

# Tung Chung New Town Extension



10<sup>th</sup> PLG Meeting  
Date : 16 April 2024



土木工程拓展署  
CIVIL ENGINEERING AND  
DEVELOPMENT DEPARTMENT

可持續大嶼辦事處  
SUSTAINABLE LANTAU OFFICE

# Agenda

1. Confirmation of Last Meeting Minutes
2. Tung Chung East
  - a) Matters Arising from Last Meeting
  - b) Overview and Progress
  - c) Environmental Monitoring and Audit (EM&A)
3. Tung Chung West
  - a) Matters Arising from Last Meeting
  - b) Overview and Progress
  - c) Environmental Monitoring and Audit (EM&A)
4. AOB

# 1. Confirmation of Last Meeting Minutes

## 2. Tung Chung East

### a) Matters Arising from Last Meeting

# Response to Comment

- ❑ S.4.1.3: *“A member suggested to review the mesh size of the oyster bag to allow marine organisms entering and leaving the oyster bag at various stages of life cycle. As for material of the oyster bag, the use of decomposable materials such as **hemp rope or thin stainless-steel wire** was recommended.*
  - Hemp net oyster bag, with opening of 25mm, is adopted on site.
  
- ❑ S.4.1.4: *“Members suggested to install **temperature loggers** (e.g. temperature sensing i-Buttons) at the tidal pools of rocky eco-shoreline to monitor the temperature profile of the different rock pool design especially during summer period.*
  - The temperature loggers would be installed in May 2024 for monitoring the temperature starting from this summer.

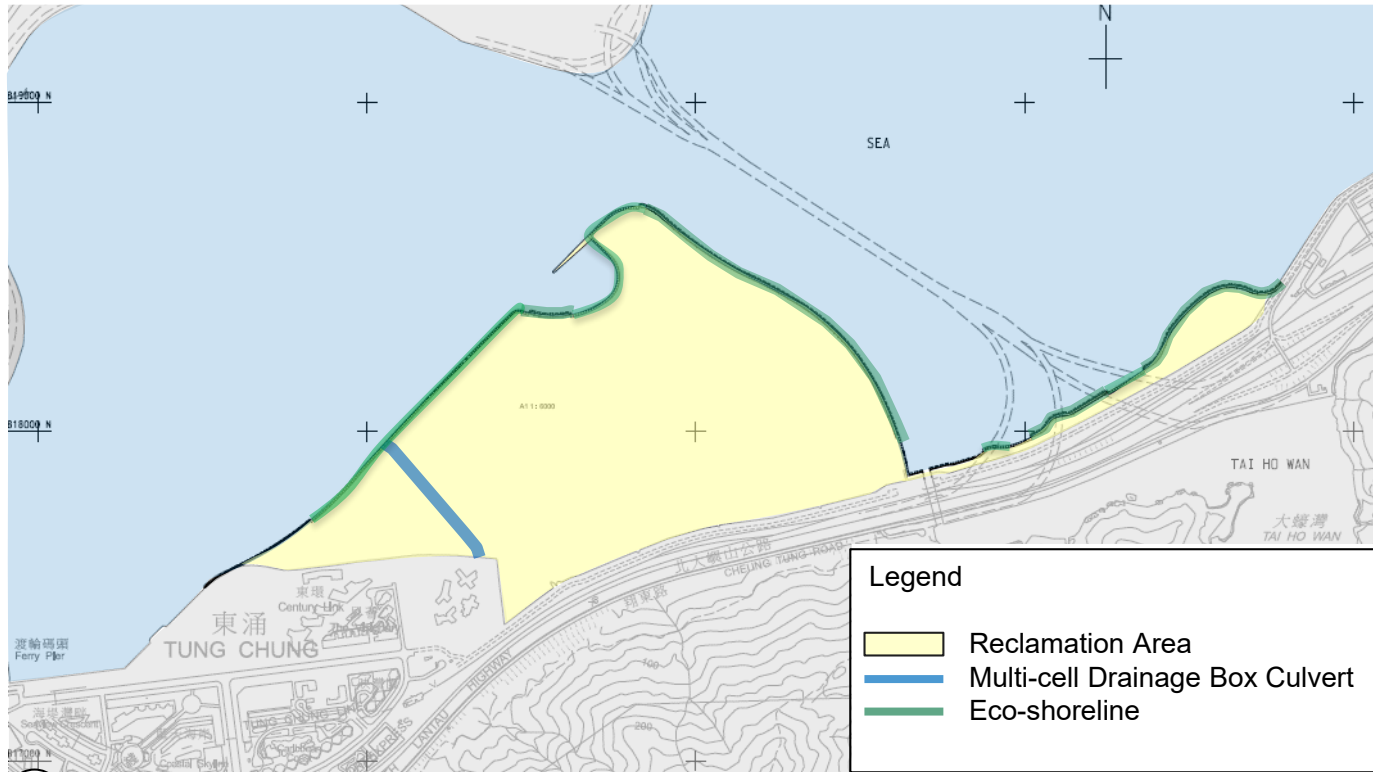
# Response to Comment

- S.4.2.4: “A member advised that EPD has developed a **Centralised Environmental Database** for environmental and ecological data as part of the optimization of the EIAO Process and enquired whether the EM&A data of horseshoe crab of the Tung Chung New Town Extension project could be incorporated into the database.
- To ensure a high degree of transparency regarding the monitoring data and results in view of the public concern about the Project, all environmental monitoring and audit data and results and all submissions and all performance test data and results required by this Permit shall be made available by the Permit Holder to the public through a dedicated website to be set up by the Permit Holder (EP condition 3.7 / 4.2).
- After further discussion with EPD on the Centralised Environmental Database, EPD acknowledged that relevant data for Tung Chung New Town Extension project is already made available through EP submissions, Monthly EM&A reports, and the dedicated website. As the database is currently managed by EPD solely, EPD is under consideration on the incorporation of the information into the database. CEDD will keep on follow up with EPD for the data incorporation.

## 2. Tung Chung East

### b. Overview and Progress

# Tung Chung East Reclamation



- ① 130 hectares land reclamation by non-dredged method
- ② Construction of 4.9 km seawalls partly with eco-shorelines (3.8km)
- ③ Construction of 470m extension of multi-cell drainage box culvert



# Vertical Eco-shoreline



General View of Vertical Eco-shoreline



Creatures observed

# Mangrove and Rocky Eco-shoreline



Creatures observed at Rocky Eco-shoreline



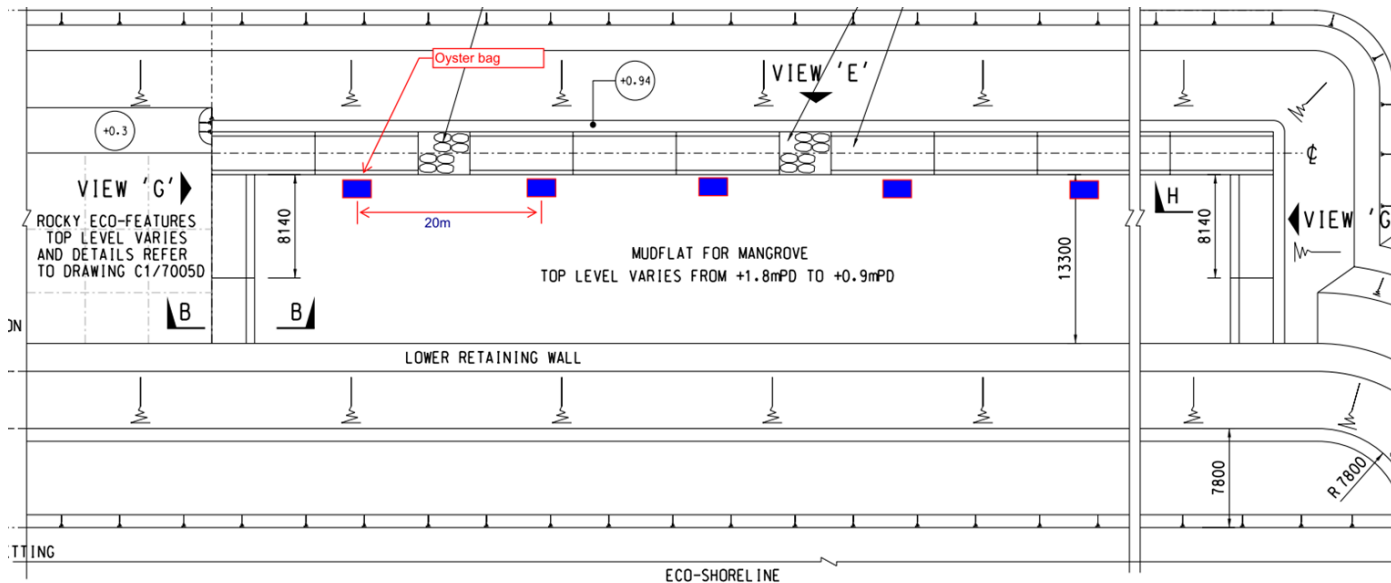
Creatures observed at Mangrove Eco-shoreline

# Oyster Bags at Lower Terrace of Mangrove Eco-shoreline

Oyster bags



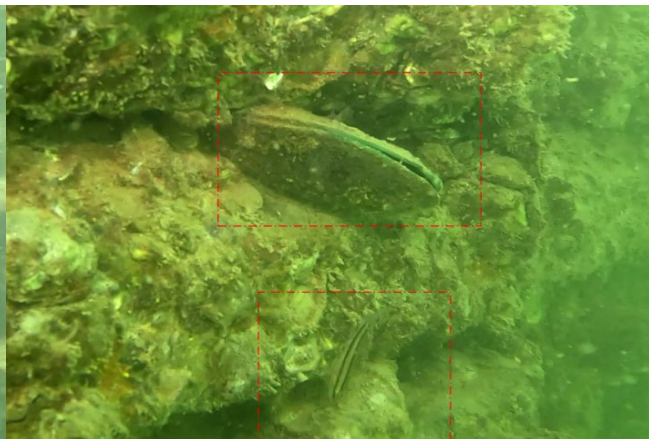
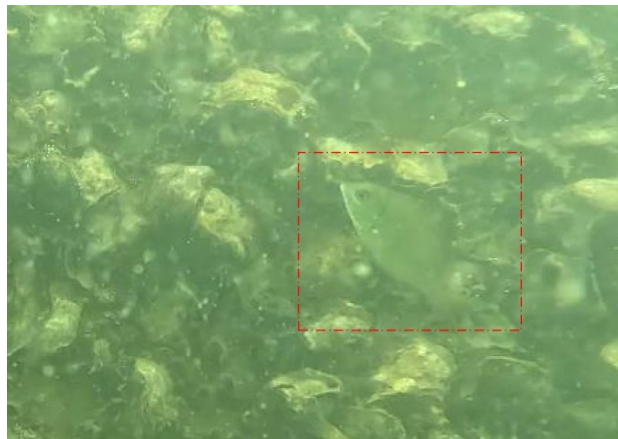
- 5 x Oyster bags at each location
- 25mm mesh size hemp net
- Approx. 40 locations at 20m interval
- Completed



# Underwater Drone Monitoring at Eco-shoreline

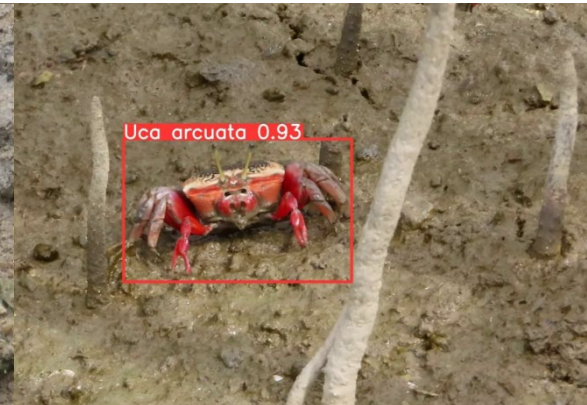
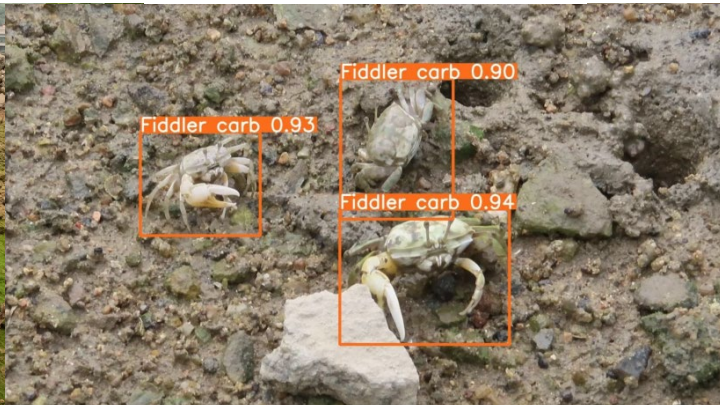


Underwater Drone Equipment



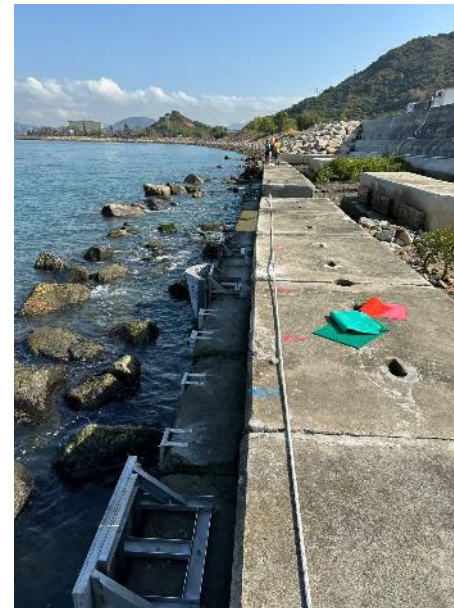
Sighted Marine Creatures

# AI Based Eco-shoreline Habitat Monitoring



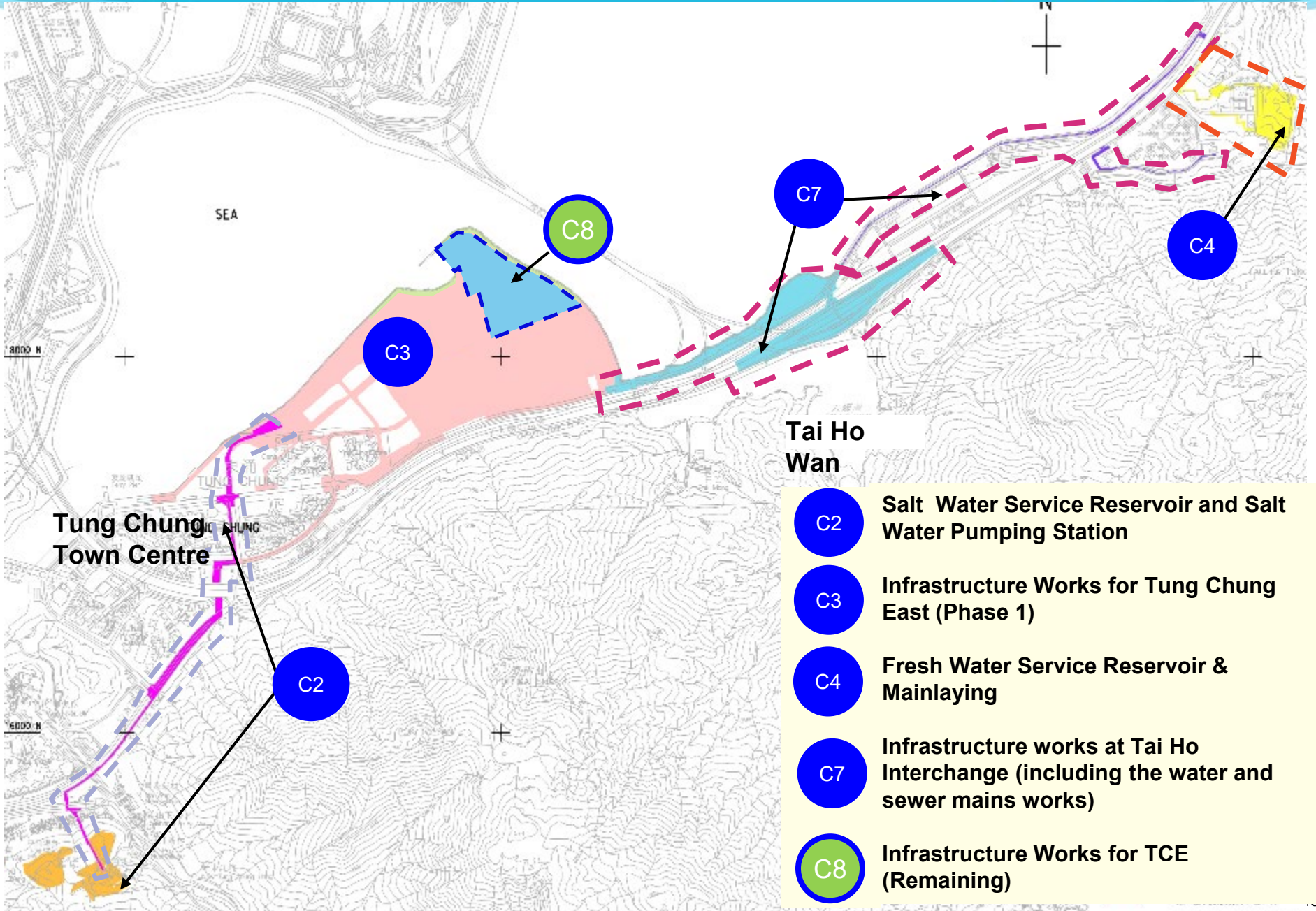
Creatures Detected at Mangrove Eco-shoreline

# Eco-Engineered Panels installation for PolyU/CityU at Eco-shoreline SHW trial site

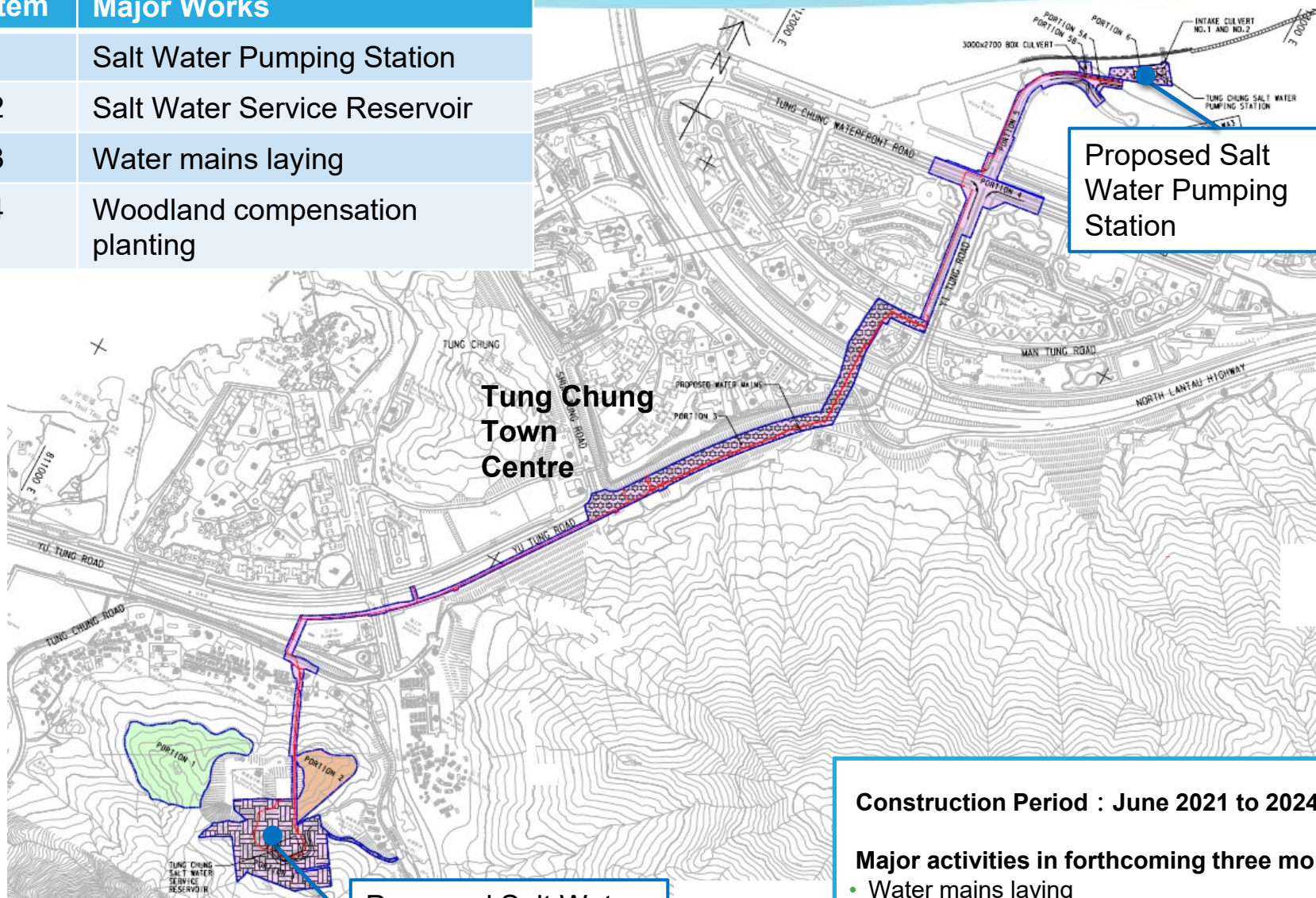


- A total of 28 eco-engineered panels of sizes 1mx1m and 0.25mx0.25m were installed in early February 2024 to facilitate PolyU/CityU's research works.

# Tung Chung East Infrastructure



Item	Major Works
1	Salt Water Pumping Station
2	Salt Water Service Reservoir
3	Water mains laying
4	Woodland compensation planting



Proposed Salt Water Pumping Station

Proposed Salt Water Service Reservoir

**Construction Period : June 2021 to 2024 Q4**

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

- Water mains laying
- Construction of Salt Water Pumping Station
- Construction of Salt Water Service Reservoir



## Salt Water Pumping Station (SWPS)

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### Construction Period

2021 Q4 to 2024 Q3

### Related Works

- E&M Works
- ABWF Works



## Salt Water Service Reservoir

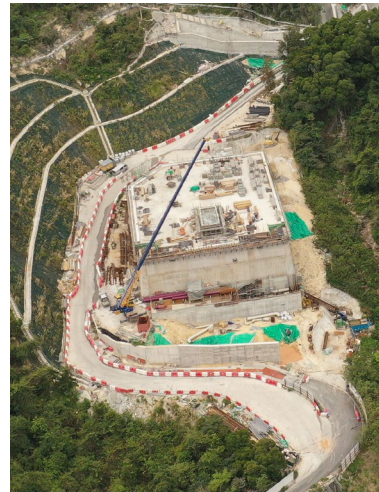
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### Construction Period

2022 Q2 to 2024 Q3

### Related Works

- Watermain Laying
- E&M Works



# Watermain Laying

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## Construction Period

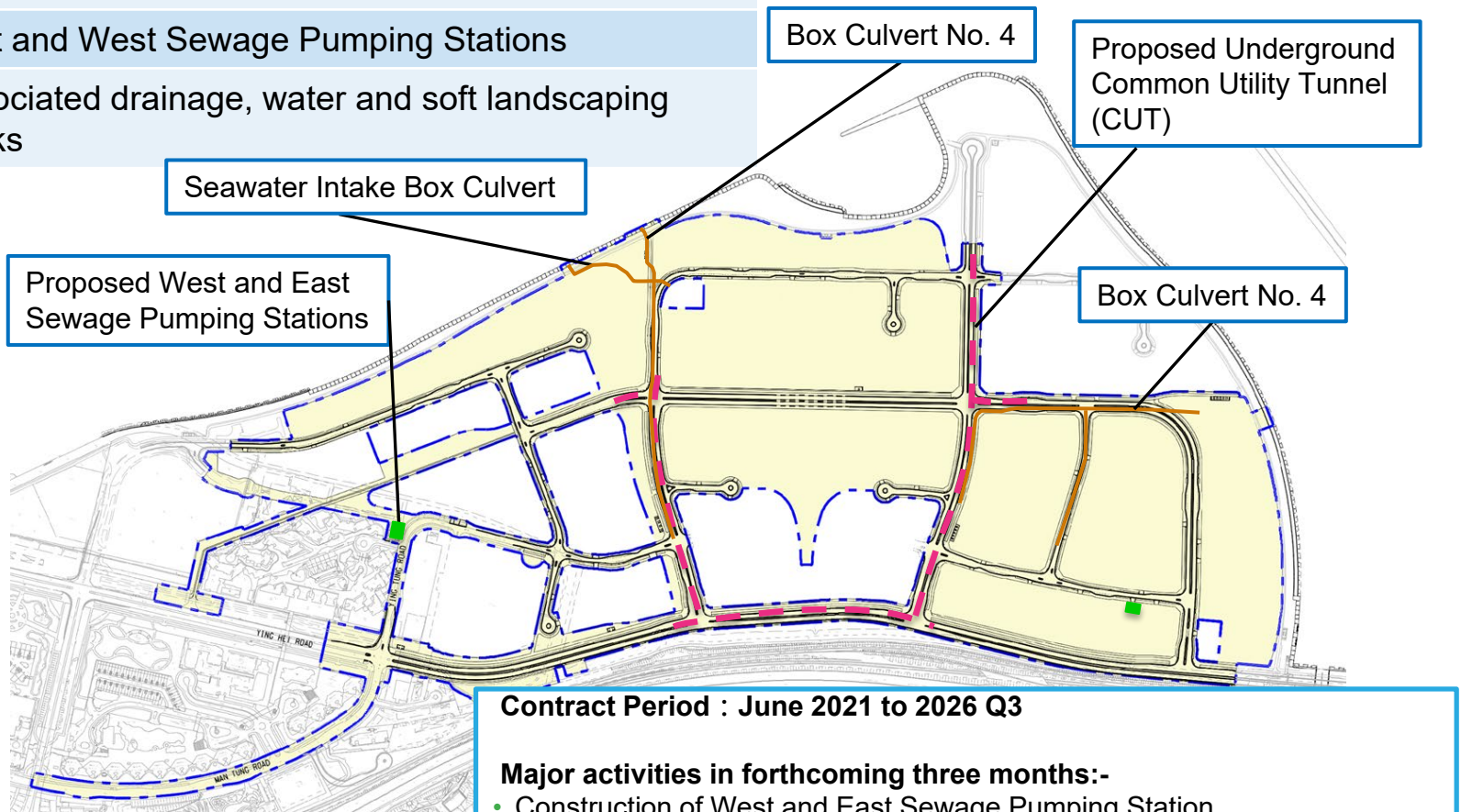
2021 Q4 to 2024 Q4

## Related Works

- TTA and traffic diversion
- Watermain Laying



Item	Major Works
1	Local road network, footpath and cycle track network
2	Road P1 connecting Tung Chung East to Pak Mong section
3	East and West Sewage Pumping Stations
4	Associated drainage, water and soft landscaping works



**Contract Period : June 2021 to 2026 Q3**

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

- Construction of West and East Sewage Pumping Station
- Construction of Common Utility Tunnel No. 1 and No. 3
- Utilities laying along Man Tung Road, Yi Tung Road, Ying Tung Road, Road L3, Road L4, Road 5, Road D4, Road L7, Road L8, Road L9
- Construction of Seawater Intake Box Culvert, Box Culvert No. 3 and No. 4

# West Sewage Pumping Station (WSPS)

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**Construction Period**  
2021 Q3 to 2024 Q2

## Related Works

- ELS works
- R.C. structures



# Common Utility Tunnel (CUT)

**Construction Period**  
2021 Q3 to 2024 Q3

## Related Works

- ELS works
- Underground R.C. structures

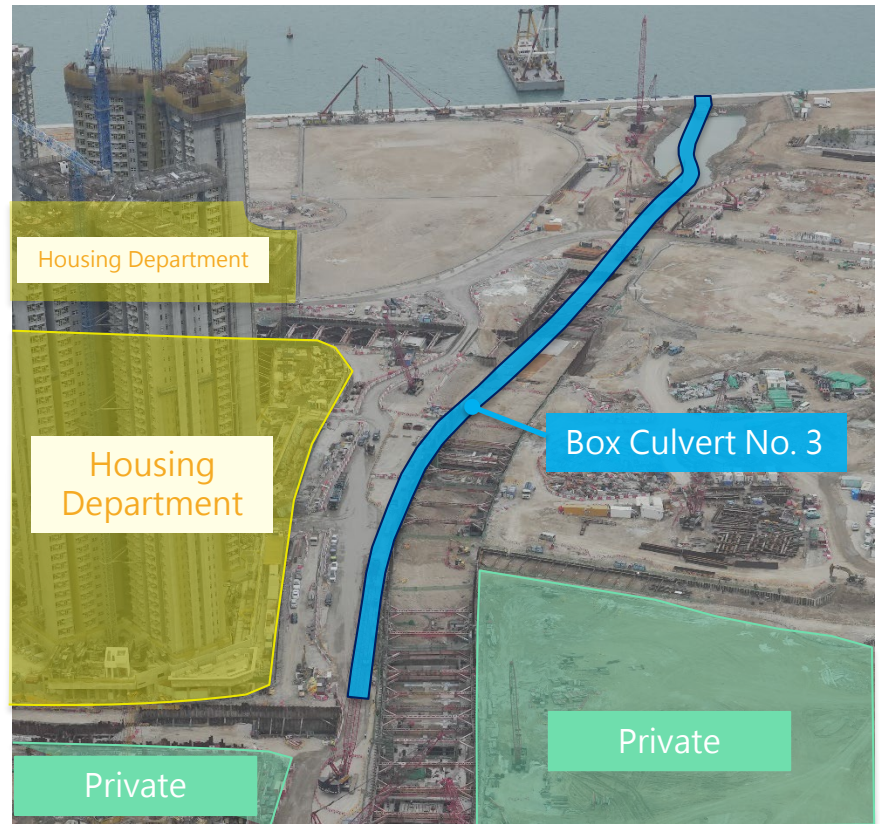


## Box Culvert No. 3

**Construction Period**  
2023 Q4 to 2024 Q3

### Related Works

- ELS works
- Precast Segments Installation
- Underground R.C. structures



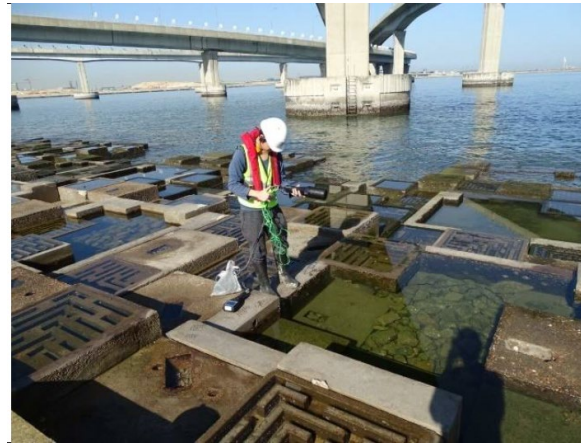
# Eco-shoreline Monitoring

## Eco-shoreline and Reference Monitoring in Dry Session:

- All the monitoring works in Dry Session were completed
- The data is under analysis



Mangrove Eco-shoreline Monitoring



Rocky Eco-shoreline Monitoring



Vertical Eco-shoreline Monitoring



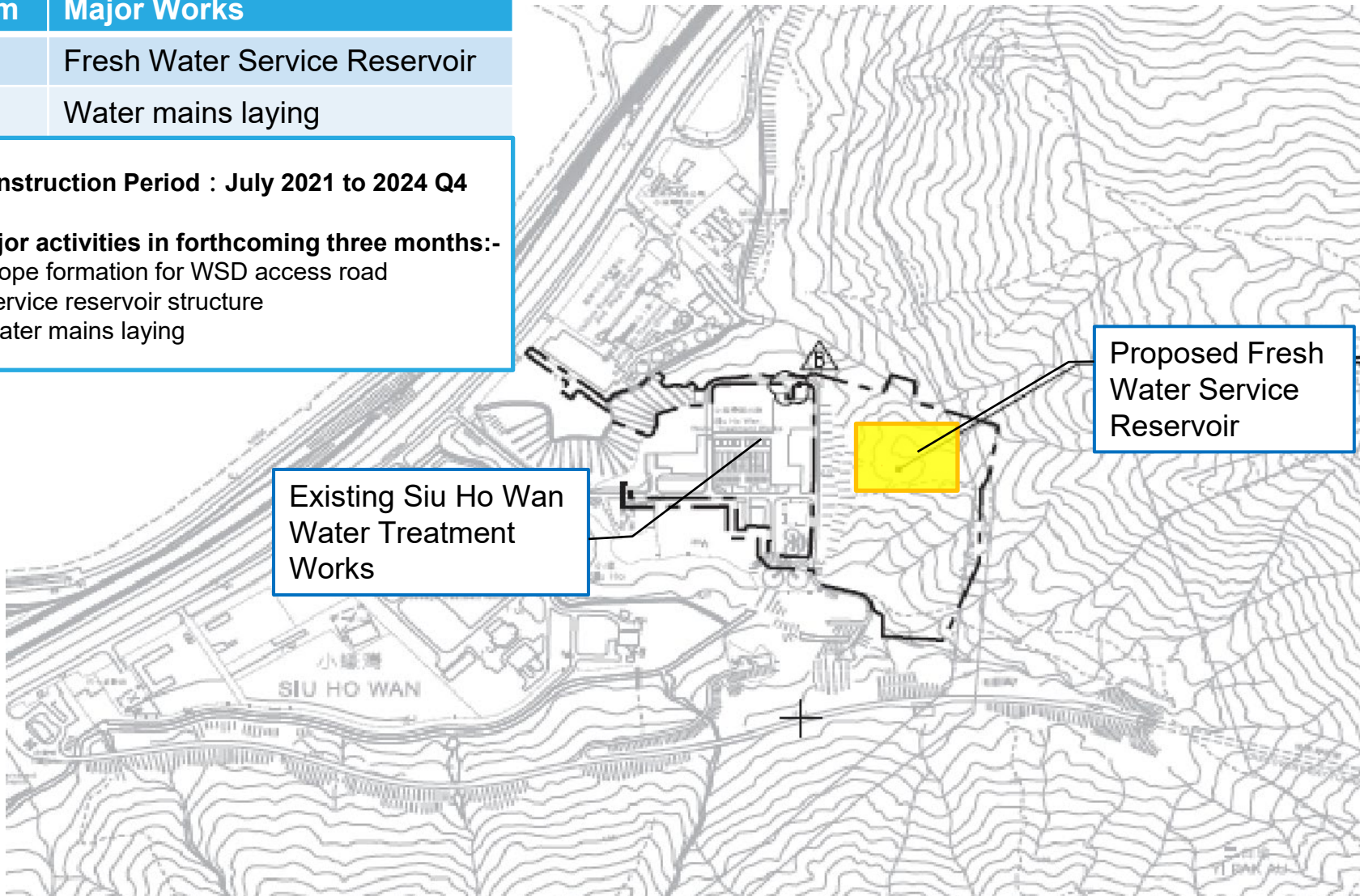
Reference Point Monitoring

Item	Major Works
1	Fresh Water Service Reservoir
2	Water mains laying

**Construction Period : July 2021 to 2024 Q4**

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

- Slope formation for WSD access road
- Service reservoir structure
- Water mains laying



Existing Siu Ho Wan  
Water Treatment  
Works

Proposed Fresh  
Water Service  
Reservoir



# Fresh Water Service Reservoir

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**Construction Period**  
2022 Q2 to 2024 Q4

## **Related Works**

- R.C. structures
- Slope works

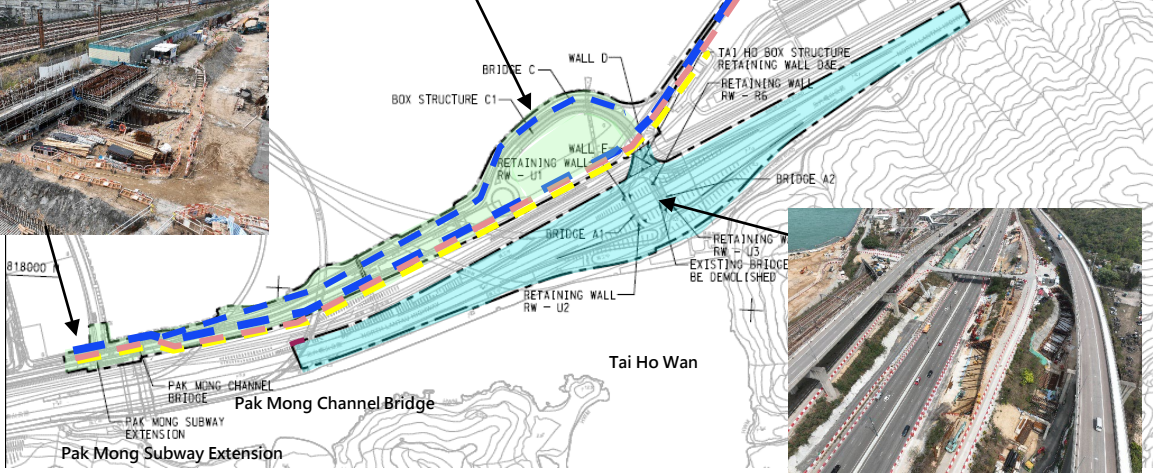
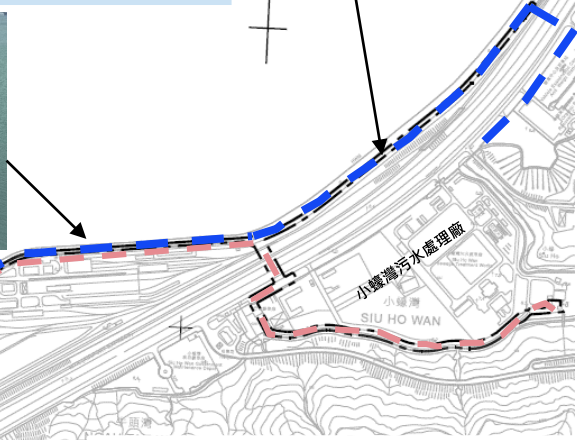
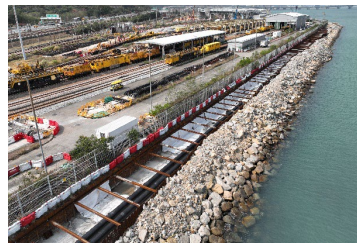


Item	Major Works
1	Construction of Tai Ho Interchange
2	Construction of a section of dual two-lane road between Tung Chung East and Tai Ho Interchange
3	Laying of fresh watermains, salt watermains and sewage rising mains



**Contract Period : Oct 2021 to 2025 Q4**  
**Major activities in forthcoming three months:-**

- Pak Mong Subway Extension
- Pak Mong Channel Bridge
- Main-Laying works
- Associated works for Tai Ho Interchange



### Legend:

- - - : Freshwater Main
- - - : Saltwater Main
- - - : Sewage Rising Main
- : Road P1 · Footpath · Cycle Track
- : Tai Ho Interchange



# Pak Mong Subway Extension

**Construction Period**  
2022 Q2 to 2025 Q4

## Related Works

- R.C. structure & Steel frame roof

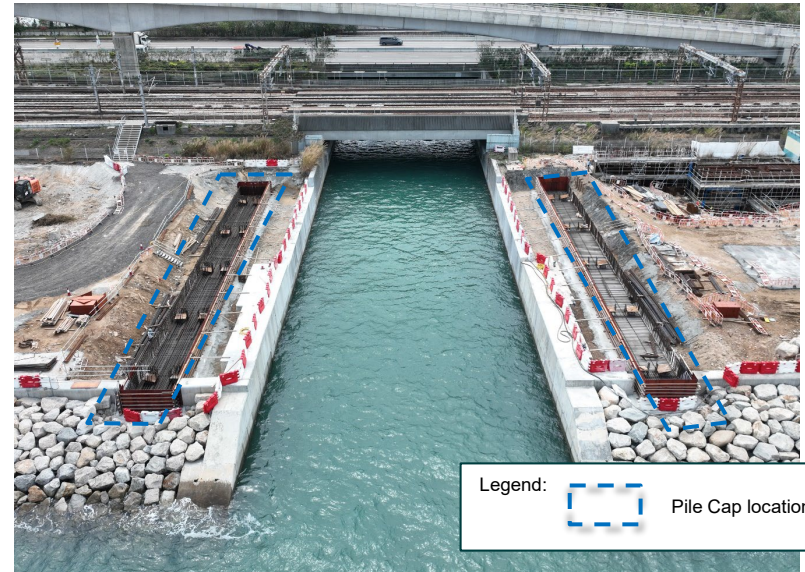


# Pak Mong Channel Bridge

**Construction Period**  
2023 Q1 to 2025 Q2

## Related Works

- Pile cap construction
- Bridge construction



## Main-laying works (Rising, Fresh and Salt Water Mains)

### Construction Period

2021 Q3 to 2024 Q3

### Related Works

- Rising Main-laying
- Fresh & Salt Water Main-laying



## Construction of Tai Ho Interchange

### Construction Period

2022 Q3 to 2025 Q4

### Related Works

- Temporary Traffic Arrangement and diversion
- Piling works
- R.C. structure
- Bridge construction



## 2. Tung Chung East

### c) Environmental Monitoring and Audit

# Dedicated Website under EP-519/2016



Website: <http://env.tcnte.hk/index-TCE.html>



## Tung Chung New Town Extension (East)

This dedicated website is set up in accordance with the requirements in the Environmental Permit (EP) (EP NO. EP-519/2016) to enable user-friendly public access of information of the Tung Chung New Town Extension (East) and the associated environmental monitoring data.

# Protection and Mitigation Measures on Construction Activities



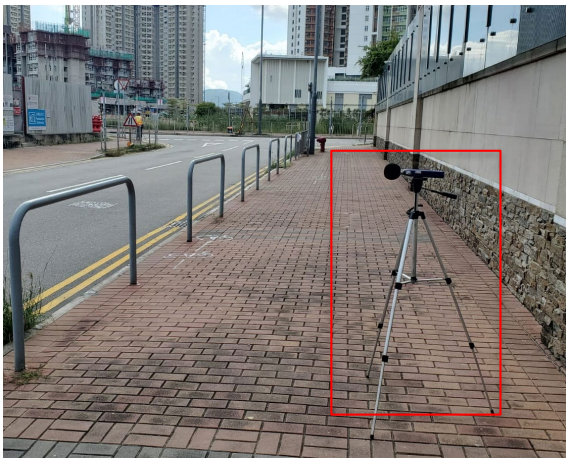
Water spraying by water truck for dust control



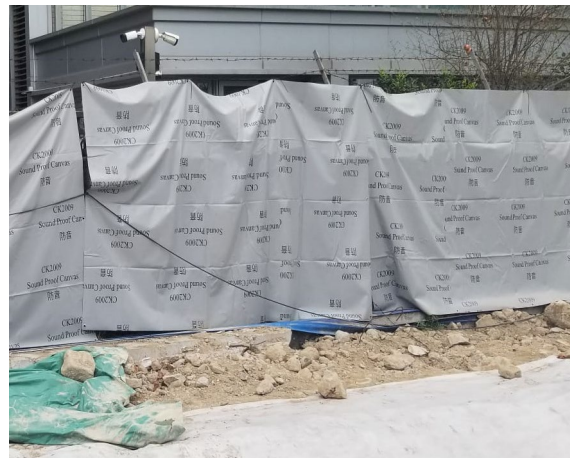
Wheel washing bay with high pressure jet



Sprinkler system



Noise monitoring



Noise barrier



Noise mitigation measures



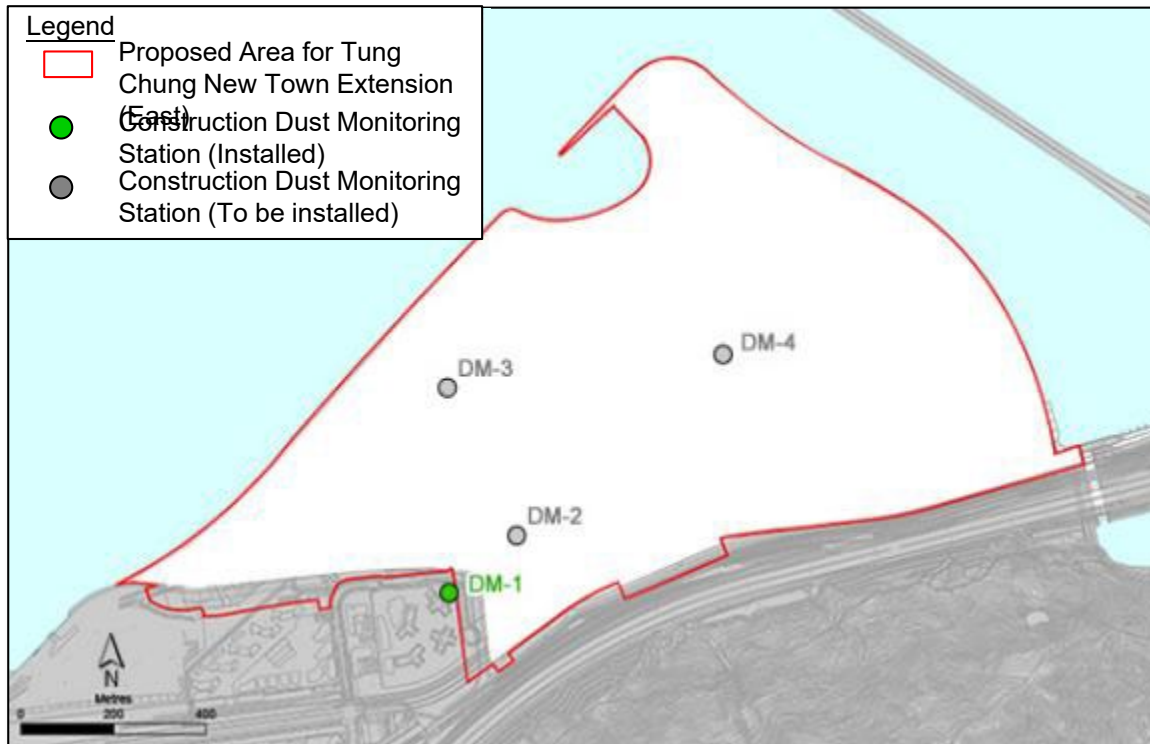


# EM&A Monitoring – Air Quality



## Air Quality Monitoring

**Frequency** Three times every six days  
**Monitoring Parameter** 1-hour Total Suspended Particulate



## Monitoring Results between Oct 2023 and Feb 2024

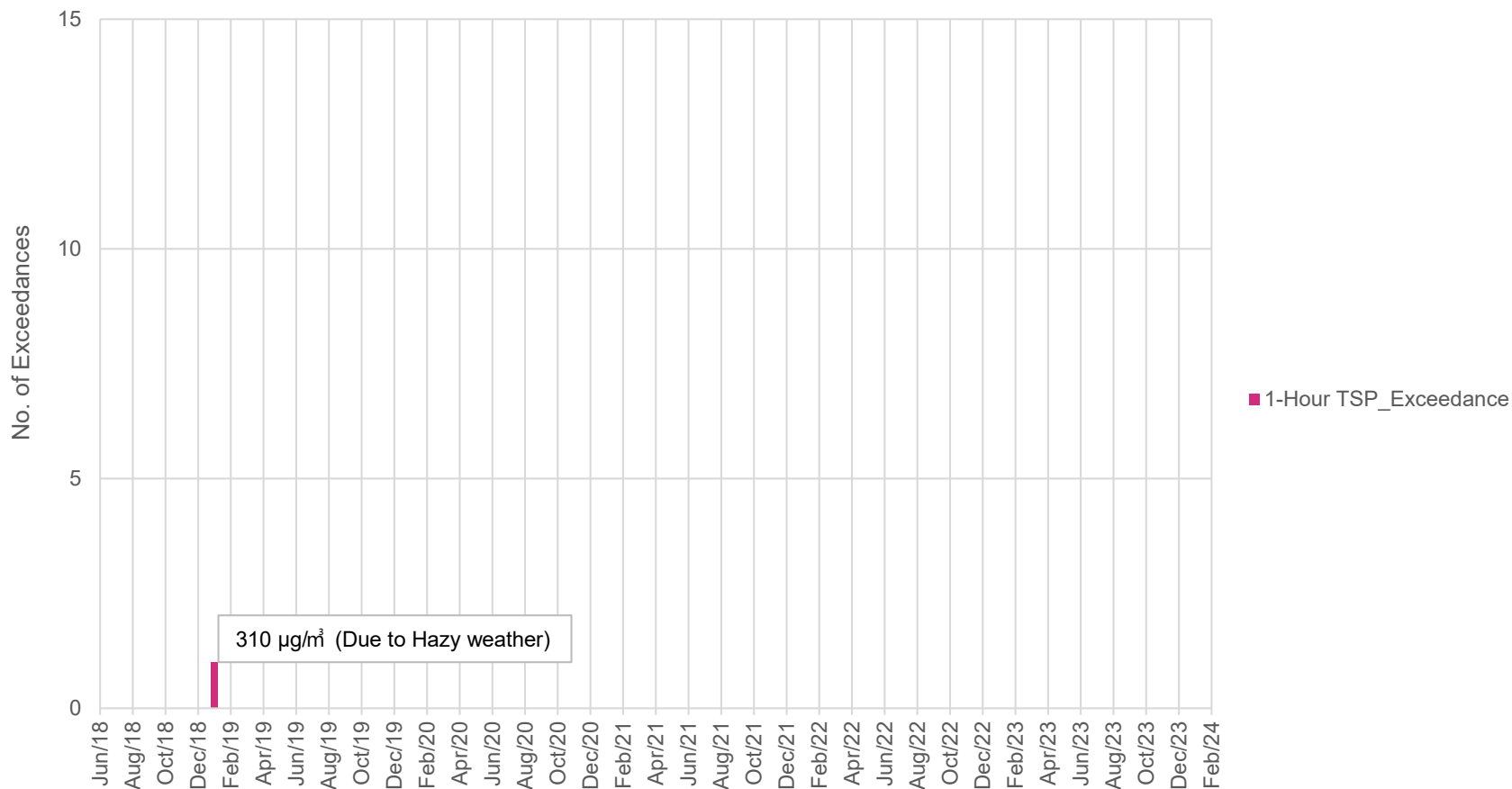
No project-related exceedance was recorded.



*Dust monitoring near Ying Tung Estate (DM-1)*

# EM&A Monitoring – Air Quality

## Tung Chung New Town Extension - Reclamation and Advance Works 1-Hour TSP Exceedance Record of Air Quality Monitoring

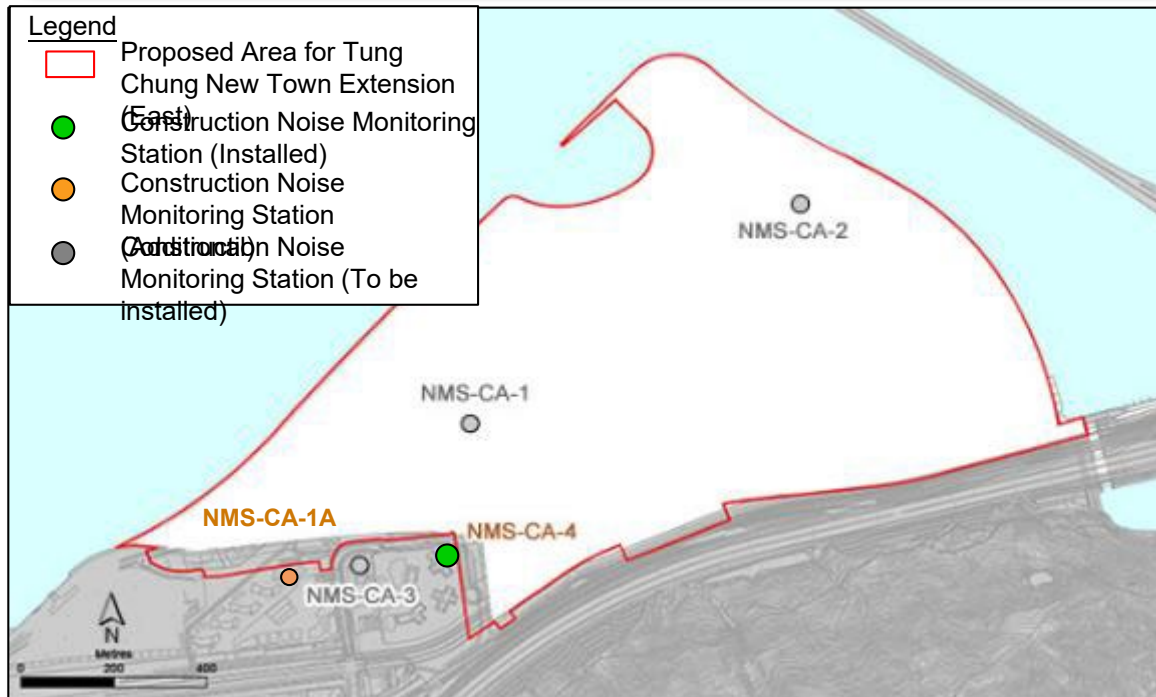


# EM&A Monitoring – Noise



## Noise Monitoring

**Frequency** Once per week  
**Monitoring Parameter**  $L_{eq}$  (30mins)



## Monitoring Results between Oct 2023 and Feb 2024

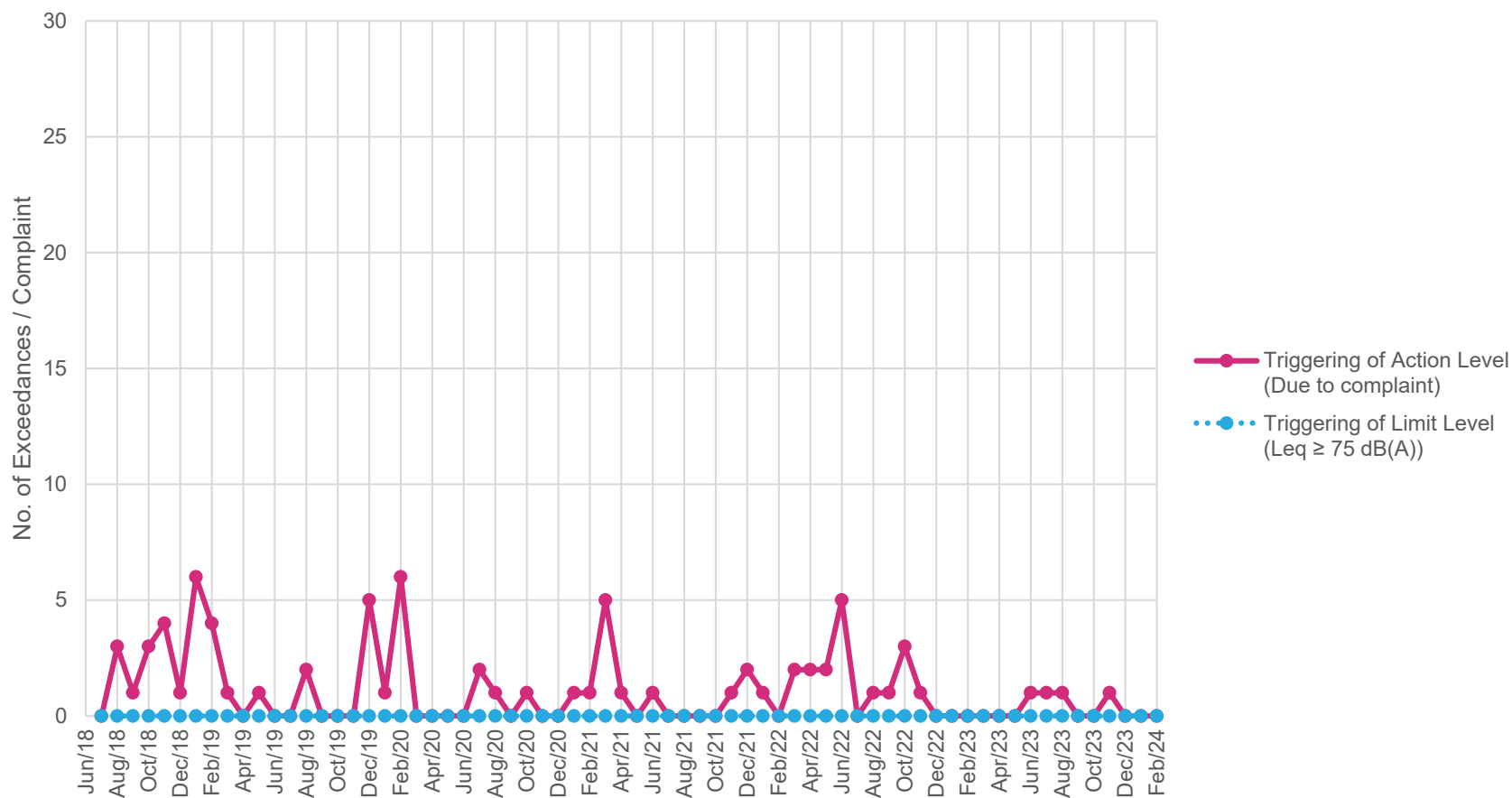
Results of noise monitoring indicated that noise levels were within acceptable level (75dBA)



Noise monitoring near Ying Tung Estate (NMS-CA-4)

# EM&A Monitoring – Noise

**Tung Chung New Town Extension - Reclamation and Advance Works**  
Exceedance / Complaint Record of Noise Monitoring

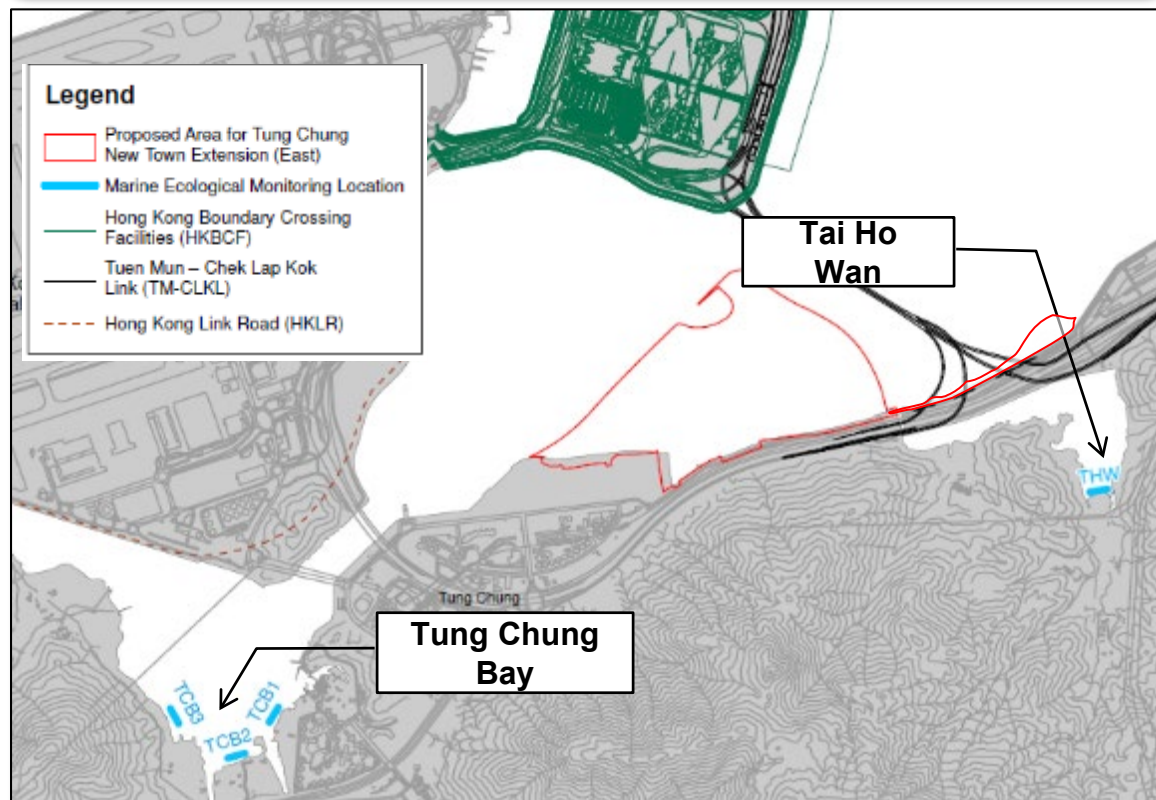


# EM&A Monitoring – Ecology



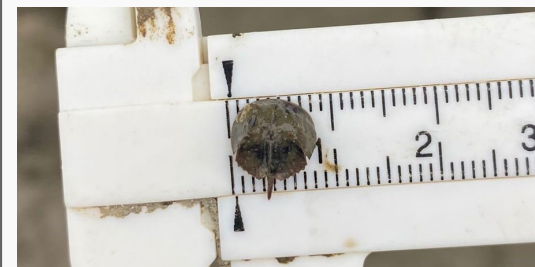
## Ecological Monitoring

<b>Frequency</b>	Quarterly
<b>Monitoring Parameter</b>	Horseshoe Crabs, Seagrass, Intertidal Soft Shore Communities



## Monitoring Results between Sep 2023 and Dec 2023

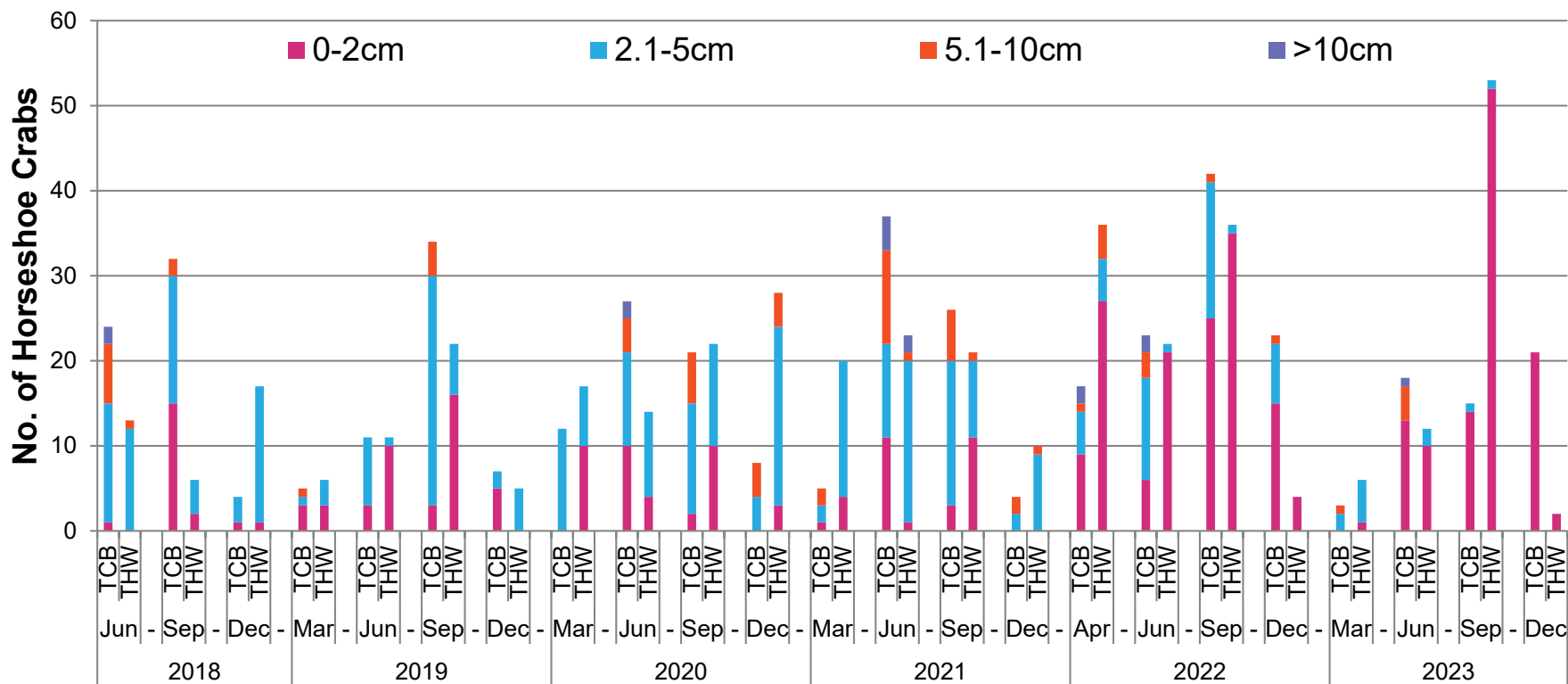
Horseshoe crabs were found in both Tung Chung Bay and Tai Ho Wan.



# Horseshoe Crab

- Numbers of horseshoe crabs varied over time and were generally higher in summer period (May – Sep)
- Small juvenile horseshoe crabs (prosomal width <2 cm) were recorded during all impact monitoring since Sep 2018

**Size (Prosomal Width) of Horseshoe Crabs**



Baseline  
(May-Jun 18)

# Complaint received

Month	Water	Air	Noise	Others (Light, Waste, Ecology)
October - 2023	0	0	1	0
November - 2023	0	0	3	0
December - 2023	0	1	2	0
January - 2024	0	6	0	0
February - 2024	0	1	0	0
Categories for recent complaints		<ul style="list-style-type: none"> <li>Dust</li> <li>Ying Hei Road</li> </ul>	<ul style="list-style-type: none"> <li>Noise at night and during restricted hours</li> </ul>	

# **10<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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Civil Engineering and  
Development Department



DEVELOPMENT and  
CONSERVATION of  
**LANTAU**  
發展及保育大嶼山

**ARUP**

# Tung Chung West

## b) Overview and Progress

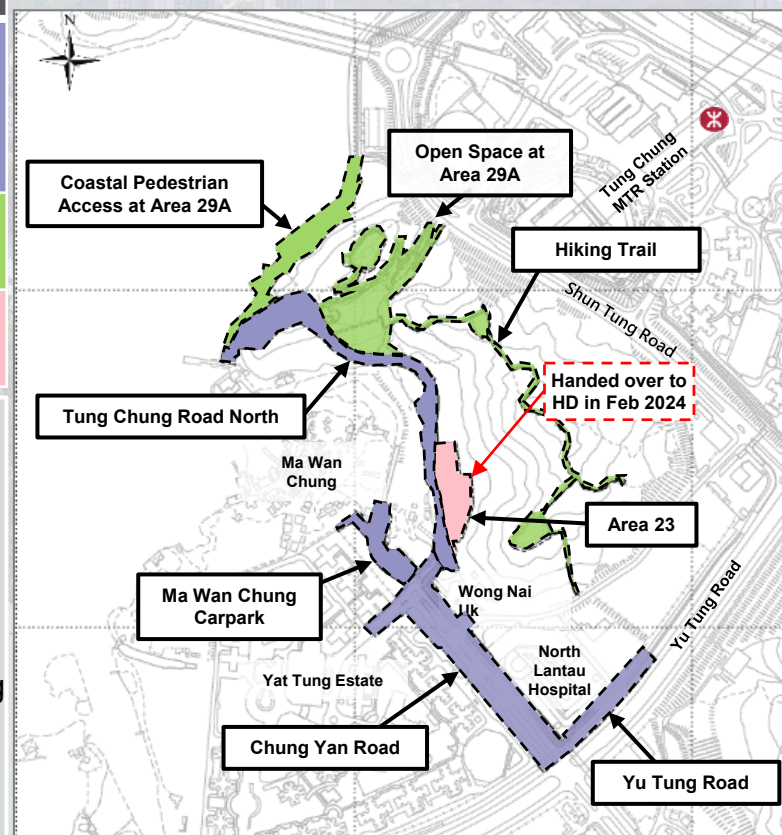
## Contract No. NL/2020/05 – Site Formation & Infrastructure Works at Ma Wan Chung

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)

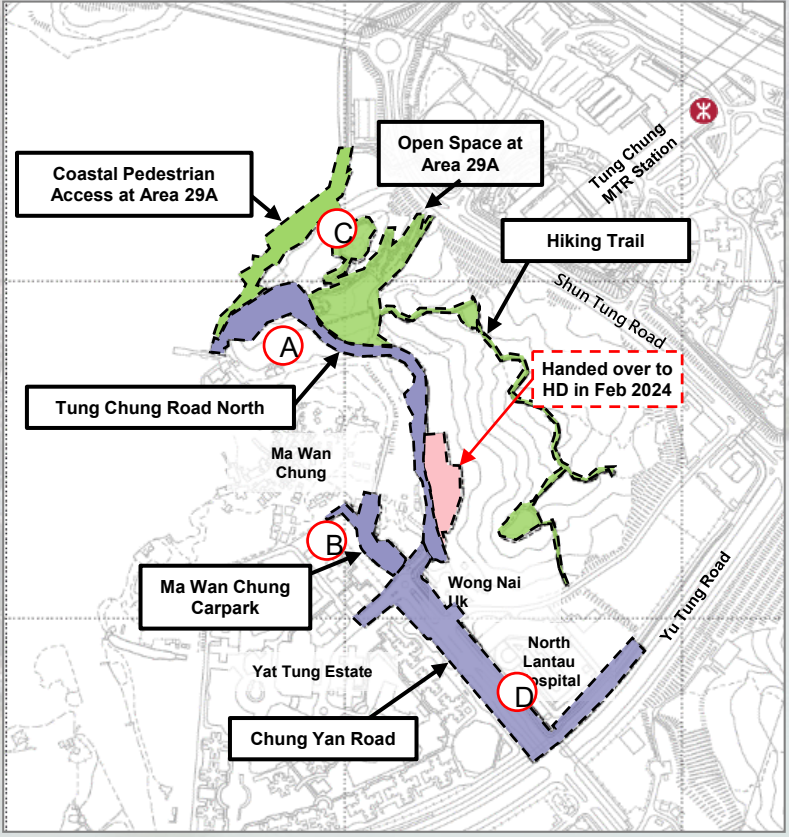
**Contract Period : May 2021 to 2025**

**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 at Area 29A
- Upgrading works of existing hiking trail at Area 29A
- Construction of Coastal Pedestrian Access



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



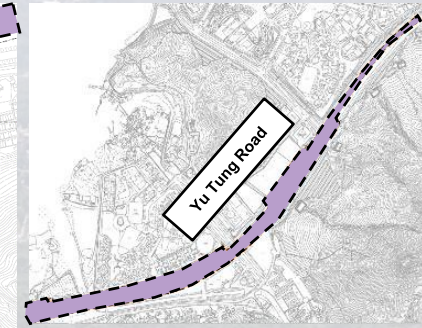
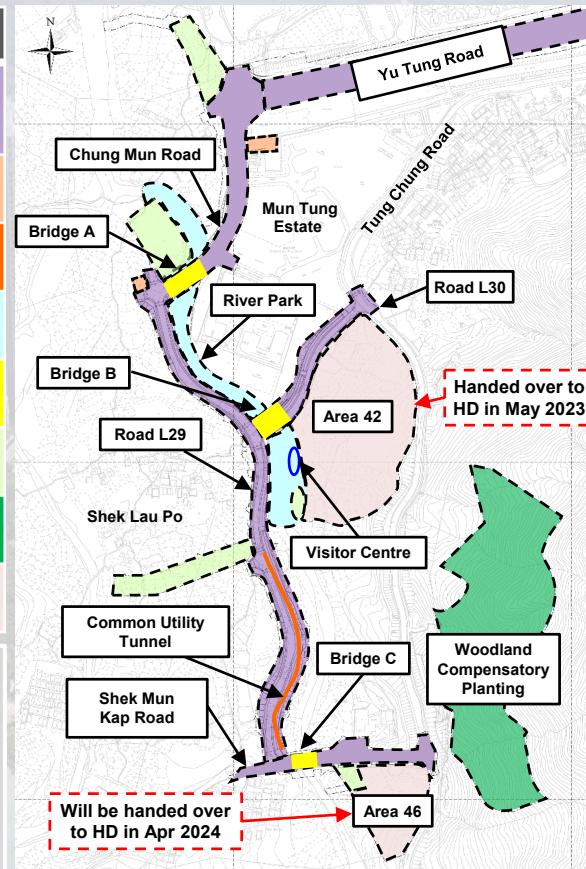
# Contract No. NL/2020/06 – Site Formation and Infrastructure Works at Tung Chung Valley, Phase 1

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
9	Site Formation at Area 42 & Area 46

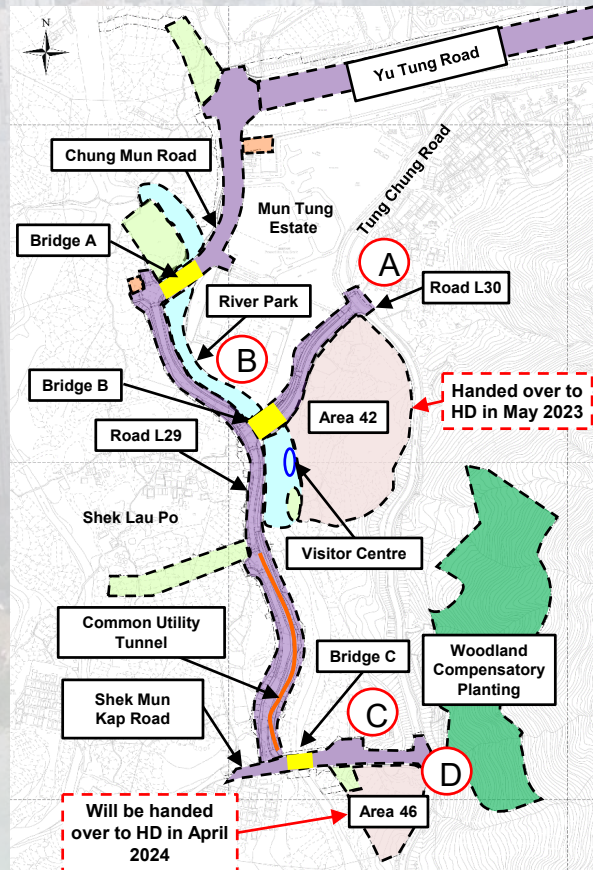
**Contract Period : May 2021 to 2025**

**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
- Site formation works at Area 46



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





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## Tung Chung West

### c) Environmental Monitoring and Audit

# Environmental Mitigation Measures for Construction Activities



Water spraying via sprinklers at construction site for dust suppression



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



Removal of sheet-pile by silenced type  
Powered Mechanical Equipment (PMEs)



Wastewater treatment facility

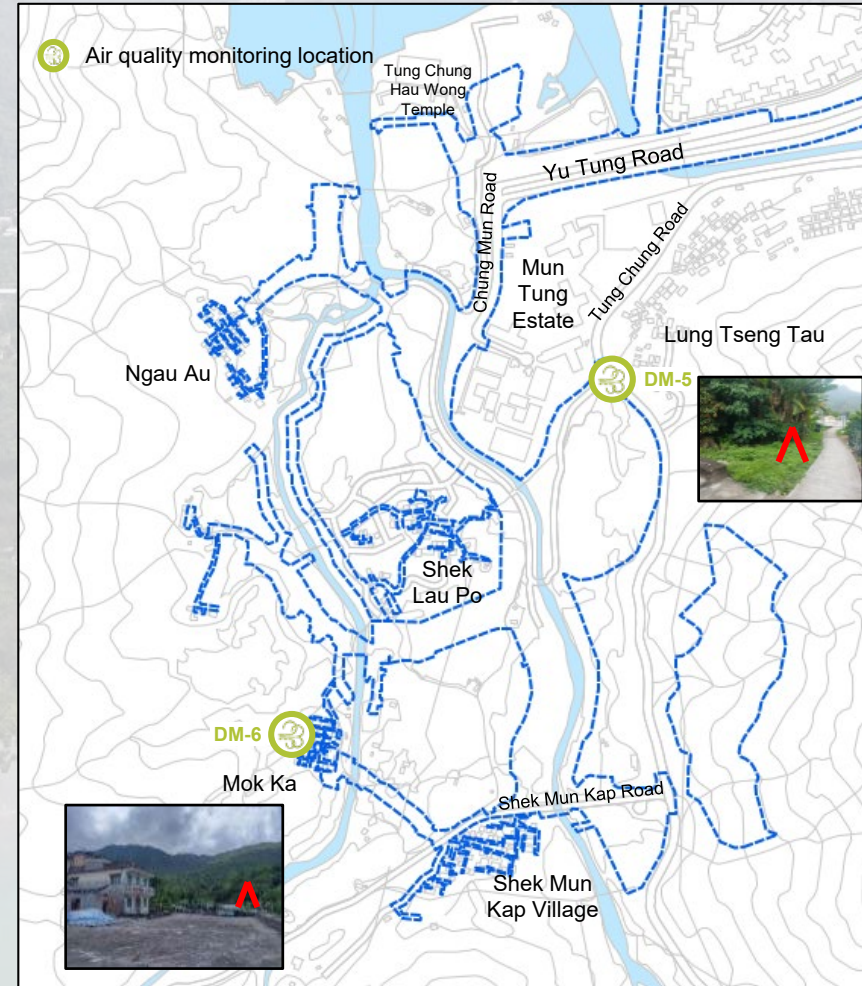


# EM&A Monitoring – Air Quality

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

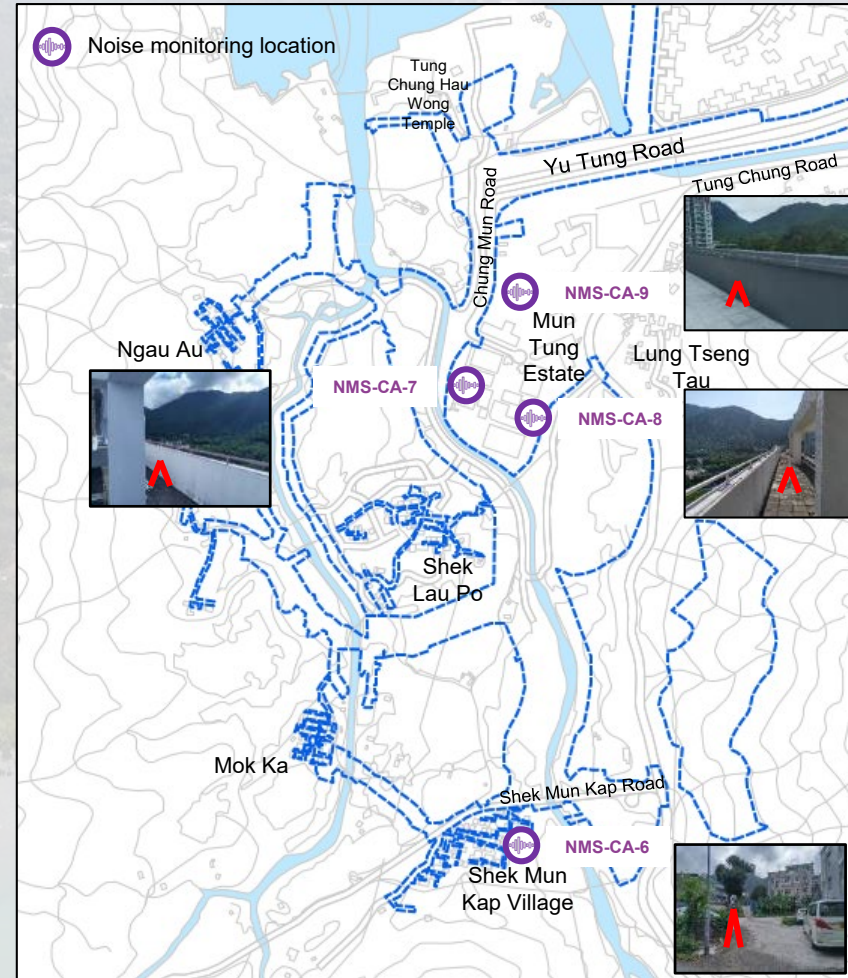
## Monitoring Results from Oct 2023 to Feb 2024

No exceedance was recorded



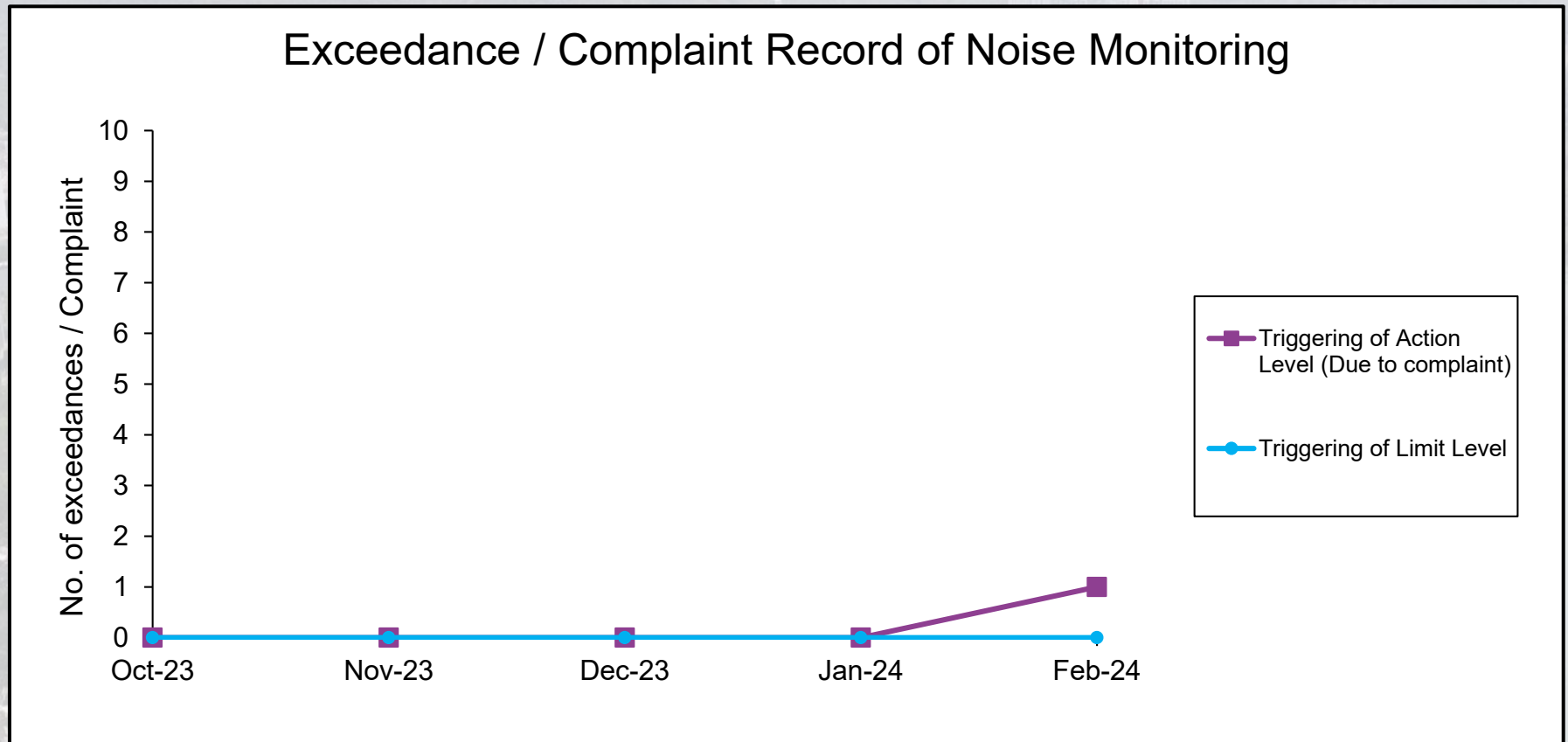
# EM&A Monitoring – Noise

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

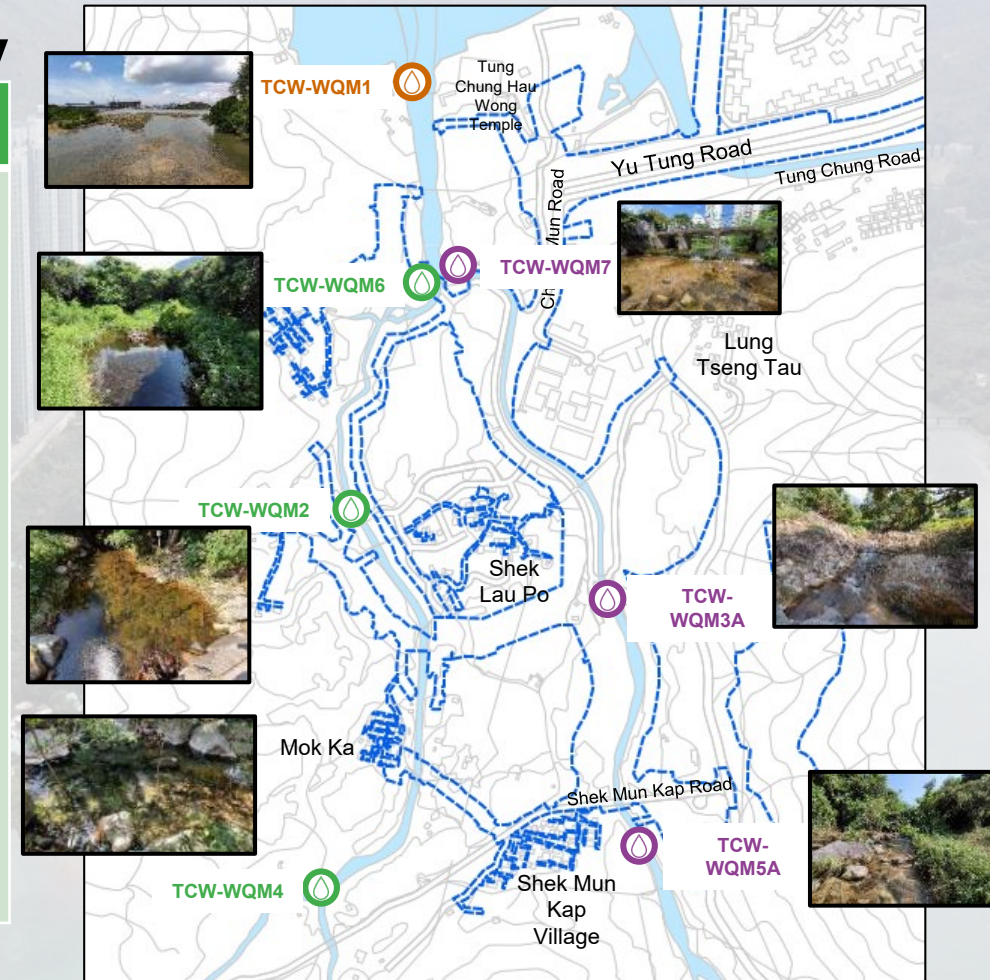
Statistics of Exceedance from Oct 2023 to Feb 2024



Exceedance as recorded in the reporting period was due to the receipt of noise complaint

# EM&A Monitoring – Water Quality

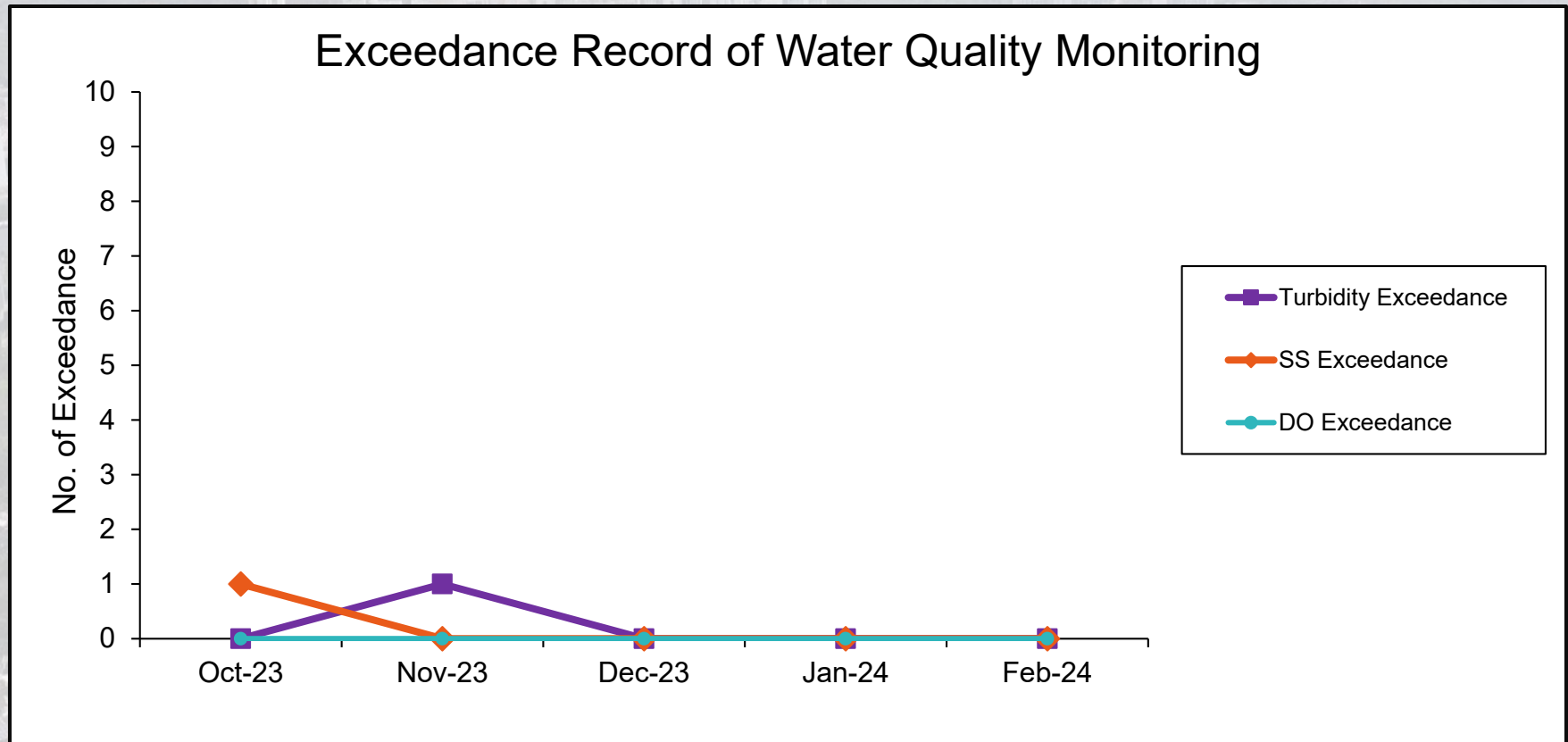
ID	Description	Monitoring Parameter	Monitoring Frequency
TCW-WQM-1	Downstream of Tung Chung Stream	<ul style="list-style-type: none"> <li>• Temperature</li> <li>• Salinity</li> <li>• Conductivity</li> <li>• pH</li> <li>• Dissolved Oxygen</li> <li>• Turbidity</li> <li>• Suspended Solids</li> </ul>	3 days 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

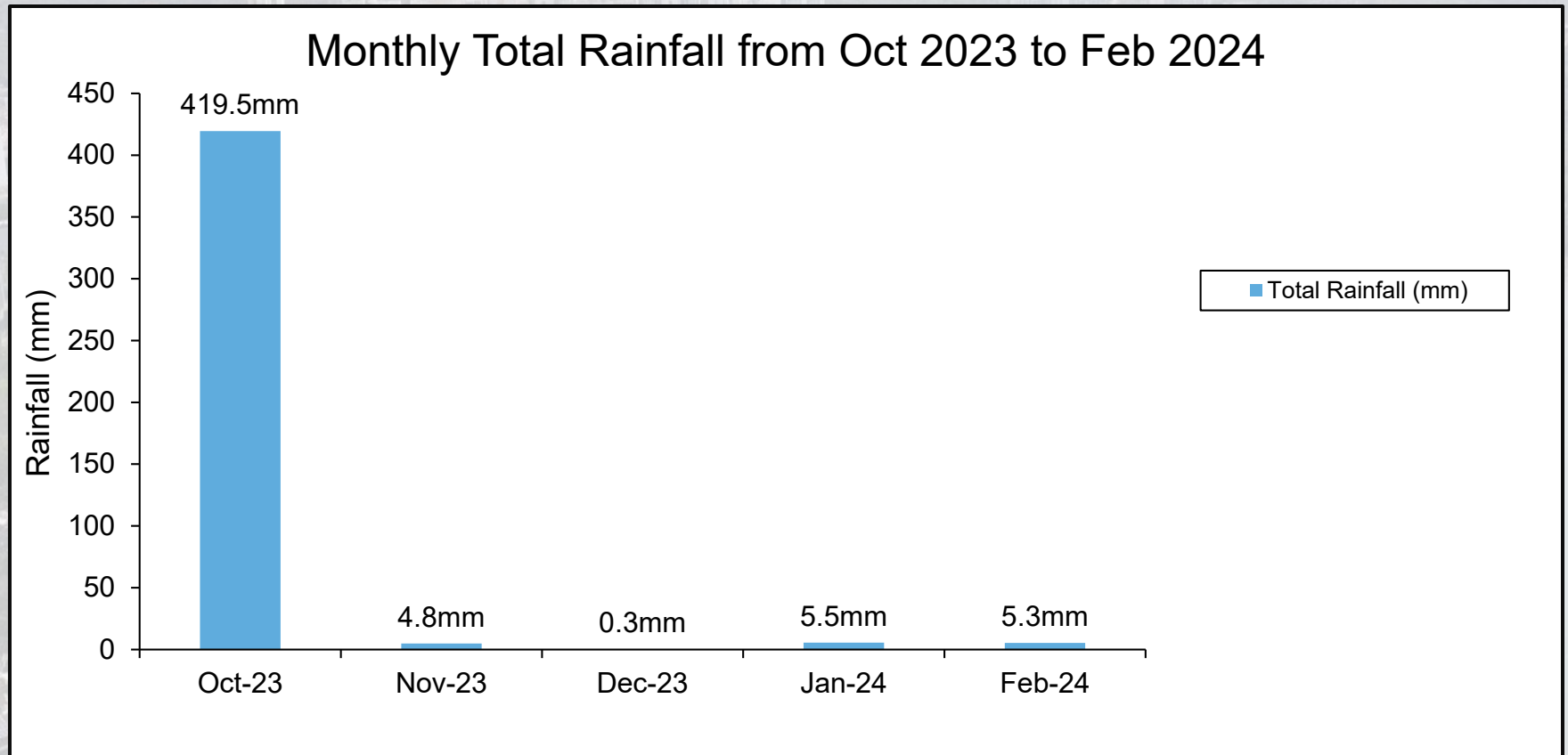
Statistics of Exceedance from Oct 2023 to Feb 2024



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.

# EM&A Monitoring – Water Quality

Statistics of Exceedance from Oct 2023 to Feb 2024



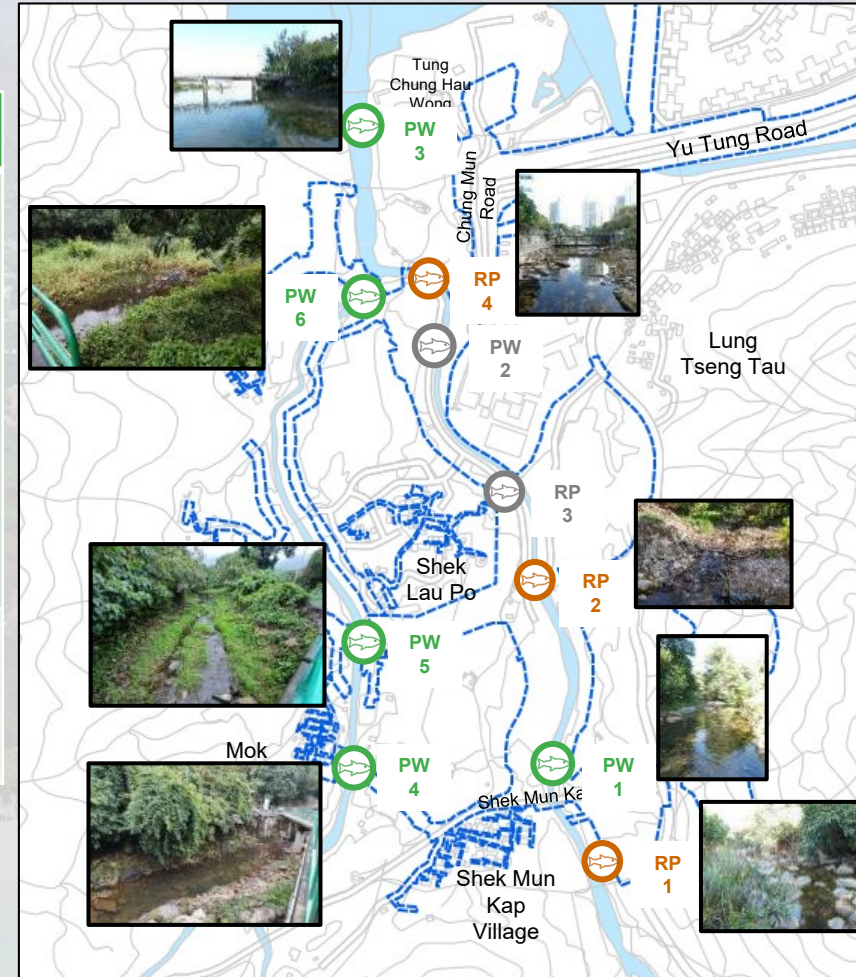
Note: Monthly rainfall data was extracted from the manned weather station located at Hong Kong International Airport by Hong Kong Observatory.

# 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> </ul>	Once per month
RP2	Upstream of River Park		
RP3	Revitalisation Zone (Channelised Section)		
RP4	Downstream of River Park		
PW1	Near Public Works	<ul style="list-style-type: none"> <li>Taxa diversity of Fish Species and Aquatic Invertebrate</li> </ul>	Baseline monitoring was commenced in May 2023 in bi-monthly basis
PW2	Near Public Works		
PW3	Near Public Works		
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

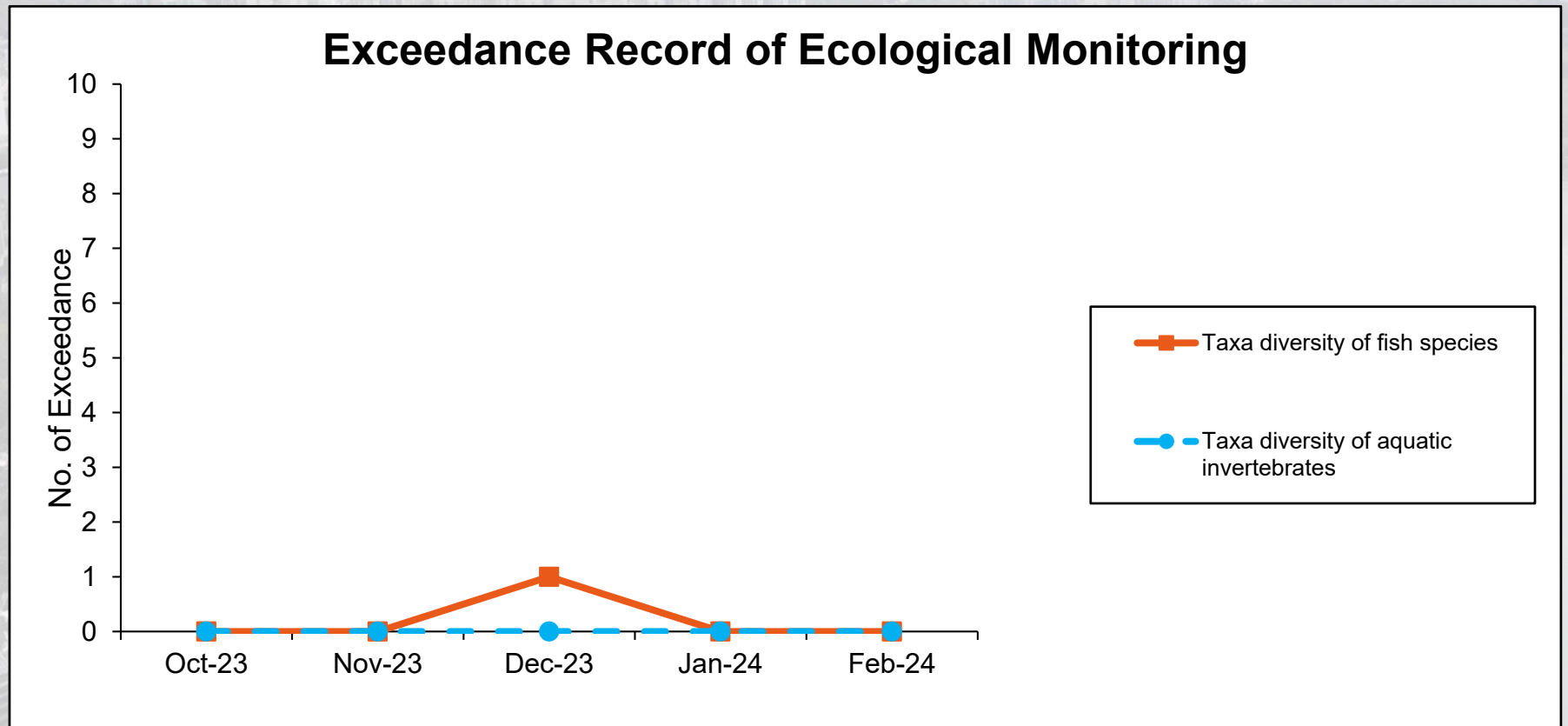


- Ecological monitoring location for other public works
- Ecological monitoring location for the proposed River Park

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.

# EM&A Monitoring – Ecology

Statistics of Exceedance from Oct 2023 to Feb 2024



1. Exceedance as recorded in the reporting period was mainly due to seasonal variation.



# Complaint Received

Month	Air	Noise	Water	Others (Waste, Ecology, Landscape and Visual)
Oct-2023	0	0	0	0
Nov-2023	1	0	0	0
Dec-2023	0	0	0	0
Jan-2024	1	0	0	0
Feb-2024	0	1	0	0
Nature of Complaints	<ul style="list-style-type: none"> <li>Construction dust from construction sites at Chung Mun Road and near Ngau Au Village</li> </ul>	<ul style="list-style-type: none"> <li>Chung Yan Road construction site</li> </ul>		

Thank you