FORM
5

Application No. : VEP-630/2023
Reference No. :
(For official use)

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

Application for Variation of an Environmental Permit

PART A PREVIOUS APPLICATIONS

☐ No previous application for variation of an environmental permit.

☑ The environmental permit was previously amended.

Application No. : VEP-607/2021

PART B DETAILS OF APPLICANT

B1. Name : (person or company)

Civil Engineering and Development Department

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

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

B3. Correspondence Address : [redacted]

B4. Name of Contact Person : [redacted]

B5. Position of Contact Person : [redacted]

B6. Telephone No. : [redacted]

B7. Fax No. : [redacted]

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

PART C DETAILS OF CURRENT ENVIRONMENTAL PERMIT

C1. Name of the Current Environmental Permit Holder :

Civil Engineering and Development Department

C2. Application No. of the Current Environmental Permit : VEP-607/2021 (EP-210/2005/E)

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

12 / 2021

Important Notes : Please submit the application together with

(a) 3 copies of this completed form; and

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

to the Environmental Protection Department at the following address :

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

RECEIVED
12 DEC 2023
EIAO Register Office, E.P.D.

☐ Tick (✓) the appropriate box

PART D PROPOSED VARIATIONS TO THE CONDITIONS IN CURRENT ENVIRONMENTAL PERMIT

D1 Condition(s) in the Current Environmental Permit	D2 Proposed Variation(s)	D3 Reasons for Variation(s)	D4 Describe the environmental changes arising from the proposed variation(s) :	D5 Describe how the environment and the community might be affected by the proposed variation(s)	D6 Describe how and to what extent the environmental performance requirements set out in the EIA report previously approved or project profile previously submitted for this project may be affected :	D7 Describe any additional measures proposed to eliminate, reduce or control any adverse environmental impact arising from the proposed variation(s) and to meet the requirements in the Technical Memorandum on Environmental Impact Assessment Process :
Item 2 under Scale and Scope of Designated Project, Part B 2. stockpiling of 4.2 million m^3 of public fill;	**Item 2 under Scale and Scope of Designated Project, Part B** 2. stockpiling of 6.3 million m^3 of public fill;	With the public fill intake from the fill bank by local reclamation projects including the Three-runway System of the Hong Kong International Airport to be completed gradually, there is a potential shortfall of public fill demand in the coming years. Based on the current public fill generation forecast, there is a need to increase the maximum stockpiling height and capacity in order to cope with the potential increase in need for temporary stockpiling public fill generated from the construction industry in Hong Kong. The additional stockpiling capacity is required until the commencement of major reclamation projects in future.	Potential environmental impacts associated with the proposed extended TMFB operation, including air quality, noise, water quality and waste management, have been reviewed. No adverse environmental impacts are anticipated due to the proposed extended TMFB operation.	To verify no adverse impact on the environment and the community, the potential environmental impacts due to the proposed extended TMFB operation (including air quality, noise, water quality and waste management) have been reviewed and are concluded to be in compliance with the relevant environmental standards set out in the Project Profile and the Technical Memorandum on EIA Process. Please refer to the associated VEP supporting document for details.	The environmental performance requirements set out in the Project Profile will not be exceeded or violated. Please refer to the associated VEP supporting document for details.	No additional measures are required.
Condition 3.2 The maximum stockpiling height at the fill bank shall be limited to a maximum of +40mPD. From 1 January 2014, a minimum of 3.2 hectares of stockpile area shall be covered with no less than 50mm thick gravel at the designated location (as indicated in Figure 2).	**Condition 3.2** The maximum stockpiling height at the fill bank shall be limited to a maximum of +65.2mPD. A minimum of 3.2 hectares of stockpile area shall be covered with no less than 50mm thick gravel at the designated location (as indicated in Figure 2).	With the public fill intake from the fill bank by local reclamation projects including the Three-runway System of the Hong Kong International Airport to be completed gradually, there is a potential shortfall of public fill demand in the coming years. Based on the current public fill generation forecast, there is a need to increase the maximum stockpiling height				

D1 Condition(s) in the Current Environmental Permit	D2 Proposed Variation(s)	D3 Reasons for Variation(s)	D4 Describe the environmental changes arising from the proposed variation(s) :	D5 Describe how the environment and the community might be affected by the proposed variation(s)	D6 Describe how and to what extent the environmental performance requirements set out in the EIA report previously approved or project profile previously submitted for this project may be affected :	D7 Describe any additional measures proposed to eliminate, reduce or control any adverse environmental impact arising from the proposed variation(s) and to meet the requirements in the Technical Memorandum on Environmental Impact Assessment Process :
		and capacity in order to cope with the potential increase in need for temporary stockpiling public fill generated from the construction industry in Hong Kong. The additional stockpiling capacity is required until the commencement of major reclamation projects in future.				
Condition 3.21 The Project shall be fully decommissioned by 31 December 2023, unless otherwise approved by the Director upon submission of a detailed proposal demonstrating no worsening of environmental impacts (in particular air quality impact) due to the Project on the sensitive receivers nearby.	**Condition 3.21** The Project shall fully implement the mitigation measures as recommended in the VEP application document, and report the status of Project operation, implementation of these mitigation measures, and the stockpiling status in the monthly EM&A Report submitted under Condition 4.6 of this environmental permit.	Extension of public fill bank operation at Tuen Mun Area 38 up to 2028 in order to meet current envisaged need for temporary stockpiling public fill generated from the construction industry in Hong Kong.				
Condition 3.22 The Permit Holder shall deposit with the Director 3 copies of layout plans at a scale 1 to 1000 or other scale as agreed by Director, certified by the ET Leader and verified by the IEC, the details and exact location of the stockpiling and haul road sections as described in the following conditions of this Permit: a) Conditions 3.2 and 3.4(a) - at least one month before 1 January 2014; and	Propose to delete	The layout plans for the details and exact location of the stockpiling and haul road sections, as described in Conditions 3.2, 3.4(a) and 3.4(b), have been deposited to EPD within the timeframes listed in Condition 3.22 under the current EP (i.e. EP-210/2005/E). The mitigation measures in Conditions 3.2, 3.4(a) and 3.4(b) will also continue to be carried out and followed through the proposed extended period of TMFB as				

D1 Condition(s) in the Current Environmental Permit	D2 Proposed Variation(s)	D3 Reasons for Variation(s)	D4 Describe the environmental changes arising from the proposed variation(s) :	D5 Describe how the environment and the community might be affected by the proposed variation(s)	D6 Describe how and to what extent the environmental performance requirements set out in the EIA report previously approved or project profile previously submitted for this project may be affected :	D7 Describe any additional measures proposed to eliminate, reduce or control any adverse environmental impact arising from the proposed variation(s) and to meet the requirements in the Technical Memorandum on Environmental Impact Assessment Process :
b) Condition 3.4(b) - at least one month before 1 January 2019.		part of the ongoing EM&A programme. Hence, it is proposed to remove Condition 3.22 of the current EP (i.e. EP-210/2005/E).				
Condition 3.29 <u>Submission of Air Quality Management Plan</u> From date of issue of this Permit to the date of decommissioning of this project, an annual Air Quality Management plan (AQMP) shall be submitted to the Director for approval on or before 1 December every year. The AQMP shall explore any newly proposed arrangements to mitigate air quality impact arising from the Project in addition to those already implementing and describe all existing and newly proposed mitigation measures to be implemented for the project. The AQMP shall include an implementation schedule in table form to clearly list out the newly proposed mitigation measures to be implemented and existing mitigation measures implemented, and the implementation party, location, timing, progress and environmental performance. Any technical constraint that would hinder the implementation of the	Propose to delete	Air quality control measures as recommended in the 2021 ERR and in the latest EP (i.e. EP-210/2005/E) to reduce potential air quality impact on the surrounding; and implementation schedule of air quality mitigation measures in AQMP 2022 will continue to be carried out and followed throughout the proposed extended TMFB operation. The implementation parties and requirements under EP condition 4.1 will continue to be complied with and the EM&A programme will be implemented as set out in the Project Profile (PP) (i.e. PP-236/2005) and the application documents for VEP. Any changes to the programme shall be justified by the ET leader and verified by the IEC as conforming to the information and requirements contained in the aforementioned documents. Since the TMFB will continue to operate in the coming years, the upcoming annual AQMP as required in				

D1 Condition(s) in the Current Environmental Permit	D2 Proposed Variation(s)	D3 Reasons for Variation(s)	D4 Describe the environmental changes arising from the proposed variation(s) :	D5 Describe how the environment and the community might be affected by the proposed variation(s)	D6 Describe how and to what extent the environmental performance requirements set out in the EIA report previously approved or project profile previously submitted for this project may be affected :	D7 Describe any additional measures proposed to eliminate, reduce or control any adverse environmental impact arising from the proposed variation(s) and to meet the requirements in the Technical Memorandum on Environmental Impact Assessment Process :
mitigation measures shall be evaluated and clearly recorded in the AQMP. All mitigation measures recommended and requirements specified in the AQMP and the implementation schedule shall be fully and properly implemented to the satisfaction of the Director.		Condition 3.29 under the current EP (i.e. EP-210/2005/E) are considered not necessary. Nevertheless, the air quality management and mitigation measures for the coming years' operation have been included in the VEP supporting document. In case further extension of TMFB operation years is needed, CEDD will seek approval from EPD.				

PART E DECLARATION BY APPLICANT

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

[redacted] [redacted] [redacted]

Signature of Applicant | Full Name in Block Letters | Position

on behalf of Civil Engineering and Development Department 6 December 2023

Company Name and Chop (as appropriate) | Date

NOTES :

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

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

Civil Engineering and Development Department

Environmental Review for Extension of Operation of Fill Bank at Tuen Mun Area 38 (2024-2028)

VEP Supporting Document

12 December 2023

Project No.: 0685896

The business of sustainability

ERM

Document details	The details entered below are automatically shown on the cover and the main page footer. PLEASE NOTE: This table must NOT be removed from this document.
Document title	Environmental Review for Extension of Operation of Fill Bank at Tuen Mun Area 38 (2024-2028)
Document subtitle	VEP Supporting Document
Project No.	0685896
Date	12 December 2023
Version	5.0
Author	DH
Client Name	Civil Engineering and Development Department

Document history

				ERM approval to issue		
Version	Revision	Author	Reviewed by	Name	Date	Comments
5.0		DH	CH	JN	12.12.2023	

Signature Page

12 December 2023

Environmental Review for Extension of Operation of Fill Bank at Tuen Mun Area 38 (2024-2028)

VEP Supporting Document

Dr Jasmine Ng
Managing Partner

ERM-Hong Kong, Limited
2509, One Harbourfront
18 Tak Fung Street
Hunghom, Kowloon
Hong Kong

CONTENTS

List of Tables

List of Figures

List of Appendices

1. INTRODUCTION

1.1 Background

In line with the government policy on the beneficial use of public fill, the Fill Bank at Tuen Mun Area 38 (TMFB) (hereinafter referred to as "the Project") was established and has been operating since 2003. TMFB is a temporary stockpiling area for public fill generated from construction works and is one of the Designated Waste Disposal Facilities under the *Waste Disposal Ordinance* (WDO) (CAP.354). Under Schedule 2 of the *Environmental Impact Assessment Ordinance* (EIAO) (CAP.499), the construction and operation of TMFB are classified as a Designated Project (DP) and an Environmental Permit (EP) is required.

To suit its operational requirements, applications for Variations of EP (VEP) were then submitted to the Environmental Protection Department (EPD) for approval and the following amended EPs have been issued:

- EP No. EP-210/2005/A on 15 December 2008 (under Application No. VEP-277/2008)
- EP No. EP-210/2005/B on 8 April 2013 (under Application No. VEP-395/2013)
- EP No. EP-210/2005/C on 6 September 2018 (under Application No. VEP-545/2018)
- EP No. EP-210/2005/D on 25 May 2020 (under Application No. VEP-577/2020)
- EP No. EP-210/2005/E on 22 December 2021 (under Application No. VEP-607/2021)

The Project is allowed to be operated until 31 December 2023 under the current EP (i.e. EP-210/2005/E), which is held by the Civil Engineering and Development Department (CEDD).

Given the shortfall of reclamation projects in Hong Kong, the surplus public fill has to be temporarily stored in TMFB, pending opportunities for reuse to provide a stable public fill supply for future reclamation projects. Meanwhile, over the years, since local projects were able to absorb only a small portion of the surplus public fill generated, the fill bank also serves as an outlet for delivering part of the surplus public fill to Mainland China for beneficial reuse.

In order to maintain the storage for future stable supply and an outlet for public fill generated from the construction industry, CEDD proposes to extend the operation of the TMFB for an additional five (5) years (i.e. until 31 December 2028). The proposed changes will require a variation of the conditions of the current EP (i.e. EP-210/2005/E).

ERM-Hong Kong, Limited (ERM) has been commissioned to undertake an environmental review to demonstrate that no adverse environmental impacts will arise from the extended operation of TMFB from Year 2024 to Year 2028.

2. PROPOSED OPERATIONAL CHANGES

2.1 Proposed Operation Changes in TMFB

In order to maintain the storage for future stable supply and an outlet for public fill generated from the construction industry, CEDD proposes to extend the operation of the TMFB for an additional 5 years to 31 December 2028, with the following proposed operational changes in the TMFB:

- Extend the operation of TMFB to 31 December 2028; and
- Increase the maximum stockpiling height to 65.2mPD; and
- Increase the total stockpiling capacity to 6.3 million m^3 of public fill.

The proposed increase in total stockpiling capacity and maximum stockpiling height are only the design capacity, as precautionary measures to prepare for any potential transient increase in need for storage capacity due to temporary decrease in demand for public fill.

The previous Environmental Review Report (ERR) was conducted in Year 2021 ("hereinafter referred to as "2021 ERR"), with VEP application approved for the current EP-210/2005/E. The key aspects of the TMFB operation as in the 2021 ERR / at present and during the proposed extension period are summarised in **Table 2.1**. Key facilities within TMFB are illustrated in **Figure 2.1**.

Table 2.1 Key Aspects of TMFB Operations as in the 2021 ERR / at Present and during the Proposed Extension Period

Key Item	As in 2021 ERR / At Present	During the Proposed Extension Period
Operational period	Until 31 December 2023	Until 31 December 2028
Total stockpiling capacity	4.2 million m^3 of public fill	6.3 million m^3 of public fill
Maximum stockpiling height	+40mPD	+65.2mPD
Operating hours for the reception of public fill delivered by trucks	0830hr to 1900hr daily (closed during Lunar Eve and New Year's Days)	No change
Number of incoming truck trips (public fill delivered by road)	1,200 truckloads/day	No change
Operation of barging points – B1, B2, B3 for exporting	Total of 9 barge trips/day (0700 to 2300) Total of 6 barge trips/night (2300 to 0700)	Overall marine transportation for fill export is expected to reduce due to anticipated reduction of barge trips at B3
Operation of barging points – IB1, IB2 for importing	Total of 2 barge trips/day (0700 to 2300)	No change
Operation of the C&DMSF (NSA) [(b)]	572 tonnes/hour (24-hour operation)	250 tonnes/hour (24-hour operation)
Operation of the site crusher	100 tonnes/hour (0700 to 2300 daily)	No change

Notes:
(a) "No change": No change as compared with the TMFB operation as in 2021 ERR.
(b) NSA refers to Construction and Demolition Material Sorting Facility (C&DMSF) within the TMFB site.

With the public fill intake from the fill bank by local reclamation projects including the Three-runway System of the Hong Kong International Airport to be completed gradually, there is a potential shortfall of public fill demand in the coming years. Based on the current public fill generation forecast, there is a need to increase the maximum stockpiling height and capacity in order to cope with the potential increase in need for temporary stockpiling public fill generated from the construction industry in Hong Kong. The additional stockpiling capacity is required until the commencement of major reclamation projects in future. Since the import rates of fill materials to TMFB will remain unchanged, the transportation for delivery of fill materials to the fill bank will remain the same (i.e. 1,200

truckloads/day). Truckload control zone as shown in Figure 2 of the latest EP (see **Figure 2.2**) and the associated control of vehicle trips within the control zone as stated in Condition 3.8 of EP will remain unchanged. Although the maximum stockpiling height and capacity are proposed to be increased, the operation mode of TMFB will remain largely unchanged. The stockpiling area and boundary will also remain unchanged. The stockpiling status would be reported in the monthly EM&A reports.

3. AIR QUALITY IMPACT

3.1 Introduction

This *Section* presents the review of the potential air quality impact associated with the proposed extension of TMFB operation (i.e. from 1 January 2024 to 31 December 2028).

3.2 Potential Sources of Air Emissions and Evaluation of Impact

3.2.1 Air Emission Sources Associated with TMFB Operation

The potential key air emission sources associated with the TMFB operation have been identified below:

- Dust emissions from TMFB operational activities including fill material handling at stockpiling areas and barging points, operation of material sorting facility (NSA) and the site crusher (C&DMCF), truck movements on major haul roads, as well as wind erosion from stockpiling areas;
- Vehicular emissions from internal roads within TMFB (incoming trucks and internal trucks); and
- Emissions from the site crusher (C&DMCF) and marine vessels (e.g. barges, derrick lighter, tugboat) during berthing and manoeuvring for exporting and importing fill materials.

3.2.2 Evaluation of Impact

As discussed in **Section 2.1**, it is proposed to extend the operation of TMFB to 31 December 2028, and to increase the maximum stockpiling height from the current +40mPD to +65.2mPD. Although the maximum stockpiling height and capacity are proposed to be increased, the operation mode of TMFB will remain largely unchanged. It should also be noted that the nearest residential air sensitive receivers (ASRs) (i.e. villages house in Lung Tsai near Sha Po Kong) are at least 2km from the TMFB, thus air quality impact on these residential ASRs due to operation of TMFB is expected to be minimal given the considerable separation distance. In addition, considering that the nearest high-rise residential buildings (i.e. Melody Garden, Butterfly Estate) are located even further away at a distance of at least 2.5km from the TMFB, unacceptable air quality impact due to the proposed increase of stockpiling height in TMFB is not anticipated.

In order to reduce dust generation from TMFB operation, the fill processing capacity for NSA operation is proposed to reduce considerably (by more than 50%) during the extended operation of TMFB compared with the current operation (see **Table 2.1**). Marine transportation associated with fill material export from NSA operation would reduce as well. NSA is a C&DMSF where sorting and handling of fill materials is conducted, and the sorted fill materials are then exported via marine vessels for use in reclamation projects such as the Three-runway System of the Hong Kong International Airport. With a reduction of processing capacity of NSA operation and the associated marine transportation while other operations within the TMFB remain essentially unchanged (e.g. no change to the operation of the site crusher), air quality impact (including dust impact) associated with the extended operation of TMFB is expected to be no worse than that assessed in the 2021 ERR / at present. Furthermore, in order to further mitigate air quality impact arising from the fill bank operation, CEDD is committed to implementing other additional air quality mitigation measures at TMFB during

the extended operation period, including implementation of on-shore power supply for marine vessels (by early 2025), and gradual replacement of existing internal trucks with new ones of at least Euro VI standard (by early 2025).

In view of the above, it is expected that there would be no worsening of air quality impact arising from the extended operation of TMFB, with no adverse air quality impact due to the extended operation of TMFB. Relevant air quality mitigation measures are detailed in **Section 3.3** below.

3.3 Air Quality Mitigation Measures

Relevant dust control measures stipulated in the *Air Pollution Control (Construction Dust) Regulation* will continue to be implemented within TMFB. Requirements stipulated in the *Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation* will also be followed to control potential emissions from non-road mobile machinery within TMFB.

Air quality control measures, as recommended in the 2021 ERR and in the latest EP (i.e. EP-210/2005/E) to reduce potential air quality impact on the surrounding areas will continue to be implemented. In particular, dust control mitigation measures at the locations indicated in Figure 2 of the latest EP (see **Figure 2.2**) will continue to be implemented. These include:

- Major haul roads and material stockpiling areas will be watered at least once every hour during operation to ensure that the roads and stockpiling areas are kept sufficiently dampened;
- Temporary slope surfaces of the stockpiling areas shall be covered with tarpaulin sheets or other impermeable sheets, or sprayed with water or a dust suppression chemical;
- Internal haul roads shall be kept wet at all operational hours;
- Site hoarding of at least 2.4m high shall be provided along the boundaries of the site except at the site entrance/exit;
- Vehicle wheel washing facilities including high-pressure water jets shall be provided at designated vehicle exit points and operated by designated staff. Before leaving the site, every vehicle shall be washed to remove any dusty materials from its body and wheels;
- Trucks carrying dusty loads entering the site shall be sprayed with water once the impervious sheeting covering the load is removed;
- All public fill delivery trucks carrying dusty loads leaving the fill bank shall be required to be covered entirely by clean impervious sheeting to prevent the dusty materials from leaking from the vehicles;
- All haul roads within the site shall be paved with concrete, bituminous materials, hardcores or metal plates;
- At the barging point, the drop height between the barge and dump trucks shall be minimised;
- Tipping halls provided for the transfer of public fill from trucks to barges shall be top and 3-sides enclosed;
- Truck speed within the site shall be controlled to within 10km/hour;
- All dusty fill materials shall be sprayed with water or a dust suppression chemical before loading, unloading or transfer to maintain the fill material wet, except in situations where the moisture content of the dusty material is a matter of concern;
- Loading of public fill delivered by barges to the site shall be sprayed with water at the material landing point to minimise dust emissions except when the materials are sufficiently dampened when landed. Any mist spraying applied should only dampen the dusty materials and overwatering should be avoided;

- Belt conveyor systems used for the transfer of dusty materials shall be enclosed on the top and 2 sides. Every transfer point between two conveyors shall be totally enclosed;
- The belt conveyor shall be equipped with bottom plates or other similar means to prevent the falling of materials from the return belt;
- The vertical distance between the belt conveyor and the material landing point shall be maintained at no more than 1m;
- Dusty materials loaded from a belt conveyor outlet to stockpiles, storage bins, trucks, barges and other open areas shall be sprayed with water or a dust suppression chemical;
- Final slope surfaces shall be treated by compaction, followed by hydroseeding, vegetation planting or other suitable surface stabilizer approved by CEDD to prevent the washing away of stockpiled material;
- The section of haul road as stated in Condition 3.4(b) of EP shall be no less than 75m away from the western site boundary of TMFB;
- A vertical barrier of 5m high shall be erected along the west side of haul road as shown in Figure 2 of EP (see **Figure 2.2)**;
- Sorted material from NSA shall be delivered to the barging point B3 via an enclosed conveyor belt system to avoid delivery by trucks;
- NSA and its associated enclosed conveyor belt system shall be connected to the CLP power supply to avoid emissions from diesel generators;
- Provision of on-shore power supply for marine vessels while at berth at TMFB; and
- Internal trucks within TMFB shall be at least of the Euro V emission standard and increase the use of internal trucks with at least Euro VI standard.

In addition to the abovementioned air quality mitigation measures, CEDD is committed to implementing additional air quality mitigation measures at TMFB to further improve the air quality performance of the Project, including mitigating potential dust impact from the proposed increase of stockpiling height. The following additional air quality improvement measures are proposed:

- Watering of additional stockpiling (due to increased stockpiling height) at least once every hour to minimise dust generation;
- Propose and implement further air quality mitigation measures as appropriate should there be noticeable increase of measured Total Suspended Particulates (TSP) levels that could be attributed to the increase of the stockpiling height;
- Reduce processing capacity of NSA operation and the associated marine transportation;
- Full implementation of on-shore power supply for marine vessels while at berth at TMFB by early 2025; and
- Increase the use of internal trucks with at least Euro VI standard to at least 57% of the internal truck fleet by early 2025.

The implementation schedule of air quality mitigation measures are provided in **Appendix A**.

3.4 EM&A Requirements

As required under the EM&A programme, 1-hour TSP levels and 24-hour TSP levels will continue to be monitored three (3) times every six (6) days and once (1) every six (6) days, respectively, using high-volume samplers (HVS). The ET, Contractor and CEDD will closely monitor the measured TSP levels, in particular during the period when the stockpiling height within the fill bank is increasing beyond +40mPD. Should there be a noticeable increase of TSP levels that could be attributed to the increase of the stockpiling height, CEDD will, in addition to the Event and Action Plan (EAP) for air

quality as part of the ongoing EM&A programme, propose and implement appropriate mitigation measures to rectify the situation accordingly.

4. OTHER ENVIRONMENTAL OUTCOMES

4.1 Noise

There are no existing or planned noise sensitive receivers (NSRs) in the vicinity of TMFB. The nearest NSRs, namely the Yee Tsui House near Butterfly Beach and the village houses in Lung Tsai near Sha Po Kong, are located at approximately 2.5km and 2.0km from the boundary of the TMFB respectively. Given the large separation distance between TMFB and the NSRs, noise impact due to the operation of TMFB will not be a concern.

4.2 Water Quality

To prevent water pollution due to the transportation of fill materials by marine vessels, all environmental control and mitigation measures recommended in the Project Profile (PP) (i.e. PP-236/2005) for TMFB operation will be followed during the extended operation period of the TMFB. These mitigation measures include:

- All barges used are of an appropriate size such that adequate clearance is maintained between the vessels and the sea bed at all states of tide to ensure no undue turbidity will be generated by turbulence from vessel movement or propeller wash;
- All vessels used for the transportation of fill materials will have tight-fitting seals to their bottom openings to prevent leakage of materials during transport;
- The design of transfer methods from barges to fill bank or vice versa will be in a way such that the pathway of material delivery from barge / fill bank to the waterfront will not be directly on top of the marine water to effectively prevent the dropping of materials to the sea;
- Barges will not be filled to a level which may cause overflow of material during loading or transportation; and
- Effluents from the barge (e.g. muddy water) will be properly collected and treated before disposal. The work activities will not cause any visible foam, oil, grease, scum, litter or other objectionable matters to be present on the water in the vicinity of the barging point.

Consistent with the existing practice at TMFB, haul roads and material stockpiling areas associated with the extended TMFB operation will be watered at least once (1) every hour to minimize potential dust generation. The wastewater generated will be collected by existing surface channels for treatment within sand/de-silting traps before discharge. The existing drainage system within TMFB was designed with reference to guidelines in EPD's *ProPECC Note PN5/93.*

The guidelines for construction site discharges in EPD's *ProPECC Note PN1/94 Construction Site Drainage* will be followed, including:

- All surface runoff from TMFB is discharged into storm drains via adequately designed sand/silt removal facilities such as sand traps, silt traps and sediment basins;
- Channels or earth bunds or sandbag barriers are provided within TMFB to properly direct stormwater to the silt removal facilities;
- Silt removal facilities, channels and manholes are maintained and the deposited silt and grit are removed regularly;
- Stockpiles and exposed slope surfaces should be covered by tarpaulin to prevent soil erosion; and
- A wheel washing bay is provided at the designated vehicle exit points of the TMFB.

Wastewater discharged from the TMFB shall comply with the discharge standards stipulated in the TMFB discharge licence and the *Technical Memorandum on Standards for Effluents Discharged Into*

Drainage And Sewerage Systems, Inland And Coaster Waters (TM-DSS) issued under the Water Pollution Control Ordinance (WPCO) (CAP.358).

In addition, a buffer distance of 50m from the seafront for stockpiling and drainage channels will be maintained (as stated in Condition 3.11 of EP-201/2005/E). Cautionary design, equipment and operational measures will be adopted in the berthing area to minimise the risk of water pollution.

There are no water sensitive receivers (WSRs) within the 500m Study Area from TMFB. The nearest WSR from TMFB is two seawater intake points at CPPS located at about 1.4km and 1.5km away as indicated in the PP (PP-236/2005).

With the implementation of suitable precautionary and mitigation measures, it is anticipated that no adverse water quality impacts will arise during the extended operation of TMFB.

The recent publicly available 12 months (i.e. August 2022 to July 2023) of water quality monitoring data for the current operation of the TMFB show that the water quality at all monitoring locations complies with the relevant criteria and no exceedance of action or limit levels was reported. The mitigation measures are proven to be effective and will be implemented during the extended operation period of the TMFB. The existing water quality monitoring programme will remain unchanged and continue to ensure no exceedance of water quality parameters (i.e. Dissolved Oxygen (DO), Suspended Solid (SS) and turbidity) during the extended operation period of the TMFB. The monitoring parameters, frequency and equipment will be the same as the existing monitoring programme.

4.3 Waste Management Implication

During the extended operation of TMFB, the major waste types to be generated include:

- General refuse; and
- Chemical waste.

General refuse generated in TMFB mainly consists of wastepaper, plastic bottles, aluminium cans, food waste and its packaging, which is a major composition of waste in TMFB and requires off-site disposal. According to the *Monitoring of Solid Waste in Hong Kong – Waste Statistics for 2021* published by EPD in 2022, the per capita disposal rate of commercial & industrial waste in Year 2021 was 0.59kg per person per day. Based on the aforementioned waste generation rate and the number of staff in TMFB (approximately 70 staff), about 41.3kg of waste is estimated to be generated in TMFB per day. It is noted that the existing practice of handling general refuse will remain unchanged during the extended operation of TMFB. These practices include segregating recyclable materials such as wastepaper, plastic bottles, and aluminium cans for delivery to local recyclers, while the remaining general refuse will be collected by waste collectors on a daily or bi-daily basis and disposed of at landfills.

Chemical waste such as fluorescent tubes, cleaning fluid (i.e. detergent), solvents, waste lubricating oil, and waste fuel etc. may be generated during maintenance activities for the utilities in TMFB. Chemical waste should be handled and disposed according to the measures stipulated in the *Waste Disposal (Chemical Waste) (General) Regulation* and the *Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes*. The quantity of chemical waste arising from the extended operation of TMFB is expected to be small (a few litres per month). It is noted that the existing practice of handling chemical waste will remain unchanged during the extended operation of TMFB. The chemical waste will continue to be properly stored on-site, collected by licensed chemical waste collectors once per month, and disposed at the licensed chemical waste treatment facilities (i.e. Chemical Waste Treatment Centre (CWTC) in Tsing Yi).

As discussed in **Section 2.1**, the proposed operation change will include extending the operation period and increasing the storage capacity of TMFB. The operation mode of TMFB will remain largely unchanged. It is anticipated that the quantity of waste generated during the proposed extension period will remain the same as in the existing operation. With the implementation of suitable

precautionary and mitigation measures for general refuse and chemical waste, adverse impact relating to waste management during the extended operation of TMFB is not anticipated.

Construction and demolition (C&D) materials are not expected to be generated from TMFB as it serves as a storage area for inert C&D materials (e.g. rock, rubble, boulder, earth, soil, sand, concrete, asphalt, brick, tile, masonry or used bentonite) received from the construction, excavation, renovation, demolition and road works in Hong Kong. C&D materials received in TMFB during the extended operation of TMFB are generated from the aforementioned works projects in Hong Kong and they are not considered as waste arising from TMFB.

4.4 Other Environmental Aspects

Considering that the nearest residential sensitive receivers are located at least 2km away from the TMFB, with the nearest high-rise residential sensitive receivers (e.g. Melody Garden and Butterfly Estate) even further away (at least 2.5km away), there are no other environmental aspects that may be considered a concern with respect to the extended operation of the TMFB.

5. PROPOSED VARIATION OF THE EXISTING ENVIRONMENTAL PERMIT

5.1 Amendment of Condition 3.2

The maximum stockpiling height is proposed to increase from +40mPD to +65.2mPD. Hence, it is proposed to vary Condition 3.2 of the current EP (i.e. EP-210/2005/E) as follows:

"The maximum stockpiling height at the fill bank shall be limited to a maximum of ~~+40mPD~~ ***+65.2mPD****. ~~From 1 January 2014, a~~****A*** *minimum of 3.2 hectares of stockpile area shall be covered with no less than 50mm thick gravel at the designated location (as indicated in Figure 2)."*

5.2 Amendment of Condition 3.21

The operation period of TMFB is proposed to be extended from 31 December 2023 to 31 December 2028. Hence, it is proposed to vary Condition 3.21 of the current EP (i.e. EP-210/2005/E) as follows:

"The Project shall ~~be fully decommissioned~~ ***fully implement the mitigation measures as recommended in the VEP application document, and report the status of Project operation, implementation of these mitigation measures, and the stockpiling status in the monthly EM&A Report submitted under Condition 4.6 of this environmental permit.*** *~~by 31 December 2023, unless otherwise approved by the Director upon submission of a detailed proposal demonstrating no worsening of environmental impacts due to the Project on the sensitive receivers nearby.~~"*

5.3 Amendment of Condition 3.22

The layout plans for the details and exact location of the stockpiling and haul road sections, as described in Conditions 3.2, 3.4(a) and 3.4(b), have been deposited to EPD within the timeframes listed in Condition 3.22 under the current EP (i.e. EP-210/2005/E). The latest layout plans of TMFB are presented in **Figure 2.1** and **Figure 2.2** of this VEP Supporting Document. The mitigation measures in Conditions 3.2, 3.4(a) and 3.4(b) will also continue to be carried out and followed through the proposed extended period of TMFB as part of the ongoing EM&A programme. Hence, it is proposed to remove Condition 3.22 of the current EP (i.e. EP-210/2005/E).

~~"The Permit Holder shall deposit with the Director 3 copies of layout plans at a scale 1 to 1000 or other scale as agreed by Director, certified by the ET Leader and verified by the IEC, the details and exact location of the stockpiling and haul road sections as described in the following conditions of this Permit:~~

~~a) Conditions 3.2 and 3.4(a) - at least one month before 1 January 2014; and~~

~~b) Condition 3.4(b) - at least one month before 1 January 2019."~~

5.4 Amendment of Condition 3.29

This VEP Supporting Document has demonstrated that there would be no adverse environmental impact arising from the proposed extended period of TMFB (i.e. from 1 January 2024 to 31 December 2028). Air quality control measures as shown in **Appendix A** will be carried out and followed throughout the proposed extended period of TMFB as part of the ongoing EM&A programme.

The implementation parties and requirements under EP condition 4.1 will continue to be complied with and the EM&A programme will be implemented as set out in the Project Profile (PP) (i.e. PP-236/2005) and the application documents for VEP. Any changes to the programme shall be justified by the ET leader and verified by the IEC as conforming to the information and requirements contained in the aforementioned documents.

Since the TMFB will continue to operate in the coming years, the annual Air Quality Management Plan (AQMP) as required in Condition 3.29 under the current EP (i.e. EP-210/2005/E) is considered not necessary. Hence, it is proposed to remove Condition 3.29 of the current EP (i.e. EP-210/2005/E). Nevertheless, the air quality management and mitigation measures for the coming years' operation

have been included in this VEP supporting document. In case further extension of TMFB operation years is needed, CEDD will seek approval from EPD.

~~*"Submission of Air Quality Management Plan*~~

~~*3.29 From date of issue of this Permit to the date of decommissioning of this project, an annual Air Quality Management plan (AQMP) shall be submitted to the Director for approval on or before 1 December every year. The AQMP shall explore any newly proposed arrangements to mitigate air quality impact arising from the Project in addition to those already implementing and describe all existing and newly proposed mitigation measures to be implemented for the project. The AQMP shall include an implementation schedule in table form to clearly list out the newly proposed mitigation measures to be implemented and existing mitigation measures implemented, and the implementation party, location, timing, progress and environmental performance. Any technical constraint that would hinder the implementation of the mitigation measures shall be evaluated and clearly recorded in the AQMP. All mitigation measures recommended and requirements specified in the AQMP and the implementation schedule shall be fully and properly implemented to the satisfaction of the Director."*~~

5.5 Amendment of Scale and Scope of Designated Project in Part B

The maximum stockpiling capacity is proposed to increase from 4.2 million m^3 to 6.3 million m^3 of public fill. Hence, it is proposed to vary Item 2 in "Scale and Scope of Designated Project" of Part B of the current EP (i.e. EP-210/2005/E) as follows:

"2. stockpiling of ~~*4.2*~~ ***6.3*** million m^3 of public fill;"

6. CONSIDERATION OF MATERIAL CHANGE

A review of the proposed operational changes against material change has been carried out. The findings of the review are summarised in **Table 6.1**.

Table 6.1 Review of the Proposed Operational Changes against Material Change

Item	Criteria	Findings	Material Change?
a	a change to physical alignment, layout or design of the project causing an adverse environmental impact likely to affect existing or planned community, ecologically important areas or sites of cultural heritage;	No change in separation distance from residential sensitive receivers (>2km). The TMFB site is also not ecological important area nor site of cultural heritage. Therefore, no adverse environmental impact is anticipated from the proposed operational changes.	No
b	a physical change resulting in an increase in the extent of reclamation or dredging affecting water flow or quality likely to adversely affect ecologically important areas, or disrupting sites of cultural heritage;	Reclamation or dredging is not required for the extended operation of TMFB.	No
c	an increase in pollution emissions or discharges or waste generation likely to violate guidelines or criteria in the EIAO-TM;	The extended operation of TMFB will increase the maximum stockpiling design capacity. However, the stockpiling capacity under actual operation is unlikely to be fully utilized throughout the proposed extension period. It acts as a precautionary measure to prepare for any potential transient increase in need for storage capacity due to temporary decrease in demand for public fill. Besides, with a reduction of processing capacity of NSA operation and the associated marine transportation, the change in pollution emissions associated with the extended operation of TMFB will unlikely cause adverse air quality impacts that violate guidelines or criteria in the EIAO-TM. The waste generation during the extended operation of TMFB will remain the same as in the existing operation of TMFB. Adverse impact relating to waste management that violate guideline or criteria in the EIAO-TM is not anticipated.	No
d	an increase in throughput or scale of the project leading to physical additions or alterations that are likely to violate the guidelines or criteria in the EIAO-TM;	The extended operation will increase the maximum stockpiling design capacity but will not lead to violation of the guidelines or criteria in the EIAO-TM.	No
e	a change resulting in physical works that are likely to adversely affect a rare, endangered or protected species, or an important ecological habitat, or a site of cultural heritage	The TMFB site is not a habitat nor site of cultural heritage. Therefore, no adverse environmental impact is anticipated from the proposed operational changes.	No

Based on the review above, the proposed operational changes would not constitute a material change.

7. CONCLUSION

A VEP Supporting Document has been prepared to review the potential environmental impacts associated with the extended operation of TMFB (i.e. from 1 January 2024 to 31 December 2028).

In terms of air quality, no worsening of air quality impact due to TMFB is expected considering CEDD's ongoing commitment to implementing additional air quality mitigation measures during the extended operation of TMFB.

Other potential environmental impacts, including noise, water quality and waste management, are considered minor and/or not of concern. The extended operation of TMFB has been reviewed in accordance with the updated EIAO-TM implemented on 30 June 2023 and there is no material change to the environmental impact of the project with the mitigation measures in place.

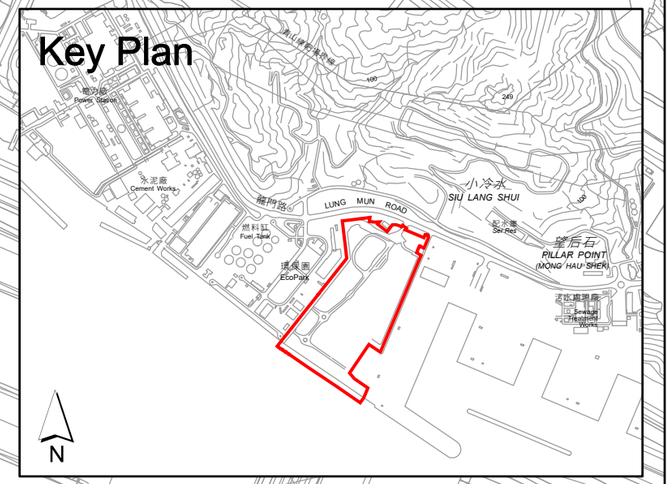
The existing environmental mitigation measures and EM&A programme are still applicable and will continue to be implemented throughout the extended period of TMFB.

Amendments to Condition 3.2, Condition 3.21, Condition 3.22, Condition 3.29 and Item 2 in "Scale and Scope of Designated Project" of Part B of the current EP (EP-210/2005/E) are proposed.

Legend

- Barging Points for Exporting Materials
- Barging Points for Importing Materials
- Site Crusher
- Tuen Mun Fill Bank
- Area for Construction and Demolition Material Sorting Facility (NSA)

Key Plan



B3
IB1
B2
IB2
B1

N
Metres
0 100 200

Figure 2.1

Locations of Key Facilities within Tuen Mun Fill Bank

File: T:\GIS\CONTRACT\0685896\mxd\0685896_Key_Facilities.mxd
Date: 1/6/2023

Environmental Resources Management

ERM

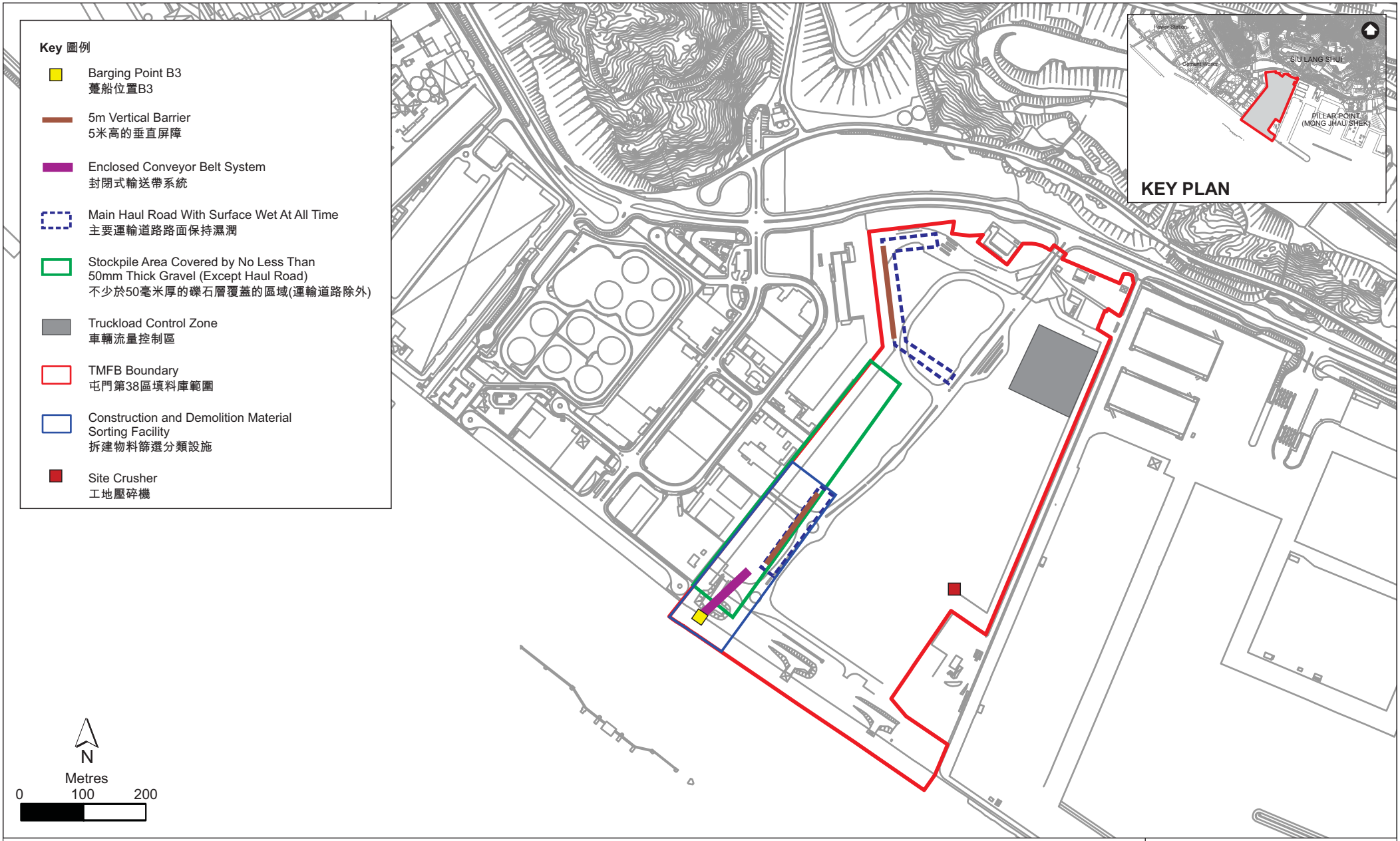


Figure 2.2
圖 2.2

Expansion and Extension of Fill Bank at Tuen Mun Area 38
屯門第38區填料庫擴展及延長運作期

Dust Control Mitigation Measures 減少塵埃控制措施

FILE: 0529880b
DATE: 05/05/2020

Environmental Resources Management
ERM

APPENDIX A IMPLEMENTATION SCHEDULE OF AIR QUALITY MITIGATION MEASURES

Appendix A - Implementation Schedule of Air Quality Mitigation Measures

Reference	Air Quality Mitigation Measures	Location of Recommended Measures	Duration/ Timing of Recommended Measures	Implementation Party	Relevant Legislation & Guidelines
Condition 3.2 of EP	The maximum stockpiling height at the fill bank shall be limited to a maximum of +65.2mPD. From 1 January 2014, a minimum of 3.2 hectares of stockpile area shall be covered with no less than 50mm thick gravel at the designated location (see Figure 2 of EP).	Stockpiling area of TMFB	Throughout the operation phase	Contractor / CEDD	-
Condition 3.3 of EP	Hoarding of at least 2.4 m high shall be erected along the site boundary adjacent to Lung Mun Road, the River Trade Terminal, except at the site entrance/exit, prior to commencement of the operational phase. Hoarding of at least 2.4 m high shall also be erected along the site boundary adjacent to the future Recovery Park (now known as EcoPark) prior to its occupation taking place.	TMFB site boundary adjacent to Lung Mun Road, River Trade Terminal and EcoPark	Throughout the operation phase	Contractor / CEDD	Air Pollution Control (Construction Dust) Regulation
Condition 3.4 of EP	All haul roads within the site shall be covered with concrete, bituminous materials, hardcores or metal plates. The following sections of main haul road (see Figure 2 of EP) shall be kept wet at all operational hours: a) 320 metre of main haul road located south of the wheel washing facility and; b) 160 metres of main haul road running parallel to western site boundary between stockpiling area and the enclosed conveyor belt system.	All haul roads within TMFB	Throughout the operation phase	Contractor / CEDD	Air Pollution Control (Construction Dust) Regulation
Condition 3.5 of EP	Haul roads within the site and stockpiling areas associated with the operation of the site crusher shall be watered at least once every hour so as to maintain the entire road surface wet during operation of the project.	All haul roads and stockpiling area within TMFB	Throughout the operation phase	Contractor / CEDD	Air Pollution Control (Construction Dust) Regulation
Condition 3.6 of EP	Tipping halls at the waterfront provided for transfer of public fill from trucks to barges shall be of enclosed design with top and 3-sides enclosed to prevent spillage of material into marine water.	Tipping halls (i.e. B1, B2, B3) at TMFB	Throughout the operation phase	Contractor / CEDD	Air Pollution Control (Construction Dust) Regulation

Reference	Air Quality Mitigation Measures	Location of Recommended Measures	Duration/ Timing of Recommended Measures	Implementation Party	Relevant Legislation & Guidelines
Condition 3.8 of EP	A “truckload control zone” of an area 100 m x 100 m shall be established in the north-eastern corner at location shown in Figure 2 of EP) where no more than 64 vehicle-trip per hour and 704 vehicle-trip per day shall be allowed to travel to the control zone between 0800 and 2000 hours daily. No traffic to the control zone shall be allowed between 2000 and 0800 hours daily.	Northeastern corner of TMFB	Throughout the operation phase	Contractor / CEDD	-
Condition 3.9 of EP	Vehicle travelling within the site shall not exceed a speed of 10 km per hour.	All areas within TMFB	Throughout the operation phase	Contractor / CEDD	-
Condition 3.10 of EP	All belt conveyor systems used on site shall be enclosed on top and 2 sides and equipped with bottom plates to prevent spillage of material. Every transfer point between two conveyors shall be totally enclosed. The vertical distance between connecting belt conveyors and the material landing point shall be no more than 1 m.	C&DMSF (NSA) within TMFB	Throughout the operation phase	Contractor / CEDD	Air Pollution Control (Construction Dust) Regulation
Condition 3.12 of EP	Vehicle wheel washing facilities including high pressure water jets shall be provided at designated vehicle exit points and operated by designated staff. Before leaving the site, every vehicle shall be washed to remove any dusty materials from its body and wheels;	Site exit of TMFB	Throughout the operation phase	Contractor / CEDD	Air Pollution Control (Construction Dust) Regulation
Condition 3.23 of EP	The section of main haul road as stated in Condition 3.4(b) of EP shall be no less than 75m away from western site boundary of the project to reduce potential air quality impact to EcoPark.	Section of main haul road as stated in Condition 3.4(b) of EP	Throughout the operation phase	Contractor / CEDD	-
Condition 3.24 of EP	A vertical barrier of 5m high shall be erected along the west side of the main haul road as shown in Figure 2 of EP to reduce potential air quality impact to EcoPark.	Main haul roads as shown in Figure 2 of EP	Throughout the operation phase	Contractor / CEDD	-
Condition 3.25 of EP	The sorted material from C&DMSF (NSA) shall be delivered to barging point B3 via an enclosed conveyor belt system as stated in Condition 3.10 of EP to avoid delivery by dump trucks.	C&DMSF (NSA) within TMFB	Throughout the operation phase	Contractor / CEDD	-
Condition 3.26 of EP	The C&DMSF (NSA) and its enclosed conveyor belt system shall be operated with CLP Power Hong Kong Limited (CLP) supply to avoid emissions from diesel generators.	C&DMSF (NSA) within TMFB	Throughout the operation phase	Contractor / CEDD	-

Reference	Air Quality Mitigation Measures	Location of Recommended Measures	Duration/ Timing of Recommended Measures	Implementation Party	Relevant Legislation & Guidelines
Condition 3.27 of EP	The internal dump trucks used for material handling within the entire project area shall be at least of Euro V emission standard.	All areas within TMFB	Throughout the operation phase	Contractor / CEDD	-
Condition 3.28 of EP	The processing capacity of the site crusher shall be no more than 100 tonnes per hour and shall only operate from 0700 to 2300 daily.	Site crusher near eastern boundary of TMFB	Throughout the operation phase	Contractor / CEDD	-
Section 3.3	Major haul roads and material stockpiling areas will be watered at least once every hour during operation to ensure that the roads and stockpiling areas are kept sufficiently dampened;	All haul roads and stockpiling area within TMFB	Throughout the operation phase	Contractor / CEDD	Air Pollution Control (Construction Dust) Regulation
Section 3.3	Temporary slope surfaces of the stockpiling areas shall be covered with tarpaulin sheets or other impermeable sheets, or sprayed with water or a dust suppression chemical;	All areas within TMFB	Throughout the operation phase	Contractor / CEDD	Air Pollution Control (Construction Dust) Regulation
Section 3.3	Internal haul roads shall be kept wet at all times;	Internal haul roads within TMFB	Throughout the operation phase	Contractor / CEDD	Air Pollution Control (Construction Dust) Regulation
Section 3.3	Trucks carrying dusty load entered to the site shall be sprayed with water once the impervious sheeting covering the load is removed;	All areas within TMFB	Throughout the operation phase	Contractor / CEDD	Air Pollution Control (Construction Dust) Regulation
Section 3.3	All public fill delivery trucks carrying dusty load leaving the fill bank shall be required to be covered entirely by clean impervious sheeting to prevent the dusty materials leaking from the vehicles;	Site exit of TMFB	Throughout the operation phase	Contractor / CEDD	Air Pollution Control (Construction Dust) Regulation
Section 3.3	At the barging point, the drop height between the barge and dump trucks shall be minimised;	Tipping halls (i.e. B1, B2, B3) at TMFB	Throughout the operation phase	Contractor / CEDD	Air Pollution Control (Construction Dust) Regulation
Section 3.3	All dusty fill materials shall be sprayed with water or a dust suppression chemical prior to loading, unloading or transfer so as to maintain the fill material wet, except of situations where the moisture content of the dusty material is a matter of concern;	All areas within TMFB	Throughout the operation phase	Contractor / CEDD	Air Pollution Control (Construction Dust) Regulation

Reference	Air Quality Mitigation Measures	Location of Recommended Measures	Duration/ Timing of Recommended Measures	Implementation Party	Relevant Legislation & Guidelines
Section 3.3	Loading of public fill delivered by barges to the site shall be sprayed with water at the material landing point to minimise dust emissions except when the materials are sufficiently dampened when landed. Any mist spraying applied should only dampen the dusty materials and overwatering should be avoided;	Barging points (i.e. IB1 and IB2) at TMFB	Throughout the operation phase	Contractor / CEDD	Air Pollution Control (Construction Dust) Regulation
Section 3.3	Dusty materials loaded from a belt conveyor outlet to stockpiles, storage bins, trucks, barges and other open areas shall be sprayed with water or a dust suppression chemical;	C&DMSF (NSA) within TMFB	Throughout the operation phase	Contractor / CEDD	Air Pollution Control (Construction Dust) Regulation
Section 3.3	Final slope surfaces shall be treated by compaction, followed by hydroseeding, vegetation planting or other suitable surface stabilizer approved by CEDD to prevent the washing away of stockpiled material;	All areas within TMFB	Throughout the operation phase	Contractor / CEDD	Air Pollution Control (Construction Dust) Regulation
Section 3.3	Watering of additional stockpiling (due to increased stockpiling height) at least once every hour to minimise dust generation;	Stockpiling area of TMFB	Throughout the operation phase	Contractor / CEDD	Air Pollution Control (Construction Dust) Regulation
Section 3.3	Full implementation of on-shore power supply for marine vessels while at berth at TMFB;	Barging points B1 to B3, IB1 and IB2 within TMFB	To be implemented for the operation phase by 2025	Contractor / CEDD	-
Section 3.3	Increase of the use of internal trucks with at least Euro VI standard to at least 57% of the internal truck fleet;	All areas within TMFB	To be implemented for the operation phase by 2025	Contractor / CEDD	-
Section 3.3	Propose and implement further air quality mitigation measures as appropriate should there be noticeable increase of measured Total Suspended Particulates (TSP) levels that could be attributed to the increase of the stockpiling height;	All areas within TMFB	Throughout the operation phase	Contractor / CEDD	-
Section 3.3	Reduce processing capacity of NSA operation and the associated marine transportation.	C&DMSF (NSA) within TMFB	Throughout the operation phase	Contractor / CEDD	-

Note:

(a) EP refers to EP-210/2005/E.