



路政署  
Highways Department

# 中九龍 幹線 Central Kowloon Route

HY/2014/20 – Central Kowloon Route - Yau Ma Tei West

**Build King – SKEC Joint Venture (YMTW)**  
**CIC Site Safety Gathering**  
**Sharing Session for Working-at Height Safety**

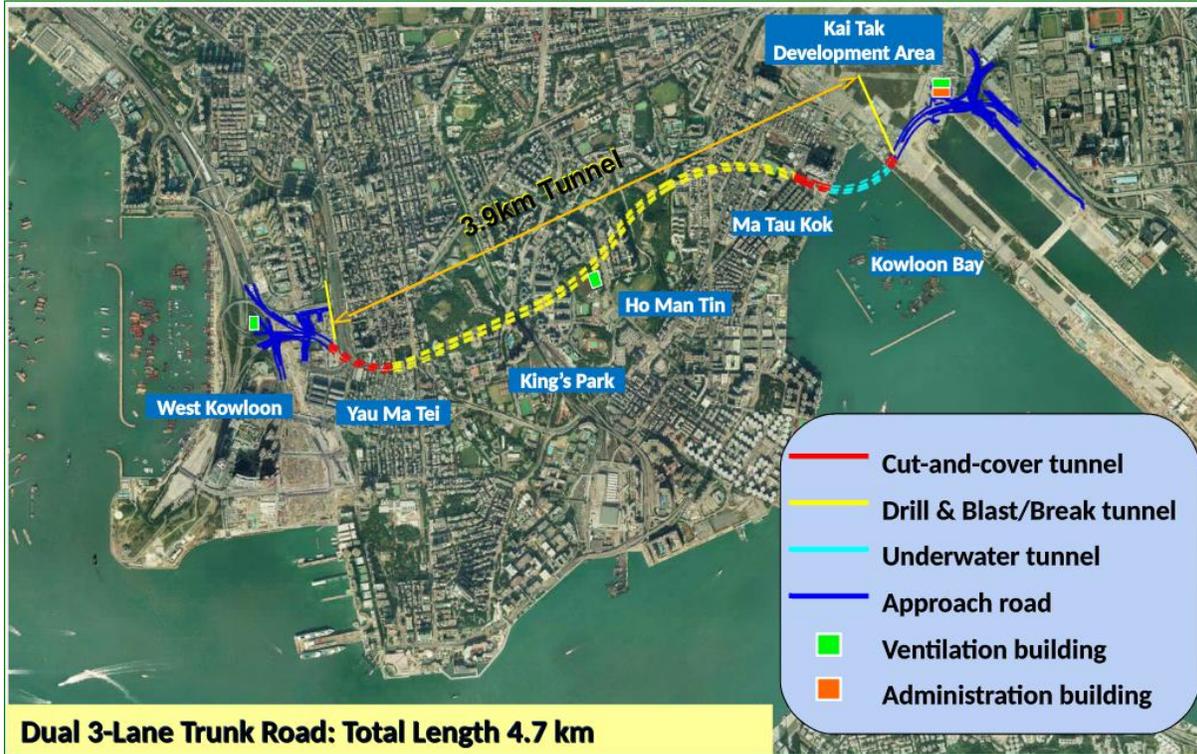


**ARUP**

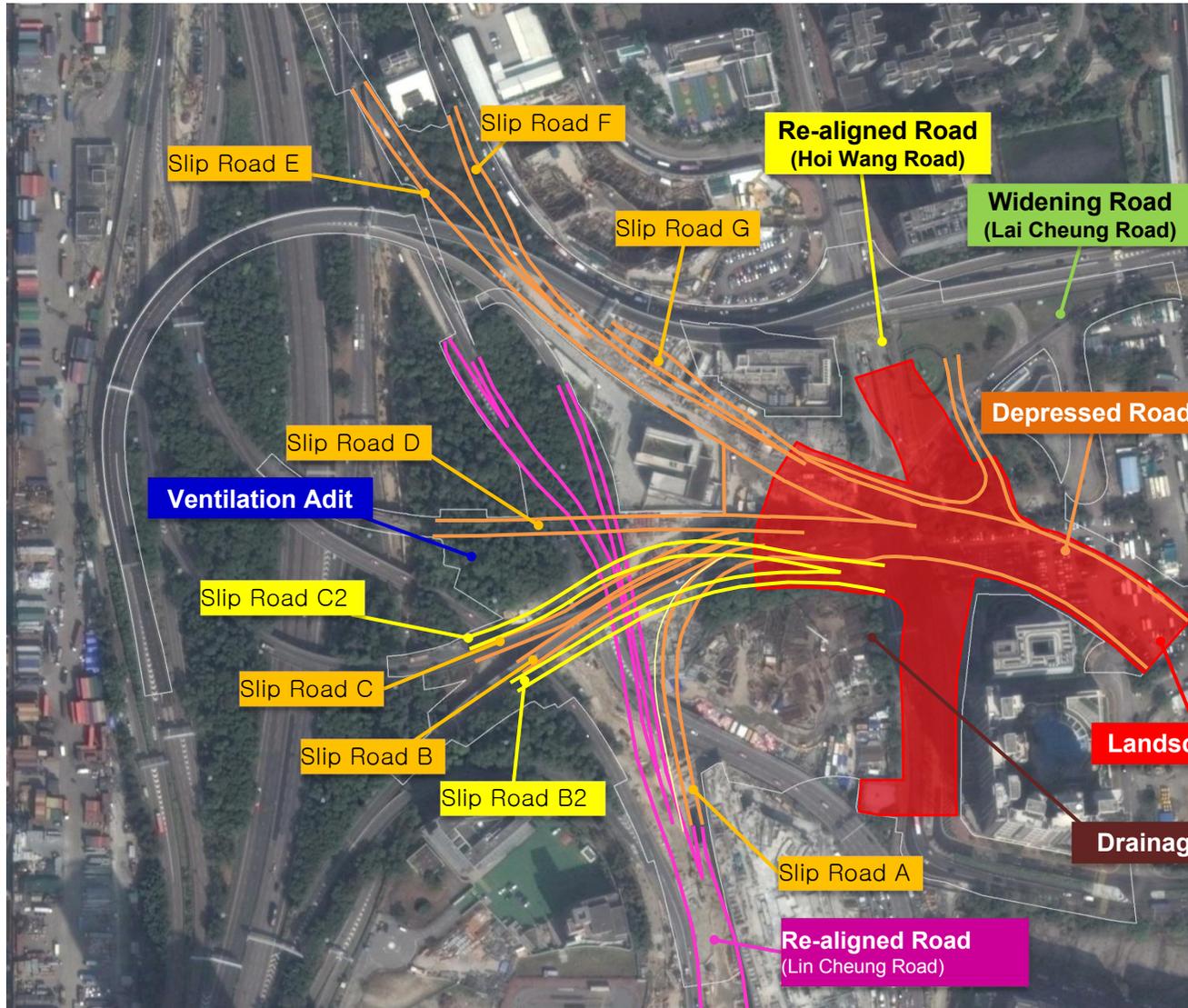
Joint Venture



# 1. Overview of CKR Project



## 2. Scope of Work



Scope of Works	
Depressed Road	250m
Slip Roads and Bridges	9ea / 7ea
Landscaped Deck	22,735m <sup>2</sup>
Noise Mitigation Measures	Semi : 120m
	Vertical : 530m
	Cantilever : 765m
Ventilation Adit	465m
Drain Diversion	215m
Re-alignment of Lin Cheung Road	
Re-alignment of Hoi Wang Road	
Widening of Lai Cheung Road	



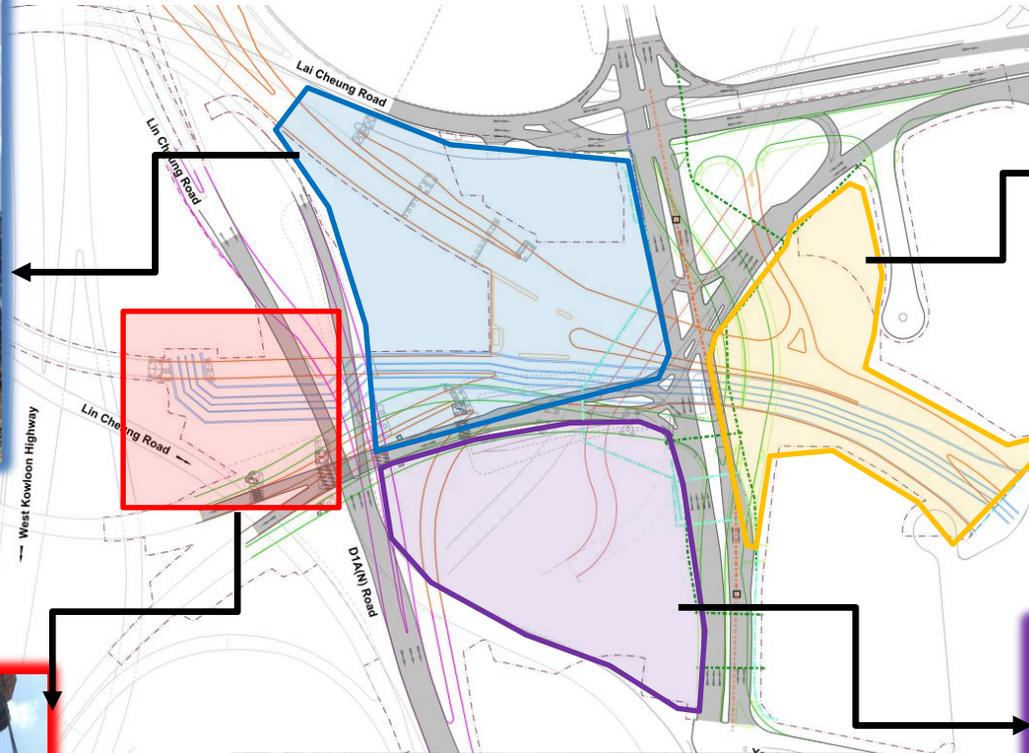
### 3. Video of YMTW Project



## 4. Work Activities with Relatively Higher Risk on Working at Height



4. Socket H-pile Construction at Portion 1B



1. Diaphragm wall Construction at Portion 1F and 10



3. Bored Pile Construction at Portion 1E

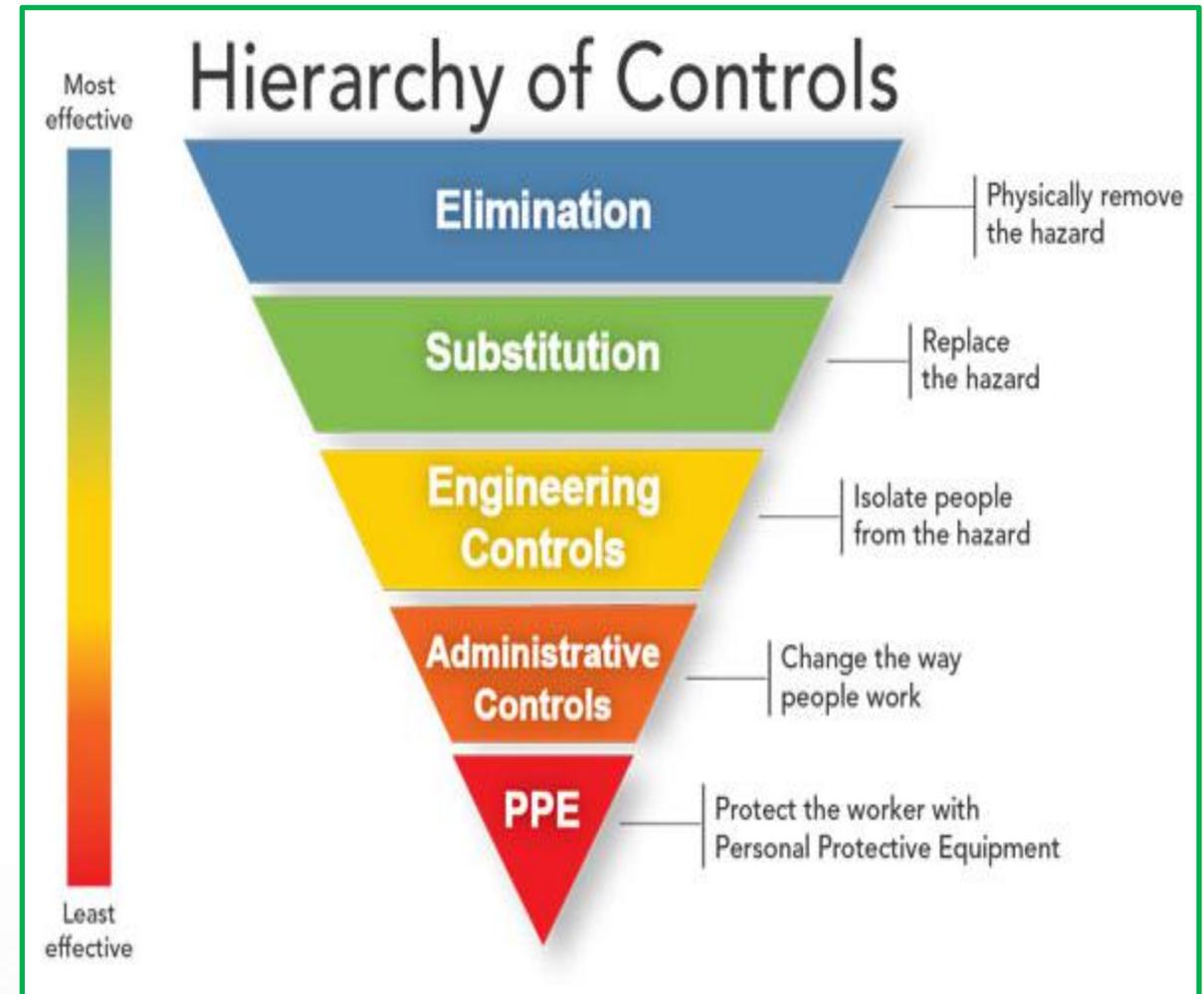


2. Box Culvert Construction at Portion 17

## 4. Work Activities with Relatively Higher Risk on Working at Height



Our project's strategy:  
Elimination and substitution are the priority of the hazards control.

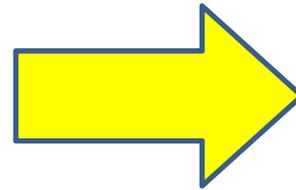


## 5. Safety Measure on Works Activities

### Method Review

#### 1) Diaphragm Wall Construction

Initial Plan: Adopt metal scaffolding during the rebar cage connection works



After Method Review: The connection work can be conducted at ground level

## 5. Safety Measure on Works Activities

### Prefabricated Protection

#### 1) Diaphragm Wall Construction



Standard of edge / ground opening protection

## 5. Safety Measure on Works Activities

### Prefabricated Protection

#### 1) Diaphragm Wall Construction



1

Setting up of metal frames for rebar cage

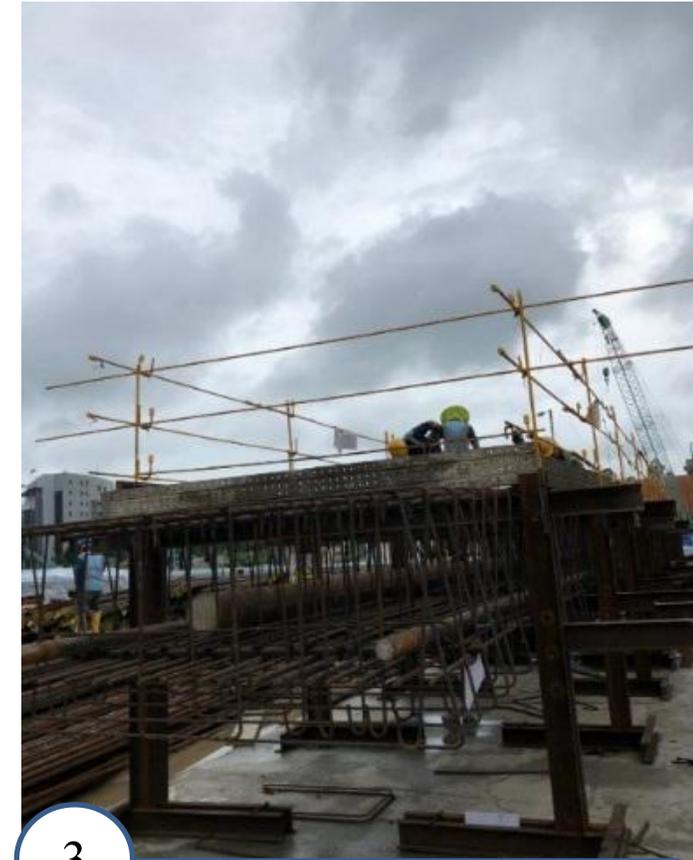
2

Tailor-made post for pre-fabricated guardrails



3

Pre-fabricated guardrails



## 5. Safety Measure on Works Activities

### Sequence of Work

### 2) Box Culvert Construction



1



2



#### Documents include:

- 1) Statutory Form
- 2) Design Certificate
- 3) ICE Certificate
- 4) Permit to Excavate
- 5) U/U Detection Report
- 6) Emergency Contact



Pictorial sequence  
of works

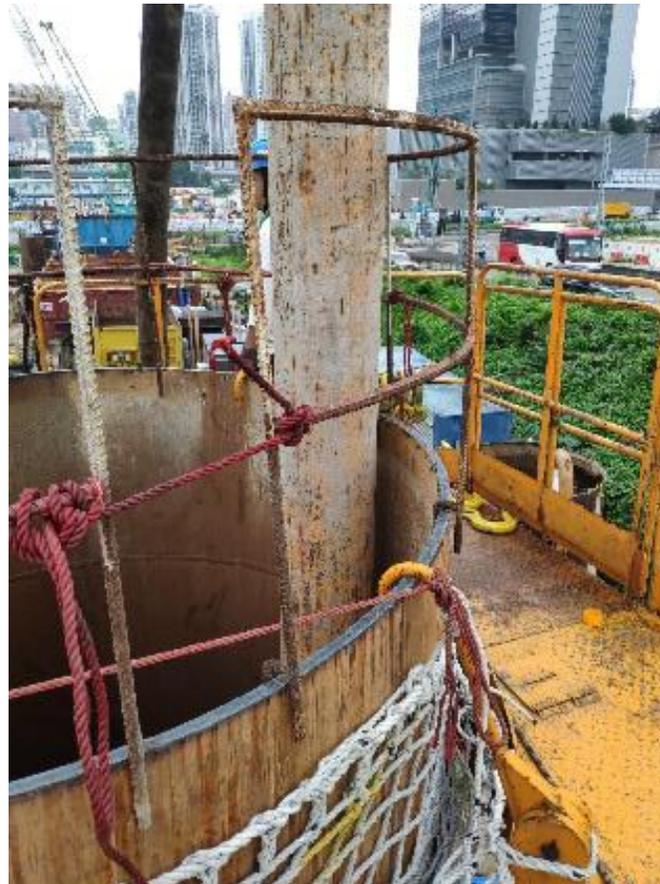
## 5. Safety Measure on Works Activities

### Prefabricated Protection

### 3) Bored Pile Construction



Pre-fabricated Guardrail



Safety Net

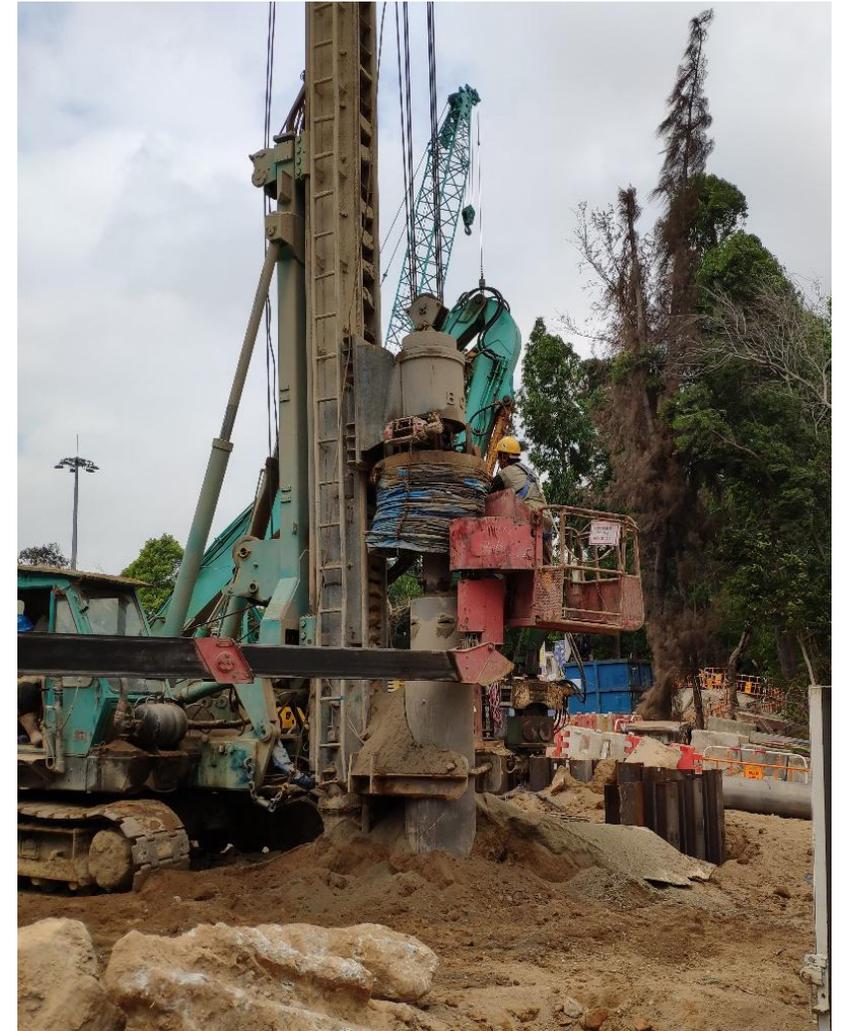
## 5. Safety Measure on Works Activities

PPE

### 4) Socket H-pile Construction



Independent  
lifeline



## 6. Working at Height Control Measures

### Works Above Ground Safety Measure

#### i) Metal Scaffolding

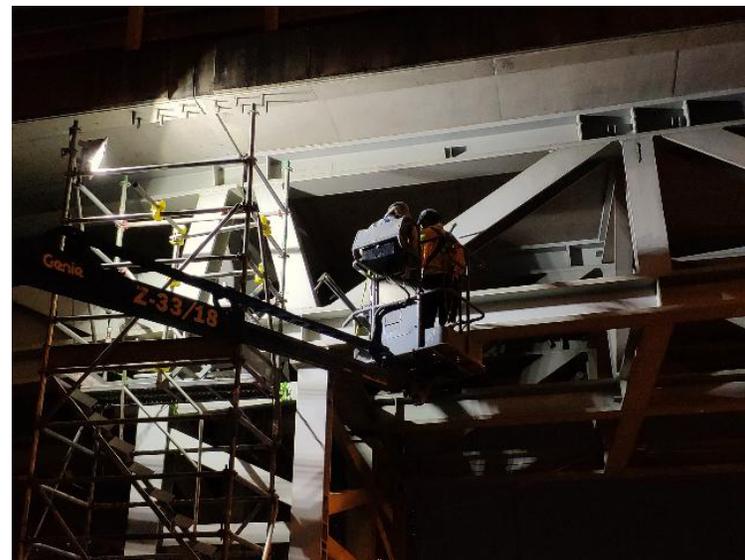


Access tower and platform

## 6. Working at Height Control Measures

### Works Above Ground Safety Measure

#### ii) Mobile Elevated Platform

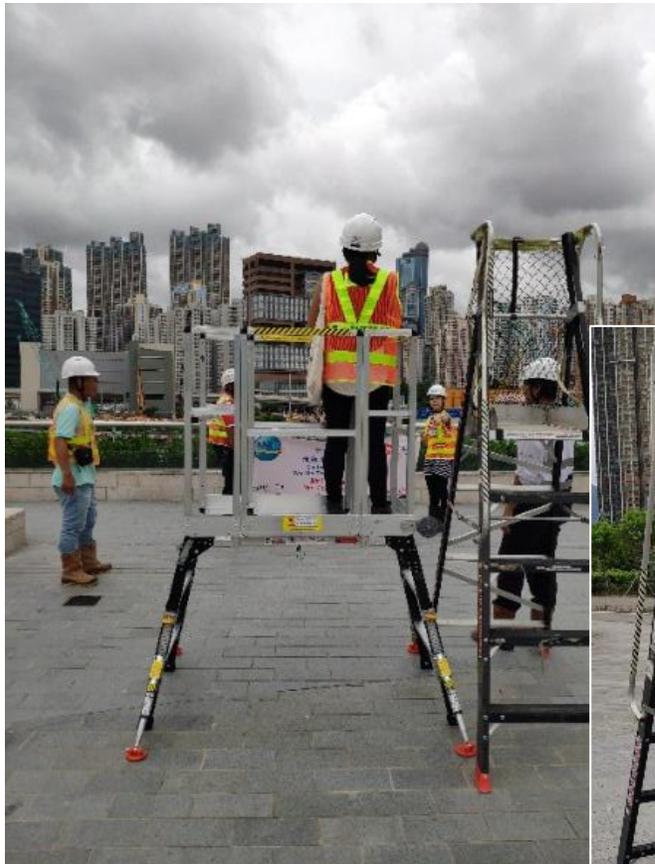


Different types of Mobile Elevated Platform are to be adopted

## 6. Working at Height Control Measures

### Works Above Ground Safety Measure

#### iii) Light-Duty Working Platform



**Equipment  
Label**



## 6. Working at Height Control Measures

### Works Above Ground Safety Measure

#### iv) Fall arresting system (Full body harness + secure anchorage point)

Independent  
lifeline

Fall arresting  
system

Access Ladder



## 6. Working at Height Control Measures

### Training & Promotion

#### Specific newsletter for promotion

嘩!!好勁呀!!



鍊成!  
“輕便工作台”

快快手整返好枝旗先!

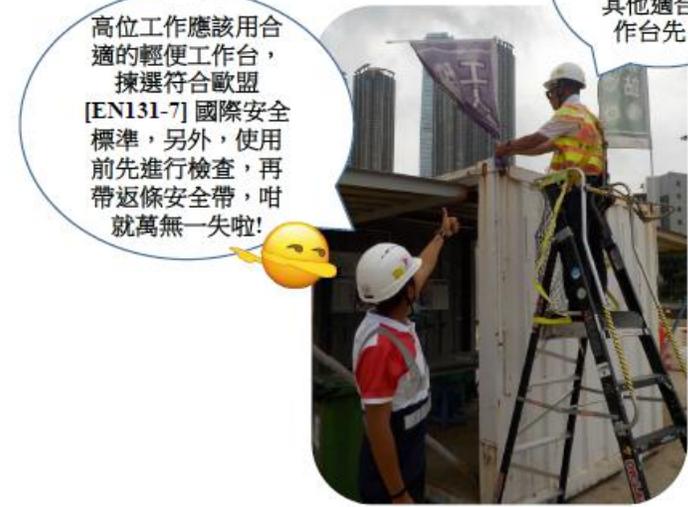
STOP!

師父，請立即停止使用直梯進行高位工作!

又幾安全穩陣WO!今晚睇下仲有無其他適合工作台先。

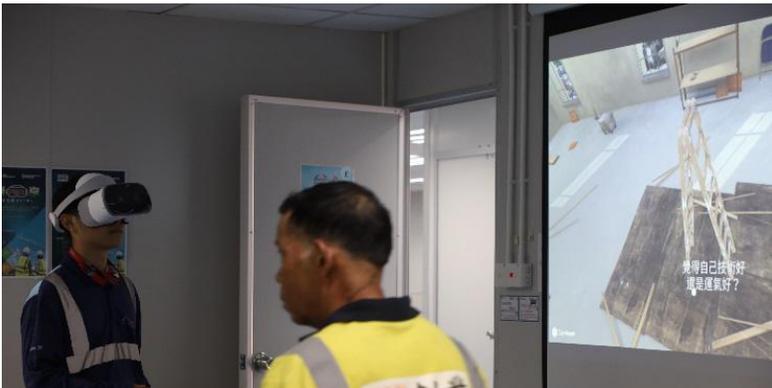
高位工作應該用合適的輕便工作台，揀選符合歐盟 [EN131-7] 國際安全標準，另外，使用前先進行檢查，再帶返條安全帶，咁就萬無一失啦!

高位工作夠穩陣，收工開心去掙鏢!醒呀!!



## 6. Working at Height Control Measures

### Training & Promotion



Virtual Reality Training (VR)

## 7. Innovative Measure in Working at Height Safety

### Alert Device



Alert Device installed on the man cage

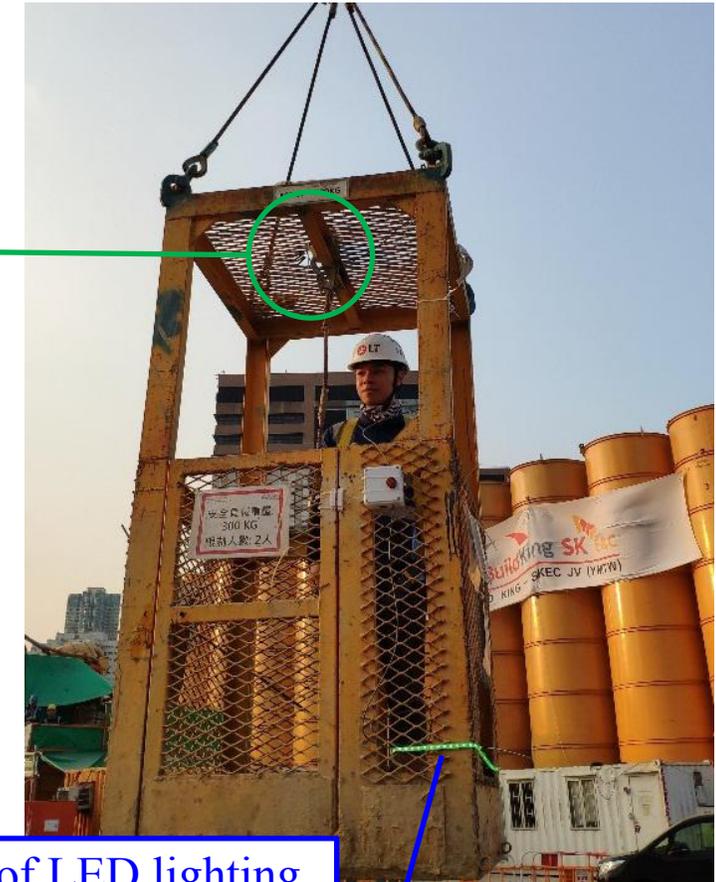


Magnetic control installed on the door



Control device at the anchor point

Buzzer with light alert when door was not closed properly



The signal of LED lighting (Green colour) showing the use of anchorage point

## 7. Innovative Measure in Working at Height Safety

### Alert Device



End of Presentation

Thank You!!