

Tung Chung New Town Extension



1st PLG Meeting
Date : 13.12.2018



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 (EM&A)
6. Discussion of Complaint Handling
7. AOB and Date of Next Meeting

1. Welcome Speech and Introduction

Community Engagement



Zero "0" 意外
ACCIDENT

Construction Site Zero Accident



Removal of Tree Branches after Typhoon



Bronze Award of
CIC Sustainable Construction Award



Mid-autumn Festival with the Elderly

2. Membership and Terms of Reference

Membership



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

Secretary : Senior Engineer of SLO, CEDD

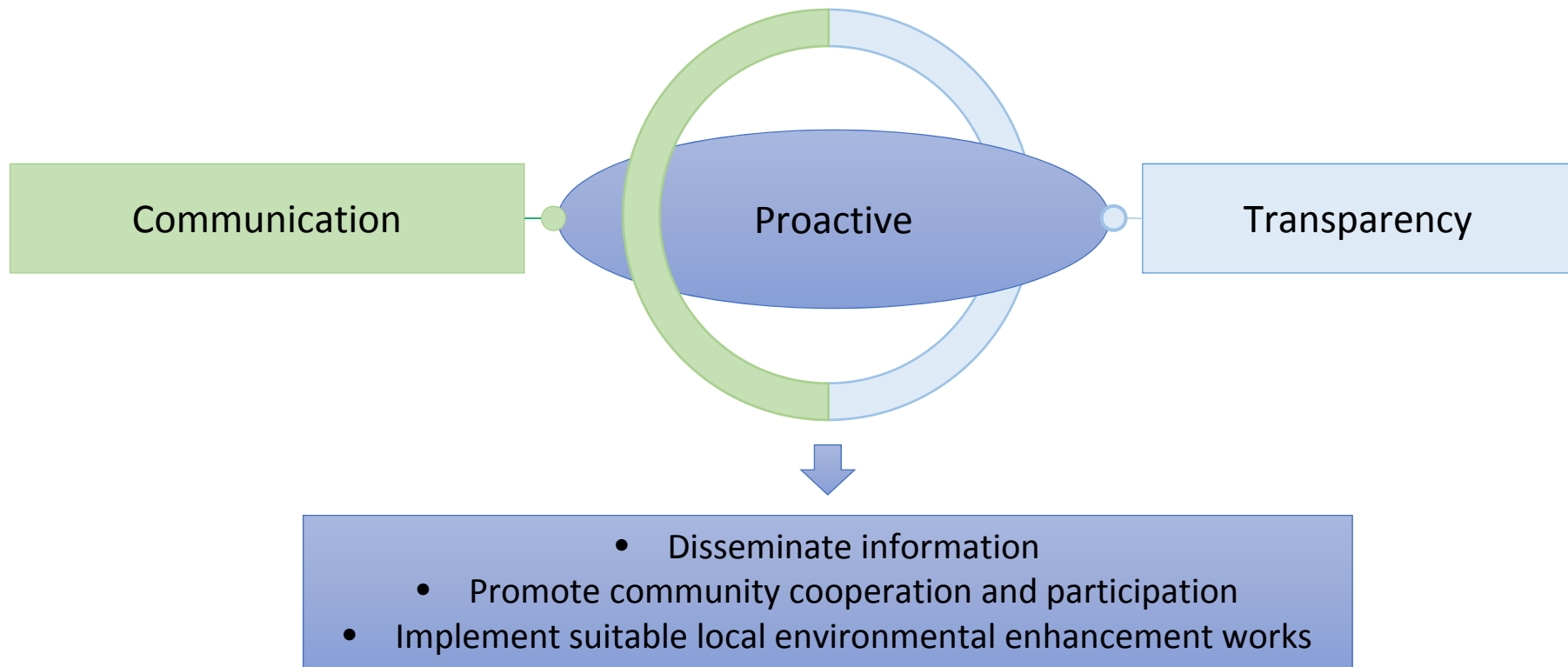
Members :

- Ir. Thomas CT CHAN, Honorary Treasurer, Environmental Division, HKIE
- Professor Kenneth MY LEUNG, School of Biological Sciences, HKU
- Dr. Simon WONG, Ocean Park Conservation Foundation Hong Kong
- Dr. Cynthia YAU, Division of Life Science, HKUST
- Professor Quentin Zhong Qi YUE, Department of Civil Engineering, HKU
- Project team of SLO, CEDD
- Environmental Teams of TCNTE project
- Independent Environmental Checker of TCNTE project

Introduction

Specific Condition 2.1 under EP 519/2016

Setting up of Community and Professional Liaison Groups (CPLG)



Term of Reference

- To advise/facilitate Civil Engineering and Development Department (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.

向土木工程拓展署提供意見及幫助以提升東涌新市鎮擴展工程項目的透明度，並加強與相關專業人員／專家的溝通，以及處理有關環境問題的查詢。

- To advise/facilitate CEDD on promoting community cooperation and participation and implementation of suitable local environmental enhancement works in the relevant Environmental Permit.

向土木工程拓展署提供意見及幫助以促進社區合作和參與，並按照相關環境許可證所載進行適當的地區環境改善工程。

3. Brief on TCNTE project

Brief on TCNTE Project



Existing population capacity:
124,000

Involve development of **about 245 ha.**
Land Formed by reclamation:
130 ha

Population:
+ 145,500
Job opportunities:
+ 40,000
Residential flats:
+ 49,600



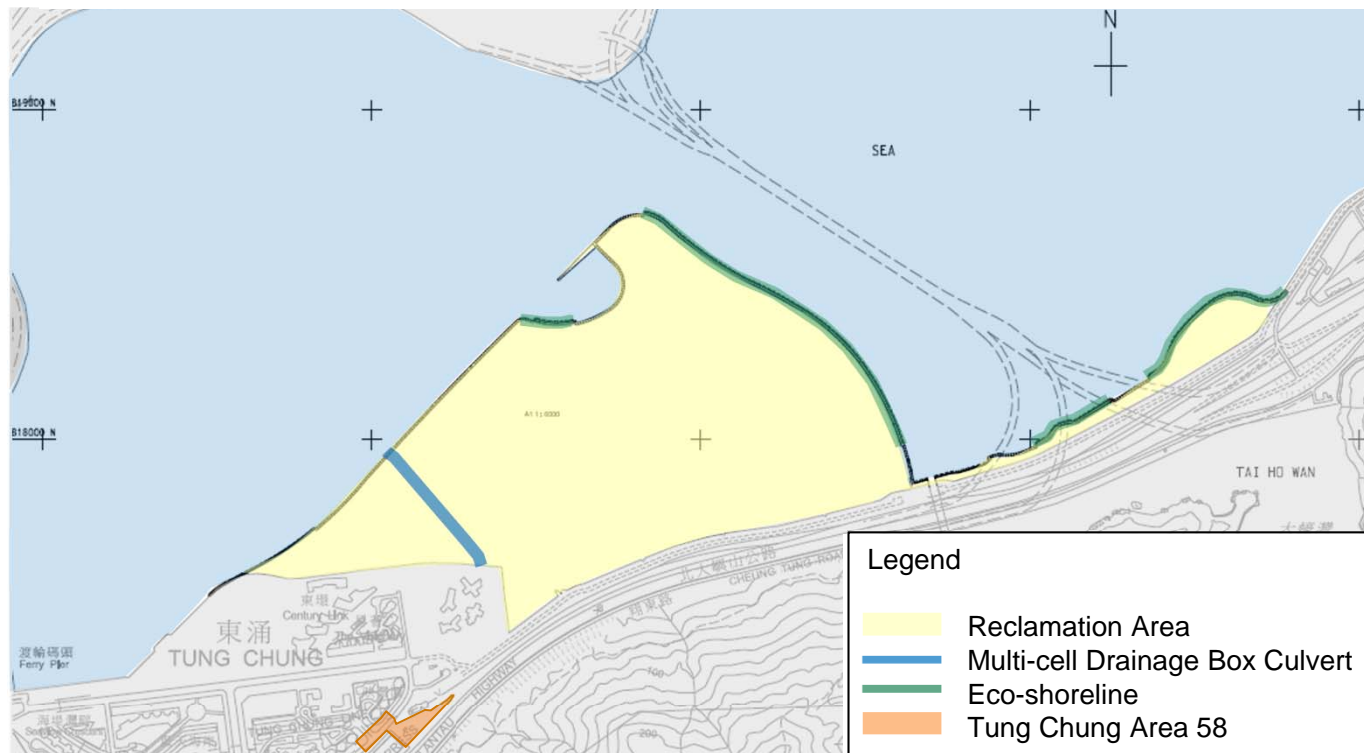
Total population of about **269,500** upon full extension.

Provide about **877,000 m²** GFA for office, retail and hotel uses.

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



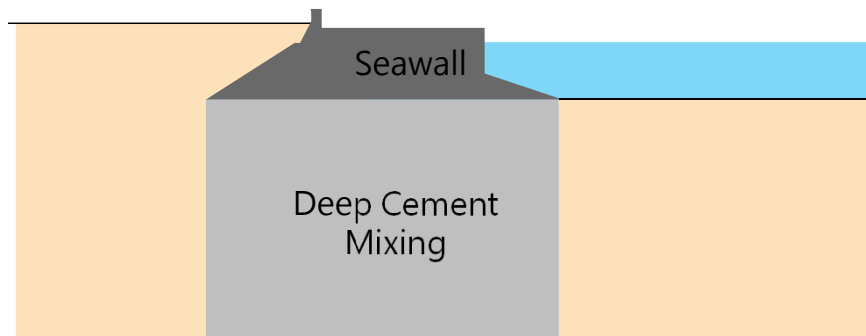
- ① 130 hectares land reclamation by non-dredged method
- ② Construction of 4.9 km seawalls partly with eco-shorelines
- ③ Construction of 470m extension of multi-cell drainage box culvert
- ④ Site formation for future development in Tung Chung Area 58

Key Environmental Design

- a) Non-Dredging Method:
Deep Cement Mixing (DCM)
- b) Eco Shoreline
- c) GPS/AIS System
- d) Reuse of Glass Cullet

Key Features

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



Typical Section of Seawall and DCM



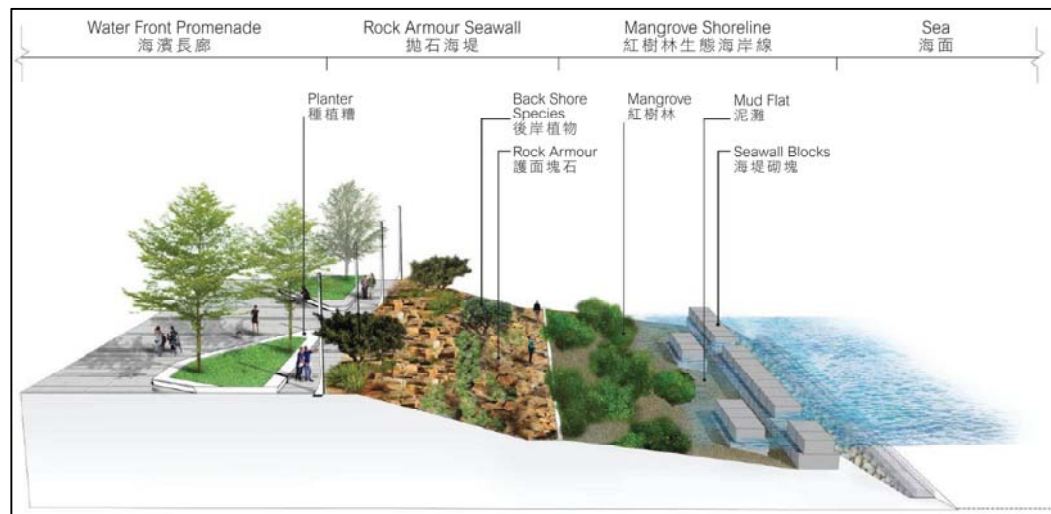
DCM Barge for Marine DCM Installation

Key Environmental Design

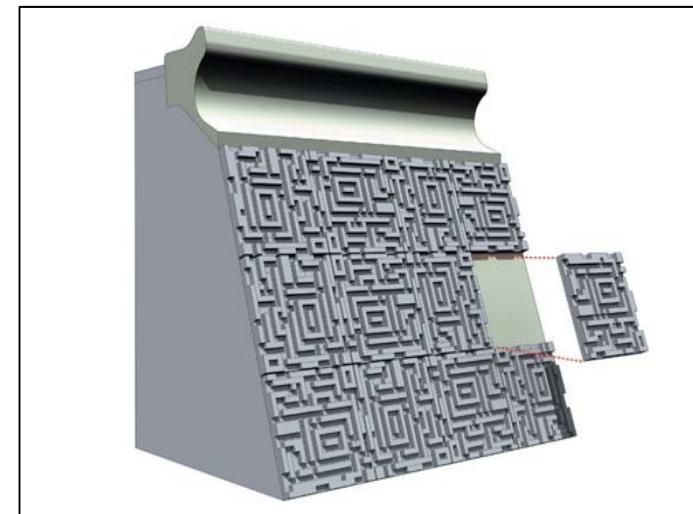
- a) Non-Dredging Method:
Deep Cement Mixing (DCM)
- b) Eco Shoreline
- c) GPS/AIS System
- d) Reuse of Glass Cullet

Key Features

- Increase biodiversity
- Natural environment integrating into the community

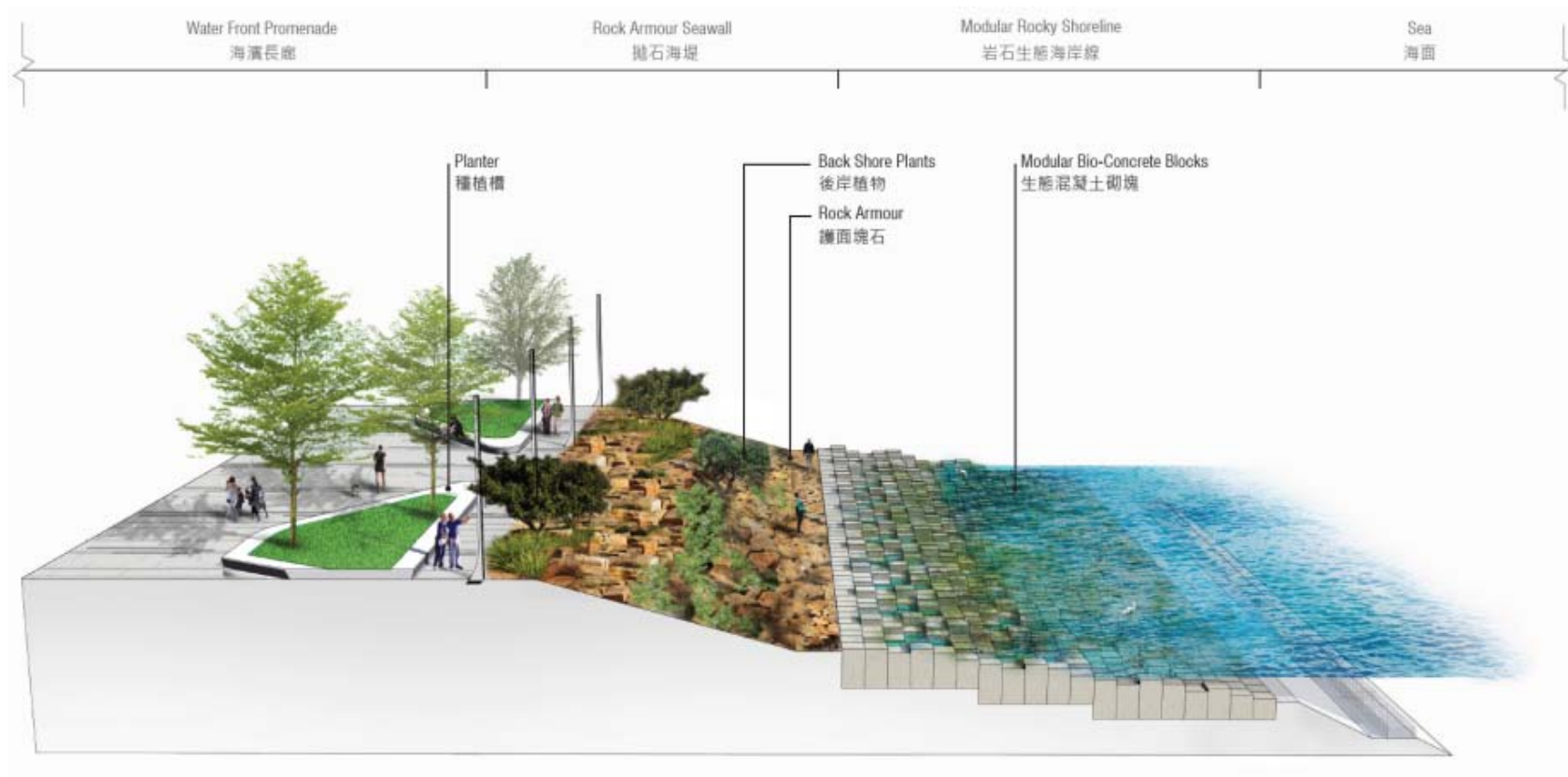


Typical Section for Eco Shoreline



Vertical Eco shoreline

Rocky Eco Shoreline



Key Environmental Design

- a) Non-Dredging Method:
Deep Cement Mixing (DCM)
- b) Eco Shoreline
- c) GPS/AIS System
- d) Reuse of Glass Cullet

Key Features

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



All dump trucks equipped with GPS system



Setting-up of Restricted Area (Tung Chung Road)

Key Environmental Design

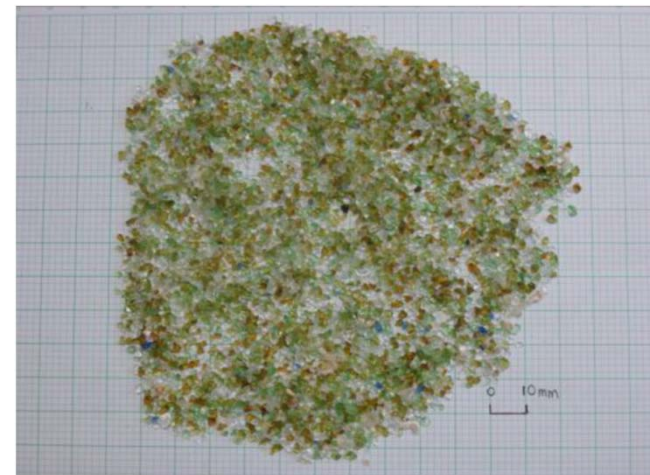
- a) Non-Dredging Method:
Deep Cement Mixing (DCM)
- b) Eco Shoreline
- c) GPS/AIS System
- d) Reuse of Glass Cullet

Key Features

- Sand Substitute for Reclamation
- Turn Waste into Valuable Resource
- Reduce Waste and Alleviate the Pressure on Landfill

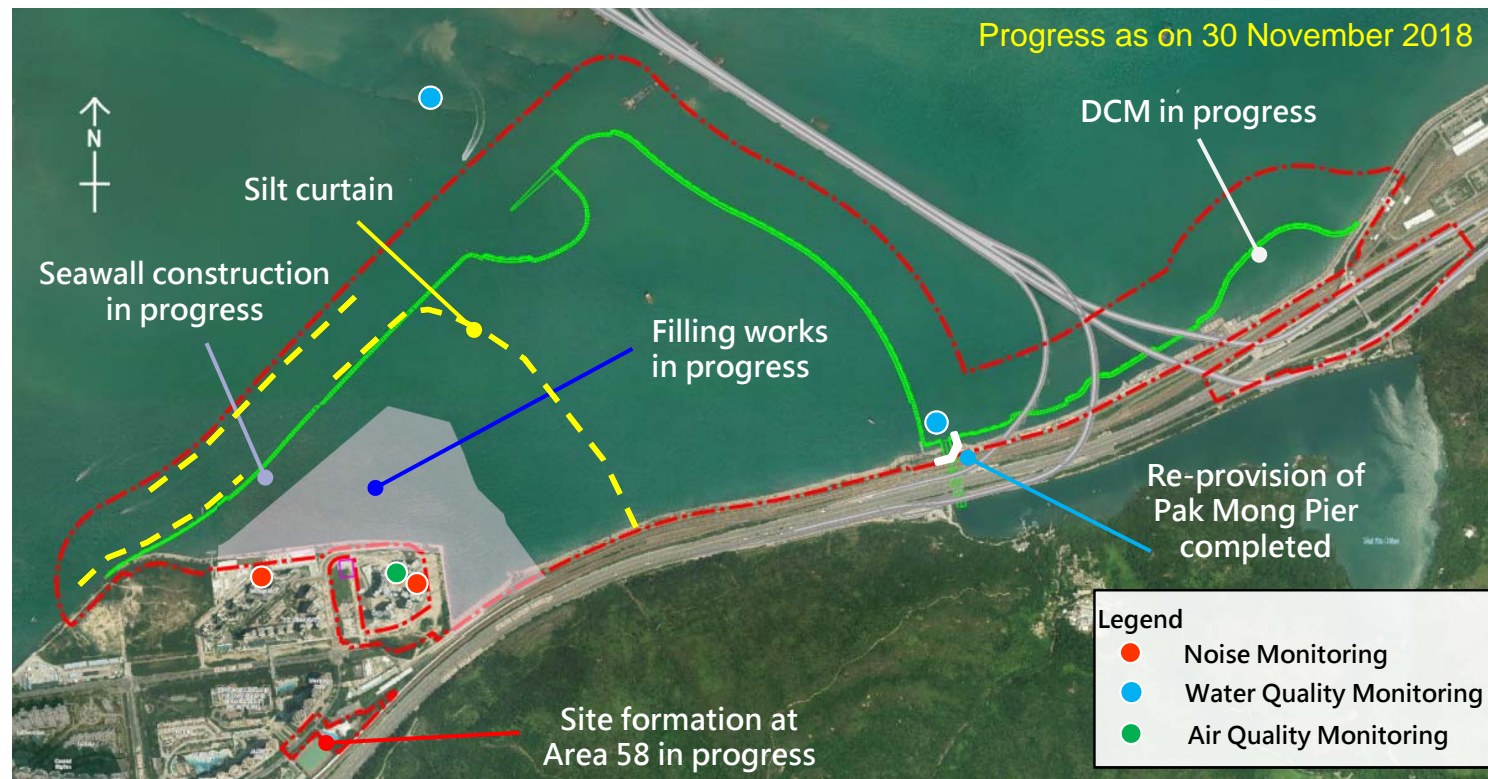


Reuse of Glass Cullet

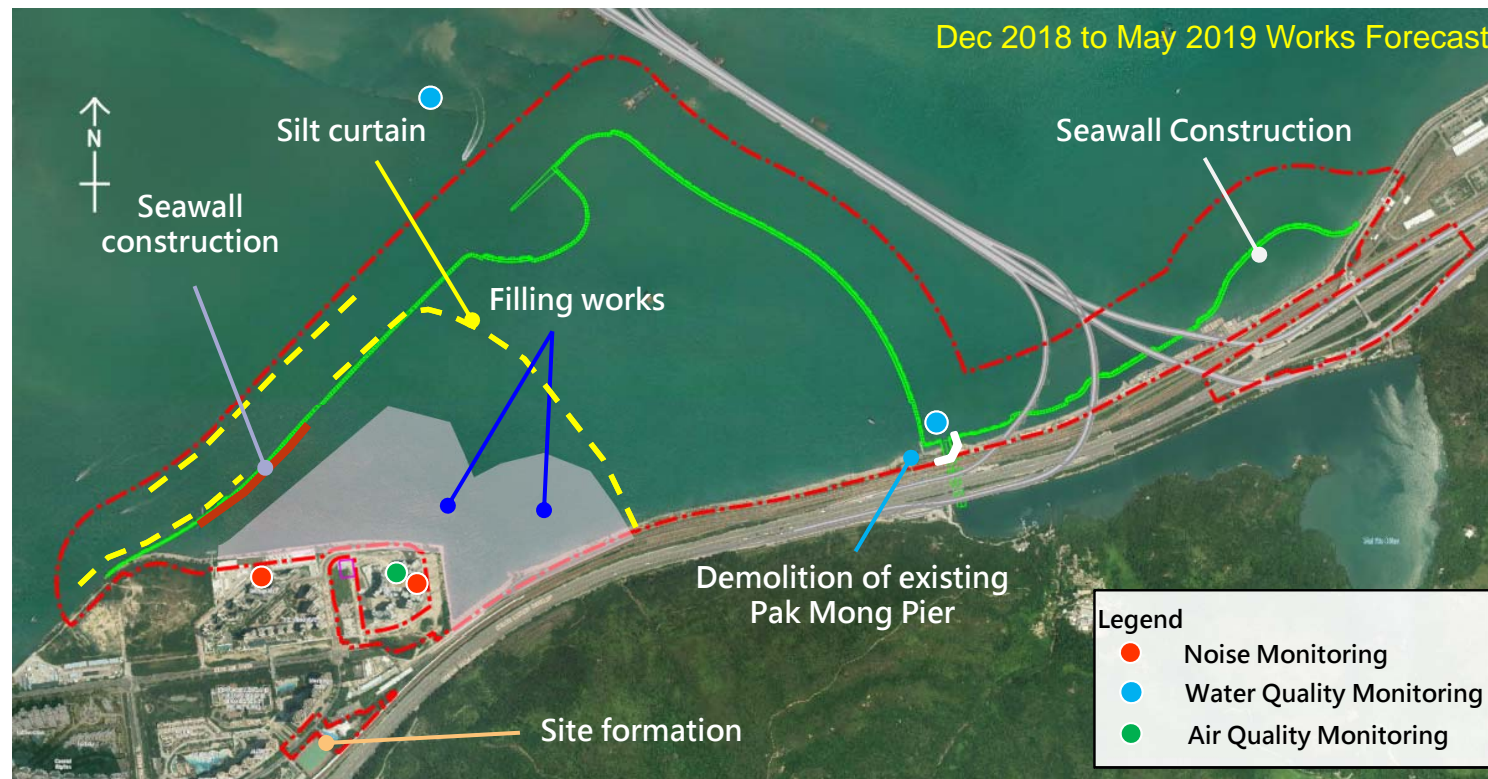


Pulverized Glass Cullet

Current Project Progress



Next Six Months Works Forecast



Newsletter Issues



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

第一期通訊
NEWSLETTER ISSUE NO. 1

2018•08

歡迎 親臨第一期東涌新市鎮擴展—填海及前期工程通訊，本通訊將提供有關工程的進度及相關資訊。

WELCOME TO OUR first issue of the newsletter for Tung Chung New Town Extension—Reclamation and Advance Works. The progress of the construction works and relevant information will be provided in this Newsletter.

工程簡介 Project Introduction

東涌新市鎮擴展填海工程及填海於2003年完成最後一期填海發展後，首座填海地盤的開工興建計劃，亦是政府多個填海計劃中長遠上最供應的重要者之一。政府計劃將東涌新市鎮進一步發展成為面向的市鎮，以容納更多人口，並提供足夠的社區及康樂設施。

The Tung Chung New Town Extension (TCNTE) is the first new town extension project via reclamation since the completion of the last new town development projects in 2003 (Kwan O and Tung Chung) by reclamation in 2003. The TCNTE project is also one of the major initiatives under the Government's multi-pronged approach to increase and diversify land supply to cater for long-term needs. The Government plans to further develop the Tung Chung New Town (TCNT) into a comprehensively planned new town to accommodate a larger population capacity with adequate local and regional community facilities.

東涌新市鎮概念圖
Conceptual Plan of Tung Chung East

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

第二期通訊
NEWSLETTER ISSUE NO. 2

2018•11

歡迎 親臨第二期東涌新市鎮擴展—填海及前期工程通訊，本通訊將提供有關填海工程的填海技術、工程的進度及相關資訊。

WELCOME TO OUR second issue of the newsletter for Tung Chung New Town Extension – Reclamation and Advance Works. The technology of the reclamation, the progress of the construction works and relevant information of the reclamation works will be provided in this News letter.

採用創新非濠挖填海技術
Adoption of Innovative Non-dredged Reclamation Technology

本工程與以往傳統北方填海地及填海地，其中不須及濠挖填海地(海泥)。為了因應填海地填海地填海地填海地填海地，工程團隊引入非濠挖填海地「深層水泥拌合法」填海地填海地填海地，填海地填海地填海地填海地填海地。

The reclamation works adopted non-dredged reclamation technology methods for reclamation and construction of seawalls. This project does not involve the removal of soft marine deposit. To strengthen the soft marine deposit and to enhance the stability of the seawall foundation, the project team introduces the non-dredged "Deep Cement Mixing" (DCM) method for stabilisation of ground. It is the first public works project using this technology.

「深層水泥拌合法」的原理是將機械攪拌水泥漿與海泥混合，形成水泥拌合法。這些水泥拌合法在海泥填海地填海地填海地填海地填海地，以填海地填海地填海地填海地填海地，之後才在海面上建造海堤及進行填海工程。

The principle of DCM is to inject cement slurry into the marine deposit and mix them mechanically to form a cement mixing column. These cement mixing columns will form a DCM treatment area (see figure at bottom right) to stabilise the seabed underneath the seawall before the construction of the seawall and reclamation works.

Traditional dredged reclamation technology requires transportation and deposition of marine deposit. Its impact in water quality and marine ecology is large. As DCM does not require dredging, it is more environmentally friendly than the traditional dredged method by causing less impact to water quality and marine ecology.

流程 Procedures

深層水泥拌合法
Deep cement mixing

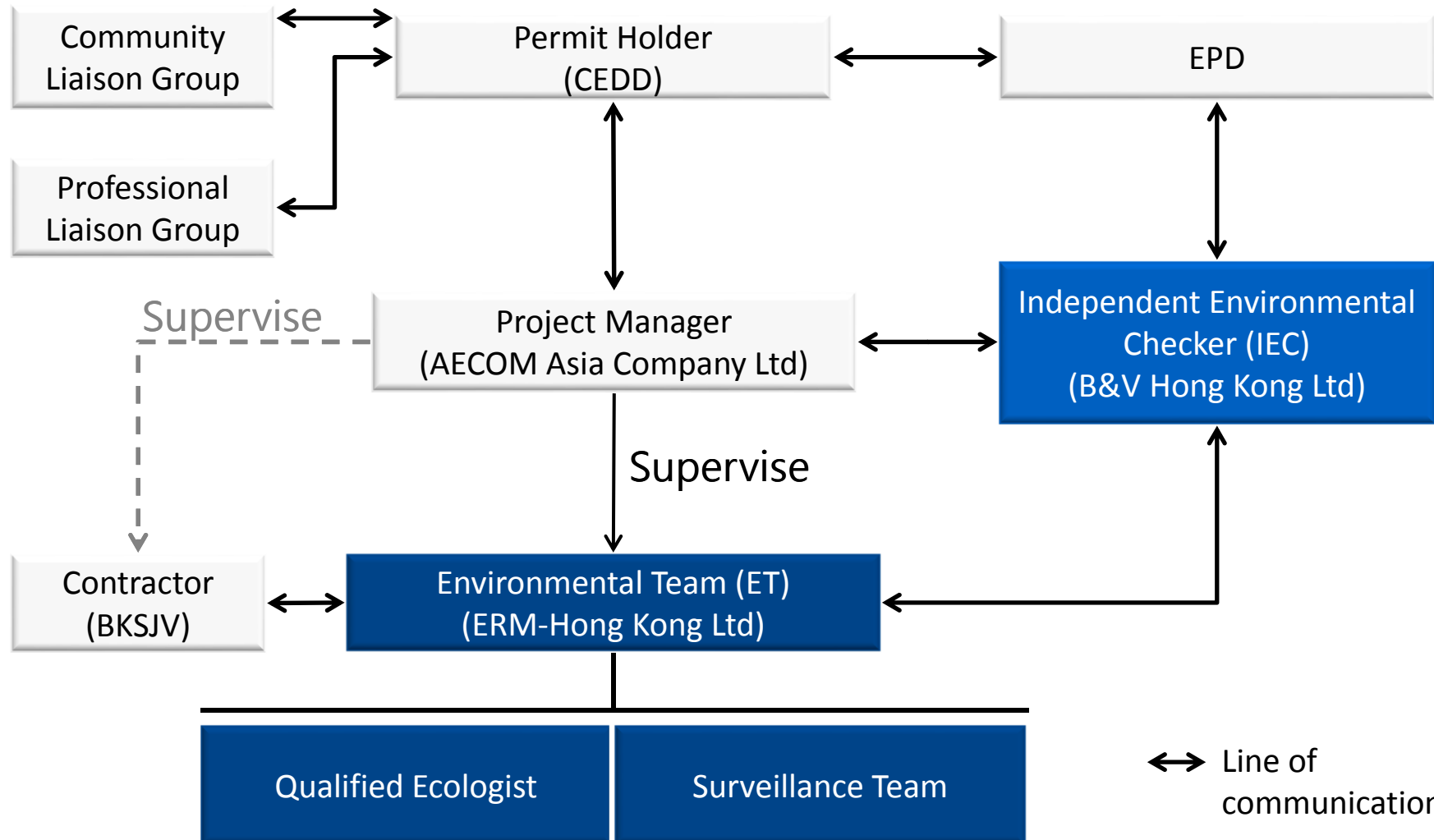
深層水泥拌合法
Deep cement mixing

深層水泥拌合法
Deep cement mixing

To take note of construction progress

5. Report of Environmental Monitoring and Audit (EM&A)

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>

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

TUNG CHUNG *New Town Extension*

Project Background | EIAO Documents | EP Submissions | Baseline Monitoring Report | EM&A Reports | EM&A Data | Community Liaison Group | Professional Liaison Group | What's New

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 (RTTM) system of dump truck's travel routings and parking locations



Complaint Management Plan

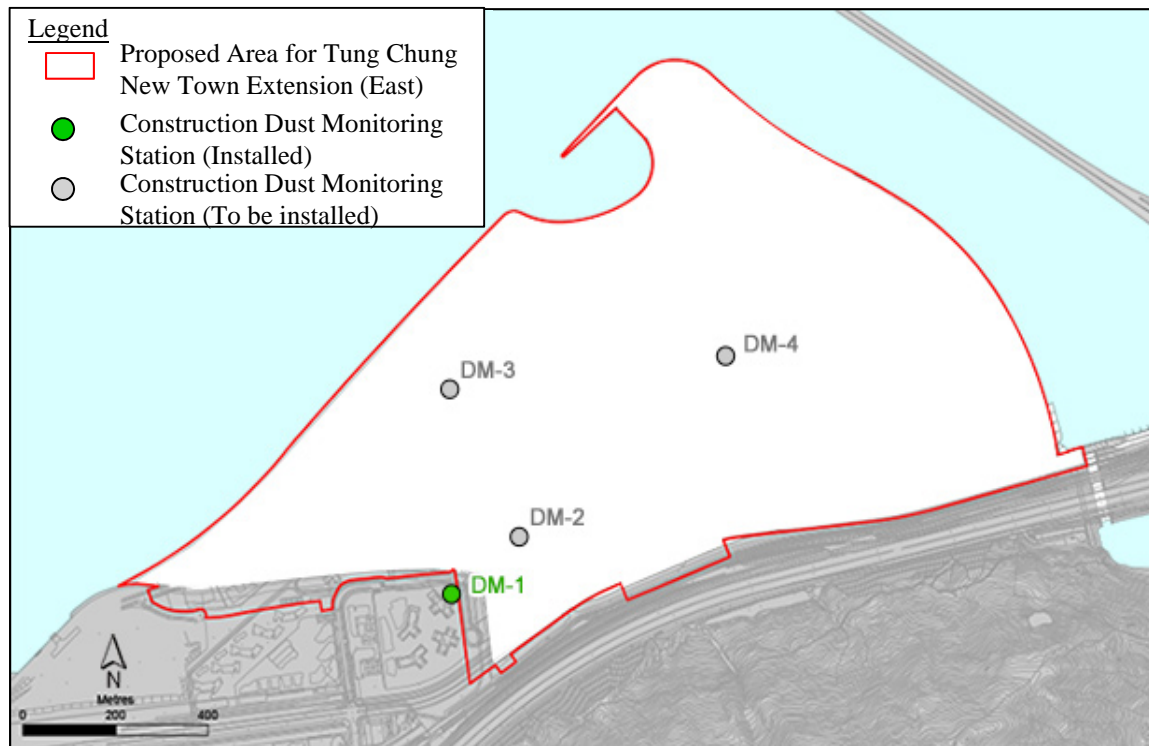
- Set up of a dedicated complaint hotline (9862 2910)
- Set up of a dedicated complaint email (nl201703.info@gmail.com)

EM&A Monitoring – Air Quality



Air Quality Monitoring

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



**Monitoring Results as on
30 Nov 2018**

No project-related
exceedance was recorded.

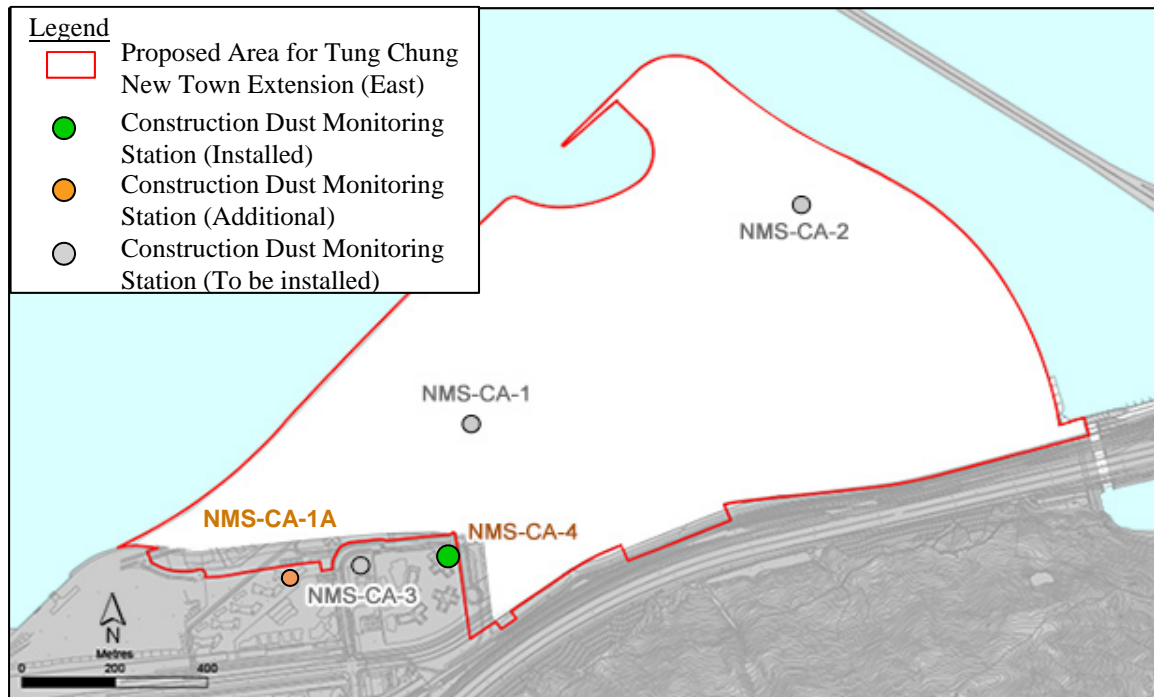


EM&A Monitoring – Noise



Noise Monitoring

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



Monitoring Results as on 30 Nov 2018

- Results of noise monitoring indicated that noise levels were within acceptable level.
- The ET conducted investigations on the noise-related complaints and recommended Contractor to implement appropriate mitigation measures to reduce noise nuisance to nearby residential areas.

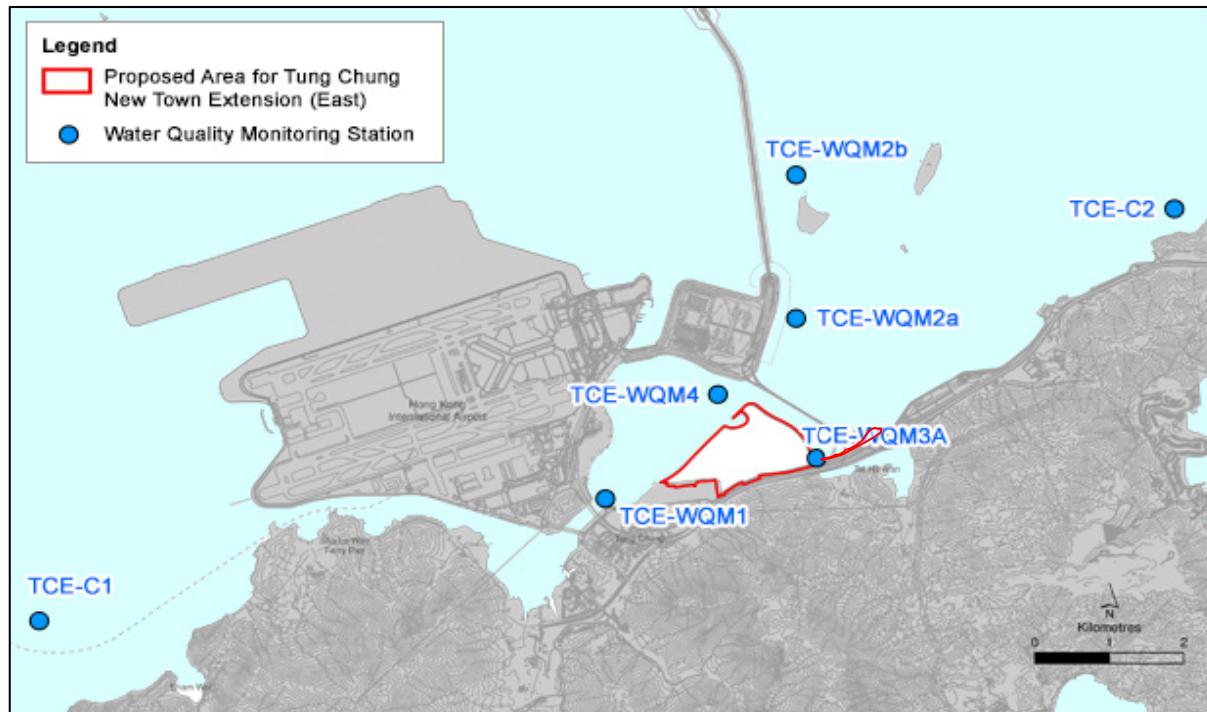


EM&A Monitoring – Water Quality



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 as on
30 Nov 2018

No project-related
exceedance was recorded.

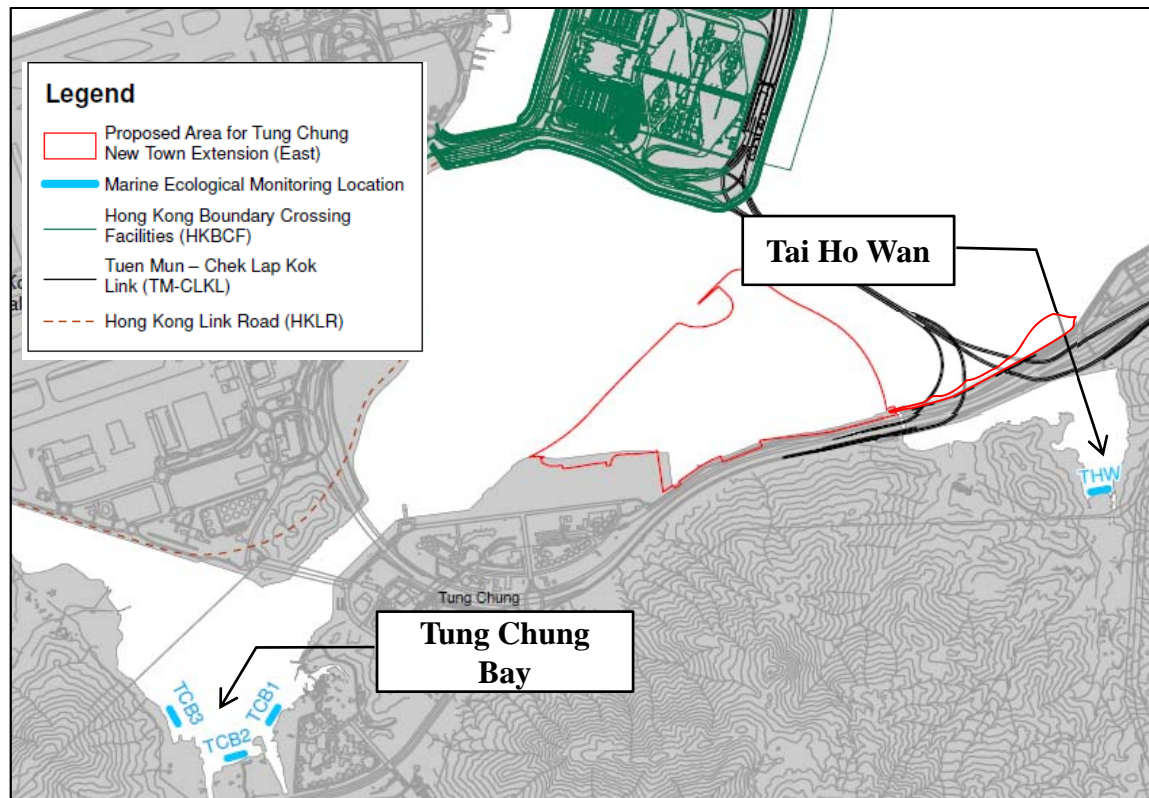


EM&A Monitoring – Ecology



Ecological Monitoring

Frequency Quarterly
Monitoring Parameter Horseshoe Crabs, Seagrass, Intertidal Soft Shore Communities



**Monitoring Results as on
30 Nov 2018**

Ecological monitoring was conducted in September 2018. Horseshoe crabs were found in both Tung Chung Bay and Tai Ho Wan.



Site Inspection



Regular Site Inspection

Frequency	Once per week and ac-hoc site inspection
Inspection Criteria	On-site mitigation measures for air quality, noise control, water quality and waste management

Air Quality



Stockpiles of aggregate covered by tarpaulin to prevent windblown dust.

Noise



Construction Noise Permit (CNP)



Quality Powered Mechanical Equipment (QPME)

Monitoring Results as on 30 Nov 2018

Immediate actions were taken to rectify the observations from the inspection team.

Site Inspection

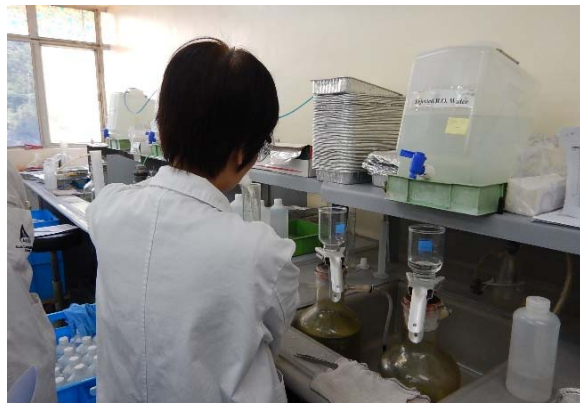


Regular Site Inspection

Water Quality



Water sampling



Laboratory test



Perimeter silt curtain

Waste Management



GPS tracking on dump trucks



Waste separation bins

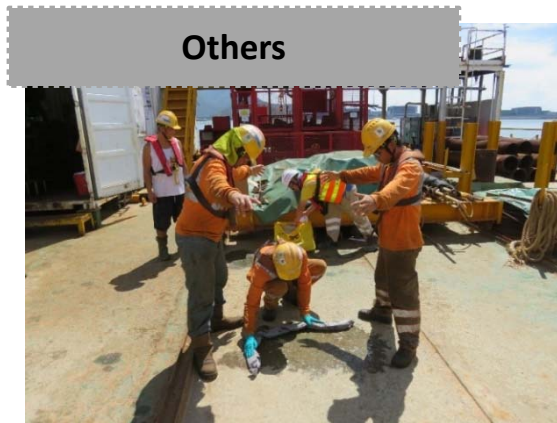


Drip trays for chemical storage

Site Inspection



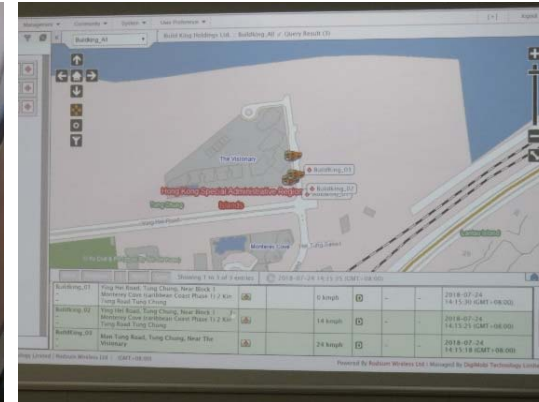
Regular Site Inspection



Chemical spill drill



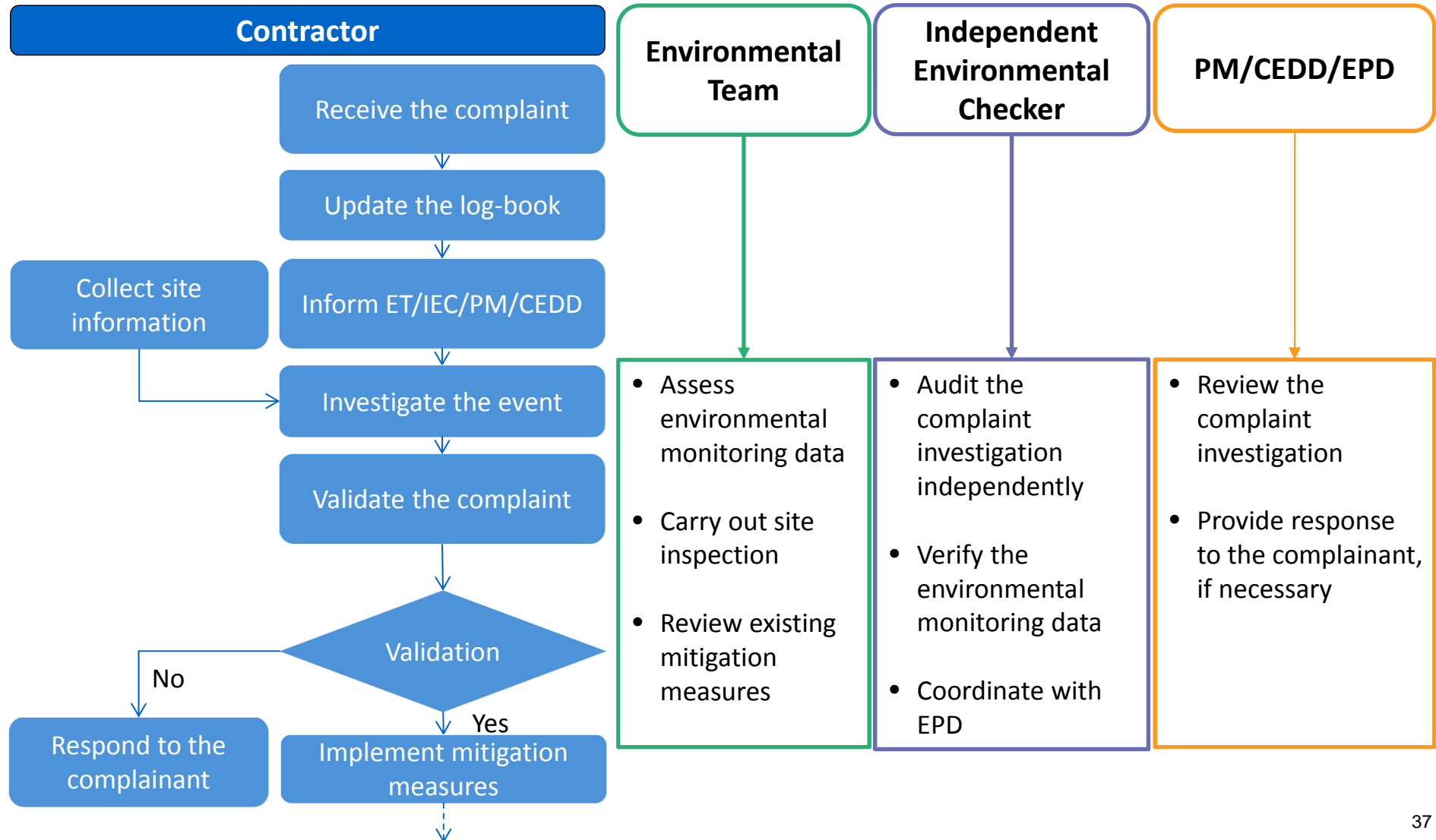
Available spill kits at the site



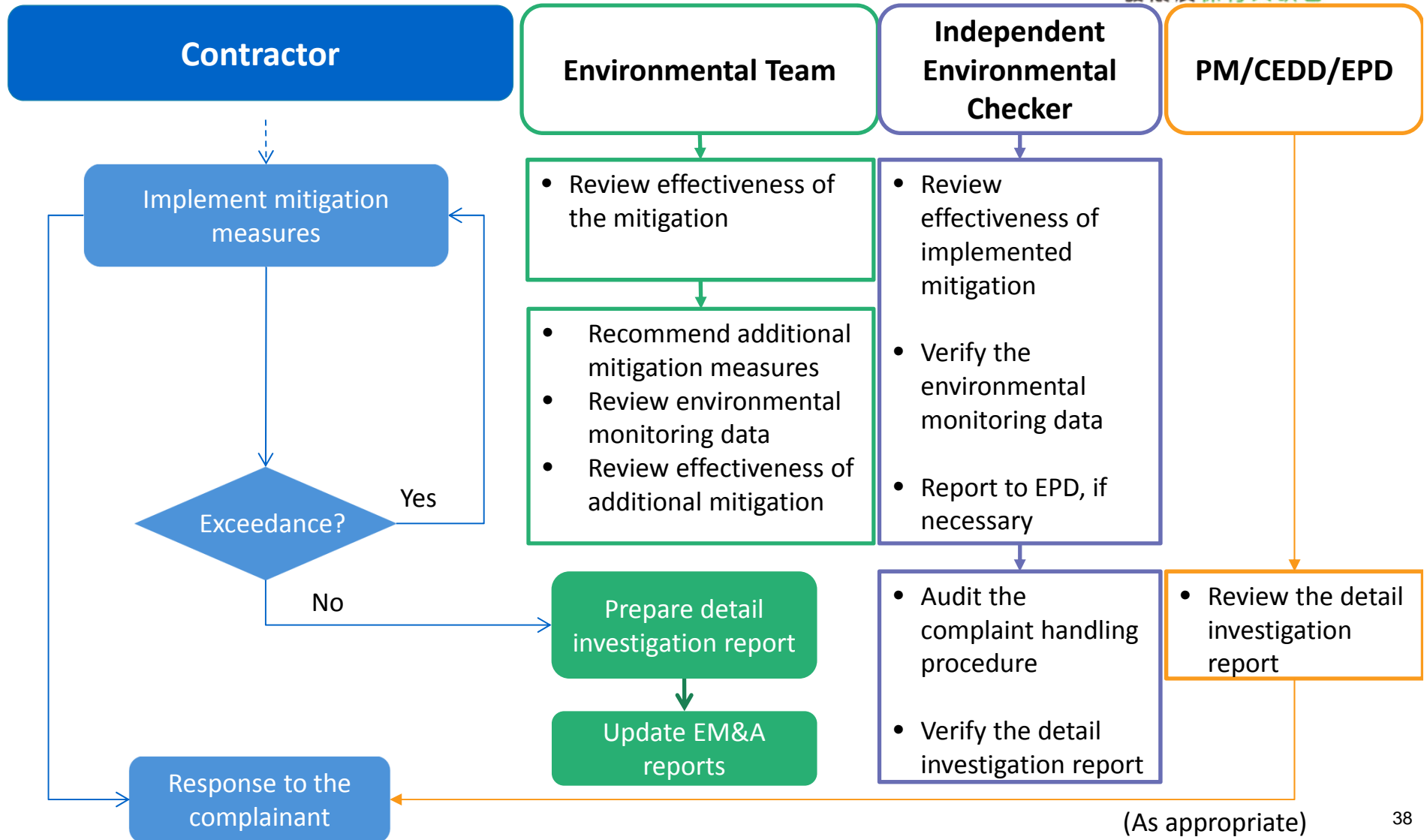
Real-time tracking of dump truck travel routings

6. Discussion of Complaint Handling

Complaint Handling Flowchart



Complaint Handling Flowchart (cont'd)



Summary of Complaint Received



Period (July – November 2018)	Water Quality	Air Quality	Noise	Waste Management
Number	1	1	9	2
Project-related Prosecution	No	No	No	No

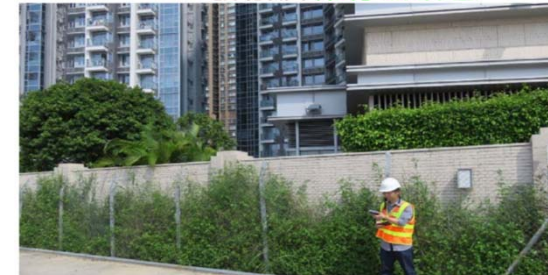
Noise Complaint Cases

9 complaints on construction noise nuisance since the commencement of the reclamation works

- Investigations were conducted for each environmental complaint
- Ad-hoc noise monitoring were conducted near CenturyLink and Ying Tung Estate.
- No limit level exceedance was recorded or non-compliance was found.

Action Taken:

- The Contractor was reminded to minimise construction noise levels near residential areas
- Additional noise monitoring points
- Protective noise barrier



Ad-hoc Noise Monitoring



Additional Noise Monitoring Point



Protective Noise Barrier

Discussion



- Apart from the current complaint channels (such as dedicated complaint hotline, complaint email, Hotline “1823” or email/phone to EPD), any further channels should be established for the public to enquire the environmental issues?
- Apart from the CLG/PLG and complaint channels, is there any suggestion for enhancing transparency and communication of the Project in the community?

7. AOB and Date of Next Meeting

Thank you