



OVERVIEW

Falls from heights is the number one killer on NSW construction sites. Most serious and fatal falls are from roofs, ladders and scaffolds and from a height of between 2.1 and 4 metres.

SafeWork NSW has undertaken a number of dedicated scaffold safety interventions since 2017 aimed at reducing the number of fatalities and serious injuries resultant from falls from heights and scaffold collapse.

Scaffolds that are not built to standard or have key components missing, pose falls from heights and collapse risks.

SafeWork inspectors visited 709 construction sites between 1 March and 30 June 2020 as part of Scaff Safe 2020.

When compared to last years scaffold visits, inspectors observed a higher percentage of compliance for 17 of the 25 key safety checklist questions.

Compared to the 2019 scaffold visits, inspectors observed a 16% increase in compliance with site supervisors informing unlicensed workers not to remove components.

Inspectors mostly visited house construction sites, which were observed to be less compliant than commercial and mid-high rise sites.

Inspectors issued 580 improvement notices, 232 prohibition notices and 26 penalties, 21 of which were on-the-spot fines for falls from heights risks totalling \$69,840. Most notices were issued on house construction sites and for a fall risk of 2.1 to 4 metres.

Regardless of the increased percentage of sites observed as compliant with some checklist questions in 2020, the safety levels on construction sites remain unacceptable when it comes to exposing workers to scaffold falls from heights and collapse risks.

New penalties directly related to scaffolds were introduced in NSW in August 2020, including on-the-spot fines of up \$720 for individuals and \$3,600 for employers for failing to safely manage or control workplace scaffolds.

SafeWork will continue to focus on working at heights and scaffold safely as key priorities under the Building and Construction Work Health and Safety Sector Plan to 2022.

BACKGROUND

When built to standard, scaffolds provide a safe working platform that allows workers safe access/ egress to buildings during construction and building finishing processes. When non-compliant, they become dangerous and pose a risk of falls from heights and collapse.

Due to some scaffolds' size, location, and complexity, there is a significant threat to workers and the general public if they are not properly constructed or if they are altered by unlicensed workers so that their structural integrity is compromised.

SafeWork has consistently targeted scaffold safety through on-site inspector visits since 2017, focusing on falls from heights and scaffold collapse risks.

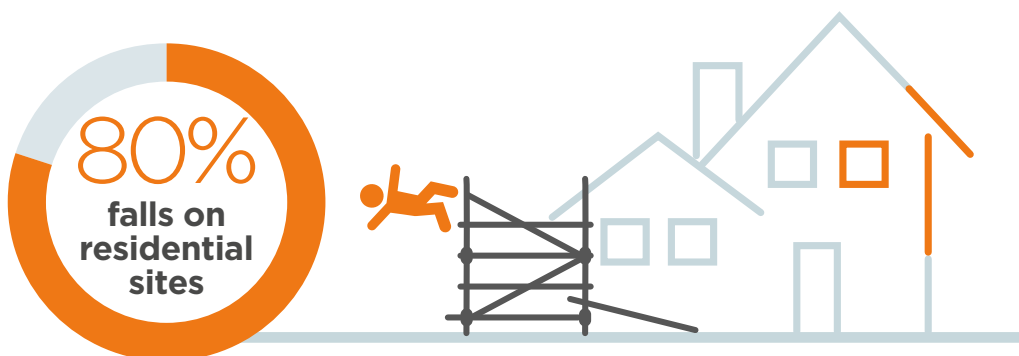
INCIDENTS REPORTED TO SAFEWORK NSW

We looked at 42 scaffold falls incidents reported to SafeWork NSW between 1/7/14 and 30/6/17 to determine the contributing factors and identify any trends. Three of these incidents reported that multiple workers were injured¹. There were three fatal scaffold falls during this period².

Where noted, the majority of scaffold falls (69%) were from a height of 4 metres or less. 28 occurred on a residential building site, 7 were on a commercial worksite and 7 were not categorised.

Some key contributing factors to the scaffold incidents were missing components, worker behaviour (such as mis-using the scaffold, inexperience or not following procedures), faulty scaffolds and scaffolds being altered by workers.

Preliminary analysis of category 1 and 2 falls incidents reported to SafeWork NSW from the above timeframe and expanded to include until 31 December 2019 indicates that scaffolds continue to be among the top three things that workers fall from³.



1 Source: SafeWork NSW Falls from heights category 1 and 2 incidents reported 1/7/2014 – 30/6/2017.

2 Source: Work-related fatalities reported to SafeWork NSW 1/7/2014 – 30/6/2017.

3 Source SafeWork NSW Falls from heights category 1 and 2 incidents reported 1/7/2014 – 31/12/2019.

SCAFF SAFE 2020

Between 1 March and 30 June 2020, SafeWork NSW inspectors undertook 709 scaffold verifications on construction sites state-wide and spoke with site supervisors, health and safety representatives and workers about how to work safely with scaffolds.

The majority of visits were undertaken in Sydney (367 or 52%), followed by the Hunter (86 or 12%), and then Richmond-Tweed (74 or 10%)⁴.

The most common type of sites visited were:

- house construction (390 or 55%),
- mid-high rise (126 or 18%) and
- commercial (88 or 12%).

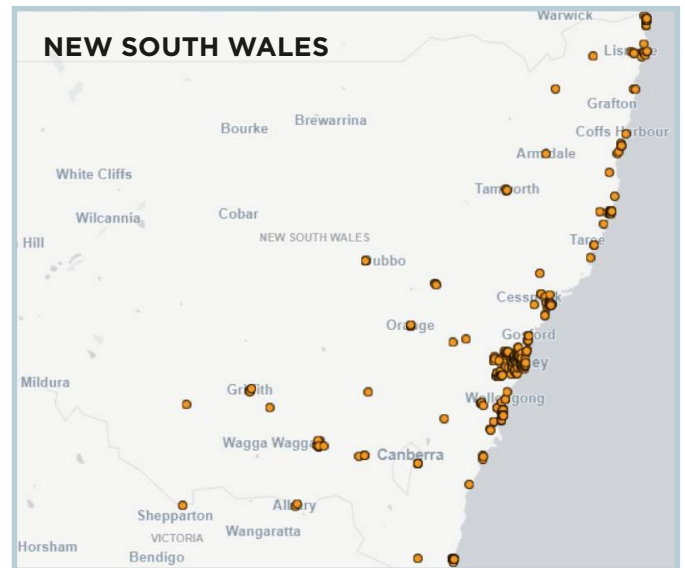


Image 1: Heat map of locations across NSW visited by SafeWork NSW Inspectors from 1 March and 30 June 2020 as part of Scaff Safe 2020



SCAFF SAFE 2020 CHECKLIST OBSERVATIONS

Inspectors completed a safety checklist for the sites visited in 2020, answering questions where appropriate in relation to scaffold falls risks, scaffold stability, scaffolds under construction and site supervisor practices.

The below tables provide the checklist observations split by the top three types of sites visited, including house construction, mid-high rise and commercial.

Overall, house construction sites had the lowest safety compliance levels observed compared to the overall state-wide average on all checklist questions. This is particularly concerning and reflective of our incident data, where the majority of serious incidents are on residential sites.

⁴ Regions within this document are aligned to the ASGS NON ABS Structures of Statistical Area Level 2 - approximated Postcode Mesh Blocks.

SCAFFOLD FALLS RISKS

Working decks with missing components (such as ledgers, planks or hop-ups) remain the primary falls safety risk on scaffolds, with house construction sites being 11% less compliant than the state average. House construction sites were up to 40% less compliant than other sites when it comes to falls risks.

Scaffold falls risks generally remain the highest risk area, with the lowest compliance levels observed compared to other checklist categories.

Checklist question	Overall state-wide compliance level	House construction compliance level	Mid-high rise compliance level	Commercial compliance level
<i>Average number of checklist questions answered</i>		117	76	70
The working decks are complete, with no missing ledgers, planks or hop-ups	58%	47%	59%	87%
All mid-rails are installed	66%	54%	73%	89%
All handrails are installed	59%	54%	73%	89%
The gaps between the scaffold platforms and building edge/face are 225mm (horizontal) or less	68%	60%	69%	87%
The gaps between the hop-ups/decks and building floor are 300mm (vertical) or less	72%	67%	71%	90%
All toe boards/brick guards are installed	74%	64%	86%	87%
There is safe access to each working deck	77%	71%	83%	85%

Table 1: Percentage of sites observed as compliant by inspectors from 1 March – 30 June 2020, broken down by type of site and falls risks checklist questions.

SCAFFOLD STABILITY

When it comes to scaffold stability, no vehicular protection where required had the overall lowest level of compliance, with house construction 45% less compliant than commercial sites.

An encouraging finding was that loads placed on the scaffold were within the rated capacity for nearly all sites visited.

Checklist question	Overall state-wide compliance level	House construction compliance level	Mid-high rise compliance level	Commercial compliance level
<i>Average number of checklist questions answered</i>		306	109	70
There is vehicular protection where required	73%	38%	78%	83%
Adequate ties are installed	74%	63%	86%	86%
If containment sheeting/netting has been installed, wind loading has been accounted for	82%	60%	92%	93%
There is adequate bracing (zig zag)	85%	77%	96%	94%
The scaffold is erected on solid foundations	92%	88%	98%	99%
Loads placed on the scaffold are within its rated capacity	97%	96%	96%	100%

Table 2: Percentage of sites observed as compliant by inspectors from 1 March – 30 June 2020, broken down by type of site and scaffold stability checklist questions.

SCAFFOLDS UNDER CONSTRUCTION

SafeWork inspectors spoke with scaffolders if they were on-site at the time of the visit. It must be noted that scaffolders were available on approximately 14% of the sites visited.

The risk of missing planks, ledgers and hop-ups was evident in scaffolds under construction, in that 31% of scaffolds under construction had these components missing.

Some positives in the results are that there was a significant improvement in the scaffold plan being available to scaffolders compared to 2019 and that nearly 100% of sites had containment netting that had a flammability index of 25 or less.

Checklist question	Overall state-wide compliance level	House construction compliance level	Mid-high rise compliance level	Commercial compliance level
<i>Average number of checklist questions answered</i>		44	33	24
In sections already built, the scaffold is complete with no missing components (ledgers, planks or hop-ups)	69%	56%	77%	74%
Safeguards against overhead electric powerlines have been provided	77%	52%	84%	90%
The scaffold plan is readily accessible to scaffolders	80%	62%	82%	90%
There is safe access/egress to all working platforms	84%	78%	90%	87%
Scaffolders are using a safe system of work that ensures they are working behind a protected edge at all times	85%	76%	79%	96%
Scaffolders erecting, altering or dismantling scaffold where a person or object can fall 4m or more have the appropriate scaffold high risk work licence eg SB, SI, SA.	94%	89%	96%	96%
The containment netting is 25 or less on the flammability index	98%	95%	98%	100%

Table 3: Percentage of sites observed as compliant by inspectors from 1 March – 30 June 2020, broken down by type of site and scaffolds under construction checklist questions.

THE ROLE OF THE PRINCIPAL CONTRACTOR/SITE SUPERVISOR

The principal contractor and site supervisors have critical roles and obligations on construction sites in ensuring the safe erection and use of scaffolds.

Some of these responsibilities are highlighted in the table below.

Unlicensed workers removing scaffold components to access the building or structure continue to be a concern for SafeWork NSW with only 65% compliance for this question, noting a slight (2%) improvement from 2019 observations.

When further comparing to 2019, inspectors have observed less compliance for principal contractors ensuring the scaffold was inspected in the last 30 days (down 2%), no percentage change in the PC knowledge of what should be in the handover certificate, and no percentage change in the PC accepting an incomplete scaffold in the handover.

These results indicate that there is still much work to be done by the industry regarding site supervision and duties.

Checklist question	Overall state-wide compliance level	House construction compliance level	Mid-high rise compliance level	Commercial compliance level
<i>Average number of checklist questions answered</i>		308	111	78
The scaffold has not been altered by unlicensed trades	65%	55%	65%	87%
The PC/Supervisor know what needs to be in the handover certificate	72%	61%	82%	86%
The PC has communicated that the scaffold components must not be removed by unlicensed workers	75%	64%	87%	94%
The PC/Supervisor has not accepted an incomplete scaffold in the handover	77%	73%	75%	83%
The scaffold has been inspected by a licenced scaffolder within the last 30 days	79%	74%	83%	89%

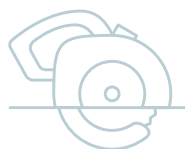
Table 4: Percentage of sites observed as compliant by inspectors from 1 March – 30 June 2020, broken down by type of site and PC related checklist questions.

The occupations who were suspected of removing scaffold components without holding the appropriate licence were listed by inspectors for 152 sites. The top five trades suspected of removing components were bricklayers (55), builders/carpenters (27), renderers (17), formworkers (9) and painters (8).

THE TOP 5 UNLICENSED TRADES THAT APPEARED TO HAVE ALTERED THE SCAFFOLDS WERE:



36%
bricklayers



18%
Builders/Carpenters



11%
renderers



6%
formworkers



5%
Painters

Noting that in many instances it can only be theorised that a trade/unlicensed worker has made the alterations (for example, painting equipment adjacent to a removed plank).

NOTICES

SafeWork inspectors issued 812 notices, including 580 improvement notices and 232 prohibition notices. They also issued 26 penalties, 21 of which were on-the-spot fines for falls risks totalling \$69,840.

Improvement notices are issued to remedy systems of work or hazards that do not pose a serious and immediate or imminent risk to any person's health or safety. A prohibition notice ceases the workplace activity, and is issued if an activity is occurring at the workplace that involves a serious risk to the health and safety of a person emanating from an immediate exposure to a hazard. An on-the-spot fine can be issued if there is a serious or imminent risk, or if the business is a repeat offender.

WHERE

Most notices were issued on Sydney sites (459), followed by the Hunter (120), Richmond-Tweed (74), Illawarra (59) and Mid-North Coast (52).

Of the 459 Sydney site notices, most were issued in Outer South Western Sydney (102), followed by Blacktown (73), St George-Sutherland (57), Central Northern Sydney (42) and Outer Western Sydney (38).

RISK IDENTIFIED

Of the improvement and prohibition notices, most were issued for scaffold risks (279), followed by falls risks (272) and then construction risks (72).

TYPE OF SITE

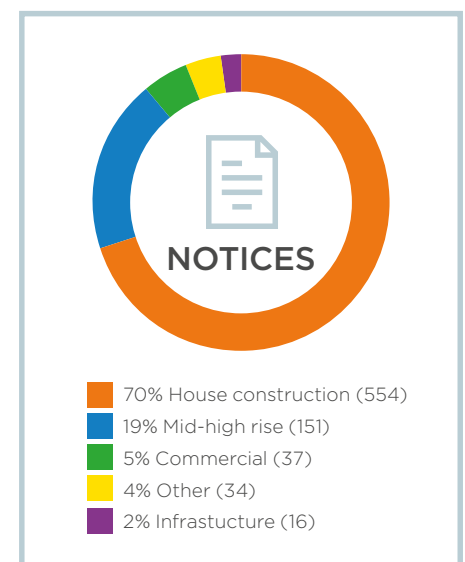
The type of site was not identifiable for all notices issued, however, where identifiable the majority of notices were issued on house construction sites, followed by mid-high rise, commercial, 'other' and infrastructure.

SPOTLIGHT ON HOUSE CONSTRUCTION NOTICES

As the majority of notices were issued for house construction sites, further analysis of these notices is below.

The majority of house construction site notices were for risks associated with falls (179), followed by scaffolds (171), construction (56), electrical (49), and general workplace management (31).

There were 9 on-the-spot fines issued for falls-related safety on house construction sites.



Graph 1: Notices issued as part of Scaff Safe 2020 from 1 March to 30 June 2020 broken down by type of site.

Notice reason for house construction sites	Notice type		Total
	Improvement	Prohibition	
Falls (eg no or inadequate fall protection)	78	101	179
Scaffolding (eg scaffold non-compliance)	122	49	171
Construction (eg site security, SWMS)	56		56
Electrical (eg inspection and testing, damaged equipment)	42	7	49
General workplace management (eg unsafe layout, trip hazards, access/egress)	31		31
Construction hazards (eg WHS mgmt plan, trip hazards, facilities)	20	2	22
Section 19 (primary duty of care)	8	2	10
Structural collapse	4	1	5
High risk work licence	5		5
Falling objects	4		4
General work health and safety (eg loading zones, no site induction)	4		4
Consultation	2		2
WHS management plan	1		1
Silica dust		1	1
Totals	377	163	540

Table 5: Notices issued on house construction sites (only) as part of Scaff Safe 2020 broken down by notice type and non-compliance issue, from 1 March and 30 June 2020.

Some examples of reasons for issue for the top three notice categories are listed below:

- **Falls notices:** eg no edge protection for roof, no edge protection on a balcony no system in place to minimise the risk of a fall, no rails or barriers on internal stairs, unprotected stair void, scaffold multiple non-compliance, inadequate or unsafe access to the upper level, the gap between the scaffold and edge/balcony, using an unsecured plank and no handrails, multiple breaches across multiple falls risks, risk of impalement.
- **Scaffold notices:** eg missing handrails, mid-rails, ledgers, planks, ties, lapboards, cross bracing and/or toe boards, no handover certificate, not using a licenced scaffolder to erect or alter the scaffold, unsafe or inadequate access, damaged sole plates, missing containment netting, trip hazards, close proximity to electric powerlines, uncovered voids/penetrations, last inspection in excess of 30 days.
- **Construction notices:** eg site signage, site fencing and security, no safe work method statement (SWMS) for high-risk work, SWMS not readily available to workers, work not carried out in accordance to the SWMS, inadequate SWMS, trip hazards, not inducting workers to SWMS.

It is clear that most notices issued were for serious safety risks to workers on-site, predominantly for scaffold and falls risks.

SUPPORTING COMMUNICATIONS AND RESOURCES

SafeWork undertook a targeted communications campaign to advise of the commencement of Scaff Safe 2020 and to provide resources on how to stay safe when working with scaffolds.

The primary messaging for this campaign were:

- SafeWork NSW is continuing to crack-down on unsafe scaffolding in 2020
- Too many workers are seriously injured or killed due to unsafe scaffolding
- Only licenced workers can erect, alter and dismantle scaffolds
- On-the-spot fines apply.

Communications were disseminated through:

- An SMS to more than 11,000 scaffolding licence holders
- An email alert to industry associations and unions, scaffolding high risk work assessors and registered training organisations, as well as major stakeholders and other interested parties
- An article in SafeWork NSW's The Wrap safety publication
- Tile on the SafeWork NSW website front page
- Links to relevant codes of practice, guides and recent scaffold-related incidents
- Distribution of the SafeWork NSW scaffold safety checklist for principal contractors (see the end of this report)
- Distribution of the SafeWork NSW scaffold inspection/handover certificate template
- A FaceBook social media campaign with two separate ads targeting construction supervisors and construction tradies – 366,656 reach, 1,123,300 impressions, 1,911 clicks.



OPERATION SCAFF SAFE 2019 VS SCAFF SAFE 2020 FINDINGS

Inspectors visited 727 construction sites for the 2019 Operation Scaff Safe campaign and issued 855 notices, including 33 falls-related on-the-spot fines totaling \$113,040.

When looking at the overall observations in 2019 and 2020, inspectors observed higher compliance rates for 17 of the 25 key checklist questions in 2020.

Whilst a different sample of sites were visited in 2020, these observations may indicate a general improvement across industry, notwithstanding that compliance rates for some checklist questions remain unacceptably low.

The top three checklist questions where inspectors observed a higher percentage of compliance were:

- 17% higher compliance percentage in the scaffold plan being readily available to scaffolders
- 16% higher compliance percentage in site supervisors/principal contractors communicating to workers that scaffold components must not be removed by unlicensed workers (for scaffolds where the risk of a person or object falling is 4 metres or more)
- 10% higher compliance percentage for scaffolds under construction being complete with no missing parts.

Our key messaging for the 2020 campaign was to ensure those workers who do not hold a scaffolding high risk work licence do not remove components from a scaffold, and so this improvement is a positive outcome.

However, there is still much work required to ensure the safety of workers.

The same four checklist questions had the lowest compliance observations in 2019 and 2020, with slightly higher percentages observed in 2020.

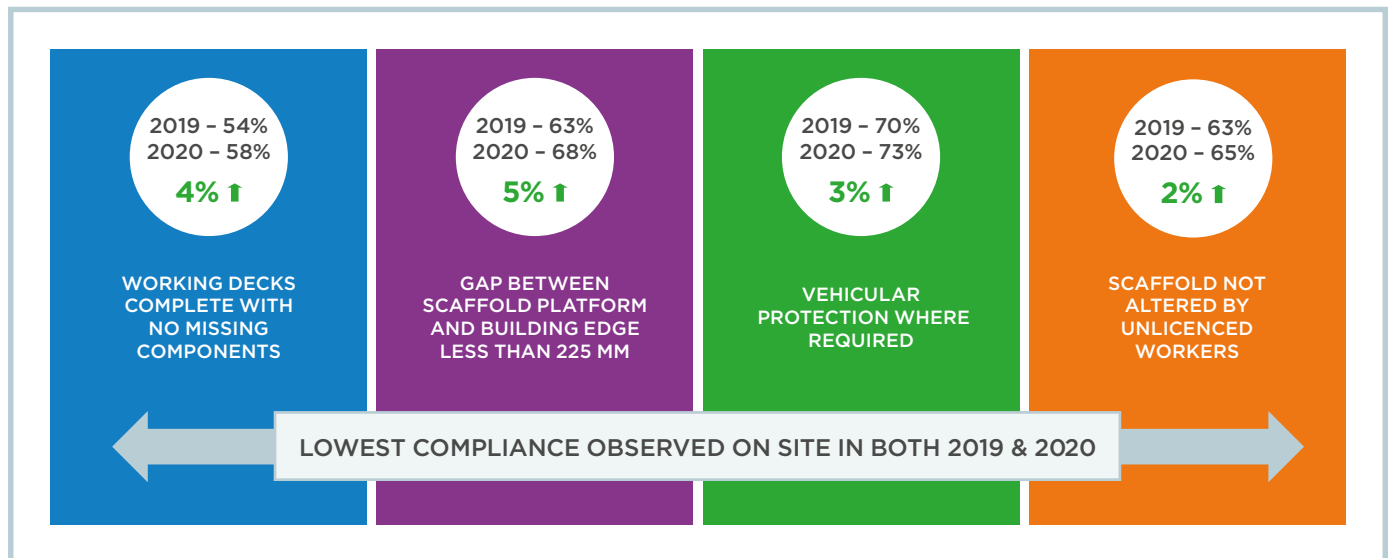


Image 2: Percentage of sites observed as compliant for the lowest compliance checklist questions - 2019 compared to 2020.

Note: Direct comparative analysis between any two safety campaigns must be viewed with consideration to the many variables that can influence the findings. For example the sample of sites visited changes from year to year with new building sites under construction, different geographic locations and types of site. Also general economic, regulatory and other external factors can impact construction industry safety.

CONCLUSION

While there has been higher percentages of compliance observed in 2020 when compared to 2019, it is clear that a continued focus on scaffold safety is required in the NSW construction industry to ensure scaffolds are built to standard by appropriately skilled and licenced personnel and that the scaffold remains safe and compliant throughout the build.

Scaffold suppliers and erectors must ensure the scaffolds they provide are fit for purpose and compliant with the appropriate Australian Standards and work health and safety legislation.

Site supervisors and principal contractors also have duties under work health and safety legislation to ensure that scaffolds are safe for workers to use upon handover, and throughout the construction build including the finishing processes.

More work is required by the industry to educate scaffold suppliers, principal contractors and site supervisors of these duties and to ensure they:

- understand what is required in a handover certificate/written evidence of a compliant scaffold
- don't accept a non-compliant scaffold
- advise workers that they must not alter a scaffold without holding the appropriate scaffolding high risk work licence
- supervise workers to ensure they do not alter a scaffold
- arrange for the scaffold to be (re)inspected by a competent person before use is resumed after an incident that may have affected its stability, after repairs, or at least every 30 days.

SafeWork NSW has a suite of tools for site supervisors, including the Pocket Guide to Construction Safety, safety podcasts, checklists and online events to assist site supervisors in understanding their duties and responsibilities on a construction site - including when it comes to scaffold safety.

Future scaffold on-site compliance projects will focus strongly on the principal contractor and the site supervisor's role and responsibilities in scaffold safety.

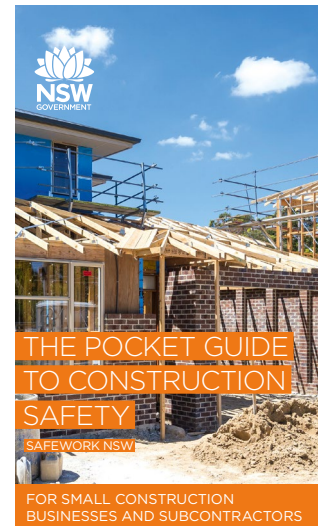
GUIDE FOR SMALL CONSTRUCTION BUSINESSES AND SUBBIES

The Pocket guide to construction safety is a great tool for small businesses and subbies, designed to make safety simple.

It covers all major safety obligations, including working at heights, is small enough to fit in your back pocket, and is QR code enabled so you can link electronically to the relevant code of practice for detailed guidance.

The (free) hard copy version is available from our publications hotline on 1300 799 003, or you can view it on the SafeWork NSW website.

For more information on working at heights safely, see www.safework.nsw.gov.au or call 13 10 50.



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SCAFFOLD INSPECTION CHECKLIST 2020

This checklist can be used by principal contractors or scaffolders to conduct a basic inspection to look for common scaffold deficiencies and hazards.

Principal Contractors/builders have a duty to provide and maintain a working environment that is safe and without risks to health and safety, so far as is reasonably practicable. This includes the provision of safe systems of work and plant that is adequately maintained.

On-the-spot fines of up to \$3,600 for businesses and \$720 for individuals may be issued to those placing workers lives at risk by not adequately protecting them when working at heights, including working on unsafe scaffolding.

The following requirements help you to prepare and plan for a safe and effective scaffold on site.

ADMINISTRATION

Manage your scaffold safely by ensuring:

- the scaffold is only erected, altered and dismantled by a worker with the appropriate scaffolding high risk work (HRW) licence. You can check a HRW licence is valid by visiting www.licencecheck.nsw.gov.au. Site inductions and ongoing toolbox talks should clearly stipulate that unlicensed workers are prohibited from altering a scaffold.
- workers, including contractors, need to be consulted about site rules, including the safe use of the scaffold and who to contact if it needs altering or repair.
- the scaffold must be inspected and a handover certificate provided at the following intervals;
 - before first use,
 - prior to use after alterations or repairs,
 - after adverse weather (eg high winds or storms) that could affect scaffold integrity or stability, and
 - at regular intervals not exceeding 30 days
- the handover certificate should be kept on site until the scaffold has been dismantled
- the scaffolders have provided an adequate safe work method statement (SWMS) before starting any high risk construction work
- work is undertaken in accordance with that SWMS provided
- the project is planned and sequenced to minimise trades working above others on the scaffold.

INSPECTING THE SCAFFOLD

The scaffold safety checklist is designed to help identify potential issues or risks with an erected scaffold on site. It is NOT intended to be exhaustive and reference should be made to appropriate legislation, standards, Codes and Guides.

Adequate safeguards have been provided to prevent contact with overhead power lines

The scaffold is erected on solid foundations and sole boards used where required

Vehicular protection is in place where required

If a ladder access is installed, edge protection or a hatch is provided to the void

A number of ties are installed, and are connected to two standards. The tie anchors are suitable for purpose

There is adequate face bracing (zig zag)

All handrails, mid-rails, toe boards/brick guards are installed

All lap boards are lashed or secured

The working deck is clear of materials and debris (minimum safe access is 450mm wide)

The working decks are complete, with no missing ledgers, planks, toe boards/kickboards or hop-ups

The gaps between the scaffold platforms and building edge/face are 225mm (horizontal) or less

The gaps between the hop-ups/decks and building floor are 300mm (vertical) or less

Tie bars are installed on each hop-up to prevent hop up brackets from moving or planks falling

Intermediate decks are in place (every 2 metres)

There is safe access to each working deck

The combined loads of materials and persons do not exceed the working load of the scaffold

Containment sheeting/netting has been installed, and wind loading has been accounted for in the design

Containment netting has a flammability index of less than 25

MOBILE SCAFFOLD SAFETY

The work area is free of floor penetrations, electric leads and other slip or fall hazards

The supporting surface is hard and flat or boards or channels are being used on unstable surfaces (on dirt, uneven ground, muddy or sloping surfaces)

Bracing is erected correctly and a plan brace is included at the base of the scaffold

The castor wheel locks are in good working order and locked when in use

Handrails, mid rails, kickplates are in place on all mobile scaffolds over 2m in height

Internal ladder access is provided and secured

The working deck is complete with no split decks

FURTHER INFORMATION

- SafeWork NSW Industry Safety Standard – *Erect, alter and dismantle scaffold*
- *Safe Work Australia Scaffolds and scaffolding work general guide*
- *Safe Work Australia Guide for scaffold inspection and maintenance*

Australian Standards

- AS/NZS1576: 2019 Part 1: Scaffolding – general requirements
- AS/NZS4576: Guidelines for scaffolding.

For further information see www.safework.nsw.gov.au or call 13 10 50

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