			Road Roller	EPD-01183	97	80	-1	96	1	96	235	-55	3	-20	24	
S58	Construction of Temporary Maternal and Child Health Centre - Superstructure	Apr 2018 - Jun 2018	Poker, Vibratory, Hand Held	CNP173	102	50	-3	99	1	99	160	-52	3	-5	45	47
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	70	-2	97	1	97	160	-52	3	-5	42	
			Bar Bender and Cutter	CNP021	90	60	-2	88	2	91	160	-52	3	0	43	
			Concrete Lorry Mixer	CNP044	109	50	-3	106	2	109	160	-52	3	-5	55	
S58	Construction of Temporary Maternal and Child Health Centre - Superstructure	Jul 2018 - Dec 2018	Concrete pump	CNP047	109	70	-2	107	1	107	160	-52	3	-10	48	57
			Generator	CNP103	95	100	0	95	2	98	160	-52	3	-10	39	
			Crane Mobile	BS D7-114	101	50	-3	98	1	98	160	-52	3	-5	44	
			Saw, Circular Wood	BS D7-79	103	50	-3	100	2	103	160	-52	3	-5	49	
			Excavator/Loader, Wheeled/Tracked	EPD-01145	99	70	-2	97	1	97	160	-52	3	-5	43	

Appendix D

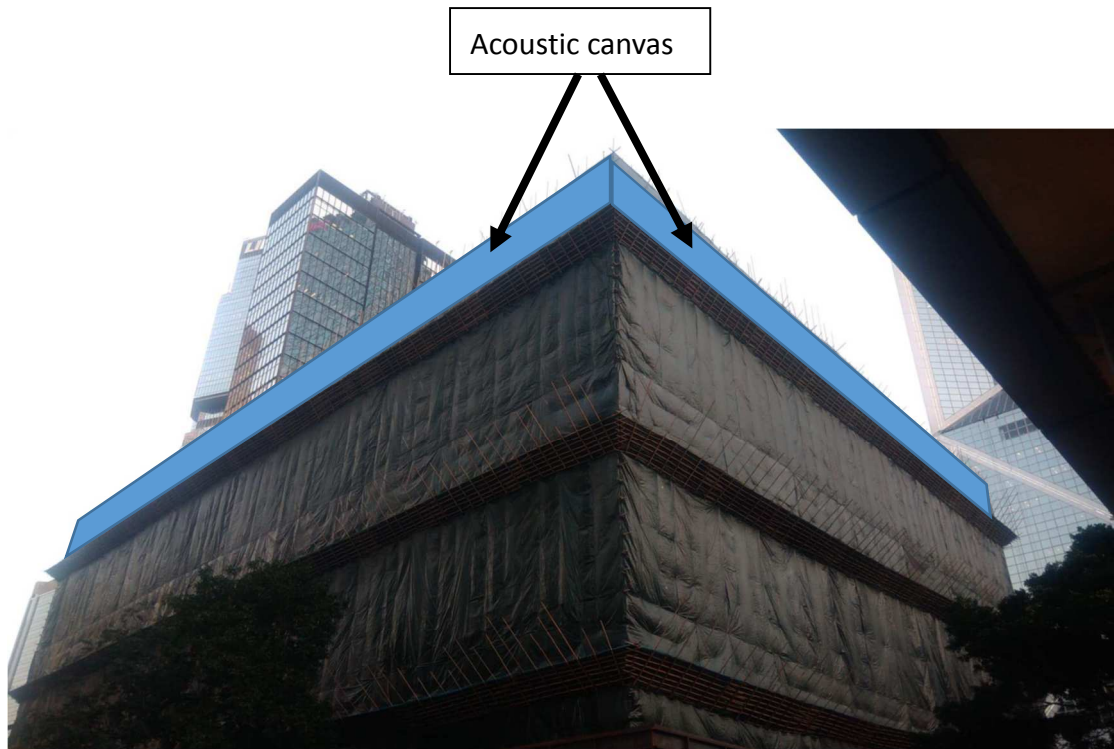
Distance between NSRs and Worksites

NSRs	S3	S4	S5	S6	S7	S8	S9	S13a	S16a	S16b	S17	S18	S25	S26	S27a	S27b	S28	S29	S30	S31	S32	S33	S34	S35	S36a	S36b	S37a	S37b	S39	S40	S41	S42	S43	S44	S45	S46a	S46b	S46c	S47a	S47b	S47c	S49	S50a	S50b	S50c	S50d	S51	S52	S53	S55a	S55b	S56a	S56b	S57	S58		
W-N1A Yau Ma Tei Catholic Primary School (Hoi Wang Road)	300	>300	>300	>300	>300	>300	>300	300	>300	>300	>300	>300	>300	>300	>300	>300	>300	>300	>300	>300	>300	>300	>300	>300	>300	>300	>300	>300	>300	>300	>300	>300	>300	>300	>300	>300	>300	>300	>300	>300	>300	>300	>300	>300	>300	>300	>300	>300	>300	>300	>300	>300	>300	>300			
W-N8A Tak Cheong Building	250	70	19	45	85	80	135	250	55	22	75	135	32	45	31	100	160	140	85	70	55	8	32	135	32	50	23	90	120	29	15	40	135	55	30	155	60	13	120	45	14	125	225	205	170	185	225	85	40	50	35	75	15	75	260		
W-N25A Prosperous Garden Block 1	110	120	135	170	180	205	285	110	80	160	170	245	120	165	80	210	85	45	70	50	95	150	190	265	115	205	80	230	75	130	165	130	45	85	130	65	80	155	45	95	155	40	75	55	16	25	65	65	115	75	175	50	135	205	160		
W-P11 The Coronation (West Façade)	165	>300	>300	>300	>300	>300	>300	165	285	>300	>300	>300	>300	>300	>300	>300	>300	150	215	>300	>300	295	>300	>300	>300	>300	>300	>300	>300	>300	260	>300	>300	>300	210	>300	>300	195	275	>300	225	>300	>300	230	180	215	250	245	200	>300	>300	>300	>300	235	>300	>300	160

Appendix E

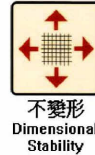
Details of Acoustic Noise Barriers for Demolition Works of YMT Yau Ma Tei Multistorey Carpark Building

Temporary noise barrier will be erected at the floor to be demolished surrounding the 4 sides of the building



Model No. CK2009	High Tenacity Polyester PVC Laminated Fabrics
General Applications:	Construction, Marine (Field) covers, Storage covers and many other applications
Colors:	Yellow, Sky Blue, Green, Orange, Dark Green, White, Grey
Available Grades:	Fire-Retardant, Ultra-Violet, Anti-Mildew, Anti-Cold, Sound Insulated
Type of Products:	Roll Type
Raw Material Origin:	From Japan
Flammability Test Method:	BS 5867-2 2008
Sizes:	2M x 6M, 2M x 30M(roll type)

Sample name(provided by sponsor): PVC Tarpaulin
 Color: Gray
 Mass per unit area : 958 g/m²
 Area, S, of test element : 3.8 m²
 Air temp. in the test rooms : 27°C
 Relative humidity in the test rooms : 58%
 Receiving room volume : 67.9 m³

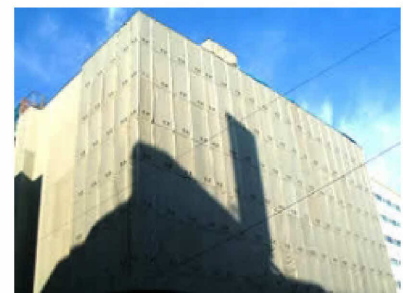
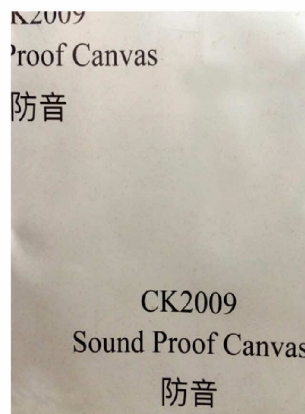
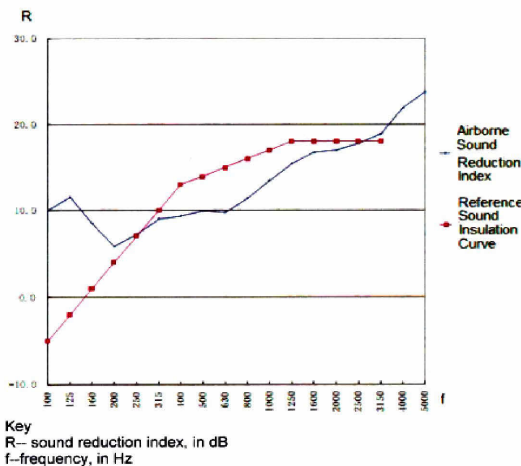


Physical Properties:

III. Test results

f Hz	R dB
100	10.1
125	11.6
160	8.6
200	5.9
250	7.3
315	9.1
400	9.4
500	10.0
630	9.9
800	11.5
1000	13.5
1250	15.5
1600	16.7
2000	17.0
2500	17.8
3150	18.9
4000	21.9
5000	23.9
Rw (C;Ctr)	14(-1;-2)

Fabric Detail 網布規格	1000D x 1000D x 20 x22			
Item 項目名稱	Test Method 執行標準	Unit 單位	Value 數據	
Thickness 厚度	DIN53353	mm	1.0	
Total Weight 總重量	DIN53352	g/m ²	1132.2	
Tensile Strength 拉伸強度	DIN53354	N/5cm	經 Warp	3040
			緯 Weft	2549
Elongation at Break 斷裂伸長率	DIN53354	%	經 Warp	17.3
			緯 Weft	23.3
Tear Strength 撕裂強度	DIN53363	N	經 Warp	448
			緯 Weft	374
Adhesion of Coating Strength 剝離負荷	DIN53357	N/5cm	經 Warp	123
			緯 Weft	108
Remarks 備註				



This technical data is offered as helpful suggestion only. It's accurate to the best of our knowledge at time of printing.

祥記帆布工程有限公司
Cheung Kee Canvas Ltd.

G/F, 352 Reclamation St., Kowloon, Hong Kong.
 香港九龍新填地街 352 號地下
 Tel: 2385 2644, 2780 7505 Fax: 2771 4599
 url: <http://www.ckcanvasltd.com> email: contact@ckcanvasltd.com

Appendix F

Details of Acoustic Noise Enclosure or Barriers



Acoustics Innovation

SilentCUBE

Movable Noise Enclosure

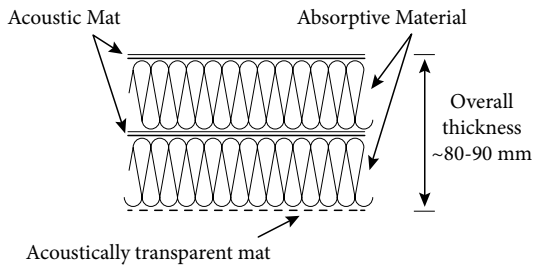
SilentCUBE is a movable noise enclosure for both indoor and outdoor use.

The lightweight design and user friendly installation mechanism enables contractors to quickly deploy and relocate SilentCUBE without using any specialized tools. Each CUBE can be seamlessly connected with another CUBE to accommodate larger machines.

SilentCUBE has been implemented in various construction sites, including:

- Night works conducted inside several MTR stations
- Road works at Tsuen Wan, Hoi Shing Road
- Concreting works for new office and education centre of Hong Kong Water Supplies Department in Tin Shui Wai

Section of Acoustic Panel



Product Specification

Modular Size (W) x (L)x (H)	1.5m x 1.5m x 2.2m
	2m x 2m x 2.2m
	2.5m x 2.5m x 2.2m
Modular Weight	~80kg
Insertion Loss*	18 dB(A)
Surface Density	3kg/m ²
Setup Time	10 mins by 4 people
Standard Colour	Grey
Ideal Solution for	
• Hand-held Breaker	
• Vibratory Poker	
• Concrete Saw / Circular Saw, etc	
• Hammering and other PCW	

* Tested with white noise source

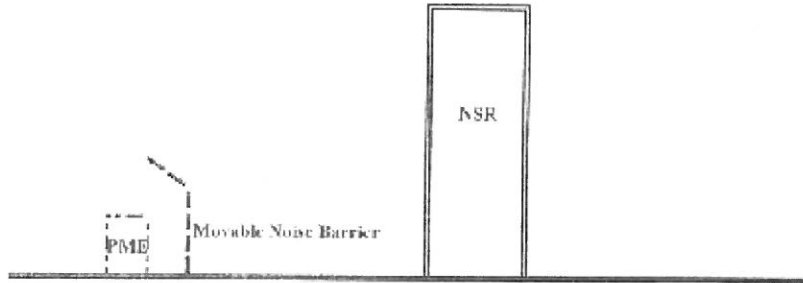


SilentCUBEs seamlessly connected with good gap sealing

Shatin to Central Link

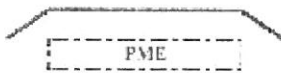
Works Contract 1108 – Kai Tak Station and Associated Tunnel

Section View of Movable Noise Barrier



Movable noise barrier composed of minimum 50mm thick sound absorbing lining and 10mm thick plywood (or 1mm thick steel) backing with a cantilevered upper portion located within 5m from any static or mobile plant. PME will be totally screened when viewed from the NSR.

Plan View of Movable Noise Barrier



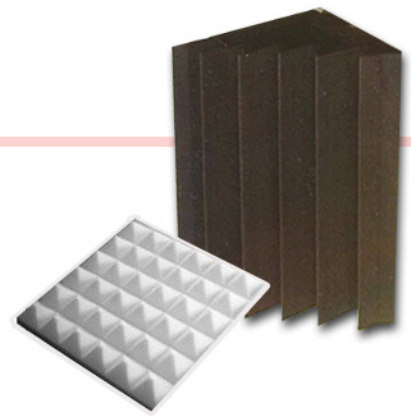
Static or mobile PME will be totally screened when viewed from the NSR.

吸音棉 SOUNDPROOF FOAM

吸音棉,學名為阻燃聚氨酯聲學泡沫是一種新型吸聲材料,具有重量輕,耐潮,可切割成形,施工安裝方便等優點。在泡沫塑料的背面塗上萬能膠,可將泡沫塑料吸音棉直接需要在需要吸聲的地方,施工十分方便。

吸音棉被廣泛應用於建築聲學和噪聲控制工程中,例如:隔聲屏吸聲層,空調消聲器,廠房車間吸聲降噪以及影劇院、禮堂、廣播電視錄音播音室等工程中控制混響時間,音箱內的吸音及改善室內音質等等。

吸音棉具有獨特的構造,細微多孔隙能有效吸收衰減聲波的能量,波浪型和金字塔型吸音棉在中頻與高頻音(500Hz~2000Hz)之吸音效果甚佳。若是低頻音的處理,則可選用三角柱體型,可將低頻做最大的降噪處理。



波浪型H25,H40,H50,H75 (經濟之選)

size: 1.5m x 2m

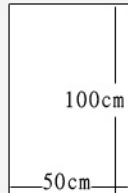
●厚度
2.5cm, 4.0cm, 5.0cm, 7.5cm



●規格
200cm X 100cm

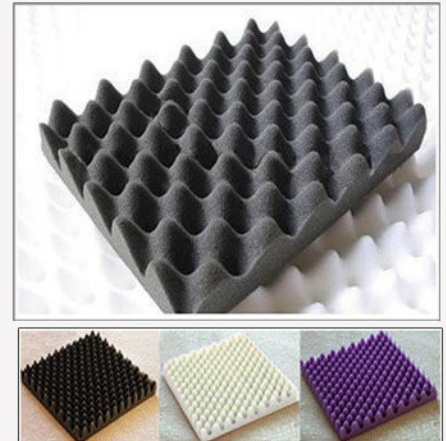
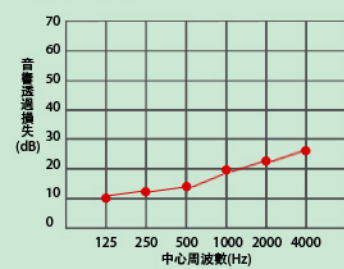
●密度
16kg/m²

●顏色
黑色, 白色和紫色



中心周波數 (Hz)	125	250	500	1000	2000	4000
音響透過損失 (dB)	10	12	15	20	25	28

●音響透過損失



金字塔型T50,T75 (質量之選)

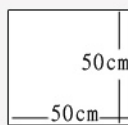
●厚度
5.0cm, 7.5cm



●規格
50cm X 50cm

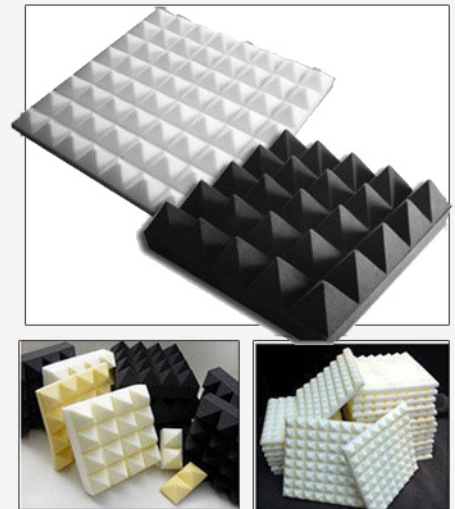
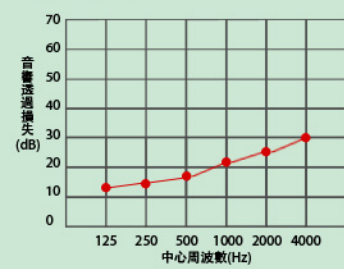
●密度
18kg/m²

●顏色
黑色和白色



中心周波數 (Hz)	125	250	500	1000	2000	4000
音響透過損失 (dB)	12	15	18	22	27	30

●音響透過損失



三角柱體型TR50 (重低音之選)

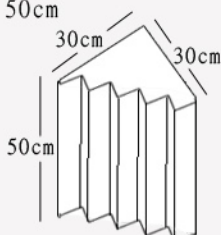
●厚度
30cm



●規格
30cm x 30cm x 50cm

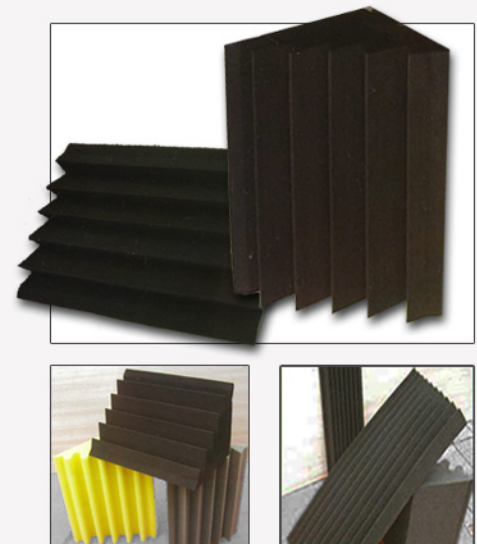
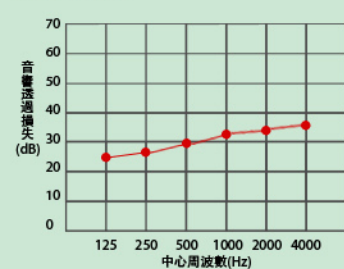
●密度
20kg/m²

●顏色
灰黑色



中心周波數 (Hz)	125	250	500	1000	2000	4000
音響透過損失 (dB)	25	28	30	32	34	36

●音響透過損失



Soundproof Testing
of
Foam



2008000188Z



(2008)国认监认字(047)号



检测
CNAS L0846

检验报告

玻纤质检 (WSW) 字 第 (1111875) 号

副本

产品名称

波浪海棉

委托单位



检验类别

委托检验

国家玻璃纤维产品质量监督检验中心


二〇一一年五月五日

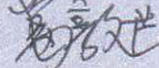


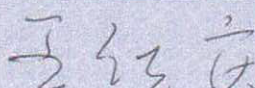
国家玻璃纤维产品质量监督检验中心

检 验 报 告

玻纤质检 (WSW) 字 第 (1111875) 号 共 2 页 第 1 页

产品名称	隔音毡	规格型号	Vinco-2.0
商 标	坤耐	样品状态	海棉制品
委托单位	██████████	检验类别	委托检验
生产单位	██████████	样品等级	——
抽样地点	——	送样日期	2011年11月29日
样品数量	约 (300×300) mm, 2块	送 样 者	██████████
抽样基数	——	生产日期	——
检验依据	试验方法详见附页	检验项目	隔声量
检 验 结 论	<p>样品经检验, 隔声量测定值详见附页 (第2页)。</p> <p>声明: 本检验结论仅对来样负技术责任。</p>		
备 注	 <p>(检验报告专用章) 2011年12月05日</p>		

批准: 

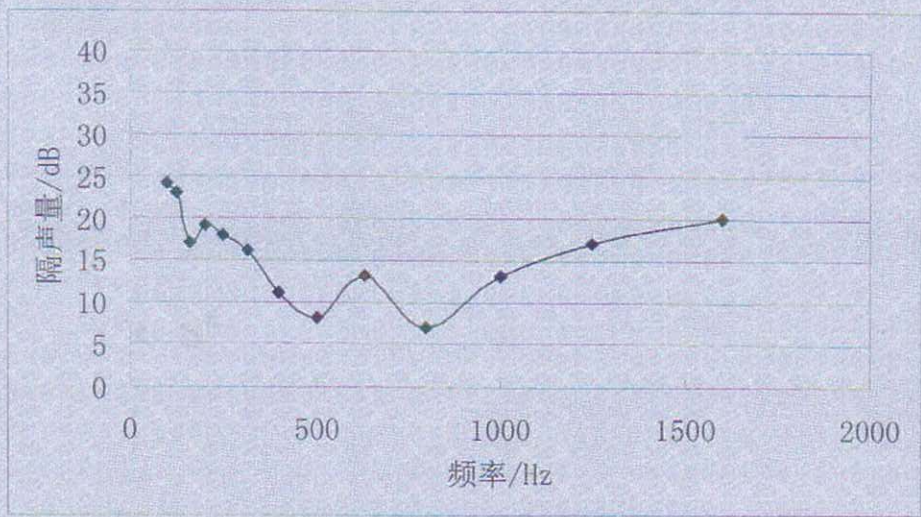
审核: 

国家玻璃纤维产品质量监督检验中心

检验报告附页

玻纤质检 (WSW) 字 第 (1111875) 号 共 2 页 第 2 页

检验项目		试验方法	测定值
隔声量 dB	100Hz	阻抗管法	24
	125Hz		23
	160Hz		17
	200Hz		19
	250Hz		18
	315Hz		16
	400 Hz		11
	500 Hz		8
	630 Hz		13
	800 Hz		6
	1000 Hz		13
	1250 Hz		16
	1600 Hz		20



编制: 张金红

Smouldering &
Flammability Test
of
Foam



STC Test Report


Date: 2009-09-16

Page 1 of 3
(DUPLICATE)

No: HT196402

- Description of Sample(s)** : Two (2) groups submitted sample in black colour said to be
(A) SPONGE
Size: 12 inch x 3 inch x ½ inch (20pcs)
(B) SPONGE
Size: 8 inch x 7 ½ inch x 2 inch (6pcs)
8 inch x 4 inch x 2 inch (6pcs)
Country of Destination: U.S.A
- Date sample(s) Received** : (A) 2009-08-11
(B) 2009-09-11
- Date Tested** : (A) 2009-08-11 to 2009-08-17
(B) 2009-09-11 to 2009-09-16
- Investigation Requested** : Selected test(s) as detailed herein.
- Conclusion(s)** : 1. The submitted sample A complied with CAL TB 117:2000
Section D Part II.
2. The submitted sample B complied with CAL TB 117: 2000
Section A Part I.

This Test Result of Sample A refers to our previous Test Report, HT196092 issued on 2009-08-17.


CHENG Chun-yiu, David
Authorized Signatory
Textile and Materials Department
For and on behalf of

The Hong Kong Standards and Testing Centre Ltd.

SATRA Accredited Laboratory
International Safe Transit Association (ISTA) Certified Laboratory
Members of
Hong Kong Apparel Society Limited
Hong Kong Footwear Association

Approved Laboratory of The Woolmark Company
The Govmark Fire Laboratories Certified Laboratory

Hong Kong Association for Testing, Inspection and Certification Limited
Knitwear Innovation and Design Society (KIDS)

The Hong Kong Standards and Testing Centre Ltd.

10, Dai Wang Street, Tai Po Industrial Estate, N. T., Hong Kong
Tel: (852) 2656 1835 Fax: (852) 2654 4353 E-mail: hkstc@hkstc.org Homepage: www.stcgroup.org

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STC Test Report

Date: 2009-09-16

Page 2 of 3
(DUPLICATE)

No: HT196402

TEST RESULTS:

1. Smouldering Screening Test

Ref. California Technical Bulletin No. 117-2000, Section D, Part II, Resilient Cellular Materials

Test Method

The apparatus and methods of testing were those described in California Technical Bulletin No. 117, Section D, Part II, for testing the smouldering tendency of resilient cellular materials used in upholstered furniture.

Test Results: Sample A

Trial	Percentage (%) of non-smouldered residue	Comment
1	99.9	Pass
2	99.9	
3	99.9	
Average	99.9	
Requirement: All test specimens greater than 80% non-smouldered residue.		

2. Flammability Test

Ref. California Technical Bulletin No. 117-2000, Section A, Part I, Resilient Cellular Materials

Test Method

The apparatus and methods of testing were those described in California Technical Bulletin No. 117, Section A, Part I, for testing the flame retardancy of resilient cellular materials used in upholstered furniture.

Test Results: Sample B

Before Aging			
Specimen	After flame time (nearest 0.1 second)	Char length (nearest 0.1 inch)	After glow time (nearest 0.1 second)
1	Nil	1.6	Nil
2	Nil	2.1	Nil
3	Nil	2.6	Nil
4	Nil	1.7	Nil
5	Nil	2.1	Nil
Average	Nil	2.0	Nil
Requirement			
Individual	≤ 10 seconds	≤ 8 inches	/
Average	≤ 5 seconds	≤ 6 inches	≤ 15 seconds

The Hong Kong Standards and Testing Centre Ltd.

10 Da Wang Street, Tai Po Industrial Estate, N. T., Hong Kong
Tel: (852) 2666 1633 Fax: (852) 2664 4353 E-mail: hkstc@hkstc.org Homepage: www.hkgroup.org

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STC Test Report

Date: 2009-09-16

Page 3 of 3
(DUPLICATE)

No: HT196402

TEST RESULTS:

After Aging			
<u>Specimen</u>	<u>After flame time</u> (nearest 0.1 second)	<u>Char length</u> (nearest 0.1 inch)	<u>After glow time</u> (nearest 0.1 second)
1	Nil	1.5	Nil
2	Nil	2.3	Nil
3	Nil	1.6	Nil
4	Nil	1.9	Nil
5	Nil	2.3	Nil
Average	Nil	1.9	Nil
Requirement			
Individual	≤ 10 seconds	≤ 8 inches	/
Average	≤ 5 seconds	≤ 6 inches	≤ 15 seconds

Comment : Pass

***** End of Test Report *****

The Hong Kong Standards and Testing Centre Ltd.

10 Da Wang Street, Tai Po Industrial Estate, N.T., Hong Kong

Tel: (852) 2656 1828 Fax: (852) 2654 4103 E-mail: hks@hks.org.hk Homepage: www.stcgroup.org

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Hong Kong Job Reference
of
Foam



綽基建築科技有限公司

Tracki Building Technology Ltd

Job Reference

Soundproof Foam

Liantang/Heung Yuen Wai
Boundary Control Point
site formation and infrastructure works
- Contract 5 CV/2012/09

Chun wo C&E Company Ltd

Residential Development
RBL 1190, No v 8-12
Deep Water Bay Drive

K. H. Foundations Ltd



Appendix G

Implementation Schedule of Proposed Mitigation Measures

Implementation Schedule of Mitigation Measures

CNMMP/ EIA Ref.	Proposed Mitigation Measures	Target PME	Implemented by	Location	Period	Requirements or Standard to be achieved
Paragraph 2, S3.2 of CNMMP	Movable temporary noise barriers	Asphalt paver, excavator etc.	Main Contractor	All areas in CKR- YMTE	Apr 2018 – Nov 2024	Annex 5, TM- EIAO
Paragraph 2, S3.2 of CNMMP	Noise enclosure	Air compressor, generator	Main Contractor	All areas in CKR- YMTE	Apr 2018 – Nov 2024	Annex 5, TM- EIAO
Paragraph 2, S3.2 of CNMMP	Traffic decking over construction site	All PME to be operated under traffic deck	Main Contractor	Areas involving excavation of cut and cover tunnel	Mar 2019 - Dec 2023	Annex 5, TM- EIAO
Paragraph 2, S3.2 of CNMMP	Noise barrier for building demolition	Crusher, breakers etc.	Main Contractor	Yau Ma Tei Multit- storey Carpark Building	Nov 2020 – Apr 2021 & May 2022 – Jul 2022	Annex 5, TM- EIAO

CNMMP/ EIA Ref.	Proposed Mitigation Measures	Target PME	Implemented by	Location	Period	Requirements or Standard to be achieved
S5.4.1 of EIA report	Implement the following good site practices: <ul style="list-style-type: none"> ● Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction programme ● Machines and plant (such as trucks, cranes) that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum; ● Plant known to emit noise strongly in one direction, where possible, be orientated so that the noise is directed away from nearby NSRs; ● Silencers or mufflers on construction equipment should 	All PME	Main Contractor	All areas in CKR-YMTE	Apr 2018 – Nov 2024	Annex 5, TM-EIAO

	<p>be properly fitted and maintained during the construction works;</p> <ul style="list-style-type: none"> ● Mobile plant should be sited as far away from NSRs as possible and practicable; ● Material stockpiles, mobile container site office and other structures should be effectively utilized, where practicable, to screen noise from on-site construction activities. 					
S5.4.1 of EIA report	Install temporary hoarding located on the site boundaries between noisy construction activities and NSRs. The conditions of hoardings shall be properly maintained throughout the construction period.	All PME	Main Contractor	All areas in CKR-YMTE	Apr 2018 – Nov 2024	Annex 5, TM-EIAO
S5.4.1 of EIA report	Use 'Quiet plant'	Refer to Table 2.2	Main Contractor	All areas in CKR-YMTE	Apr 2018 – Nov 2024	Annex 5, TM-EIAO
S5.4.1 of EIA report	Sequencing operation of construction plants where practicable	All PME	Main Contractor	All areas in CKR-YMTE	Apr 2018 – Nov 2024	Annex 5, TM-EIAO
S5.4.1 of EIA report	Implement a noise monitoring programme under EM&A programme	All PME	Main Contractor	Noise Sensitive Receivers	Apr 2018 – Nov 2024	Annex 5, TM-EIAO