

A COMPREHENSIVE GUIDE TO CONSTRUCTION SITE SECURITY

A step-by-step guide to improving
Job Site Security practices.

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1

INTRODUCTION

Construction sites attract a range of security and safety challenges, including the threat of vandalism, accidents, and theft of equipment and materials.

Equipment theft is so widespread the National Equipment Register (NER), and National Insurance Crime Bureau (NICB) estimate losses to construction companies are between \$300m and \$1b annually.

This comprehensive guide has been created in response to these shocking statistics. It provides site managers with a step-by-step process of how to secure construction job sites, from ground-breaking through to client handover.

Our objectives in creating this guide are simple - help construction companies reduce losses attributed to crime, whether these are monetary losses from vandalism or equipment theft, or the costs of project delays.

The authors of this document have a combined 30 years experience working alongside construction companies across the globe, supplying the highest quality security services and surveillance cameras.

While this guide has been created for companies of any size, the location and layout of your site, as well as project duration, will dictate what types of security measures you require. Any advice contained within this guide is to be used as a 'rule-of-thumb', and may be adapted to your site specific requirements.



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HOARDING

- 2.1 When designing site hoarding, it is advisable to consider security details such as creating sharp corners or alcoves. These give a potential site intruder a natural hiding spot. Instead, look to create rounded corners wherever possible, and avoid creating blind spots.
- 2.2 Pedestrian and vehicle entrances to your sites create a natural security weak spot. It would be wise to give specific attention to these areas to ensure these structures don't give unauthorised intruders easy access to your sites. Keep an eye out for potential footholds or steps that would present an intruder with an opportunity to hop your hoarding or fences.
- 2.3 Intruders can use streetlights and electrical junction boxes surrounding your job sites as a way to climb over fencing or hoarding. Try to negate this threat where possible by setting your hoarding or fences back from any of these fixed structures.
- 2.4 If hoarding must be positioned flush with streetlights, take extra care to reduce the creation of natural footholds. Using a smooth transition made from plywood will help minimize the threat of someone easily climbing the hoarding by eliminating natural footholds.
- 2.5 Keep the areas surrounding your hoarding and fencing clear from debris, building materials, and any waste. Intruders could use these as a way to help them scale your hoarding. A tidy site is a safe site.
- 2.6 Angled extensions ('fans') on top of hoardings make climbing difficult and reduce problems with items (including litter) being thrown over the hoarding and potentially damaging materials or injuring workers.
- 2.7 Size matters when it comes to hoarding and fences. Ideally, your hoarding should be no less than 8ft high to prevent anyone from easily seeing into your sites, or being able to climb over easily.
- 2.8 Have a regular maintenance program in place to clear any graffiti off the hoarding. Graffiti tends to multiply, and can attract other crime types.
- 2.9 Hoarding must be regularly inspected to ensure its continued integrity and should be modified as required during the course of construction works as site requirements change.

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DOORS AND GATES

- 3.1 It is advisable to keep the number of site entrances to a minimum to reduce the likelihood of an unauthorized intrusion, and to help better manage the flow of authorized access.
- 3.2 It would be best to communicate your site operating hours to all workers, including subcontractors and suppliers, on a frequent basis. Having set and clear working hours will make it easier to detect when someone should not be on site.
- 3.3 Having a 24/7 security protocol in place can help reduce opportunistic theft. This security presence can be guards or surveillance cameras, or a combination of the two.
- 3.4 Have a clear policy for site access, including screening any visitors before they pass through doors and gates. This will ensure only authorized visitors are onsite at any time.
- 3.5 Your site access policy should include things like a signing-in book at the site entrance. For larger sites, access may be controlled by a security guard with a signing-in system or by electronic access control systems such as PIN codes, electronic fobs or cards, or vehicle LPR scanners.
- 3.6 Biometric access control systems are a potential option, though, for many sites, they may be unnecessary, overly complex, and create logistical issues when trying to read fingerprints of tradespersons.
- 3.7 Turnstiles are a good way of controlling access to a site, especially when paired with an electronic access control system.
- 3.8 Your gates should be constructed in a way that leaves a minimal gap underneath, preventing people from crawling under, and they should match the height of your hoarding.
- 3.9 Use the highest quality gates available within reason to help limit the potential of a site breach.

3

DOORS AND GATES

- 3.10 The hinges on gates should be secure, and difficult to unscrew from the outside. They should be fixed to prevent the gate from being lifted.
- 3.11 Gates should be protected by the highest standard of lock.
- 3.12 Chains should be of an appropriate length, not excessively hanging down and the majority of the chain should be on the secure side of the gate.



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SITE OFFICES

- 4.1 Site offices should be constructed in a way that prevents them from arson and burglary. Steel construction, secure doors with multiple locks, and window shutters secured from inside are highly recommended.
- 4.2 Limit the number of people who have access to keys, utilize a key safe, and have a system for signing keys in and out.
- 4.3 Implement a policy of issuing security passes, and foster a culture of challenging anyone not wearing one to create ongoing vigilance onsite.



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LIGHTING

5.1 Lighting helps deter site intruders, assists security patrols, and makes the area feel safer at night.

5.2 Your site hoardings should have a uniform lighting level on the exterior to illuminate the entire perimeter.

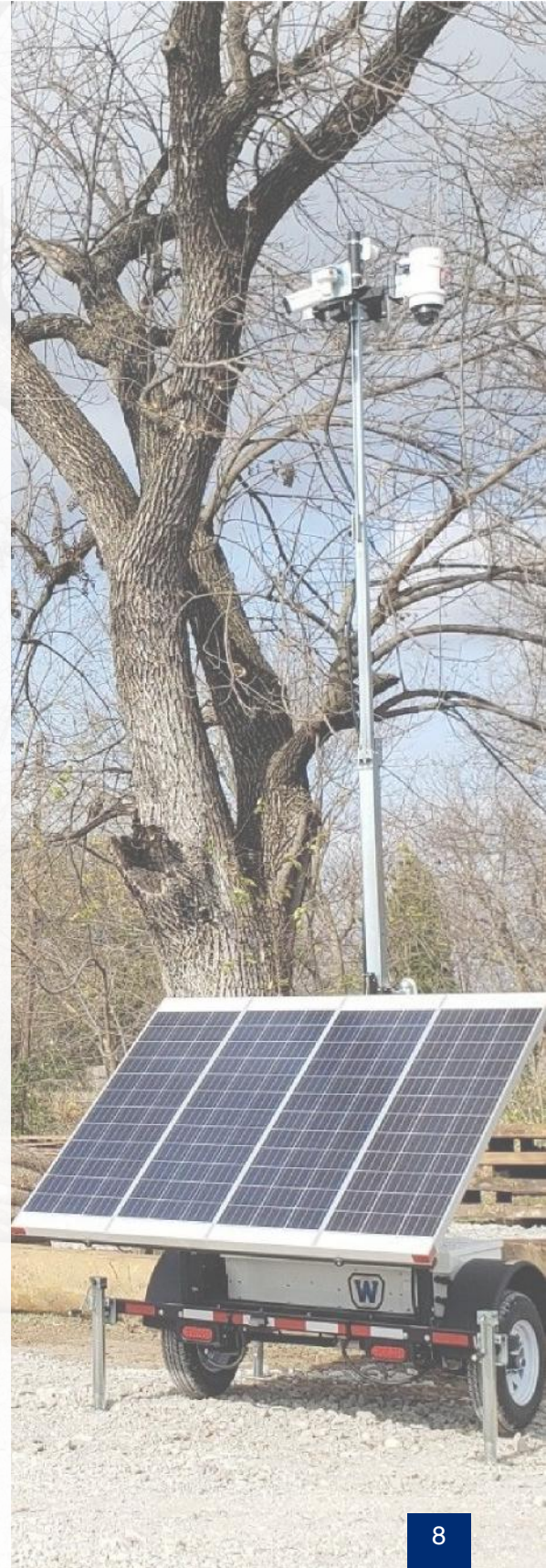
5.3 Lighting inside the site should also be of a uniform level. While high-powered spotlights can light up specific areas, they also create pools of blackspots where a site intruder could take cover. Utilizing low wattage lighting throughout the site will eliminate these areas of high contrast.

5.4 Any lights on the outside of your hoarding should be tamper-proof, and you should schedule regular maintenance to ensure ongoing operation.

5.5 All entrance and exit points should be well illuminated.

5.6 Wiring for site lighting should only be accessible to authorized personnel. This is particularly important for bulkhead-style lights employed on the exterior of the perimeter hoarding. Exposed lighting cables should be enclosed in a steel conduit.

5.7 Any recesses or hidden points on your site should have particular attention paid to them with lighting and mirrors to increase visibility.



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Surveillance Cameras

- 6.1 Surveillance cameras are one of the most effective ways to deter crime from construction sites.
- 6.2 Cameras should be positioned to achieve recognition quality and in such a way that site lighting does not interfere with picture quality.
- 6.3 Footage can be monitored by remote operators who will have a crime prevention escalation plan. This should be considered as a key security measure.
- 6.4 Your lighting should complement surveillance cameras, ensure both are positioned so that there is no glare on the camera. Modern surveillance cameras provide infrared or low lux capability which are ideal for construction sites.
- 6.5 Portable surveillance systems work best for construction sites. They are easily moved, so as the site progresses and camera position needs to change, the systems can change with the site.
- 6.6 For a large site, consider a License Plate Reader (LPR) enhancement to the surveillance camera. This is an effective way to manage vehicles coming onto the site and monitoring any unauthorized vehicles that may attempt to enter.
- 6.7 Autonomous systems work best for construction sites. Surveillance cameras with solar powering and wireless (cellular) transmission are increasingly effective solutions for job site security.



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PLANT AND TOOLS

- 7.1 All vehicles and plant should have ignition keys removed and, if possible, be immobilized at the end of each day.
- 7.2 Keep a record of all Vehicle Identification Numbers (VIN) and chassis and engine numbers for all vehicles.
- 7.3 Securely mark all plant to aid retrieval in case of theft. Some schemes record details of members' items, making it easier to identify and then return them if stolen.
- 7.4 Any electrical infrastructure that could be used to commit thefts should be disabled at the end of each working day. This includes generators and transformers used to power cutting tools.
- 7.5 Communicate with all contractors and personnel on-site to mark their tools to help protect smaller tools and items. Painting tools with unusual colors and covert methods such as permanent marking inside drill housings make it easier to return stolen items.
- 7.6 You can utilize forensic property marking systems. These invisibly mark your valuable items, making it easier for Law Enforcement to return recovered stolen items.
- 7.7 If tools are to be left on-site overnight, use a tool safe or other high-security storage sheds.
- 7.8 New technology advances in smart tools make it easier to secure small power tools. Tracking chips and internal security systems that render the tool inoperable by anyone other than the authorized user are now available.
- 7.9 Spot check vehicles leaving the sites to mitigate against vehicles being used to convey stolen items away from sites.

8

URBAN EXPLORERS

- 8.1 Urban Explorers are groups of people who explore urban structures such as abandoned sewers or underground railways or the roofs of skyscrapers.
- 8.2 The following is a non-exhaustive list of things to consider with regards to identifying Urban Explorers.

Identifying Urban Explorers

- Individuals or groups looking for access points (perimeter fences, doors, access panels or vents).
- Individuals or groups emerging from drains or buildings after dark.
- Carrying daysacks/rucksacks to hold their camera equipment as well as access equipment (bolt cutters, skeleton keys, lock picks, ropes, etc.).
- Possession of a Drone.
- Known to wear hi-visibility clothing to look official.
- They generally operate during hours of darkness but will often carry out reconnaissance during daylight hours.
- They are security-aware and have been known to distract security staff multiple times until they stop responding before entering locations.
- Known to befriend security to gain access without site owners' knowledge or permission.
- Will try to talk themselves out of trouble when stopped, saying 'only taking photos'.

- 8.3 The groups are known to have caused damage to gain entry to sites, and on some occasions have suffered serious injuries. The disruption to construction sites should this happen is severe, and can lead to lengthy investigations which will ultimately incur high costs.
- 8.4 Infrared surveillance cameras backed by video monitoring greatly assist in the detection and deterring of Urban Explorers.
- 8.5 Anti-climb paint in vulnerable areas, particularly any place where a climbing rope could be utilized, will put off an Urban Explorer. Should this be employed, adequate signage should be used, as anti-climb paint can cause considerable damage to expensive climbing ropes.
- 8.6 Forensic property marking spray systems are now available as a crime prevention method. There are various products that will transfer onto offenders.

9

GENERAL ADVICE

- 9.1 A culture of challenging anyone on site who should not be there, or does not have the correct ID is a simple method of monitoring who is on-site.
- 9.2 All security personnel working on site must be contracted security personnel and be appropriately trained and briefed on any particular vulnerabilities of the site.
- 9.3 Report suspicious behavior to security or law enforcement and report any thefts immediately.
- 9.4 Display warning notices of the security measures in place to ward off opportunist thieves. Valuable building materials should be stored securely and protected by surveillance cameras, security patrols, and intruder alarms.
- 9.5 When nearing the completion of projects, special attention should be paid to the security of electrical items and utilities.
- 9.6 Scaffolding is often utilized as a climbing aid. Scaffolding, in particular towers and ladders, should be kept secured when not in use.
- 9.7 Hold regular security briefings, particular as the site develops and new teams join the site for the various project stages. Keep a culture of security an ever present part of your project.

Security of your sites is critical. It must become a mindset and part of the culture. Regular security briefings, spot checks, and adequate investment in lighting, fencing, and surveillance cameras are crucial to keeping your sites safe.



WCCTV: MANAGED SURVEILLANCE CAMERAS FOR CONSTRUCTION SITES

WCCTV is the USA's leading supplier of mobile surveillance cameras for construction job sites.

We provide market-leading security cameras backed by a fully managed service that includes equipment installation, video monitoring, maintenance, and ongoing technical support.

Our rapid-deployment, portable cameras provide construction sites with multi-application benefits, including security, time lapse video filming, and remote project management.

Our customizable solutions can accommodate any site, and easily function whether you have power or are dependent on solar energy. All of our units contain 4G LTE transmission technology – allowing these solutions to operate autonomously.

No matter the site, we have a solution that we can create for you.

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