



Operation of Fill Bank at Tuen Mun Area 38

Annual Air Quality Management Plan 2022

28 November 2022

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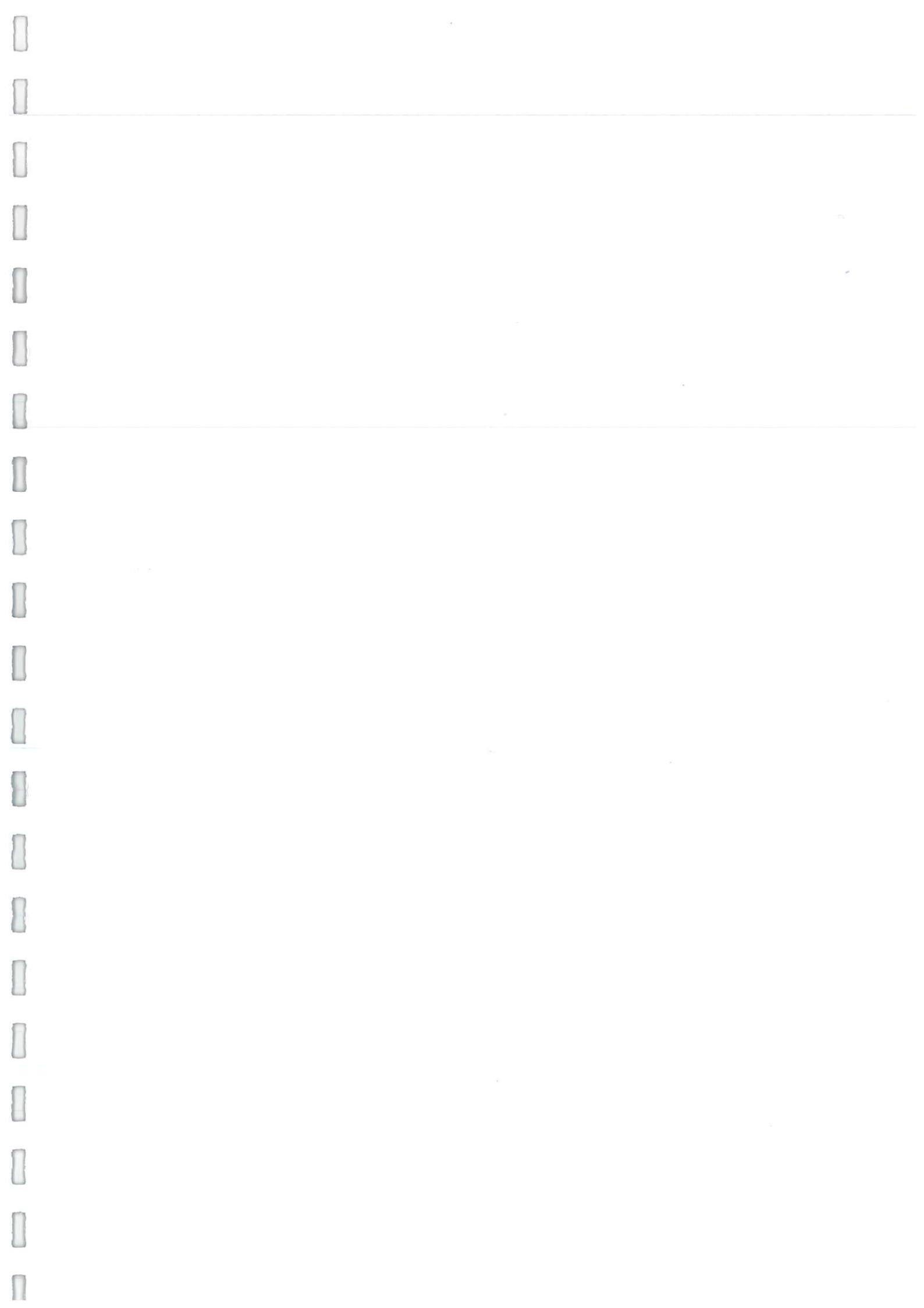
Annual Air Quality Management Plan 2022



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1. INTRODUCTION

The Fill Bank at Tuen Mun Area 38 (TMFB, or the Project) is a designated project under the *Environmental Impact Assessment Ordinance* (EIAO) and is allowed to be operated until 31 December 2023 under the current Environmental Permit (EP) (EP-210/2005/E) held by the Civil Engineering and Development Department (CEDD). Nevertheless, in case of any extension of operation of TMFB beyond 2023, it shall be approved by the Director of Environmental Protection upon submission of a detailed proposal demonstrating no worsening of environmental impacts due to the Project on the sensitive receivers nearby under Condition 3.21 of EP.

An Environmental Review Report was prepared in 2021 (hereinafter referred as “2021 ERR”) as a supporting document for the application for Variation of Environmental Permit (VEP) under the previous version of EP (EP-210/2005/D). The 2021 ERR included a comprehensive air quality impact assessment for the Project.

In accordance with Condition 3.29 of EP-210/2005/E, an annual Air Quality Management Plan (AQMP) is required to be submitted to the Director of Environmental Protection for approval on or before 1 December every year. The annual 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;
- 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; and
- include and evaluate any technical constraint that would hinder the implementation of the mitigation measures.

This is the first annual submission of AQMP for the Year 2022 detailing the relevant matters in relation to the requirements stated under Condition 3.29 of EP-210/2005/E. All mitigation measures recommended and requirements specified in the AQMP and the implementation schedule will be fully and properly implemented upon the approval of this AQMP.



2. REVIEW OF TUEN MUN FILL BANK OPERATION AND ADJACENT AREA

2.1 Review of Air Sensitive Receivers

The representative ASRs within an area of 500m from the TMFB site boundary (i.e. 500m Study Area) as identified in the 2021 ERR have been reviewed. The identified representative ASRs in the 2021 ERR remain valid with no additional representative ASRs identified within the 500m Study Area. Details of these representative ASRs are presented in **Table 2.1**. The locations of the identified representative ASRs are shown in **Figure 2.1**.

Table 2.1 Details of Identified Representative ASRs within 500m Study Area

ASR	Description	Type of Use	Approx. Separation Distance from the Site Boundary (m)	Approx. Base Elevation (m)	Approx. Max. Height (m above ground)
A1	EcoPark Tenant: HP Telford	Industrial	224	6	7.5
A2	EcoPark Tenant: Baguio	Industrial	368	5	7.5
A3	Eco Park Tenant: WEEE	Industrial	50	5	10
A4	Eco Park Tenant	Industrial	85	5	10
A5	Eco Park Tenant: Chung Yue	Industrial	103	5	4.5
A6	Eco Park Tenant: K Wah	Industrial	75	5	4.5
A7	EcoPark Tenant: HK Battery Recycling Centre	Industrial	131	5	10
A8	EcoPark Tenant: E-Tech	Industrial	163	5	10
A9	Eco Park Administration Building	Industrial	267	6	10
A10	PAFF Office	Industrial	474	5	10
A11	Proposed Modern Logistics Development at TM Area 49	Industrial	81	10	10
A12	EcoPark Tenant: On Fat Lung	Industrial	116	5	7.5

2.2 Baseline Air Quality Condition

A number of industrial sites are located in the close proximity and to the west of TMFB, including Castle Peak Power Station (CPPS), Green Island Cement (GIC), Shiu Wing Steel Mill (SWSM), EcoPark and Permanent Aviation Fuel Facility (PAFF). In addition, the Tuen Mun Sorting Facility (TMSF) (i.e. the former Construction & Demolition materials Sorting Facility as referred in 2021 ERR) adjoins the TMFB boundary to the east. The local air quality of the Project site area is primarily influenced by stack emissions from the aforementioned industrial sites, emissions from the operation of the TMFB as well as vehicular emissions from local road networks.

The nearest EPD's Air Quality Monitoring Station (AQMS) is located in Tuen Mun. The concentrations of RSP, FSP, NO₂ and SO₂ recorded at this AQMS in the past 5 years (2017 - 2021) are presented in **Table 2.2**.

Table 2.2 Concentrations of Air Pollutants Measured at the EPD's Tuen Mun AQMS in the Past 5 Years (2017 – 2021)

Year	Concentrations of Pollutants (µg m ⁻³)								
	19 th highest 1-hr NO ₂	Annual NO ₂	4 th highest 24-hr SO ₂	4 th highest 10-min SO ₂	10 th highest 24-hr RSP	Annual RSP	19 th highest 24-hr FSP ^(c)	36 th highest 24-hr FSP	Annual FSP
2017	188	46 ^(a)	26	88	99	43	56 ^(a)	49	27 ^(a)
2018	177	47 ^(a)	20	94	87	42	47	42	26 ^(a)

Year	Concentrations of Pollutants ($\mu\text{g m}^{-3}$)								
	19 th highest 1-hr NO ₂	Annual NO ₂	4 th highest 24-hr SO ₂	4 th highest 10-min SO ₂	10 th highest 24-hr RSP	Annual RSP	19 th highest 24-hr FSP ^(c)	36 th highest 24-hr FSP	Annual FSP
2019	166	47 ^(a)	12	45	89	41	46	42	24
2020	166	40	10	98	84	34	41	35	20
2021	172	44 ^(a)	9	22	87	36	42	35	19
Prevailing AQOs	200	40	50	500	100	50	50	50	25

Notes:

- (a) Exceedance of prevailing AQO criteria.
- (b) EPD's Tuen Mun AQMS is located at Tuen Mun Public Library, 1 Tuen Hi Road.
- (c) A reduced number of allowable exceedances of 18 days per year for 24-hour FSP (in lieu of 35 days per year as set out in the *Air Pollution Control (Amendment) Bill 2021*) is applicable to government projects.

The annual average NO₂ concentrations exceeded the relevant AQO criterion from 2017 to 2019, and in 2021, but were in compliance in 2020. The annual average FSP concentrations exceeded the relevant AQO criterion from 2017 to 2018, but were in compliance in the recent 3 years (i.e. 2019 to 2021). The 24-hour average FSP concentration (19th highest) exceeded the relevant AQO criterion in 2017, but were in compliance for the following 4 years (i.e. 2018 to 2021). No exceedances were recorded for other parameters for the past five years.

2.3 Review of Operation of Tuen Mun Fill Bank

The activities associated with the TMFB operation remain essentially the same as those assumed in the 2021 ERR⁽¹⁾, except that the emission standard of the internal dump truck fleet within TMFB has been further improved. With reference to the 2021 ERR and requirement under Condition 3.27 of the EP-210/2005/E, all internal dump trucks shall be at least of Euro V emission standard. As advised by CEDD, currently about 25% of the internal dump truck fleet are of Euro VI emission standard while the remaining are of Euro V emission standard. Hence, the current operation of TMFB (as of Year 2022) is expected to produce lower air emissions than that assumed in the 2021 ERR. Key aspects of the operation conditions of TMFB are summarised in **Table 2.3**. Key facilities of TMFB are illustrated in **Figure 2.2**.

Table 2.3 Key Aspects of Current TMFB Operation

Key Item	TMFB Operation (as Detailed in 2021 ERR)	TMFB Operation (Current) ^(a)
Stockpiling Capacity	4.2 million m ³	No change
Maximum stockpiling height	40mPD	No change
Operating hours for reception of public fill delivered by trucks	From 08:30 hrs to 19:00 hrs, daily (close during Lunar Eve and New Year Days)	No change
Nos. of incoming truck trips (public fill delivered by road)	1,200 truck loads/day	No change

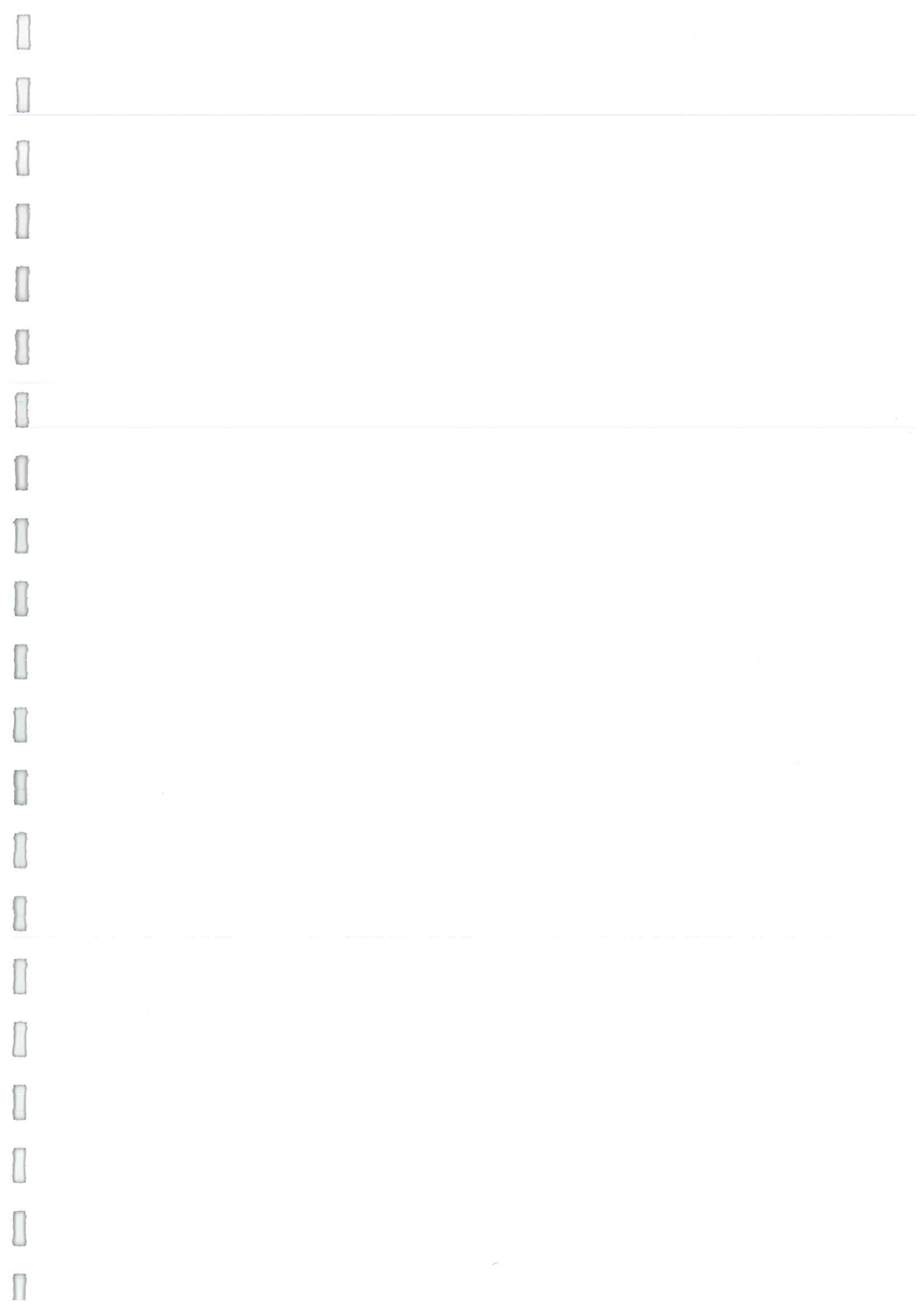
(1) There is no change to the location of the NSA or other emission sources and haul roads/ routes of internal dump trucks compared to the 2021 ERR. The area for NSA marked in Figure 2.2 is the same as that presented in the 2021 ERR (see Figure 2.1 of 2021 ERR). The actual location of NSA (see Figure 3.2 of 2021 ERR) remains unchanged.

Key Item	TMFB Operation (as Detailed in 2021 ERR)	TMFB Operation (Current) ^(a)
Operation of barging points	<u>B1, B2, B3 (exporting)</u> 9 barge trips/day (07:00 hrs to 23:00 hrs) 6 barge trips/night (23:00 hrs to 07:00 hrs)	No change
	<u>IB1 and IB2 (importing)</u> 2 barge trips/day (07:00 hrs to 23:00 hrs)	No change
Operation of the C&DMSF (NSA)	572 tonnes/hour (24 hour operation)	No change
Operation of the proposed site crusher	100 tonnes/hour (from 07:00 hrs to 23:00 hrs daily)	No change
Emission standard of the internal dump trucks	100% of the internal dump truck fleet are of Euro V emission standard	Around 25% of the internal dump truck fleet are of Euro VI emission standard, while the remaining are of Euro V emission standard

Note:

(a) Current TMFB operation refers to TMFB operation in Year 2022.

In addition, the current operation of TMSF, which is also operated by CEDD but is not part of TMFB (i.e. to the eastern side of TMFB), remain essentially the same as that assumed in the 2021 ERR, with the processing capacity kept unchanged (i.e. 700 tonnes/ day).



3. AIR QUALITY MITIGATION MEASURES AT TUEN MUN FILL BANK

3.1 Existing Mitigation Measures

Air quality mitigation measures as recommended in the 2021 ERR and in the latest EP-210/2005/E for the operation of TMFB are being implemented. Details of the implementation of these measures are presented in **Appendix A**. Relevant dust control measures are shown in **Figure 2.2**.

With regard to the vehicle wheel washing requirement stipulated under Condition 3.12 of the EP-210/2005/E and recommended under Section 3.7 of the 2021 ERR – “*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*”, in addition to the existing three wheel washing bays with high pressure water jets at the site exit, a “wash house” has been set up for voluntarily use by the truck drivers since October 2022. Comparing with the existing wheel washing bays, the “wash house” is capable of thoroughly removing any dusty materials on the dump truck body before leaving the site, including the front and the rear, using multiple high pressure water jets. Photo of the “wash house” is shown in **Figure 3.1**.

Furthermore, in relation to the vehicular emission standard requirement stipulated under Condition 3.27 of the EP – “*The internal dump trucks used for material handling within the entire project area shall be at least of Euro V emission standard.*”, in addition to fulfilling this requirement, about 25% of all internal dump trucks currently in use within TMFB are of Euro VI emission standard to further reduce the vehicular emissions from these internal dump trucks.

3.2 Proposed Additional Mitigation Measures by 2024

There will be an extension of TMFB's operation beyond 2023 in order to continue to serve the need to provide temporary storage of surplus public fill generated from construction projects, and maintain future supply of public fill for future reclamation projects in Hong Kong. CEDD will obtain approval by the Director of Environmental Protection upon submission of a detailed proposal demonstrating no worsening of environmental impacts due to the Project on the sensitive receivers nearby, pursuant to Condition 3.21 of EP. A number of mitigation measures in addition to the existing mitigation measures are also proposed to be implemented by 2024. These mitigation measures are discussed in **Sections 3.2.1 to 3.2.3** and listed in **Appendix A**.

3.2.1 Provision of On-shore Power Supply for Marine Vessels

Provision of on-shore power supply for marine vessels by 2023 was proposed as an additional mitigation measure in 2021 ERR. Using on-shore power supply for marine vessels can eliminate the use of auxiliary engines for the loading and unloading operations while at berth. With the use of on-shore power supply for marine vessels, marine emissions associated with TMFB operation can be further minimised.

The C&DMSF (NSA) located at the southwest corner of TMFB (see **Figure 2.2**) is currently operated by Airport Authority Hong Kong (AAHK) for the Three Runway System Project, and it is anticipated that the C&DMSF (NSA) would no longer be needed by AAHK by around mid-2023. When the C&DMSF (NSA) ceases to operate, the CLP power connections for the C&DMSF (NSA) could be utilised for provision of on-shore power supply for marine vessels. CEDD and the Contractor will liaise closely with the Airport Authority regarding the abovementioned transition, with an aim to implement the on-shore power supply for marine vessels by end of 2023.

3.2.2 Use of Internal Dump Trucks with Euro VI Standard

Increasing the use of internal dump trucks with at least Euro VI emission standard to 50% of the internal truck fleet by 2024 was proposed as an addition mitigation measure in 2021 ERR. As

discussed in **Section 3.1**, at present, around 25% of all internal dump trucks in use are of Euro VI emission standard, while the remaining are of Euro V emission standard.

CEDD targets to introduce more internal dump trucks that are of Euro VI emission standard, with an aim to achieving the target of 50% of internal dump trucks having Euro VI emission standard by 2024. CEDD also intends to put this target for Euro VI emission standard for internal dump trucks as a contract requirement in the upcoming new contract for TMFB operation in 2024. With the use of internal trucks that can meet increasingly stringent emission standard, vehicular emissions associated with truck movement within TMFB can be further reduced.

3.2.3 Installation of Solar Panel for the Contractor's Container Office

CEDD proposes to install solar panel for the Contractor's container office as an additional air quality mitigation measure. Currently, the electricity at the Contractor's container office is supplied by an on-site diesel generator. Due to site constraint, connecting the Contractor's container office to the mains electricity supply may not be feasible. As an alternative, it is proposed to install solar panels and utilise renewable energy to support the electricity supply at Contractor's container office such that the operation of the on-site diesel generator and its associated emissions can be reduced. The proposal to install solar panel for the Contractor's container office is currently at the investigation stage and its implementation is targeted by 2024.

3.3 Proposed Additional Mitigation Measures beyond 2024

3.3.1 Replacement of Mechanical Sorting Plant at Tuen Mun Sorting Facility

In addition to the proposed additional mitigation measures by 2024 discussed in **Section 3.2**, it is proposed to replace the existing mechanical sorting plant with a new one at TMSF by 2025. Although the TMSF is not part of TMFB, it is also operated by CEDD. In view of its vicinity to the TMFB, its emission (along with other adjacent emission sources within the 500m Study Area) has been taken into account when preparing the 2021 ERR.

The replacement of the existing mechanical sorting plant by a new one is currently at the design stage. The proposed siting of the new mechanical plant will be positioned away from the identified ASRs (e.g. EcoPark) as far as practicable, with an aim to minimising the air quality impact arising from the operation of the TMSF to the ASRs. The new mechanical sorting plant will also be a more recent model, therefore its operation is expected to produce less air emissions than the existing mechanical sorting plant. The design of the new sorting plant will also take into account the installation of dust control equipment for dust reduction generated from the sorting process. Furthermore, CEDD will also explore the feasibility of utilising electricity from CLP Power to support the operation of the new mechanical plant in order to further reduce gaseous emission impact. Implementation of the proposed additional mitigation measure is listed in **Appendix A**.

4. CONCLUSION

This first annual AQMP 2022 has been prepared in accordance with Condition 3.29 of EP-210/2005/E.

The representative ASRs within the 500m Study Area as identified in 2021 ERR have been reviewed and are considered to remain valid. The activities associated with the operation of TMFB and the adjacent TMSF remain essentially the same as those assumed in the 2021 ERR.

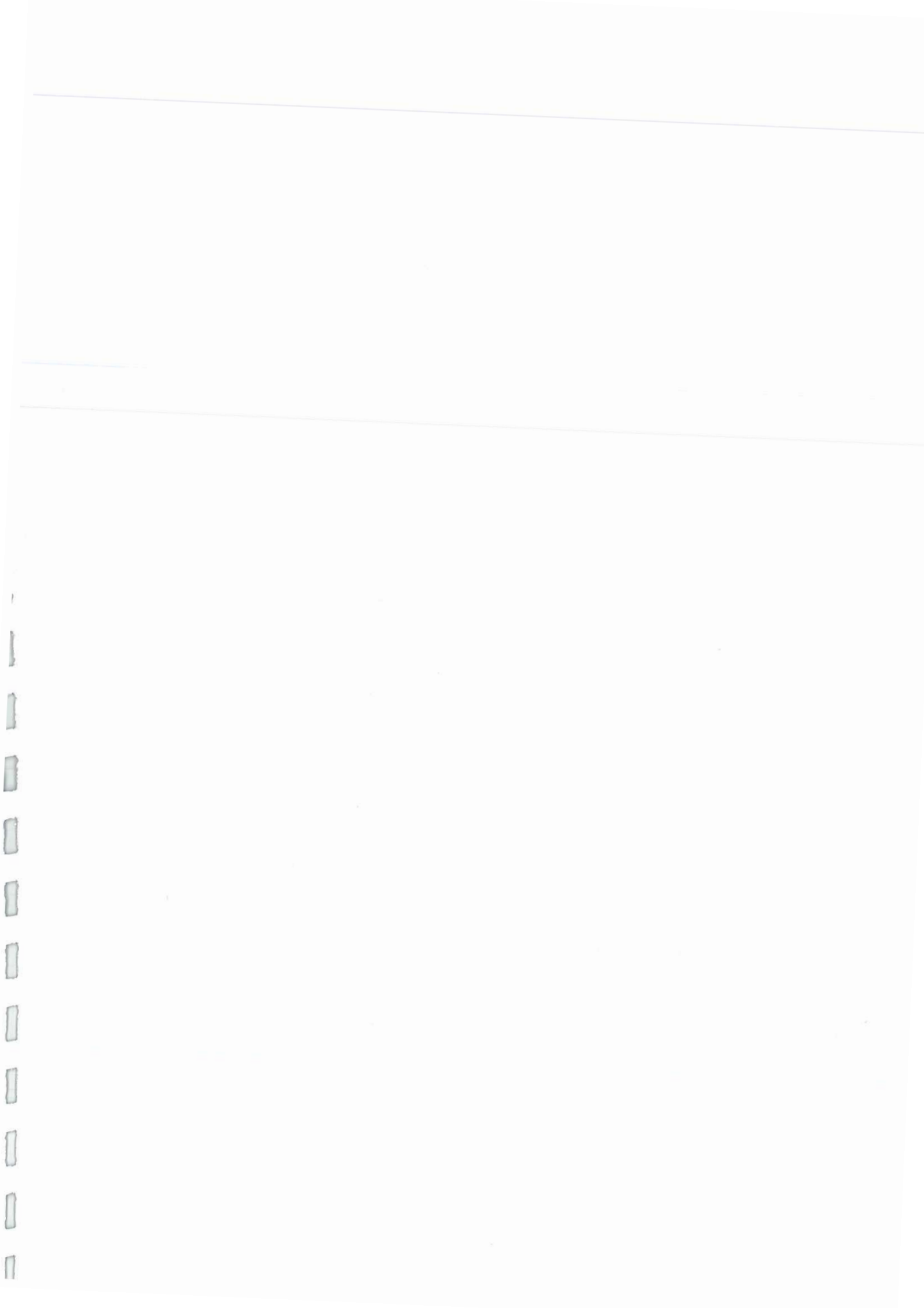
The existing mitigation measures stipulated under EP-210/2005/E and recommended in 2021 ERR are being implemented. A “wash house” has been installed in addition to the existing wheel washing bays, as a further improvement measure for removal of dusty materials on the truck body. In addition to having all internal dump trucks comply with the Euro V emission standard requirement, about 25% of the internal dump trucks currently operating within TMFB are of Euro VI emission standard.

In case extension of operation of TMFB beyond 2023 was approved by the Director of Environmental Protection, additional mitigation measures are also proposed to be implemented by 2024 and beyond 2024. The proposed mitigation measures targeted to be implemented by 2024 include:

- Provision of on-shore power supply for marine vessels by 2023;
- Increase of the use of internal dump trucks with at least Euro VI emission standard to 50% of the internal truck fleet by 2024; and
- Installation of solar panel to support the power supply of the Contractor’s site office by 2024.

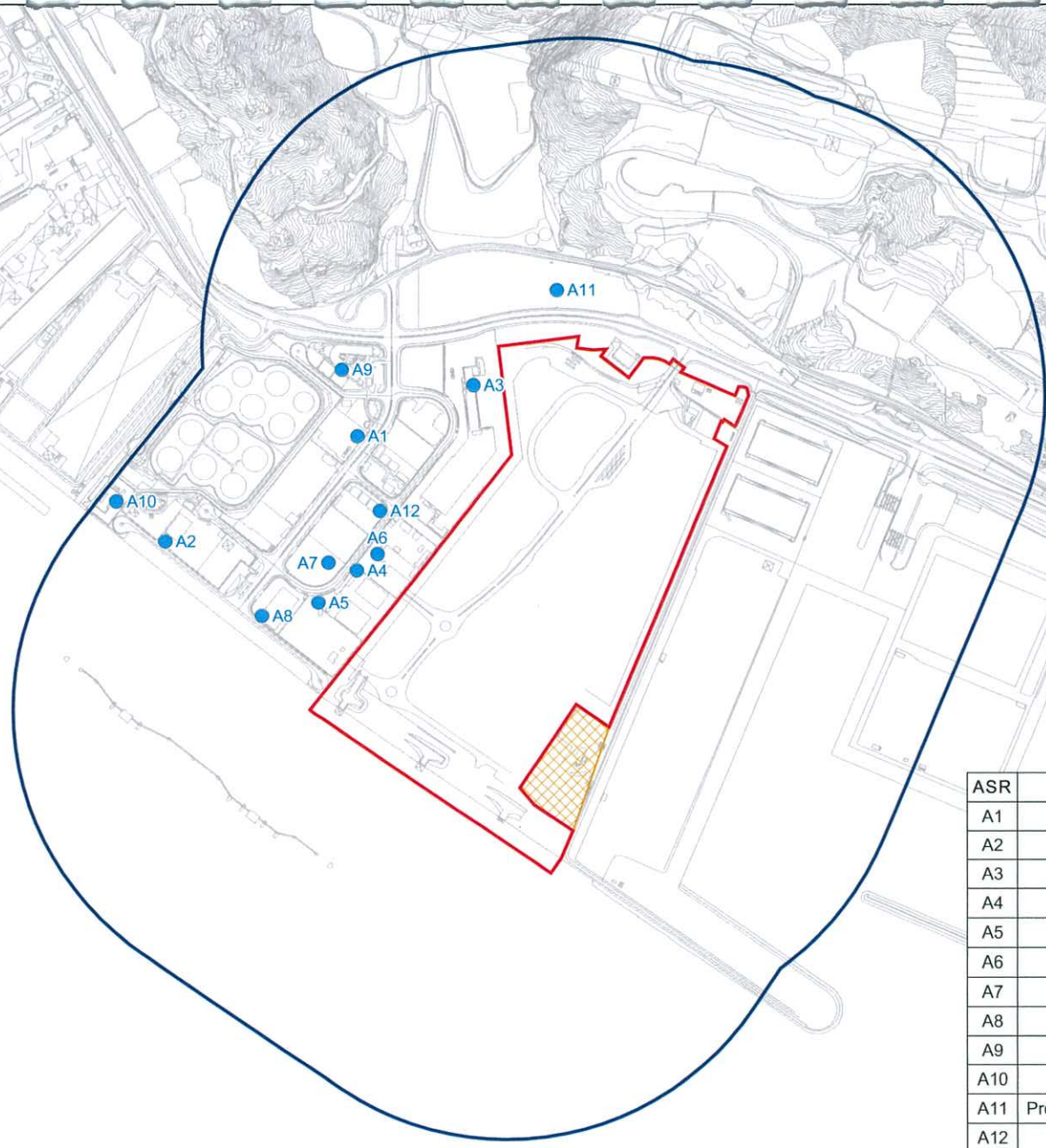
The proposed mitigation measure targeted to be implemented beyond 2024 includes:

- Replacement of mechanical sorting plant at TMSF by 2025.



Legend

- Air Sensitive Receivers
- Tuen Mun Fill Bank
- Tuen Mun Fill Bank 500m Study Area
- Tuen Mun Sorting Facility



ASR	Location
A1	EcoPark Tenant: HP Telford
A2	EcoPark Tenant: Baguio
A3	EcoPark Tenant: WEEE
A4	EcoPark Tenant
A5	EcoPark Tenant: Chung Yue
A6	EcoPark Tenant: Ka Wah
A7	EcoPark Tenant: HK Battery Recycling Centre
A8	EcoPark Tenant: E-Tech
A9	EcoPark Administration Building
A10	PAFF Office
A11	Proposed Modern Logistics Development at TM Area 49
A12	EcoPark Tenant: On Fat Lung

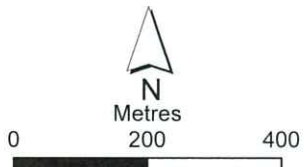
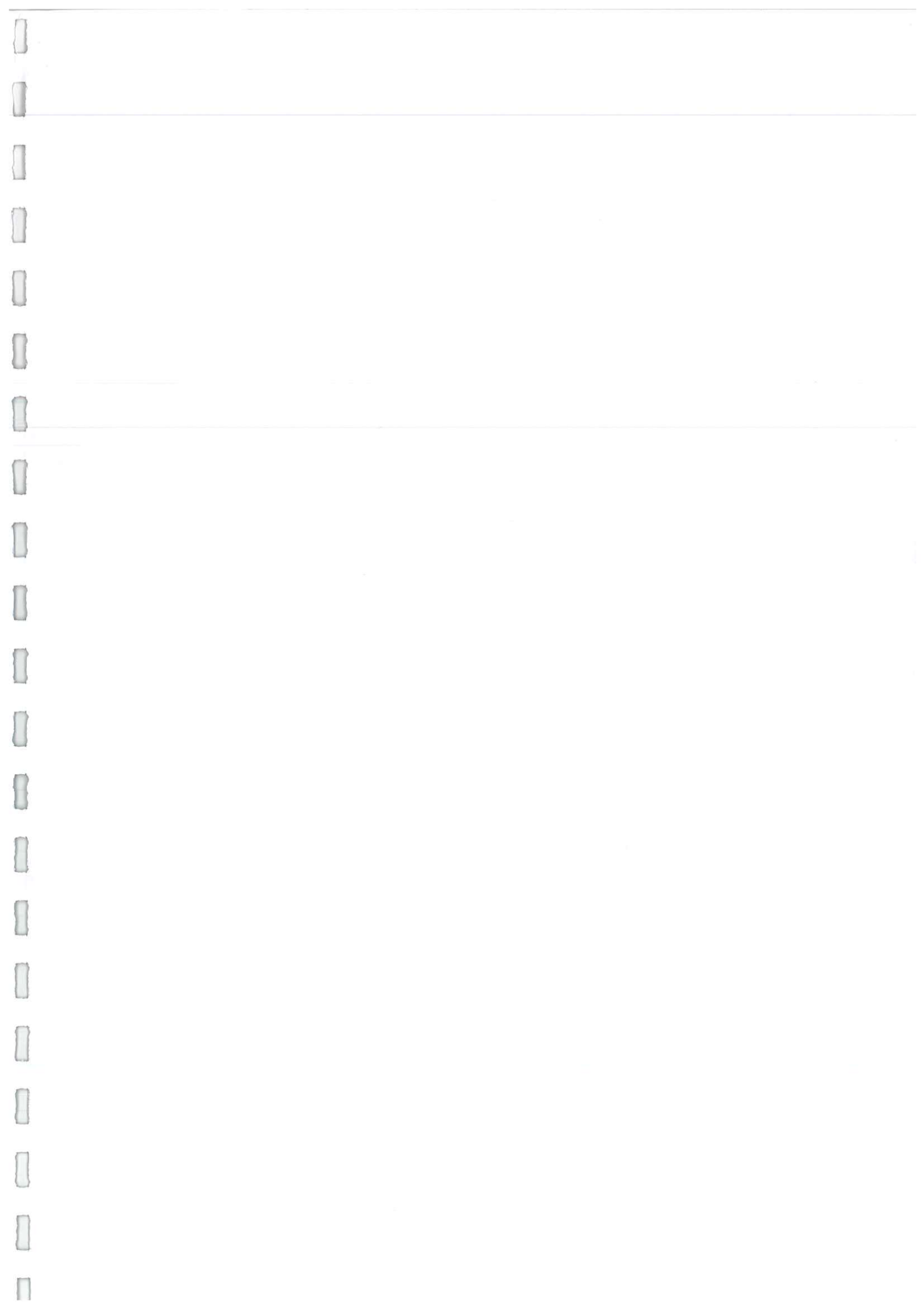


Figure 2.1

Locations of Representative Air Sensitive Receivers



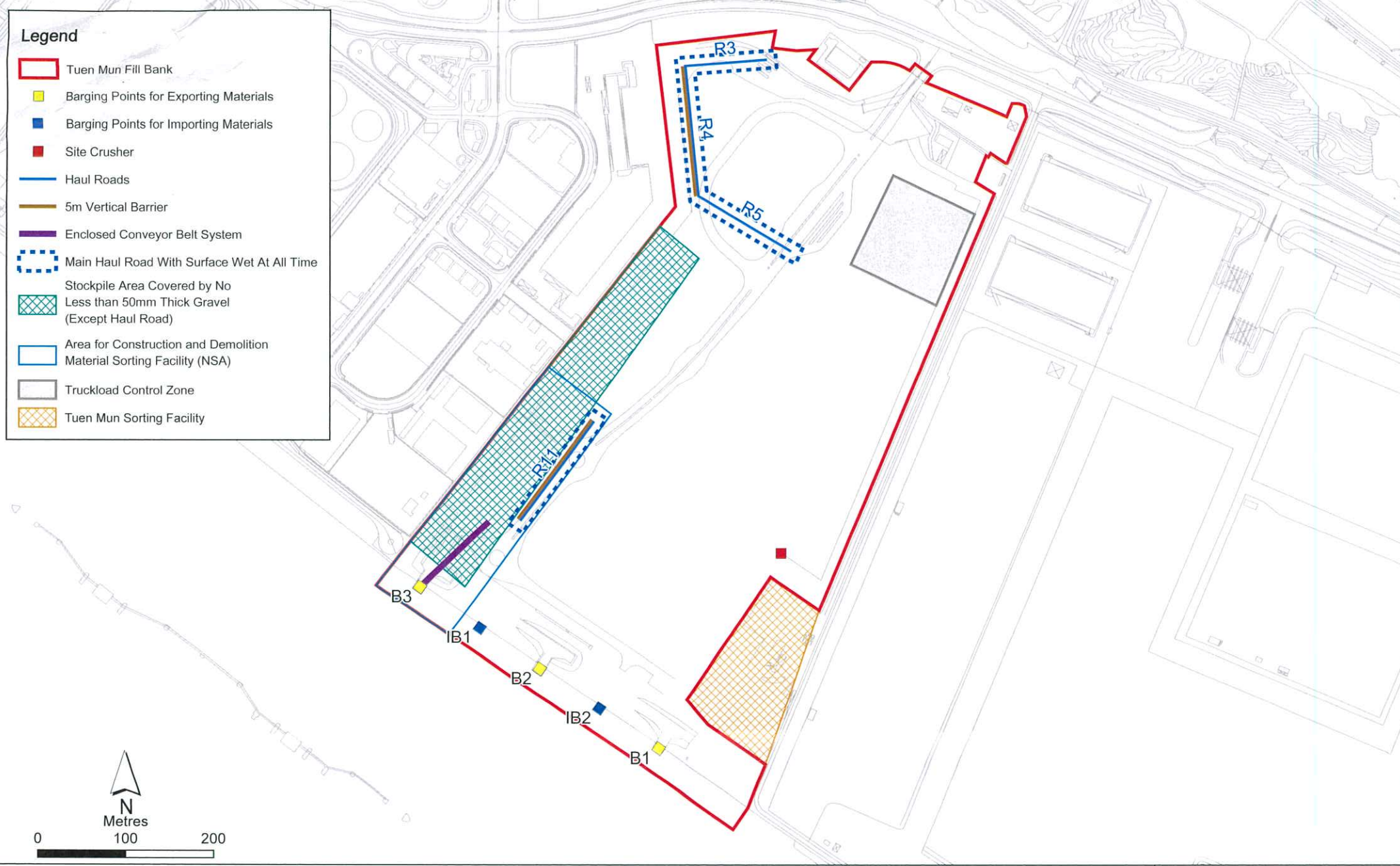


Figure 2.2

Locations of Key Facilities within Tuen Mun Fill Bank and Dust Control Measures

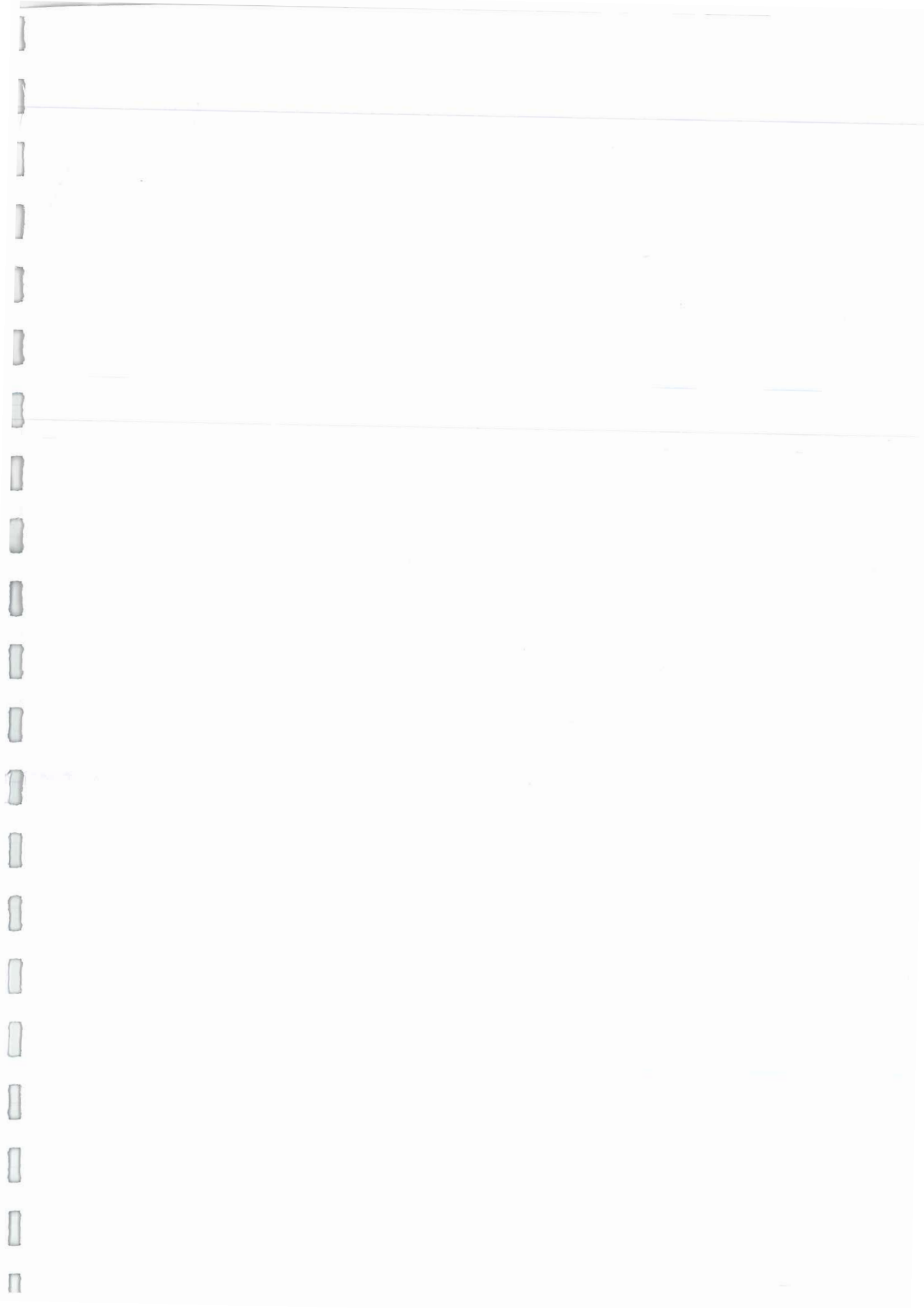
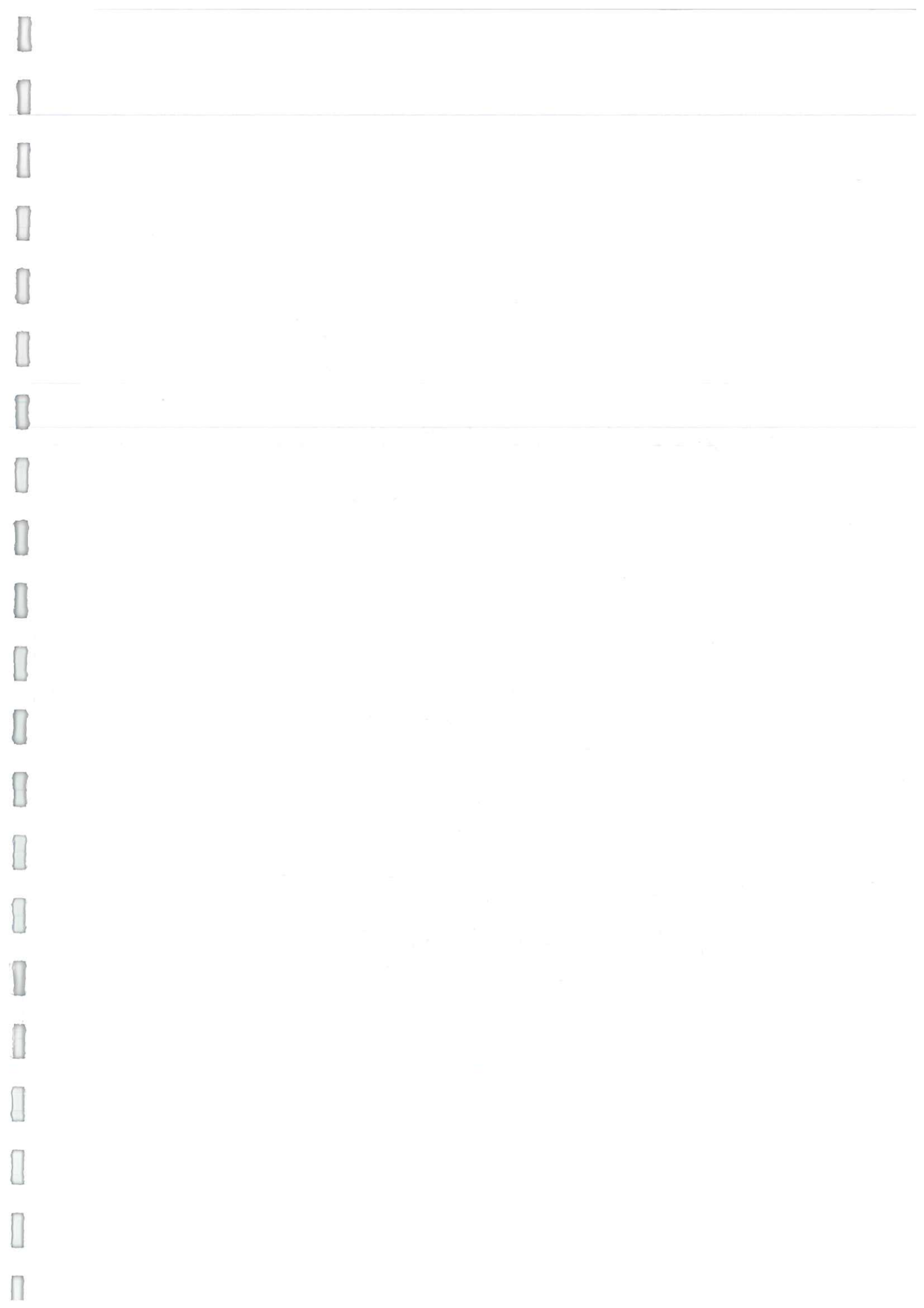


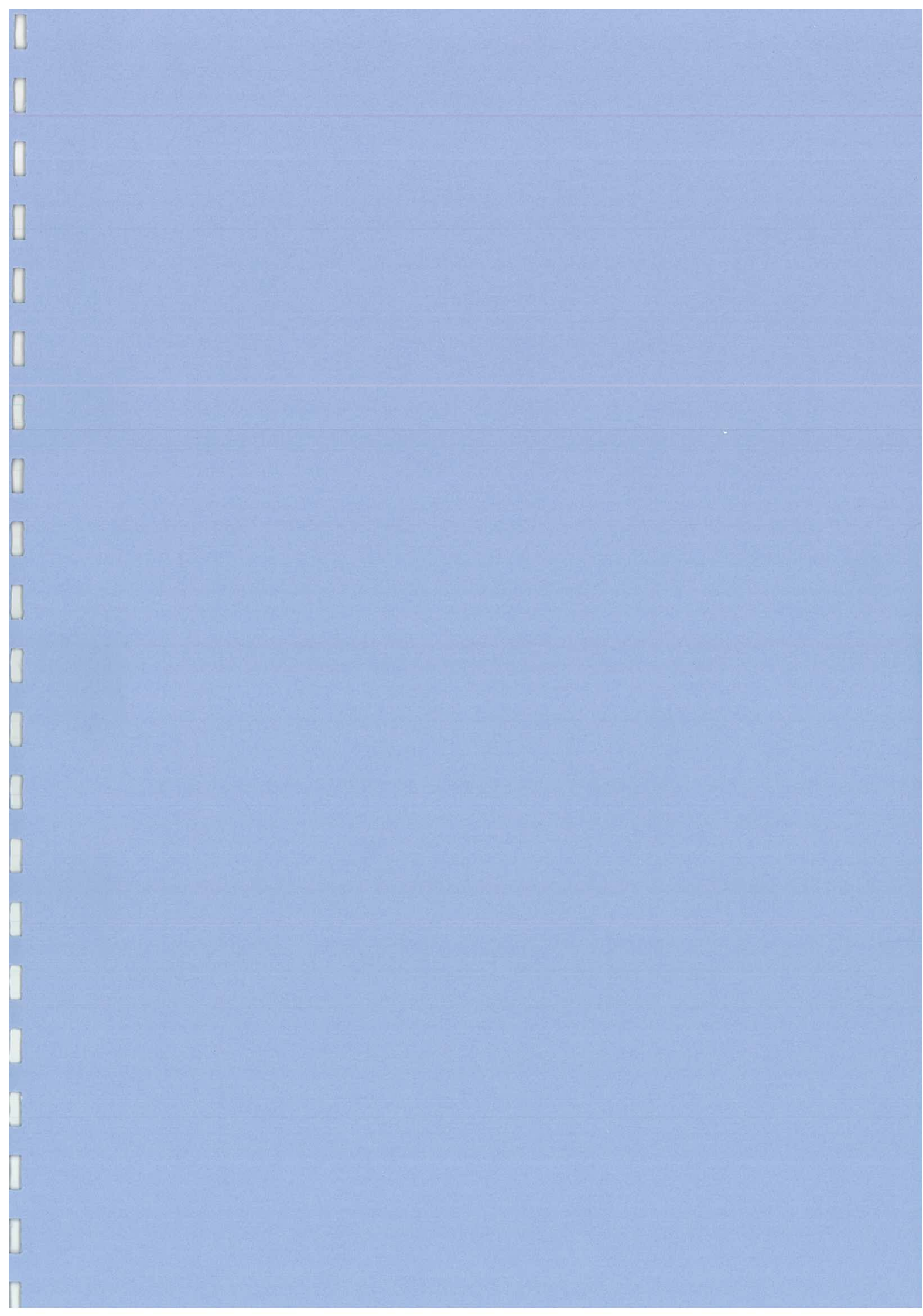


Figure 3.1

Photo of Wash House at TMFB Site Exit



**APPENDIX A IMPLEMENTATION SCHEDULE OF AIR QUALITY
MITIGATION MEASURES**



Appendix A - Implementation Schedule of Air Quality Mitigation Measures

2021 ERR Reference	EP Reference	Air Quality Mitigation Measures	Location of Recommended Measures	Duration/ Timing of Recommended Measures	Implementation Party	Relevant Legislation & Guidelines
Existing Measures						
-	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 (see Figure 2.2 or Figure 2 of EP-210/2005/E).	Stockpiling area of TMFB	Throughout the operation phase	Contractor / CEDD	-
3.7 item 4	3.3	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
3.7 item 8	3.4	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 2.2 or Figure 2 of EP-210/2005/E) 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
3.7 item 1	3.5	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

2021 ERR Reference	EP Reference	Air Quality Mitigation Measures	Location of Recommended Measures	Duration/ Timing of Recommended Measures	Implementation Party	Relevant Legislation & Guidelines
3.7 item 10	3.6	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
-	3.8	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 2.2 (or Figure 2 of EP-210/2005/E) 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	-
3.7 item 11	3.9	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	-
3.7 item 14, 15, 16	3.10	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) operated by AAHK within TMFB	Throughout the operation phase	AAHK / Contractor / CEDD	Air Pollution Control (Construction Dust) Regulation
3.7 item 5	3.12	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
3.7 item 19	3.23	The section of main haul road as stated in Condition 3.4(b) of EP-210/2005/E shall be no less than 75m away from western site boundary of the project to reduce potential air quality impact to EcoPark.	Haul roads R11 within TMFB	Throughout the operation phase	Contractor / CEDD	-

2021 ERR Reference	EP Reference	Air Quality Mitigation Measures	Location of Recommended Measures	Duration/ Timing of Recommended Measures	Implementation Party	Relevant Legislation & Guidelines
3.7 item 20	3.24	A vertical barrier of 5m high shall be erected along the west side of the main haul road as shown in Figure 2.2 (or Figure 2 of EP-210/2005/E) to reduce potential air quality impact to EcoPark.	Haul roads R4 and R11 within TMFB	Throughout the operation phase	Contractor / CEDD	-
3.7 item 21	3.25	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-210/2005/E to avoid delivery by dump trucks.	C&DMSF (NSA) operated by AAHK within TMFB	Throughout the operation phase	AAHK / Contractor / CEDD	-
3.7 item 22	3.26	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) operated by AAHK within TMFB	Throughout the operation phase	AAHK / Contractor / CEDD	-
3.7 item 23	3.27	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	-
-	3.28	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	-
3.7 item 2	-	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
3.7 item 3	-	Internal haul roads R3, R4, R5 and R11 shall be kept wet at all times;	Haul roads R3, R4, R5 and R11 within TMFB	Throughout the operation phase	Contractor / CEDD	Air Pollution Control (Construction Dust) Regulation

2021 ERR Reference	EP Reference	Air Quality Mitigation Measures	Location of Recommended Measures	Duration/ Timing of Recommended Measures	Implementation Party	Relevant Legislation & Guidelines
3.7 item 6	-	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
3.7 item 7	-	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
3.7 item 9	-	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
3.7 item 12	-	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
3.7 item 13	-	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
3.7 item 17	-	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) operated by AAHK within TMFB	Throughout the operation phase	AAHK / Contractor / CEDD	Air Pollution Control (Construction Dust) Regulation
3.7 item 18	-	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

2021 ERR Reference	EP Reference	Air Quality Mitigation Measures	Location of Recommended Measures	Duration/ Timing of Recommended Measures	Implementation Party	Relevant Legislation & Guidelines
Proposed Measures						
3.7 item 24	-	Provision of on-shore power supply for marine vessels while at berth at TMFB by 2023	Barging points B1 to B3, IB1 and IB2 within TMFB	To be implemented for the operation phase by 2023	Contractor / CEDD	-
3.7 item 25	-	Increase of the use of internal trucks with at least Euro VI standard to 50% of the internal truck fleet by 2024	All areas within TMFB	To be implemented for the operation phase by 2024	Contractor / CEDD	-
-	-	Installation of solar panel to support the power supply of the Contractor's container office by 2024	Contractor's container office within TMFB	To be implemented for the operation phase by 2024	Contractor / CEDD	-
-	-	Replacement of mechanical sorting plant at Tuen Mun Sorting Facility by 2025	Tuen Mun Sorting Facility	To be implemented for the operation phase by 2025	Contractor / CEDD	-

