



# OPERATION SCAFF SAFE

## Project findings report - 1 April to 30 September 2019

### OVERVIEW

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

Operation Scaff Safe ran between 1 April and 30 September 2019 as a targeted compliance campaign, following on from observations of unacceptable levels of non-compliant scaffolds during the 2017/18 construction blitz on falls from heights.

SafeWork inspectors visited 727 construction sites as part of Operation Scaff Safe and issued 855 notices, including 33 falls-related on-the-spot fines totalling \$113,040.

Inspectors observed the primary scaffold risks to be missing components, large gaps between the working platform and building edge/face, no vehicular protection when required and inadequate ties to the building. Additionally, 37% of scaffolds appeared to have been altered by workers who did not hold a scaffolding high risk work licence.

Given the remarkably poor performance across scaffold compliance rates, 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 licenced personnel, and that the scaffold remains safe and compliant throughout the life of the construction project.

In 2020 and beyond, principal contractors can expect to see continued inspector compliance site visits, alongside targeted interventions with poor performing scaffold suppliers and installers.

SafeWork will continue to show zero-tolerance to those putting workers lives at risk from unsafe scaffolds, and work with major stakeholders and influencers in industry to increase awareness and improve overall standards and commitment to scaffold safety.

## BACKGROUND

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

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

Due to the size, location and complexity of some scaffolds, 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.

Principal contractors and site supervisors have critical duties and responsibilities to ensure the safety and integrity of the scaffold throughout the life of the construction project, including managing the number of working decks, the working loads of each deck and prohibiting access to any unsafe scaffold.

## SCAFFOLD RELATED CLAIMS AND INCIDENTS

There were 26 falls from heights fatalities in NSW over the three-year period to 2016/17, with three of those (or 12%) being falls from scaffolds.<sup>i</sup>

We looked at workers compensation claims in the construction industry over the three-year period to 2015/16 where the breakdown agency (primarily what they fell from) was scaffold, and found there were 135 claims costing \$6.8 million, with 73% of these being classified as a major claim<sup>ii</sup>. A major claim is where the injury resulted in death, or permanent or temporary disability with at least one week of weekly benefit entitlement paid.

We undertook a deep analysis of 42 serious or fatal scaffold falls from heights incidents reported to SafeWork NSW over the three-year period to 2016/17 and found that most incidents had between one and three contributing factors recorded by the attending inspector.

Whilst the contributing factors recorded were primarily direct-level on-site factors, rather than organisational factors, the observations were still useful in providing a front-line picture.

The on-site contributing factors reported in these scaffold incidents were:



<sup>i</sup> Source: SafeWork NSW Falls from heights data insights and action plan

<sup>ii</sup> Source: Workers Compensation data 2013/14 to 2015/16 provided by NSW State Insurance Regulatory Authority.

## 2018 FALLS FROM HEIGHTS IN CONSTRUCTION BLITZ

Before Operation Scaff Safe, SafeWork NSW conducted a statewide construction blitz on falls from heights over the twelve months to November 2018 where inspectors visited more than 1,000 construction sites and observed that the level of non-compliance on scaffolds was unacceptable in that:

- 50% of scaffolds were incomplete, with missing ledgers, planks or hop-ups
- 23% had inadequate access/egress to scaffold decks
- 21% did not have evidence that the scaffolder was competent
- 13% were not adequately supported on the ground and tied into the building.

Inspectors provided educative advice and secured compliance through the issuance of notices and fines.

See the [2017/18 Construction Blitz on Falls From Heights](#) report available on the SafeWork NSW website for more information.

## OPERATION SCAFF SAFE FINDINGS (2019)

Operation Scaff Safe 2019 was a six-month field-based project with inspectors conducting unannounced site visits, taking compliance action and talking with site supervisors, workers and scaffolders to increase safety awareness and compliance in the construction industry.

The 1 April launch date tragically coincided with a major scaffold collapse in Macquarie Park, where a young worker was killed and another critically injured.

Between 1 April and 30 Sept 2019, Inspectors undertook 727 site visits state-wide, with the top five regions visited being Sydney metro (63%), the Illawarra (12%), South Eastern NSW (7%), the Hunter (6%) and Mid North Coast (5%).

The majority of sites visited were house construction (50%), followed by mid-rise (25%), commercial (10%) and high rise (5%).

For this report, we have split scaffold safety risks in to three main categories;

1. scaffold falls risks
2. scaffold stability and
3. scaffolds under construction.



Image 1: Heat map of locations across NSW visited by SafeWork NSW Inspectors from 1 April to 30 September 2019 as part of Operation Scaff Safe.

# 1. SCAFFOLD FALLS RISKS

Whilst there have been slight improvements in some inspector observations from 2017/18 in relation to falls risks, the level of risk remains unacceptable with 46% of scaffold working decks observed as having missing components, such as missing planks, ledgers or hop-ups.

Other concerning issues included 37% had gaps between the scaffold platform and building edge/face larger than 225mm (horizontal), and 37% appeared to have been altered by unlicensed workers.

When altered by unlicensed workers, a scaffold can become unsafe with gaps creating falls risks, or the structural integrity compromised with critical components removed and not replaced, such as removing ties.

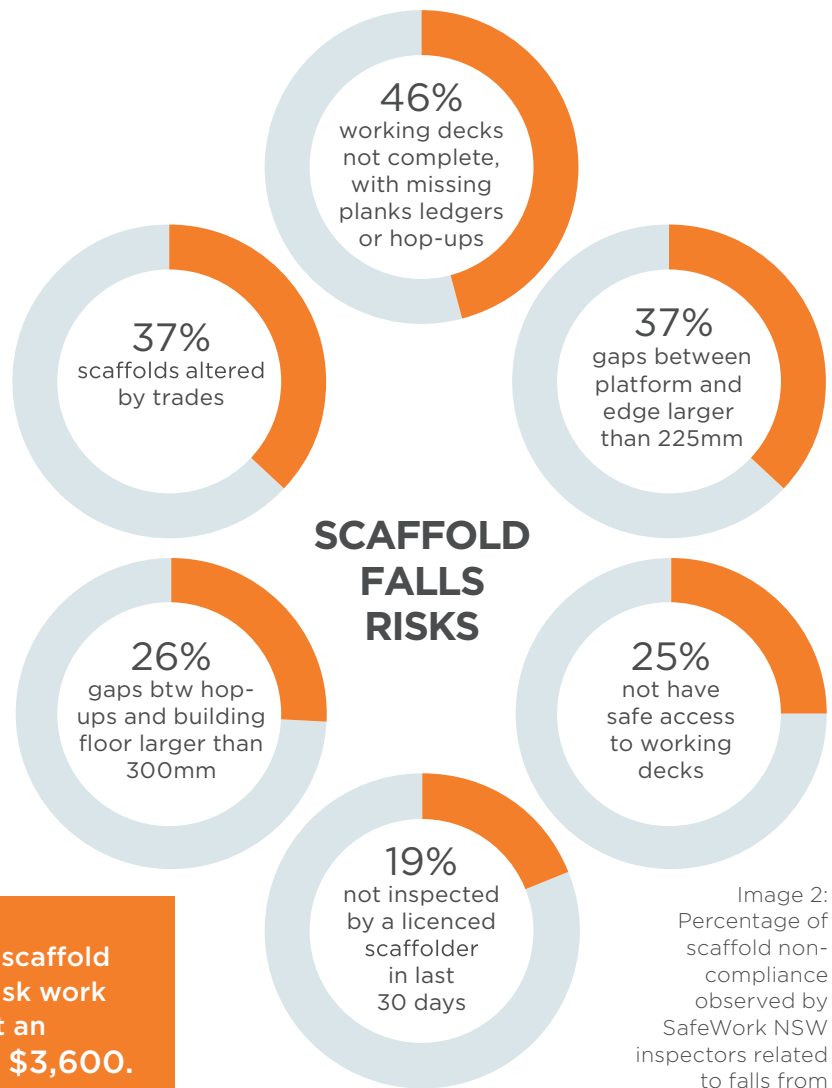
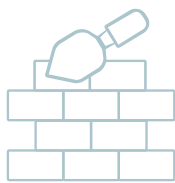


Image 2: Percentage of scaffold non-compliance observed by SafeWork NSW inspectors related to falls from heights risks.

**Erecting, altering or dismantling a scaffold without holding the correct high risk work scaffolding licence can attract an ON-THE-SPOT FINE OF UP TO \$3,600.**

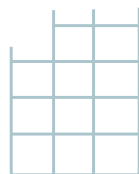
The top five unlicensed tradies that appeared to have altered the scaffolds were:



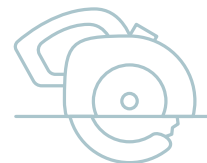
bricklayers  
40%



renderers  
16%



formworkers  
15%



builders/carpenters  
12%



painters  
4%

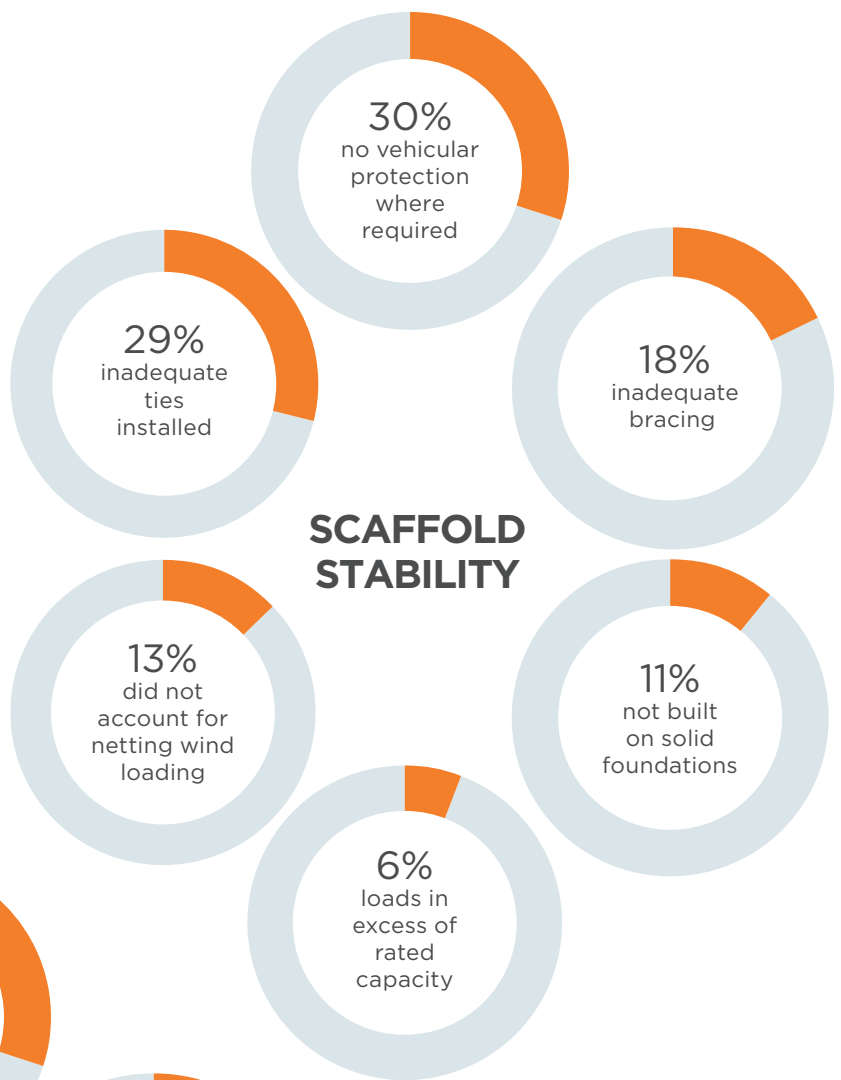
Noting that in many instances it can only be theorised that a trade/unlicensed worker has made the alterations (for example, painting equipment adjacent to a removed plank).

## 2. SCAFFOLD STABILITY

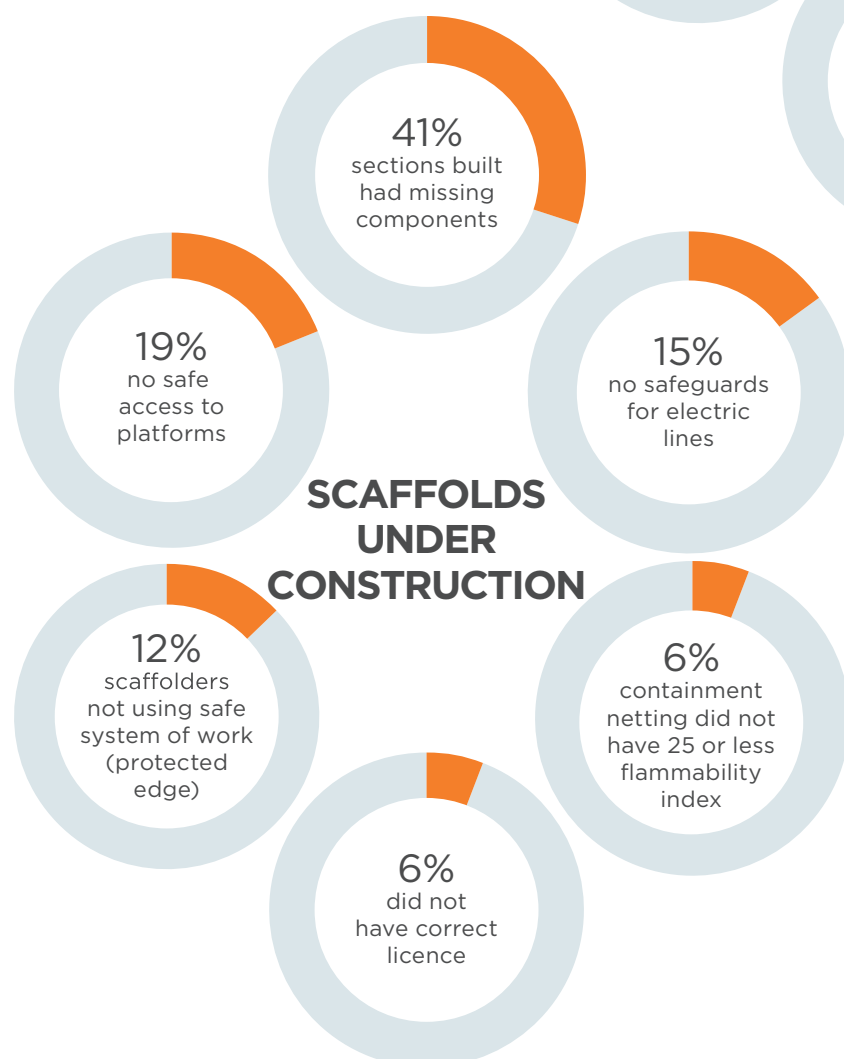
When it came to scaffold stability, the most concerning observations were that 30% did not have adequate vehicular protection when it was required, 29% did not have adequate ties installed, and a further 18% had inadequate bracing.

Each of these issues may lead to a catastrophic collapse, endangering the lives of workers and the general public.

Image 3: Percentage of scaffold non-compliance observed by SafeWork NSW inspectors related to scaffold stability.



### SCAFFOLD STABILITY



### SCAFFOLDS UNDER CONSTRUCTION

## 3. SCAFFOLDS UNDER CONSTRUCTION

Scaffolders and their labourers are at risk of a fall from a height or collapse when erecting, altering or dismantling a scaffold.

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 less than half of the sites.

Of the scaffolds that were observed as being under construction, 41% had missing components in sections that were already built, 19% did not have safe access to platforms and 15% did not have the appropriate safeguards in place when close to electric lines.

Image 4: Percentage of scaffold non-compliance observed by SafeWork NSW inspectors related to scaffolds under construction.

## NOTICES AND ON-THE-SPOT FINES

SafeWork inspectors issued 855 notices including 619 improvement notices, 184 prohibition notices, 19 “other” notices and 33 falls-related on-the-spot fines totalling \$113,040.

Unsurprisingly, the most common reason for a notice issued was for non-compliant scaffolds (37%), followed by falls risks (27%), then general construction safety - mostly site security (13%), electrical risks (11%) and general work health and safety risks (7%).

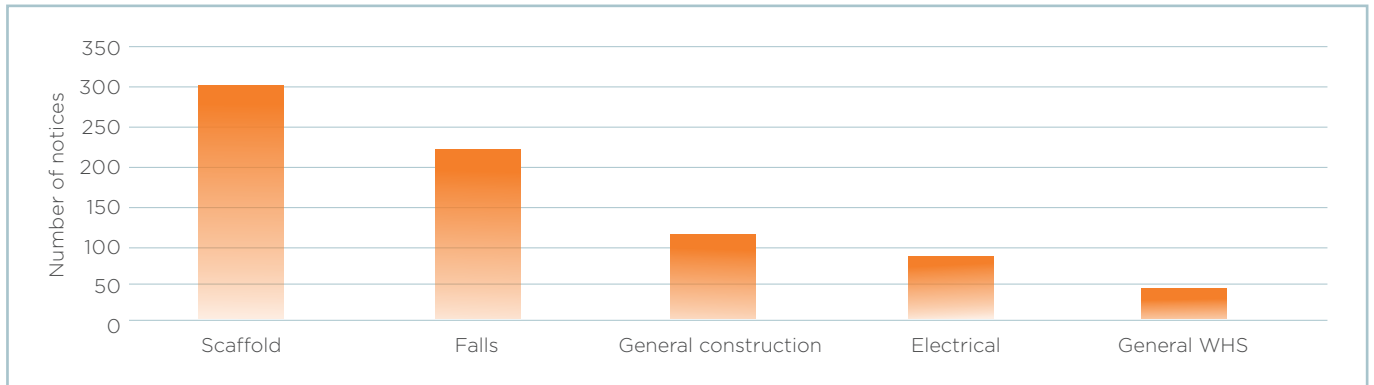


Table 1: Notices issued as part of Operation Scaff Safe broken down by non-compliance issue, from 1 April to 30 September 2019.

## SUPPORTING COMMUNICATIONS AND RESOURCES

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

This included:

- 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
- A scaffold safety article published in major industry association magazines, and for dissemination through their channels
- Links to relevant codes of practice, guides and recent scaffold-related incidents
- A newly developed [scaffold safety checklist for principal contractors](#) (see end of this report)
- A newly developed [scaffold inspection/handover certificate template](#)
- Social media postings on Facebook.

## EDUCATIONAL EVENTS WITH INDUSTRY

Between 1 April and 30 September 2019, inspectors conducted scaffold safety presentations at 24 industry events or trade nights across the state to talk with employers, site supervisors and workers about scaffold safety, and to provide advice on identifying and controlling the primary risks SafeWork NSW inspectors look for on a work site.

Ten of those talks were held in the Sydney metropolitan area, and the remainder delivered throughout the state including Port Macquarie, Maitland, Foster, Ballina, Coffs Harbour, Tenterfield, Grafton, Armidale, Narrabri, Murwillumbah and Goulburn. Most talks were partnered with an industry association or major regional employer.

The talks were attended by more than 950 construction industry workers or employers, with at least 25% of attendees indicating they were from a culturally or linguistically diverse background, mostly Arabic.

# CONCLUSION

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. Future scaffold on-site compliance projects will focus strongly on the role of the principal contractor and site supervisor in ensuring the structural integrity and compliance of the scaffold throughout the construction project.

The Operation Scaff Safe on-site verifications project will be repeated in 2020, alongside targeted interventions and case management of the poor performing scaffold suppliers and installers identified in 2019.

The scaffold supplier and installer targeted interventions program will consist of a dedicated team of inspectors to work closely with scaffold entities to systematically improve work, health and safety standards and scaffold compliance levels.

Inspectors will continue to have a zero-tolerance of those putting workers lives at risk from unsafe scaffolds, and target those areas identified as being unsafe or not compliant.

SafeWork will also work with major stakeholders and key influencers in industry to increase awareness and improve overall standards and commitment to scaffold safety.

More comprehensive falls from heights data and initiatives are outlined in the [Towards Zero Falls from Heights Data Insights and Action Plan](#) on the SafeWork NSW website.

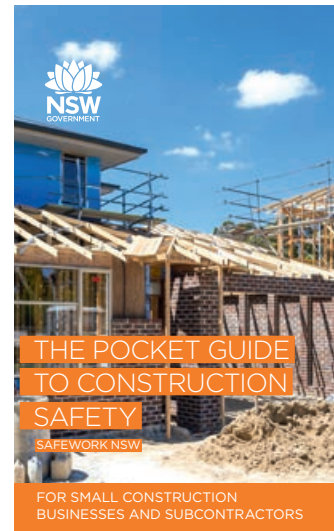
## GUIDE FOR SMALL CONSTRUCTION BUSINESSES AND SUBBIES

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](http://www.safework.nsw.gov.au) or call 13 10 50.



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# SCAFFOLD INSPECTION CHECKLIST

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 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](http://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](http://www.safework.nsw.gov.au) or call 13 10 50

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