



土木工程拓展署  
Civil Engineering and  
Development Department



ARUP

# Overview and Progress

## Environmental Monitoring and Audit

### Tung Chung West

11<sup>th</sup> PLG Meeting

Date: 22 October 2024

# **11<sup>th</sup> Professional Liaison Group Meeting – Agenda**

## **Tung Chung West**

**a) Matters Arising from Last Meeting - Nil**

**b) Overview and Progress**

**c) Environmental Monitoring and Audit**



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# Tung Chung West

## b) Overview and Progress

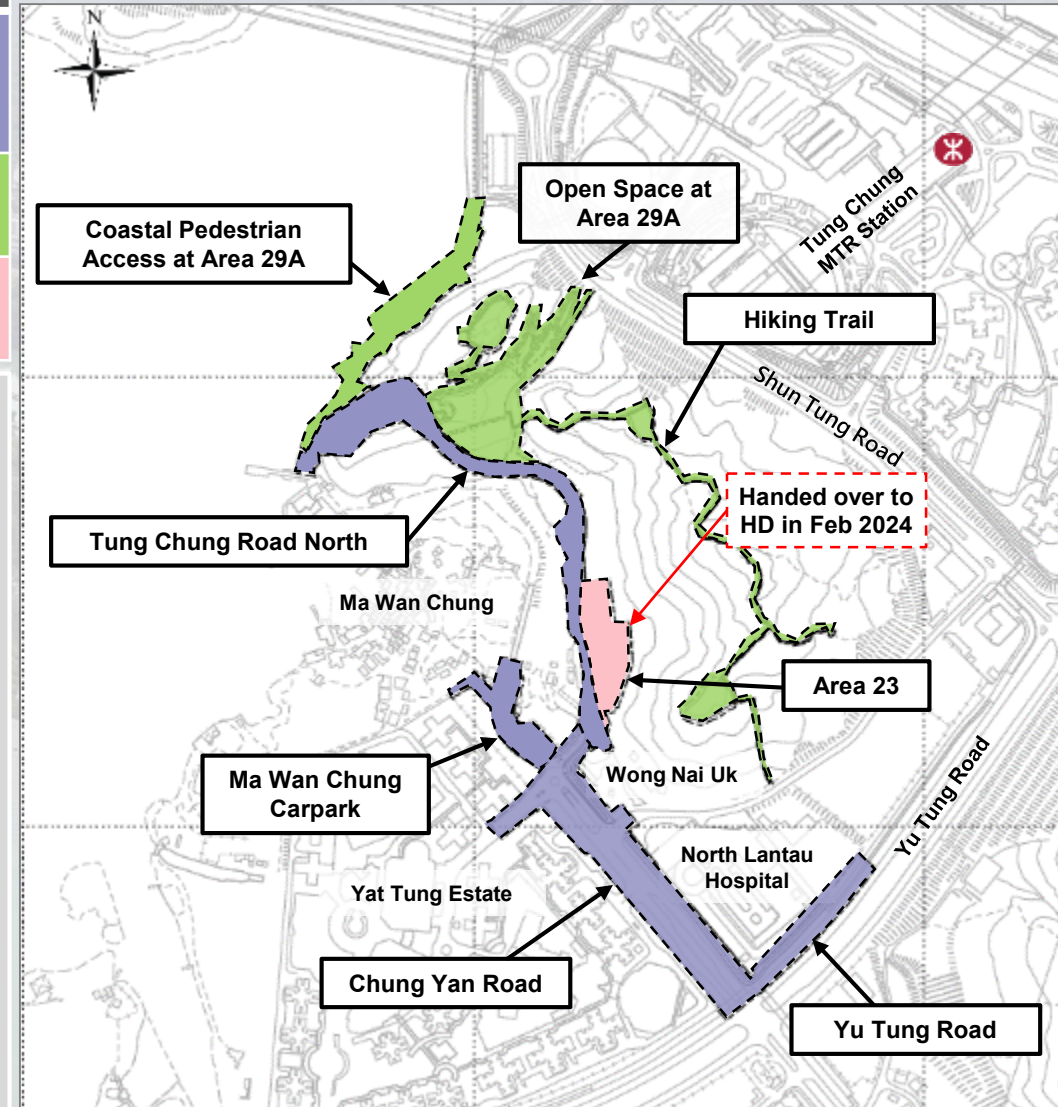
# Contract No. NL/2020/05 – Site Formation & Infrastructure Works at Ma Wan Chung

Item	Major Works
1	Widening of Tung Chung Road North, Construction of Ma Wan Chung Carpark and Road Improvement Works and Drainage Works at Chung Yan Road
2	Construction of Open Space at Area 29A and Coastal Pedestrian Access
3	Site Formation of Area 23 (Completed and handed over to Housing Department)

**Contract Period : May 2021 to 2025**

**Major activities in coming three months :-**

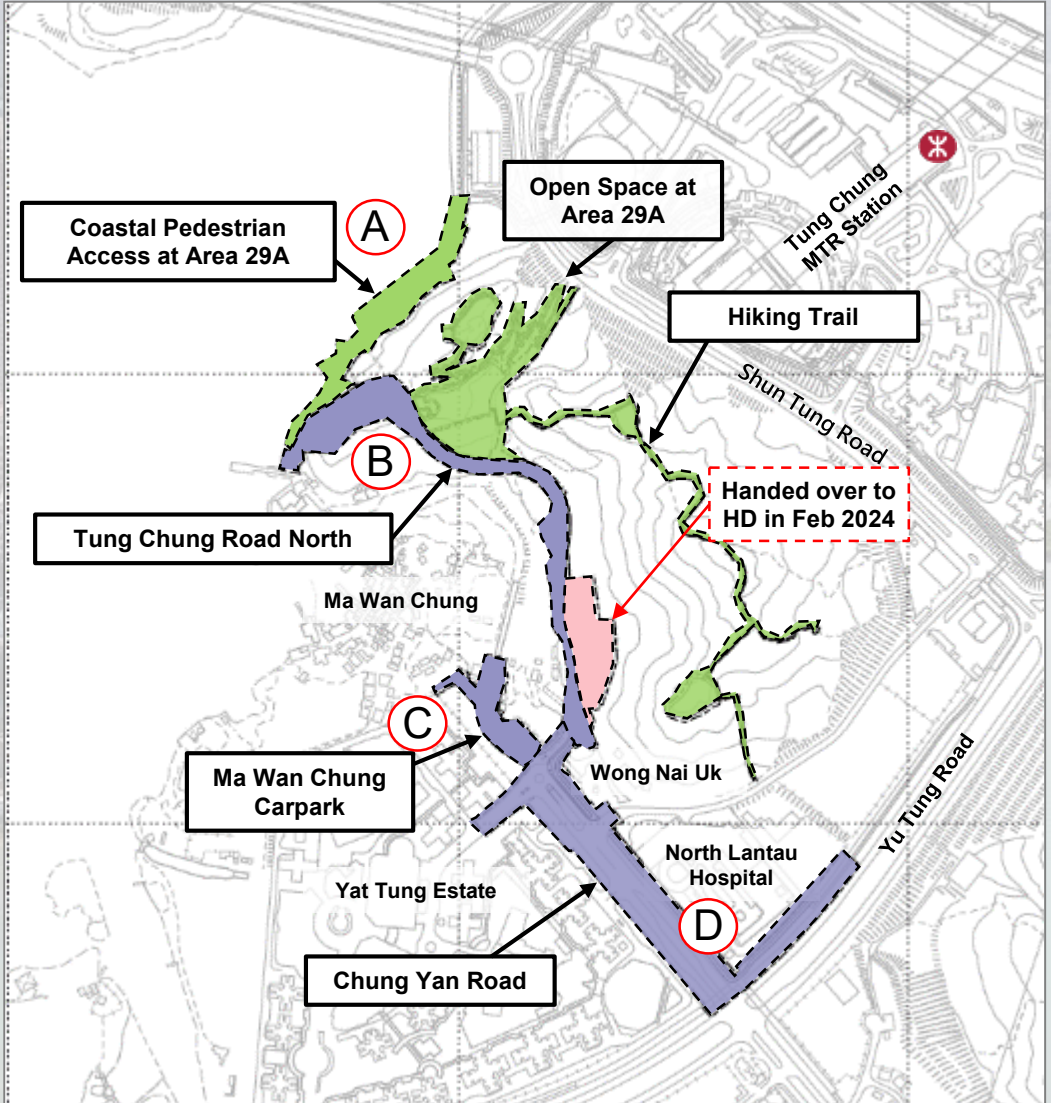
- Slope works at Tung Chung Road North
- Construction of underground utilities and road works at Ma Wan Chung Carpark, Yu Tung Road, Chung Yan Road & Tung Chung Road North
- Construction of covered walkway at Chung Yan Road
- Construction of retaining walls
- Upgrading works of existing hiking trail at Area 29A
- Construction of Coastal Pedestrian Access



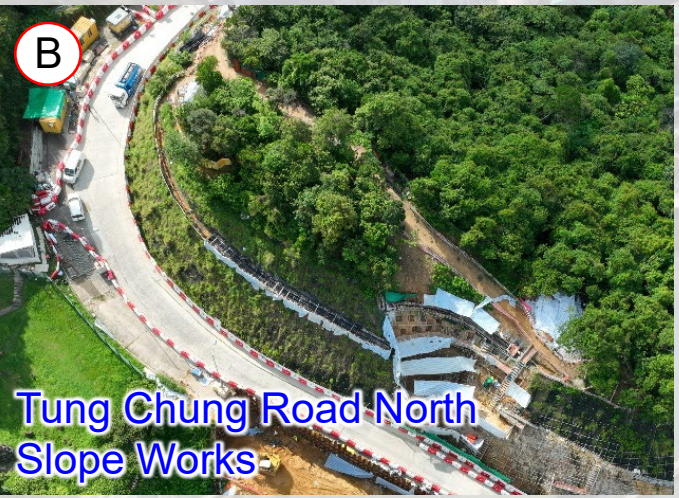
# Contract No. NL/2020/05 – Site Progress



**Coastal Pedestrian Access Pier Construction**



**Ma Wan Chung Carpark Underground Drainage Works**



**Tung Chung Road North Slope Works**



**Chung Yan Road Covered Walkway Construction**

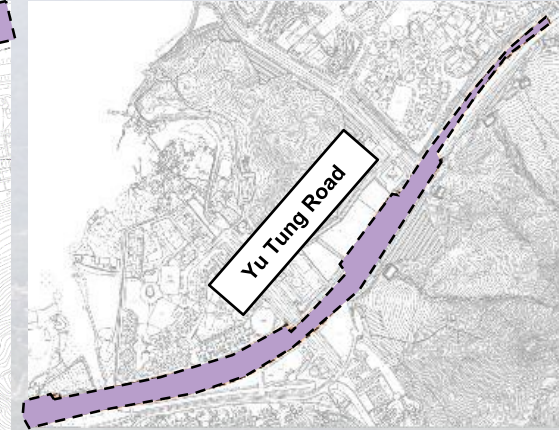
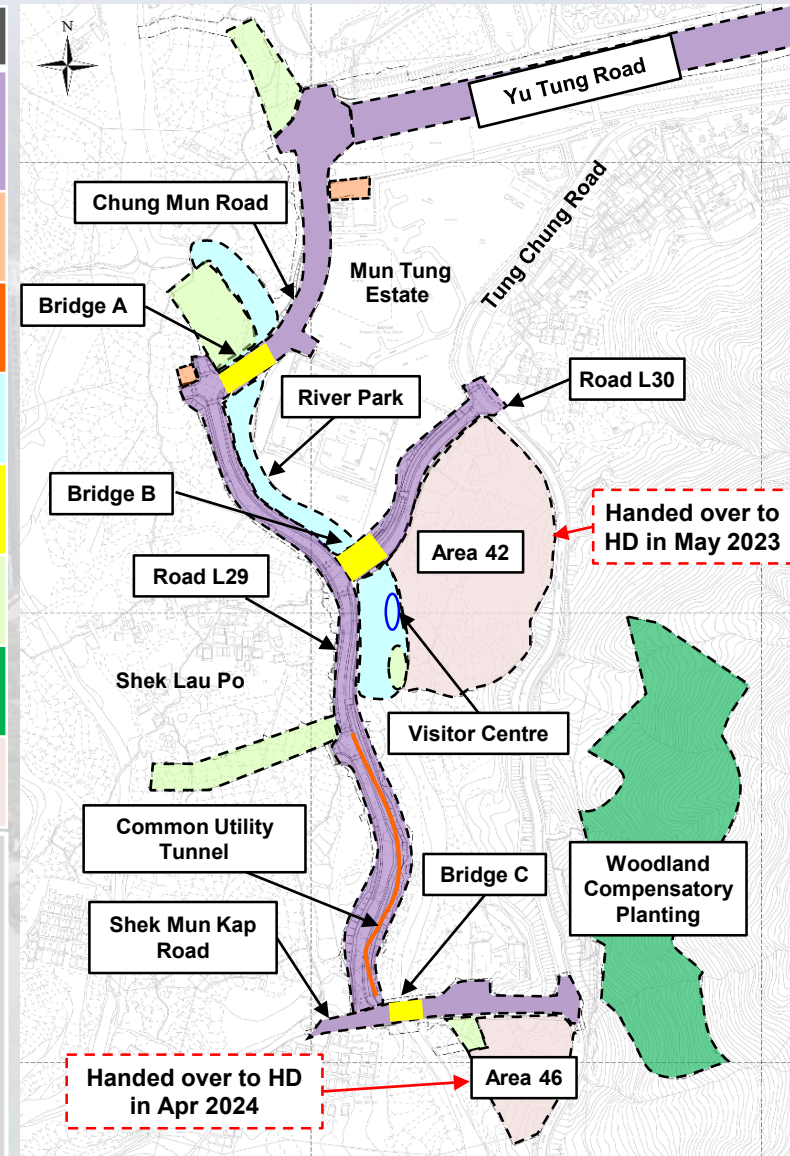
# Contract No. NL/2020/06 – Site Formation and Infrastructure Works at Tung Chung Valley, Phase 1

Item	Major Works
1	Road Works at Yu Tung Road, Chung Mun Road, Road L29, Road L30 & Shek Mun Kap Road
2 & 3	Sewage Pumping Stations
4	Common Utility Tunnel
5	River Park & Visitor Centre
6	Bridges across Tung Chung Stream
7	Sustainable Urban Drainage System
8	Woodland Compensatory Planting (Completed)
9	Site Formation at Area 42 & Area 46 (Completed and handed over to HD)

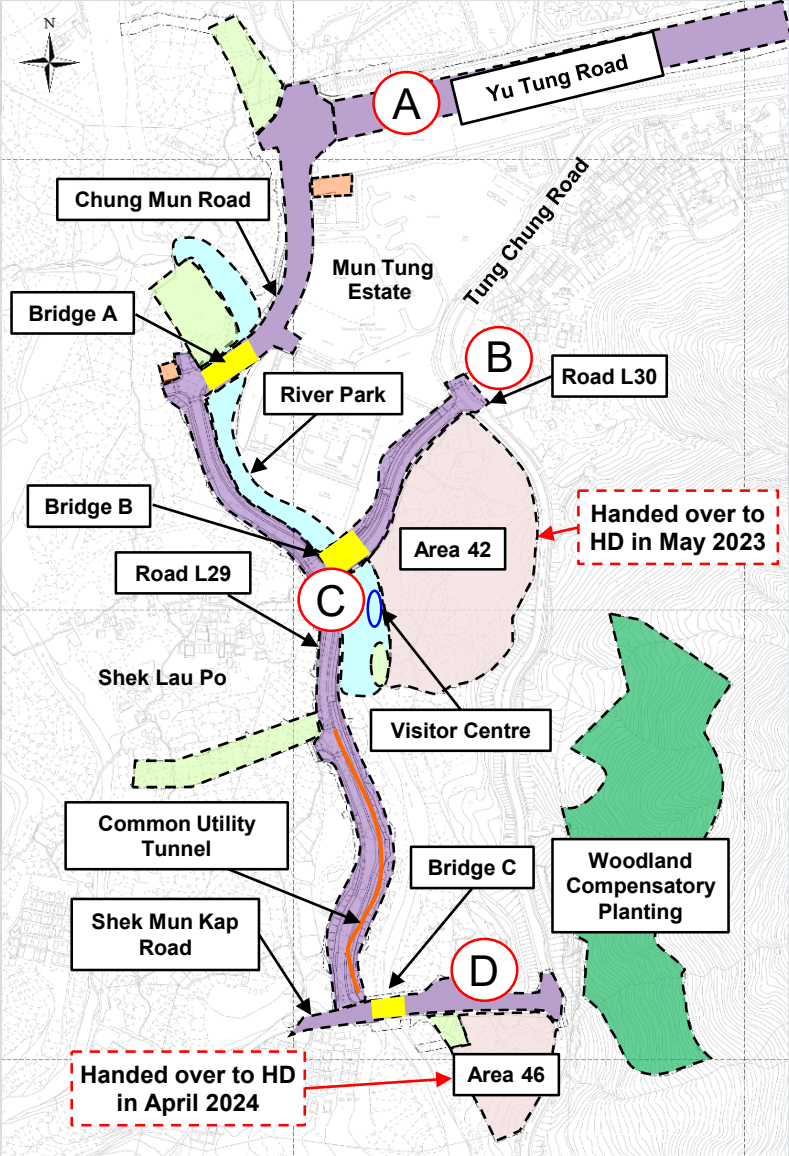
**Contract Period : May 2021 to 2025**

**Major activities in coming three months :-**

- Construction of underground utilities and road works at Yu Tung Road, Chung Mun Road, Road L29, Road L30 & Shek Mun Kap Road
- Construction of sewage pumping stations
- Construction of Common Utility Tunnel
- Construction of River Park and Visitor Centre
- Construction of bridges



# Contract No. NL/2020/06 – Site Progress





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# Tung Chung West

## c) Environmental Monitoring and Audit



# Management Organisation



# Major Components of EM&A for the Project in TCW

*Environmental Submissions to be made before and during the construction including:*

- Complaint Management Plan
- Waste Management Plan
- Plan on Provision of Buffer Zones
- River Park Plan
- Habitat Enhancement and Translocation Plan for Amphibian Species of Conservation Importance
- Detailed Preservation and/or Translocation Plan for Plant Species of Conservation Importance
- Detailed Compensatory Woodland Planting Plan
- Plan for Review of Use of New Low Noise Road Surfacing Material(s)

*Environmental Monitoring during the construction stage:*

- Air Quality Monitoring
- Noise Monitoring
- Stream Water Quality Monitoring
- Ecology Monitoring (Stream Water, Fish Species and Aquatic Invertebrates)
- Regular Site Inspection

# Environmental Mitigation Measures for Construction Activities



Water spraying via sprinklers at main access road



Wheel washing facility at the site exit



Water spraying by water truck along haul road



Covering excavated stockpiles by impervious sheeting

# Environmental Mitigation Measures for Construction Activities (Cont'd)



Deployment of noise barrier

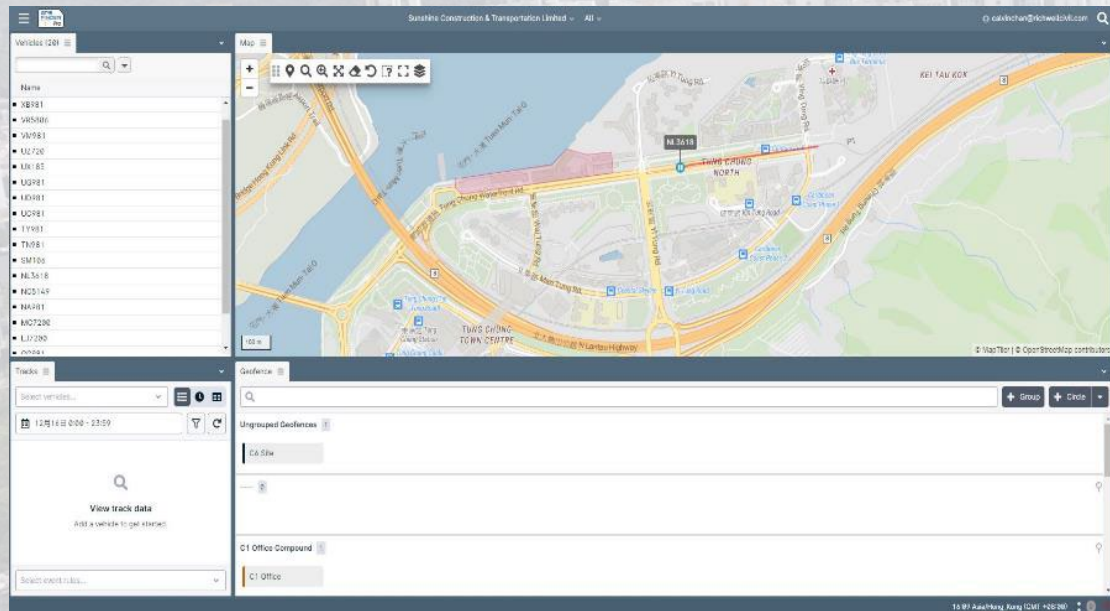


Concrete breaking by quieter method  
(Rock Splitter)

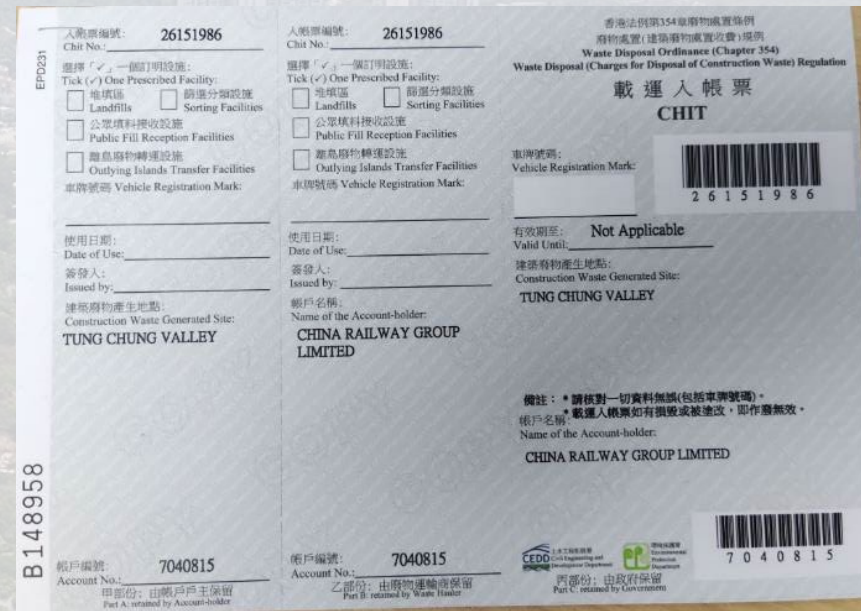


Wastewater treatment facility

# Environmental Mitigation Measures for Construction Activities (Cont'd)



Realtime tracking on the travelling routes of dump trucks



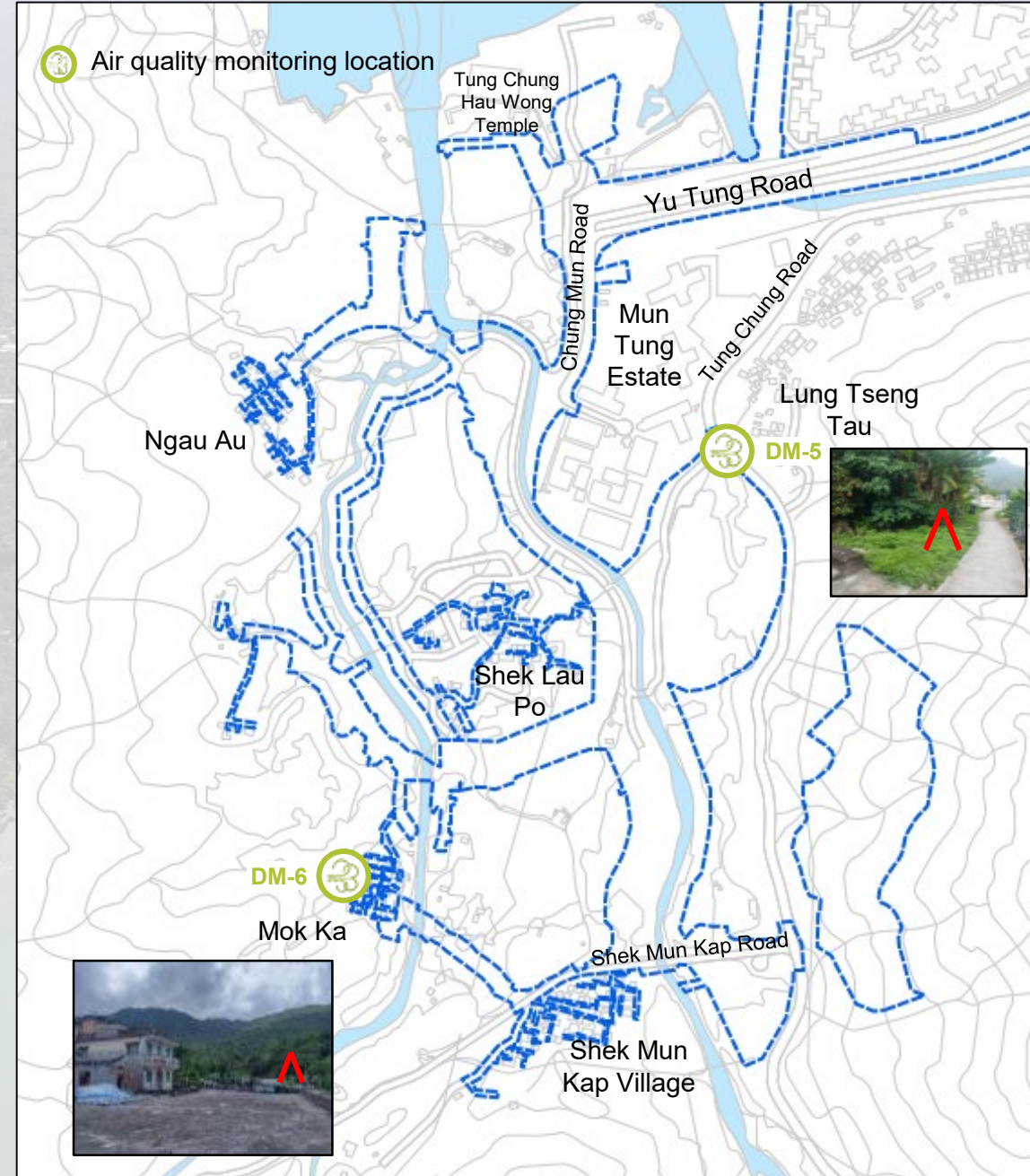
CHIT for waste disposal

# EM&A Monitoring – Air Quality

ID	Description	Monitoring Parameter	Monitoring Frequency
DM-5	Lung Tseng Tau	1-hr TSP	Three times every six days
DM-6	Mok Ka		

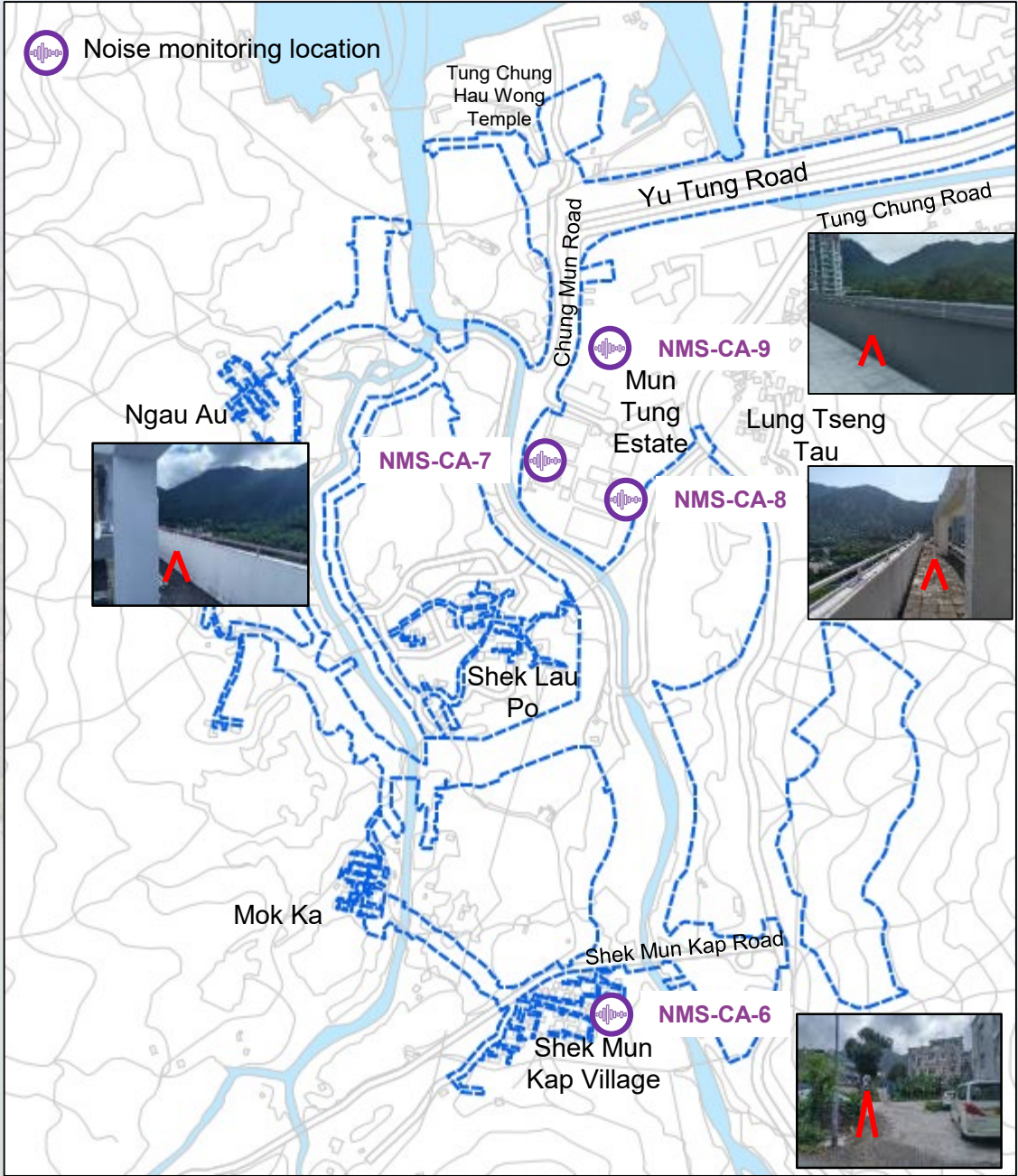
Monitoring Results from Mar 2024 to Aug 2024

No exceedance was recorded



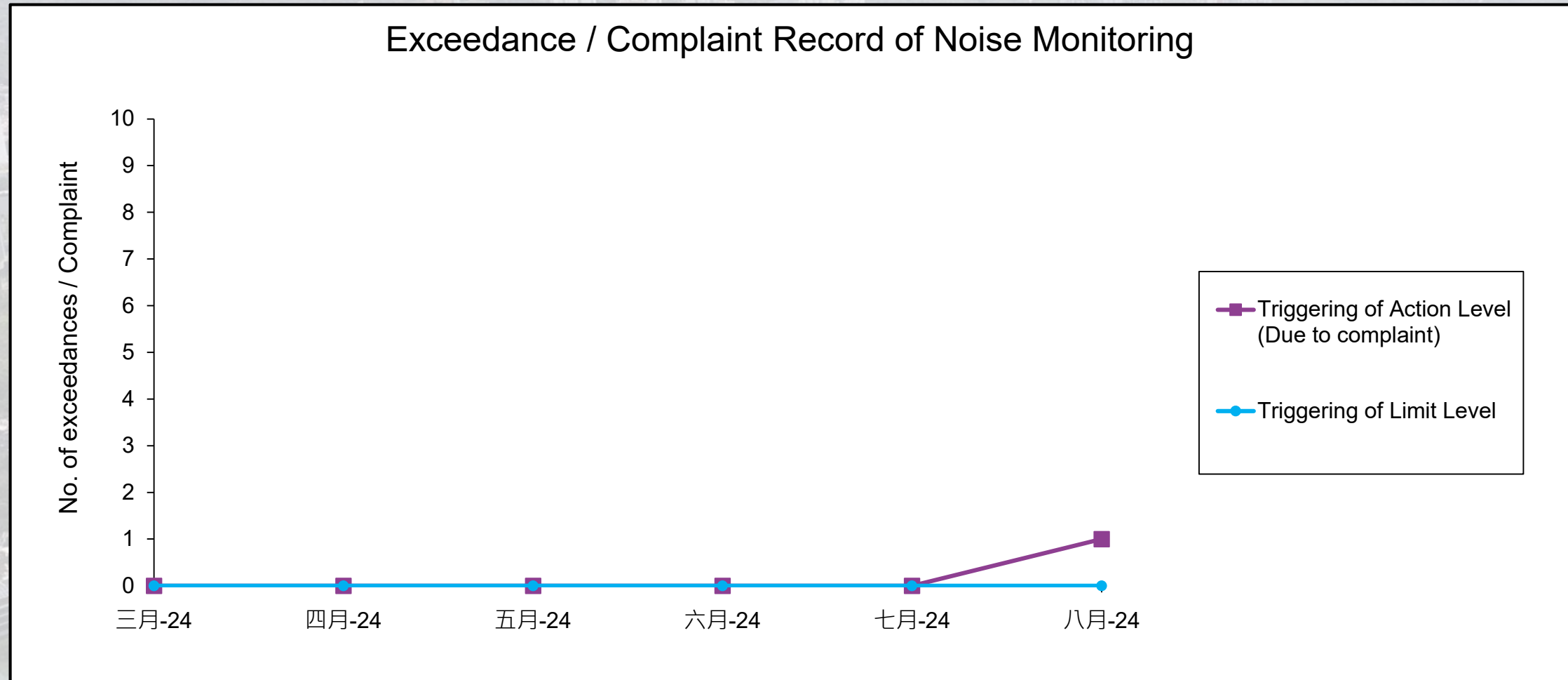
# EM&A Monitoring – Noise

ID	Description	Monitoring Parameter	Monitoring Frequency
NMS-CA-5	Village house in Ma Wan Chung	A-weighted equivalent continuous sound pressure level $L_{eq}$	Once per week
NMS-CA-6	Village house in Shek Mun Kap		
NMS-CA-7	YMCA of Hong Kong Christian College		
NMS-CA-8	Caritas Charles Vath College (Roof Floor)		
NMS-CA-9	Hong Chi Shiu Pong Morninghope School (Roof Floor)		



# EM&A Monitoring – Noise

Statistics of Exceedance from Mar 2024 to Aug 2024





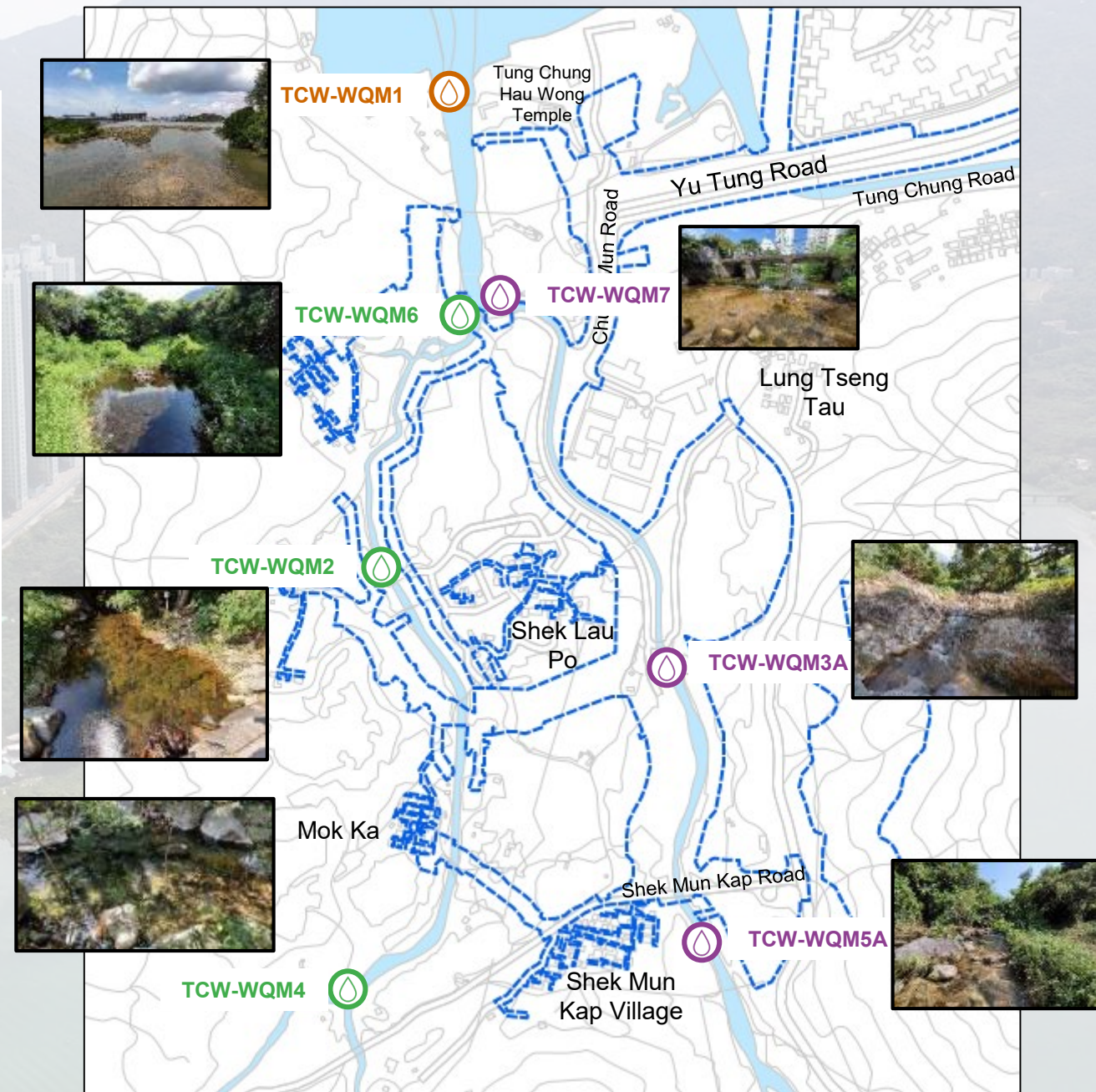
1. Exceedance as recorded in the reporting period was due to the receipt of noise complaint.
2. No measurement exceedance in noise was recorded.
3. The implementation of environmental mitigation measures by Contractor was in general satisfactory and no deficiencies in practices were observed.



# EM&A Monitoring – Water Quality

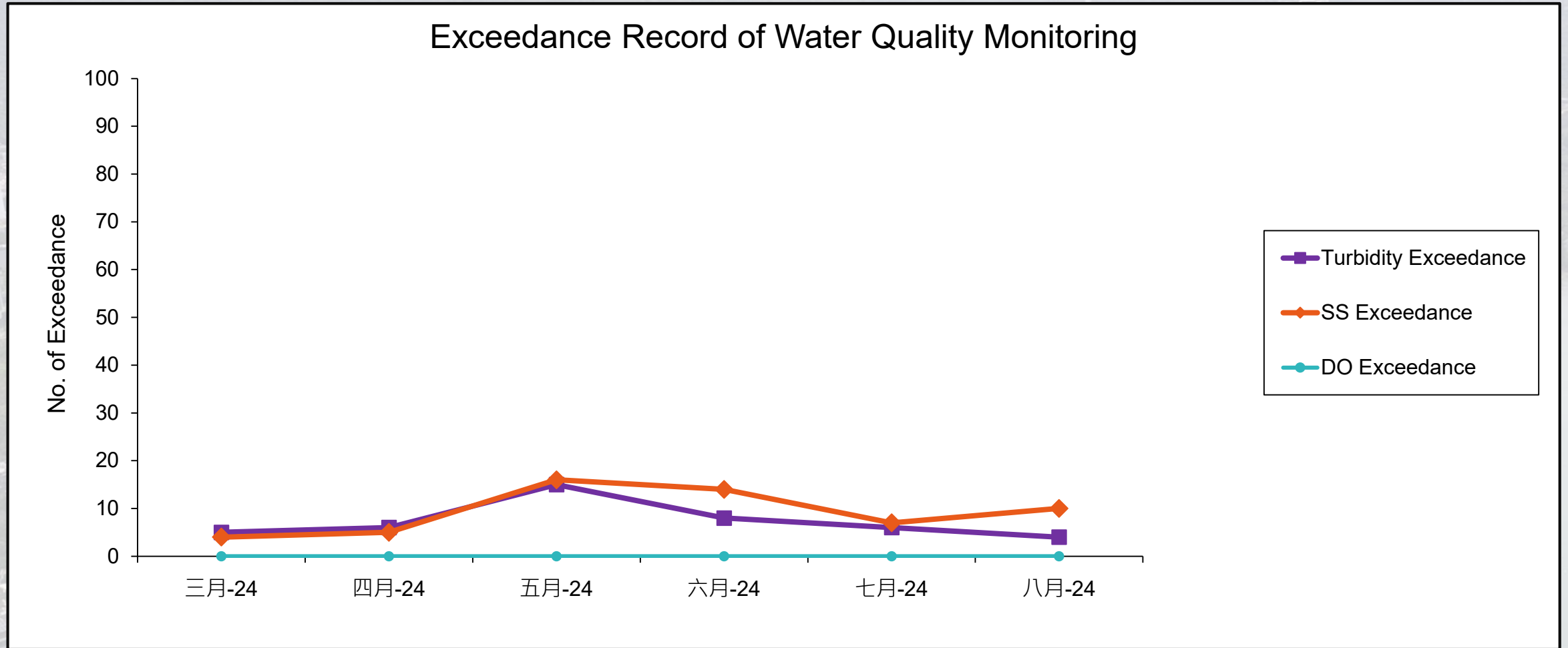
ID	Description	Monitoring Parameter	Monitoring Frequency
TCW-WQM-1	Downstream of Tung Chung Stream	<ul style="list-style-type: none"> <li>• Temperature</li> <li>• Salinity</li> <li>• Conductivity</li> <li>• pH</li> <li>• Dissolved Oxygen</li> <li>• Turbidity</li> <li>• Suspended Solids</li> </ul>	3 days per week
TCW-WQM-2	Middle of Tung Chung Stream (West)		
TCW-WQM-3A	Middle of Tung Chung Stream (East)		
TCW-WQM-4	Upstream of Tung Chung Stream (West)		
TCW-WQM-5A	Upstream of Tung Chung Stream (East)		
TCW-WQM-6	Downstream of Tung Chung Stream (West)		
TCW-WQM-7	Downstream of Tung Chung Stream (East)		

-  Stream water quality monitoring location (River Mouth)
-  Stream water quality monitoring location (West Tributary)
-  Stream water quality monitoring location (East Tributary)



# EM&A Monitoring – Water Quality

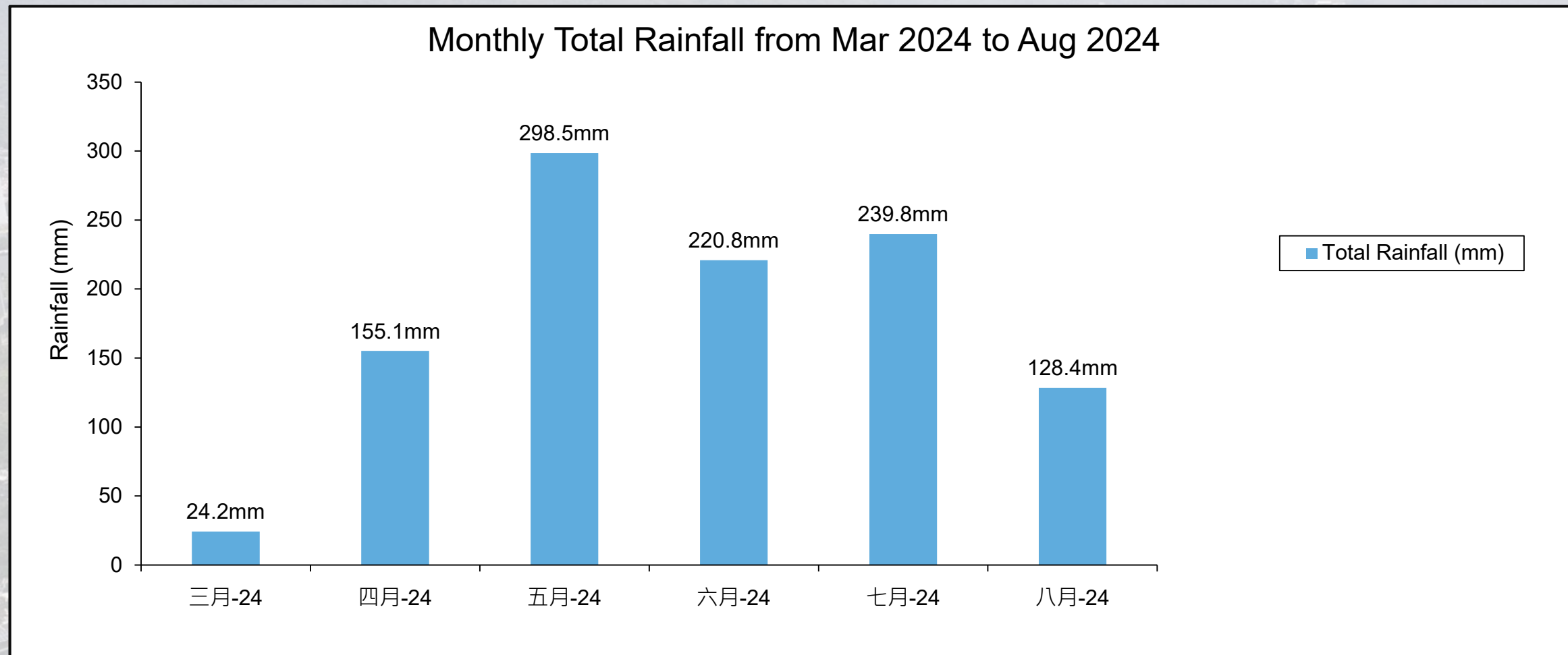
Statistics of Exceedance from Mar 2024 to Aug 2024



1. Impact monitoring is carried out at seven stations for three times per week.
2. Exceedances as recorded in the reporting period were mainly due to the inclement weather.
3. The implementation of environmental mitigation measures by Contractor was in general satisfactory and no deficiencies in practices were observed.

# EM&A Monitoring – Water Quality

Statistics of Exceedance from Mar 2024 to Aug 2024



Note: Monthly rainfall data was extracted from the manned weather station located at Hong Kong International Airport by Hong Kong Observatory.

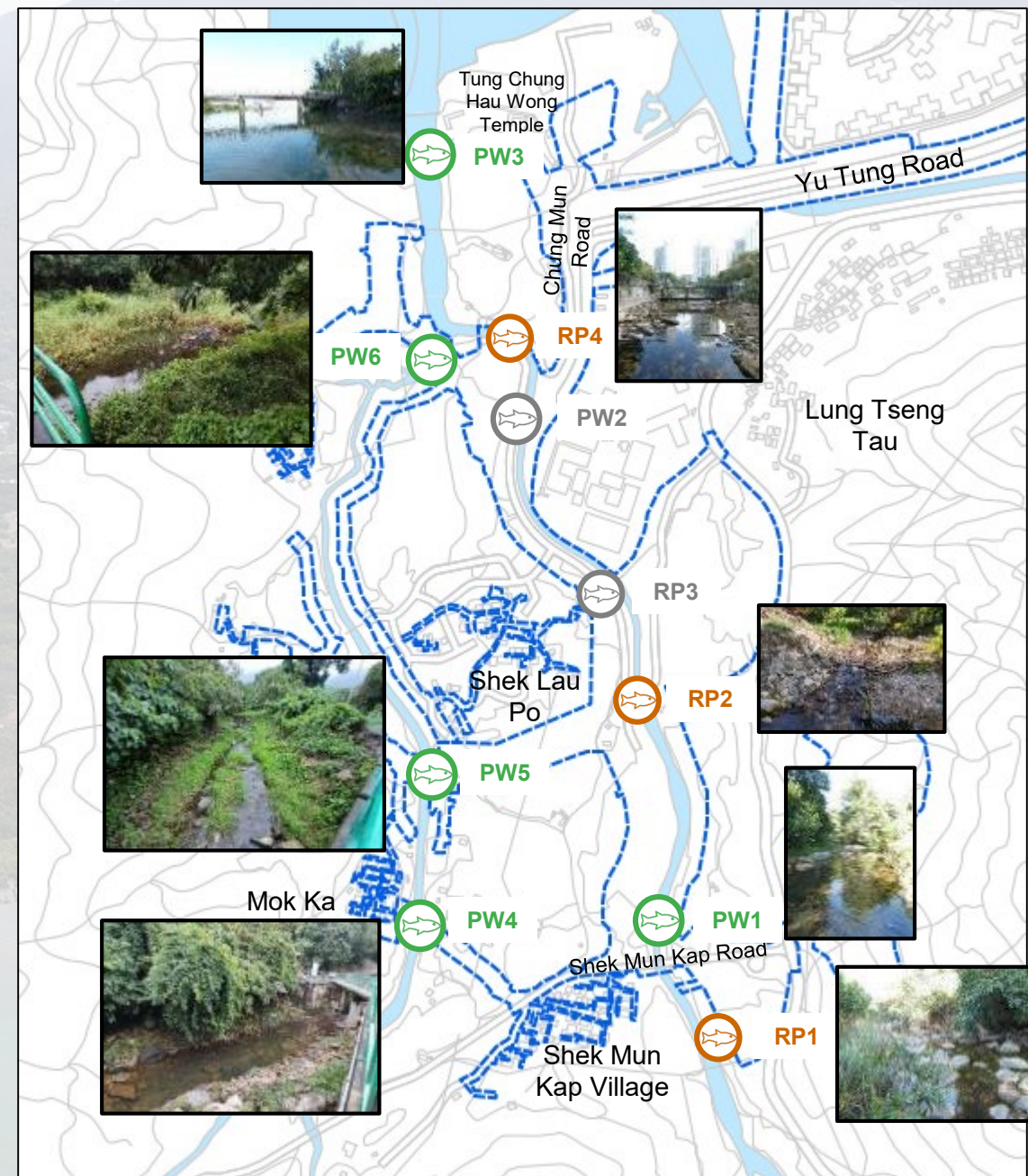
# EM&A Monitoring – Ecology

ID	Description	Monitoring Parameter	Monitoring Frequency
RP1	Conservation Zone (Natural Section)	<ul style="list-style-type: none"> <li>Water Quality <sup>[Note]</sup></li> <li>Taxa diversity of Fish Species and Aquatic Invertebrate</li> </ul>	Once per month
RP2	Upstream of River Park		
RP3	Revitalisation Zone (Channelised Section)		
RP4	Downstream of River Park		
PW1	Near Public Works		
PW2	Near Public Works		
PW3	Near Public Works		Baseline monitoring was completed in Mar 2024
PW4	Near Public Works		
PW5	Near Public Works		
PW6	Near Public Works		

Notes:

- pH
- Salinity
- Temperature
- Turbidity
- Dissolved Oxygen
- Suspended Solids
- Ammonia as N
- Total Kjeldahl Nitrogen
- E. Coli
- Biochemical Oxygen Demand
- Chemical Oxygen Demand
- Oil & Grease

Ecological Monitoring at the monitoring station RP3 and PW2 were suspended since March 2023 with the commencement of temporary river diversion in Tung Chung Stream.

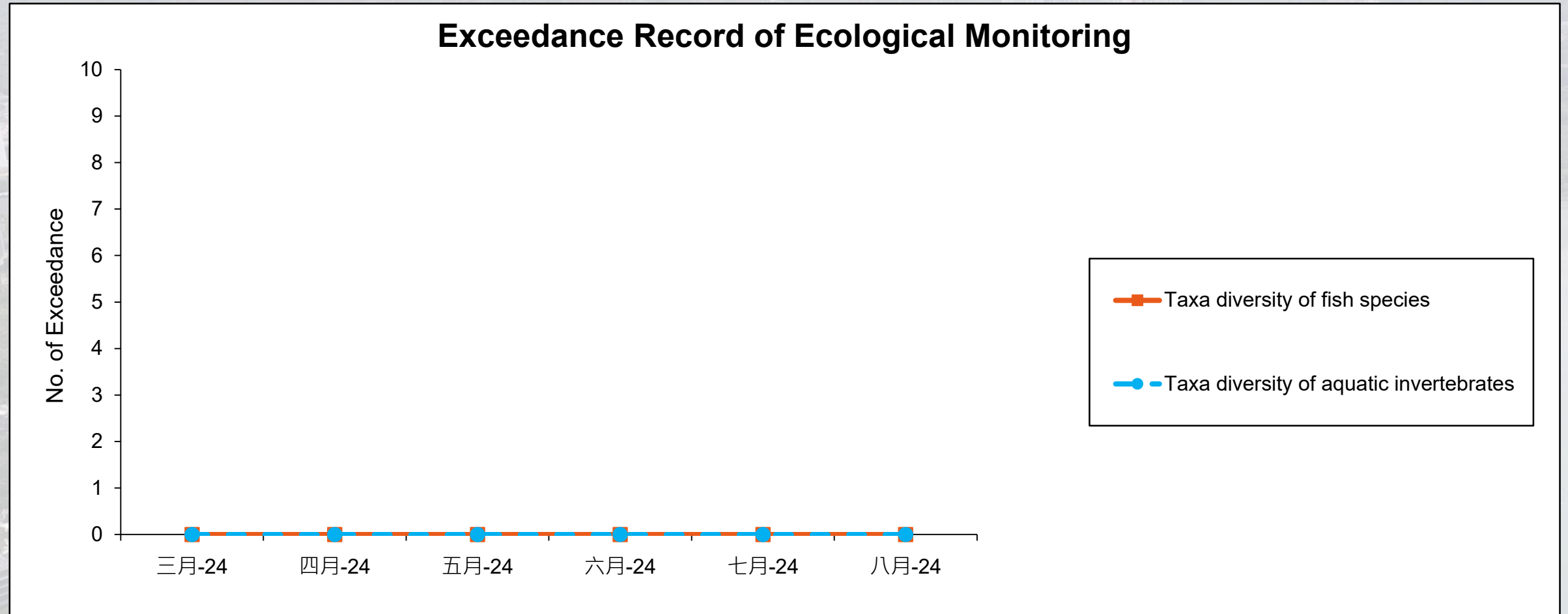


Ecological monitoring location for other public works

Ecological monitoring location for the proposed River Park

# EM&A Monitoring – Ecology

Statistics of Exceedance from Mar 2024 to Aug 2024



No Exceedance

# Complaint Received

Month	Air	Noise	Water	Others (Waste, Ecology, Landscape and Visual)
Mar-2024	0	0	1	0
Apr-2024	1	0	1	0
May-2024	0	0	0	0
Jun-2024	3	0	0	0
Jul-2024	0	0	0	0
Aug-2024	0	1	1	0
Sep-2024	0	1	0	0
Nature of Complaints	<ul style="list-style-type: none"> <li>Construction dust from construction sites near YHKCC and Yu Tung Road</li> </ul>	<ul style="list-style-type: none"> <li>Chung Yan Road construction site</li> <li>Site Office of TCW</li> </ul>	<ul style="list-style-type: none"> <li>Suspected discharge at Tung Chung Stream</li> <li>Muddy water at Shek Mun Kap Road</li> </ul>	



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**THANK YOU**