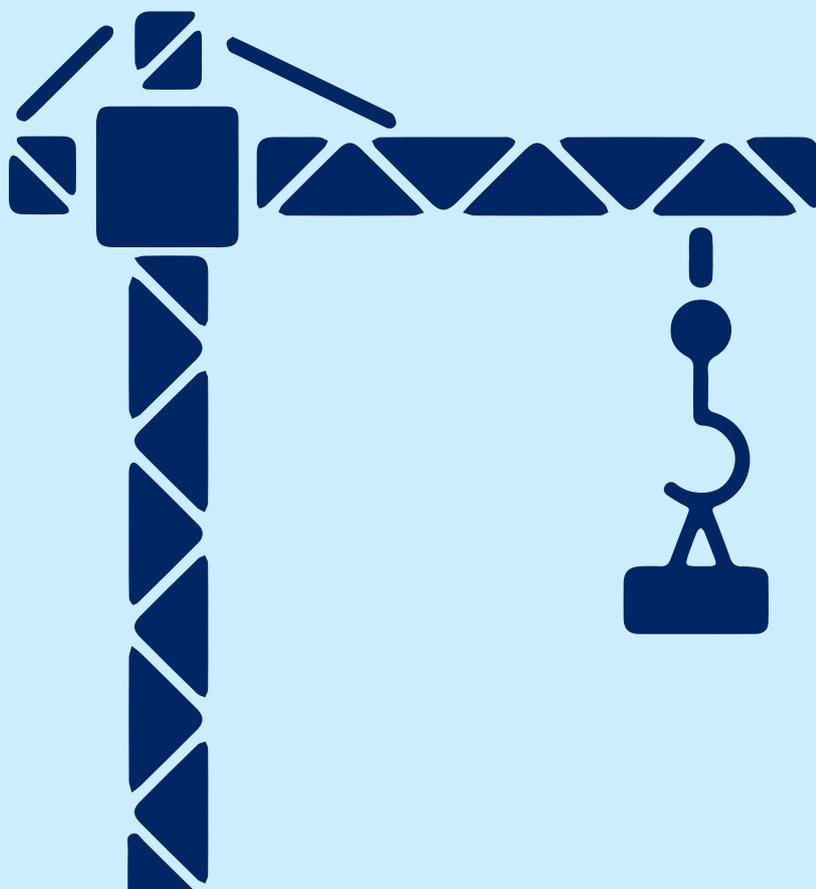


Building and Construction

Safety Symposium Evaluation

2022



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Executive Summary

The NSW Government's inaugural SafeWork NSW Building and Construction Symposium was held at CommBank Stadium Parramatta on the 10th May 2022 with Regional Roadshow events held at Coffs Harbour, Tamworth, Newcastle, Wollongong, Batemans Bay, Wagga Wagga, Orange, and Port Macquarie.

The Symposium brought together the Regulator and the building and construction industry to launch the Scaffolding Industry Safety Standard (SISS) as well as conduct workshops to address the ongoing issues around working at heights in NSW.

In attendance was the then Minister for Small Business and Minister for Fair Trading, Ms Eleni Marie Petinos, MP, and the Director of the Office of the Building Commissioner, Vanessa Carmody-Smith, along with representatives from SafeWork NSW and industry.

The evaluation components for this initiative were focused on whether the symposium was adequately resourced and administered in terms of the time spent, budget and staff resources; its impact on managing priority Work Health and Safety (WHS) issues, the industry's understanding of the whole of government approach to building and construction regulation and improving the engagement and collaboration between SafeWork NSW and the industry.

Participants at the Sydney event agreed that it was a valuable opportunity to engage and consult on WHS issues and attendance resulted in a better understanding of the regulatory landscape. They also found the Scaffolding Industry Safety Standard (SISS) session valuable as it gave them a better understanding of how to safely manage scaffolding work; and commented that the workshops being split across three sub-industry areas; residential/house construction (class 1), multi-storey mixed use (class 2), and infrastructure provided a forum to address their specific issues, improve safety standards and work with SafeWork NSW. The most popular part of the symposium was the keynote speakers, followed by the networking opportunities, the delivery of the SISS and the falls from heights workshops.

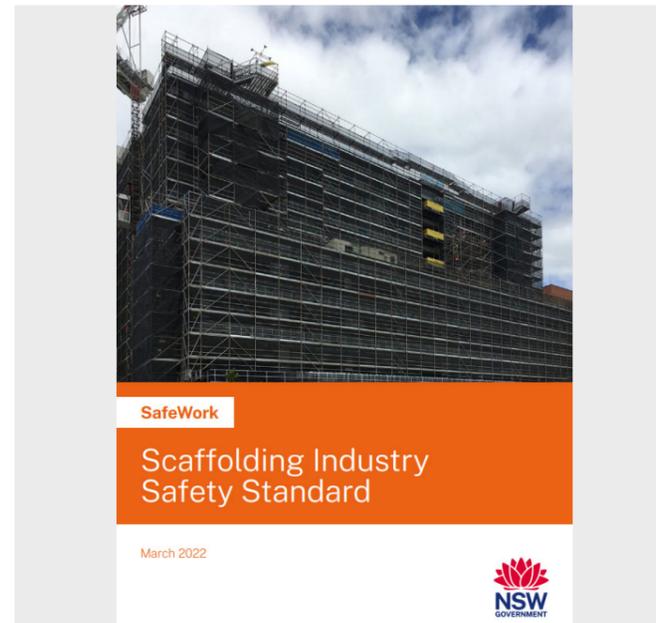
Regional Roadshow participants also agreed that it was a valuable opportunity to engage and consult on WHS issues and attendance resulted in a better understanding of the regulatory landscape. They also found the SISS session valuable, and that the event provided an opportunity to improve and address working at heights safety issues across the industry and work with SafeWork NSW. The large majority stated that they would attend future SafeWork NSW events.

The themes within the breakout sessions discussed two topics per stream:

- **Stream 1** residential house construction (class 1) – for housekeeping there was the common sentiment that there is a lack of standards in this area, and it was felt that there needed to be a Code of Practice or guidance material outlining the accountabilities and responsibilities of the person conducting the business or undertaking (PCBU), supervisors, workers and third-party suppliers. For site security, it was suggested that more education/emphasis was needed in site inductions, toolbox talks and site supervisor training.
- **Stream 2** multi-storey mixed use (class 2) – for hazardous manual task outcomes in formwork it was commented that there needed to be more focus on safety in design, standardised safe work method statements (SWMS) and re-consideration of licensing or regular verification of competency (VOC) requirements. For waterproofing, more training was needed on personal protective equipment (PPE), ventilation, safety data sheets (SDS), confined spaces (atmospheric and flammability issues), as well as more supervision.
- **Stream 3** infrastructure – for plant and person interaction, minimum standards for separation was suggested along with auto immobilisation recognition, competency requirements for spotters, and a change of culture and behaviour at all levels. For silica exposure, in-built suppression systems, removing persons during plant movements, air-monitoring and ventilation flow alarms, fit-testing, and ensuring that it is a topic within all training packages were considered best practice and should be implemented industry wide.

Regarding the falls from heights workshop, each stream brainstormed ideas for potential regulatory options to solve this “wicked problem” – the most common cause of traumatic fatalities on NSW construction sites, with this statistic echoed throughout Australia and the rest of the world for decades. Suggestions included a white card / licence, demerit points, mandatory training, regulatory options, Code of Practice and mandated equipment. A separate regulatory options paper will be prepared by SafeWork NSW for further consultation.

Overall, the evaluation results of the inaugural Building and Construction Symposium and Regional Roadshow have concluded that the initiative is a successful way for SafeWork NSW to engage with the building and construction industry, with it recommended to be delivered every two years with smaller stream specific forums in between.



Outcomes and Considerations for SafeWork NSW

The following is a summary of key outcomes and suggestions for SafeWork NSW that were identified across stream sessions and falls from height sessions at the symposium and regional events.

Stream 1 – Residential House Construction

Housekeeping

- Code of Practice clarity and an outlining of Supervisor responsibility.
- Development of guides for young / new workers, collaboration with TAFE NSW.
- Include as part of Inspector site checklist questions.

Site Security

- Development of a toolbox talk.
- Include as part of a site supervisor training via Supervisor Workshops or Safety Cast.
- Include as part of Inspector site checklist questions.

Stream 2 – Multi-storey mixed use (class 2)

Formwork

- Explore innovative mechanical equipment, potentially looking at best practice in other countries.
- Improve the Code of Practice and collaboration with the formwork industry and relative associations.
- Create guidance materials for non-English speaking workers and those with low literacy.
- Provide an overview of the site establishment, coordination, program and sequencing details which are taken into consideration before working in the formwork space.
- Safety in design – consultation and feedback, buildability, mechanical loads.
- SWMS mandate to include manual handling, language, commercial pressure.
- High Risk Work Licence (HRWL) / VOC weight limit on manual handling.

Waterproofing

- Confined space training (atmospheric and flammability issues).
- Training for PPE, ventilation and SDS.

Falls From Heights

Tackling the falls from height issue identified a significant number of changes, summarised across the areas listed below.

- Regulatory change: increased penalties, demerit point system, specific SafeWork NSW led Working at Heights Forum, permit and licencing systems introduced.
- Communication: building greater awareness and risks including guidance material, changing messaging regarding accountability and duties of leaders.
- Training: specific training for Working at Heights specific to sub-sector and skills, White Card changes/inclusion of work at height, greater oversight of Registered Training Organisation (RTO) providers.
- Licencing: High Risk Work Licence (HRWL) e.g., <4m and >4m, sub-competencies as per trade (formwork, scaffold), validity period.

Stream 3 – Infrastructure

Plant and person interaction

- Explore remote operated machinery, design of plant and camera sensors.
- Minimum standard for separation of people and plant within the Code of Practice.

Silica exposure

- More information and education on Silicosis (what is it? How does it occur?) with specific resources for apprentices.
- Explore and promote emerging technologies along with a targeted social media campaign about this issue.
- Promote alternative materials and the use pre-cut materials / cast-ins.
- Promote rebates on PPE – for example, dust suppression tools and attachments for machinery, real-time respirable crystalline silica detector.

The stream session outcomes have been considered in developing the following options for consideration by SafeWork NSW. It is recognised that some suggestions across all sessions may not be implemented due to the following:

- Should be led and championed by industry, particularly regarding mandating / standardising SWMS, sharing and promotion of proprietary systems and technologies.
- Some suggestions are not appropriate within the scope and role of SafeWork NSW as the NSW Regulator for work health and safety.
- Code of Practice changes – although there is value in the suggestions, some Codes of Practice are not due for review in the short or medium term.
- Falls From Heights – many suggestions relate to regulatory change, mandatory requirements including licencing and training. In considering these options, a separate regulatory options paper has been developed.
- Legislative changes – specifically relating to Falls from Heights sessions, these suggestions will be considered in a separate regulatory options paper.
- Some suggestions cross over with advisory material already produced e.g. SafetyCasts, Guidance Material, Supervisor Workshops.



Short Term (approximately 3 months)

- Develop and release stream specific summaries
- Develop and release standardised SWMS and Awareness and Guidance Material
- Agile approach to SafeWork NSW's compliance checklist questions

Short term

Develop and Release Stream Specific Summaries

Develop and provide feedback to participants of symposium events, and the broader construction industry, a one to two page summary for each stream/sub-sector to share the learnings and outcomes of SafeWork NSW strategies resulting from the events.

SWMS and Awareness and Guidance Material

SWMS remains a hot topic for discussion around legislative requirements and consistency. SWMS was mentioned consistently across the metropolitan and regional symposiums. Feedback indicates SWMS required by the WHS Regulation High Risk Construction Work, are long and hard to understand for workers on sites and overall ineffective. In addition, standard Toolbox Talks addressing high-risk or high frequency compliance areas (e.g. silica, plant person, hazardous manual tasks in formwork, site security, housekeeping) were also frequently suggested.

There were suggestions for SafeWork NSW to produce more advice, guidance and support on this topic. Currently SafeWork NSW has a website landing page for SWMS, a supervisor workshop and a SafetyCast that provide clear guidance and templates.

It is understood Safe Work Australia are working on a Safe Work Method Statement template to release to industry, therefore it is suggested to continue promoting the current platforms and review the Safe Work Australia document on its release for adoption in NSW.

As a short-term achievable goal, the SafeWork NSW Construction Services Group (CSG) could consider promotion and provision of the existing resources during targeted Harm Prevention and Compliance programs.

1. Consider a standing topic at monthly CSG Meeting to ensure Inspector consistency in the promotion and compliance checking of SWMS.
2. Continue providing promotional material e.g. SafetyCast, Supervisor Workshop, Construction Pocket Guides, handouts/checklists during on site interactions.
3. Development or review of any new or existing guidance material should include information specifically targeted to Young Workers and At Risk Workers as these were commonly identified as "gaps" regarding understanding of responsibilities, controls, competency.
4. In relation to residential housing construction (Class 1), it would be advantageous if/ when designing guidance material or harm prevention programs in relation to this sector, to identify opportunities to collaborate with Fair Trading. This recommendation is based on the feedback from the waterproofing session in which many suggestions cross over between quality and WHS.

Agile approach to SafeWork NSW's compliance checklist questions

SafeWork NSW is recommended to continually review key compliance checklist questions and data where possible to address priority and emerging harms, allowing an agile and targeted approach during the compliance program lifecycle.

This should include where practical specific questions targeted to site security and housekeeping, as these were frequently identified in feedback. In addition, the high-risk harm programs, e.g. Formwork, Silica should consider suggestions made at the symposium and roadshow events for inclusion.

Medium (planning for next Symposium within 6 months)

- Symposium to be held every two years
- Small stream specific forums to be held in between Symposiums

Medium term

Symposium to be held every two years

Based on the delegate consensus and the feedback from surveys it was overwhelmingly agreed that the industry found the symposium was very informative and useful. As a result, SafeWork NSW should consider hosting the symposium as a bi-annual event in the future, to address key priority harms and engage with stakeholders.

Condensed / targeted Symposiums or Forums

Due to the success of the Symposium and regional roadshows, identified as an excellent opportunity for the Regulator to engage with industry and discuss solutions for priority issues, it is recommended for smaller events or forums to be held, addressing specific harms in the targeted locations and sub-sectors across the state. It is also an opportunity for direct face to face engagement.

1. Regional events held more frequently on targeted / local issues.
2. Development of an Infrastructure industry specific forum, due to the current significant government investment in infrastructure. This forum can provide the opportunity for the Regulator, Industry, Clients and Unions to engage to discuss issues, lessons and best practice opportunities.

Long (12 months plus depending on option, each has their own timeframes)

- Falls from Heights regulatory options paper

Long term

Falls from Heights regulatory options paper

Falling from heights is the leading cause of serious injury and fatal incidents in the construction industry in NSW. The paper explores the major findings of SafeWork NSW's initiatives and proposes options for SafeWork NSW and its interstate counterparts to solve the wicked problem of serious falls from heights in construction with a national approach. The paper will also be a major contributor to how SafeWork NSW will address falls from heights with future compliance interventions and campaigns to drive down incident rates.

Ongoing

- Specific and practical working at heights training through TAFE, RTOs and online

Ongoing

Specific and practical working at heights training through TAFE, RTOs and online

Working at heights training whether practical or online, was a recurrent theme throughout the symposium and the various workstreams.

SafeWork NSW are currently considering a training regime as an option in the aforementioned Falls from Heights regulatory options paper, for the construction industry to upskill workers and increase practical safety knowledge across NSW.

Further research would be required to determine scale, delivery and impact on the regulator and customer.



Background

There are nine priority areas identified in the Building and Construction Sector WHS Plan as being the highest risk in the construction industry. These include:

Harms

- Falls from heights
- Falling objects
- Contact with electricity
- Plant

Illnesses

- Silica
- Asbestos
- Musculoskeletal disorders
- Mental health
- Covid-19

The construction industry also has one of the State's highest workplace risks with 23,352 new workers compensation claims in the two years to 30 June 2021. Total payments during the same time frame cost the NSW workers compensation scheme \$1.13 billion.

As part of the SafeWork NSW Work Health and Safety Roadmap for NSW 2022 and to drive state-wide activities for work, health and safety (WHS) improvement across NSW we engaged with industry stakeholders to collaborate and look at ways to improve safety across these high-risk harms and illnesses.

The overarching objective of the symposium was for SafeWork NSW to have engaged, consulted and collaborated with building and construction industry stakeholders on priority WHS issues. Through evaluation it has been identified that this was achieved.

The Symposium

The symposium program commenced with keynote speeches, panel discussions, followed by participation in workshop discussions on the management of risks associated with working at heights in construction. The event concluded with a networking session between industry professionals and SafeWork NSW staff.

Participants

- Most participants were male.
- Positions varied from HSE Manager, WHS Manager, Safety Manager, Leading Hand, Project Manager, Site Manager, CEO and Director.

Aims of the Construction Symposium 2022

Participants were able to engage, consult and collaborate on issues impacting their industry with SafeWork NSW, Fair Trading, and Office of the NSW Building Commissioner representatives. The symposium included discussions on topics such as the new SIIS and falls from heights, which is the number one killer on NSW construction sites.

Findings

The purpose of this report is to assess the key findings from the symposiums including the risks and issues facing industries. The events also explored ways for SafeWork NSW to work more collaboratively, with key stakeholders and industry associations in the future.

The findings will help inform development of SafeWork NSW future policies, programs and setting of organisational objectives including the Construction Sector Plan; and focussing on target areas such as falls from heights, in the overarching aim of reducing fatalities and serious incidents across the NSW Construction Sector.

The findings focussed on the following indicators:

- What was identified as the biggest issues
- What are the industry stakeholders telling the regulator
- Which innovative ways were identified to tackle falls from heights
- How can SafeWork NSW work better with industry
- Did the activities result in an improved understanding of the risks and best practices
- Will this contribute to improved controls in place to reduce exposure to high-risk harms and illnesses?

The key evaluation questions for the symposium were identified as:

1. Inputs: Was the symposium appropriately resourced and administered in terms of time spent, budget and staff resources.
 2. Impact: Have we achieved the symposium day outcomes, being:
 - Industry has shared and explored ideas to managing priority WHS issues
 - Participants have an improved understanding of the whole of government approach to building and construction regulation
- Have we achieved the post-symposium outcomes, being:
- SafeWork NSW has documented and analysed ideas and options to address priority WHS issues
 - There is improved engagement and collaboration between SafeWork NSW and industry.

Keynote speeches

Minister for Small Business & Minister for Fair Trading

The then Minister, Ms Eleni Petinos said it was vital to bring builders, industry and government together to improve safety for workers.

- “Construction is one of the State’s key industries, employing more than 360,000 people and generating over \$45 billion in economic output to the NSW economy,” Ms. Petinos said.
- “Every worker deserves to come home safely at the end of the working day. That is why the NSW Government bolstered SafeWork NSW Inspector numbers last year with an additional 40 Inspectors across the State, half of which are in construction. This event will focus on how work health safety solutions can keep workers out of harm’s way, while also saving time and money for businesses.”

NSW Office of the Building Commissioner

The Director of the Office of the Building Commissioner Vanessa Carmody-Smith spoke about the key focus being:

- Maintaining momentum for change to lock-in customer confidence.
- Understanding that the industry wants its brand back and it does not want untrustworthy players.
- Trustworthiness ratings and accountability are the foundation stones of ensuring public and consumer confidence.
- Rebuilding industry capability has become the accepted focus – industry associations, professionals and practitioners, enterprises, educators.
- Reinforcing the changing nature of construction and modernising regulation.

Panel Discussion – Scaffolding Industry Safety Standard (SISS)

The panel discussed:

- Providing clarity and guidance to industry bodies, PCBUs and workers on how to safely plan, design, manage and modify scaffolding.
- Driving traffic to the NSW Scaffolding Industry Safety Standard document on the SafeWork NSW website.
- Increasing engagement with the SafeWork NSW website, highlighting additional scaffolding safety resources, information and tools available.
- Reinforcing SafeWork NSW’s image as a trusted and influential regulator by providing WHS education and advice to assist in achieving safer workplaces in NSW.

Workshop breakout sessions

There were three breakout sessions:

Stream 1 – Residential house construction (Class 1)

Stream 2 – Multi storey / mixed use construction (Class 2)

Stream 3 – Infrastructure

Each stream focussed on specific harms identified as relevant to the sector. Participants were also then asked to specific questions, regarding a collaborative approach to reducing harms relating to the specific issues identified by the presentation.

For each stream these were:

Stream 1 – Residential house construction

- Q1: What can we all do to reduce injury from poor housekeeping?
- Q2: What can we all do to improve site security to prevent members of the public entering sites?

Stream 2 – Multi storey / mixed use construction (class 2)

- Q1: What can we do to improve hazardous manual tasks outcomes in formwork?
- Q2: What can we all do to reduce exposure to hazardous chemicals in waterproofing?

Stream 3 – Infrastructure

- Q1: What can we all do to reduce injuries and fatalities from plant and person interaction?
- Q2: What can we all do to reduce silica exposure and improve health outcomes for construction workers?

Within the focus questions for each stream, a common set of considerations were applied and asked participants to consider when workshopping ideas to address the harms. These were:

- Why do these issues keep showing up?
- What are the underlying root causes?
- How can those root causes be addressed consistently?
- Hard / physical controls / emerging technology.
- Training and education / why is it socially or culturally acceptable not to control risks?
- What Regulatory changes could or should be made?

STREAM 1



Residential House Construction

What can we all do to reduce injury from poor housekeeping?

Main Issues

- Excess of waste materials on-site, and the cost of waste management.
- Lack of standards along with a lack of education.
- No Code of Practice clarity and supervisors are unsure of their responsibility.
- Third-party suppliers and their contract performance in cleaning up the sites.
- Weather.
- Construction site worker complacency along with poor site planning and housekeeping on sites e.g., bins full / not emptied, green waste, trade boundaries, recycling, and minimal access to store waste.

Solutions/Ideas

Supervisors

- Emphasis on accountabilities, responsibilities, and process chains of senior construction management with site establishment, better guidance and consultation, planning and design of product selection.
- More supervisor inspections and actions.
- Demarcation of duties, allocate responsibility.
- Early engagement – set expectation to suppliers and contractors.
- Promote efficiency and highlight consequence.
- CCTV, signage, separated waste bins and recycling mandates.

Process

- Regular empty of bins / site clean-up.
- Verification of clean sites.
- Housekeeping plan/stage deliveries, but it was acknowledged that this would incur additional costs for the project.
- Contract payments being conditional.

Education/Training

- Development of a 'Good housekeeping' guide for young /new workers.
- TAFE education – expectations and realities of being on construction sites.
- Project sequencing videos.
- Site induction and toolbox talks.
- Consistent education for supervisors and trades.
- Regulator focus.

Considerations for SafeWork NSW

- Code of Practice clarity and an outlining of Supervisor responsibility.
- Development of guides for young / new workers, possibly working with TAFE.
- Include as part of Inspector site checklist questions.

What can we all do to improve site security to prevent members of the public entering sites?

Main Issues

- Complacency.
- Lack of education and training for construction workers.
- Site supervisors are poorly educated and not providing good examples to workers.
- Lack of accountability across trades, suppliers and supervisors in general.
- Limited room onsite (for smaller lots and quicker builds).
- Size of fencing components 2.4 m long.
- Requirement for alternative sized fences.

Solutions/Ideas

Site Management

- Use of tamperproof clamps, fixings, innovative fencing designs.
- CCTV and security guards.
- Visual management through portal.
- Site access via keycode.

Education/Training

- Discussed during site inductions and toolbox talks.
- Include as part of the site supervisor workshops.
- Effective social media campaigns – using good and bad imagery of contractor management/ processes and systems.
- Review of white card credentials and training.

Regulation

- More local government involvement and small block planning would be beneficial with an emphasis on building safety in the design, especially for smaller sites. For example, there needs to be more proactive engagement with local government, the construction industry, SafeWork NSW and local government to identify how we can fence 220m2 - 400m2 blocks.
- More regulatory intervention to the responsible parties including fines.

Considerations for SafeWork NSW

- Development of a toolbox talk.
- Include as part of site supervisor training via Supervisor Workshops or Safety Cast.
- Include as part of Inspector site checklist questions.

STREAM 2



Multi Storey / Mixed use construction (Class 2)

What can we all do to improve hazardous manual task outcomes in formwork?

Main Issues

- Financial restraints to implement proper controls.
- Commercial pressures on time, money and resources.
- Buildability.
- Mechanical load thresholds.
- Workers - non-English speaking backgrounds, lack of education and minimal understanding about safety and hazards.

Solutions/Ideas

Systems/Equipment

- Make use of mechanical equipment to pour materials close to points of installation. i.e., cranes, hoists, pallet jacks, trolleys and loading platforms, electric trolleys, super decks and fixed bays.
- Positioning of formwork - emerging technology, QR Codes, surveillance.
- Precast elements.
- Safety in design – standardised structure.
- Designed formwork plans enforced by regulators.
- Use scaffold as falsework instead of formwork in high structuring areas and better use of material, perhaps more flexibility with catch decks and bracing.

Process Improvement – Installation and dismantling

- Table form – install and dismantle from below.
- Ensure adequate manpower for installation and stripping crews.
- Fall protection and access to workface to suit / protect requirements.

Supervisor

- Correct level of supervision.
- Worker ratio to supervisor.

Education/Training

- Accessible and free training in the mechanical space like genie

lifter, forklift, and pallet lifters.

- Training (bio mech) body levers and task specific.
- Mandatory minimum competency – supervisor licence.
- Site management / project management / formwork supervisor training and competency.

Licensing

- Competency tickets.
- HRWL.

Regulator / Industry Collaboration

- Consultation and feedback between the formwork industry and the regulator could be improved through participation in joint committees.
- Integrate into design descriptions (i.e. Architects and structure).
- Zero tolerance for non-compliance. Enforcement to motivate positive actions.

Communication

- Better communication to reduce risks on formwork sites for example pre-start daily, toolbox talk, job planning and weekly and monthly meetings. These sessions would consist of discussion on the sequence of works, the correct numbers of workers on site, and skill sets available.
- Development of publications / visuals to the appropriate language level.

Considerations for SafeWork NSW

- Safety in design – consultation and feedback, buildability, mechanical loads
- Explore innovative mechanical equipment, potentially looking at best practice in other countries.
- Improve the Code of Practice and collaborate with the formwork industry and associations.
- HRWL / VOC weight limit on manual handling.
- Create guidance materials for non-English speaking workers and those with low literacy.
- Provide guide/ overview of the site establishment, coordination, program and sequencing details which should be taken into consideration before working in the formwork space.
- SWMS mandate to include manual handling.

What can we all do to reduce exposure to hazardous chemicals when waterproofing?

Main Issues

- General lack of awareness of the risks around waterproofing chemicals.
- Minimal safety planning in the design phase.
- The solvents within the concrete are aggressive and the correct ventilation levels are hard to achieve.
- Lack of supervision.
- Use of unskilled labour.
- Lack of correct PPE.

Solutions/Ideas

Products

- Controls, surface preparation and new technology, would be beneficial to reduce the hazards and risks.
- Substituting hazardous products with non-toxic alternatives.
- Embed waterproofing within the concrete (e.g., additives or water-based solutions in accordance with hierarchy of risk controls).
- Water shedding.
- Designing shower heads in the structural concrete.
- Pre-casting off-site.
- Latex mould for the wet areas.

Ventilation & Extraction

- Atmospheric testing.
- Minimum mandatory ventilation for waterproofing areas.

- Using a robotic application to ensure the correct level of ventilation.
- Setting up area correctly – signage, ventilation, isolation/exclusion, correct equipment.
- Fit testing of breathing apparatus.

Education/Training

- Confined space training to address atmospheric and flammability issues.
- Supervisor training to understand waterproofing principles.
- First aid trained personnel.
- Workers trained to understand lower and upper explosive limits, signs and symptoms of chemical exposure, importance of PPE and signage.
- Product familiarity and how to read and understand SDS in Confined Space training.

Considerations for SafeWork NSW

- Confined space training (atmospheric and flammability issues).
- Training for PPE, ventilation and SDS.

STREAM 3



Infrastructure

What can we all do to reduce injuries and fatalities from plant and person interaction?

Main Issues

- Accidents caused by operator incompetence, overcrowding of sites and lack of training for operators.
- Not selecting the right plant for the job.
- Operator competency.
- Sequencing of work and lack of separation of plant.

Solutions/Ideas

Regulation/Legislation

- Mandatory minimum distances between plant and people (risk based decision making).
- Safety standard supported by legislation.

Site Management

- Change of culture (risk perception) and behaviour at all levels (senior management to onsite workers).
- Planning/ sequencing of work.
- Dedicated work zones.
- Use of Drone or Virtual Reality (VR) technology to assist in improving safety standards through proximity detection.
- Geotech report of site.
- Barricading and signage matrix for plant (min standard) or traffic management standard.
- Eliminate traffic controllers - install traffic lights.
- Site “heat maps” check points – because sites change.

Plant

- Auto immobilisation of plant via facial recognition.
- Plant to have interaction devices such as camera, audible alarms, collision sensors.
- Driverless plant – remote operation.
- Vehicle tracking (IVMS).

Education/Licensing

- Specific training / licensing for plant operator and spotter.
- Increased awareness of plant to be included in “white card training”.
- Plant familiarisation / awareness of specific pieces of plant.

Considerations for SafeWork NSW

- Explore remote operated machinery, design of plant and camera sensors.
- Minimum standard for separation of people and plant within the Code of Practice.

What can we all do to reduce silica exposure and improve health outcomes for construction workers?

Main Issues

- Lack of knowledge, understanding, awareness and education.
- Unsafe practices.
- Lack of guidance re PPE, use and the long term effects.

Solutions/Ideas

Equipment & Products

- Promotion and use of alternative materials.
- Using pre-cast materials/ cast ins.
- Machines with inbuilt suppression / dosing systems.
- Engineering – monitoring alarm / light.
- Control centre – ventilation flows with shut down procedures.

Education/Training

- Education and training of manufacturers, distributors, installers.
- Supervisor ratio training.
- Include as part of apprentice training.
- Include in white card training.
- Change in industry culture to normalise PPE and its use.
- Education on silicosis (what, how, why).
- Consider silica certification.

Communication

- Public advertising campaigns.

Regulation

- Supply chain legislation and responsibilities.
- High Risk Construction Work (HRCW)/ SWMS.

Considerations for SafeWork NSW

- More information and education on Silicosis (what is it? How does it occur?), aimed at apprentices.
- Explore and promote emerging technologies.
- Targetted social media campaign.
- Promote alternative materials and the use of pre-cut materials / cast-ins.
- Promote rebates on PPE – for example, dust suppression tools and attachments for machinery, real-time respirable crystalline silica detector.

Falls from Heights

Wicked Problem Overview

Of the priority harms, falls from heights has remained one of the highest risks in construction over many years. So much so, we often refer to it as a wicked issue, in that it is a complex problem with many influencing factors that are challenging to address.

Data insights indicate:

- 39% notifiable construction fatalities in the ten years to 2020/21 were resultant from falls from heights
- Falls from heights is the number one cause of traumatic fatalities in the NSW building and construction industry
- Most serious and fatal falls are from less than 4 metres, and from roofs, ladders or scaffolds
- Voids/penetrations, formwork and building edges are also high-risk

- Average construction claim is \$49,031 vs Average FFH construction claim which is \$167,797
- Gross incurred cost of FFH claims was \$385.9 million over the 3 years to 2020/21.

The FFH workshop was designed to have each table document:

1. a list of brainstormed ideas for potential FFH framework/solutions for industry
2. a breakdown of one idea – including what it would “look like”, what are the pros/cons, and any challenges.

Some of the recurrent themes brought up throughout the Sydney symposium session are in the table below:

Solutions

- Regulator**
- Identify working at heights trades.

- Communication**
- Articulate SafeWork NSW information / requirements at the point of licensing and at renewal.

- Training**
- Mandate minimum training / competency.
 - Tie safety requirements and performance into licensing and make minimum requirements conditional to maintaining licence.
 - Support ongoing training / upskilling / dissemination of safety info through:
 - Trusted industry bodies (subsidize memberships).
 - Mandate attendance at events according to contractor licence categories.

Issue – focus areas

- Dissemination of information and education.
- Self-sourcing of information vs ignorance.
- How information is then applied – self initiated vs regulator intervention.
- How performance is – monitored / revisited.

Planning

- Sophistication of systems – vary from PCBU / Principal contractor.
- Cost (implement / upkeep and dollars passed onto clients).
- Culture / morale / reputation.
- Resourcing – Inconsistency across industry – supply issues.

Consideration for SafeWork NSW

Regulator

- Service NSW app monitoring.
- Implement demerit points and include on public record and integrate with Fair Trading.
- Oversight of training providers.
- Collaborate with the Industry Skills Reform.
- Increase fines for non-compliance.
- Review regulation and instruments.
- SafeWork NSW to lead a WAH safety forum with workers, supervisors, managers and safety professionals.
- Mentor program.
- Data share of poor performers.
- Create a guide for short duration roof work and ladder set-up.
- Invest in research and development (R&D) for new design of scaffold and edge protection.
- Permits required for WAH similar to confined spaces.
- Change of building codes to include anchor points and edge design to accommodate edge protection post construction.
- More on-site presence.

Education/Training

- White card revamp to include WAH.
- FFH specific training for new and refresher (mandatory) – minimum 3 days.
- Training mapped closer to legislation and COP.
- Training for workers at different levels – apprentices, supervisors, managers, specialists, consultants.
- Measure of competence not just attendance.
- Mandate attendance at events, e.g. CDP.
- Move away from private RTO providers for white card (worthless, tick and flick), only deliver via TAFE or SafeWork NSW.

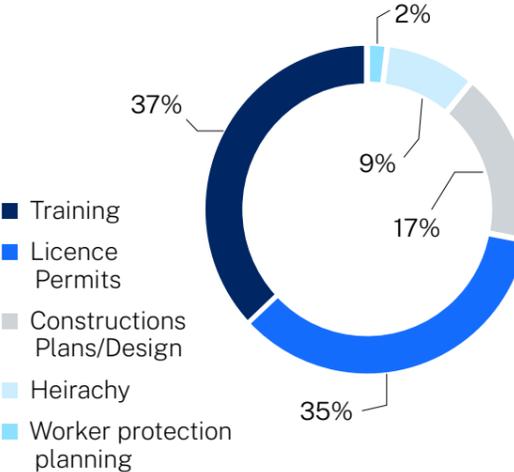
Communication

- Marketing campaign re Speak Up APP.
- Communication and education – the right tool for the right job.
- Build awareness around what WAH is and risks.
- Change the messaging – accountability from leadership.

Licensing

- Include as HRWL – over and under 4 metres.
- Sub-competencies that are job specific (scaffold, formwork).
- WAH permit with 1 to 2 years validity.
- Training linked to licence for industry sectors – roofing, plumbing, electrical, scaffold.

Proposal across sub sectors



Regional Symposiums

What would you do to improve working at heights safety on construction sites?

There were a number of common themes identified from the Regional events, which include:

- Mandatory training – across various sectors: apprenticeships and TAFE, work at heights, white card, supervisor workshops, controls, regulation (work at height, controls, responsibilities, due diligence), subsidised mandatory controls, demerit system, and standardised SWMS for specific tasks.
- Focus on apprentices and young workers.

The key takeaway from these sessions was that participants identified that a combination of approaches are required, addressing mandatory requirements, training and strong regulation and enforcement.



Wagga Wagga

- Mandatory training on construction sites.
- Education and approved training courses.
- Incorporate work at heights and scaffolding courses into apprenticeships.
- Accreditation and permits for safety rails and fall protection.
- Setting up workshops for industry stakeholders.
- Training working at height assessor's qualifications.

Tamworth

- Specific training for individual trades and tasks.
- Practical mandatory and online training along with a refresher on the regulations, and this could be mandated every three years.
- Netting used in New Zealand would help reduce injuries and fallibilities.
- Toolbox talks as they are more beneficial than SWMS (they are too complex to understand).
- Consultation with workers in the preparation of SWMS or specific only SWMS for high risk work.

Orange

- Safety officers on-site.
- Mandated training for workers.
- Renewal of working at heights licence that requires training.
- Creating and promoting a safety culture and continuous professional development with awareness campaigns.
- Safework NSW developed/ managed training courses to reduce the grey areas and manage expectations.
- The introduction of a debit system.
- Less paperwork and a more practical approach, reducing the cost of fall prevention equipment, mandatory sign off photos for solar installation and standardised SWMS.

Coffs Harbour

- Mandatory WAH training. More than half the participants had completed training which changed their working methods on-site.
- Free up supervisors. Supervision on site is hampered by workloads, costs and not always being onsite and available. This is further complicated, by the list of responsibilities and liabilities already in place for supervisors.
- Increase fines so that PCBUs are not willing to pay them when they deliberately cut corners.
- Targeted training for young workers.
- Introduce a demerit/ accrued points system for breaches.
- Amendment to white card training.
- Task-orientated licences.
- Review SWMS. The time invested into a SWMS statement and putting the procedures in place is not necessarily of equal benefit to the builders.
- There is a general conception that SWMS work until they do not.
- More guidance from SafeWork with site visits and publications.

Batemans Bay

- Prioritise due diligence and the safety of you and others before costs.
- Implement the Canadian model and subsidise this with Government funds.
- Designated inspectors to inspect all handrails, scaffolding prior to the work shift.
- Zero-tolerance approach for tampering and adjustments made by non-qualified workers.

Summary of satisfaction survey

Participants from the events were asked a series of questions via Survey Monkey post events:

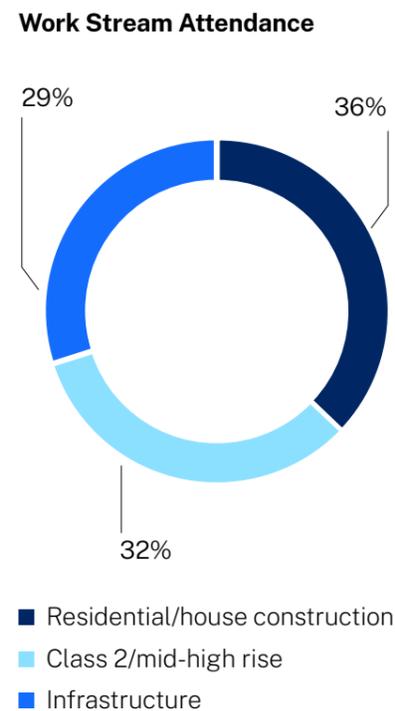
- The Symposium provided a valuable opportunity to engage, consult and collaborate with stakeholders on priority WHS issues?
- I now have a better understanding of the way that SafeWork NSW, Fair Trading and the Office of the Building Commissioner are working together to address build quality and worker safety?
- I found the Scaffolding Industry Safety Standard (SISS) panel discussion to be a valuable session?
- Falls from Heights provided an opportunity to work with SafeWork NSW and industry representatives to help inform improved directions?
- Overall, I felt I could contribute to the afternoon workshop discussions?
- Would you like to attend future SafeWork NSW industry events?

Sydney participant symposium feedback

Participants at the event agreed that it was a valuable opportunity to engage and consult on WHS issues and their attendance resulted in a better understanding of the regulatory landscape.

The SISS session was considered beneficial, and it gave participants a better understanding.

The workshop attendance was roughly split into a third for each session and subject area:



The participants found these workshops provided a forum to address and improve safety standards across the industry and work with SafeWork NSW.

Evaluation of Symposium

The evaluation plan identified three criteria to determine the success of the events.

1. Consideration was given to the inputs in relation to the SafeWork NSW budget and staff resources.
2. The impact on the industry and how we could explore ideas and understanding of the issues facing the building and construction industry.
3. Focus on the outcomes from the symposiums and an action plan of how to document, analyse and address some of the issues which have been raised in the symposium.

The evaluation components for this initiative were focused on whether the symposium was adequately resourced and administered in terms of the time spent, budget and staff resources; and its impact on managing priority WHS issues, understanding the whole of government approach to building and construction regulation and improving the engagement and collaboration between SafeWork NSW and the industry.

The evaluation found that the symposium was adequately resourced and administered in terms of the time spent, budget and staff resources. Participants at both the Sydney symposium and regional roadshows agreed that it was a valuable opportunity to engage and consult on WHS issues and attendance resulted in a better understanding of the regulatory landscape.

The large majority felt the event was a success and an opportunity to improve and address working at heights safety issues across the industry and collaboratively work with SafeWork NSW.

The participants left with a better understanding of the way that SafeWork NSW, Fair Trading and the Office of the Building Commissioner are working together to address build quality and worker safety. They found the SISS panel discussion to be a valuable session and they would also attend future SafeWork NSW industry events.

It was agreed across all the state events that the current rate of severe or fatal injuries from falls was not acceptable and that a mixture of mandatory work at heights training, permit systems, prescribed controls and phasing in safety at the planning and design stage would help reduce and address some of the working at heights issues currently faced by the industry.



Regional participant symposium feedback

As reflected in the Sydney symposium, regional participants agreed that it was a beneficial opportunity to engage and consult on WHS issues and attendance resulted in a better understanding of the regulatory landscape.

The Scaffolding Industry Safety Standard (SISS) session was considered valuable, and participants found that it gave them a better understanding of the SISS. The participants found that the event provided an opportunity to improve and address working at heights safety issues across the industry and work with SafeWork NSW. The large majority stated that they would attend future SafeWork NSW events.

Participants in Wollongong, Wagga Wagga, Orange, Batemans Bay and Newcastle agreed that the current rate of severe or fatal injuries from falls were unacceptable and was within the top 5 of industries must fix issues but it was noted that as an industry we need to do better.

It was also recognised there were many other challenges within construction. Mandatory training and work at heights permits were seen as ways to reduce falls, although a few participants felt that permits would have a low impact on fall incidents. Whilst prescribed controls, influencing constructions plans and worker planning protection would partially reduce the falls problem. It was highlighted that some participants felt the worker planning protection would be very effective in preventing falls from heights.

Conclusion

Overall, the inaugural SafeWork NSW Construction Symposium were highly successful events that provided the opportunity for industry representatives and participants to engage with SafeWork NSW to gain insight into the Whole of Government approach across Better Regulation Division regulators.

The most successful elements were keynote speakers, panel discussion on Scaffold Industry Safety Standard and Falls from Height in Construction “wicked problem” sessions; as well as venue selection, catering, and connecting with SafeWork NSW Inspectors and resources.

The stream sessions held at the Sydney event identified some areas for improvement across the specific harms discussed and highlighted that industry continues to seek further guidance and clarity around these harm areas. It should be noted that some suggestions for harm reduction are outside the scope of SafeWork NSW, and others are areas in which industry can affect greater change through associations and networks.

Following evaluation of the event series, it is recommended for SafeWork NSW to continue holding symposium events on an ongoing basis, with specific areas taking a targeted proactive approach to engagement with industry stakeholders.

Further recommendations targeted to specific harm areas will be reviewed and considered by SafeWork NSW within harm prevention and other programs, with a specific focus on falls from height workshop outcomes, which is further discussed in a separate regulatory options paper.

SafeWork NSW is pleased by the success of the events, the valuable contributions and options for future consideration of events, opportunities to collaborate with industry and co-regulators, and in the review and improvement of options aimed in reducing illnesses and injuries within the construction industry.

Data Sources

A number of data sets have been identified as contributing towards answering the evaluation questions:

D1

Mentimeter survey – FFH workshop on the day

D2

Post-symposium attendee survey monkey

D3

Registration and attendance records

D4

Workshop outputs – Ideas

D5

Project management records

D6

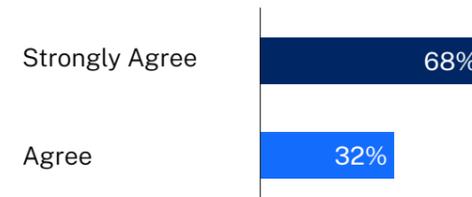
Post-symposium staff survey monkey

Appendix

Sydney symposium data graphs

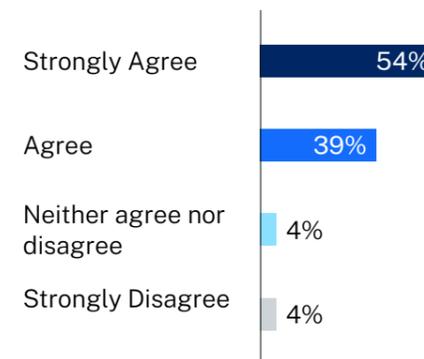
Q1.

The Symposium provided a valuable opportunity to engage, consult and collaborate with stakeholders on priority WHS issues.



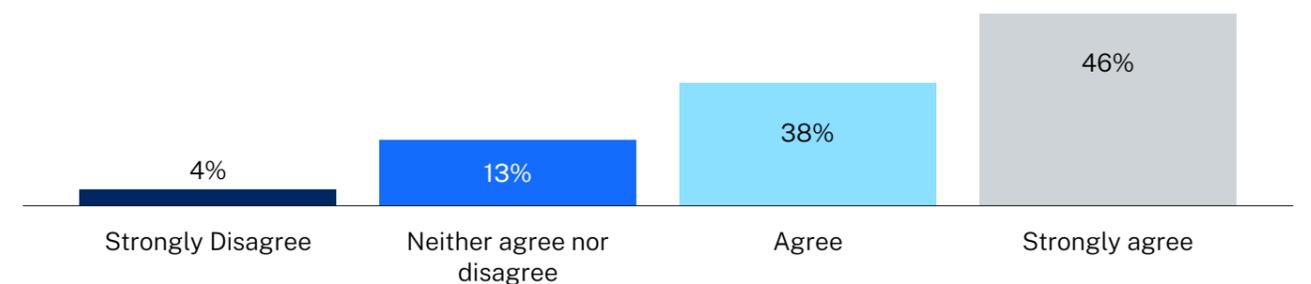
Q2.

I now have a better understanding of the way that SafeWork NSW, Fair Trading and the Office of the Building Commissioner are working together to address build quality and worker safety.



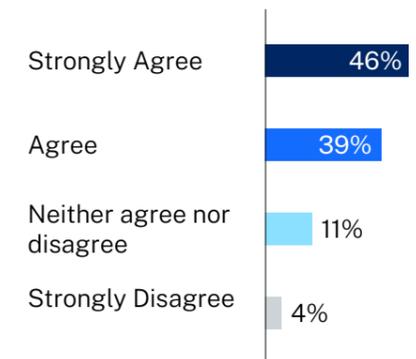
Q5.

Workshop 1 provided an opportunity to work with SafeWork NSW and other industry representatives to address safety and help inform improved directions. (Workshop 1 streams included: Residential-housekeeping/site security, or Class 2-formwork/waterproofing)



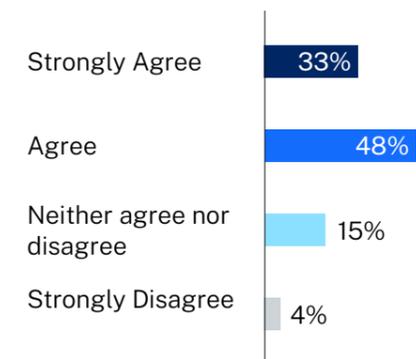
Q3.

I found the Scaffolding Industry Safety Standard (SISS) panel discussion to be a valuable session?



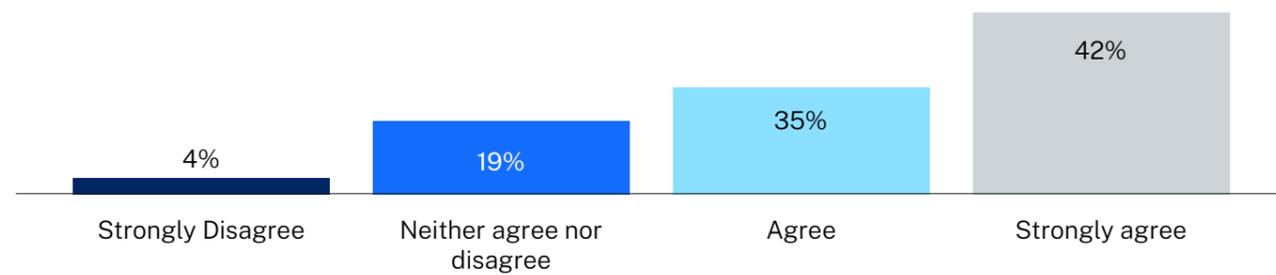
Q4.

I now have a better understanding of the Scaffold Industry Safety Standard (SISS).



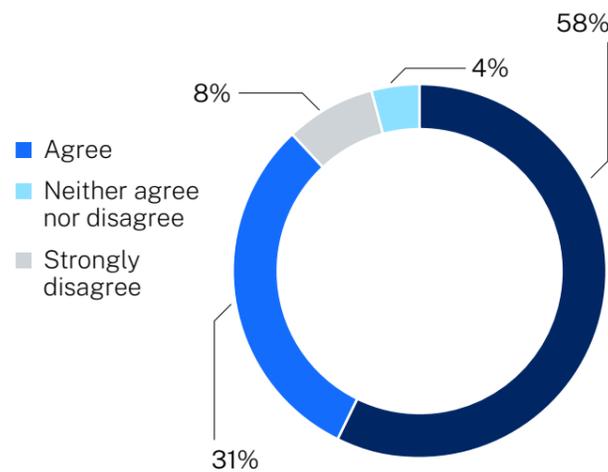
Q6.

Workshop 2: Falls from Heights provided an opportunity to work with SafeWork NSW and industry representatives to help inform improved directions.



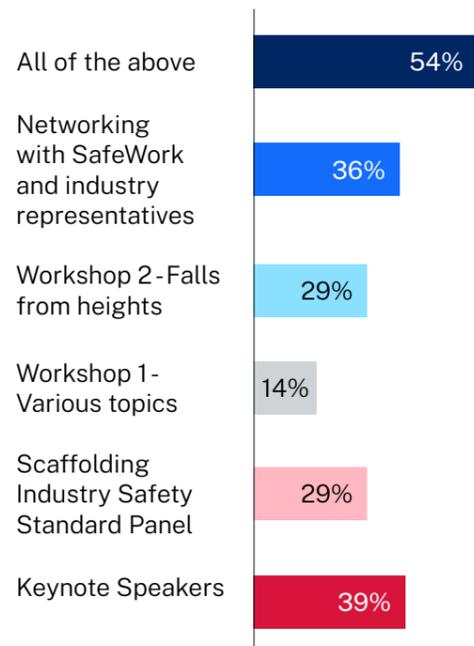
Q7.

Overall, I felt I could contribute to the afternoon workshop discussions.



Q8.

What was the best part of the safety symposium?



Q9.

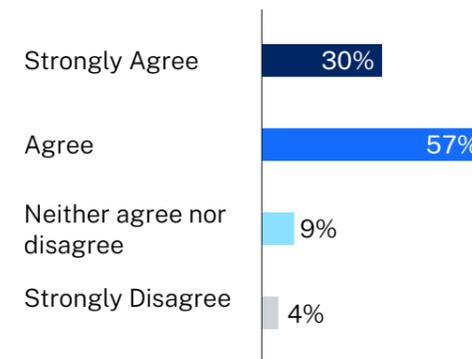
Would you like to further share your views on what framework or combination of frameworks would help reduce falls from heights in construction?

- Re-certification of white card/construction general induction.
- SafeWork NSW Working at heights mentor programme.
- HSE professionals Donate their time to support lower tier and local business in working at height.
- High Risk Work Licence is introduced for a person supervising work at height where there is a risk of a fall from height.
- Mandatory legislative requirement.
- Permit proforma to be added to the CoP managing the risk of falls.
- Support the Singapore model SOP.

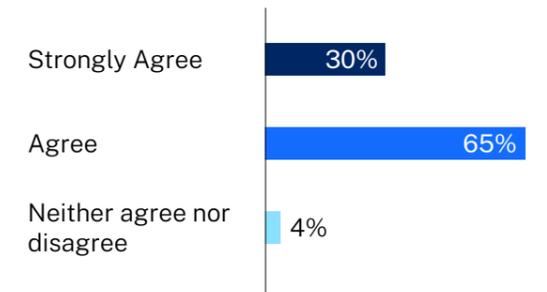
- Training for contractors and supervisors as to requirements.
- Safety in design at concept along with continual information and notifications to all involved with building.
- A working at height standard and working group similar to the scaffold standard that has been developed.
- Training and licences, demerit point system on businesses (not individual workers)
- Stronger licensing and working with younger
- More training and working with younger workers prior to their working careers, such as in schools.

Regional symposium data graphs

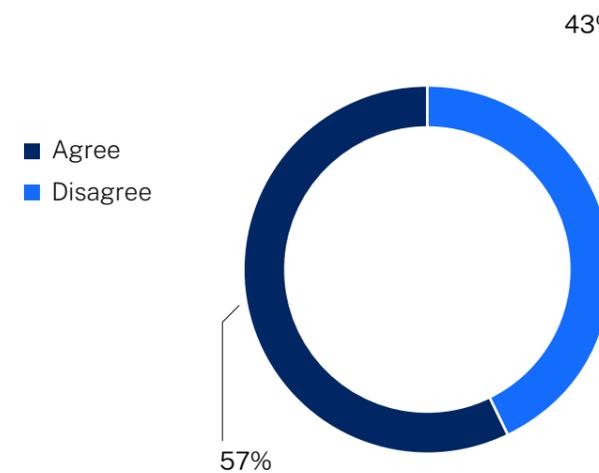
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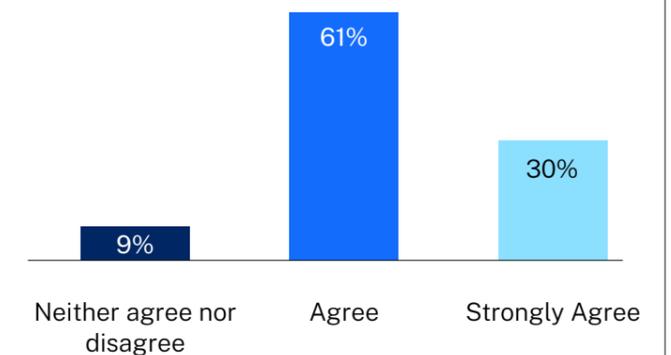
I now have a better understanding of the way that SafeWork NSW, Fair Trading and the Office of the Building Commissioner are working together to address build quality and worker safety.



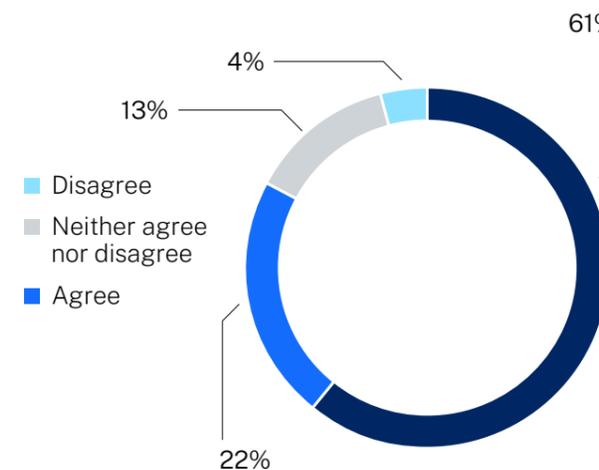
I found the Scaffolding Industry Safety Standard (SISS) panel discussion to be a valuable session?



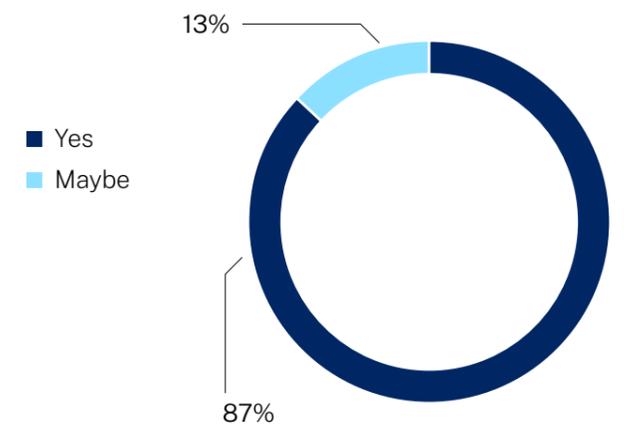
Falls from Heights provided an opportunity to work with SafeWork NSW and industry representatives to help inform improved directions.



Overall, I felt I could contribute to the afternoon workshop discussions.



Would you like to attend future SafeWork NSW industry events?



Wollongong symposium data graphs

Is the current rate of severe or fatal injuries from falls acceptable?

Height safety needs to be in the industries top 5 must fix issues

76%

As an industry we need to do a bit better

11%

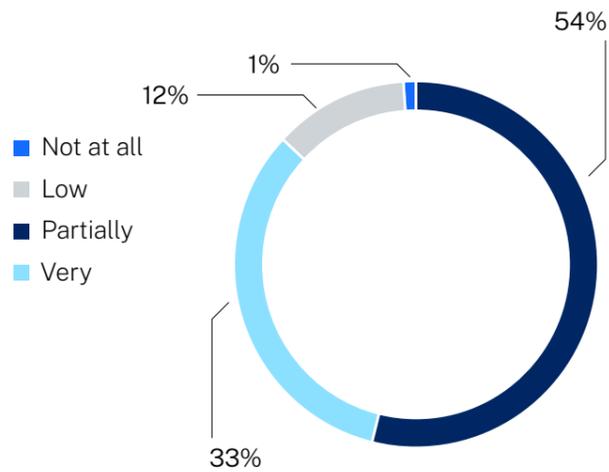
It's an issue but only one of many challenges

9%

Acceptable

4%

How effective will a work at heights permit system be at reducing the falls problem



How effective will influencing construction plans and building design be at reducing the falls problems?

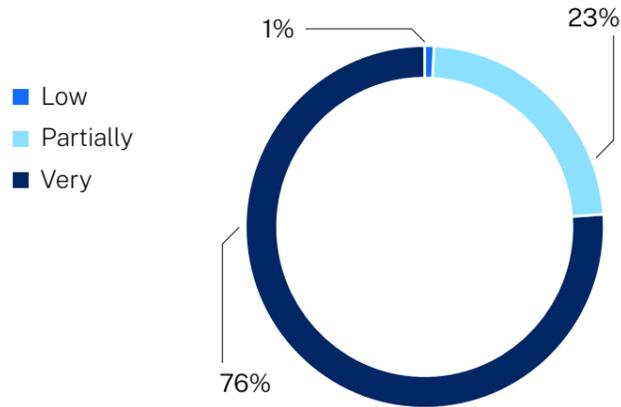
Very 20%

Partially 40%

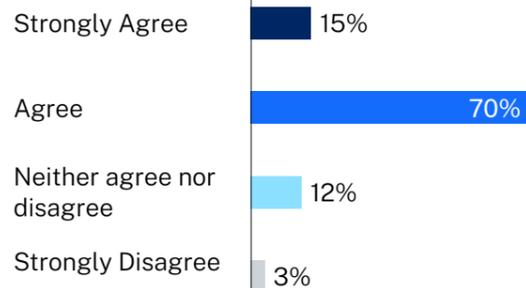
Low 34%

Not at all 6%

How effective will prescribed controls (heirarchy specified) be at reducing the falls problem?



How effective will prescribed controls (heirarchy specified) be at reducing the falls problem?



How effective can worker protection planning be at reducing the falls problem?

Very 28%

Partially 69%

Low 3%

Wagga Wagga symposium data graphs

Is the current rate of severe or fatal injuries from falls acceptable?

Height safety needs to be in the industries top 5 must fix issues

80%

As an industry we need to do a bit better

11%

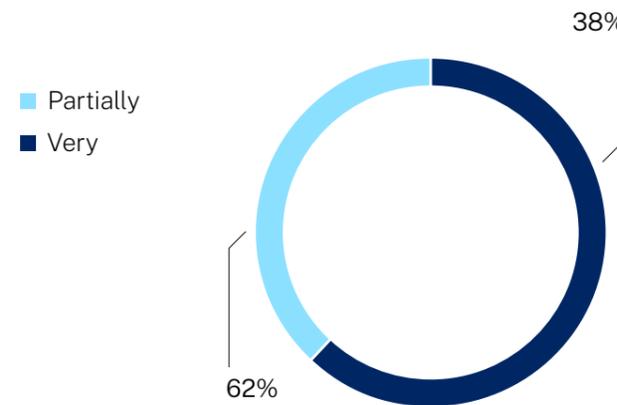
It's an issue but only one of many challenges

6%

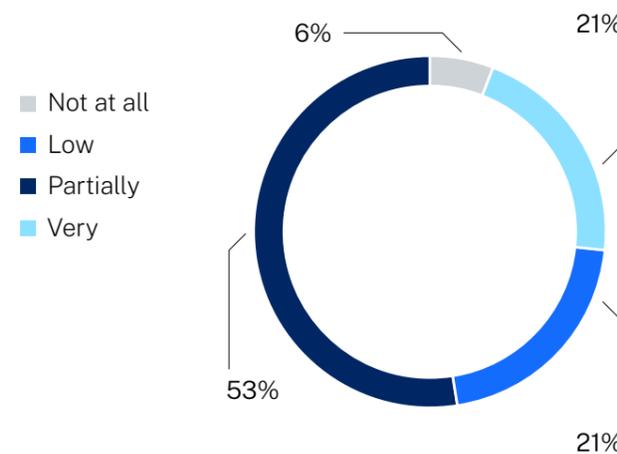
Acceptable

3%

How effective will mandatory work at heights training be at reducing falls



How effective will a work at heights permit system be at reducing the falls problem



How effective will prescribed controls (heirarchy specified) be at reducing the falls problem?

Very 47%

Partially 50%

Low 3%

How effective will influencing construction plans and building design be at reducing the falls problems?

Very 30%

Partially 55%

Low 15%

How effective can worker protection planning be at reducing the falls problem?

Very 61%

Partially 35%

Low 4%

Is the current rate of severe or fatal injuries from falls acceptable?

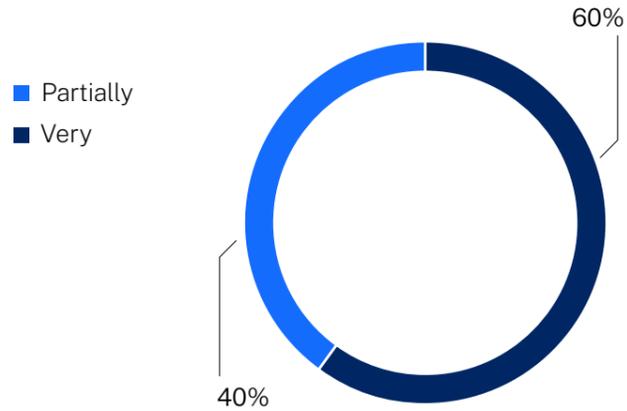
Height safety needs to be in the industries top 5 must fix issues 73%

As an industry we need to do a bit better 23%

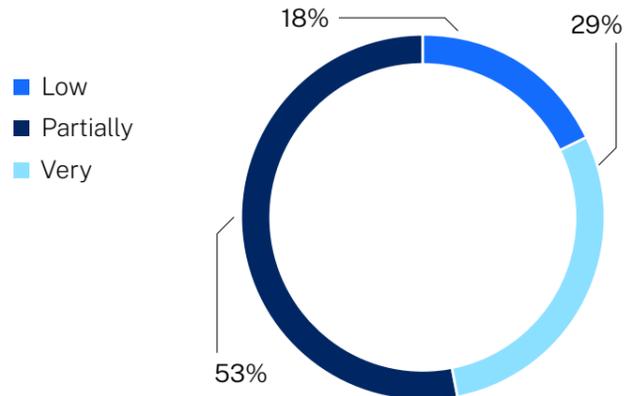
It's an issue but only one of many challenges 4%

Orange symposium data graphs

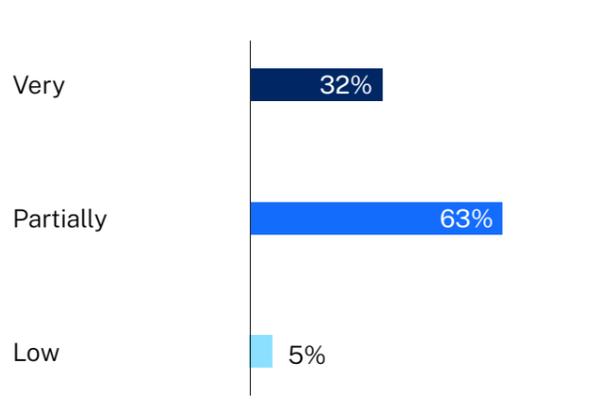
How effective will mandatory work at heights training be at reducing falls



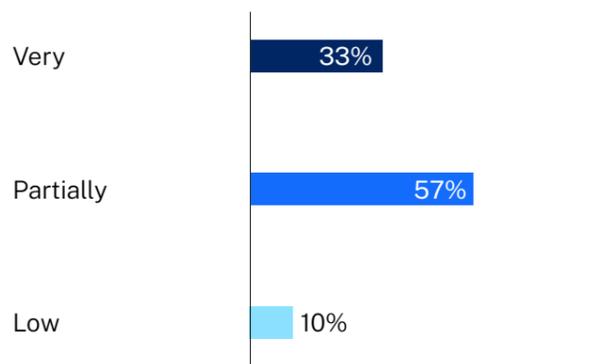
How effective will a work at heights permit system be at reducing the falls problem



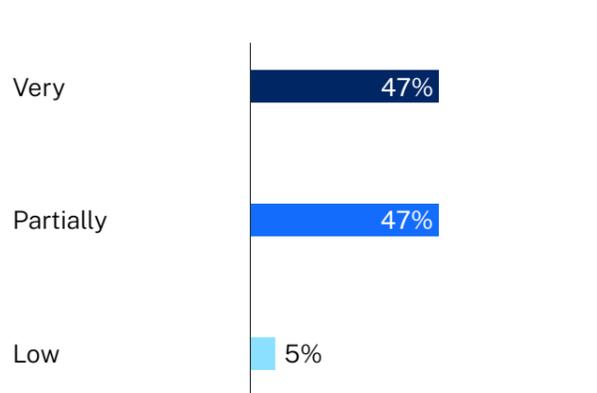
How effective will perscribed controls (heirarchy specified) be at reducing the falls problem?



How effective will influencing construction plans and building design be at reducing the falls problems?

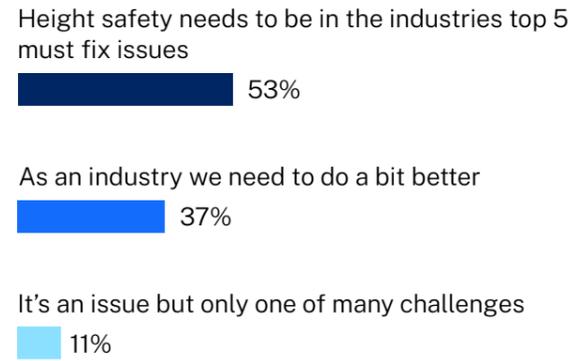


How effective can worker protection planning be at reducing the falls problem?

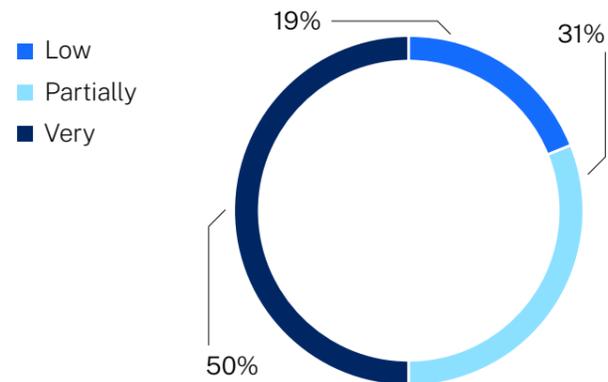


Batemans Bay symposium data graphs

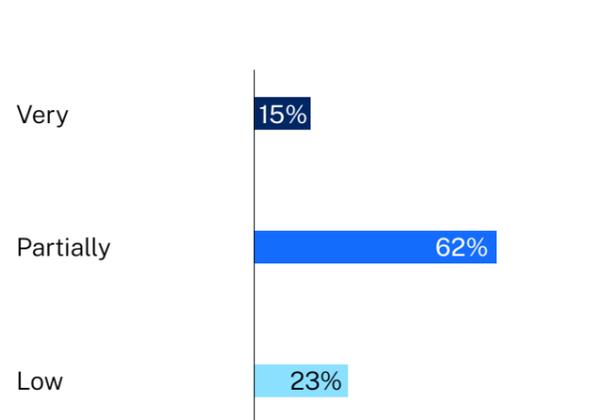
Is the current rate of severe or fatal injuries from falls acceptable?



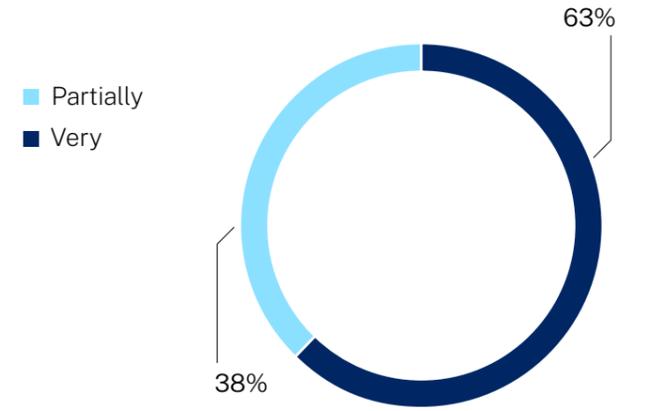
How effective will a work at heights permit system be at reducing the falls problem



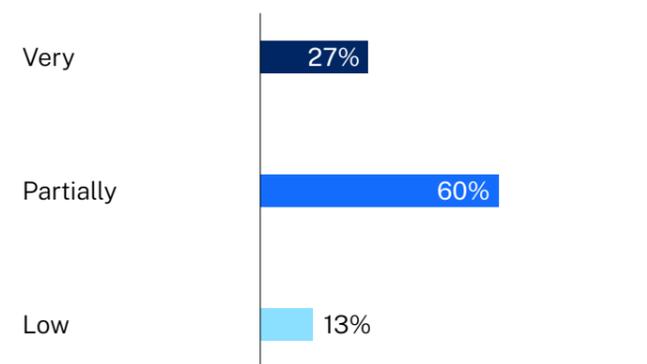
How effective will influencing construction plans and building design be at reducing the falls problems?



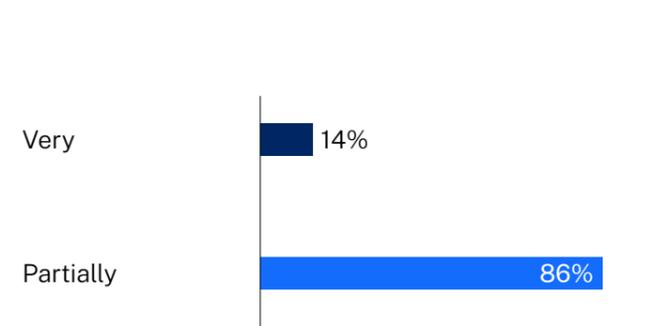
How effective will mandatory work at heights training be at reducing falls



How effective will perscribed controls (heirarchy specified) be at reducing the falls problem?

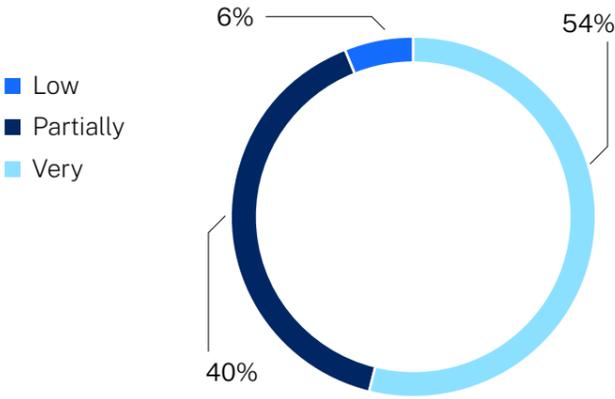


How effective can worker protection planning be at reducing the falls problem?

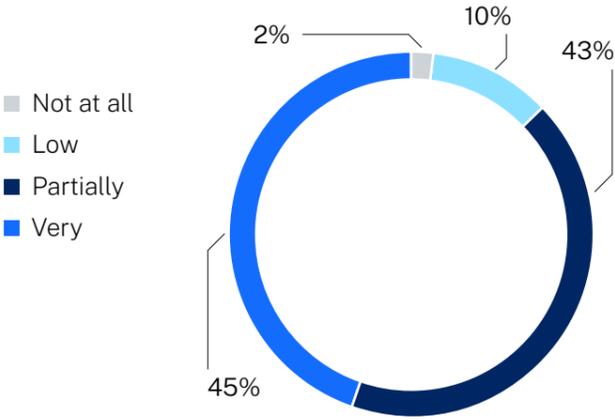


Newcastle symposium data graphs

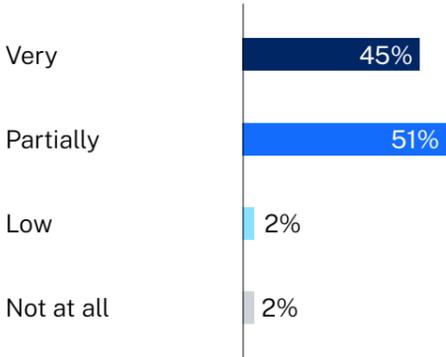
How effective will mandatory work at heights training be at reducing falls



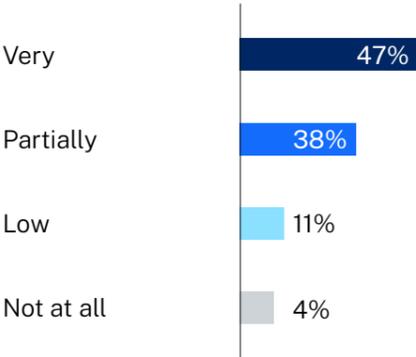
How effective will a work at heights permit system be at reducing the falls problem



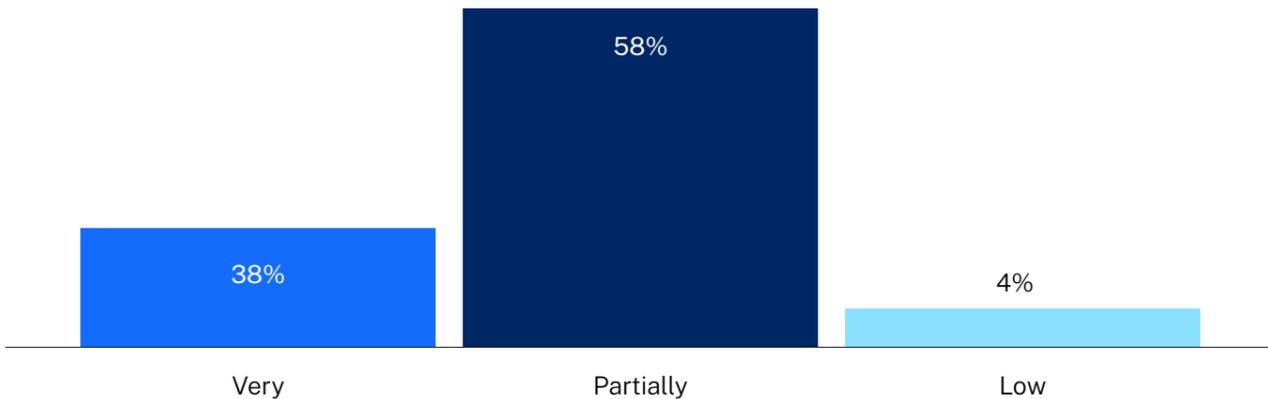
How effective will prescribed controls (heirarchy specified) be at reducing the falls problem?



How effective will influencing construction plans and building design be at reducing the falls problems?



How effective can worker protection planning be at reducing the falls problem?



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