



Airport City Link

Monthly EM&A Report for February 2024

March 2024

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Airport Authority Hong Kong

Airport City Link

Monthly EM&A Report for February 2024

March 2024

**This Submission of Construction Phase Monthly Environmental
Monitoring and Audit (EM&A) Report for February 2024**

has been reviewed and certified by

the Environmental Team Leader (ETL) in accordance with

Condition 3.5 of Environmental Permit No. EP-581/2020 and

Section 11.2 of the EM&A Manual of the Project.

Certified by:



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

Date

12 March 2024

Your Ref: -
Our Ref: 60664934/C/FYW24031201

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 March 2024

Dear Sir,

Contract C21C02 – Independent Environmental Checker Consultancy Services for Airport City Link
Monthly Environmental and Audit (EM&A) Report for February 2024

Reference is made to the Environmental Team's submission of Monthly EM&A Report for February 2024 in accordance with Condition 3.5 of the Environmental Permit (No: EP-581/2020) and Section 11.2 of the EM&A Manual of the Project certified by the ET Leader on 12 March 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-581/2020.

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

In July 2020, a Project Profile (PP) (Register No.: PP-606/2020) of the Airport City Link (ACL) (hereinafter as “the Project”) was submitted for the application for permission to apply directly for an Environmental Permit (EP), which was approved by Environmental Protection Department (EPD) in August 2020. The EP of the Project (EP No.: EP-581/2020) was obtained in October 2020.

On 10 June 2021, Mott MacDonald Hong Kong Limited (MMHK) was commissioned by Airport Authority Hong Kong (AAHK) to provide Environmental Team (ET) consultancy services for the implementation of an Environmental Monitoring and Audit (EM&A) programme of the Project in accordance with the EP requirements throughout the Pre-construction, Construction and Post-construction phases.

The construction phase EM&A programme of the Project started on 26 July 2022. The construction of marine section was commenced on 26 July 2022, while the construction of the land section was commenced on 20 February 2023.

This is the 19th 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 29 February 2024.

Key Construction Works in the Reporting Period

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

Marine Section

- Plant mobilization and material delivery for works
- Marine pier construction works
- Segment construction works
- Bridge deck construction works

Land Section

- GI works
- Underground utilities diversion work
- Bored pile work
- Socketed H-Pile
- Pile cap
- ELS
- Water mains installation
- Tower crane installation

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 (Marine Section)	4
Weekly environmental site inspections (Land Section)	4

Breaches of Action and Limit Levels

Water Quality

The post-construction water quality monitoring has been completed and the results for dissolved oxygen (DO), turbidity and suspended solids (SS) will be reported in the Final EM&A Review Report under this Project.

Complaint Log

There was no complaint in relation to the environmental impact 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:

Marine Section

- Plant mobilization and material delivery
- Marine pier construction works
- Segment construction works
- Bridge deck construction works

Land Section

- GI works
- Underground utilities diversion work
- Bored pile work
- Socketed H-Pile
- Pile cap
- ELS
- Water mains installation
- Tower crane installation

1 Introduction

1.1 Background

In July 2020, a Project Profile (PP) (Register No.: PP-606/2020) of the Airport City Link (ACL) (hereinafter as “the Project”) was submitted for the application for permission to apply directly for an Environmental Permit (EP), which was approved by Environmental Protection Department (EPD) in August 2020. The EP of the Project (EP No.: EP-581/2020) was obtained in October 2020.

The Project is situated between the Airport Island and Hong Kong Port (HKP) Island, at the south of existing SkyPier on the Airport Island. To enhance vehicular mobility and walkability between HKP Island and the SKYCITY, the Project serves as a connection bridge providing shuttle services and pedestrian pathway.

The construction for the Project consists of a marine section in a marine area between the Airport Island and HKP Island, and a land section on the Airport Island and HKP Island. The connection bridge comprises of approximately 400m long marine section and 450m long land section. The construction works of marine section will be carried out by marine works Contractor, while the construction works of land section will be carried out by land works Contractor.

On 10 June 2021, Mott MacDonald Hong Kong Limited (MMHK) was commissioned by Airport Authority Hong Kong (AAHK) to provide Environmental Team (ET) consultancy services for the 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.

The construction phase EM&A programme of the Project started on 26 July 2022. The construction of marine section was commenced on 26 July 2022, while the construction of the land section was commenced on 20 February 2023.

This is the 19th Monthly EM&A report summarising the key findings of the construction phase EM&A programme from 1 to 29 February 2024 (the reporting period) and is submitted to fulfil requirements in Condition 3.5 of EP and Section 11.2 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 Deputy Environmental Team Leader	Thomas Chan Gary Chow	2828 5967 2828 5874

Party	Position	Name	Telephone
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 – Marine Section (Gammon Engineering & Construction Company Limited)	Senior Project Manager	Brian Ho	9041 7535
	Environmental Officer	Elena Lai	6841 3324
Main Contractor – Land Section (China State Construction Engineering (HK) Ltd.)	Project Manager	Kingsley Chiang	9424 8437
	Senior Environmental Officer	William Chan	5408 3045

1.3 Construction Works Programme and Construction Works Area

The construction phase EM&A programme of the Project started on 26 July 2022. The construction of marine section was commenced on 26 July 2022, while the construction of the land section was commenced on 20 February 2023.

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:

Marine Section

- Plant mobilization and material delivery for works
- Marine pier construction works
- Segment construction works
- Bridge deck construction works

Land Section

- GI works
- Underground utilities diversion work
- Bored pile work
- Socketed H-Pile
- Pile cap
- ELS
- Water mains installation
- Tower crane installation

2 Water Quality

2.1 Baseline Water Quality Monitoring

As stipulated in the EM&A Manual, the construction activities under sea water level for the Project will commence in a month after completion of that of Intermodal Transfer Terminal Bonded Vehicular Bridge (ITT-BVB). Therefore, it is likely that the period for baseline monitoring would overlap with the construction activities under sea water level of ITT-BVB, which may influence the baseline water quality for the Project.

Since the baseline monitoring of ITT-BVB project has been carried out at the same proposed baseline monitoring locations of the Project during 15 August 2019 – 10 September 2019, and 28 November 2019 – 24 December 2019 covering both dry and wet seasons, which was carried out before any marine construction activities in the vicinity of the Project. Hence, the baseline monitoring data from ITT-BVB would be the most recent and representative to the baseline condition of the water quality in the vicinity of the Project without any interference. Thus, the baseline monitoring data from ITT-BVB would be adopted for the Project.

ET submitted the baseline monitoring report of the Project on 12 November 2021 and EPD expressed no comment on 24 November 2021.

2.2 Impact Water Quality Monitoring

2.2.1 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 when there are marine works below seawater level 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.

2.2.2 Monitoring Locations

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:

- 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

2.2.3 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.

2.2.4 Monitoring Schedule for the Reporting Period

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.

2.2.5 Monitoring Equipment

Water samples for all monitoring parameters were collected, stored, preserved and analysed according to the Standard Methods, APHA 21st ed. and/or other methods as agreed by the EPD. In-situ measurements at monitoring locations including dissolved oxygen (DO), dissolved oxygen saturation (DO%), pH, temperature, turbidity, salinity and water depth were collected using the equipment listed in **Table 2.2**.

Water samples for suspended solids (SS) analysis were stored in suitable containers provided by the HOKLAS laboratory with no preservative added, packed in ice (cooled to 4°C without being frozen) and delivered to the HOKLAS laboratory as soon as possible after collection.

Table 2.2: Impact Water Quality Monitoring Equipment

Equipment	Brand and Model	Quantity
Water Sampler	Van Dorn Water Sampler	-
Monitoring Position Equipment (measurement of DGPS)	Garmin eTrex 20x	-
Water Depth Detector (measurement of water depth)	Garmin STRIKER™ Series	-
Multifunctional Meter (measurement of DO, DO%, temperature, turbidity, salinity and pH)	YSI ProDSS (Multiparameter Sampling Instrument)	-

2.2.6 Maintenance and Calibration of In-situ Instruments

In-situ monitoring instruments for water quality parameters were checked, calibrated and certified by a laboratory accredited under HOKLAS before use. Responses of sensors and electrodes were checked with certified standard solutions before each use.

Wet bulb calibration for DO measurement was carried out before commencement of monitoring and after completion of all measurements each day. The turbidity meter was calibrated in order to establish the relationship between NTU units and the levels of suspended solids. A zero check in distilled water was performed with the turbidity probe at least once per monitoring day. The probe was then calibrated with a solution of known NTU. Standard buffer solutions of at least pH 7 and pH 10 was used for calibration of the pH instrument before and after use on each monitoring day.

2.2.7 Laboratory Measurement / Analysis

Analysis of SS was conducted in a HOKLAS accredited laboratory, ALS Technichem (HK) Pty Ltd (Reg. No. HOKLAS 066). Sufficient water samples were collected at each of the control stations and impact stations for carrying out the laboratory SS determination.

The SS determination works started within 24 hours after collection of the water samples. The analysis followed the APHA 2540D analytical method with a detection limit of 1 mg/L.

2.3 Event and Action Plan

2.3.1 Action and Limit Levels

The Action and Limit Levels for the impact monitoring stations were extracted from Table 2.8 of the Baseline Monitoring Report of ITT-BVB. The derived Action and Limit Levels are summarized in **Table 2.3**.

Table 2.3: Derived Action and Limit Levels

Parameters	Action Level	Limit Level
Impact Stations M1 and M2		
DO in mg/L		
Surface & Middle	4.3	4.0
Bottom	3.8	3.0
SS in mg/L		
	14.2	17.4
	AND	AND
	120% of upstream control station at the same tide of the same day	130% of upstream control station at the same tide of the same day
Turbidity in NTU		
	11.0	16.3
	AND	AND
	120% of upstream control station at the same tide of the same day	130% of upstream control station at the same tide of the same day
Impact Station M3		
SS in mg/L	33	42

Notes:

1. For DO measurement, non-compliance occurs when the monitoring result is lower than the limits.
2. For parameters other than DO, non-compliance of water quality occurs when the monitoring result is higher than the limits.
3. Depth-averaged results are used unless specified otherwise.
4. Impact station M3 is represents the impact station SR1A of "Expansion of Hong Kong International Airport into a Three-Runway System". The AL levels for M3 in **Table 2.3** is referencing the agreed and adopted AL levels of SR1A from the Updated EM&A Manual for Expansion of Hong Kong International Airport into a Three-Runway System.

2.3.2 Event and Action Plan

In the event of water quality monitoring results at impact stations exceeding the Action and/or Limit levels for water quality as defined in **Table 2.3**, the actions in accordance with the Event and Action Plan presented in **Appendix E** shall be carried out.

2.4 Post-Construction Water Quality Monitoring

2.4.1 Monitoring Requirement, Locations and Parameters

The post-construction water quality monitoring of the Project was scheduled to be conducted after completion of the construction activities under seawater level of the Project.

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 location and parameters are in the same manner as the impact monitoring, and details could be referred to **Section 2.2**.

2.4.2 Monitoring Schedule for the Reporting Period

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

2.5 Water Quality Monitoring Results

2.5.1 Impact Water Quality Monitoring

The impact water quality monitoring was terminated after 15 December 2023.

2.5.2 Post-Construction Water Quality Monitoring

The post-construction water quality monitoring has been completed and the results for DO, turbidity and SS will be reported in the Final EM&A Review Report under this Project.

2.6 Conclusion

The post-construction water quality monitoring has been completed.

While the marine works under seawater level of the Project have been completed, the Contractor was reminded to implement and maintain all mitigation measures during weekly site inspection and regular environmental management meetings. These include maintaining mitigation measures properly as recommended in the EM&A Manual.

3 Environmental Site Inspection and Audit

3.1 Environmental Site Inspection

Site inspections for marine and land section 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 Contractors together with the appropriate recommended mitigation measures where necessary.

Marine Section

During the reporting period, site inspections were carried out on 7, 16, 19 and 27 February 2024 for marine section. Joint IEC site inspection for marine section was carried out on 27 February 2024. Monthly landscape and visual site audit was carried out on 27 February 2024.

Land Section

During the reporting period, site inspections were carried out on 5, 15, 19 and 26 February 2024 for land section. Joint IEC site inspection for land section was carried out on 26 February 2024. Monthly landscape and visual site audit was carried out on 26 February 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

Marine Section			
Inspection Date	Key Observations / Reminders	Recommendations / Actions	Close-Out Date
30 Jan 2024	Chemical containers were observed without drip tray at Gammon No. 23 and Yat Wui 288.	The Contractor should provide drip trays for the chemical containers to prevent any potential spillage.	7 Feb 2024
16 Feb 2024	General refuse were not properly disposed at Pier 6.	The Contractor should dispose of the general refuse at the designated point to maintain good housekeeping.	19 Feb 2024
16 Feb 2024	Chemical containers were observed without drip tray at Pier 6.	The Contractor should provide drip trays for the chemical containers to prevent any potential spillage.	19 Feb 2024
19 Feb 2024	NRMM label displayed on the crane lorry was faded. (Reminder)	The Contractor was reminded to replace the faded NRMM label.	19 Feb 2024
Land Section			
Inspection Date	Key Observations / Reminders	Recommendations / Actions	Close-Out Date
29 Jan 2024	Oil spill was observed at the sheet piling works area.	The Contractor should clear the oil spill and dispose it as chemical waste.	5 Feb 2024
29 Jan 2024	No protection measure was provided for the gully near the site exit.	The Contractor should cover the gully to prevent any silty runoff from entering the public drainage system.	5 Feb 2024

Land Section			
29 Jan 2024	Tire track was observed at the site entrance/exit.	The Contractor should provide proper wheel washing for all vehicles leaving the site and keep public road clear of dust.	5 Feb 2024
5 Feb 2024	Wastewater in the settling chamber was observed turbid.	The Contractor should arrange maintenance for the wastewater treatment facility and ensure discharge quality could meet the discharge licence requirement.	15 Feb 2024
5 Feb 2024	Oil spill was observed on the ground.	The Contractor should clear the oil spill and dispose it as chemical waste.	15 Feb 2024
5 Feb 2024	Sand was deposited at the existing U channel.	The Contractor should provide regular cleaning for the U channel to prevent any silty runoff from entering the public drainage.	15 Feb 2024
5 Feb 2024	Tire track was observed at the site entrance/exit.	The Contractor should provide proper wheel washing for all vehicles leaving the site and keep public road clear of dust.	15 Feb 2024
5 Feb 2024	Maintenance record of the wastewater treatment facilities was not up to date. (Reminder)	The Contractor was reminded to duly update the date as recorded in the maintenance record of the wastewater treatment facilities.	5 Feb 2024
15 Feb 2024	The NRMM labels on the boring machines were missing.	The Contractor should display valid NRMM labels on the machinery.	19 Feb 2024
19 Feb 2024	Mud was deposited on the steel plate at the vehicular exit.	The Contractor should clean up the mud to prevent vehicles from carrying mud to the public road.	26 Feb 2024
19 Feb 2024	The gully was not properly covered as protection measures.	The Contractor should cover the gully to prevent any silty runoff from entering the public drainage system.	26 Feb 2024
19 Feb 2024	Sand was deposited at the existing U channel.	The Contractor should provide regular cleaning for the U channel to prevent any silty runoff from entering the public drainage.	26 Feb 2024
19 Feb 2024	Sand was deposited at the existing U channel.	The Contractor should provide regular cleaning for the U channel to prevent any silty runoff from entering the public drainage.	26 Feb 2024
26 Feb 2024	The dusty material was observed at the site entrance/exit.	The Contractor should provide cleaning and keep the site entrance/exit clear of dusty materials.	Ongoing
26 Feb 2024	The solution used for wastewater treatment was observed insufficient.	The Contractor should refill the solution and provide regular maintenance to ensure proper functioning of the wastewater treatment facility.	Ongoing
26 Feb 2024	Faded NRMM label was observed on a generator. (Reminder)	The Contractor was reminded to replace the faded NRMM label with a valid label displayed on the generator.	26 Feb 2024

3.2 Advice on the Solid and Liquid Waste Management Status

The Contractors were registered as chemical waste producers 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 Contractors were 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 for marine and land section are detailed in **Appendix F**.

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

3.3 Implementation Status of Environmental Mitigation Measures

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

A summary of the environmental mitigation measures implementation status is presented in **Appendix H**. Environmental Mitigation Measures Implementation Status. Necessary mitigation measures were implemented properly, observations and reminders were issued to the Contractors where actions were taken by the Contractors to rectify the identified issues.

3.4 Summary of Exceedance of the Environmental Quality Performance Limit

Water Quality

The post-construction water quality monitoring has been completed on 12 January 2024 and the results for DO, turbidity and SS will be reported in the Final EM&A Review Report under this Project.

3.5 Summary of Complaints, Notifications of Summons and Successful Prosecutions

Complaint Log

There was no complaint received in relation to the environmental impact during the reporting period.

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 (Feb 2024)	0	0	0
From commencement date of construction to end of reporting period	0	0	0

4 Future Key Issues

4.1 Construction Programme for the Coming Month

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

Table 4.1: Construction Activities for the Next Reporting Period

Marine Section	
Period	Description of Activities
Mar 2024	<ul style="list-style-type: none"> Plant mobilization and material delivery Marine pier construction works Segment construction works Bridge deck construction works
Land Section	
Period	Description of Activities
Mar 2024	<ul style="list-style-type: none"> GI works Underground utilities diversion work Bored pile work Socketed H-Pile Pile cap ELS Water mains installation Tower crane installation

4.2 Environmental Site Inspection and Monitoring Schedule for the Next Reporting Period

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

No water quality monitoring is scheduled for the next reporting period, with all post-construction monitoring completed.

5 Conclusions

General

The construction works for the Project commenced on 26 July 2022. 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 has been completed on 12 January 2024 and the results for DO, turbidity and SS will be reported in the Final EM&A Review Report under this Project.

Environmental Site Inspections

Environmental site inspections were carried out 4 times for marine section and 4 times for land section during the reporting period. Recommendations on remedial actions were given to the Contractors for the deficiencies identified during the site inspections.

Complaint Log

There was no complaint received in relation to the environmental impact during the reporting period.

Reporting Changes

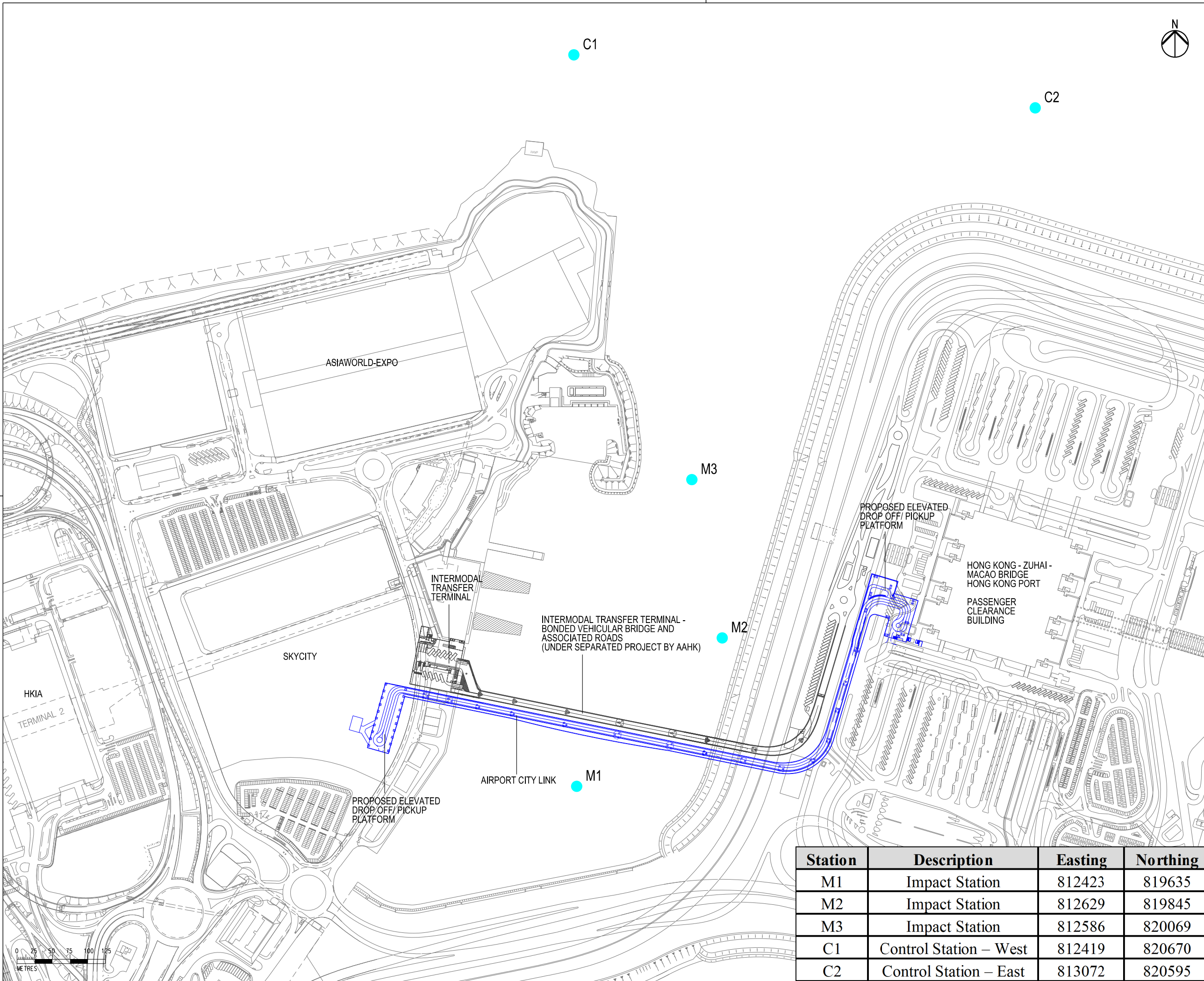
There was no reporting change during the reporting period.

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



LEGEND
 PROPOSED ALIGNMENT
 WATER QUALITY MONITORING STATION

Rev.	Date	Description	Checked



Hong Kong International Airport

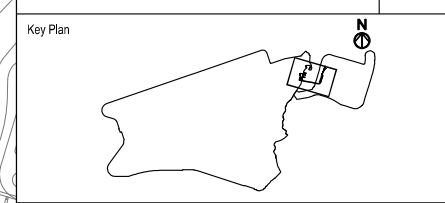
Consultant
 MOTT MACDONALD

Consultant's Signatures for Approval _____ Date _____

Design Supervisor _____

Checkers _____

Authorised Representative _____



Title

LOCATION OF WATER QUALITY MONITORING STATIONS

FIGURE 2.1

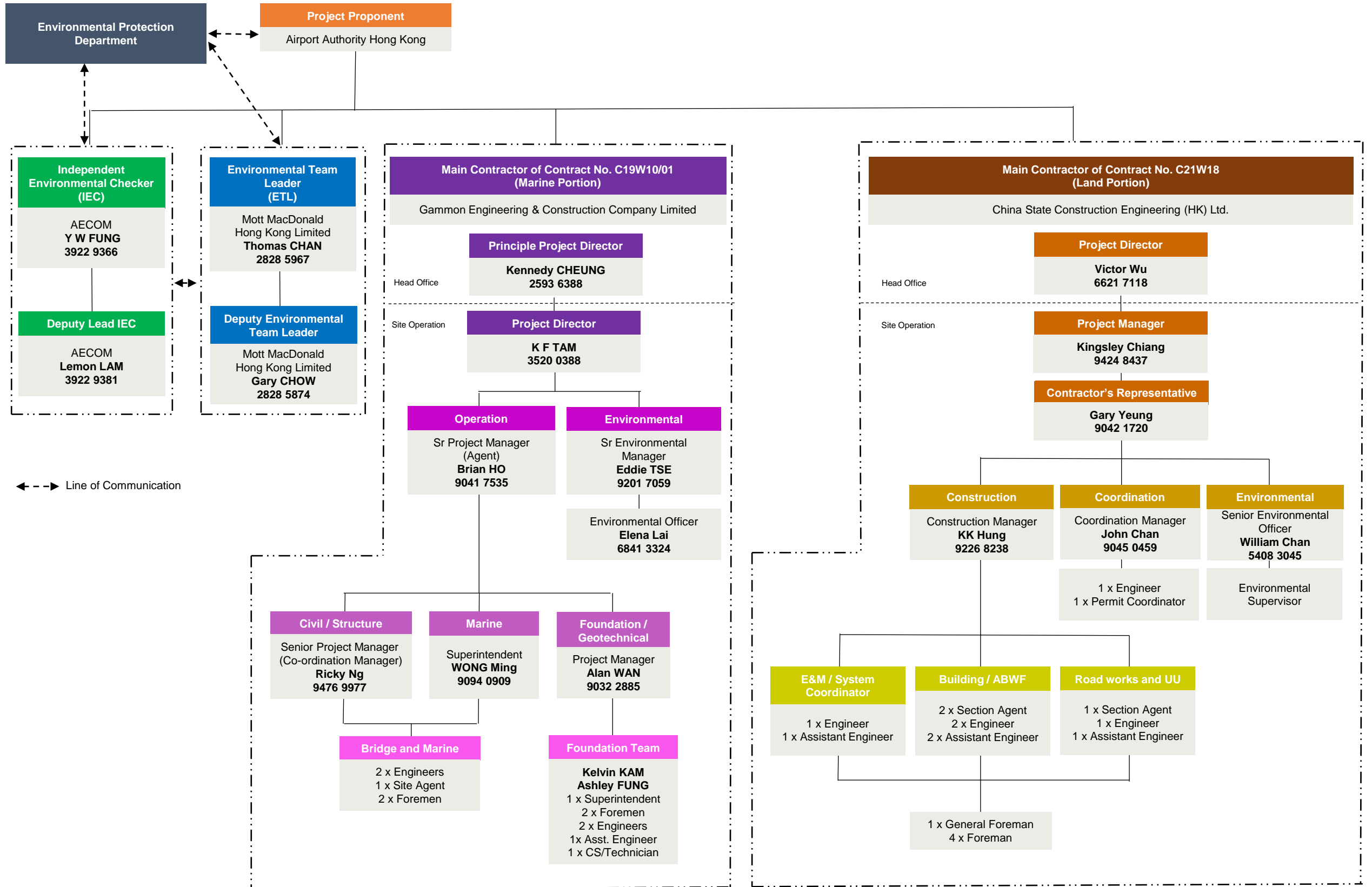
Station	Description	Easting	Northing
M1	Impact Station	812423	819635
M2	Impact Station	812629	819845
M3	Impact Station	812586	820069
C1	Control Station – West	812419	820670
C2	Control Station – East	813072	820595

Originator	Location	Discipline	Type	Dwg Sequence No.
Status	DESIGN	Scale	1:5000 (A3)	Rev. A

Appendices

Appendix A. Project Organisation

Management Organizations for EP Condition 2.3



Appendix B. Construction Works Programme

Marine Section

C19W10/01 - ACL - Mitigation Programme Rev.D Updated as of 29 Feb 2024

Activity ID	Activity Name	Orig Dur	BL Project Start	BL Project Finish	Start	Finish	Total Float	Physical % Complete	2024			
									Feb 25	Mar 26	Apr 27	May 28
C19W10/01 - ACL - Mitigation Programme Rev.D Updated as of 29 Feb 2024												
Contract Dates												
Statutory Submission												
19W10.A.C0W895	Design Preparation, Submissoin and Approval for Navigation Aids	100	02-Feb-23	29-May-23	01-May-23 A	03-Apr-24	-118	50%	[Red bar from Feb 25 to Mar 26]			
Marine Substructure Works												
P8 Substructure												
19W10.U.SD192	P8 Pier Erection	21	01-Aug-23	25-Aug-23	17-Nov-23 A	07-Mar-24	-84	80%	[Red bar from Feb 25 to Mar 26]			
Marine Viaduct Erection												
ACL P5 Span												
19W10.U.SD262	Cantilever Segment Erection (7 Cycles, 10 days per cycle)	58	16-Jun-23	14-Sep-23	02-Jan-24 A	13-Apr-24	-121	50%	[Red bar from Feb 25 to Mar 26]			
ACL P6 Span												
19W10.U.SD292	Cantilever Segment Erection (7 Cycles, 10 days per cycle)	70	16-May-23	14-Aug-23	18-Dec-23 A	28-Mar-24	-129	65%	[Red bar from Feb 25 to Mar 26]			
19W10.U.SD422	Casting the Stitching Between P5 & P6	10	15-Sep-23	27-Sep-23	29-Mar-24	09-Apr-24	-135	0%	[Red bar from Mar 26 to Apr 27]			
19W10.U.SD432	Stressing P5 & P6 Bottom Tendon	4	28-Sep-23	05-Oct-23	10-Apr-24	13-Apr-24	-135	0%	[Red bar from Apr 27 to May 28]			
19W10.U.SD442	Grouting C-tendon Between P5 & P6	5	06-Oct-23	12-Oct-23	15-Apr-24	19-Apr-24	-39	0%	[Red bar from Apr 27 to May 28]			
19W10.U.SD452	Grouting Bottom Tendon Between P5 & P6	3	13-Oct-23	16-Oct-23	20-Apr-24	23-Apr-24	-39	0%	[Red bar from Apr 27 to May 28]			
ACL P4 Span												
19W10.U.SD302	Erection of Hammer Head	28	25-May-23	30-Jun-23	11-Dec-23 A	23-Feb-24 A		100%	[Blue bar from Feb 25 to Mar 26]			
19W10.U.SD312	Erection of Travelling Formworks TF1 for Segment N-1	4	28-Sep-23	04-Oct-23	29-Mar-24	02-Apr-24	-135	0%	[Red bar from Mar 26 to Apr 27]			
19W10.U.SD313	Erect Segment N-1	10	05-Oct-23	17-Oct-23	03-Apr-24	13-Apr-24	-135	0%	[Red bar from Apr 27 to May 28]			
19W10.U.SD314	Erection of Travelling Formworks TF2 for Segment N+1	5	18-Oct-23	24-Oct-23	15-Apr-24	19-Apr-24	-135	0%	[Red bar from Apr 27 to May 28]			
19W10.U.SD315	Erect Segment N+1	10	25-Oct-23	04-Nov-23	20-Apr-24	01-May-24	-135	0%	[Red bar from Apr 27 to May 28]			
19W10.U.SD322	Cantilever Segment Erection (7 Cycles, 10 days per cycle)	57	06-Nov-23	13-Jan-24	02-May-24	06-Jul-24	-135	0%	[Red bar from Apr 27 to May 28]			
ACL P7 Span												
19W10.U.SD332	Erection of Hammer Head	28	26-Jun-23	01-Aug-23	29-Feb-24	05-Apr-24	-114	0%	[Red bar from Mar 26 to Apr 27]			
19W10.U.SD342	Erection of Travelling Formworks TF3 for Segment N-1	3	15-Aug-23	18-Aug-23	15-Apr-24	17-Apr-24	-131	0%	[Red bar from Apr 27 to May 28]			
19W10.U.SD343	Erect Segment N-1	10	19-Aug-23	31-Aug-23	18-Apr-24	29-Apr-24	-131	0%	[Red bar from Apr 27 to May 28]			
19W10.U.SD344	Erection of Travelling Formworks TF4 for Segment N+1	5	01-Sep-23	07-Sep-23	30-Apr-24	04-May-24	-131	0%	[Red bar from Apr 27 to May 28]			
19W10.U.SD345	Erect Segment N+1	10	08-Sep-23	19-Sep-23	06-May-24	16-May-24	-131	0%	[Red bar from Apr 27 to May 28]			
19W10.U.SD352	Cantilever Segment Erection (7 Cycles, 10 days per cycle)	55	21-Sep-23	28-Nov-23	17-May-24	19-Jul-24	-131	0%	[Red bar from Apr 27 to May 28]			
ACL P3 Span												
19W10.U.SD362	Erection of Scaffolding Tower	28	28-Jul-23	31-Aug-23	25-Jan-24 A	27-Feb-24 A		100%	[Blue bar from Feb 25 to Mar 26]			
19W10.U.SD372	Installation of Permanent Bearing at P3	1	01-Sep-23	01-Sep-23	28-Feb-24 A	28-Feb-24 A		100%	[Blue bar from Feb 25 to Mar 26]			
19W10.U.SD382	Erect of Pier Head Diaphragm	21	02-Sep-23	28-Sep-23	29-Feb-24 A	22-Mar-24	-52	0%	[Red bar from Mar 26 to Apr 27]			
19W10.U.SD542	Erection of P3 End Span	18	15-Jan-24	03-Feb-24	23-Mar-24	17-Apr-24	-52	0%	[Red bar from Apr 27 to May 28]			
ACL P8 Span												
19W10.U.SD392	Erection of Scaffolding Tower	25	01-Sep-23	04-Oct-23	08-Mar-24	10-Apr-24	-84	0%	[Red bar from Mar 26 to Apr 27]			
19W10.U.SD402	Installation of Permanent Bearing at P8	2	05-Oct-23	06-Oct-23	11-Apr-24	12-Apr-24	-84	0%	[Red bar from Apr 27 to May 28]			
19W10.U.SD412	Erect of Pier Head Diaphragm	25	07-Oct-23	07-Nov-23	13-Apr-24	13-May-24	-84	0%	[Red bar from Apr 27 to May 28]			
19W10.U.SD582	Erection of P8 End Span	23	29-Nov-23	27-Dec-23	14-May-24	13-Jun-24	-84	0%	[Red bar from Apr 27 to May 28]			
Installation of Drainage Pipe												
Main Carriage Drain Inside the Void												
19W10.A.C0W380	P5-P6 Span	5	17-Oct-23	01-Nov-23	24-Apr-24	29-Apr-24	-39	0%	[Red bar from Apr 27 to May 28]			
125mm dia. Drainage Pipe at Walkway												
19W10.A.C0W450	P5-P6 Span	14	06-Oct-23	24-Oct-23	15-Apr-24	30-Apr-24	-27	0%	[Red bar from Apr 27 to May 28]			
Installation of Cable Tray Inside the Deck Void (328m)												
19W10.A.C0W520	P5-P6 Span	5	02-Nov-23	09-Nov-23	30-Apr-24	04-May-24	-39	0%	[Red bar from Apr 27 to May 28]			
Top Railing and Road Lighting Plinth												
19W10.A.C0W790	Off-site Fabrication and Delivery of Top Railing	150	06-May-23	20-Dec-23	29-Feb-24	21-Aug-24	-129	0%	[Red bar from Mar 26 to Apr 27]			
Fender Installation												
19W10.A.C0W865	Fender Installation at P3	0	29-Aug-23	23-Sep-23	29-Feb-24	29-Feb-24	-15	0%	[Red bar from Apr 27 to May 28]			
19W10.A.C0W915	Fender Installation at P4	0	25-Sep-23	20-Oct-23	29-Feb-24	29-Feb-24	-15	0%	[Red bar from Apr 27 to May 28]			
19W10.A.C0W925	Fender Installation at P5	0	21-Oct-23	14-Nov-23	29-Feb-24	29-Feb-24	-15	0%	[Red bar from Apr 27 to May 28]			
19W10.A.C0W935	Fender Installation at P6	20	15-Nov-23	07-Dec-23	29-Feb-24	22-Mar-24	-15	0%	[Red bar from Apr 27 to May 28]			
19W10.A.C0W945	Fender Installation at P7	20	08-Dec-23	03-Jan-24	23-Mar-24	19-Apr-24	-15	0%	[Red bar from Apr 27 to May 28]			
19W10.A.C0W955	Fender Installation at P8	0	04-Jan-24	26-Jan-24	20-Apr-24	20-Apr-24	-15	0%	[Red bar from Apr 27 to May 28]			

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

Project ID: C19W10/01-DWP-D-M242
Three-Month Rolling Programme (as of 29 February 2024)
 Page 1 of 2

Data Date: 29-Feb-24
Printed: 26-Feb-24 09:11
Layout: C19W10/01 ACL 3MR M24
TASK filter: 3 Mths Rolling.

Date	Revision	Checked	Approved
26-Feb-22	Initial Works Programme	DW	BH
10-May-22	Detailed Works Programme ...	DW	BH
22-Aug-22	Detailed Works Programme ...	DW	RN
31-Mar-23	Detailed Works Programme ...	DW	RN
29-Feb-24	3MRP - Update	DW	BH

C19W10/01 - ACL - Mitigation Programme Rev.D Updated as of 29 Feb 2024

Activity ID	Activity Name	Orig Dur	BL Project Start	BL Project Finish	Start	Finish	Total Float	Physical % Complete	2024			
									Feb 25	Mar 26	Apr 27	May 28
19W10.AC0W875	Off-site fabrication and delivery	80	30-May-23	16-Oct-23	05-Apr-24	15-Jul-24	-109	0%				

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

Project ID: C19W10/01-DWP-D-M242
Three-Month Rolling Programme (as of 29 February 2024)
 Page 2 of 2

Data Date: 29-Feb-24
Printed: 26-Feb-24 09:11
Layout: C19W10/01 ACL 3MR M24
 TASK filter: 3 Mths Rolling.

Date	Revision	Checked	Approved
26-Feb-22	Initial Works Programme	DW	BH
10-May-22	Detailed Works Programme ...	DW	BH
22-Aug-22	Detailed Works Programme ...	DW	RN
31-Mar-23	Detailed Works Programme ...	DW	RN
29-Feb-24	3MRP - Update	DW	BH

Land Section

Activity ID	Activity Name	CWPG-A04 OD	CWPG-A04 Start	CWPG-A04 Finish	MU21A(19c-2)BL2 OD	MU21A(19c-2)BL2 Start	MU21A(19c-2)BL2 Finish	Prog Update OD	Remaining Duration	Start	Finish	Physical % Complete	Remarks	Total Float	2024				
															Feb	Mar	Apr	May	Jun
HKP Viaduct Pion 2 - Span P8 to P11		136	21-Nov-23	09-May-24	136	14-Feb-24	07-Sep-24	163	163	02-Feb-24 A	26-Sep-24			150					
Marine Viaduct		631	06-Jun-22	20-Jul-24	631	02-May-23	20-Jul-24	374	125	29-Dec-22 A	02-Aug-24			256					
At Grade Works		246	28-Oct-22	26-Aug-23	246	11-May-23	17-Jun-24	341	100	10-Nov-22 A	04-Jul-24			285					
At-Grade Plant Room		246	28-Oct-22	26-Aug-23	246	11-May-23	17-Jun-24	341	100	10-Nov-22 A	04-Jul-24			285					
Diversion for Existing UU		246	28-Oct-22	26-Aug-23	246	11-May-23	03-May-24	339	98	10-Nov-22 A	02-Jul-24			287					
FD, CT, FN Cable Ducts and LV Duct for Existing Bridge Pier		48	28-Oct-22	22-Dec-22	48	02-Jan-24	29-Feb-24	48	48	01-Mar-24	30-Apr-24			337					
FD, CT, FN, LV Cable Ducts Diversion - Preparation Works		21	28-Oct-22	21-Nov-22	21	02-Jan-24	25-Jan-24	21	21	01-Mar-24	25-Mar-24			337					
FD, CT, FN, LV Cable Ducts Diversion - Construction Works		27	22-Nov-22	22-Dec-22	27	26-Jan-24	29-Feb-24	27	27	26-Mar-24	30-Apr-24			337					
DN 1500mm to DN1650mm Storm Drain		244	31-Oct-22	26-Aug-23	244	11-May-23	27-Apr-24	299	79	10-Nov-22 A	07-Jun-24			-8					
Storm Diversion - Preparation Works		14	31-Oct-22	15-Nov-22	14	11-May-23	27-May-23	14	2	10-Nov-22 A	02-Mar-24			69					
Storm Diversion - Construction Works		198	23-Dec-22	26-Aug-23	198	01-Dec-23	27-Apr-24	130	79	26-Sep-23 A	07-Jun-24			-52					
CLP LV Cables		98	15-Nov-22	15-Mar-23	98	02-Jan-24	03-May-24	98	98	01-Mar-24	02-Jul-24			236					
CLP LV Cable Diversion - Preparation Works		98	15-Nov-22	15-Mar-23	98	02-Jan-24	03-May-24	98	98	01-Mar-24	02-Jul-24			236					
DN300mm Existing Sewer		28	21-Nov-22	22-Dec-22	28	01-Dec-23	05-Jan-24	28	28	14-Sep-23 A	06-Apr-24			164					
Sewage Diversion - Preparation Works		28	21-Nov-22	22-Dec-22	28	01-Dec-23	05-Jan-24	28	28	14-Sep-23 A	06-Apr-24			164					
Structure, ABWF and E&M Works for At-Grade Plant Room		143	23-Feb-23	17-Aug-23	143	01-Jan-24	17-Jun-24	148	100	23-Nov-23 A	04-Jul-24			150					
At-Grade Plant Room - Structure Works		143	23-Feb-23	17-Aug-23	143	01-Jan-24	17-Jun-24	148	100	23-Nov-23 A	04-Jul-24			150					
At-Grade Plant Room Structure - Statutory Submission, Approval & Procedure		47	23-Feb-23	22-Apr-23	47	01-Jan-24	17-Feb-24	54	4	23-Nov-23 A	05-Mar-24			81					
At-Grade Plant Room Structure - Cable Trench for Transformer Room		12	24-Apr-23	08-May-23	12	19-Feb-24	02-Mar-24	12	12	06-Mar-24	19-Mar-24			81					
KD2_AGP_1540	Cable Trench for Transformer Room - Rebar Fixing	3	24-Apr-23	26-Apr-23	3	19-Feb-24	21-Feb-24	3	3	06-Mar-24	08-Mar-24	0%		81					
KD2_AGP_1550	Cable Trench for Transformer Room - Formwork Erection	4	27-Apr-23	02-May-23	4	22-Feb-24	26-Feb-24	4	4	09-Mar-24	13-Mar-24	0%		81					
KD2_AGP_1560	Cable Trench for Transformer Room - Concrete to Trench Wall & Slab	1	03-May-23	03-May-23	1	27-Feb-24	27-Feb-24	1	1	14-Mar-24	14-Mar-24	0%		81					
KD2_AGP_1570	Cable Trench for Transformer Room - Backfilling to Ground Level	4	04-May-23	08-May-23	4	28-Feb-24	02-Mar-24	4	4	15-Mar-24	19-Mar-24	0%		81					
At-Grade Plant Room Structure - Ground Slab		4	09-May-23	12-May-23	4	04-Mar-24	07-Mar-24	4	4	20-Mar-24	23-Mar-24			81					
KD2_AGP_1580	Ground Slab - Rebar Fixing	3	09-May-23	11-May-23	3	04-Mar-24	06-Mar-24	3	3	20-Mar-24	22-Mar-24	0%		81					
KD2_AGP_1590	Concrete for Ground Slab	1	12-May-23	12-May-23	1	07-Mar-24	07-Mar-24	1	1	23-Mar-24	23-Mar-24	0%		81					
At-Grade Plant Room Structure - Wall Construction + Lower Roof of Transformer Room (+10.5mPD)		31	13-May-23	19-Jun-23	31	08-Mar-24	17-Apr-24	31	31	25-Mar-24	04-May-24			81					
At-Grade Plant Room Structure - Upper Roof for Transformer Room and Other Rooms Roof		49	20-Jun-23	17-Aug-23	49	18-Apr-24	17-Jun-24	49	49	06-May-24	04-Jul-24			81					
At-Grade Plant Room Structure - Street Fire Hydrant Supply Water Tanks		68	13-May-23	03-Aug-23	68	08-Mar-24	03-Jun-24	69	69	25-Mar-24	20-Jun-24			161					
Airport System		95	11-Oct-22	13-Jan-23	95	01-May-23	30-Mar-24	395	90	04-Nov-22 A	29-May-24			369					
KD3 - Statutory Submission & Approval for Completion of Testing & Commissioning		110	06-Jun-22	15-Oct-22	110	01-Jan-24	14-Feb-24	35	35	01-Mar-24	15-Apr-24			256					

	Actual Work		Second Baseline Milestone
	Remaining Work		Primary Baseline
	Critical Remaining Work		Baseline Milestone
	Milestone		
	Second Baseline		

Project ID: MU21A-CWPG-A04D
CWPG-A04 - 3-Month Rolling Programme
 Page 2 of 2


Data Date: 29-Feb-24
Printed: 06-Mar-24 16:27
Layout: C21W18-WPU_MU21A (2BL) large 3MRP **Filter:** TASK
 filters: 3 Month, without LOE, Without WBS Summary.


Date	Revision	Checked	Approved
29-Feb-24	C21W18-CWPG-A04-MU21A	Gary Yeung	Kingsley Chiang

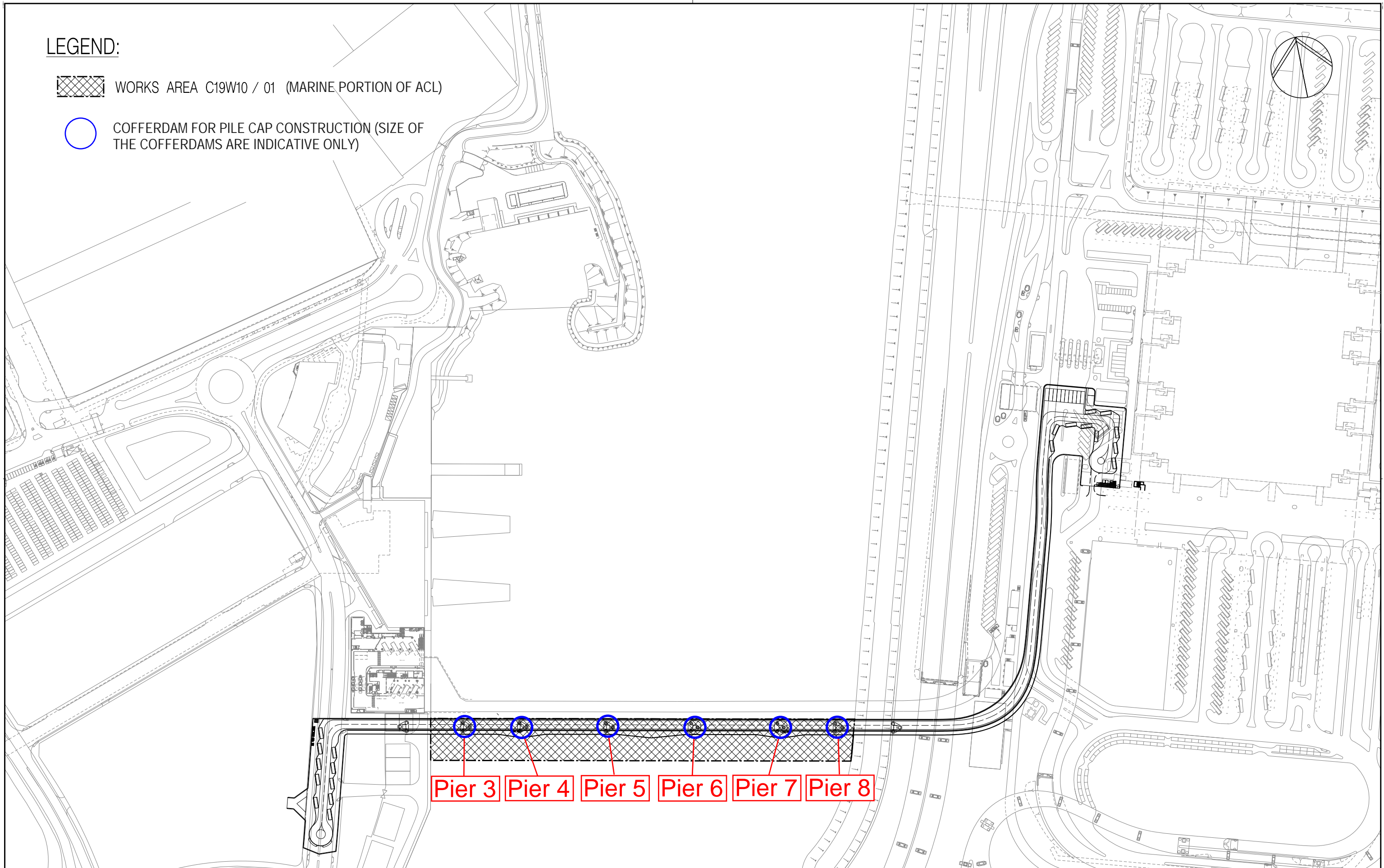
Appendix C. Construction Works Area

Marine Section

LEGEND:

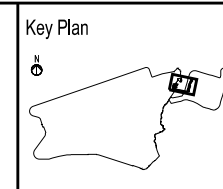
 WORKS AREA C19W10 / 01 (MARINE PORTION OF ACL)

 COFFERDAM FOR PILE CAP CONSTRUCTION (SIZE OF THE COFFERDAMS ARE INDICATIVE ONLY)



Rev.	Date	Description	Checked
A	07OCT2021	ISSUE FOR TENDER	HARRY CHAU

Airport Authority
 HKIA Tower, 1 Sky Plaza Road,
 Hong Kong International Airport,
 Lantau, Hong Kong.
 Tel : (852) 2188 7111
 Fax : (852) 2824 0717



Title SUPPLEMENTAL AGREEMENT C19W10/01
 AIRPORTCITY LINK - MARINE PORTION

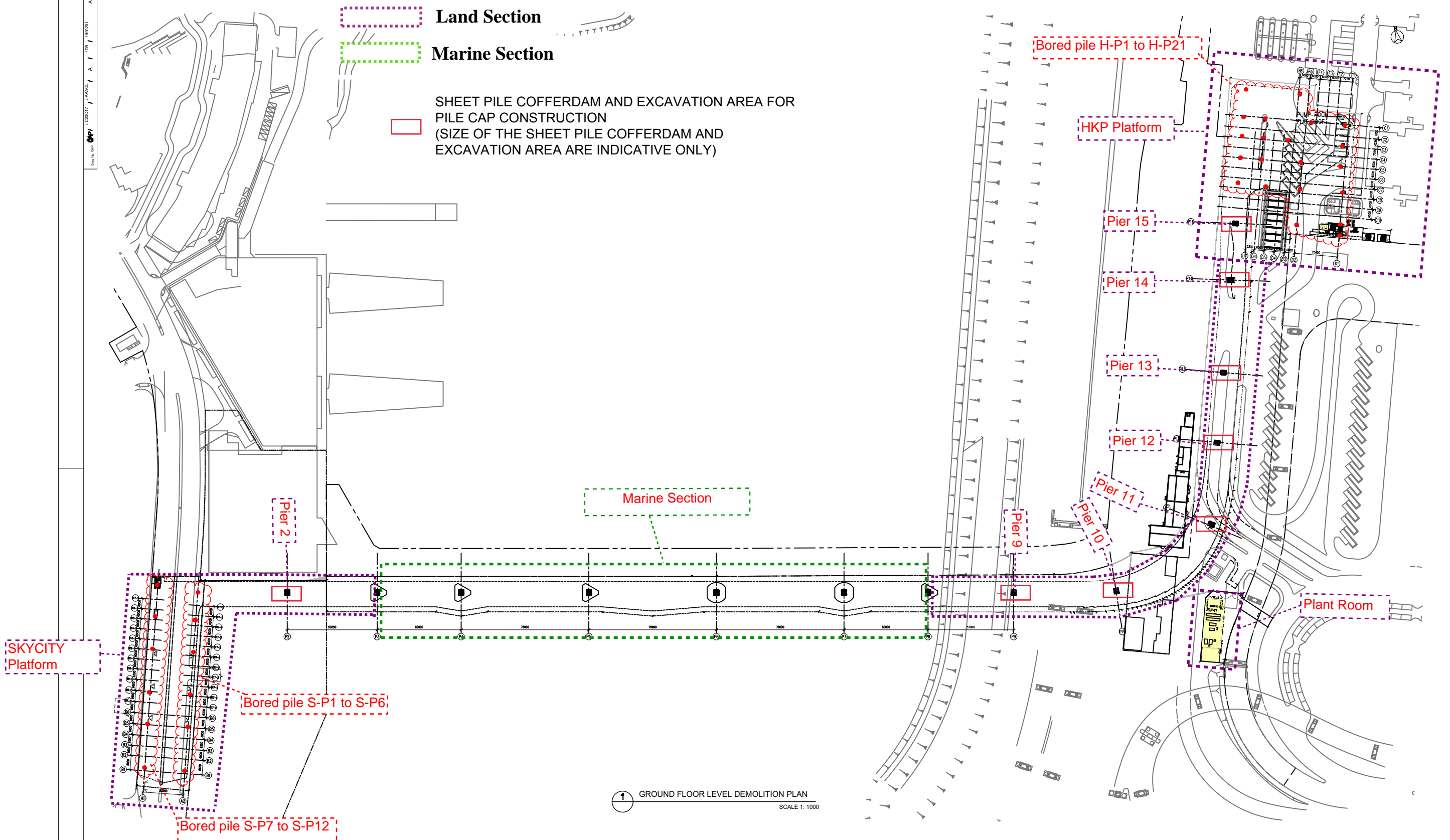
WORKS AREA PLAN

Signatures for Approval	Date
Design Supervisor : HARRY CHAU	31JUL2021
Checkers : HARRY CHAU	31JUL2021
Authorised Representative :	31JUL2021

Hong Kong International Airport	
Drawing No.	CWD/C19W10-01 / AAACL / C / DR / 0100000
Scale	1:3000 (A3)
Rev.	A

Land Section

Date No. OAP / AAACL / A / DR / 990201



Notes:

- Measurements are based on metric system.
- All levels are in metres to Principal Datum (mPD) unless noted otherwise.
- Do not scale drawing.
- Figure dimensions are to be followed.
- Do not use for construction unless expressly permitted.
- The Contractor shall verify all conditions on the Site & notify the Project Manager of any variations from dimensions before construction.

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File Name : U:\STUDIO_KIPROJ_DATA\2020\20080\DRAWING\TENDERMAIN CONTRACT\LOT990201 -WP GF PLAN

Rev.	Date	Description	Checked
A	15-DEC-2021	ISSUE FOR TENDER	KW

Consultant's Signatures for Approval			
Drawn	Date	Design	Date
LKW	DEC 2021	MAL	DEC 2021
Checkers	U/E/2021	Plot Date	
KW			DEC 2021
Design Supervisor		Date	
KW		DEC 2021	
Authorised Representative		Date	
KW		DEC 2021	

香港國際機場
HONG KONG INTERNATIONAL AIRPORT

Airport Authority HQA Tower, 1 Sky Plaza Road, Hong Kong International Airport, Lantau, Hong Kong
Tel : (852) 2188 7111 Fax : (852) 2824 0711

Hong Kong International Airport

Works Area Plan

Scale: Location: Title: Originator: Design Ref: Location: Discipline: Type: Number: Status: Rev.

Drawing No. OAP / C20C17 / AAACL / A / DR / 990201 Tender A1

Plot Date : December 11, 2021

Appendix D. Environmental Site Inspection and Monitoring Schedule

ACL Environmental Monitoring and Site Inspection Schedule for Feb 2024

Feb-24

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

ACL Environmental Monitoring and Site Inspection Schedule for Mar 2024

Mar-24

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

Appendix E. Event and Action Plan

Table F.1: Event and Action Plan for Marine Water Quality

Event	Action			
	ET	IEC	AAHK / PM	Contractor
Action level being exceeded by one sampling day	<ol style="list-style-type: none"> 1. Repeat <i>in-situ</i> measurement to confirm findings; 2. Identify reasons for non-compliance and source(s) of impact; 3. Inform IEC and Contractor; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Discuss mitigation measures with IEC and Contractor; 6. Repeat measurement on next day of exceedance. 	<ol style="list-style-type: none"> 1. Discuss with ET and Contractor on the mitigation measures; 2. Review proposals on mitigation measures submitted by Contractor and advise AAHK / PM accordingly; 3. Assess the effectiveness of the implemented mitigation measures. 	<ol style="list-style-type: none"> 1. Discuss with IEC on the proposed mitigation measures; 2. Make agreement on the mitigation measures to be implemented; 4. Assess the effectiveness of the implemented mitigation measures. 	<ol style="list-style-type: none"> 1. Inform the AAHK / PM and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment; 4. Consider changes of working methods; 5. Discuss with ET and IEC and propose mitigation measures.
Action level being exceeded by two or more consecutive sampling days	<ol style="list-style-type: none"> 1. Repeat <i>in-situ</i> measurement to confirm findings; 2. Identify reasons for non-compliance and source(s) of impact; 3. Inform IEC and Contractor; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Discuss mitigation measures with IEC and Contractor; 6. Ensure mitigation measures are implemented; 7. Prepare to increase the monitoring frequency to daily; 8. Repeat measurement on next day of exceedance. 	<ol style="list-style-type: none"> 1. Discuss with ET and Contractor on the mitigation measures; 2. Review proposals on mitigation measures submitted by Contractor and advise the AAHK / PM accordingly; 3. Assess the effectiveness of the implemented mitigation measures. 	<ol style="list-style-type: none"> 1. Discuss with IEC on the proposed mitigation measures; 2. Make agreement on the mitigation measures to be implemented; 3. Assess the effectiveness of the implemented mitigation measures. 	<ol style="list-style-type: none"> 1. Inform the AAHK / PM and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment 4. Consider changes of working methods; 5. Discuss with ET and IEC and propose mitigation measures to IEC and AAHK / PM within 3 working days; 6. Implement the agreed mitigation measures.
Limit level being exceeded by one sampling day	<ol style="list-style-type: none"> 1. Repeat <i>in-situ</i> measurement to confirm findings; 2. Identify reasons for non-compliance and source(s) of impact; 3. Inform IEC, Contractor and EPD; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Discuss mitigation measures with IEC, AAHK / PM and 	<ol style="list-style-type: none"> 1. Discuss with ET and Contractor on the mitigation measures; 2. Review proposals on mitigation measures submitted by Contractor and advise the AAHK / PM accordingly; 3. Assess the effectiveness of the implemented mitigation measures. 	<ol style="list-style-type: none"> 1. Discuss with IEC, ET and Contractor on the proposed mitigation measures; 2. Request Contractor to critically review the working methods; 3. Make agreement on the mitigation measures to be implemented; 4. Assess the effectiveness of the implemented mitigation measures. 	<ol style="list-style-type: none"> 1. Inform the AAHK / PM and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment; 4. Consider changes of working methods; 5. Discuss with ET, IEC and AAHK / PM and propose mitigation measures to IEC and AAHK / PM within

Event	Action			
	ET	IEC	AAHK / PM	Contractor
	Contractor; 6. Ensure mitigation measures are implemented; 7. Increase the monitoring frequency to daily until no exceedance of limit level.			three working days; 6. Implement the agreed mitigation measures.
Limit level being exceeded by two or more consecutive sampling days	1. Repeat <i>in-situ</i> measurement to confirm findings; 2. Identify reasons for non-compliance and source(s) of impact; 3. Inform IEC, Contractor and EPD; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Discuss mitigation measures with IEC, AAHK / PM and Contractor; 6. Ensure mitigation measures are implemented; 7. Increase the monitoring frequency to daily until no exceedance of Limit level for two consecutive days.	1. Discuss with ET and Contractor on the mitigation measures; 2. Review proposals on mitigation measures submitted by Contractor and advise the AAHK / PM accordingly; 3. Assess the effectiveness of implemented mitigation measures.	1. Discuss with IEC, ET and Contractor on the proposed mitigation measures; 2. Request Contractor to critically review the working methods; 3. Make agreement on the mitigation measures to be implemented; 4. Assess the effectiveness of the implemented mitigation measures; 5. Consider and instruct, if necessary, the Contractor to slow down or to stop all or part of the construction activities until no exceedance of Limit level.	1. Inform AAHK / PM and confirm notification of non-compliance in writing; 2. Rectify unacceptable practices; 3. Check all plant and equipment; 4. Consider changes of working method; 5. Discuss with ET, IEC and AAHK / PM and propose mitigation measures to IEC and AAHK / PM within 3 working days; 6. Implement the agreed mitigation measures; 7. As directed by the AAHK / PM, to slow down or to stop all or part of the construction activities.

Appendix F. Waste Flow Table

Marine Section

AAHK Supplemental Contract No. C19W10/01 Airport City Link - Marine Portion

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)		
Apr-22	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
May-22	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
Jun-22	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
Jul-22	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-22	2591.67	2591.67	0.00	0.00	1584.00	1007.67	0.00	0.00	0.00	0.00	0.00	1584.00	2591.67
Sep-22	1340.00	1340.00	0.00	0.00	1340.00	0.00	0.00	0.00	0.36	0.00	0.36	1340.00	1340.36
Oct-22	1385.00	1385.00	0.00	0.00	1385.00	0.00	0.00	0.00	0.00	0.00	0.00	1385.00	1385.00
Nov-22	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
Dec-22	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
Jan-23	1814.47	1814.47	0.00	0.00	1814.47	0.00	0.00	0.00	0.36	0.00	0.36	1814.47	1814.83
Feb-23	761.45	761.45	0.00	0.00	0.00	761.45	0.00	0.00	0.00	0.00	0.00	0.00	761.45
Mar-23	939.46	939.46	0.00	0.00	939.46	0.00	0.00	0.00	0.25	0.00	0.25	939.46	939.71
Apr-23	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
May-23	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
Jun-23	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
Jul-23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.99	2.99	0.00	2.99
Aug-23	16.16	16.16	0.00	0.00	0.00	16.16	0.00	0.00	0.00	16.83	16.83	0.00	32.99
Sep-23	95.49	95.49	0.00	0.00	0.00	95.49	0.00	0.00	0.00	4.25	4.25	0.00	99.74
Oct-23	69.96	69.96	0.00	0.00	0.00	69.96	0.00	0.00	0.00	15.83	15.83	0.00	85.79
Nov-23	29.24	29.24	0.00	0.00	0.00	29.24	0.00	0.00	0.00	10.57	10.57	0.00	39.81
Dec-23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17.64	17.64	0.00	17.64
Jan-24	16.05	16.05	0.00	0.00	0.00	16.05	0.00	0.00	0.00	31.44	31.44	0.00	47.49
Feb-24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.45	33.45	0.00	33.45
Total	9058.95	9058.95	0.00	0.00	7062.93	1996.02	0.00	0.00	0.97	133.00	133.97	7062.93	9192.92

*Chemical waste, Wasted oil density 0.9kg/L

Land Section

C21W18 Monthly Waste Flow Table

Year	Month	Actual Quantities of Inert Construction Waste Generated Monthly			Actual Quantities of Non-inert Construction Waste Generated Monthly					
		(a)=(b)+(c)	(b)	(c)	Recycled	Recycled	Recycled	Recycled	Chemical Waste	General Refuse disposed of at Landfill
		Total Quantity Generated	Reused in other Projects	Disposed of as Public Fill	Timber	Metals	Paper/ cardboard	Plastic		
		(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)
2023	Jan	-	-	-	-	-	-	-	-	-
	Feb	754.38	0	754.38	0	0.017	0.129	0.038	0	22.27
	Mar	1464.86	0	1464.86	0	0.014	0.087	0.024	0	13.51
	Apr	1005.98	0	1005.98	0	0.007	0.025	0.013	0	11.94
	May	1723.58	0	1723.58	0	0.008	0.039	0.018	0	14.46
	Jun	944.13	0	944.13	0	0.025	0.022	0.102	0	14.01
	Sub-total	5892.93	0	5892.93	0	0.071	0.302	0.195	0	76.19
	Jul	1174.60	0	1174.60	0	0.012	0.044	0.012	0	31.92
	Aug	2287.72	0	2287.72	0	0.023	0.075	0.02	0	37.33
	Sep	2404.54	0	2404.54	0	0.007	0.022	0.015	0	10.12
	Oct	4354.08	0	4354.08	0	0.007	0.015	0.021	0	8.9
	Nov	3550.04	0	3550.04	0	0.010	0.025	0.020	0	19.84
	Dec	4333.88	0	4333.88	0	0.010	0.008	0.015	0	118.82
Sub-total	18104.86	0	18104.86	0	0.069	0.189	0.103	0	226.93	
2024	Jan	4902.86	303.29	4599.57	0	0	0.076	0.003	0	14.65
	Feb	1200.33	275.88	924.45	0	0	0	0	0	7.26
	Mar	-	-	-	-	-	-	-	-	-
	Apr	-	-	-	-	-	-	-	-	-
	May	-	-	-	-	-	-	-	-	-
	Jun	-	-	-	-	-	-	-	-	-
	Sub-total	6103.19	579.17	5524.02	0	0	0.076	0.003	0	21.91
	Jul	-	-	-	-	-	-	-	-	-
	Aug	-	-	-	-	-	-	-	-	-
	Sep	-	-	-	-	-	-	-	-	-
	Oct	-	-	-	-	-	-	-	-	-
	Nov	-	-	-	-	-	-	-	-	-
	Dec	-	-	-	-	-	-	-	-	-
Sub-total	0	0	0	0	0.000	0.000	0.000	0	0	
Total		30100.98	579.17	29521.81	0.00	0.14	0.57	0.30	0.00	325.03

Appendix G. Status of Environmental Permits and Licences

Table G.1: Summary of Environmental Licenses and Permits - Marine Section (February 2024)

Type of Licence / Permit	Reference No.	Valid From	Valid Until	Remark
Environmental Permit	EP-581/2020	5 Oct 2020	End of Project	N/A
Billing Account for Disposal of Construction Waste	7043487	18 Mar 2022	End of Project	N/A
Construction Dust Notification under APCO	477560	10 Mar 2022	N/A	N/A
Construction Noise Permit	GW-RS0644-23	15 Aug 2023	14 Feb 2024	Superseded by GW-RS0046-24
	GW-RS0046-24	15 Feb 2024	14 Aug 2024	Superseded GW-RS0644-23
	GW-RS0895-23	20 Oct 2023	17 Apr 2024	N/A
Chemical Waste Producer	5213-951-G2961-01	19 Apr 2022	End of Project	N/A
Water Discharge License – Marine	WT00044182-2023	23 Aug 2023	31 Aug 2028	N/A

Table G.2: Summary of Environmental Licenses and Permits - Land Section (February 2024)

Type of Licence / Permit	Reference No.	Valid From	Valid Until	Remark
Environmental Permit	EP-581/2020	5 Oct 2020	End of Project	N/A
Billing Account for Disposal of Construction Waste	7044291	27 Jun 2022	End of Project	N/A
Construction Dust Notification under APCO	480843	10 Jun 2022	N/A	N/A
Construction Noise Permit	GW-RS0027-24	31 Jan 2024	30 Jul 2024	N/A
Chemical Waste Producer	5213-951-C1169-68	23 Jun 2022	End of Project	N/A
Water Discharge License	WT00042879-2022	17 Apr 2023	31 Jan 2028	Variation of discharge license WT00042879-2022 granted on 4 Jan 2023.
	WT00042680-2022	29 Aug 2023	31 Jan 2028	Variation of discharge license WT00042680-2022 granted on 9 Jan 2023.
	WT10002073-2023	5 Feb 2024	28 Feb 2029	N/A

Appendix H. Environmental Mitigation Measures Implementation Status

Environmental Mitigation Measures Implementation Status (February 2024)

Recommended Mitigation Measures for Air Quality Impact

PP Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^ (Marine Section)	Mitigation Measures Implemented? ^ (Land Section)
S6.1.1	S4.2.1	<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	Obs
		<ul style="list-style-type: none"> Skip hoist for material transport should be totally enclosed by impervious sheeting. 	N/A	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. 	N/A	Yes
		<ul style="list-style-type: none"> All stockpiles of aggregate or spoil should be covered and/or water applied. 	Yes	Yes
		<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	Yes
		<ul style="list-style-type: none"> Immediately before leaving a construction site, every vehicle shall be washed to remove any dusty materials from its body and wheels. 	N/A	Obs
		<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. 	N/A	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. 	Rem	Obs / Rem

Recommended Mitigation Measures for Noise Impact

PP Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^ (Marine Section)	Mitigation Measures Implemented? ^ (Land Section)
S6.2.1	S5.2.1	<ul style="list-style-type: none"> Only well-maintained plant should be operated on-site and plant should be serviced regularly. 	Yes	Yes
		<ul style="list-style-type: none"> Silencers or mufflers on construction plant should be utilised. 	Yes	N/A
		<ul style="list-style-type: none"> Mobile plant should be sited as far away from sensitive uses as possible. 	Yes	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	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	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	Yes
	<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	Yes

Recommended Mitigation Measures for Water Quality Impact

PP Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^ (Marine Section)	Mitigation Measures Implemented? ^ (Land Section)
S6.3.1	S6.2.1	<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. 	Yes	N/A
S6.3.1	S6.2.1	<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. 	Yes	N/A
S6.3.1- S6.3.2	S6.2.1	<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. 	Yes	N/A
S6.3.1	S6.2.1	<ul style="list-style-type: none"> • For in-situ construction method, concrete would be delivered from existing concrete batching plants off-site to avoid on site concrete batching activity. During the in-situ bridge deck concreting, the concrete should be pumped or lifted inside an enclosed container for concreting the deck. Tarpaulin plastic sheet should be mounted at the bottom of the temporary working platform for concreting to prevent concrete from falling to the sea. 	Yes	N/A

PP Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^ (Marine Section)	Mitigation Measures Implemented? ^ (Land Section)
S6.3.1	S6.2.1	<ul style="list-style-type: none"> The marine works of the Project should be proactively planned and coordinated to avoid any concurrent marine works below seawater level with those of ITT-BVB to minimise cumulative water quality impact during construction phase. 	Yes	N/A
S6.3.1	S6.2.1	<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	Yes
S6.3.1	S6.2.1	<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	Obs
S6.3.1	S6.2.1	<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. 	N/A	Yes
S6.3.1	S6.2.1	<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. 	N/A	Yes
S6.3.1	S6.2.1	<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. 	N/A	Yes
S6.3.1	S6.2.1	<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 	Yes	Obs

PP Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^ (Marine Section)	Mitigation Measures Implemented? ^ (Land Section)
		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.		
S6.3.1	S6.2.1	<ul style="list-style-type: none"> • Good site practices should be adopted to remove rubbish and litter from construction sites so as to prevent the rubbish and litter from spreading from the site area. It is recommended to clean the construction sites on a regular basis. Also, the following mitigation measures related to the transportation of the sediment should be implemented to minimise the potential water quality impact: <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/ storm drains; • The barge/ dump truck transporting the excavated marine-based sediment/ land-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; and • Monitoring of the barge/ dump truck loading shall be conducted to ensure that loss of material does not take place during transportation. Transport barges or vessels/ dump truck shall be equipped with automatic self-monitoring devices as specified by the Director of Environmental Protection (DEP). 	N/A	Yes
S6.3.1	S6.2.1	<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. 	Yes	Yes
S6.3.1	S6.2.1	<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. 	N/A	Yes
S6.3.1	S6.2.1	<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	Obs
S6.3.1	S6.2.1	<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 	Yes	Yes

PP Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^ (Marine Section)	Mitigation Measures Implemented? ^ (Land Section)
		construction workforce. A licensed waste collector should be deployed to clean the chemical toilets on a regular basis.		
S6.3.1	S6.2.1	<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	Yes
S6.3.1	S6.2.1	<ul style="list-style-type: none"> 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	Yes
S6.3.1	S6.2.1	<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. 	Yes	Yes
S6.3.1	S6.2.1	<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. Chemical waste containers should be suitably labelled, to notify and warn the personnel who are handling the wastes, to avoid accidents. Storage area should be selected at a safe location on site and adequate space should be allocated to the storage area. 	Obs	Yes

Recommended Mitigation Measures for Waste Management

PP Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^ (Marine Section)	Mitigation Measures Implemented? ^ (Land Section)
S6.4.1- S6.4.2	S7.2.1	<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. Training of site personnel in site cleanliness, concepts of waste reduction, reuse and recycling, proper waste management and chemical waste handling procedures. Provision of sufficient waste reception/ disposal points, and regular collection of waste. 	Yes	Yes
			Yes	Yes
			Yes	Yes

PP Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^ (Marine Section)	Mitigation Measures Implemented? ^ (Land Section)
		<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	Yes
		<ul style="list-style-type: none"> Provision of regular cleaning and maintenance programme for drainage systems and sumps. 	Yes	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	Yes
		<ul style="list-style-type: none"> Preparation of Waste Management Plan (WMP), as part of the Environmental Management Plan (EMP). 	Yes	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	Yes
		<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. 	N/A	N/A
		<ul style="list-style-type: none"> Recycle any unused chemicals or those with remaining functional capacity. 	N/A	N/A
S6.4.1	S7.2.1	<ul style="list-style-type: none"> Maximise the use of reusable steel formwork to reduce the amount of C&D materials. 	Yes	N/A
		<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	Yes
		<ul style="list-style-type: none"> Plan the delivery and stock of construction materials carefully to minimise the amount of waste generated. 	Yes	Yes
		<ul style="list-style-type: none"> Minimise over ordering and wastage through careful planning during purchasing of construction materials. 	Yes	Yes
S6.4.1	S7.2.1	<u>C&D materials:</u>		
		<ul style="list-style-type: none"> The C&D materials generated should be sorted on-site into inert C&D materials (that is, public fill) and non-inert (C&D waste). 	Yes	Yes
S6.4.1	S7.2.1	<ul style="list-style-type: none"> To minimise the impact resulting from collection and transportation of C&D materials as far as practicable, C&D waste, such as wood, plastic, steel and other metals should be reused or recycled and, as a last resort, disposed to landfill. 	N/A	N/A
S6.4.1	S7.2.1	<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	Yes
		<ul style="list-style-type: none"> Covering materials during heavy rainfall. 	N/A	Yes
		<ul style="list-style-type: none"> Locating stockpiles to minimise potential visual impacts. 	Yes	Yes

PP Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^ (Marine Section)	Mitigation Measures Implemented? ^ (Land Section)
		<ul style="list-style-type: none"> Minimising land intake of stockpile areas as far as possible. 	N/A	Yes
		<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	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. 	Yes	N/A
		<p><u>General Refuse:</u></p> <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. 	Obs	Yes
S6.4.1	S7.2.1	<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. 	N/A	N/A
		<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	Yes
		<p><u>Chemical Waste:</u></p> <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	Obs / Rem
S6.4.1- S6.4.2	S7.2.1	<ul style="list-style-type: none"> Appropriate containers with proper labels should be used for storage of chemical wastes. 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	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. 	Yes	N/A
		<ul style="list-style-type: none"> Trip ticket system shall be implemented to prevent illegal dumping in accordance with the “Trip Ticket System for Disposal of Construction and Demolition Materials”. 	Yes	Yes

PP Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^ (Marine Section)	Mitigation Measures Implemented? ^ (Land Section)
S6.4.1 & S6.4.3	S7.2.1	<p><u>Sediment:</u></p> <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	Yes
		<ul style="list-style-type: none"> Relevant ordinances (such as Waste Disposal Ordinance, Air Pollution Ordinance (Construction Dust) Regulation and Water Pollution Control Ordinance) shall be complied with during the excavation and handling of the sediment. 	N/A	Yes
		<ul style="list-style-type: none"> The temporary stockpiling area should be placed within earth bunds or sand bags to prevent leachate from entering the ground, nearby drains and surrounding water bodies. The temporary stockpiling 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, treated 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. 	N/A	N/A
S6.4.1	S7.2.1	<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	N/A
S6.4.1, 6.4.3	S7.2.1	<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	N/A
		<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	N/A
S6.4.1	S7.2.1	<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	N/A
		<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 	N/A	Yes

PP Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^ (Marine Section)	Mitigation Measures Implemented? ^ (Land Section)
		<p>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).</p>		
		<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/ dump truck shall be controlled to avoid splashing and overflowing of the sediment slurry to the surrounding water/ storm drains. 	N/A	Yes
		<ul style="list-style-type: none"> The barge/ dump truck 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/ dump truck loading shall be conducted to ensure that loss of material does not take place during transportation. Transport barges or vessels/ dump truck shall be equipped with automatic self-monitoring devices as specified by the DEP. 	N/A	Yes
S6.4.1	S7.2.1	<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. 	Yes	Yes

Recommended Mitigation Measures for Marine Ecological Impact

PP Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^ (Marine Section)	Mitigation Measures Implemented? ^ (Land Section)
-	-	<ul style="list-style-type: none"> No underwater percussive piling shall be conducted in this Project 	Yes	N/A
S6.5.1	S8.2.1	<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	N/A
S6.5.1	S8.2.1	<ul style="list-style-type: none"> Good site practices, guidelines and mitigation measures detailed in Water Quality Sections 6.3.1 of the Project Profile should be adopted to further alleviate water quality impacts. 	Yes	N/A

Recommended Mitigation Measures for Landscape and Visual Impact

PP Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^ (Marine Section)	Mitigation Measures Implemented? ^ (Land Section)
S6.6.1	S9.3.1	<ul style="list-style-type: none"> All affected trees will be felled and compensated, no transplantation is required. 	N/A	Yes
S6.6.1	S9.3.1	<ul style="list-style-type: none"> Optimising construction activities, e.g. minimising extent of temporary works area, installing site hoardings and minimising illumination on non-target areas. 	Yes	Yes
S6.6.1	S9.3.1	<ul style="list-style-type: none"> Minimise construction periods where possible. 	Yes	Yes
S6.6.1	S9.3.1	<ul style="list-style-type: none"> Early establishment of planting areas as far as appropriate. 	N/A	Yes
S6.6.1	S9.3.1	<ul style="list-style-type: none"> Erection of decorative mesh screen or construction hoardings. 	N/A	Yes
S6.6.1	S9.3.1	<ul style="list-style-type: none"> Control of night-time lighting. 	N/A	N/A
S6.6.1	S9.3.1	<ul style="list-style-type: none"> Temporary vertical greening, screen / buffer at-grade planting to soften the engineering structure of construction works. 	N/A	N/A
S6.6.1	S9.3.1	<ul style="list-style-type: none"> Tree preservation in accordance with Development Bureau Technical Circular (Works) No. 4/2020 (ref: DEVB(GLTM) 200/2/1/1). 	N/A	Yes
S6.6.1	S9.3.1	<ul style="list-style-type: none"> Proposed tree felling / tree compensation. 	N/A	Yes

Others

PP Ref.	EM&A Ref.	Recommended Mitigation Measures	Mitigation Measures Implemented? ^ (Marine Section)	Mitigation Measures Implemented? ^ (Land Section)
-	-	<ul style="list-style-type: none"> A copy of the valid Environmental Permit shall be displayed conspicuously on the Project site(s) at all vehicular site entrances/exits or at a convenient location for public's information at all times. The most updated information about the Permit, including any amended Permit, shall be displayed at such locations. If the Permit Holder surrenders a part or whole of the Permit, the notice he send to the Director shall also be displayed at the same locations as the original Permit. The suspended, varied or cancelled Permit shall be removed from display at the Project site(s). 	Yes	Yes
-	-	<ul style="list-style-type: none"> The required licences should be obtained by the Contractor (including CNP (if any), WPCO licence, etc. 	Yes	Yes

Notes:

Yes = Implemented where applicable

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