
Appendix 11

Environmental Assessment



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Section 16 Planning Application

**Renewal of Planning Application No. A/NE-FTA/192 –
Temporary Asphalt Plant on Man Kam To Road,
Sheung Shui
Environmental Assessment Report**

Prepared for:

K. Wah Asphalt Ltd

August 2024



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For and on behalf of EnviroSolutions & Consulting					
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1 INTRODUCTION

1.1 Preface

1.1.1 EnviroSolutions & Consulting Ltd (“ESC”) has been appointed to prepare this Environmental Assessment (“EA”) Report in support of a renewal of planning application for Temporary Asphalt Plant (“the Temporary Asphalt Plant”) for a Period of Five Years at Lots 20 RP (Part), 21 and 23 RP (Part) in D.D. 88 and adjoining Government Land, East of Man Kam To Road, Sheung Shui, New Territories (“the Application Site”). The application aims to renew the latest planning permission under Planning Application No. A/NE-FTA/192 from the Town Planning Board (“TPB”) which will expire on 12 December 2024 such that the Applicant can be given opportunity to continue using the Application Site for the Temporary Asphalt Plant with **no change in operation. The Temporary Asphalt Plant under the current application is proposed to maintain existing operation, site configuration and major development parameters.**

1.2 Project Background

1.2.1 Since early 2010s, demand for asphalt increased because of several mega infrastructure projects such as Hong Kong-Zhuhai-Macao Bridge, Guangzhou-Shenzhen-Hong Kong Express Rail, etc. At that time, there were several temporary asphalt plants in Hong Kong. None of them were located within the Northeast District.

1.2.2 In order to ensure stable supply of asphalt, the Temporary Asphalt Plant was proposed to be provided at the Application Site. The history of planning applications and Specified Process (“SP”) Licence application is summarised below:

- In 2014, a planning application (no. A/NE-FTA/148) for the Proposed Development was made under Section 16 of the *Town Planning Ordinance* (“TPO”). The planning application was approved with conditions by the TPB on 12 December 2014.
- In accordance with Schedule 1 of the *Air Pollution Control Ordinance* (“APCO”), the Temporary Asphalt Plant is a “Tar and Bitumen Works” and classified as a SP. A SP Licence application was then made supported by providing an Air Pollution Control Plan (“APCP”) to the authority, Environmental Protection Department (“EPD”). A SP Licence No. L-15-035(1) was duly granted on 23 February 2017. After receiving no adverse comment on the submitted commissioning trial report from EPD on 7 April 2017, the Temporary Asphalt Plant came into operation.
- In 2019, S16 Application (No. A/NE-FTA/192) was made to the TPB to renew planning approval for the Temporary Asphalt Plant for another five years. On 18 October 2019, the renewal application was approved with conditions for a period from 13 December 2019 to 12 December 2024.
- Amongst the approval conditions, only one condition, Approval Condition (g), was related to environmental impact, “*the implementation of noise mitigation*”

measures, as proposed by you, as required under approval condition (g) to the satisfaction of the Director of Environmental Protection or of the TPB by 13.9.2021”.

- Thereafter, submissions were made to the TPB for compliance with Approval Condition (g). On 26 July 2021, a letter was issued by the PlanD stating that the Approval Condition (g) regarding implementation of noise mitigation measures was complied with. The copies of the final submission and PlanD letter are provided in **Appendix A**.
- Shortly after approval of the S16 Application, the application for renewal of the SP Licence was made and the renewed SP Licence No. L-15-035(2) with an effective period of three years was obtained on 18 May 2020.
- An application for renewing SP Licence No. L-15-035(2) was made on 15 March 2023. The renewal is further described in **paragraphs 2.2.11 and 2.2.12**.

1.2.3 The Applicant has been engaged in various major infrastructure projects, road construction and maintenance works carried out by Highways Department (“HyD”), Drainage Services Department (“DSD”), Civil Engineering and Development Department (“CEDD”), Airport Authority (“AA”) and MTR Corporation (“MTRC”). Those projects included Tseung Kwan O – Lam Tin Tunnel (“TKO-LTT”), The Hong Kong – Zhuhai – Macao Bridge (“HZMB”), Liantang/Heung Yuen Wai Boundary Control Point (“LTHYW BCP”), Central – Wan Chai Bypass, Tuen Mun – Chek Lap Kok Link (“TMCLKL”), Queen’s Hill Development and the North and South Runway Asphalt Resurfacing projects, as well as ongoing road maintenance works for Kowloon West and New Territories West.

1.2.4 The Hong Kong government has been in the forefront in developing the Northern Metropolis and others New Development Areas (“NDAs”). The latest release of the Hong Kong Major Transport Infrastructure Development Blueprint also highlights the government's commitment in building a liveable, competitive and sustainable Hong Kong through “**driving development by transport infrastructure**” by adopting the planning principles of “infrastructure-led” and “capacity-creating”. The road network of Hong Kong would be expanded and with increased capacity, and it is foreseeable that there is a **growing demand for high quality asphalt to materialise the vision**.

1.2.5 As indicated in **Table 1-1**, a number of projects such as the Northern Link – Kwu Tung Station, Hung Shui Kiu Station, Tuen Mun South Extension, Tung Chung Line Extension, etc., will be carried out in Hong Kong. It is essential to ensure stable asphalt supply to support the aforementioned works in Hong Kong. The Temporary Asphalt Plant is the only asphalt plant located in the North New Territories. To avoid disruption for the supply of asphalt, which would impact infrastructure projects and road works, the Temporary Asphalt Plant operation is essential to be continued.

Table 1-1 Major Planned Projects in Hong Kong

PROJECTS	ANTICIPATED COMPLETION
MTR Northern Link - Kwu Tung Station	2027
MTR Tung Chung Line Extension	2029

PROJECTS	ANTICIPATED COMPLETION
MTR Tuen Mun South Extension	2030
MTR Hung Shui Kiu Station	2030
Kwu Tung North and Fanling North New Development Area - Remaining Phase of Site Formation and Engineering Infrastructure Works	2031
Yuen Long South Development - Second Phase Development	2031

1.2.6 In addition, a number of infrastructure projects currently utilising the Temporary Asphalt Plant are ongoing as shown in **Table 1-2** below. Those projects will not be completed within the current approval period expiring on 12 December 2024. Should the Temporary Asphalt Plant have to be ceased operation, it would cause serious disruption in the progress of the involved projects. In order to continue to utilise the application site and to ensure the supply of asphalt to support infrastructure projects in the locality and territory, the Applicant seeks to renew the previous approved application No. A/NE-FTA/192 with an expiry date on 12 December 2024.

Table 1-2 Major Contracts Supported by the Temporary Asphalt Plant

EMPLOYER	CONTRACT NO.	CONTRACT TITLE	ANTICIPATED COMPLETION
AA	Contract No. 3310	North Runway Modification Works	2025
HyD	12/HY/2019	Highways Department Term Contract (Management and Maintenance of Roads in Kowloon West excluding Expressways and High Speed Roads 2020 – 2026)	2026
HyD	04/HY/2020	Highways Department Term Contract (Management and Maintenance of Roads in Tuen Mun and Yuen Long Districts excluding Expressways and High Speed Roads 2021 – 2026)	2026
HyD	HY/2014/08	Construction of tunnel at Yau Ma Tei, reconstruction of a section of the Gascoigne Road Flyover and reprovisioning of affected public facilities at Yau Ma Tei	2026
HyD	HY/2019/13	Construction of administration building and ventilation buildings, and installation of route-wide electrical and mechanical works	2028
HyD	HY/2020/07	Widening of Castle Peak Road between Kwun Tsing Road and Hoi Wing Road	2025
HyD	HY/2020/08	Flyover from Kwai Tsing Interchange Upramp to Kwai Chung Road	2026
HyD	HY/2021/16	Provision of Universal Accessibility Facilities at Footbridges, Elevated Walkways and Subways Package 5 - Contract 2	2025

EMPLOYER	CONTRACT NO.	CONTRACT TITLE	ANTICIPATED COMPLETION
DSD	DC/2019/12	Upgrading of West Kowloon and Tsuen Wan Sewerage – Phase 2B	2027
DSD	DC/2020/03	Drainage Maintenance and Construction in Hong Kong Island and Islands Districts (2021-2025) And Building and Civil Maintenance and Minor Works to DSD Plants and Facilities (2020-2025)	2025
CEDD	CV/2020/01	Site formation and infrastructure works for public housing developments at Pok Fu Lam South	2027
CEDD	CV/2022/07	Site Formation and Infrastructure Works for Public Housing Developments at Long Bin, Yuen Long	2026
CEDD	ED/2018/04	Trunk Road T2 and Infrastructure Works for Developments at the Former South Apron	2026
CEDD	ND/2019/01	Kwu Tung North New Development Area, Phase 1: Site Formation and Infrastructure Works	2026
CEDD	ND/2019/04	Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section (Shek Wu San Tsuen North to Lung Yeuk Tau)	2026
CEDD	NE/2017/03	Development of Anderson Road Quarry Site - Road Improvement Works and Pedestrian Connectivity Facilities Works Phase 2A	2026
CEDD	NE/2017/05	Widening of Tai Po Road (Sha Tin Section)	2025
CEDD	NL/2020/03	Tung Chung New Town Extension - Major Infrastructure Works in Tung Chung East	2028
CEDD	NL/2020/06	Tung Chung New Town Extension - Site Formation and. Infrastructure Works at Tung Chung Valley, Phase 1	2027
CEDD	YL/2020/06	Site Formation and Infrastructure Works for Public Housing Developments at Kam Tin South, Yuen Long – Phase 1	2026
HK & China Gas Co. Ltd.	N/A	Reinstatement Service (Term Contract 2023 – 2025)	2025
Hongkong International Terminals	N/A	Bituminous Re-surfacing Works at Terminal 4, 6, 7, 8, 9 & Depot S (1+1 Term Contract)	2025

1.2.7 The planning approval under A/NE-FTA/192 for the Temporary Asphalt Plant is set to expire on 12 December 2024. To avoid disruption to ongoing projects, the Applicant is submitting a renewal application seeking planning permission to continue utilising

the Application Site while maintaining the same operation. This application aims to maintain existing operations at the Application Site while ensuring no changes to the nature, operation, or site configuration of the Temporary Asphalt Plant, with no adverse impact induced.

1.3 Site Description

1.3.1 The Application Site is located to east of Man Kam To road and to the north of Hung Kiu San Tsuen as shown in **Figure 1-1**.

1.3.2 To the north and east of the Application Site is land zoned “Green Belt” in which no new development is expected. A metal workshop is located on the hillside to the northeast of the Application Site. There are public roads access to the metal workshop which also surround and lie within the Application Site.

1.3.3 Based on the Application Site observation on 11 July 2024, the environs of the Application Site remain the same as those observed in 2019/20, including:

- Some public roads providing access to the metal workshop adjacent to the north of the Application Site surrounding and partially lying within the Application Site.
- A metal workshop locating on the hillside to the northeast of the Application Site.
- A piece of land reserved for developing Poultry Slaughtering Centre but shelved in 2010 located to the southeast of the Application Site.
- Several car repair workshops located to the south and southwest of the Application Site.
- Some other workshops and open storage sites located to the further southwest, across Man Kam To Road.
- Some open storage sites located to the west and northwest.

1.4 Project Description

1.4.1 Under the current application, it is proposed to continue utilising the Application Site for the Temporary Asphalt Plant. **As compared with the last approved scheme, there is no change in the nature, and no change to the Application Site configuration, building bulk, site area, form, and major development parameters of the approved Plant, and the Application Site remains unchanged when compared to the previous application.** The Application Site configuration and layout are identical to the approved scheme.

1.4.2 There is **no change** in the asphalt production process and operation. The main product of the Temporary Asphalt Plant is Hot Mix Asphalt (“HMA”) consisting of aggregates blended with bitumen. The usage of HMA is mainly for road paving and airport runway. The maximum HMA production rate of the Temporary Asphalt Plant is 160 tonnes/hour using a batch mix production mode with a small quantity of asphalt emulsion is also produced. Since road and airport runway maintenance works are mainly carried out between midnight and early morning, the Temporary

Asphalt Plant must be operated for 24 hours/day. In response to EPD's control of "Land Filling and Fly-tipping" policy, up to 85,000 tonnes of Reclaimed Asphalt Pavement ("RAP") per year are consumed in the asphalt production

1.4.3 The Master Layout Plan shown in **Figure 1-2** is identical to that of the last approved Planning Application No. A/NE-FTA/192. The major components of the Temporary Asphalt Plant include:

- Asphalt Plant Complex including the Mixing Tower
- Bitumen Tanks
- RAP Stock Pile No. 1
- RAP Equipment Store
- Aggregate Stock Pile No. 2
- Workshop Building

1.4.4 There will be **no change** to the building bulk, site area, form, and major development parameters of the Temporary Asphalt Plant after obtaining the approval with conditions from TPB on 12 December 2019 as mentioned in **paragraph 1.2.2**. A Schematic Diagram of the Temporary Asphalt Plant showing the manufacture of HMA is enclosed in **Appendix A**.

1.5 Objectives of the Report

1.5.1 The objectives of this EA Report are to:

- Review potential environmental impacts arising from the operation of the Temporary Asphalt Plant, in terms of air quality, noise, water quality, waste management and land contamination.
- Review the situation of air and noise sensitive receivers

Figure 1-1 Site Boundary and Locations

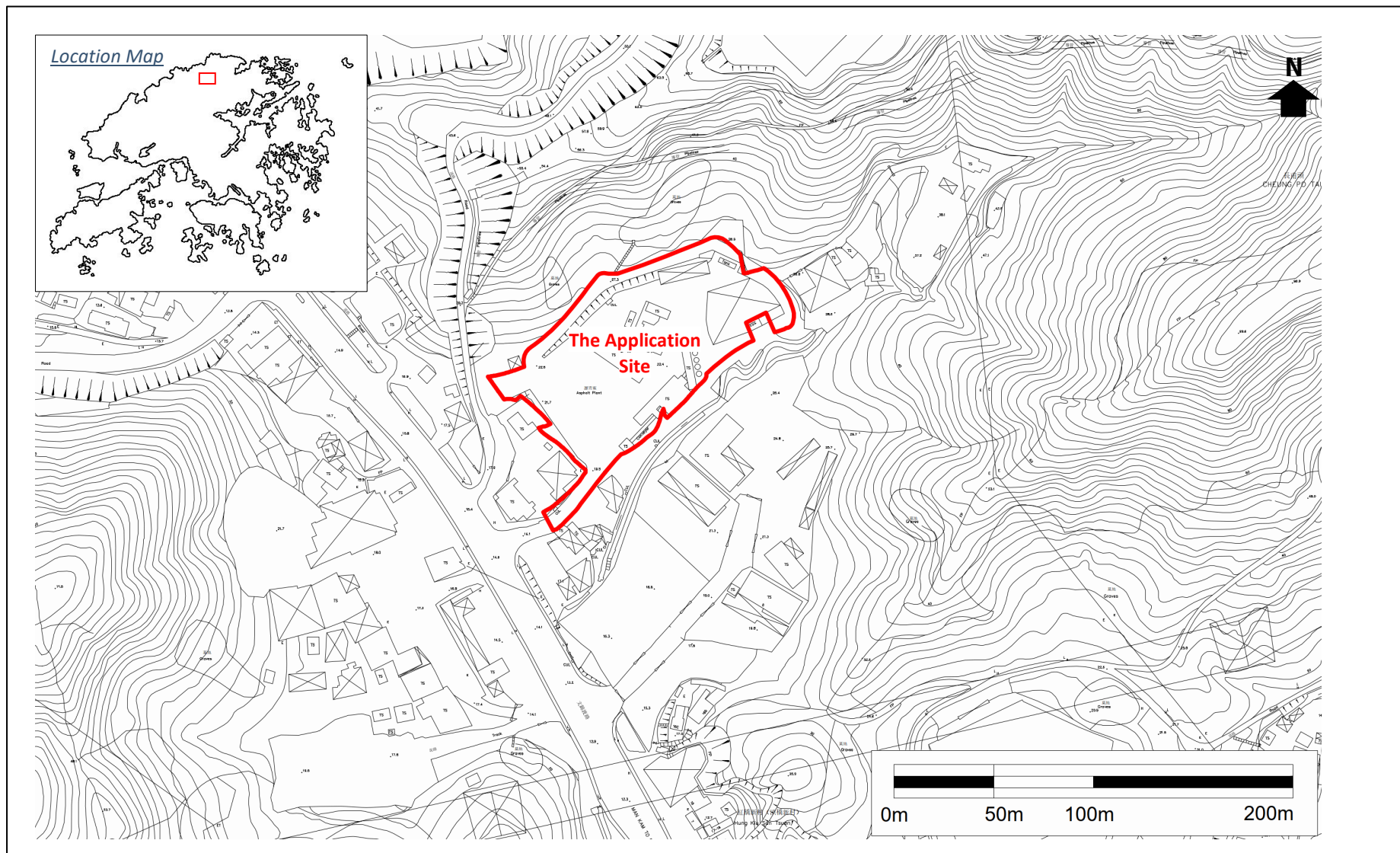


Figure 1-2 Master Layout Plan



2 REVIEW OF ENVIRONMENTAL IMPACTS

2.1 Introduction

2.1.1 Assessments of environmental impact to air quality, noise, water quality, waste and land contamination, were carried out in previously submitted EA Reports to support previous Planning Applications and received “no comment” from the Authority. Apart from the aforementioned planning applications supported by the EA Reports, applications were made under the *Air Pollution Control Ordinance* (“APCO”). The documents are listed in **Table 2-1** below:

Table 2-1 Summary of Submissions

REF	REVISION	REPORT	APPLICATION	DATE	REMARK
7076143 D01/01	1	Environmental Assessment (2014 EA Report)	Planning Application No. A/NE-FTA/148	August 2014	No comment
7076382 D01/01	9.3	Air Pollution Control Plan (“APCP”) (“2017 APCP”)	SP Licence No. L-15-035(1)	March 2017	No comment
7076703 D01/01	1	Environmental Assessment (2019 EA Report)	Planning Application No. A/NE-FTA/192	August 2019	No comment
N/A	N/A	Review on Air Sensitive Receivers (“ASRs”)	SP Licence Renewal Application obtaining the renewed SP Licence No. L-15-035(2)	2019	No comment
AQN23.1014-J.01	2	APCP (“2024 APCP”)	SP Licence Renewal Application	August 2024	Being reviewed and no adverse comment

2.1.2 As the Temporary Asphalt Plant has been in operation since 2017, the existing operation would be maintained without any changes in site configuration, building bulk, site area, form, and major development parameters. **No construction work** is needed for the continuation of Plant operation, therefore there will be no environmental impacts arising from construction. Due to **no change in operation** of the Temporary Asphalt Plant, environmental impacts related to Plant operation are the same as those previously assessed in the 2014 EA Report and 2019 EA Report.

2.2 Air Quality

Planning Application No. A/NE-FTA/148 (2014)

2.2.1 With reference to the Rural and New Town Planning Committee (“RNTPC”) Paper dated 12 December 2014, paragraph 9.1. stated the conclusion of 2014 EA Report supporting Planning Application No. A/NE-FTA/148 was agreed by the Director of Environmental Protection (“DEP”).

2.2.2 The air quality assessment for Plant operation in the 2014 EA Report included the following:

- Quantitative impact assessment was conducted to compare against the historical Air Quality Objectives (“AQOs”) in force between 2014 and 2021 (“2014 AQOs”) and adopted international standards for non-criteria pollutants Volatile Organic Compounds (“VOCs”), formaldehyde, benzo(a)pyrene (“B[a]P”) and bitumen fumes
- No exceedance of the AQOs and adopted standards for non-criteria pollutants were predicted at all representative Air Sensitive Receivers (“ASRs”)
- The Temporary Asphalt Plant would not pose any unacceptable air quality impacts on the ASRs in the vicinity
- Plant operation would fully comply with 2014 AQOs, other adopted criteria and the Best Practicable Means (“BPM”)

The First version of SP Licence No. L-15-035(1)

2.2.3 The 2017 APCP supporting the application for SP Licence No. L-15-035(1) was received with “no comment”. The SP Licence was obtained on 23 February 2017.

2.2.4 The 2017 APCP included:

- Identification of Representative ASRs within 500m from the Application Site boundary
- Adopting the 2014 AQOs
- Adopting international standards for non-criteria pollutants including B[a]P, bitumen fume (“Polycyclic Organic Matter”), formaldehyde and VOCs. Recommended standards for benzene (“C₆H₆”), as well as metals and odour.
- Reporting the estimated cumulative air quality levels at the ASRs including the contour plots complying with the 2014 AQOs as well as the adopted standards for non-criteria pollutants, metals and odour
- Recommending the BPMs for HMA manufacturing
- Concluding:
 - The BMPs would be provided, implemented and maintained

- All the relevant AQOs (historical AQOs) would be met with the Temporary Asphalt Plant in operation
- No unacceptable noxious and offensive emissions would arise from Plant operation

2.2.5 The Applicant has properly implemented the recommendations and air quality control measures provided in the 2017 APCP and the SP Licence. Soon after the commissioning trials held in March 2017, a letter of no objection to the commencement of operation of the Temporary Asphalt Plant was issued by EPD in April 2017.

2.2.6 Since commencement of operation in 2017, several improvements have been made to the Temporary Asphalt Plant by the Applicant, as follows:

- An additional deodorisation system for further reduction of particulates and odour
- The use of low-odour bitumen to reduce the volatility and formation of bitumen fumes
- Covers attaching to asphalt trucks to reduce fugitive dust and odour during transportation

2.2.7 In accordance with SP Licence requirements, during operation of the Temporary Asphalt Plant, 24-hour average ambient Respirable Suspended Particulates (“RSP”) sampling was conducted by the Applicant at a frequency not less than once every six calendar days. Source sampling at chimney for the concerned air pollutants is carried out at a frequency not less than once per every 12 months.

The First Renewal for SP Licence No. L-15-035(2)

2.2.8 A renewal application of SP licence was submitted to EPD in November 2018. A review of ASRs was completed in March 2019 and **no change** of ASRs was identified. The findings and conclusion were still valid for the renewal application. SP Licence No. L-15-035(2) was granted by EPD in May 2020.

The First Renewal for Planning Application No. A/NE-FTA/192 (2019)

2.2.9 An EA report was prepared in August 2019 to support the renewal of planning approval (Planning Application No. A/NE-FTA/192) for the Temporary Asphalt Plant for another five years to 2024. Review of the 2017-APCP and ASRs for the renewal of SP licence in 2019 concluded that no adverse air quality and health impact from operation of the Temporary Asphalt Plant was anticipated with implementation of the control measures recommended in APCP and stipulated in the SP licence.

2.2.10 The renewal application was approved for a period from 13 December 2019 to 12 December 2024 with several approval conditions.

The Second (Current) Renewal for SP Licence

- 2.2.11 An application for renewing SP Licence No. L-15-035(2) was made, supported by a new APCP. The latest version of the new APCP (“2024 APCP”) was submitted to EPD in August 2024 to support the renewal application of SP Licence. In the 2024 APCP:
- The cumulative concentrations of pollutants including RSP, FSP, NO₂, SO₂, etc., have been quantitatively assessed based on the latest modelling guidelines.
 - The predicted cumulative concentrations would comply with both the prevailing AQOs and future 2025 AQOs.
 - Representative ASRs in the 2017 APCP were reviewed and there is no change.
- 2.2.12 The recently revised APCP versions were submitted in June and July 2024. The APCP has been reviewed by EPD and it is being finalised, and **no adverse comment has been received on the APCP.**

The Second (Current) Renewal for Planning Application (2024)

2.2.13 This EA report has been prepared to support the renewal of planning approval for the Temporary Asphalt Plant for another five years to 2029. The previously submitted 2014 EA Report, 2017 APCP, ASRs for the renewal of SP Licence in 2019, 2019 EA Report and 2024 APCP concluded that no adverse air quality and health impact from operation of the Temporary Asphalt Plant was anticipated with implementation of the control measures recommended in APCP and stipulated in the SP Licence. Since there will be no change in the Temporary Asphalt Plant operation, no adverse air quality impact will be arising from the continued operation of the Temporary Asphalt Plant.

Summary of Air Pollution Control Measures

2.2.14 Based on the Application Site observations on 11 July 2024, the air pollution control measures are summarised in **Table 2-2** below.

Table 2-2 Mitigation Measures for the Temporary Asphalt Plant

ID	DESCRIPTION	MITIGATION MEASURES
EP1	Exhaust from Dust Collectors of Stack	<ul style="list-style-type: none"> • Pre-skimmer and filter baghouse are provided for dust removal prior to exhaust emission to ambient air • Ventilation duct for the chimney are 34m above ground to assist air pollutants dispersion • ULSD with a maximum sulphur content of 0.005% w/w is used • Air-to-fuel ratio is properly controlled to achieve complete fuel combustion as far as possible • Dust is filtered with high capacity filter baghouse before discharge to ambient air • The exhaust fume from the mixer is passed to the aggregate rotary dryer drum for re-burning by incineration, potential PAHs emission arising from the mixer is minimised

ID	DESCRIPTION	MITIGATION MEASURES
EP2	Fugitive dust emission from underground hopper	<ul style="list-style-type: none"> • Sufficient automatic water sprinklers and manual water hoses are installed and operated during loading of aggregate to suppress possible dust emissions • Underground hoppers are enclosed at the top and three sides • Enclosed conveyor belts are used to minimise dust emissions
EP3	Fugitive dust emission from spare Aggregates Storage Bay	<ul style="list-style-type: none"> • Sufficient automatic water sprinklers and manual water hoses are installed and operated during loading of aggregate to suppress possible dust emissions • Storage bay is covered on top with three sides enclosure, and front curtain will be provided at the fine aggregate piles with sizes less than 5mm
EP4	Fugitive dust emission from RAP Storage Bay	<ul style="list-style-type: none"> • Sufficient automatic water sprinklers and manual water hoses are installed and operated during loading of aggregate to suppress possible dust emissions • Covered on top with three sides enclosure, and equipped with front curtain
EP5	Fugitive dust emission from Coarse RAP Storage Bay	<ul style="list-style-type: none"> • Sufficient automatic water sprinklers and manual water hoses are installed and operated during loading of aggregate to suppress possible dust emissions • Covered on top with three sides enclosure, and equipped with front curtain
EP6	Fugitive dust emission from Crushed RAP Storage Bay	<ul style="list-style-type: none"> • Sufficient automatic water sprinklers and manual water hoses are installed and operated during loading of aggregate to suppress possible dust emissions • Covered on top with three sides enclosure, and equipped with front curtain
EP7	Fugitive dust emission from RAP Feed Hopper at RAP Processing Depot	<ul style="list-style-type: none"> • Sufficient automatic water sprinklers and manual water hoses are installed and operated during loading of aggregate to suppress possible dust emissions • Covered on top with three sides enclosure, and equipped with front curtain • RAP processing housed in fully enclosed building with enclosed conveyor belts
EP8 & EP9	Fugitive dust emission from (Coarse & Fine) RAP Feed Hopper	<ul style="list-style-type: none"> • Sufficient automatic water sprinklers and manual water hoses are installed and operated during loading of aggregate to suppress possible dust emissions • Covered on top with three sides enclosure, and equipped with front curtain. • Enclosed conveyer and bucket elevator are used to minimise dust emissions.
EP10	Exhaust from Dust Collectors of Silos	<ul style="list-style-type: none"> • Fully enclosed debagging machine and enclosed bucket elevator are used to load imported lime into the silo. • Dust is filtered with bag filter before discharge to ambient air. • Water sprinklers are operated during filler feeding processes. • Feed by fully enclosed screw conveyor.

ID	DESCRIPTION	MITIGATION MEASURES
EP11	Negligible dust emission from conditioner	<ul style="list-style-type: none"> Water sprinklers are operated during handling of conditioned dust.
EP12 – EP16	Bitumen fume emission from heated bitumen tanks	<ul style="list-style-type: none"> The heating temperature of the particular bitumen type and grade shall not exceed the corresponding temperature limit Tamper-free high temperature cut-off device shall be provided to cut off the heater in case the upper limit for bitumen temperature is reached. The cut off temperature shall be set at 160°C. Connected to the Mixing Tower thereby being emitted from the stack EP1 to further reduce bitumen fume emission.
EP17	Bitumen fume emission from heated bitumen tanks	<ul style="list-style-type: none"> The heating temperature of the particular bitumen type and grade shall not exceed the corresponding temperature limit Tamper-free high temperature cut-off device is provided to cut off the heater in case the upper limit for bitumen temperature is reached. The cut off temperature shall be set at 160°C. Exhaust fume is discharged through tank vents of at least 10m above ground. Activated carbon filter is installed to eliminate bitumen fume emission.
EP18	Asphalt rubber fume emission from the removable heated asphalt rubber tank	<ul style="list-style-type: none"> The heating temperature of the asphalt rubber shall not exceed the corresponding temperature limit Tamper-free high temperature cut-off device shall be provided to cut off the heater in case the upper limit for bitumen temperature is reached. The cut off temperature shall be set at 191°C. Activated carbon filter is installed to eliminate bitumen fume emission.
EP19	Exhaust from the diesel burner of the Bitumen Storage and Drum Decanter	<ul style="list-style-type: none"> Air-to-fuel ratio is properly controlled to achieve complete fuel combustion. Maximum sulphur content of liquid fuel used shall be 0.005% by weight. Activated carbon filter is installed to eliminate bitumen fume emission.
EP20	Fugitive dust emissions from oversized aggregate reject bin	<ul style="list-style-type: none"> Water sprinklers are operated during loading of rejected aggregate.
EP21	Fugitive dust emissions from rejected aggregate storage	<ul style="list-style-type: none"> Sufficient automatic water sprinklers and manual water hoses are installed and operated during loading of aggregate to suppress possible dust emissions. Three sides enclosure with the top cover and front-side curtain.

ID	DESCRIPTION	MITIGATION MEASURES
EP22	Fugitive dust emissions from Paved Road	<ul style="list-style-type: none"> All access roads within the Application Site are hard-paved and adequately wetted during operational hours. Vehicle and wheel washing facilities are provided to remove dust or mud deposits on vehicle body and wheels prior to exiting the Application Site. Traffic on site is restricted to 5km/hour. Loaded tankers/trucks shall be fully covering with tarpaulin sheet before leaving the Application Site.
EP23	Temporary Diesel Generator already removed	<ul style="list-style-type: none"> Not applicable
EP24	Combustion products from diesel fuel for Emergency Generator	<ul style="list-style-type: none"> Air-to-fuel ratio is properly controlled to achieve complete fuel combustion. Ventilation duct for the heater shall be 8m above ground to assist air pollutants dispersion. Maximum sulphur content of liquid fuel used shall be 0.005% by weight.
EP25	Bitumen fume emission from heated Bitumen Storage and Drum Decanter	<ul style="list-style-type: none"> The heating temperature of the bitumen storage shall not exceed the corresponding temperature limit Tamper-free high temperature cut-off device shall be provided to cut off the heater in case the upper limit for bitumen temperature is reached the cut off temperature shall be set at 191°C. Activated carbon filter is installed to eliminate bitumen fume emission.

2.3 Noise

2.3.1 The noise impact arising from the Temporary Asphalt Plant assessed in the 2014 EA Report was based on noise measurement taken at the Applicant’s asphalt plant at Anderson Road Quarry. The noise impact assessed in the 2019 EA Report was based on actual noise measurements at the Temporary Asphalt Plant during operation. Since no changes to Plant components or operations have been made and no new Noise Sensitive Receivers (“NSRs”) have been identified, the noise impact assessment provided by 2019 EA Report is considered to remain valid.

2.3.2 Based on the Application Site observations on 11 July 2024, the noise mitigation measures listed below include:

- 2.5m high hoarding erected along the Application Site Boundary
- The mixing unit installed inside the mixing tower fully enclosed by cladding
- The exhaust fan located inside a plant room fully enclosed by steel plates
- The screw conveyor, slant belt conveyor, belt conveyor, bucket elevator and filler elevator all fully enclosed with cladding

- The rotary dryer drum set up in the centre of the Temporary Asphalt Plant which can be screened by the storage facilities, mixing tower and other building structure of the Temporary Asphalt Plant
- A barrier which is a steel plate with a thickness of not less than 1.5mm and a surface density of not less than 10kg/m² is provided to reduce noise impact of the air compressor
- A barrier which is a steel plate with a thickness of not less than 1.5mm and a surface density of not less than 10kg/m² provided to reduce noise impact of the bitumen pump
- The aggregate unloading bay/storage area three sides enclosed with top by cladding
- The RAP unloading area enclosed by cladding
- The asphalt loading area enclosed by two sides with top by cladding and curtains at the entrance and exit sides

2.3.3 Furthermore, the noise mitigation measures submitted on 18 June 2021 were received with no comment from EPD (Appendix A refers).

2.3.4 Therefore, no adverse noise impact arising from the continued Plant operation is anticipated.

2.4 Water Quality

2.4.1 As mentioned in the 2014 and 2019 EA Reports, water is not required for the production of HMA. No industrial wastewater is generated from the Temporary Asphalt Plant during operation. The only sources of wastewater during Plant operation include the following:

- Sewage generated from site staff
- Surface runoff

2.4.2 Since all water for vehicle wheel washing is treated and reused, there is no generation of wastewater from this source.

2.4.3 For the sewage generated from site staff, portable toilets equipped with storage tanks are already installed at the Temporary Asphalt Plant to collect sewage/wastewater generated by staff. The collected sewage/wastewater is tankered away by a licensed contractor for off-site disposal on a regular basis. No adverse water quality impact arises from the Temporary Asphalt Plant since the operation started. Hence, no adverse impact on water quality due to sewage/wastewater generated by staff is anticipated.

2.4.4 For the Application Site surface runoff, water sprinklers are installed for dust suppression and the entire site is paved. Operational procedures are applied to prevent over-wetting of the ground and roads so as to minimise surface runoff. All

surface runoff is collected by the existing peripheral surface U-channels and diverted to sand traps for silt removal prior to being discharged into public drains.

2.4.5 Therefore, no adverse water quality impact due to surface runoff is anticipated.

2.5 Waste Management

2.5.1 There is no change to the operation of the Temporary Asphalt Plant or disposal methods of waste. The waste generated from the Temporary Asphalt Plant operation mainly comprises general refuse, commercial waste, rejected aggregates, treated aggregate fines from the dust conditioner and chemical waste.

2.5.2 General refuse and commercial waste are collected and taken away regularly by a registered waste collector for disposal off-site at a landfill managed by EPD. Hence, no adverse waste implication due to handling, transportation and/or disposal of general refuse and commercial waste is anticipated.

2.5.3 Rejected aggregates and treated aggregate fines are Inert Construction and Demolition (“C&D”) Material and disposed of off-site at an appropriate government-managed facility. Temporary stockpiling area, enclosed at three sides and with a front curtain, is set up for storage of aggregate prior to disposal. No adverse impact from Inert C&D Material is anticipated.

2.5.4 No more than 85,000 tonnes of RAP is reused in producing HMA. Reuse of RAP in the production process as aggregate as mentioned in **paragraph 1.4.1** for green asphalt product instead of treating as C&D waste for disposal at being dumped at landfill, thereby helping to reduce the pressure on landfill capacity.

2.5.5 There is only a small quantity of chemical wastes including used oil filters, scrap battery and waste lubrication oil generated from daily operation of the Temporary Asphalt Plant. A licensed collector is employed to handle and disposed of the chemical wastes. Hence, no adverse impact from chemical waste is anticipated.

2.6 Land Contamination

2.6.1 In the 2014 EA Report, the Application Site was reported to be used as rice paddy prior to the 1970s. In the mid- to late-1970s, the Application Site was filled and converted to open land. Then Site was used for open storage, manufacture of construction materials, warehouses and concrete batching plant. The 2014 EA report concluded no sources of historical land contamination issues were identified and was considered valid in the 2019 EA Report.

2.6.2 There is **no change** to Plant operation after being used since 2017. Hence, the conclusion of no historical land contamination made in the 2014 Report is considered to remain valid for this Application.

3 CONCLUSION

3.1 General

- 3.1.1 The Plant has been in operation since 2017 after obtaining the approval with conditions from TPB for Planning Application No. A/NE-FTA/148 in 2014, SP Licence No. L-15-035(1) from EPD in 2017, approval with conditions from TPB for Planning Renewal Application No. A/NE-FTA/192 in 2019 and renewed SP Licence No. L-15-035(2) in 2020. The SP Licence No. L-15-035(2) is being renewed and no adverse comment on the APCP is received. The Planning Application aims to renew the latest planning permission under Planning Application No. A/NE-FTA/192 from TPB which will expire on 12 December 2024 such that the Applicant can be given opportunity to continue using the Application Site for the Temporary Asphalt Plant. Considering the Temporary Asphalt Plant supplies asphalt for major infrastructure projects, airport runway and road maintenance works, it is necessary to keep the Temporary Asphalt Plant operation to avoid any disruption in the progress of the involved projects. In the light of this reason, the Applicant would like to apply for the Temporary Asphalt Plant operation for the other five years by submitting a planning application under Section 16 of TPO. This EA Report has been prepared to support the Planning Application.
- 3.1.2 The Temporary Asphalt Plant under the current application is proposed to maintain existing operation approved under previous application. There is **no change** to the Application Site configuration, building bulk, site area, form, and major development parameters of the approved Temporary Asphalt Plant. The application site remains unchanged when compared to the previous application. The existing operation is proven to induce no adverse environmental impact by maintaining good operation and on-site practices.
- 3.1.3 The main product of the Temporary Asphalt Plant is HMA and the maximum HMA production rate remains the same, i.e., 160 tonnes/hour using a batch mix production mode. Since road maintenance works are mainly processed between midnight and early morning, the Temporary Asphalt Plant must operate 24 hours per day supplying HMA in order to meet the demand.
- 3.1.4 The Temporary Asphalt Plant has already been built and in operation since 2017. No construction works will be required for the extension of operation. Therefore, there will be no construction-related impact on air quality, noise, water quality and waste management. The environmental impacts arising from the operation of the Temporary Asphalt Plant has not been changed since the 2019 EA report.
- 3.1.5 The conclusions for air quality, noise water quality, waste management and land contamination are as follows:

3.2 Air Quality

- 3.2.1 The current SP Licence No. L-15-035(2) was obtained in 2020. The latest version of APCP report with assessment by comparing the existing and proposed 2025 AQOs to

support of the application for renewal of SP Licence has been submitted to EPD for review and no adverse comment on APCP is received. No adverse air quality impact or health impact from the operation of the Temporary Asphalt Plant is expected by implementing and maintaining the control measures recommended in the APCP. Revised APCP versions were submitted in June and July 2024. The APCP is being finalised and reviewed by EPD. **No adverse comment has been received on the APCP.**

3.3 Noise

3.3.1 Since no changes on the Temporary Asphalt Plant component and operation, the noise impact assessment provided by 2019 EA Report is referred to in this EA Report. Based on 2019 EA Report, no adverse noise impact in terms of off-site traffic noise or on-site operation noise is anticipated. Therefore, with the implementation and maintenance of noise mitigation measures, no adverse noise impact is expected.

3.4 Water Quality

3.4.1 HMA production process does not require the use of water and so there is no industrial wastewater arising from the Temporary Asphalt Plant operation. The sources of water pollution from the Temporary Asphalt Plant includes sewage from site staff and surface runoff from the Application Site. All water for vehicle wheel washing is treated and reused.

3.4.2 Portable toilets equipped with storage tanks are installed to collect sewage generated by site staff. The sewage collected is disposed by licenced contractors. All site runoff is collected by existing peripheral surface U-channels and diverted to sedimentation tanks for silt removal prior to discharge into public drains. Therefore, no adverse water quality impact arises from the Temporary Asphalt Plant operation is anticipated.

3.5 Waste Management

3.5.1 General refuse and commercial waste generated are collected by registered waste collectors and disposed at a landfill managed by EPD regularly. Rejected aggregates and treated aggregate fines are disposed of off-site at an appropriate government-managed facility. Chemical waste is collected by licensed collectors. Hence, no adverse impact of waste from the Temporary Asphalt Plant operation was caused previously or is anticipated hereafter.

3.6 Land Contamination

3.6.1 With reference to 2014 EA Report, no suspected land contaminated were found based on aerial photographs. The 2014 EA Report draws a conclusion that no sources of historical land contamination issues were identified. The conclusion is still considered valid under this Application as there is no change on the land use. Therefore, no land contamination is anticipated within the Application Site.

Appendix A Letter of Compliance from Planning Department for A/NE-FTA/192



Member of the Surbana Jurong Group

local people
global experience

Our ref: 7076703/L27544/AW/MCC/rw

18 June 2021

District Planning Officer/Shu Tin, Tai Po & North
Sha Tin, Tai Po & North District Planning Office
13/F Sha Tin Government Offices
1 Sheung Wo Che Road, Sha Tin
New Territories, Hong Kong

By Post

Attention: Ms Wendy LEE

Dear Madam

**Renewal of Planning Approval for Temporary Asphalt Plant for a Period of 5 Years at
Lots 20 RP (Part), 21 and 23 RP (Part) in D.D. 88 and adjoining
Government Land, East of Man Kam To Road, Sheung Shui
Compliance of Approval Condition (g) of Approved Planning Application No. A/NE-FTA/192-1)**

Further to the letter of the Town Planning Board dated 1 June 2021 regarding the non-compliance with approval condition (g), we are pleased to enclose herewith the Response to Comment ("RtoC") table and the revised submission of the implementation of the noise mitigation measures for discharging approval condition (g).

The Applicant confirms that noise mitigation measures will be properly and fully implemented to assure that noise standards under Chapter 9 of the *Hong Kong Planning Standards and Guidelines* ("HKPSG") would be complied with.

I, as a corporate member of Hong Kong Institute of Acoustics (membership no: M155), hereby certify that the noise mitigation measures proposed by the Applicant are in line with the mitigation measures recommended and committed in the Further Information ("FI") of the captioned planning application. A figure with photographs for illustration purpose on the implemented noise mitigation measures has been enclosed for reference.

Should you have any queries regarding the above, please do not hesitate to contact the undersigned on 3995 8120.

Yours faithfully


Antony WONG
Technical Director – Water & Environment

Encl.

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27/F Ford Glory Plaza, 37-39 Wing Hong Street
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Ref.	Information Request	Responses
Comments from EPD (Contact Person: Ms Candice CHUNG, Tel: 2835 1114)		
	<ul style="list-style-type: none"> Response-to-Comment Item C – the applicant should state in the submission the surface mass density of the steel case enclosing the air compressor (e.g. whether it is $\geq 10\text{kg/m}^2$). The door of the steel case should also kept locked. The applicant should also clarify if the air-intake is facing away from nearby noise sensitive receivers. 	<p>The density of steel varies between approx. $7,500\text{kg/m}^3$ and $8,000\text{kg/m}^3$. Furthermore, according to BD's Code of Practice ("CoP") for the Structural Use of Steel 2011 which can be downloaded from https://www.bd.gov.hk/doc/en/resources/codes-and-references/code-and-design-manuals/SUOS2011.pdf, steel density is $7,850\text{kg/m}^3$. For a conservative approach, the steel density of $7,500\text{kg/m}^3$ is therefore adopted.</p> <p>As advised by the Applicant, the thicknesses of steel case is approx. 2mm. Therefore, the surface density of the steel case is approx. 15kg/m^2. The exact surface density (i.e. 15kg/m^2) and thickness of the steel case (i.e. 2mm) and sound absorptive material (i.e. 25mm) have been provided in the revised submission.</p> <p>The Applicant also confirmed that the door of the steel case are kept locked during operation of the air compressor. Besides, the air-intake of the steel case is facing northeast towards a hill, which is away from the nearby noise sensitive receivers. The relevant information have been also provided in the revised submission.</p>

Item	Machine	Noise Mitigation Measures
1	Exhaust Fan	The exhaust fan is already fully enclosed with four sides and the top.
2	Air Compressor	<p>The air compressor has been enclosed in the steel case with surface density about 15kg/m^2 (i.e. 2mm thick steel plate with density of about $7,500\text{kg/m}^3$) lined with approx. 25mm thick sound absorptive material facing the air compressor. The Applicant confirmed the door of the steel case shall be kept locked during operation of the air compressor. Besides, the air-intake of the steel case is facing northeast towards a hill, which is always from the nearby noise sensitive receivers.</p> <p>Additional noise barrier made of steel plate with surface density about 22.5kg/m^2 (i.e. 3mm thick steel plate with density of about $7,500\text{kg/m}^3$) and 27mm sound absorptive material facing the ground, on the top of the compressor, has been also installed.</p>
3	Rotary Dryer Drum	Screened by a barrier to the west of the drum with surface density of approx. 18kg/m^2 (i.e. 6.2mm thick cement pressure plate with density of about $2,300\text{kg/m}^3$ plus 0.5mm thick steel plate with density of about $7,500\text{kg/m}^3$) lined with approx. 27mm thick sound absorptive material facing the drum.
4	RAP Processing Machine	The crusher of RAP Processing Machine has been enclosed with four sides and the top made of steel plate with surface density about 22.5kg/m^2 (i.e. 3mm thick steel plate with density of about $7,500\text{kg/m}^3$) lined with 27mm thick sound absorptive material facing the machine.
5	Screw Conveyor/Slant Belt Conveyor/Belt Conveyor	<p>Due to the operation need for heat dissipation of motors, the proposed noise mitigation measures have been slightly modified as follows:</p> <p>(a) The motors have been enclosed on both sides, the top, the bottom and the front which the enclosures is made of steel plates with surface density about 22.5kg/m^2 (i.e. 3mm thick steel plate with density of about $7,500\text{kg/m}^3$) lined with 27mm thick sound absorptive material facing the motors.</p>
6	Bucket Elevator/Filler Elevator	The elevators have been enclosed by steel plate with surface density about 22.5kg/m^2 (i.e. 3mm thick steel plate with density of about $7,500\text{kg/m}^3$) lined with 27mm thick sound absorptive material facing the bucket elevator.
7	Mixing Unit	The mixing unit is already fully enclosed by cladding.
8	Bitumen Pump	<p>Due to the operation need for heat dissipation of pump, the proposed noise mitigation measures have been slightly modified as follows:</p> <p>(a) The pump has been enclosed on both sides, the top, the bottom and in front of the opening which the enclosures will be made of steel plates with surface density about 22.5kg/m^2 (i.e. 3mm thick steel plate with density of about $7,500\text{kg/m}^3$) lined with 27mm thick sound absorptive material facing the pump.</p>

Figure 1 – Noise Mitigation Measures (Sheet 1 of 5)

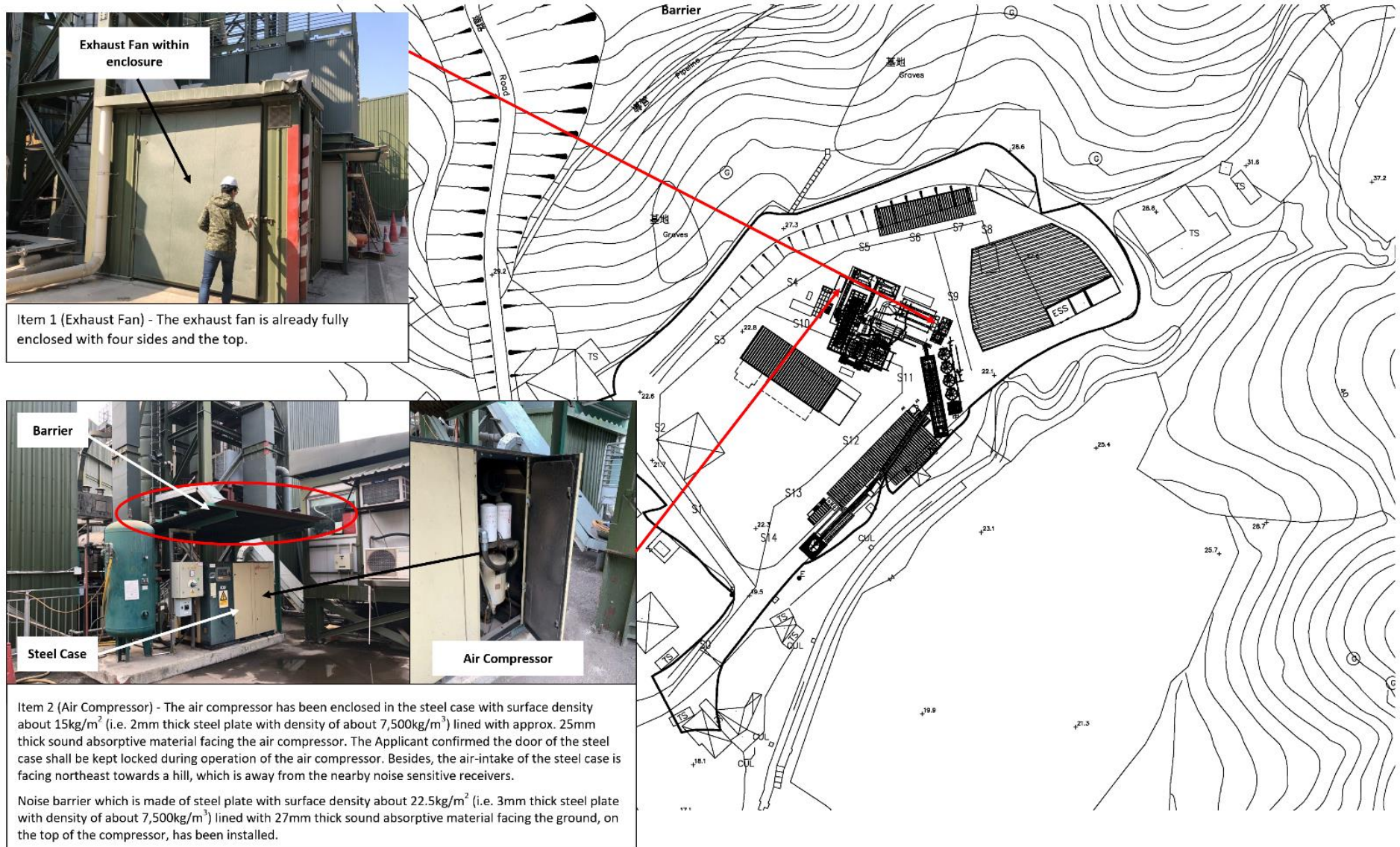


Figure 2 – Noise Mitigation Measures (Sheet 2 of 5)

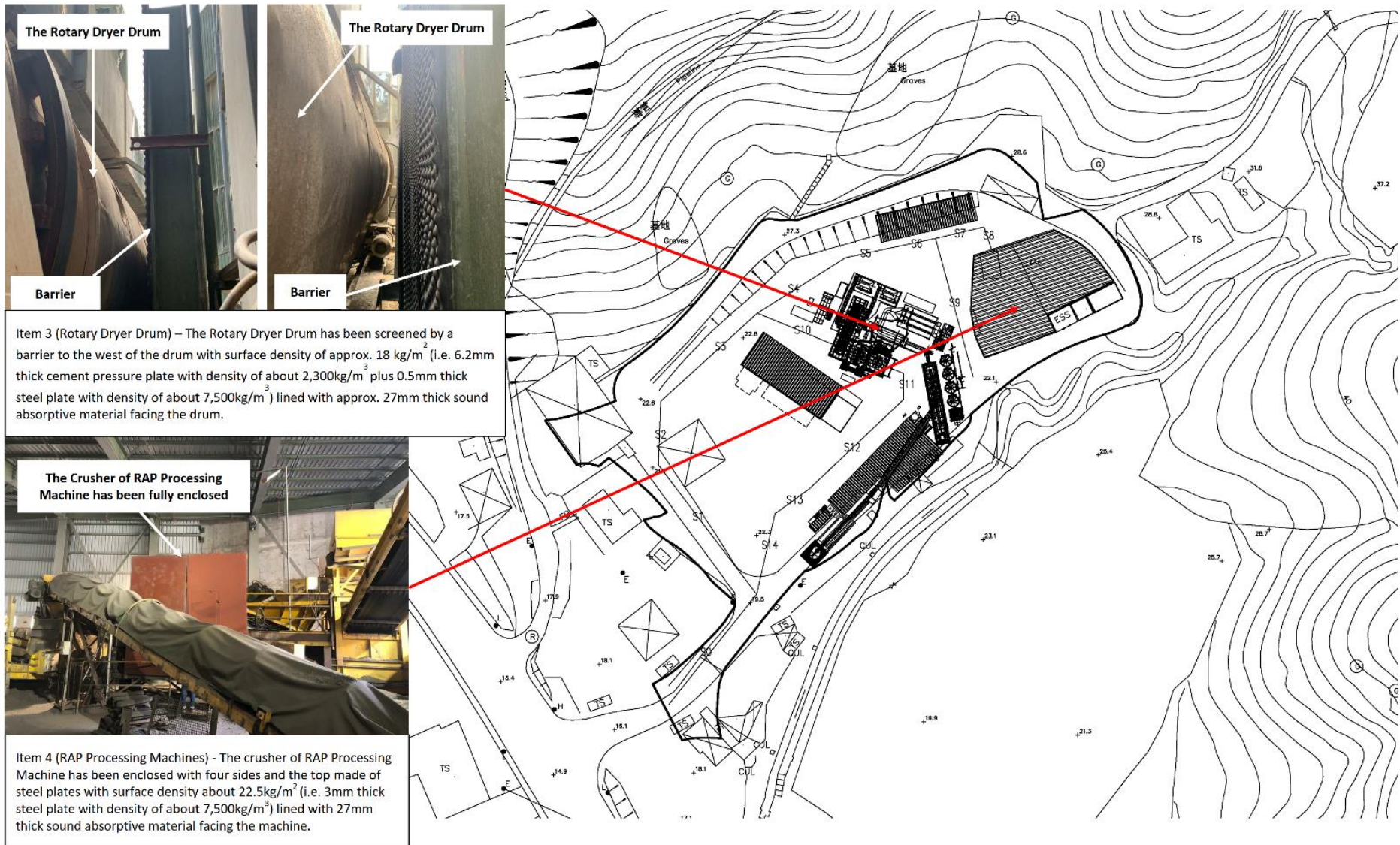


Figure 3 – Noise Mitigation Measures (Sheet 3 of 5)

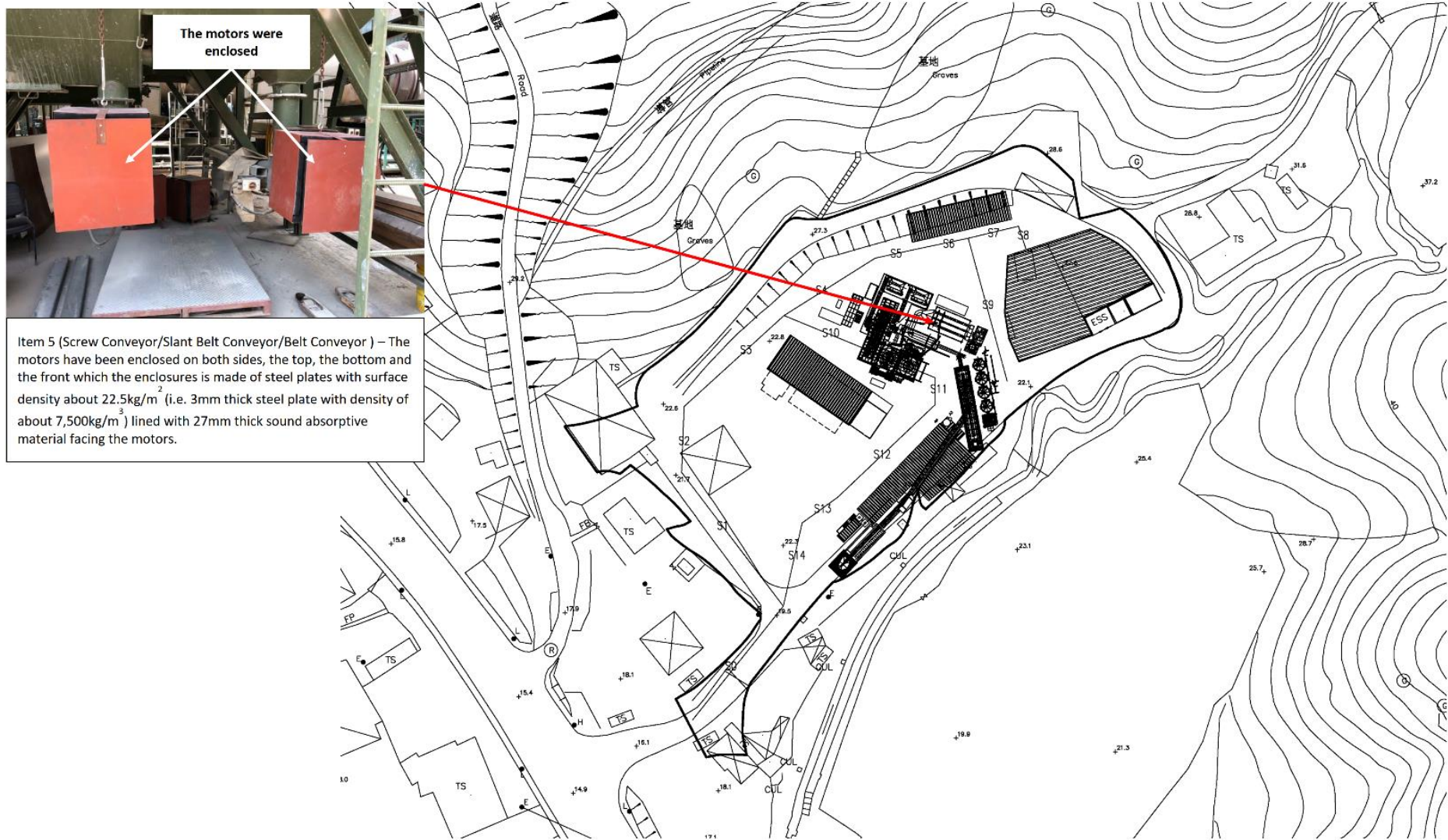


Figure 4 – Noise Mitigation Measures (Sheet 4 of 5)

Item 6 (Bucket Elevator/Filler Elevator) - The elevators have been enclosed by steel plate with surface density about 22.5kg/m² (i.e. 3mm thick steel plate with density of about 7,500kg/m³) lined with 27mm thick sound absorptive material facing the bucket elevator.

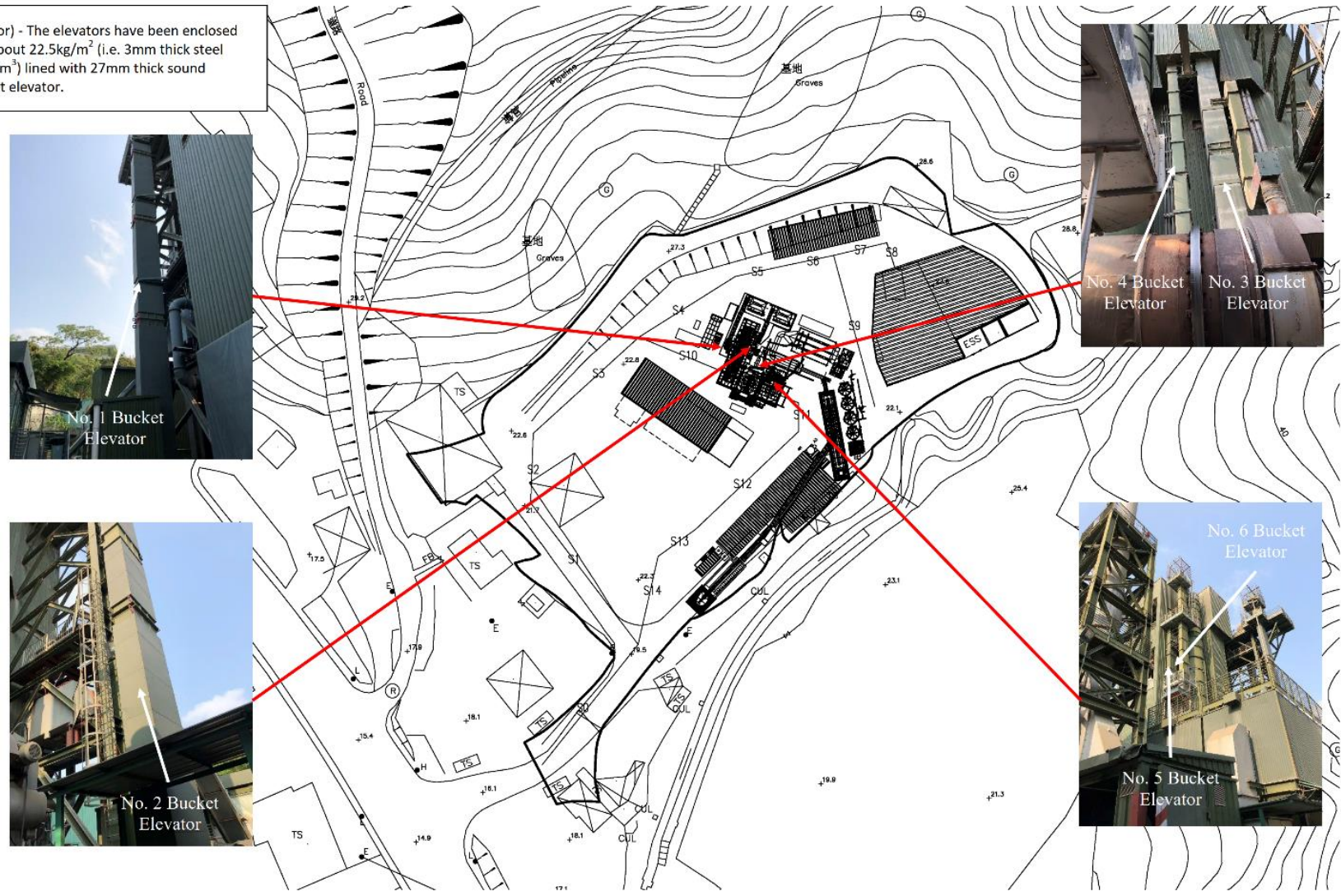
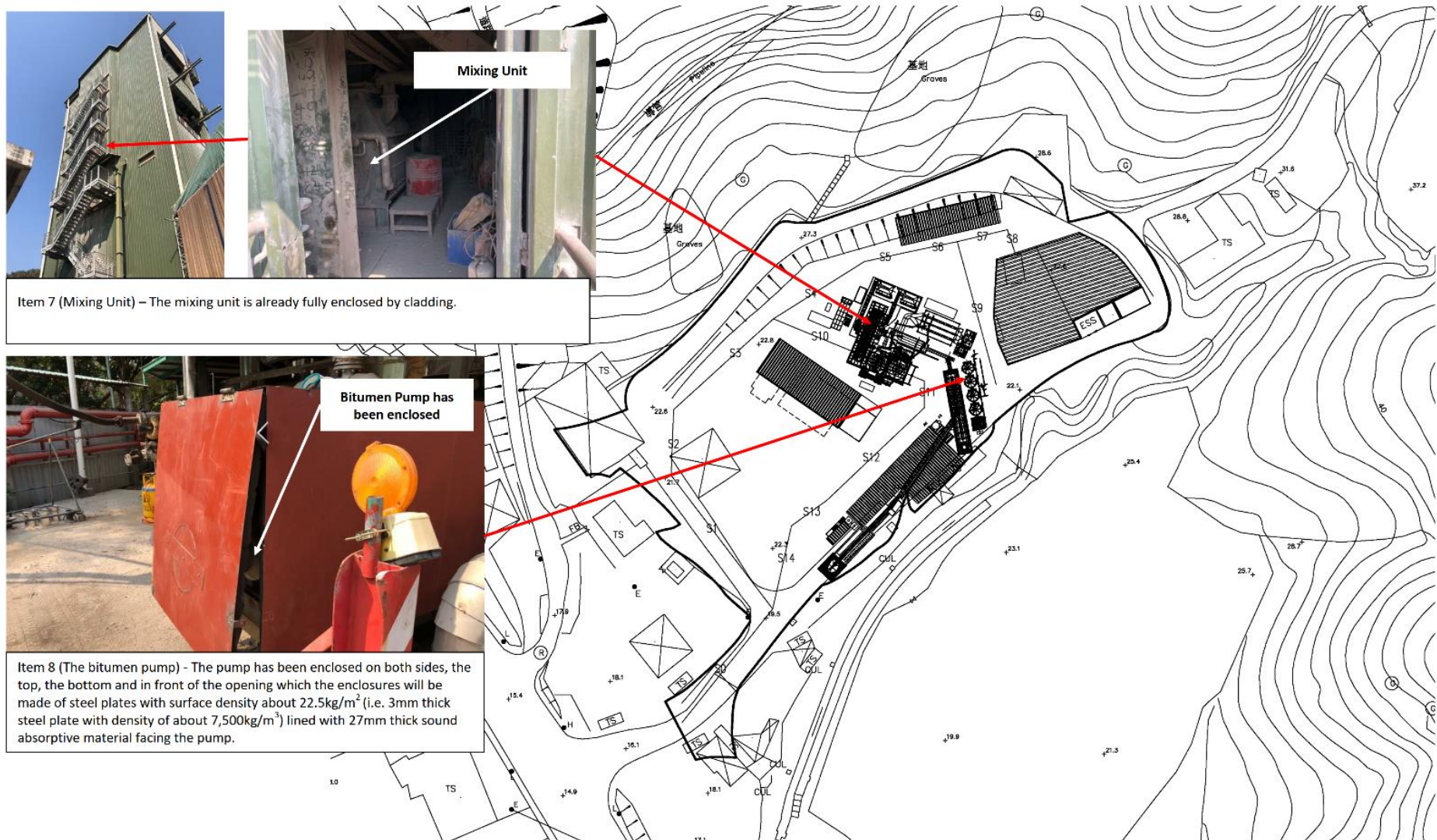


Figure 5 – Noise Mitigation Measures (Sheet 5 of 5)



規 劃 署

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Planning Department

Sha Tin, Tai Po & North District
Planning Office
Rooms 1301-1314, 13/F,
Shatin Government Offices,
1 Sheung Wo Che Road, Sha Tin,
N.T., Hong Kong.

本函檔號 Your Reference ADCL/PLG-10189/L015
本署檔號 Our Reference () in TPB/A/NE-FTA/192
電話號碼 Tel. No.: 2158 6220
傳真機號碼 Fax No.: 2691 2806 / 2696 2377

Aikon Development Consultancy Limited
Unit 1310, 13/F, Tower 2 Metroplaza,
223 Hing Fong Road, Kwai Chung
New Territories, Hong Kong
(Attn.: Mr. Thomas LUK)

By Post and Fax (3180 7611)

26 July 2021

Dear Mr. LUK,

**Renewal of Planning Approval for Temporary Asphalt Plant for a Period of 5 Years
in “Open Storage” Zone, Lots 20 RP (Part), 21 and 23 RP (Part) in D.D. 88,
and adjoining Government Land, East of Man Kam To Road, Sheung Shui**

(Compliance with Approval Condition (g) for Application No. A/NE-FTA/192)

I refer to your submission received on 18.6.2021 for compliance with approval condition (g) in relation to the implementation of noise mitigation measures.

Director of Environmental Protection (Contact Person: Ms. Candice CHUNG Tel.: 2835 1114) has been consulted and has no comment on your submission. As such, approval condition (g) is considered complied with.

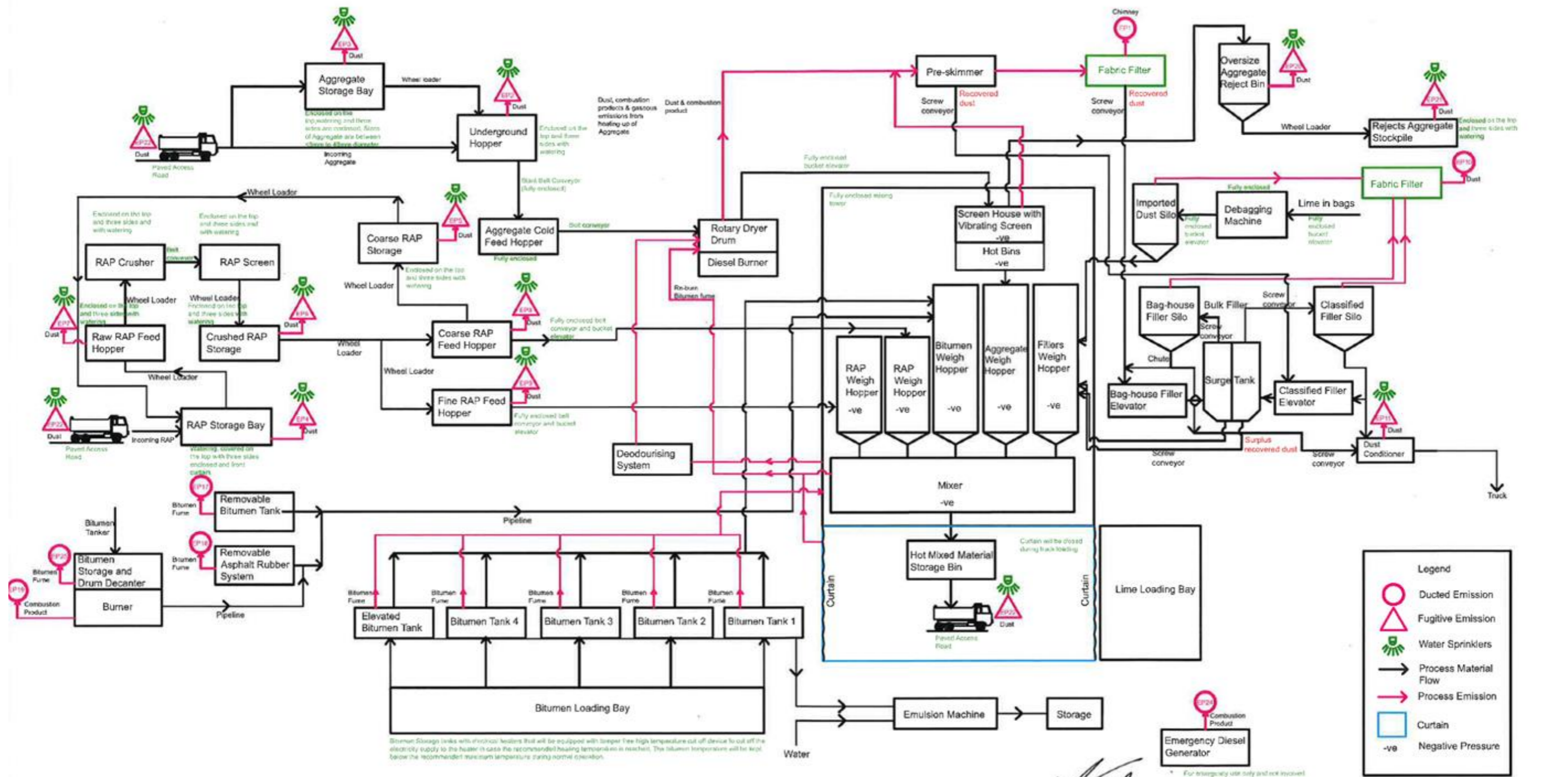
Should you have any queries, please feel free to contact Ms. Wendy W. L. LEE of this department at 2158 6241.

Yours faithfully,

(Ms. Jessica CHU)

for and on behalf of Director of Planning

Appendix B Schematic Diagram of the Temporary Asphalt Plant



SEA
Ir Dr CHONG Fan
RPE (RP0406950)
MHKIE (MW0406950)

Project: Asphalt Plant Along Man Kam To Road, Sheung Shui
 Title: Schematic Diagram
 DWG No.: KWA_SS/02
 Revision: D Scale: NTS Date: 5 JUNE 2019