

# Tung Chung New Town Extension



4<sup>th</sup> PLG Meeting  
Date : 18 January 2021



Civil Engineering and  
Development Department

# Agenda

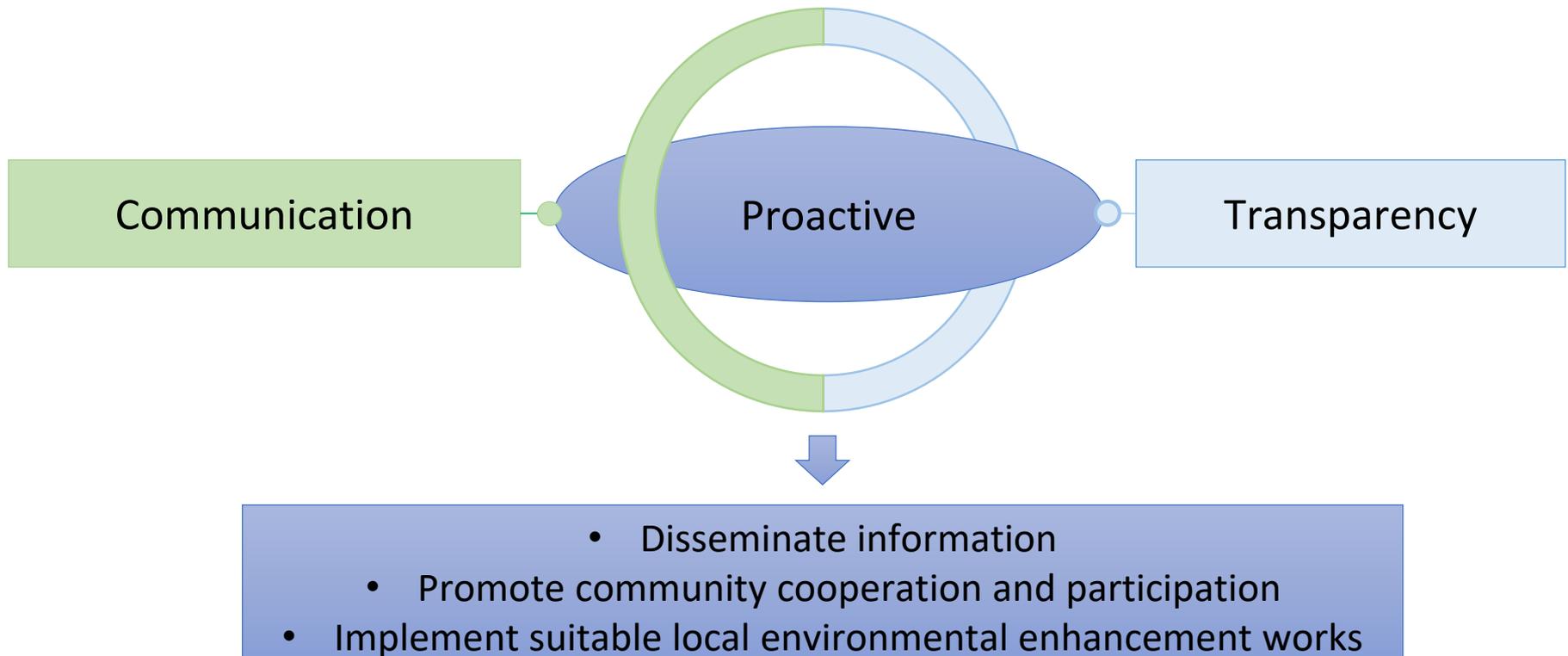
1. Welcome Speech and Introduction
2. Membership and Terms of Reference
3. Brief on TCNTE Project
4. Reclamation Contract Overview and Progress
5. Report of Environmental Monitoring and Audit
6. AOB

# 1. Welcome Speech and Introduction

## 2. Membership and Terms of Reference

Specific Condition 2.1 under EP 519/2016

## Setting up of Community and Professional Liaison Groups



# Membership



Chairman : Deputy Head of SLO, CEDD, or his/her delegate

Secretary : Senior Engineer of SLO, CEDD

Members :

- Ir. Thomas CT CHAN, HKIE
- Professor Kenneth MY LEUNG, CityU
- Ms. Mandy Lo, Ocean Park Conservation Fund, HK
- Professor Jianwen QIU, HKBU
- Dr. Cynthia YAU, HKUST
- Project team of SLO, CEDD
- Environmental Team Leader of TCNTE project
- Independent Environmental Checker of TCNTE project

# Term of Reference



- To advise/facilitate CEDD on enhancing transparency and communication with relevant professional/experts, as well as enquiries on all environmental issues related to the Tung Chung New Town Extension project.
- To advise/facilitate CEDD on promoting community cooperation and participation and implementation of suitable local environmental enhancement works with respect to the Project.

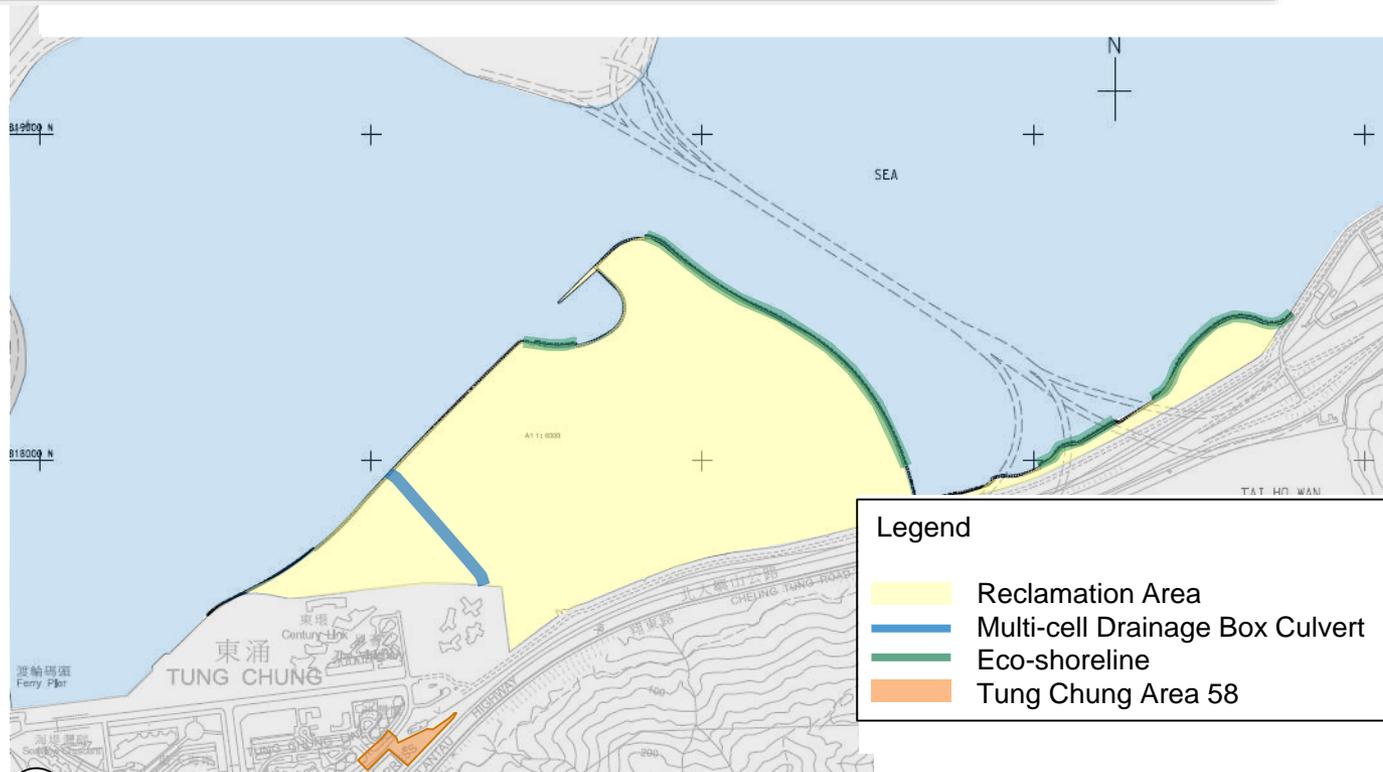
## 3. Brief on TCNTE project



# 4. Reclamation Contract Overview and Progress

**Contract No. NL/2017/03**  
**Tung Chung New Town Extension -**  
**Reclamation and Advance Works**

# Contract NL/2017/03 Overview



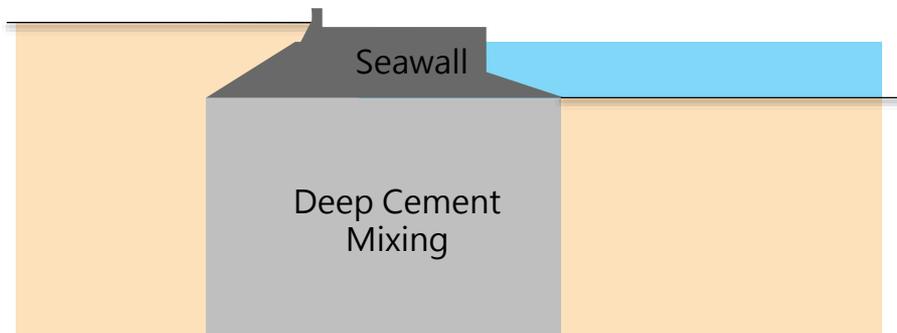
- ① 130 hectares land reclamation by non-dredged method
- ② Construction of 4.9 km seawalls partly with eco-shorelines
- ③ Construction of 470m extension of multi-cell drainage box culvert
- ④ Site formation for future development in Tung Chung Area 58

# Key Environmental Design

- a) Non-Dredging Method:  
Deep Cement Mixing (DCM)
- b) Eco Shoreline
- c) GPS System

## Key Features

- Stabilisation of Ground
- No Dredging Works
- No Disposal of Marine Mud



Typical Section of Seawall and DCM



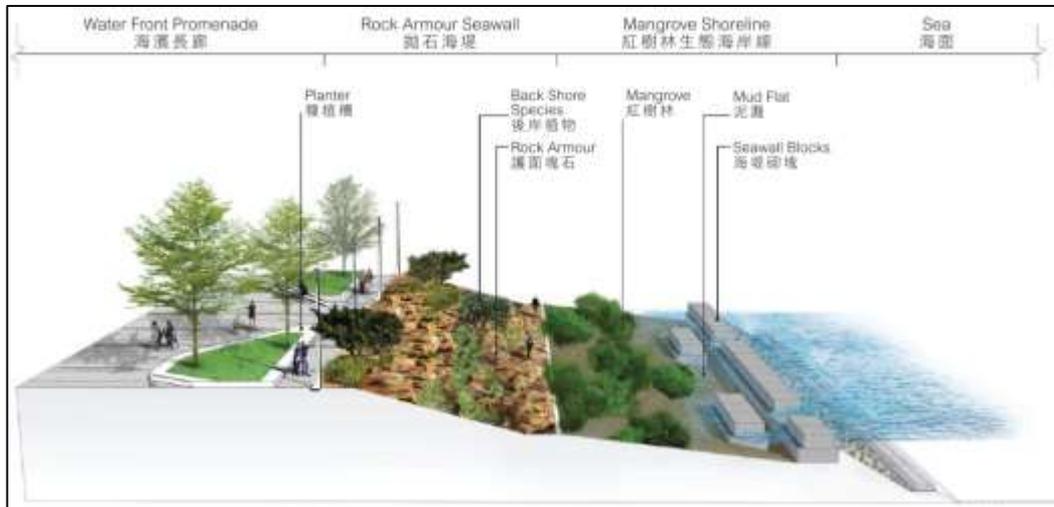
DCM Barge for Marine DCM Installation

# Key Environmental Design

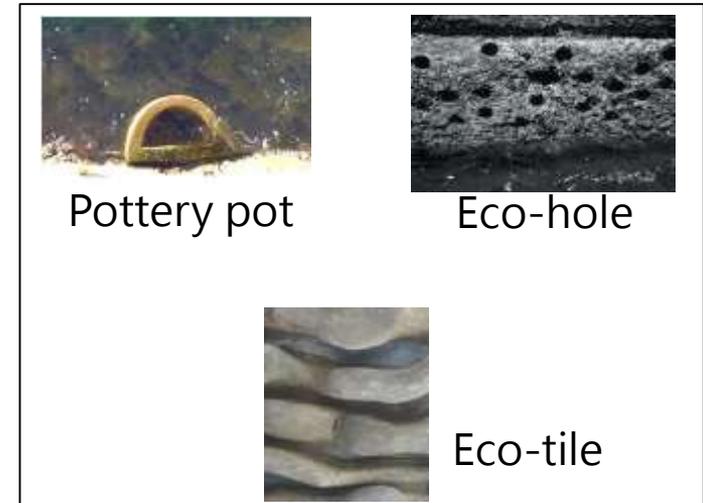
- a) Non-Dredging Method:  
Deep Cement Mixing (DCM)
- b) Eco Shoreline
- c) GPS System

## Key Features

- Increase biodiversity
- Natural environment integrating into the community



Typical Section for Mangrove Eco Shoreline



Vertical Eco shoreline

# Rocky Eco Shoreline



# Eco Shoreline Trial in Siu Ho Wan



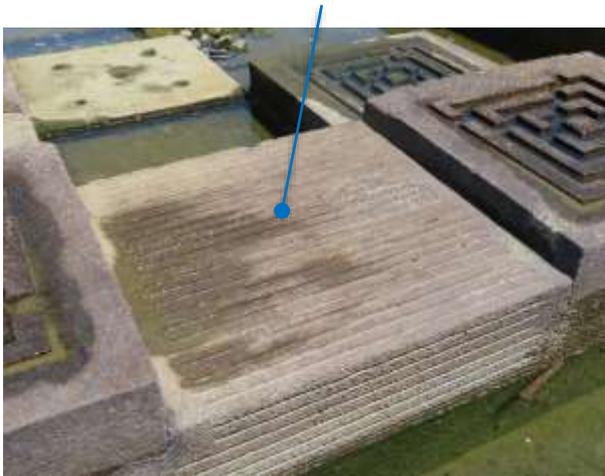
Mangrove Eco Shoreline



Rocky Eco Shoreline

# Enhancement Works for Eco-shoreline Trial

Additional ridges



Additional drillholes



Filled with rip-rap

- Rough surface to be provided on the bio-blocks

# Enhancement Works for Eco-shoreline Trial

Rock pool filled with water  
without leakage



# Enhancement Works for Eco-shoreline Trial

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- Sediment from Mai Po has been collected for testing on April and July 2020
- According to the test results from Sediment Quality Report, sediment is not suitable

# Enhancement Works for Eco-shoreline Trial

Watering for mangrove with fresh water was carried for a year



# Enhancement Works for Eco-shoreline Trial



- Provision of geo-cell is being reviewed

Rip rap was placed at the opening to reduce the sea wave and reduce the erosion of mudflat

# Key Environmental Design

- a) Non-Dredging Method:  
Deep Cement Mixing (DCM)
- b) Eco Shoreline
- c) GPS System

## Key Features

- Real-time Monitoring (RSS, ET, IEC, Contractor)
- Prevent Illegal Dumping



*GPS system*

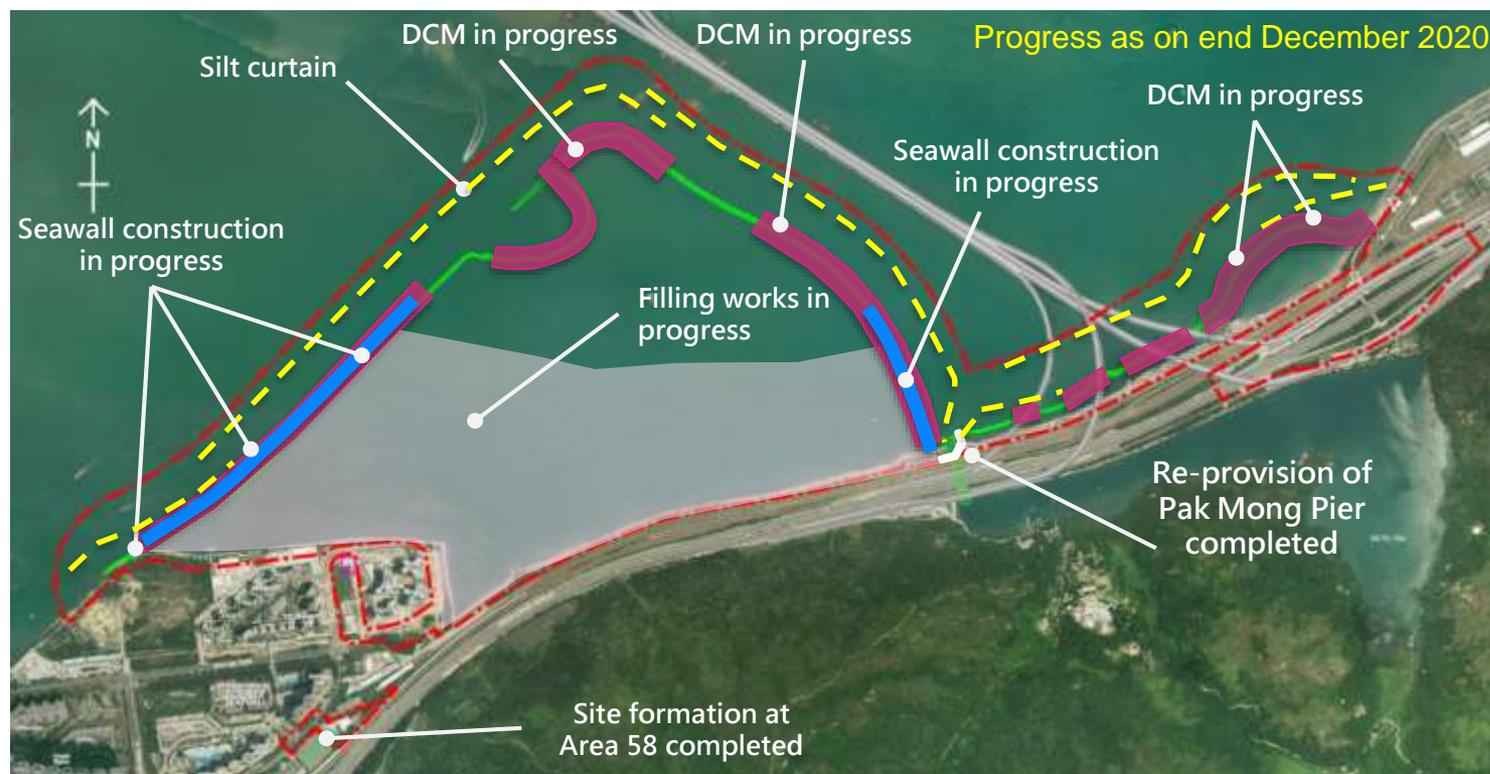


*All dump trucks equipped with GPS system*



*Setting-up of Restricted Area (Tung Chung Road)*

# Current Project Progress

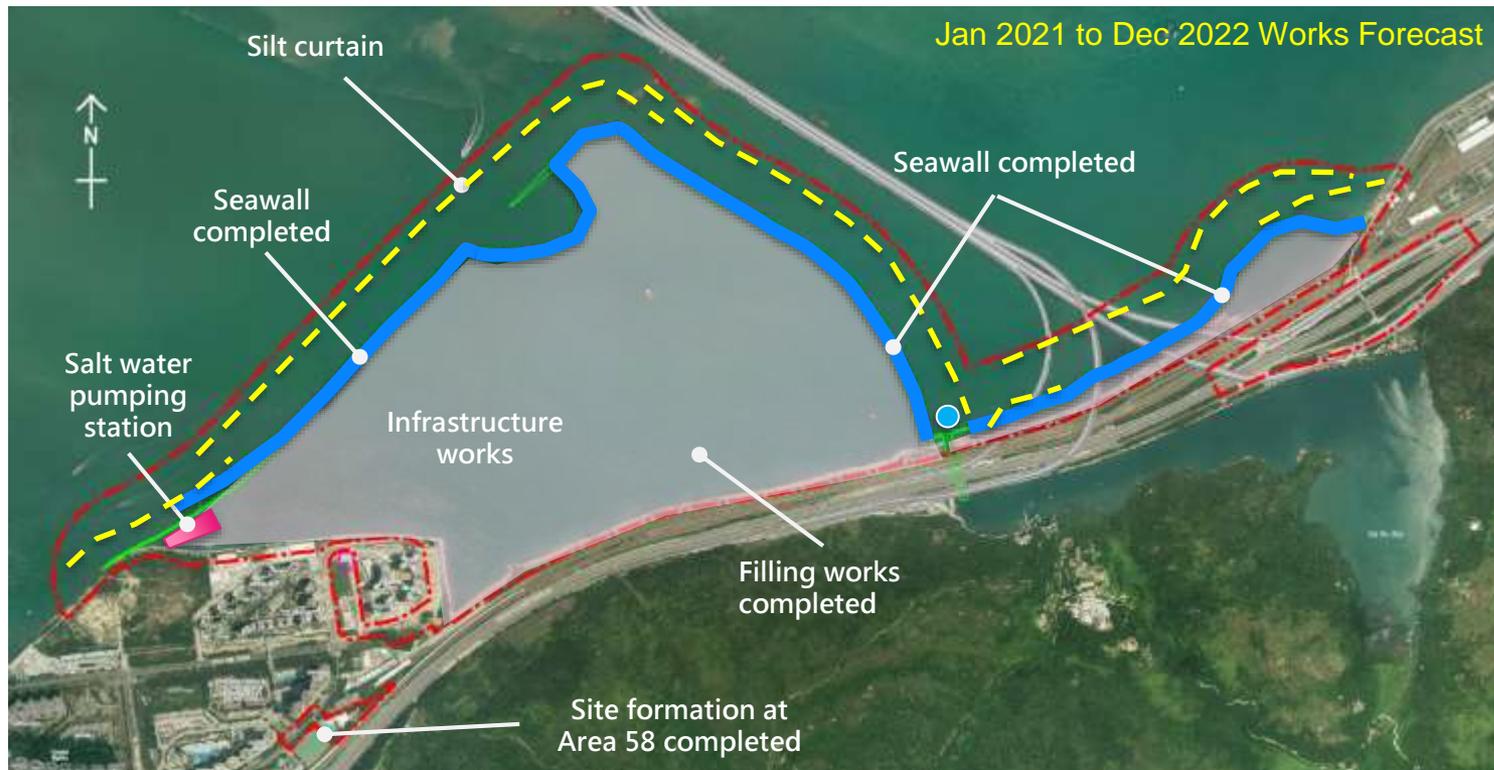


# Aerial Photo

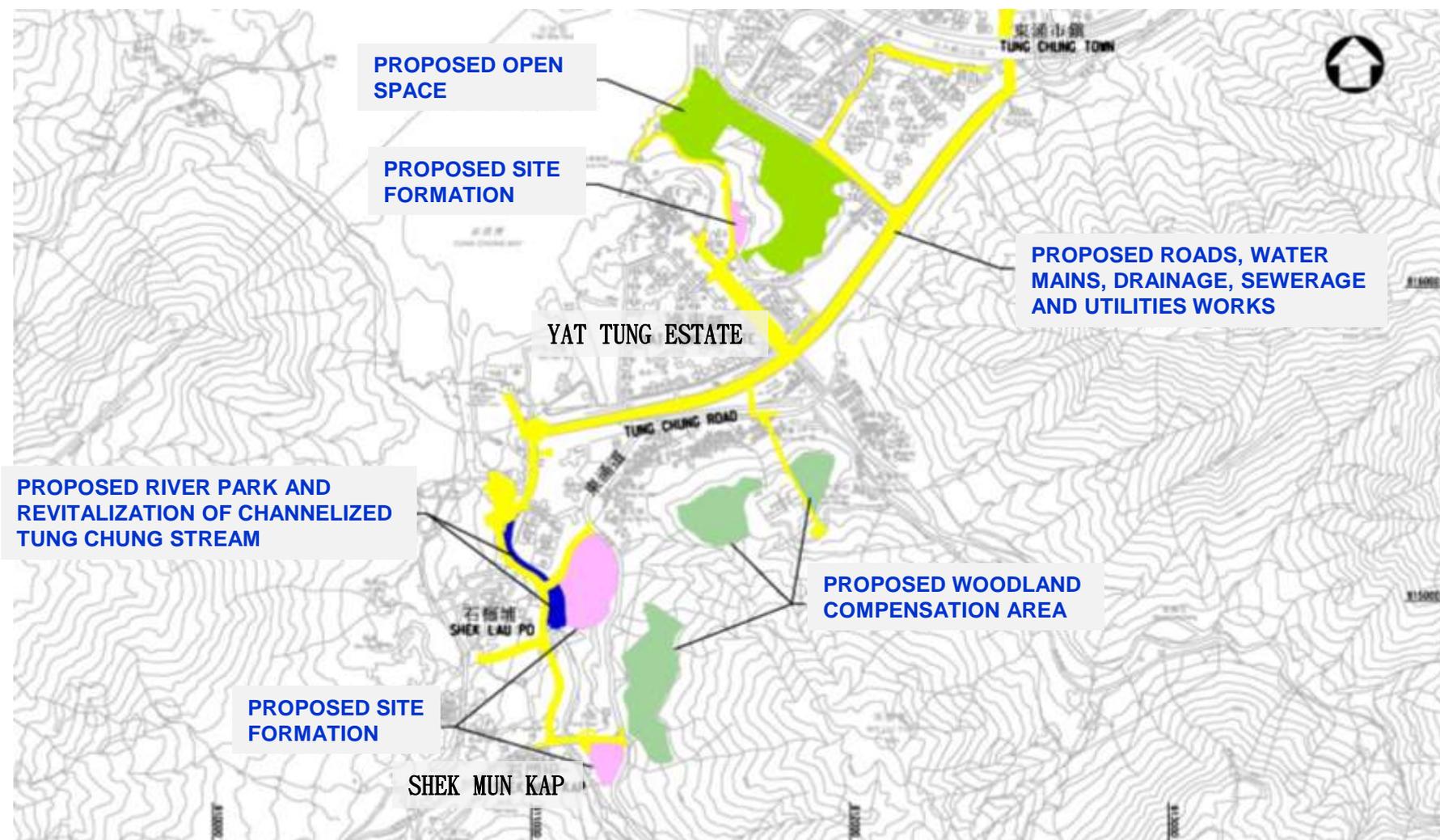
Photo taken in December 2020



# Next Two Years Works Forecast (TCE)



# Next Two Years Works Forecast (TCW)



# Newsletter Issues

**東涌新市鎮擴展—填海及前期工程**  
TUNG CHUNG NEW TOWN EXTENSION—RECLAMATION AND PRELIMINARY WORKS

**第九期通訊**  
NEWSLETTER 9

2020+08

**歡迎各界人士踴躍提供意見**  
We encourage the public to provide their views on the proposed project. The views will be taken into account in the design and implementation of the project.

**颱風季節剛開始 工地預防措施**  
Precautionary Measures on Site during Typhoon Season

本港的颱風季通常由六月開始，至十月結束。在颱風季節，建築工地應採取預防措施，以確保工地的安全。本局已要求承建商採取預防措施，包括在工地設置防風設施、加固臨時設施、以及在工地周圍設置圍欄等。此外，本局亦會密切關注天氣情況，並在有需要時採取緊急措施，以確保公眾的安全。

**完成東涌第103區及第108區填海工程**  
Completion of Tung Chung Areas 103 and 108 Reclamation Works

東涌填海工程第一期填海及前期工程，將於今年八月完成。這項工程包括填海、填土、填海及填土工程。填海工程包括填海、填土、填海及填土工程。填土工程包括填土、填海及填土工程。填海及填土工程包括填海、填土、填海及填土工程。



**東涌新市鎮擴展—填海及前期工程**  
TUNG CHUNG NEW TOWN EXTENSION—RECLAMATION AND PRELIMINARY WORKS

**第十期通訊**  
NEWSLETTER 10

2020+11

**歡迎各界人士踴躍提供意見**  
We encourage the public to provide their views on the proposed project. The views will be taken into account in the design and implementation of the project.

**完成東涌第103區及第108區填海工程**  
Completion of Tung Chung Areas 103 and 108 Reclamation Works

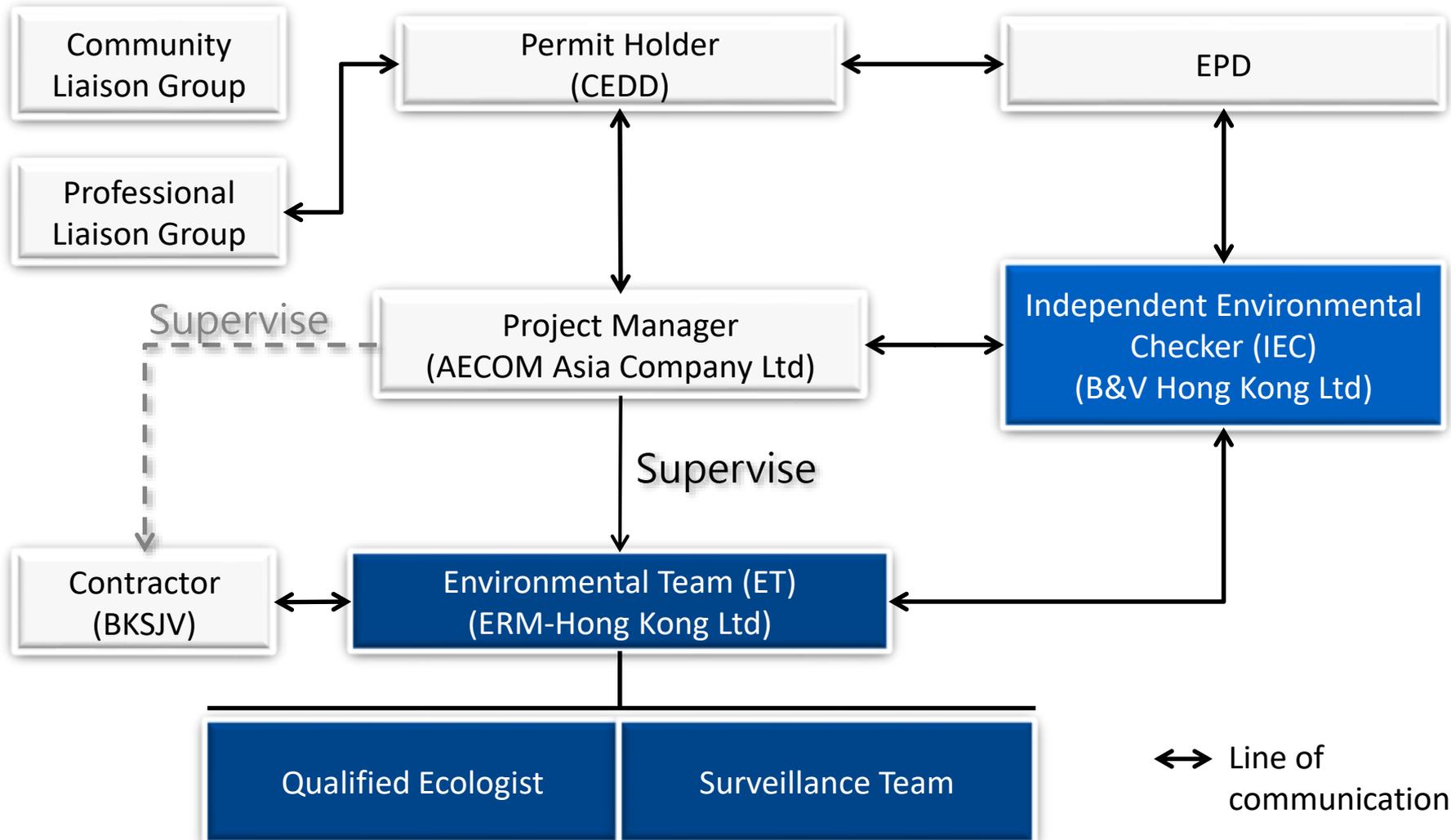
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To take note of construction progress

# 5. Report of Environmental Monitoring and Audit

# EM&A Management Organization



# ET and IEC

Roles and Duties of ET and IEC include -

## Environmental Team (ET)

- Certify the environmental acceptability of construction works
- Audit the Contractor's site practice and work methodologies
- Pre-empt environmental problems pro-actively
- **Qualified Ecologist** as part of the ET to carry out work relating to ecological aspects
- **Surveillance Team** as part of the ET to conduct site inspection on suspected illegal dumping and filling of C&D materials

## Independent Environmental Checker (IEC)

- Audit the overall EM&A performance
- Verify the environmental acceptability of construction works
- Offer objective and professional advice on environmental issues, when requested

# Dedicated Website under EP-519/2016



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



## Tung Chung New Town Extension

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 and the associated environmental monitoring data.

# Major Components of EM&A

## Submissions under Environmental Permit

*Environmental submissions to be made before or during the construction including:*

-  • Works Vessel Travel Route Plan
-  • Silt Curtain Deployment Plan
-  • Spill Response Plan
-  • Dolphin Watching Plan
-  • Waste Management Plan
-  • Complaint Management Plan

## Environmental Monitoring and Audit

*Environmental parameters are monitored through systematic procedures:*

-  • Air Quality Monitoring
-  • Noise Monitoring
-  • Water Quality Monitoring
-  • Ecological Monitoring (Soft Shore Ecology)
-  • Regular Site Inspection

# Mitigation Measures

## Mitigation Measures



### Works Vessel Travel Route Plan

- Restriction on vessel trips
- Restriction on vessel speed
- Restriction on travel route (e.g. Tung Chung Buoyed Channel)
- Real-time tracking of works vessels



### Silt Curtain Deployment Plan

- Installation of silt curtain
- Inspection of silt curtain before commencement of daily works
- Collection of floating refuse at regular intervals



### Spill Response Plan

- Provision of drip trays for chemical containers
- Provision of spill kits on site
- Designated location for chemical waste storage
- Regular toolbox trainings and chemical spill drills

# Mitigation Measures

## Mitigation Measures



### Dolphin Watching Plan

- Implementation of dolphin exclusion zone
- Regular inspection of silt curtains
- Regular refresher training to dolphin watchers



### Waste Management Plan

- Reuse of C&D materials
- Implementation of trip ticket system
- Real time tracking and monitoring system of dump truck's travel routings and parking locations



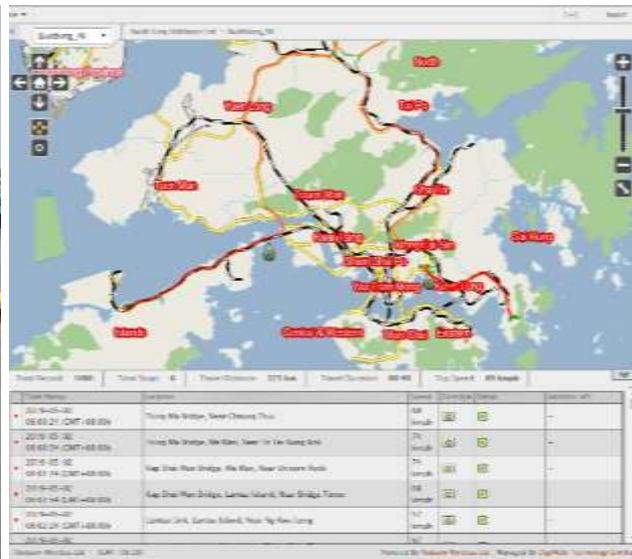
### Complaint Management Plan

- Set up of a dedicated complaint hotline (9862 2910)
- Set up of a dedicated complaint email (nl201703.info@gmail.com)

# Protection and Mitigation Measures on Construction Activities



Maintenance of perimeter silt curtain



Real time tracking and monitoring system for dump trucks



Speed control of works vessels

# Protection and Mitigation Measures on Construction Activities



Water quality monitoring



Water spraying for dust control



Noise monitoring

# Protection and Mitigation Measures on Construction Activities



Enhanced noise mitigation measures on DCM



Trip ticket for waste control

# EM&A Monitoring – Air Quality



## Air Quality Monitoring

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



## Monitoring Results between Dec 2019 and Dec 2020

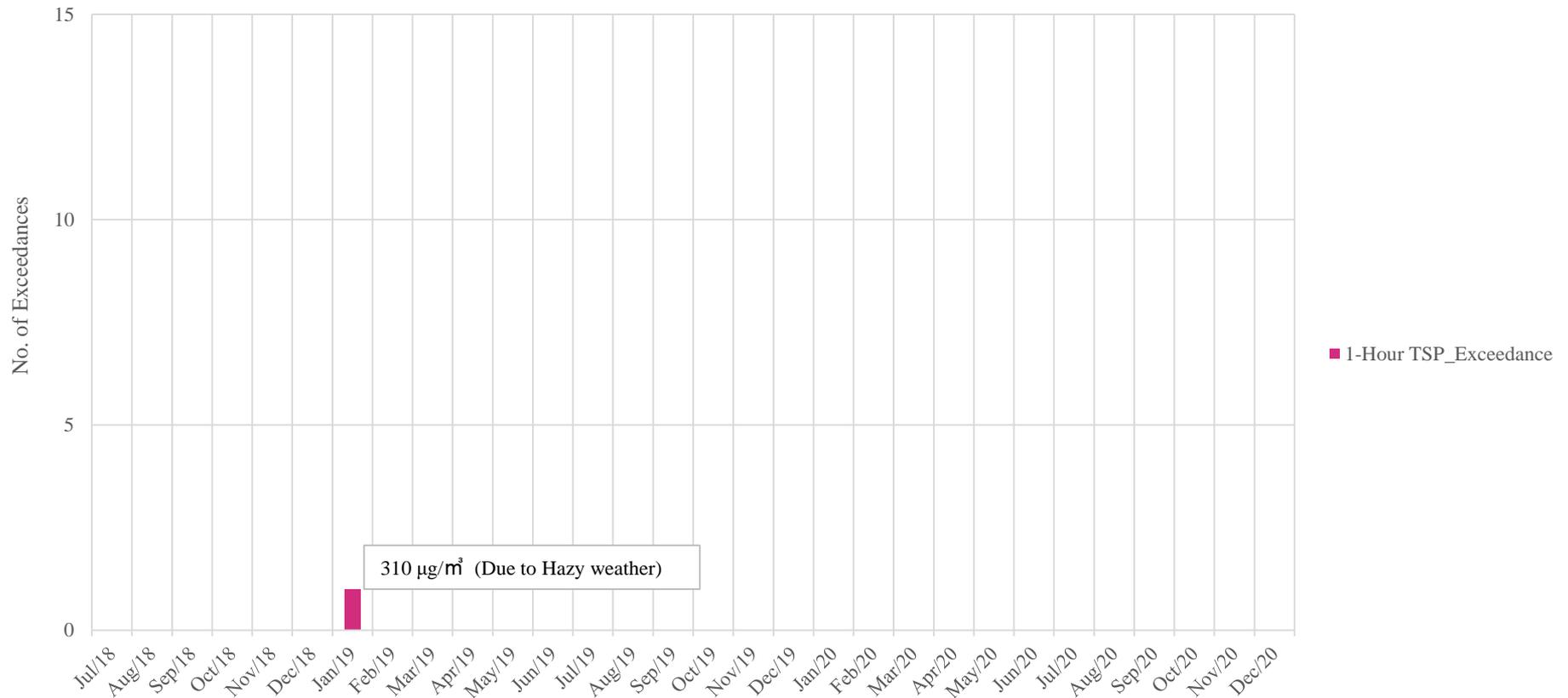
No project-related exceedance was recorded.



*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

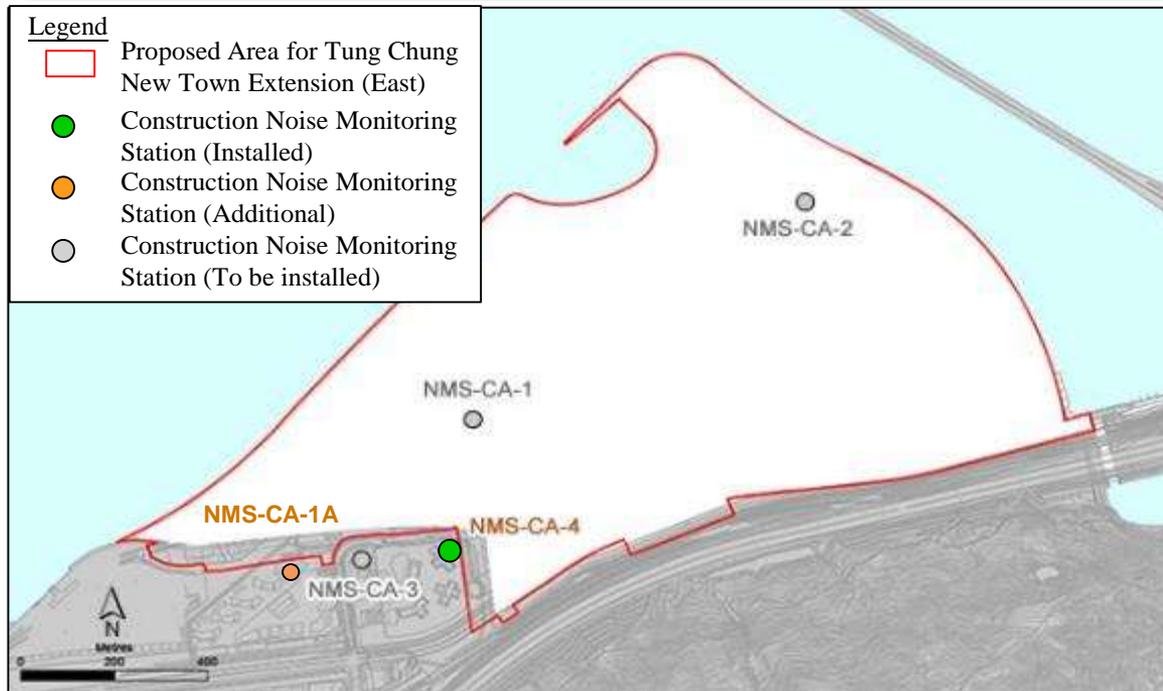


# EM&A Monitoring – Noise



## Noise Monitoring

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



## Monitoring Results between Dec 2019 and Dec 2020

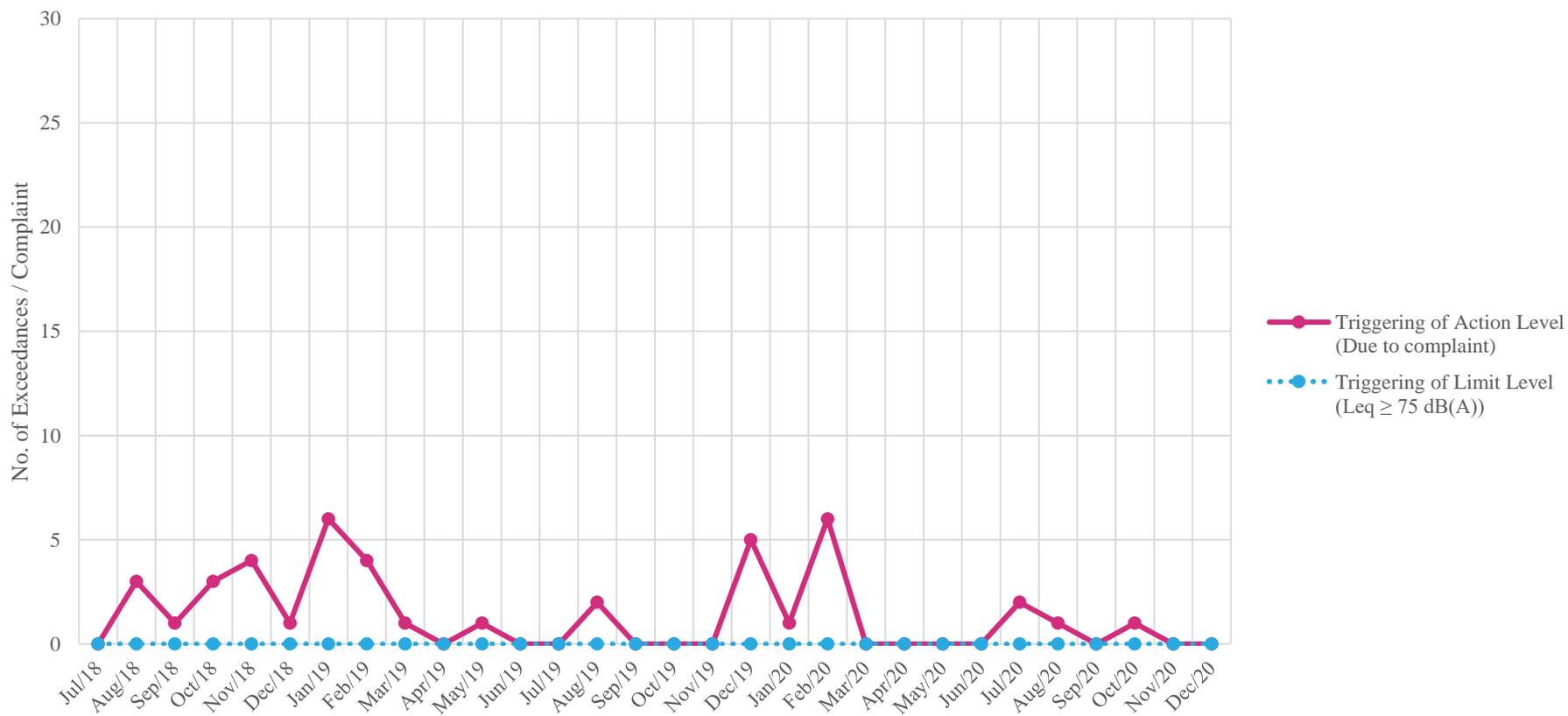
Results of noise monitoring indicated that noise levels were within acceptable level (75dBA)



Noise monitoring near Century Link (NMS-CA-1A)

# EM&A Monitoring – Noise

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



# EM&A Monitoring – Water Quality



## Water Quality Monitoring

**Frequency** 3 times per week, at mid-flood & mid-ebb tides  
**Monitoring Parameter** Dissolved Oxygen, pH Value, Salinity, Turbidity, Suspended Solids, Temperature



## Monitoring Results between Dec 2019 and Dec 2020

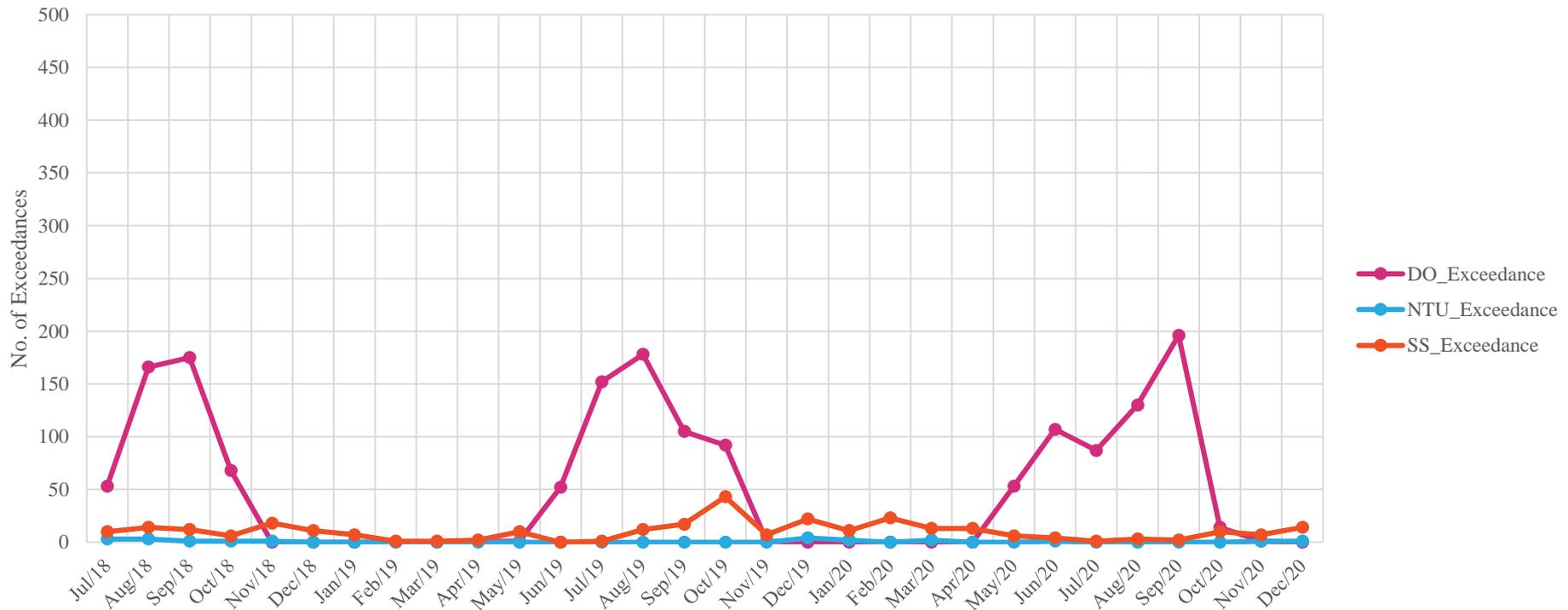
No project-related exceedance was recorded.



Water monitoring by ET (TCE-WQM4)

# EM&A Monitoring – Water Quality

**Tung Chung New Town Extension - Reclamation and Advance Works**  
Exceedance Record of Water Quality Monitoring



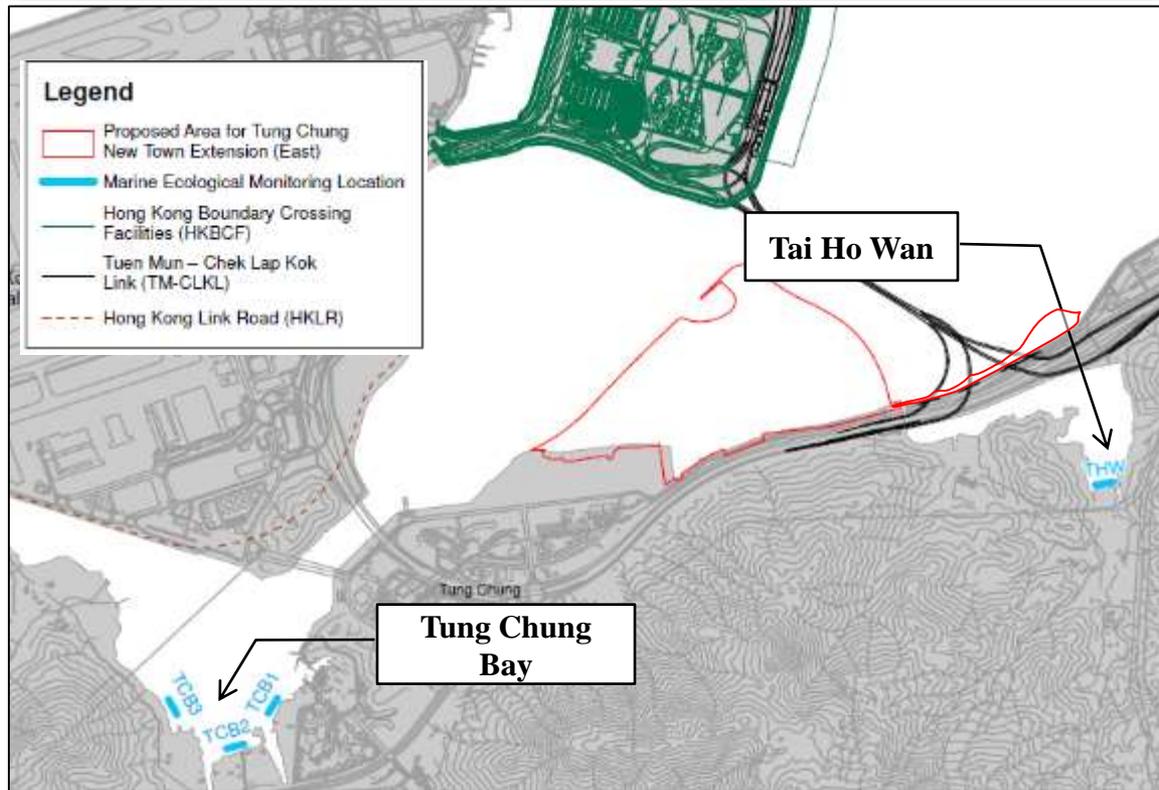
The majority exceedances recorded were DO exceedances. Low levels of DO were recorded during summer period. This trend suggested the changes should be due to seasonal fluctuation.

# EM&A Monitoring – Ecology



## Ecological Monitoring

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



## Monitoring Results between Dec 2019 and Dec 2020

Ecological monitoring was conducted in Dec 2020.

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

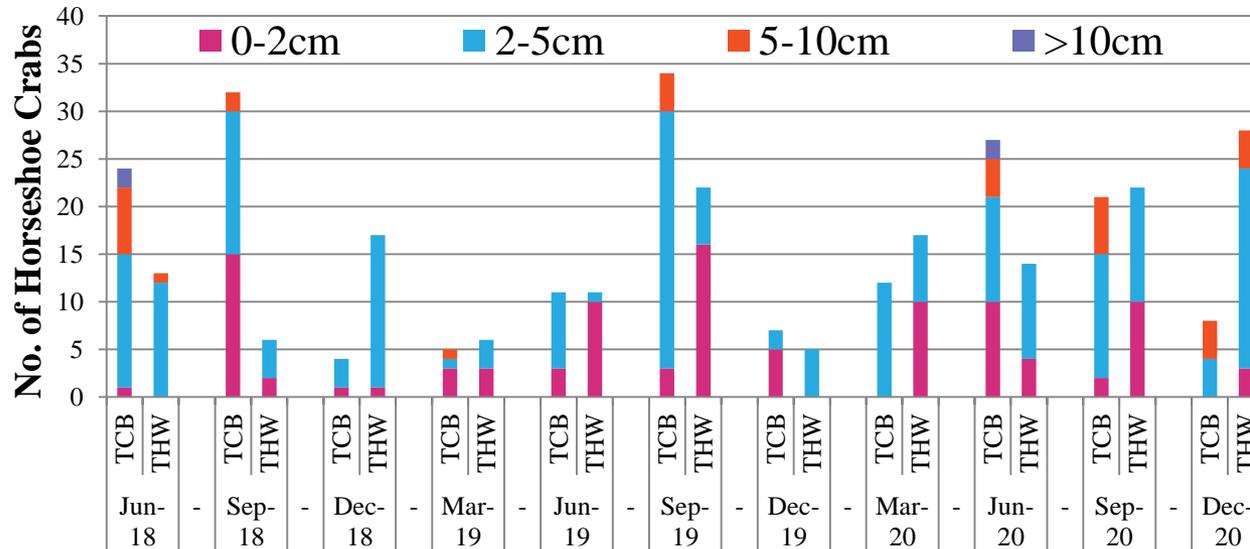


Juvenile *Tachypleus tridentatus* found at Tung Chung Bay

# 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)



Mating pair was recorded at Tung Chung Bay

# Complaint received

Date	Water	Air	Noise	Others (Light, Waste, Ecology)
Jul 18 – Dec 18	2	1	12	4
Jan 19 – Jun 19	4	4	12	2
Jul 19 – Dec 19	1	4	7	0
Jan 20 – Jun 20	1	6	7	0
Jul 20 – Dec 20	4	24	4	0
Categories	<ul style="list-style-type: none"> <li>• Sea pollution</li> <li>• Red tide</li> <li>• Muddy plume</li> </ul>	<ul style="list-style-type: none"> <li>• Odour</li> <li>• Dust</li> <li>• Dark smoke</li> <li>• Muddy Track</li> </ul>	<ul style="list-style-type: none"> <li>• Noise from DCM plant</li> <li>• Noise early at the morning</li> </ul>	<ul style="list-style-type: none"> <li>• Light disturbance</li> </ul>

# Air Complaint Cases

The majority of the recent complaints were air complaints due to Ying Hei Road site entrance and dusty road condition nearby.

Action Taken for Ying Hei Road:

- Additional wheel washing bay provided
- Additional wheel washing by workers
- Deployed 2 water trucks and 2 sweepers for road cleaning
- Workers to remove any dirt/debris on road when observed



Wheel washing bay



Dirt/debris removed



Road cleaning



Wheel washing by workers

# Air Complaint Cases

## Other potential dust source for complaints.

### Action Taken for General Site Dust Suppression

- Deployed water trucks for water spraying every hour
- Installed sprinklers for water spraying
- Provide cover to stockpiles/surcharge piles



Water truck for dust suppression



Cover to stockpiles/surcharge piles



Sprinklers installed on site



Water spray every hour

## 6. AOB

**Thank you**