



Intermodal Transfer Terminal – Bonded Vehicular Bridge and Associated Roads

Monthly EM&A Report for July 2024

August 2024

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Airport Authority Hong Kong

Intermodal Transfer Terminal – Bonded Vehicular Bridge and Associated Roads

Monthly EM&A Report for July 2024

August 2024

**This Submission of Construction Phase Monthly
Environmental Monitoring and Audit (EM&A) Report for July 2024
has been reviewed and certified by
the Environmental Team Leader (ETL) in accordance with
Condition 3.4 of Environmental Permit No. EP-560/2018 and
Section 10.3 of the EM&A Manual of the Project.**

Certified by:



Ir Thomas Chan
Environmental Team Leader (ETL)
Mott MacDonald Hong Kong Limited

Date 12 August 2024

Your Ref: -
Our Ref: 60610093/C/FYW24081201

By Email

Capital Works Management Department
Level 6, HKIA Tower 2,
15 Cheong Tat Road,
Hong Kong International Airport,
Lantau, Hong Kong

Attn: Collin Chan (Manager, Civil)

12 August 2024

Dear Sir,

Contract C19C02 – Independent Environmental Checker Consultancy Services for Intermodal Transfer Terminal – Bonded Vehicular Bridge and Associated Roads Monthly Environmental and Audit (EM&A) Report for July 2024

Reference is made to the Environmental Team's submission of Monthly EM&A Report for July 2024 in accordance with Condition 3.4 of the Environmental Permit (No: EP-560/2018) and Section 10.3 of the EM&A Manual of the Project certified by the ET Leader on 12 August 2024.

We would like to inform you that we have verified on the captioned submission in accordance with the requirement stipulated in Condition 1.9 of EP-560/2018.

Should you have any queries, please feel free to contact the undersigned at 3922 9366.

Yours faithfully,
AECOM Asia Co. Ltd.



Y W Fung
Independent Environmental Checker

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Executive summary

On 23 August 2018, the Environment Impact Assessment (EIA) Report (Register No.: AEIAR-216/2018) for the Project was approved and an Environmental Permit (EP) (Permit No.: EP-560/2018) was issued for the construction and operation of the Project.

In June 2019, Mott MacDonald Hong Kong Limited (MMHK) was commissioned by Airport Authority Hong Kong (AAHK) to provide Environmental Team (ET) consultancy services for implementation of an Environmental Monitoring and Audit (EM&A) programme of the “Intermodal Transfer Terminal – Bonded Vehicular Bridge and Associated Roads” (hereinafter referred to as “the Project”) in accordance with the Environmental Permit (EP) requirements throughout the Pre-construction, Construction and Post-construction phases.

The project construction was commenced on 5 October 2020 and the construction phase EM&A programme started on 5 October 2020.

This is the 46th Monthly EM&A Report for the construction phase of the Project which summaries findings of the EM&A programme during the reporting period from 1 to 31 July 2024.

Key Construction Works in the Reporting Period

A summary of construction activities undertaken during the reporting period is presented below:

- Road and drainage works

Environmental Monitoring and Audit Progress

The monthly EM&A programme was undertaken by ET in accordance with the approved EM&A Manual. A summary of the monitoring activities during the reporting period is presented below:

Table I: Summary Table for EM&A Activities in the Reporting Period

EM&A Activities	Number of Sessions
Weekly environmental site inspections	5

Complaint Log

One complaint in relation to the environmental impact was received during the reporting period.

Notifications of Summons and Successful Prosecutions

There was no notifications of summons or successful prosecutions received during this reporting period.

Reporting Changes

There was no reporting change during the reporting period.

Future Key Issues

The future key issues to be undertaken in the upcoming month are:

- Road and drainage works

1 Introduction

1.1 Background

On 23 August 2018, the Environment Impact Assessment (EIA) Report (Register No.: AEIAR-216/2018) for the Project was approved and an Environmental Permit (EP) (Permit No.: EP-560/2018) was issued for the construction and operation of the Project.

The Project site is situated between the Hong Kong-Zhuhai-Macao Bridge Boundary Crossing Facilities (HKBCF) Island and the Hong Kong International Airport (HKIA), at the south of the existing SkyPier on the Airport Island. The Bonded Vehicular Bridge serves as a land connection between the HKBCF Island and Intermodal Transfer Terminal (ITT) building next to the SkyPier to be built by AAHK. Part of the bridge is located in the marine area (marine section) and part on the HKBCF Island (land section). The marine section of the site is situated in a marine area between HKIA and HKBCF Island.

The Bonded Vehicular Bridge serves as a dedicated direct vehicular access connecting the ITT of HKIA and HKBCF Island. The Project scale is anticipated to be small, the bridge's marine section is approximately 360 m in length, supported by bridge concrete piers. The Bridge's land section spans over the HKBCF Island with a total length of approximately 210 m.

In June 2019, Mott MacDonald Hong Kong Limited (MMHK) was commissioned by Airport Authority Hong Kong (AAHK) to provide Environmental Team (ET) consultancy services for implementation of an Environmental Monitoring and Audit (EM&A) programme in accordance with the EP requirements throughout the Pre-construction, Construction and Post-construction phases of the Project.

Baseline monitoring for the Project was carried out between August to October 2019, and the baseline monitoring report was submitted in April 2020 in accordance with the requirements set out in the EP and recommended in the EM&A Manual and received no further comment from the Environmental Protection Department (EPD).

For Construction phase of the Project, the construction has been commenced on 5 October 2020 and the construction phase EM&A programme was started on 5 October 2020.

This is the 46th monthly EM&A report summarising the key findings of the construction phase EM&A programme from 1 to 31 July 2024 (the reporting period) and is submitted to fulfil requirements in Condition 3.4 of EP and Section 10.3 of EM&A Manual of the Project.

1.2 Project Organisation

The organisation chart and lines of communication with respect to the on-site environmental management structure of the key personnel are shown in **Appendix A**. The key personnel contact names and numbers are summarized in **Table 1.1**.

Table 1.1: Contact Information of Key Personnel

Party	Position	Name	Telephone
Project Manager’s Representative (Airport Authority Hong Kong)	Senior Project Engineer, Environment	Becky Yan	2183 2773
Environmental Team (ET) (Mott MacDonald Hong Kong Limited)	Environmental Team Leader	Thomas Chan	2828 5967
	Deputy Environmental Team Leader	Gary Chow	2828 5874
Independent Environmental Checker (IEC) (AECOM Asia Company Limited)	Independent Environmental Checker	Y W Fung	3922 9366
	Deputy Independent Environmental Checker	Lemon Lam	3922 9381
Main Contractor (Gammon Construction Limited)	Senior Project Manager	Brian Ho	9041 7535
	Environmental Officer	Ariana Chan	6449 3086

1.3 Construction Works Programme and Construction Works Area

The construction works commenced on 5 October 2020. The construction works programme and the construction works area of the Project are shown in **Appendix B** and **Appendix C** respectively.

1.4 Construction Works undertaken during the Reporting Period

A summary of construction activities undertaken during this reporting period is presented below:

- Road and drainage works

2 Water Quality Monitoring

2.1 Impact Water Quality Monitoring

2.1.1 Monitoring Requirement

The impact water quality monitoring was conducted three days per week at mid-flood and mid-ebb tides, at 5 water quality monitoring stations during the marine works of the Project. Samples were taken at three depths, namely, 1m below water surface, mid-depth and 1m above sea bed, except where the water depth less than 6m, the mid-depth station was omitted. For locations with water depth less than 3m, only the mid-depth station was monitored. Duplicate in-situ measurements and water samples were collected from each independent monitoring event for all parameters to ensure a robust statistically interpretable dataset.

2.1.2 Monitoring Parameters

For the 3 impact stations (M1 to M3) and 2 control stations (C1 and C2), monitoring of DO, DO%, pH, temperature, turbidity, salinity, SS and water depth were undertaken.

Other relevant data were also recorded, including monitoring location, time, tidal stages, weather conditions and any special phenomena or work during the monitoring.

2.1.3 Monitoring Locations

With reference to the Baseline Monitoring Report, the water quality monitoring was conducted at three locations in the sea channel between the HKIA and the HKBCF (M1, M2 and M3) and two control stations (C1 and C2), locations are shown in **Figure 2.1** and summarized in **Table 2.1**.

Table 2.1: Locations of Marine Water Quality Monitoring Stations

ID	Monitoring Station	Easting	Northing
M1	Impact Station	812423	819635
M2 ⁽¹⁾	Impact Station	812629	819845
M3 ⁽²⁾	Impact Station	812586	820069
C1	Control Station - West	812419	820670
C2	Control Station - East	813072	820595

Notes:

1. As updated in the baseline monitoring report, the water quality monitoring at M2 station was shifted to bring it closer to the Project site and away from the SkyPier ferry movements for better representation.
2. As updated in the baseline monitoring report, the water quality monitoring at M3 station was shifted to the location near the seawater intake of HKBCF to better represent the potential water quality impacts at the nearby sensitive receiver.

2.1.4 Monitoring Results

As informed by AAHK, the marine works below sea water level of the Project were completed on 25 July 2022. Since the construction activities under sea water level and the impact water quality monitoring of Airport City Link (ACL) project were commenced (i.e. 26 July 2022) right after the completion of the construction activities under the seawater level of the ITT-BVB project, as the impact water quality monitoring programme (e.g. monitoring requirement and parameter) and monitoring locations under the EM&A Manual of EP (Permit no.: EP-581/2020) of ACL project are the same as that of ITT-BVB project. Hence, the water quality monitoring results of ACL project

are adopted and presented in this Monthly EM&A Report as agreed with AAHK, and such arrangement was continued until the completion of all marine works of the Project.

With the completion of marine works below seawater level on 15 December 2023, the impact water quality monitoring was terminated after 15 December 2023. Therefore, no impact monitoring was scheduled for this reporting month and no impact monitoring results are reported in this report.

2.1.5 Monitoring Schedule for the Reporting Period

No impact water quality monitoring under ACL project was scheduled for this reporting month, with the impact water quality monitoring being terminated after 15 December 2023.

2.2 Action and Limit Levels

The Action and Limit Levels for the impact monitoring stations and Event and Action Plan can refer to the Monthly EM&A Report of ACL project.

2.3 Post-Construction Water Quality Monitoring

The post-construction water quality monitoring of ITT-BVB was combined with the post-construction water quality monitoring of ACL project and conducted after completion of the construction activities under sea water level of ACL project.

The alternative arrangement for post-construction water quality monitoring was proposed to EPD on 7 July 2022 and EPD expressed no comment on 18 July 2022 on the alternative arrangement.

On 24 November 2023, notification was made to the EPD on the termination of Impact Water Quality Monitoring and implementation of post-construction monitoring, with further update sent on 5 December 2023. With the completion of marine works below seawater level on 15 December 2023, the impact water quality monitoring was terminated after 15 December 2023 and the post-construction water quality monitoring was commenced on 16 December 2023 and completed on 12 January 2024.

The monitoring parameters and locations are in the same manner as the impact monitoring, and details could be referred to **Section 2.1**.

2.3.1 Monitoring Schedule for the Reporting Period

The post-construction water quality monitoring was completed on 12 January 2024, thus no water quality monitoring was undertaken in the reporting month.

2.3.2 Monitoring Results

The detailed result and analysis of post-construction monitoring will be further presented in the Final EM&A Review Report under ITT Project.

2.4 Conclusion

As informed by AAHK, the marine works below sea water level was completed on 25 July 2022. Refer to **Section 2.1.4**, the water quality monitoring results of ACL project are adopted and presented in this Monthly EM&A Report as agreed with AAHK, and such arrangement was continued until the completion of all marine works of the Project.

With the completion of marine works below seawater level on 15 December 2023, the impact water quality monitoring was terminated after 15 December 2023. Therefore, no impact

monitoring was scheduled for this reporting month and no impact monitoring results are reported in this report.

In addition, the post-construction water quality monitoring of ITT-BVB was combined with the post-construction water quality monitoring of ACL project; this was commenced on 16 December 2023 and completed on 12 January 2024.

3 Environmental Site Inspection and Audit

3.1 Environmental Site Inspection

Site inspections were carried out by ET on a weekly basis to monitor the implementation of proper environmental pollution control mitigation measures for the Project. Key observations were recorded in the site inspection checklist and passed to the Contractor together with the appropriate recommended mitigation measures where necessary. During the reporting period, site inspections were carried out on 2, 8, 16, 23 and 30 July 2024. Joint IEC site inspection was carried out on 16 July 2024. Monthly landscape and visual site audit was carried out on 16 July 2024.

Key observations and reminders during the site inspections and landscape and visual site audit are described in **Table 3.1**.

Table 3.1: Summary of Site Inspections and Recommendations

Inspection Date	Key Observations / Reminders	Recommendations / Actions	Close-Out Date
8 Jul 2024	Soil stockpiles were observed dry.	The Contractor should provide sufficient dust suppression measures (e.g. water spraying, covering with impervious sheets) to prevent fugitive dust emission.	16 Jul 2024
8 Jul 2024	No drip tray was provided for the oil drums for spillage prevention.	The Contractor should provide adequate drip trays for the oil drums to contain any potential spillage.	16 Jul 2024
23 Jul 2024	Soil deposit was observed on the paved haul road near public road.	The Contractor should provide cleaning to keep the public road free of soil and silt.	30 Jul 2024

3.2 Advice on the Solid and Liquid Waste Management Status

The Contractor was registered as a chemical waste producer for the Project. Construction and demolition (C&D) material sorting was carried out on site. Sufficient numbers of receptacles were provided for general refuse collection and sorting. Excavated inert C&D materials were reused to minimise the disposal of C&D waste to public fill. The Contractor was reminded to maintain on site waste sorting and recording system and maximize reuse / recycling of C&D wastes, whenever these are generated.

The monthly summary of waste flow table is detailed in **Appendix E**.

The valid environmental licenses and permits for the Project during the reporting period are summarized in **Appendix F**.

3.3 Implementation Status of Environmental Mitigation Measures

In response to the site audit findings, the Contractor carried out corrective actions.

A summary of the environmental mitigation measures implementation status is presented in **Appendix G**. Necessary mitigation measures were implemented properly, observations and reminders were issued to the Contractor where actions were taken by the Contractor to rectify the identified issues.

3.4 Summary of Complaints, Notifications of Summons and Successful Prosecutions

Complaint Log

One complaint was received in relation to the environmental impact during the reporting period.

A complaint was received via email from EPD on 24 July 2024 regarding polluting effluent discharge at 41 Shun Wan Road from the ITT-BVB site.

From the photos provided in EPD’s email, ET recognized the location as construction site area for ITT-BVB at Shun Wan Road.

According to information provided by the Contractor, no construction work had been carried out since late December 2023 and no wastewater was generated at the concerned location. Upon receiving the complaint, the Contractor found that the blue hoses had been removed from the concerned manhole. No polluting effluent discharge was observed at the concerned location.

Furthermore, the Contractor sealed up a manhole as identified nearby to prevent any polluting effluent discharge. Reminders were given to area engineer and frontline supervisors to ensure there was no direct discharge of polluted water within their site area.

During ET’s weekly environmental site inspection on 23 July 2024, no observation related to the direct discharge of polluted effluent was recorded. With regards to the ad-hoc site inspections conducted by AAHK, ET and IEC on 24 July 2024; and ad-hoc site inspection conducted by EPD and ET on 29 July 2024, it was also noted that no direct discharge of polluted effluent was observed.

The investigation report was submitted to EPD on 1 August 2024.

Notifications of Summons or Status of Prosecution

There was no notification of summons or prosecutions received during the reporting period.

Cumulative Statistics

Statistics on complaints, notifications of summons and successful prosecutions are summarized in **Table 3.2**.

Table 3.2: Statistics on Environmental Complaints, Notifications of Summons and Successful Prosecutions

Reporting Period	Environmental Complaints	Notifications of Summons	Successful Prosecutions
This reporting period (July 2024)	1	0	0
From commencement date of construction to end of reporting period	2	0	0

4 Future Key Issues

4.1 Construction Programme for the Coming Month

As informed by the Contractor, the major construction activities for the next reporting period (August 2024) are summarized in **Table 4.1**.

Table 4.1: Construction Activities for the Next Reporting Period

Period	Description of Activities
August 2024	<ul style="list-style-type: none">Road and drainage works

4.2 Environmental Site Inspection for the Next Reporting Period

The tentative schedule for weekly site inspection for the next reporting period is provided in **Appendix D**. Environmental Site Inspection Schedule.

5 Conclusions

General

The construction works for the Project commenced on 5 October 2020. The ET of the Project has undertaken environmental site inspections and water quality monitoring under the construction phase EM&A programme during the reporting period.

Water Quality Monitoring

The post-construction water quality monitoring was commenced on 16 December 2023 and was completed on 12 January 2024.

Environmental Site Inspections

Environmental site inspections were carried out five (5) times during the reporting period. Recommendations on remedial actions were given to the Contractor for the deficiencies identified during the site inspections.

Complaint Log

One complaint was received in relation to the environmental impact during the reporting period.

Reporting Changes

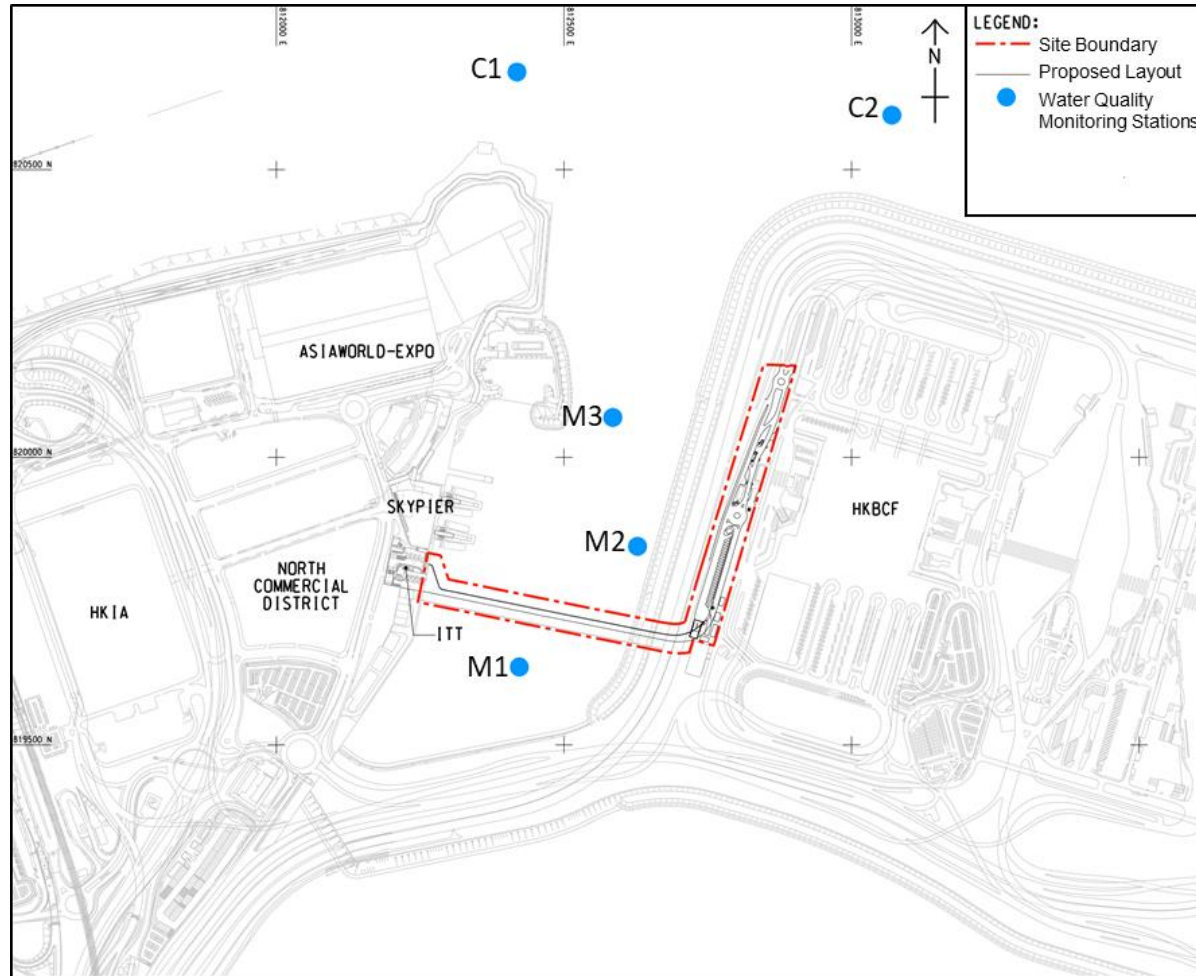
There was no reporting change during the reporting period.

Notifications of Summons and Successful Prosecutions

There was no notification of summons or successful prosecutions received during the reporting period.

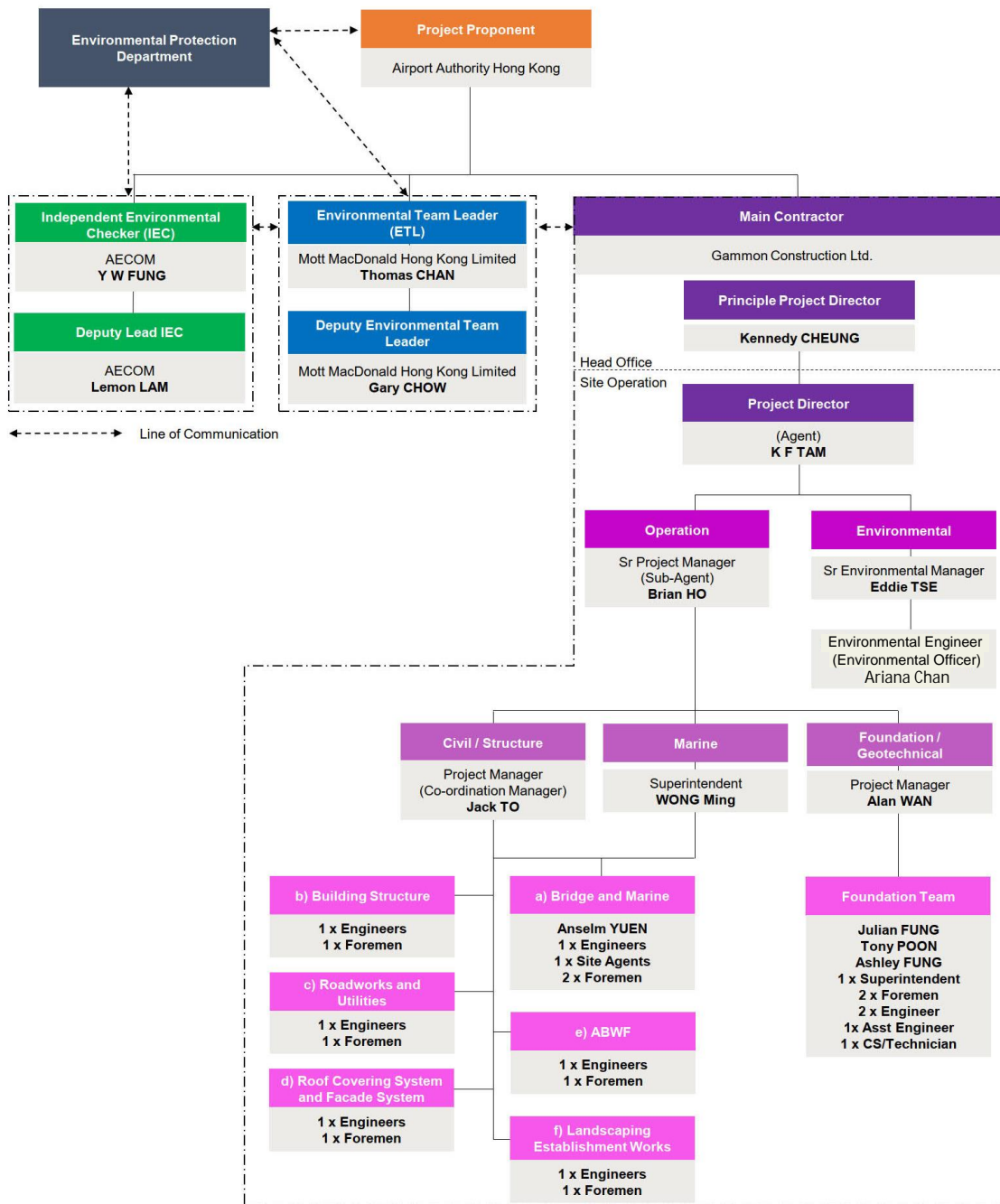
Figure

Figure 2.1 Water Quality Monitoring Locations



Appendices

Appendix A. Project Organisation



Appendix B. Construction Works Programme

C19W10 ITTB SA02 DRM Programme Updated as 31 Jul 2024

Activity ID	Activity Name	Current Start	Current Finish	Orig Dur	Pct Com	2024			
						Jun	Jul	Aug	Sep
C19W10 ITTB SA02 DRM Programme Updated as 31 Jul 2024									
Contract Dates									
Cost Centre 1 - Preliminaries and General Requirements									
Cost Centre 7 - External Works									
Landscape Works									
19W10.C.71555	North Part - Planting	17-May-24 A	02-Jul-24	10	90%	[Gantt bar: 17-May-24 to 02-Jul-24, 90% complete]			
Utilities									
Irrigation									
19W10.S.71030	Connect Water Meter	04-Jul-24	04-Jul-24	0	0%	[Gantt bar: 04-Jul-24 to 04-Jul-24, 0% complete]			
19W10.S.71015	Install Irrigation	14-May-24 A	03-Jul-24	14	15.71%	[Gantt bar: 14-May-24 to 03-Jul-24, 15.71% complete]			
19W10.S.71020	Submit WWWO 046 Part 4	04-Jul-24	04-Jul-24	0	0%	[Gantt bar: 04-Jul-24 to 04-Jul-24, 0% complete]			
Post OP Works & Vacation of the Site									
19W10.H.71000	Demobilise, clear area & vacate site	29-Dec-23 A	09-Jul-24	35	1.43%	[Gantt bar: 29-Dec-23 to 09-Jul-24, 1.43% complete]			
19W10.C.71620	Post OP Works (Non-Essential External Works)	29-Dec-23 A	09-Jul-24	35	1.43%	[Gantt bar: 29-Dec-23 to 09-Jul-24, 1.43% complete]			

Actual LOE	Critical Remaining Work	Start Constraint
Remaining LOE	Milestone	Finish Constraint
Actual Work	Crit Milestone	No Predecessors
Remaining Work	Actual Milestone	No Successors

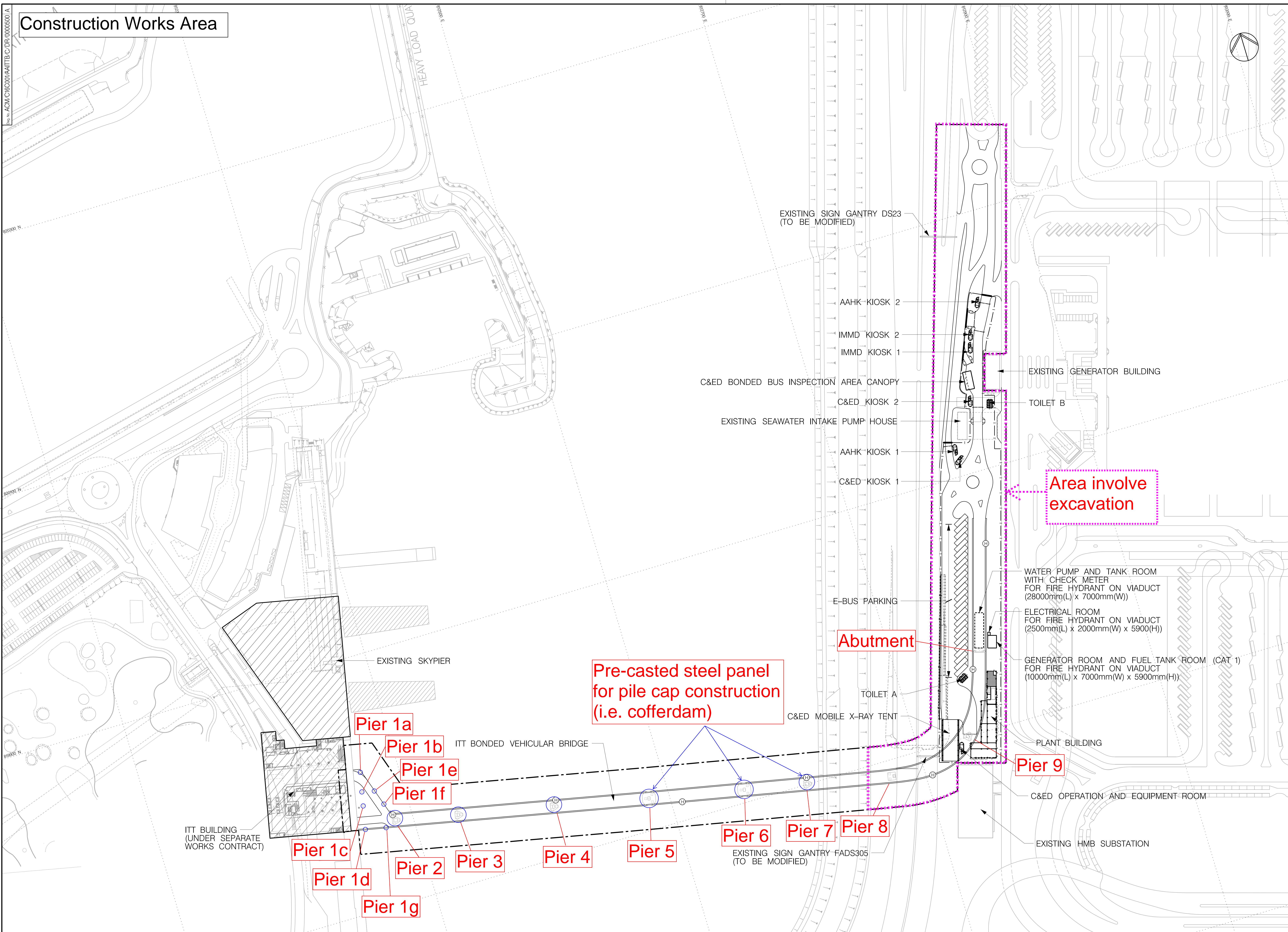
Project ID: C19W10-DRMPG-SA2-M49
3-Month Rolling Programme (As of 31 July 2024)

Data Date: 30-Jun-24
Printed: 06-Aug-24 15:20
Layout: C19W10 ITT 3MRP - M49
 TASK filters: 3-Month Rolling (MPU), Not Level of Effort.

Date	Revision	Checked	Approved
31-Jul-24	3MRP July 2024	DW	BH

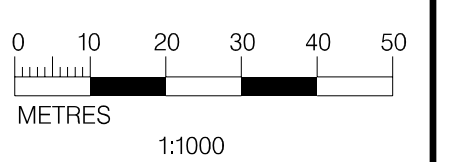
Appendix C. Construction Works Area

Construction Works Area



NOTE :
 1. FOR THE FIRE HYDRANT MAIN DETAILS ON VIADUCT, REFER TO DRAWING NO. ACM/C16C001/AAITTB/C/DR/0000500.

LEGEND :
 --- SITE BOUNDARY
 (H) PROPOSED FIRE HYDRANT ON VIADUCT

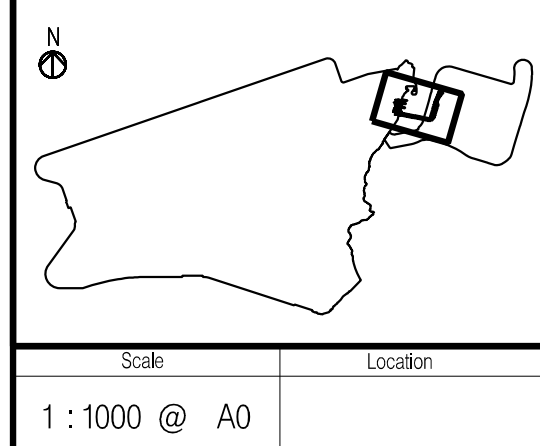


Notes:
 1. Measurements are based on metric system.
 2. All levels are in metres to Principal Datum (mPD) unless noted otherwise.
 3. Do not scale drawings.
 4. Figure dimensions are to be followed.
 5. Do not use for construction unless expressly permitted.
 6. The Contractor shall verify all conditions on the Site & notify the Employer's Representative of any variations from dimensions before construction.

Rev.	Date	Description	Checked	Rev.	Date	Description	Checked
A	17FEB20	TENDER ADDENDUM NO.3	MICHELLE LAM				

Signatures for Approval			
Drawn	ERIC KWAN	Date	17FEB20
Design	AARON POON	Date	17FEB20
Checkers	TIM FUNG	Date	17FEB20
Plot Date			23-Mar-20
Design Supervisor		Date	
Authorised Representative	MICHELLE LAM	Date	17FEB20
	HELEN LEUNG	Date	17FEB20

Consultant
AECOM in association with
Aedas
 ● AECOM ○ AEDAS ○ OTHERS



Hong Kong International Airport
 CONTRACT C19W10 INTERMODAL TRANSFER TERMINAL – BONDED VEHICULAR BRIDGE AND ASSOCIATED ROADS GENERAL ARRANGEMENT AND PROVISION OF FIRE HYDRANT ON VIADUCT
 Drawing No: ACM/C16C001/AAITTB/C / DR/0000500 TENDER A
 Plot Date: 23-Mar-20

Appendix D. Environmental Site Inspection Schedule

ITT-BVB Environmental Monitoring and Site Inspection Schedule for July 2024

Jul-24

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2 Environmental Site Inspection	3	4	5	6
7	8 Environmental Site Inspection	9	10	11	12	13
14	15	16 Environmental Site Inspection	17	18	19	20
21	22	23 Environmental Site Inspection	24	25	26	27
28	29	30 Environmental Site Inspection	31			
		Notes:				

ITT-BVB Environmental Monitoring and Site Inspection Schedule for August 2024

Aug-24

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3
4	5	6 Environmental Site Inspection	7	8	9	10
11	12	13 Environmental Site Inspection	14	15	16	17
18	19	20 Environmental Site Inspection	21	22	23	24
25	26	27 Environmental Site Inspection	28	29	30	31
		Notes:				

Appendix E. Waste Flow Table

AAHK Contract No. 19W10 Intermodal Transfer Terminal - Bonded Vehicular Bridge and Associated Roads

Monthly Waste Flow Table

Month	Excavated Waste (tonnes)	Actual Quantities of Inert C&D Materials (excluding excavated waste) (tonnes) e.g. broken concrete					Actual Quantities of Non-inert C&D Waste (tonnes)					(k) Total recyclable waste (k) = (b) + (c) + (d) + (f) + (g)	(l) Total construction waste generated (l) = (a) + (j)
		(a) Total inert C&D material generated (a) = (b) + (c) + (d) + (e)	(b) Reused in contract	(c) Reused in other projects	(d) Sent to recycling company	(e) Disposed to public fill	(f) Recycled scrap metal	(g) Reused / recycled timber	(h) Chemical waste	(i) Other waste disposed to landfill	(j) Total non-inert C&D material generated (j) = (f) + (g) + (h) + (i)		
Jul-20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Aug-20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sep-20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.04	4.04	0.00	4.04
Oct-20	740.49	740.49	0.00	0.00	0.00	740.49	0.00	0.00	0.00	3.55	3.55	0.00	744.04
Nov-20	574.90	574.90	0.00	0.00	0.00	574.90	0.00	0.00	0.00	6.76	6.76	0.00	581.66
Dec-20	536.08	536.08	0.00	0.00	0.00	536.08	0.00	0.00	0.00	2.33	2.33	0.00	538.41
Jan-21	1778.61	1778.61	0.00	0.00	0.00	1778.61	0.00	0.00	0.00	5.33	5.33	0.00	1784.14
Feb-21	4031.66	4031.66	0.00	2832.32	0.00	1199.34	0.00	0.00	0.00	4.40	4.40	2832.32	4036.06
Mar-21	1921.26	1921.26	0.00	419.77	0.00	1501.49	0.00	0.00	0.00	12.28	12.28	419.77	1933.54
Apr-21	3929.82	3929.82	0.00	1702.03	0.00	2227.79	0.00	0.00	0.00	26.48	26.48	1702.03	3956.30
May-21	2062.98	2062.98	0.00	1694.52	0.00	368.46	0.00	0.00	0.00	12.63	12.63	1694.52	2075.61
Jun-21	5098.30	5098.30	0.00	4446.42	0.00	651.88	0.00	0.00	0.54	23.41	23.95	4446.42	5122.25
Jul-21	6868.66	6868.66	0.00	6440.45	0.00	428.21	0.00	0.00	0.00	12.92	12.92	6440.45	6881.58
Aug-21	6884.63	6884.63	0.00	5662.00	0.00	1222.63	8.56	0.00	1.08	38.91	48.55	5670.56	6933.18
Sep-21	3949.49	3949.49	0.00	2798.89	0.00	1150.60	0.00	0.00	0.00	15.66	15.66	2798.89	3965.15
Oct-21	389.98	389.98	0.00	235.10	0.00	154.88	6.20	0.00	0.00	15.48	21.68	241.30	411.66
Nov-21	1926.96	1926.96	285.00	650.00	0.00	991.96	13.78	0.00	0.00	16.18	29.96	948.78	1956.92
Dec-21	672.20	672.20	240.00	0.00	0.00	432.20	0.00	0.00	0.00	17.40	17.40	240.00	689.60
Jan-22	584.00	584.00	584.00	0.00	0.00	0.00	6.03	0.00	0.00	22.17	28.20	590.03	612.20
Feb-22	1056.52	1056.52	378.00	240.26	0.00	438.26	0.00	0.00	0.00	33.95	33.95	618.26	1090.47
Mar-22	1426.34	1426.34	0.00	1199.88	0.00	226.46	0.00	0.00	0.00	38.49	38.49	1199.88	1464.83
Apr-22	68.10	68.10	0.00	0.00	0.00	68.10	0.00	0.00	0.00	50.11	50.11	0.00	118.21
May-22	366.14	366.14	0.00	0.00	0.00	366.14	0.00	0.00	0.00	55.50	55.50	0.00	421.64
Jun-22	5806.30	5806.30	0.00	3751.49	0.00	2054.81	0.00	0.00	0.72	74.26	74.98	3751.49	5881.28
Jul-22	4334.71	4334.71	0.00	3561.75	0.00	772.96	0.00	0.00	0.00	81.66	81.66	3561.75	4416.37
Aug-22	7115.76	7115.76	1588.85	2406.49	0.00	3120.42	3.73	0.00	0.00	72.25	75.98	3999.07	7191.74
Sep-22	4345.65	4345.65	0.00	625.55	0.00	3720.10	0.00	0.00	0.00	66.94	66.94	625.55	4412.59
Oct-22	831.14	831.14	0.00	0.00	0.00	831.14	0.00	0.00	0.00	64.59	64.59	0.00	895.73
Nov-22	4503.18	4503.18	0.00	251.20	0.00	4251.98	0.00	0.00	0.00	84.10	84.10	251.20	4587.28
Dec-22	5771.99	5771.99	323.00	722.41	0.00	4726.58	0.00	0.00	0.00	136.24	136.24	1045.41	5908.23
Jan-23	1024.71	1024.71	246.00	0.00	0.00	778.71	0.00	0.00	0.00	138.77	138.77	246.00	1163.48
Feb-23	2920.39	2920.39	396.00	0.00	0.00	2524.39	0.00	0.00	0.00	102.33	102.33	396.00	3022.72
Mar-23	2477.37	2477.37	110.00	0.00	0.00	2367.37	0.00	0.00	0.00	121.57	121.57	110.00	2598.94
Apr-23	2972.62	2972.62	114.00	549.48	0.00	2309.14	0.00	0.00	0.00	54.00	54.00	663.48	3026.62
May-23	1748.61	1748.61	343.00	528.20	0.00	877.41	0.00	0.00	0.00	71.48	71.48	871.20	1820.09
Jun-23	921.35	921.35	552.00	0.00	0.00	369.35	0.00	0.00	0.00	52.44	52.44	552.00	973.79
Jul-23	3195.60	3195.60	667.00	0.00	0.00	2528.60	0.00	0.00	0.00	95.40	95.40	667.00	3291.00
Aug-23	837.84	837.84	198.00	0.00	0.00	639.84	0.00	0.00	0.00	78.16	78.16	198.00	916.00
Sep-23	147.63	147.63	34.00	0.00	0.00	113.63	0.00	0.00	0.00	39.08	39.08	34.00	186.71
Oct-23	117.05	117.05	20.00	0.00	0.00	97.05	0.00	0.00	0.00	36.18	36.18	20.00	153.23
Nov-23	825.22	825.22	0.00	0.00	0.00	825.22	0.00	0.00	0.00	73.32	73.32	0.00	898.54
Dec-23	615.07	615.07	0.00	0.00	0.00	615.07	0.00	0.00	0.00	33.73	33.73	0.00	648.80
Jan-24	339.33	339.33	0.00	0.00	0.00	339.33	0.00	0.00	0.00	16.56	16.56	0.00	355.89
Feb-24	363.15	363.15	0.00	0.00	0.00	363.15	0.00	0.00	0.00	3.24	3.24	0.00	366.39
Mar-24	593.72	593.72	0.00	0.00	0.00	593.72	0.00	0.00	0.00	2.57	2.57	0.00	596.29
Apr-24	230.72	230.72	0.00	0.00	0.00	230.72	0.00	0.00	0.00	14.64	14.64	0.00	245.36
May-24	198.84	198.84	0.00	0.00	0.00	198.84	0.00	0.00	0.00	8.15	8.15	0.00	206.99
Jun-24	406.88	406.88	0.00	0.00	0.00	406.88	0.00	0.00	0.00	8.72	8.72	0.00	415.60
Jul-24	146.42	146.42	0.00	0.00	0.00	146.42	0.00	0.00	0.00	1.32	1.32	0.00	147.74
Total	97658.37	97658.37	6078.85	40718.21	0.00	50861.31	38.30	0.00	2.34	1949.68	1990.52	46835.36	99648.89

Appendix F. Status of Environmental Permits and Licences

Table F.1: Summary of Environmental Licenses and Permits

Type of Licence / Permit	Reference No.	Valid From	Valid Until	Remark
Environmental Permit	EP-560/2018	24 Aug 2017	End of Project	N/A
Billing Account for Disposal of Construction Waste	7037763	6 Jul 2020	End of Project	N/A
Construction Dust Notification under APCO	458075	13 Jul 2020	N/A	N/A
Construction Noise Permit	GW-RS0306-24	10 Apr 2024	4 Oct 2024	Issued by EPD on 8 Apr 2024.
	GW-RS0529-24	8 Jun 2024	3 Dec 2024	Issued by EPD on 6 Jun 2024.
Chemical Waste Producer	5213-951-G2857-02	24 Aug 2020	End of Project	N/A
Water Discharge License – Landside	WT00037071-2020	14 July 2023	31 Jan 2026	Variation of discharge license WT00037071-2020 granted on 12 Jan 2021 and varied on 23 Jun 2021.
Water Discharge License – Marine	WT00037556-2021	9 Jun 2021	31 May 2026	Variation of discharge license WT00037556-2021 granted on 14 May 2021.

Appendix G. Environmental Mitigation Measures Implementation Status

Recommended Mitigation Measures for Air Quality Impact

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^
S3.7.1	S2.2.1	<ul style="list-style-type: none"> Relevant control measures as required in the Air Pollution Control (Construction Dust) Regulation shall be implemented to minimise dust impact. 	Yes
		<ul style="list-style-type: none"> Skip hoist for material transport should be totally enclosed by impervious sheeting. 	Yes
		<ul style="list-style-type: none"> All dusty materials should be sprayed with water prior to any loading, unloading or transfer operation to maintain the dusty materials wet. 	Yes
		<ul style="list-style-type: none"> All stockpiles of aggregate or spoil should be covered and/or water applied. 	Obs
		<ul style="list-style-type: none"> The height from which excavated materials are dropped should be controlled to a minimum practical height to limit fugitive dust generation from unloading. 	N/A
		<ul style="list-style-type: none"> Every vehicle should be washed to remove any dusty materials from its body and wheels before leaving the construction sites. 	Yes
		<ul style="list-style-type: none"> The load of dusty materials carried by a vehicle leaving a construction site should be covered entirely by clean impervious sheeting to ensure dust materials do not leak from the vehicle. 	Yes
		<ul style="list-style-type: none"> All NRMMS operated on-site are approved or exempted (as the case may be) and affixed with the requisite approval/exemption labels under the Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation, or are in the process of application for such approval/exemption during the relevant grace period. 	Yes

Recommended Mitigation Measures for Noise Impact

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^
S4.5.2	S3.2.1	<ul style="list-style-type: none"> Only well-maintained plant should be operated on-site and plant should be serviced regularly. 	Yes
		<ul style="list-style-type: none"> Silencers or mufflers on construction plant should be utilised. 	Yes
		<ul style="list-style-type: none"> Mobile plant should be sited as far away from sensitive uses as possible. 	Yes
		<ul style="list-style-type: none"> Machines and plant that may be in intermittent use should be shut down between works periods or should be throttled down to a minimum. 	Yes
		<ul style="list-style-type: none"> Plant known to emit noise strongly in one direction should, where possible, be orientated so that noise is directed away from the nearby sensitive uses. 	Yes
		<ul style="list-style-type: none"> Material stockpiles and other structures such as site hoarding should be effectively utilised to screen noise from on-site construction activities. 	N/A
		<ul style="list-style-type: none"> Noisy construction activities such as road breaking, should be scheduled to less sensitive hours during the day, e.g. midday. 	Yes

Recommended Mitigation Measures for Water Quality Impact

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^
S5.9.1	S4.3.1	<ul style="list-style-type: none"> Steel pile casing and watertight cofferdam should be installed at the pier site and seawater trapped inside the casing and cofferdam should be pumped out to generate a dry working environment prior to carrying out sediment excavation. 	N/A
S5.9.2	S4.3.1	<ul style="list-style-type: none"> During dewatering of the cofferdam, appropriate desilting or sedimentation device should be provided on site for treatment before discharge. The Contractor should ensure discharge water from the sedimentation tank meeting the WPCO / TM-DSS requirements before discharge. 	N/A
S5.9.3	S4.3.1	<ul style="list-style-type: none"> To minimise any adverse water quality impact during the excavation of sediment, a funnel should be placed at the top of pile casing during excavation and silt curtains should be deployed to completely enclose the cofferdam and steel pile casing. Silt curtains should be deployed prior to installation of temporary platform on barge, cofferdam and steel pile casing. Silt curtains should only be removed after completion of pile caps and piers. The Contractor should be responsible for the design, installation and maintenance of the silt curtain to minimise the impacts on water quality. The design and specification of the silt curtains should be submitted by the Contractor to the Project Manager or Project Manager's Representative of AAHK for approval. The marine bridge piers should not be constructed at the same time to avoid adverse hydrodynamic impact due to flow blockage increase during the interim construction stages. All vessels should be sized such that adequate clearance is maintained between vessels and the sea bed at all states of the tide to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash. 	N/A
S5.9.5	S4.3.1	<ul style="list-style-type: none"> Surface run-off from construction sites should be discharged into storm drains via adequately designed sand/silt removal facilities such as sand traps, silt traps and sedimentation basins. Channels or earth bunds or sand bag barriers should be provided on site to properly direct stormwater to such silt removal facilities. Perimeter channels at site boundaries should be provided on site boundaries where necessary to intercept storm run-off from outside the site so that it will not wash across the site. Catchpits and perimeter channels should be constructed in advance of site formation works and earthworks. 	Yes
S5.9.6	S4.3.1	<ul style="list-style-type: none"> Silt removal facilities, channels and manholes should be maintained and the deposited silt and grit should be removed regularly, at the onset of and after each rainstorm to prevent local flooding. Before disposal at the public fill reception facilities, the deposited silt and grit should be solicited in such a way that it can be contained and delivered by dump truck instead of tanker truck. Any practical options for the diversion and re-alignment of drainage should comply with both engineering and environmental requirements in order to provide adequate hydraulic capacity of all drains. 	Yes
S5.9.7	S4.3.1	<ul style="list-style-type: none"> Construction works should be programmed to minimise soil excavation works in rainy seasons (April to September). If excavation in soil cannot be avoided in these months or at any time of year when rainstorms are likely, for the purpose of preventing soil erosion, temporary exposed slope surfaces should be covered e.g. by tarpaulin, and temporary access roads should be protected by crushed stone or gravel, as excavation proceeds. Intercepting channels should be provided (e.g. along the crest / edge of excavation) to prevent storm runoff from washing across exposed soil surfaces. Arrangements should always be in place in such a way that adequate surface protection measures can be safely carried out well before the arrival of a rainstorm. 	Yes
S5.9.8	S4.3.1	<ul style="list-style-type: none"> Earthworks final surfaces should be well compacted and the subsequent permanent work or surface protection should be carried out immediately after the final surfaces are formed to prevent erosion caused by rainstorms. Appropriate drainage like intercepting channels should be provided where necessary. 	Yes

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^
S5.9.9	S4.3.1	<ul style="list-style-type: none"> Measures should be taken to minimise the ingress of rainwater into trenches. If excavation of trenches in wet seasons is necessary, they should be dug and backfilled in short sections. Rainwater pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities. 	Yes
S5.9.10	S4.3.1	<ul style="list-style-type: none"> Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage system, and to prevent storm run-off from getting into foul sewers. Discharge of surface run-off into foul sewers must always be prevented in order not to unduly overload the foul sewerage system. 	Yes
S5.9.11	S4.3.1	<ul style="list-style-type: none"> If bentonite slurries are required for any construction works, they should be reconditioned and reused wherever practicable to minimise the disposal volume of used bentonite slurries. Temporary enclosed storage locations should be provided on-site for any unused bentonite that needs to be transported away after the related construction activities are completed. Requirements as stipulated in ProPECC Note PN 1/94 should be closely followed when handling and disposing bentonite slurries. 	N/A
S5.9.12	S4.3.1	<ul style="list-style-type: none"> Loading of the excavated marine-based sediment to the barge shall be controlled to avoid splashing and overflowing of the sediment slurry to the surrounding water. 	N/A
		<ul style="list-style-type: none"> The barge transporting the excavated marine-based sediment to the designated disposal sites shall be equipped with tight fitting seals to prevent leakage and shall not be filled to a level that would cause overflow of materials or laden water during loading or transportation. Monitoring of the barge loading shall be conducted to ensure that loss of material does not take place during transportation. Transport barges or vessels shall be equipped with automatic self-monitoring devices as specified by the Director of Environmental Protection (DEP). 	N/A
S5.9.13	S4.3.1	<ul style="list-style-type: none"> Water used in ground boring and drilling for site investigation or rock/soil anchoring should as far as practicable be re-circulated after sedimentation. When there is a need for final disposal, the wastewater should be discharged into storm drains via silt removal facilities. 	N/A
S5.9.14	S4.3.1	<ul style="list-style-type: none"> All vehicles and plant should be cleaned before they leave a construction site to minimise the deposition of earth, mud, debris on roads. A wheel washing bay should be provided at every site exit if practicable and wash-water should have sand and silt settled out or removed before discharging into storm drains. The section of construction road between the wheel washing bay and the public road should be paved with backfall to reduce vehicle tracking of soil and to prevent site run-off from entering public road drains. 	Yes
S5.9.15	S4.3.1	<ul style="list-style-type: none"> There is a need to apply to EPD for a discharge licence for discharge of effluent from the construction site under the WPCO. The discharge quality must meet the requirements specified in the discharge licence. All the runoff and wastewater generated from the works areas should be treated so that it satisfies all the standards listed in the TM-DSS. The beneficial uses of the treated effluent for other on-site activities such as dust suppression, wheel washing and general cleaning etc., can minimise water consumption and reduce the effluent discharge volume. If monitoring of the treated effluent quality from the works areas is required during the construction phase of the Project, the monitoring should be carried out in accordance with the relevant WPCO license. 	Yes

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^
S5.9.16	S4.3.1	<ul style="list-style-type: none"> No discharge of sewage to the storm water system and marine water will be allowed. Sufficient chemical toilets should be provided in the works areas to handle the sewage generated from the construction workforce. A licensed waste collector should be deployed to clean the chemical toilets on a regular basis. 	Yes
S5.9.17	S4.3.1	<ul style="list-style-type: none"> Notices should be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the surrounding environment. Regular environmental audit of the construction site will provide an effective control of any malpractices and can encourage continual improvement of environmental performance on site. It is anticipated that sewage generation during the construction phase of the project would not cause water pollution problem after undertaking all required measures. 	Yes
S5.9.18	S4.3.1	<ul style="list-style-type: none"> The Contractor must register as a chemical waste producer if chemical wastes would be produced from the construction activities. The Waste Disposal Ordinance (Cap 354) and its subsidiary regulations in particular the Waste Disposal (Chemical Waste) (General) Regulation, should be observed and complied with for control of chemical wastes. 	Yes
S5.9.19	S4.3.1	<ul style="list-style-type: none"> Any service shop and maintenance facilities should be located on hard standings within a bonded area, and sumps should be provided. Maintenance of vehicles and equipment involving activities with potential for leakage and spillage should only be undertaken within the areas appropriately equipped to control these discharges. 	N/A
S5.9.20	S4.3.1	<ul style="list-style-type: none"> Suitable containers should be used to hold the chemical wastes to avoid leakage or spillage during storage, handling and transport. 	Obs
		<ul style="list-style-type: none"> Chemical waste containers should be suitably labelled, to notify and warn the personnel who are handling the wastes, to avoid accidents. 	Yes
S5.9.22	S4.3.1	<ul style="list-style-type: none"> Storage area should be selected at a safe location on site and adequate space should be allocated to the storage area. 	Yes
		<ul style="list-style-type: none"> For the operation of road works, a surface water drainage system should be provided to collect the road runoff. The road drainage should be provided with adequately designed silt trap as necessary. The design of the operational phase mitigation measures for the road works shall take into account the guidelines published in ProPECC PN 5/93 "Drainage Plans subject to Comment by the EPD" 	Yes
S5.9.23 to 5.9.29	S4.3.1	<p><u>Design Measures:</u></p> <ul style="list-style-type: none"> Exposed surface shall be avoided within the roads to minimise soil erosion. The roads shall be hard paved. The drainage system should be designed to avoid flooding. 	Yes
		<p><u>Devices and Facilities:</u></p> <ul style="list-style-type: none"> Screening facilities such as standard gully grating and trash grille, with spacing which is capable of screening large substances such as rubbish should be provided at the inlet of drainage system. Road gullies with standard design and silt traps should be provided to remove particles present in stormwater runoff, where appropriate. 	N/A

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^
		<u>Administrative Measures:</u> <ul style="list-style-type: none"> • Good management measures such as regular cleaning and sweeping of road surface/ open areas are suggested. The road surface/ open area cleaning should also be carried out prior to occurrence rainstorm. • Manholes, as well as stormwater gullies, ditches provided at the Project site should be regularly inspected and cleaned (e.g. monthly). Additional inspection and cleansing should be carried out before forecast heavy rainfall. 	Obs
S5.9.30	S4.3.1	All the sewage flow generated from the proposed toilets should be properly collected and conveyed to the existing sewerage system on HKBCF Island. No direct discharge of sewage effluent into the marine water will be allowed.	Yes

Recommended Mitigation Measures for Waste Management

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^
		<u>Good Site Practices:</u> <ul style="list-style-type: none"> • Nomination of approved personnel, such as a site manager, to be responsible for implementation of good site practices, arrangements for waste collection and effective disposal to an appropriate facility. 	Yes
S6.5.3	S5.2.1	<ul style="list-style-type: none"> • Training of site personnel in site cleanliness, concepts of waste reduction, reuse and recycling, proper waste management and chemical waste handling procedures. 	Yes
		<ul style="list-style-type: none"> • Provision of sufficient waste reception/ disposal points, and regular collection of waste. 	Yes
		<ul style="list-style-type: none"> • Adoption of appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers. 	Yes
		<ul style="list-style-type: none"> • Provision of regular cleaning and maintenance programme for drainage systems and sumps. 	Yes
		<ul style="list-style-type: none"> • Adoption of a recording system for the amount of wastes generated, recycled and disposed (including the disposal sites). 	Yes
		<ul style="list-style-type: none"> • Preparation of Waste Management Plan (WMP), as part of the Environmental Management Plan (EMP). 	Yes
		<u>Waste Reduction Measures:</u> <ul style="list-style-type: none"> • Segregate and store different types of construction related waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal. 	Yes
S6.5.4	S5.2.1	<ul style="list-style-type: none"> • Provide separate labelled bins to segregate recyclable waste such as aluminium cans from other general refuse generated by the work force, and to encourage collection by individual collectors. 	Yes
		<ul style="list-style-type: none"> • Recycle any unused chemicals or those with remaining functional capacity. 	N/A
		<ul style="list-style-type: none"> • Maximise the use of reusable steel formwork to reduce the amount of C&D materials. 	Yes
		<ul style="list-style-type: none"> • Adopt proper storage and site practices to minimise the potential for damage to, or contamination of construction materials. 	Yes
		<ul style="list-style-type: none"> • Plan the delivery and stock of construction materials carefully to minimise the amount of waste generated. 	N/A

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^
		<ul style="list-style-type: none"> Minimise over ordering and wastage through careful planning during purchasing of construction materials. 	N/A
S6.5.6	S5.2.1	<u>C&D materials:</u> <ul style="list-style-type: none"> Proper handling and storage of waste such as soil by means of covers and/or water spraying system to minimise the potential environmental impact and to prevent materials from wind-blown or being washed away. 	Yes
		<ul style="list-style-type: none"> Covering materials during heavy rainfall. 	N/A
		<ul style="list-style-type: none"> Locating stockpiles to minimise potential visual impacts. 	N/A
		<ul style="list-style-type: none"> Minimising land intake of stockpile areas as far as possible. 	N/A
		<ul style="list-style-type: none"> Adopting GPS or equivalent system for tracking and monitoring of all dump trucks engaged for the Project in recording their travel routings and parking locations to prohibit illegal dumping and landfilling of C&D materials. 	N/A
		<ul style="list-style-type: none"> Keeping record and analysis of data collected by GPS or equivalent system related to travel routings and parking locations of dump trucks engaged on site. 	N/A
S6.5.7 to 6.5.9	S5.2.1	<u>General Refuse:</u> <ul style="list-style-type: none"> General refuse should be stored in covered bins or compaction units separately from C&D materials. A reputable waste collector should be employed by the Contractor to remove general refuse from the site regularly, separately from C&D materials. An enclosed and covered area is preferred to reduce the occurrence of "wind blown" light materials. 	Yes
		<ul style="list-style-type: none"> The recyclable component of general refuse, such as aluminium cans, paper and cleansed plastic containers shall be separated from other waste. Provision and collection of recycling bins for different types of recyclable waste shall be set up by the Contractor. The Contractor shall also be responsible for arranging recycling companies to collect these materials. 	Yes
		<ul style="list-style-type: none"> The Contractor should carry out an education programme for workers in avoiding, reducing, reusing and recycling of materials generation. Posters and leaflets advising on the use of the bins should also be provided in the site as reminders. 	N/A
S6.5.10 to 6.5.12	S5.2.1	<u>Chemical Waste:</u> <ul style="list-style-type: none"> If chemical wastes were to be produced, the Contractor would be required to register with the EPD as a Chemical Waste Producer, and to follow the guidelines stated in the <i>Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes</i>. 	Yes
		<ul style="list-style-type: none"> Appropriate containers with proper labels should be used for storage of chemical wastes. Chemical wastes should be collected and delivered to designated outlet by a licensed collector. Chemical wastes (e.g. spent lubricant oil) should be recycled at an appropriate facility as far as possible, while the chemical waste that cannot be recycled should be disposed of at either the CWTC, or another licensed facility, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation. 	Yes
		<ul style="list-style-type: none"> Any unused chemicals or those with remaining functional capacity should be collected for reuse as far as practicable. 	N/A
S6.5.13 to 6.5.16	S5.2.1	<u>Sediment:</u> <ul style="list-style-type: none"> The sediment should be excavated, handled, treated, transported and/or disposed of in a manner that would minimise adverse environmental impacts. 	N/A

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^
		<ul style="list-style-type: none"> Requirements of the Air Pollution Ordinance (Construction Dust) Regulation, where relevant, shall be adhered to during excavation, treatment, transportation and disposal of the sediment. 	N/A
		<ul style="list-style-type: none"> The land-based sediment will be treated using S/S technique and will be reused on site (e.g. as backfilling materials). 	Yes
		<ul style="list-style-type: none"> Any treatment area for the land-based sediment should be confined for carrying out the cement S/S process and any temporary stockpiling. The area should be designed to prevent leachate from entering the ground. Leachate, if any, should be collected and discharged according to the Water Pollution Control Ordinance (WPCO). In order to minimise the exposure to contaminated materials, workers shall, if necessary, wear appropriate personal protective equipments (PPE) when handling contaminated sediments. Adequate washing and cleaning facilities shall also be provided on site. 	Yes
S6.5.17	S5.2.1	<ul style="list-style-type: none"> For off-site disposal, the basic requirements and procedures specified under PNAP No. 252 (ADV-21) shall be followed. Marine Fill Committee (MFC) of CEDD is managing the disposal facilities in Hong Kong for the excavated sediment, while EPD is the authority of issuing marine dumping permit under the Dumping at Sea Ordinance (DASO). 	N/A
S6.5.18 to 6.5.19	S5.2.1	<ul style="list-style-type: none"> For the purpose of site allocation and application of marine dumping permit and if considered necessary by Dumping at Sea Ordinance (DASO) Team/EPD, separate submissions (e.g. SSTP/SQR) shall be submitted to DASO team/EPD for agreement under DASO. Additional SI works, based on the SSTP, shall then be carried out in order to confirm the disposal arrangements of the excavated sediment. A Sediment Quality Report (SQR), reporting the chemical and biological screening results and the estimated quantities of sediment under different disposal options, shall then be submitted to DASO team/EPD for agreement under DASO. 	N/A
S6.5.18 to 6.5.19	S5.2.1	<ul style="list-style-type: none"> To ensure disposal space is allocated for the Project, the Project Proponent should be responsible for obtaining agreement from MFC on the allocation of the disposal site. The contractor(s), on the other hand, should be responsible for the application of the marine dumping permit under DASO from EPD for the sediment disposal. 	N/A
		<ul style="list-style-type: none"> The excavated sediments is expected to be loaded onto the barge and transported to the designated disposal sites allocated by MFC. The excavated sediment would be disposed of according to its determined disposal options and PNAP No. 252 (ADV-21). 	N/A
S6.5.20 to 6.5.23	S5.2.1	<ul style="list-style-type: none"> Stockpiling of contaminated sediments should be avoided as far as possible. If temporary stockpiling of contaminated sediments is necessary, the excavated sediment should be covered and the area should be placed within earth bunds or sand bags to prevent leachate from entering the ground, nearby drains and surrounding water bodies. The stockpiles area should be completely paved in order to avoid contamination to underlying soil or groundwater. Separate and clearly defined areas should be provided for stockpiling of contaminated and uncontaminated materials. Leachate, if any, should be collected and discharged according to the Water Pollution Control Ordinance (WPCO). 	Yes
		<ul style="list-style-type: none"> In order to minimise the potential odour / dust emissions during excavation and transportation of the sediment, the excavated sediments shall be wetted during excavation / material handling and shall be properly covered when placed on trucks or barges. Loading of the excavated sediment to the barge shall be controlled to avoid splashing and overflowing of the sediment slurry to the surrounding water. 	N/A
		<ul style="list-style-type: none"> The barge transporting the sediments to the designated disposal sites shall be equipped with tight fitting seals to prevent leakage and shall not be filled to a level that would cause overflow of materials or laden water during loading or transportation. In addition, monitoring of the barge loading shall be conducted to ensure that loss of material does not take 	N/A

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^
		place during transportation. Transport barges or vessels shall be equipped with automatic self-monitoring devices as specified by the DEP.	
S6.5.24	S5.2.1	<p><u>Potential Floating Refuse:</u></p> <ul style="list-style-type: none"> Proper management and education should be given to construction site workers such that accidental release or intentional disposal would be avoided. The refuse should be stored in enclosed bin to avoid adverse impacts to the surroundings including marine environment. Regular checking should also be carried out to ensure that the refuse is stored properly. 	N/A

Recommended Mitigation Measures for Marine Ecological Impact

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^
S7.8.3	S6.3.3	<ul style="list-style-type: none"> Based upon a precautionary approach, a speed limit of 10 knots should be strictly enforced on all construction-related vessels. 	Yes
S7.8.6	S6.3.1	<ul style="list-style-type: none"> Good site practices, guidelines and mitigation measures detailed in Water Quality Sections 5.9.1 to 5.9.20 should be adopted to further alleviate water quality impacts. 	Yes
S7.8.9	S6.3.2	<ul style="list-style-type: none"> Coral colonies at REA2 under the direct impacts of habitat loss should be translocated as a precautionary measure. A detailed Coral Translocation Proposal, including description of methodology and precautionary post-translocation monitoring programme, should be prepared and subject to agreement with the authority before commencement of the coral translocation. 	N/A

Recommended Mitigation Measures for Landscape and Visual Impact

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^
S8.9.2	S7.3.1	<p><u>Preservation of New Tree Planting:</u></p> <ul style="list-style-type: none"> All the planned new trees to be retained and not to be affected by the Project shall be carefully protected during construction in accordance with DevB TCW No. 7/2015 – Tree Preservation during Development issued by GLTM Section of DevB. Any existing vegetation in landscaped area and natural terrain not to be affected by the Project shall be carefully preserved. 	N/A
S8.9.2	S7.3.1	<p><u>Transplanting of Affected Trees:</u></p> <ul style="list-style-type: none"> Planned trees to be planted under HKBCF unavoidably affected by the works shall be transplanted within the Project boundary or off-site within the Airport Island (i.e. within area of approx. 6.2km) as far as possible in accordance with DevB TCW No. 7/2015 – Tree Preservation and the latest Guidelines on Tree Transplanting issued by GLTM Section of DevB. 	N/A

EIA Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^
S8.9.2	S7.3.1	<p><u>Compensatory Tree Planting:</u></p> <ul style="list-style-type: none"> Any planned trees to be planted under HKBCF to be felled under the Project shall be compensated within the Project boundary or off-site within the Airport Island (i.e. within area of approx. 6.2km), in accordance with DevB TCW No. 7/2015 – Tree Preservation. The compensatory planting shall be of a ratio not less than 1:1 in terms of number, i.e. the number of compensatory trees shall not be lower than that of the number of trees to be felled. Justification shall be provided if tree compensation requirement could not be met. For trees to be compensated on slopes, the guidelines for tree planting stipulated in GEO Publication No. 1/2011 will be followed. 	N/A
S8.9.2	S7.3.1	<p><u>Control of night-time lighting glare:</u></p> <ul style="list-style-type: none"> Any lighting provision of the construction works at night shall be carefully control to prevent light overspill to the nearby VSRs and into the sky. 	N/A
S8.9.2	S7.3.1	<p><u>Erection of Decorative Screen Hoarding:</u></p> <ul style="list-style-type: none"> Decorative Hoarding, which is compatible with the surrounding settings, shall be erected during construction to minimise the potential landscape and visual impacts due to the construction works and activities. 	N/A
S8.9.2	S7.3.1	<p><u>Management of Construction Activities and Facilities:</u></p> <ul style="list-style-type: none"> The facilities and activities at works sites and areas, which include site office, temporary storage areas, temporary works etc., shall be carefully managed and controlled on the height, deposition and arrangement to minimise any potential adverse landscape and visual impacts. 	N/A
S8.9.2	S7.3.1	<p><u>Reinstatement of Temporarily Disturbed Landscape Areas:</u></p> <ul style="list-style-type: none"> All hard and soft landscape areas disturbed temporarily during construction shall be reinstated on like-to-like basis, to the satisfaction of the relevant Government Departments. 	N/A
S8.9.2	S7.3.1	<p><u>Aesthetically Pleasing Design of Aboveground / Above-sea Structures:</u></p> <ul style="list-style-type: none"> The proposed structures in regard of layouts, forms, materials and finishes shall be sensitively designed so as to blend in the structures to the adjacent landscape and visual context. 	N/A
S8.9.2	S7.3.1	<p><u>Provision of Amenity Planting:</u></p> <ul style="list-style-type: none"> Amenity planting, including groundcover and trees shall be provided to soften the proposed above-ground structures on HKBCF as far as appropriate. 	N/A

Notes:

Yes = Implemented where applicable

No = Not implemented

Obs/Rem = Observations or reminders were issued, and items were rectified

N/A = Not applicable to the construction works implemented during the reporting period

^ = Checked by ET through site inspection and record provided by the Contractor.

