Construction Site Security

建築地盤保安
Construction Site Security

Compiled by the Crime Prevention Bureau Of Hong Kong Police

由香港警務處防止罪案科編寫
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Introduction

1. Contractors are becoming more conscious of the importance of site security. A good security system not only gives workers a sense of safety at their workplace, but also keeps stock of good and the structure in building process in good order. Any damage on site or stolen of the construction materials will cause monetary loss and more importantly delay in work progress which insurance cannot pay for.

2. This booklet has been compiled with a view to management appreciation and involvement in security from the very start. Main areas of concern have been highlighted, and some general recommendations have been made where appropriate.

3. The Crime Prevention Bureau of the Hong Kong Police is in a position to:
   (a) provide information by means of a Crime Profile when a site has been selected;
   (b) provide comment on the overall design after the general layout has been decided;
   (c) supply a Security Survey Report from plans provided and/or meet the architect to discuss them; and
   (d) provide security provisions on subsequent schedules such as doors, windows, etc.

4. Management are invited to contact their local Regional Crime Prevention Unit via their nearest Police Station in the first instance. Some useful telephone numbers can be found on page 34 of this booklet.
Chapter I
Site Development

A construction site can, to all intents and purposes be sub-divided into three stages each of which can present the criminal fraternity with potential targets. These can be summarised as follows:

Phase I Site Establishment

The perceived threats at this stage may include criminal damage or vandalism to plant, worker intimidation and blackmail in an attempt to secure certain franchises, such as haulage contracting, supply of labour, etc.

Phase II Construction/Installation

Thefts of materials on a large scale, short deliveries, and 'employment' of a non-existent workforce are most prevalent.

Phase III Marketing/Selling of Units

Unscrupulous selling practices by commissioned agents, unauthorised decoration "contractors" and queue controlling are predominant at this stage.

If positive action is taken by management from the outset and liaison with police ensues, much of the adverse publicity and financial losses associated with these various stages can be avoided.

第一章
地盤的發展

建築地盤的發展，可分為下列三個階段，但無論在哪一個階段，匪徒都可能伺機犯案：

第一期 地盤發展初期

這階段地盤面對的威脅，包括匪徒對機器進行刑事破壞或惡意破壞，恐嚇及勒索工人，以圖獲得貨運權及提供工人等的專利權。

第二期 建築及安裝工作

最常見的情況是物料大量失竊，送往地盤的貨物數量不足，及虛報工人數目。

第三期 宣傳及出售單位

此階段最常見的問題是代理商以不正當的手法售賣樓宇，出現非法裝修「承辦商」及排隊買樓時秩序混亂等。

假如管理階層在工程初期便與警方合作，採取積極行動，防止上述各階段的問題出現，便可避免金錢及聲譽上的損失。
Chapter II
Security Considerations

1. All invited tenders should include and outline requirements for site security. It should be made clear to all parties involved that security must be re-appraised on a regular basis to coincide where necessary with changes on site. Concerned parties must be informed of any changes.

2. A Security Officer or other supervisory member of staff must be nominated to oversee all aspects of site security and ensure that company policies are strictly adhered to. This person will be solely responsible for investigations, police liaison and the processing of subsequent insurance claims.

3. All staff need to be continually reminded that individual crimes or losses are not their only concerns, as the resultant delays could necessitate rescheduling and subsequent financial penalties.

1. 所有承建商在接標時應包括地盤保安方面的要求。應該提醒有關人士定期檢討保安問題，以切合地盤各方面的改變，及將一切改變通知有關人士。

2. 應指派一位保安主任，或由管理階層中挑選一位職員，監察地盤保安的事宜，並確保全體人員遵守公司政策。這位負責人應專責調查工作、與警方聯絡及申請保險賠償等事宜。

3. 應不斷提醒所有職員，個別罪案或金錢損失，可能拖延完工時間及引致財政方面的損失。
Chapter III
Loss Factors - Main Causes

Thefts Involving Employees
1. 'Small' thefts, if ignored, can accumulate to become a sizeable financial problem over a prolonged period of time.

Short Deliveries
2. It is not suggested that suppliers are totally responsible for these, but it is necessary for all materials going to and from sites to be checked and counted.

Bad Site Storage
3. Damage to materials whether accidental or otherwise can often be attributed to poor storage or site inefficiency. Wastage can usually be prevented by designating a responsible person to supervise stock.

Thefts by Outside Agencies
4. A casual or indifferent approach to security by relying on insurance claims to cover costs is bad management and such attitudes must be discouraged or else high premiums may result. It cannot be over-emphasised that stolen materials take time to be replaced, and subsequent re-scheduling may invoke hefty penalties.
Vandalism and Damage

5. Blackmail, implied threats and asking for 'tea-money' have become prevalent in some areas. In such cases, the local police should be immediately informed or else damage to plant or worker intimidation may result for non-compliance to demands. Every Police District has its own dedicated Anti-Triad Unit to deal with such matters, and all reports will be handled in the strictest confidence.

Fraudulent Workforce

6. If itinerant or casual labour is used, care must be taken to ensure that workers deemed to be on the payroll actually exist. Spot checks by management are encouraged to prevent potential swindles.
Chapter IV
Materials - Stock Controls

1. If materials arrive on site too early, the resultant stockpiling can produce an additional security and storage hazard, yet if the goods are late, the project could be held up. A Stock Controller should therefore be appointed to ensure that planned deliveries are made, and that procedures exist for recording and checking the quality and quantity of the deliveries.

2. It is important to note that the responsibility for ordering and paying should be removed from that of checking goods received. Any sloppiness in this area will only serve to encourage theft, and could tempt suppliers to deliver lesser amounts than those specified.

3. The main contractor should therefore ask himself the following questions:
   (a) Is there secure storage?
   (b) Who has the keys and/or access to stores?
   (c) Who receives the materials on site?
   (d) Who checks deliveries?
   (e) Who is responsible for security?

4. Two main rules should be mandatory on all sites. These are:
   (a) Sub-contractors' employees must never be allowed to sign for anything other than their own supplies;
   (b) A checker should always insist on getting a delivery note with each delivery.
Chapter V
Physical Security on Site

Perimeter Fences

1. Many types of fence are available, and one can either have chain link fencing or wooden hoardings, with or without barbed wire. Any fence erected should be at least 2.5 metres high. In the event of wooden hoardings being used, 'peep-holes' should be cut at frequent intervals, to ensure that anyone inside can be seen by passing police/public.

2. It is essential that the fence is kept in good repair and checked regularly. Where the site is large and security guards are unable to see all of the perimeter fence from their static post, then it is essential that regular patrols are conducted (i.e. at least once per hour). This is particularly important at nighttime and holiday periods when no work is being done on site.

3. Under no circumstances should material be stacked against the inside or outside of a perimeter compound fence. This will prevent easy access over the fence itself. To enhance security, CCTV camera with night vision function and recording function should be installed inside the site.

Access Control

4. Entrances to the site/compound must be as few as possible. The main entrance should ideally be adjacent to the checker's office, which should be

第章
地盤實質保安

外圍欄柵

1. 可使用的欄柵種類很多，包括鐵網及圍板，亦可安裝帶刺或不帶刺鐵線。所有欄柵最少應有

2. 5米高。若裝設圍板，應在一定距離加設窺視孔，以確保路人或巡警可看到地盤內的情況。

2. 必須確保圍板牢固，並應定期檢查。假如地盤範圍大，而保安人員不能由他們的固定警崗清楚看見整個外圍欄柵，便應該定期巡邏（最少每小時一次），特別在晚間或假期，當地盤沒有工程進行時，亦應加強巡邏工作。

3. 切勿將物料堆放在外圍欄柵或圍牆內外，以防被人用以攀越進出地盤。地盤內亦可配合使用一些具有夜視功能的閉路電視監察系統並具備錄影功能以加強保安。
suitably identified. (Notices directing all visitors to report to the site office should also be prominently displayed). All entrances/exits should be locked during non-operational hours. The display of notices giving warning of watch dogs, or prosecution of trespassers, or rewards for apprehending or reporting thieves, should be considered.

**Site Offices**

5. These should be suitably marked and near the entrance. They should also be elevated. Height gives checkers a psychological advantage over drivers with high cabs etc., who may try to intimidate the checker or try to deliver short.

**Storerooms**

6. A secure storeroom should be constructed for the storage of valuable goods/materials/equipment. The storeroom should be physically secure and should comprise 9 inch brick walls or equivalent and a mild steel door fitted with a thief resistant lock(s) conforming to British Standard 3621 or equivalent. There should be no other apertures. If there are any window openings, these should be protected by mild steel anti-burglar bars. Anti-burglar bars should be fitted internally and should be at least 2 cm thick and no more than 12 cm apart. Bars should be securely fitted into the surrounding masonry and where they exceed 50 cm in length, flat mild steel tie bars should be used. Anti-burglar bars should pass through tie bars but where this is not feasible and tie bars are welded to the anti-burglar bars, they should be fillet welded and not spot welded. Infrared detectors, dual-tec motion detectors,
vibration detectors, etc. should be installed in a storeroom to enhance security.

7. If storerooms are of the sectional type, ensure that the nuts are on the inside.

(NB: Workmen should not be allowed to collect materials from a store. Any 'open' store should have a barrier/counter to prevent potential wanderers.)

8. In addition to physical security measures as outlined above, the storeroom should be located near the watchman's hut (i.e. The site office) and must be checked on a regular basis, at least once per hour, by a watchman or security guard. As a more effective alternative, the storeroom may be fitted with an intruder alarm system linked either to the watchman's hut or to a civilian control room. It is important that the alarm system is designed to give full protection of the storeroom including doors, walls and other apertures. Any alarm system installed should conform to British Standard 4737 (Specification for Intruder Alarm Systems).

Lock/Shutters

9. Hasp and staple-type fastenings should not be used on office and storerooms.
5. Lever Mortice Locks or draw bolts with close-shackle padlocks are recommended.

Lighting

10. Good lighting is essential and is necessary to assist in the protection of the perimeter fencing, site offices and storerooms.

Keys

11. Only the minimum number of keys should be kept, and should be entrusted only to selected staff. Alternatively, Key Management Systems can be used to manage keys.

Specialist Storage

12. Timber
   - ideally in an inner compound, and should be covered.

Window Frames
   - with polythene; should not touch ground.

Bricks
   - stacked on battens; prevent chipping.

Glass
   - carefully stored in hut 3° out of vertical on wooden base.

Plumbing/Electrical Goods
   - generally most valuable, therefore usually in metal stores; ensure no access by digging under walls; hold only sufficient stock for a short period.

General
   - impossible to cover every type of material
   - neat stacking of all materials takes up less room.
Chapter VI
Out of Hours Security
Security Guards
and Equipment

1. It is recommended that security guards are hired from a reputable, professional security company.

2. In addition to this, and in order to prevent guards being overpowered by criminals prior to theft of property from the site, it is advised that they be provided with a secure hut or room, with a good view of the site, lockable from the inside, with a direct exchange line telephone installed. In the event of trouble, they can then telephone for assistance from a position of safety.

3. It is essential that arrangements are made for telephone checks with the guards on the site at least once per hour during non-operational hours. These checks can be made by a security company or a member of the management staff. In the unlikely absence of a telephone, a mobile patrol from a security firm should be employed to check the guard and site once every hour.

4. To assist with the above, site management should consider the use of electronic monitoring equipment for guards and alarm systems of storerooms. However it is particularly important to note that visiting books are not always an effective way of ensuring that checks/patrols are carried out. Guards deployed at static posts are generally ineffective, and although specific duties can vary, the following should always be considered necessary:

(a) perimeter fence patrol/inspection at least once per hour;

(b) storeroom inspection at least once per hour and preferably twice per hour during non-operational hours;

(c) checking and recording registration numbers of all incoming and

Chapter VI
Out of Hours Security
Security Guards
and Equipment

1. 應向聲譽良好的專業保安公司聘請保安人員。

2. 此外，為免匪徒行劫前制服保安人員，應為他們提供一間安全的房間，讓他們清楚看管地盤內的一切活動，房門應可上鎖，房內設有直線電話，一旦發生任何事故，保安人員便可在一個安全的地方打電話求助。

3. 沒有工程進行時，必須由保安公司或管理人員每小時電話與地盤的保安人員聯絡，假如沒有電話，可聘用護衛公司派遣流動巡邏隊伍每小時巡邏地盤及探訪保安人員一次。

4. 若要使用輔助設備，地盤管理人員可考慮使用看更上錶或電子管理設備監管保安人員；至於儲物室，可使用警鐘系統。但以簽到簿監管保安人員，確保他們執行檢查巡邏地盤任務，則未必有效。一般而言，安排保安人員在固定警崗把守，收效不大。雖然不同的地盤可能因應需要，改變保安措施，但以下各項措施應加以考慮：

(a) 最少每小時巡邏／檢查外圍欄柵一次。

(b) 每小時檢查儲物室一次，沒有工程進行時，最好每小時檢查兩次。
outgoing vehicles, and details of any goods/materials being removed from the site.

(d) regular checks of bags/equipment being taken from the site by workers.

5. Many thefts on construction sites occur near the completion stage of the building(s) when expensive fittings are already in place in the individual units.

This period is particularly vulnerable and the only effective viable security measure at this stage is increased patrols of the building. It is advisable that during this final phase of construction, additional guards are employed for this purpose. It is also essential to ensure that site management frequently conduct checks to ensure conformity with contractual obligation.

Holiday Periods

6. A list of any staff who will be returning to the site during a holiday should be given to the watchman for reference.

7. No deliveries or movements of materials or equipment should take place when the site is closed.

Police

8. Always encourage good liaison, and ensure that all up to date and relevant telephone numbers are readily available to site staff and guards.

(c) 檢查及登記所有進出汽車的登記號碼。假如需要由地盤運走貨物及物料，必須檢查清楚，並登記詳細資料。

(d) 定期檢查工人由地盤拿走的袋子或工具。

5. 建築物接近完成的階段，個別單位已安裝了昂貴的設備，令匪徒垂涎，故經常發生地盤盜竊案，而唯一有效可行的保安措施是加強大廈巡邏。為此，在工程的最後階段，最好特別增聘保安人員，地盤管理人員亦須加強巡查，以確保保安人員執行合約上訂明的職務。

假期

6. 若有職員須在假期內返回地盤，應將名單交給保安人員查閱。

7. 地盤關門後不可將物料送進或送出地盤。
Alarms

There are many types available. Two 'schools of thought' exist in respect of the publicity aspect:

(a) it should be kept secret; or
(b) it should be publicized by prominent display of bells etc.

Whichever method is adopted, care should be taken to ensure that details of the specific type of installation should not be revealed.

Floodlighting

During the period of darkness the site should be illuminated, particularly in the vicinity of storerooms. This is normally considered to be a deterrent as thieves do not like working in lighted areas. There are two methods which can be adopted, either

(a) lights atop high central poles in middle of compound facing outwards; or
(b) lights atop high poles on perimeter facing inwards.

No matter which method is adopted, the lights must be protected by barbed wire to prevent climbing. Two additional points are also worthy of note:

(a) the lamps themselves should be covered in chicken wire to protect against stones, etc;
(b) an automatic time switch is necessary in case someone forgets to switch the lights on.

Low pressure sodium lighting is generally suitable for this purpose.
Chapter VII
Safes, Cash and Wages

1. The presence of a safe on site suggests that there is plenty to protect. Thieves will therefore be attracted. In general terms, safes are not recommended.

2. In the event that there is a requisite for petty cash, a small holding limit should be established and should not be exceeded. Secure storage and strict administrative procedures must be utilized.

3. In respect of wages, sub-contractors should be advised to pay their staff off-site. This can be included in contracts as a matter of policy. Main contractors however must ensure that their staff wages transported to site have already been made up.

4. If a central pay-out office is in operation, the office must be substantially secure with only one pay-out window open. A telephone/alarm system must be easily available. Care must be taken to identify employees who come to collect their wages.

第七章
夾萬、現款及薪金

1. 在地盤設置夾萬，即是告訴匪徒地盤有很多東西值得保護，難免令他們垂涎。一般而言，地盤不應設置夾萬。

2. 如須預備少量現金應用，必須定下限額，不可超越。而且應該加強保安，並訂立嚴格的行政程序。

3. 應建議副承辦商在地盤外發薪給工人，此做法最好在合約內訂明，作業政策之一。總承辦商必須確保員工薪金在送抵地盤前已經分配妥當。

4. 假如設有統一分發薪金的部門，該辦公室必須有足夠的保安設備及只有一個出納窗口，房間內須裝設電話/警鐘系統。分發薪金前，應檢查清楚員工的身份。
Chapter VIII
Security of Plant and Tools

1. Serial numbers, descriptions and photographs (e.g. manufacturers' illustrated brochures) of valuable equipment and tools should be recorded. Such records will provide the police with positive means of identification and thereby facilitate the recovery of stolen equipment. Where individual marks or serial numbers do not exist, the company should put their own serial number in a conspicuous place and keep a record.

2. This can be done in several ways:
   (a) stamping with a metal dye;
   (b) engraving;
   (c) burning wooden parts with branding iron; or
   (d) painting with a known colour (e.g. electrical switches).

3. Most tool theft cases occur during lunch breaks when tools are left lying about carelessly. Tools left lying about can also be used by thieves to forcibly enter storage sheds and offices.

4. It is important to ensure that plant and equipment is returned to stores or the plant yard when no longer required for use. Returns should be recorded.
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