

高處工作安全計劃

東頭邨第八期公屋發展計劃

Construction of Public Rental
Housing Development of Tung Tau
Estate Phase 8



Sun Fook Kong Construction Group
新福港建設集團

Since 1948

東頭邨第八期

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1. 工程簡介及工程項目的風險

- ▶ 地盤面積：約8366平方米
- ▶ 樓宇高度：一幢樓高29層住宅
- ▶ 單位數目：約1033個
- ▶ 預計人口：約2900人
- ▶ 康樂設施：兒童遊樂場
- ▶ 其他設施：27個私家車車位
9個電單車位
2個輕型貨車車位
- ▶ 預期2020年第一季完工



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1. 工程簡介及工程項目的風險

- ▶ 地盤以釘板、扎鐵、預製件及鐵模板進行 → 涉及大量的高處及吊運工作
- ▶ 地盤隔鄰有一間小學、鄰近亦有民居及被車路包圍 → 涉及公眾安全



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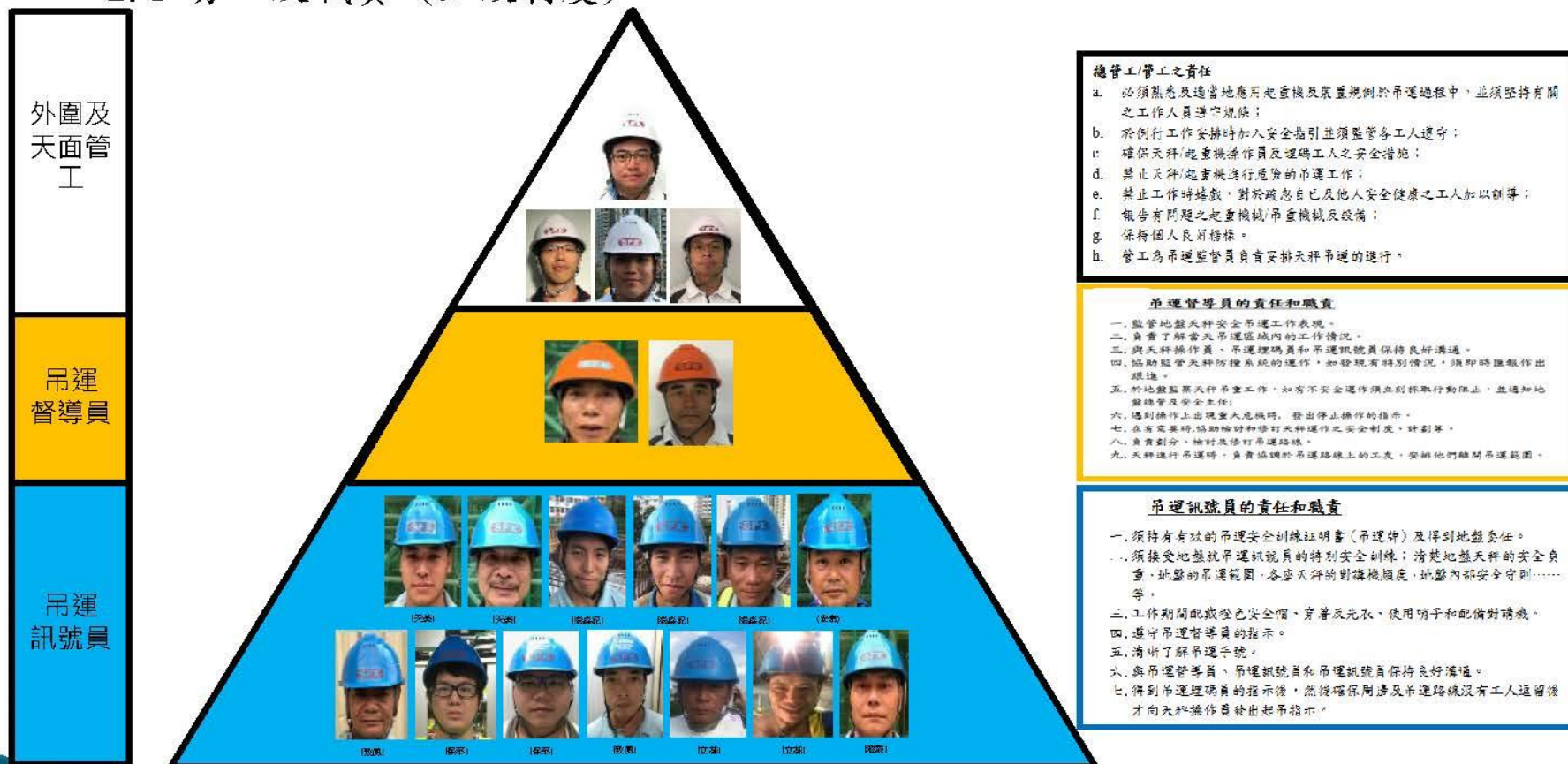
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2. 吊運工作管理與監督

2.1 分工及職責（三級制度）

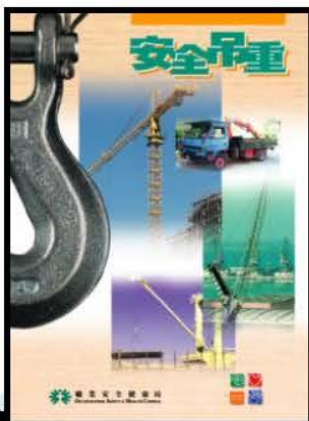



2. 吊運工作管理與監督

- ▶ 委任合資格吊運訊號員及吊運督導員，並提供安全培訓及測試。



吊運訓練內容





Sun Fook Kong Construction Limited

新福港建設集團有限公司

地點 Site :	Construction of Public Rental Housing (development of Lung Tau Estate Phase II) Contract No. 20150605	更新日期 Updated on :	18/4/2018
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合資格人士委任總表

Summary of Competent Person Appointment

項目 Item	姓名 Name	委任項目 Appointed Item	委任日期 Appoint Date	證書編號 Certificate No.	到期日 Expiry Date	公司 Company	備註 Remarks
CP016	卓國強 Tso Kwok Keung	吊運訊號員	20/9/2017	A1200127375	06-03-2019	GSK	
CP018	李國強 Li Kam Man	吊運督導員	26/9/2017	A1200116882	24-09-2020	SFK	
CP022	李國強 Li Kam Man	吊運訊號員	1/10/2017	A1200066517	16-05-2018	Mania	
CP023	李國強 Li Kam Man	吊運訊號員	4/10/2017	A120006829	06-05-2020	Mania	
CP027	李國強 Li Kam Man	吊運訊號員	12/10/2017	A120006891	28-05-2020	Termax	
CP032	鄭國強 Cheng Kwok Keung	吊運訊號員	17/10/2017	A120011453	14-10-2018	Termax	
CP036	鄭國強 Cheng Kwok Keung	吊運訊號員	13/10/2017	A1200030755	08-11-2019	Termax	
CP038	張國強 Cheung Kwok Keung	吊運訊號員	20/10/2017	A1200113762	04-06-2019	Chief	
CP038	戴國強 Tai Kwok Keung	吊運訊號員	20/10/2017	A120014760	06-07-2019	Chief	
CP049	呂國強 Lau Kwok Keung	吊運訊號員	30/10/2017	A120022575	01-05-2018	On Time	
CP065	陳國強 Chan Kwok Keung	吊運訊號員	5/11/2017	A120033661	06-04-2020	Kong Yip	
CP076	鄭國強 Cheng Kwok Keung	吊運訊號員	21/11/2017	A1200337743	14-11-2020	Termax	
CP078	蘇國強 So Kwok Keung	吊運訊號員	30/11/2017	A120035885	04-08-2020	Tac Tai	
CP082	黃國強 Wong Kwok Keung	吊運訊號員	5/12/2017	A120033060	10-03-2020	Termax	
CP083	陳國強 Chan Kwok Keung	吊運訊號員	13/12/2017	A1200334618	31-06-2020	Termax	
CP084	吳國強 Ng Kwok Keung	吊運訊號員	13/12/2017	A1200324610	01-06-2018	Termax	
CP086	吳國強 Ng Kwok Keung	吊運訊號員	13/12/2017	A1200323170	28-07-2019	Termax	
CP086	黃國強 Wong Kwok Keung	吊運訊號員	13/12/2017	A1200326085	26-11-2018	Chief	
CP091	李國強 Li Kwok Keung	吊運訊號員	1/1/2018	A1200336510	04-09-2020	Termax	
CP107	鄭國強 Cheng Kwok Keung	吊運訊號員	24/1/2018	A1200330367	13-10-2019	Lap Kei	
CP108	鄭國強 Cheng Kwok Keung	吊運訊號員	25/1/2018	A1200316365	08-11-2019	Paul Y	
CP111	吳國強 Ng Kwok Keung	吊運督導員	19/1/2018	A1200326617	08-01-2019	SFK	
CP113	黃國強 Wong Kwok Keung	吊運訊號員	2/2/2018	RMK0101084	11-06-2019	天美	
CP114	黃國強 Wong Kwok Keung	吊運訊號員	2/2/2018	A1200325600	11-06-2019	天美	
CP116	鄭國強 Cheng Kwok Keung	吊運訊號員	8/2/2018	A1200316971	03-06-2021	敬園	
CP120	李國強 Li Kwok Keung	吊運訊號員	10/1/2018	A1200322819	08-03-2021	CSK	
CP122	鍾國強 Chung Kwok Keung	吊運訊號員	10/1/2018	A1200335540	16-07-2020	CSK	
CP133	許國強 Hui Kwok Keung	吊運訊號員	14/3/2018	A1200336432	29-08-2020	敬園	
CP134	梁國強 Leung Kwok Keung	吊運訊號員	10/2/2018	A1200336060	29-11-2020	敬園	



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3. 非標準樓層建設的安全措施

- ▶ 地盤使用金屬工作平台及阻燃棚網，取代竹棚。



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3. 非標準樓層建設的安全措施

► 加強安全標準

每十四天由合資格人仕檢查
及簽發法定表格五



每七天由合資格人仕檢查
及簽發法定表格五



金屬棚架每星期由合資格人仕檢查，及每天由6個合資格技工維修

Table 5 (FORM 5) [附錄 5A(1) 續] [reg. 38(1)]

建築地盤(安全)規則
第 5 條
每十四日一次或在其他場合執行的檢查結果報告
本表格乃由勞工處人員填用(建築地盤(安全)規則第 38(1)條所認可)

Construction Sites (Safety) Regulations
SCAFFOLDS
REPORTS OF RESULTS OF FORTNIGHTLY OR OTHER INSPECTIONS
Form approved by the Commissioner for Labour for the purpose of regulation 38(1) of the Construction Sites (Safety) Regulations

1座台
出入料台

有關棚架的說明或所在地點 Description or location	檢查日期 Date of inspection	檢查結果 Result of inspection State whether the scaffold is in safe working order	檢查者簽名及職銜 Signatures and designations of person who made the inspection
(1)	(2)	(3)	(4)
1座	11/3/19	檢查結果是符合安全操作狀態	[Signature]
再立料台	25/3/19	檢查結果是符合安全操作狀態	[Signature]
6F	27/3/19	檢查結果是符合安全操作狀態	[Signature]
	13/4/19	檢查結果是符合安全操作狀態	[Signature]

任何合資格人員或持牌人，如向承建商交付證明書或向勞工處提供報告，須證明：一般來說，可保證二十萬呎或更多十二個月。Any competent person or competent person who delivers to a contractor a certificate or makes a report which it is his knowledge that as to a material particular shall be guilty of an offence and shall be liable on conviction to a fine of \$200,000 and to imprisonment for 12 months. CSAR/5



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4. 標準樓層建設的安全措施

- ▶ 預製件埋碼工作平台 - (“安全預埋你架”)
 - 提供訂製梯台上落排卡車。
 - 排卡車上設有梯具，供工人上落預製件埋碼工作平台。



4. 標準樓層建設的安全措施

- ▶ 2018第十七屆職安健改善項目大獎 - 金獎



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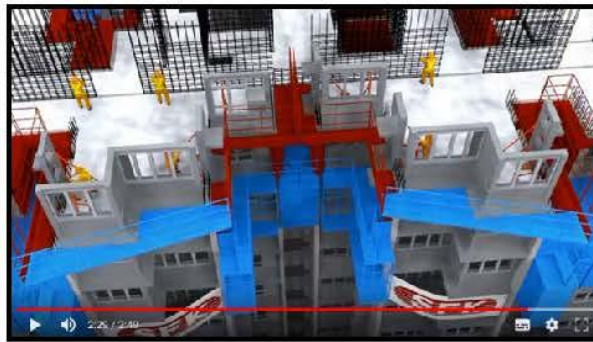
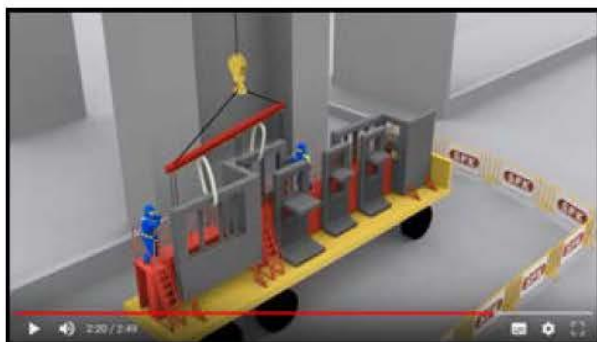
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4. 標準樓層建設的安全措施

- ▶ 使用建築信息模擬短片(BIM)，模擬吊運操作系統，讓工人更清楚理解工序
- ▶ 制定六日標準樓層施工流程(BIM)，確保工人清楚了解每日工作流程



4. 標準樓層建設的安全措施

▶ Video



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5. 地盤日常工作

- ▶ 提供各式標準安全工作平台及安全帶予工人使用
- ▶ 本地盤規定合資格人仕
 - 每7日檢查各式安全工作平台，以確保工作平台安全使用。



設有兩面圍欄及踢腳板之工作平台



設有兩面扶手及踢腳板之流動梯台



選用合規格之流動升降台並由合資格技工每星期檢查



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5. 地盤日常工作

- ▶ 積極與業主協商合作，加強地盤安全。

- ▶ 例如：貨車式起重機（吊雞車）

設置安全上落通道，避免人體從高處下墮。



5. 地盤日常工作

- ▶ 搭建鐵台及學校圍網，防止物料下墮



完
多謝



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問答題

Q1：新福港在2018年第17屆職安健改善項目大獎獲得金獎的工作平台名稱是什麼？

A1：“安全預埋你架”或預製件埋碼工作平台

Q2：新福港運用了那一項電腦技術模擬吊運操作系統，讓工人更清楚理解工序？

A2：建築信息模擬短片(BIM)



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Here is the footage of

“Safety Forum 2019 for Works Contracts and Property Services Contracts”

which was held on 3 July 2019

by the Hong Kong Housing Authority

The Speaker is

Mr. Cheng Man Hin Senior Safety Officer

Sun Fook Kong Construction Limited

His topic is Safe Work at Height

Next may we invite

Senior Safety Officer of Sun Fook Kong Construction Limited

Mr. Cheng Man Hin

to share with us

Mr. Cheng, please

Guests

colleagues, greetings

I am the senior safety officer from Sun Fook Kong Construction Ltd

Cheng Man Hin

I am very happy to represent my company

based upon District Term Maintenance Contracts of Housing Authority (HA)

to share with you the experience of work at height

According to the maintenance contract

there are 3 major areas

First scaffolding work

Second gondola work

Third work-above-ground

Our work often affects the public and residents nearby

Our work often affects the public and residents nearby

So we take public safety into consideration

So we take public safety into consideration

I will share these one by one

Before I share about work at height

I wish to introduce

our company's implementation of Notification of Work System

A district term maintenance contract

may cover over 10 housing estates

involving a few thousand units

To do good safety supervision

we need a sound notification of work system

so that frontline management is clear about workers'

work locations, times and procedures

We require our subcontractors

to submit a notification of work and worker list

before 5pm, one day before the work commence

At 9 am of the day of work

frontline management will verify the information

For work at height

this effectively keeps an eye on high risk procedures

Next, I will introduce scaffolding work

In our contract with HA

truss-out bamboo scaffold has to be built very often

When we hire a scaffolding company

we abide by requirements of HA

We hire only those scaffolding companies holding

OSH Star Enterprise certification

Erection of scaffolding is also based on HA

Erection of scaffolding is also based on HA

Buildings Department and Labour Department's (LD)'s scaffolding standards

Depending on specific circumstances of different estates

our structural engineers will

carry out design calculations on metal brackets

to guarantee safety standards are met

Regarding frontline management

we supervise competent persons

strengthen monitoring them

because in scaffolding, competent persons

play a very important role

We require

competent persons to arrive at the site 30 minutes in advance

to notify our Safety Department and frontline management via mobile app

to notify our Safety Department and frontline management via mobile app

They have to sign in at the security guard counter upon arrival

and assemble with the frontline management

This can hugely raise the efficiency of safety supervision

We also require

the provision of anchorage device in all work locations

for example, transportable temporary anchorage device

and eye bolts

The equipment provides an anchorage point

for frontline workers wearing a safety harness

This reduces the risk of falling

To enhance the stability of the anchorage device

we arrange competent persons of bamboo scaffolding

to attain OSHC certification on truss-out scaffolding

and anchor bolt testing (ANCP)

and anchor bolt testing (ANCP)

Meanwhile, become part of OSHC

list of accreditation to carry out pull out test of anchor bolt

list of accreditation to carry out pull out test of anchor bolt

and ensure the anchor bolt are securely embedded in walls

Of course, we require all scaffold workers

to equip with full body safety harness

Our basic scaffold has a 6mm tie-back

At least 3 anchor bolts are installed on each metal bracket

We install toe board, planking board and fire retardant canvas

In the event of kindling materials in the scaffolding

a fire will not happen

When the scaffolding is completed

only competent persons can issue Form 5

Our frontline management will use a scaffolding checklist

to check all items and take photos for record

Next I will introduce gondola work

The installation of gondola

is based on HA and LD's standards

Before installation, we require registered engineers

to do design and calculation work

and submit related information for the approval of HA

This ensures that gondola can work under safe conditions

Regarding additional installation of gondola

the metal frame is suspended on the net

The example in the picture

This prevents debris or tools from falling to the ground

These additional facilities have weight and wind resistance

Thus, we require engineers

to take into account these elements

so that gondola is not affected and can operate safely

The installation of gondola takes place on roof

We require roof to be clearly marked

to ensure the counterweights are installed on rooftop beams

The counterweights are locked and weights are added

“DO NOT MOVE” signs are placed

to remind frontline management

We also add heavy weights at the end of the suspension rope

to prevent slacking of the ropes above the safety devices

and maintain vertical at all time

To enhance stability in installation

wire clips

are switched from the traditional “U” shape wire clips to “7” wire clips

There are two advantages

First, “7” wire clips are non-directional

It’s not easy to make installation mistakes

Second, “7” wire clips have 2 bolts

which can be installed firmly and sturdily

There will be no loosening

All gondola facilities

should be installed in accordance with the approved drawing of HA

Very often, gondola are installed outdoors

Very often, gondola are installed outdoors

We require the gondola companies

when they hook up electrical appliances

to use IP67 waterproof plugs (international standard)

Lifelines and electrical wire at sharp corners

are protected by fabric material and plastic tube

to prevent damage and fraying

After a gondola is installed

a registered professional engineer (RPE)

will do an on-site inspection and issue a test certificate

Anchorage device on the roof

is also tested by registered professional engineers

for pull out test

Labels are added to clearly state the safe working load

We require the gondola company

to appoint competent persons

to provide frontline management and workers concerned

with training on gondola operation

All trained participants will receive a certificate

Our company is concerned about overloading of gondola
especially when large amounts of debris are produced during demolition

At the bottom of gondola, a line is added
When the line is crossed
workers know they need to stop demolition

Lower the gondola to the ground
Make sure the gondola is not overloaded

On the gondola
bilingual safe working load information is displayed
to remind frontline management and workers
all control panels must be locked

A general foreman will be in charge of
the management of the main switch of gondola

All safety measures must be implemented before operation

After work, all gondolas must be lowered to the ground level
and make sure all safety measures are taken

Then the main switch can be turned off
This will ensure that no unauthorised persons
including workers or the public
can restart the gondola

All workers in gondola
must be equipped with full-body safety harness
and properly harnessed to the anchorage device

We also teach workers to hang the harness high while working below it

Regarding “work-above-ground”
the company will provide enough working platforms
hop-up platform with barriers and step platform
to ensure that frontline workers are well protected

When work above ground is underway
both workers’ safety and public safety are safeguarded

To prevent falling objects from height

we require all contractors to fit hand tools

with D-ring (adjustable loop) and hand straps

In case things slip off the hand

the hand tools will remain attached to the hand

so that it will not fall to the ground

Besides hand straps

work areas at height will be fenced off with barriers

erect a bamboo scaffold at major access

and safety notices are displayed

to prevent workers and people living nearby from entering

To enhance safety training

we regularly arrange safety officers and supervisors

to provide training for the frontline management staff

to raise their safety awareness

Finally, I would like to say

Pay attention to occupational safety for the love of your family

Thank you

Thank you to Mr. Cheng again

Mr. Cheng, please ask a question

About gondola, the traditional “U” shaped wire clip

has been changed into another shape. What shape

The front row

“7” wire clip

Correct

Besides the “U” shaped wire clips

there are “7” wire clips

Right

Thank you Mr. Cheng again

Please be seated

After listening to the 2 sharings

you must realise our company

not only improves facilities continually

but we also implement many measures to safeguard workers

but we also implement many measures to safeguard workers

including using a complete supervision system

and a safety policy to supervise

Little effort, such as labelling, is effective enough to remind workers

Little effort, such as labelling, is effective enough to remind workers

there are certain things that we must pay special attention to

Thank you for watching