



Slips, Trips and Falls in Residential Construction

Recognising critical risk and the role of advanced head protection

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Prepared by: Anthony Ford, ZERO Height Safety (NZ/AU) Limited



Foreword

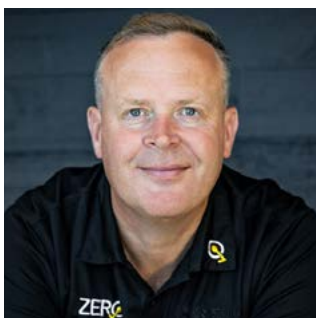
Slips, trips and falls are familiar hazards on building sites. They are discussed in inductions, raised in toolbox meetings, recorded in incident reports and often linked to housekeeping and site tidiness. That familiarity can sometimes work against us.

When something is common, it can be easy to treat it as routine. Yet on a residential building site, a simple loss of balance can have a serious outcome if a worker strikes their head.

Residential construction is recognised as a high-risk sector, with a high volume of activity and a high rate of injuries. It is also a sector where many businesses are small, practical and fast-moving. Decisions often need to be made in real site conditions, without adding unnecessary complexity.

This paper has been prepared to support those decisions. It is intended to help residential builders and their advisers think more clearly about when slips, trips and falls may create a critical risk, and when head protection should be considered as part of the control measures.

The aim is not to overcomplicate health and safety. It is to support better, clearer and more proportionate decisions that reflect the conditions workers face every day.



Anthony Ford
ZERO Height Safety

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Introduction

Residential construction is a dynamic work environment. Site conditions change as the build progresses, and the way workers move through the site changes with it. What may appear to be a routine slip, trip or fall hazard at one stage of the build can become a critical risk at another.

Slips, trips and falls are often managed through housekeeping, clear access and general site tidiness. These are important controls and should remain part of good site practice. However, they do not always address the full risk. On a residential building site, a slip, trip or fall can become a critical risk and lead to serious head injury, including traumatic brain injury or loss of consciousness.

The key issue is not simply whether a slip, trip or fall could occur. The key issue is what the consequence could be if it does occur. A risk that is usually treated as low level can become critical when the surrounding site conditions increase the likelihood of head impact, fall from height or another serious outcome.

This is particularly important for small residential building companies. These businesses often operate with smaller teams, multiple subcontractors and site conditions that change quickly. Health and safety decisions still need

to be practical, but they also need to be strong enough to manage critical risks effectively.

For this reason, slips, trips and falls should not be classified by the hazard label alone. They should be considered through the normal process of identifying and assessing risks, then selecting control measures that are proportionate to the potential consequence.

This paper focuses on the role of advanced head protection where a head-impact risk remains foreseeable. It does not suggest that PPE replaces higher-order controls or good site management. These controls remain essential.

However, where a slip, trip or fall could credibly result in serious head injury, head protection should be considered as part of the control measures. In those situations, advanced multi-impact tested helmets can provide a practical way to reduce the consequence of head impact and support better protection for workers in residential construction.



Objective

The objective of this paper is to provide practical guidance for small residential building companies, contractors and health and safety advisers when identifying and assessing slips, trips and falls as potential critical risks.

The paper is intended to help decision-makers understand when a slip, trip or fall should be treated as more than a routine housekeeping issue, how site context can change the likely consequence of an event, why traumatic brain injury can occur from both low-level and height-related falls, and how head protection selection should be matched to the way a worker could actually be injured.

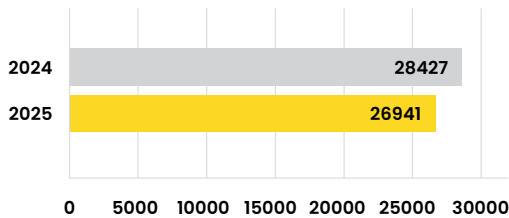
It also explains why traditional crown-impact hard hats and advanced multi-impact tested helmets should not be treated as the same type of protection. Both may have a place, but they are not designed around the same impact scenarios.

The intended outcome is a clearer, more practical approach to head protection on residential construction sites.

The impact from slips, trips and falls in New Zealand

Falls place a significant burden on New Zealand workers, businesses, families and the wider injury system. Fall-related active claim costs increased from \$1.11 billion in 2017 to \$2.58 billion in 2025.

Injury claims in construction 2024 - 2025



Construction fatalities in New Zealand are



higher than
Australia



higher than
the UK

The time lost is equivalent to



Building **2,500**
new homes

Businesses with 1-5 people recorded



days of weekly compensation paid

\$422m
in lost productivity

Work-related injuries commonly occur in higher-risk industries, including construction, where workers are exposed to risks such as machinery, vehicles, manual handling and working at height. ACC recorded 26,941 new work-related claims in the construction sector alone in 2025.

In its 2025 injury report, ACC notes that construction injuries resulted in over 1 million days of weekly compensation. It also identifies

strains and sprains, slips, trips and falls, and vehicle-related incidents as leading causes of workplace injury.

The impact is not only financial. Injuries affect how people work, recover, support their families and return to normal life. Time away from work can make recovery harder, reduce workforce capacity and place pressure on businesses, projects and teams.

Source: ACC - Work injury statistics 2024/2025, ACC - Injuries in New Zealand report 2025

Managing head trauma from slips, trips & falls

PPE is not the first control in the hierarchy of control, but it is often an important final layer of protection. This is particularly true where the work environment is dynamic and residual critical risk remains after higher-order controls have been applied.

Traditional industrial hard hats have played a long-standing role in construction. However, their limitations are becoming more apparent in modern dynamic worksites.

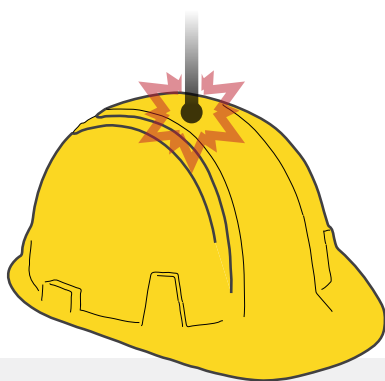
Hard hats are commonly used to manage vertical impact to the crown area from falling objects. A multi-impact tested helmet is designed to provide a broader level of head protection where a worker may fall sideways, backwards or forwards and strike their head against a hard surface.

Multi-impact tested helmets typically include an energy-absorbing liner, improved coverage, better stability and a retention system such as a four-

point chinstrap. The intent is to better manage impacts from multiple directions, including off-crown impacts that may occur during slips, trips, falls or strikes against fixed objects.

This distinction is important for residential builders because many head-impact risks on residential sites are not limited to dropped objects. Workers operate in real-world conditions where lateral, front and rear impacts can be credible.

Where the credible risk includes slips, trips, falls, loss of balance or head strike from multiple directions, a multi-impact tested helmet is more closely aligned to the way the injury could occur.

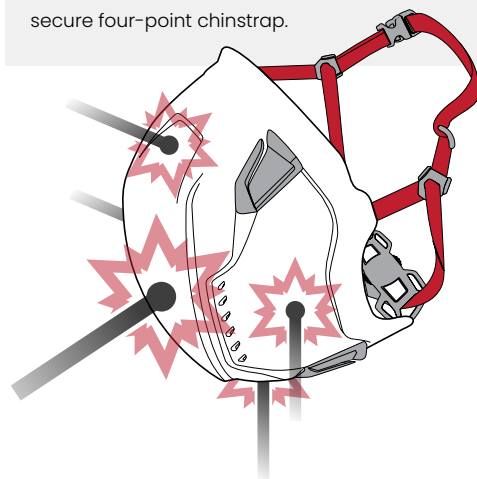


Type 1 Helmets (Hard Hats)

Designed primarily for vertical impact protection to the crown from falling objects. Type 1 helmets typically feature a suspension harness and limited side coverage, with limited retention capability and no off-crown impact testing.

Advanced Multi-impact Helmets

Tested for protection against crown and off-centre impacts, these helmets are designed for dynamic environments with fall and strike hazards from multiple directions, including energy-absorbing liners and a secure four-point chinstrap.



Choosing the right helmet to protect from critical risk

The following are five common mistakes to avoid:

- 1 Choosing head protection without identifying the risks**


Slips, trips and falls are often treated as routine site hazards, with housekeeping used as the tick-box control. On construction sites, a slip, trip or fall can become a critical risk. A head impact from that event can result in traumatic brain injury, so the control measures need to match the possible outcome, not just the hazard label.
- 2 Assuming a hard hat will protect you in a fall**

Traditional hard hats (often referred to as Type 1 helmets) are designed and tested to protect from dropped objects striking the top of the crown only. Slips, trips and falls create a different type of risk. Head impacts can occur to the front, side or rear of the head, not only the crown so other control measures should be considered.
- 3 Treating the helmet as a single control measure**

Modern head protection can do more than absorb impact. A fully integrated helmet system can act as a PPE hub, allowing compatible eye, face and hearing protection to connect quickly and securely. That matters on dynamic and changing sites where workers move between framing, cutting, drilling, grinding, noisy work and outdoor conditions.
- 4 Overlooking fit, comfort and correct use**

Comfort affects compliance. If a helmet is uncomfortable, unstable, poorly balanced or hard to adjust, workers are less likely to engage with it or wear it correctly. A helmet needs to fit the team, not just meet a standard. If workers wear it correctly, protection improves.
- 5 Letting price outweigh function**

The cheapest helmet is not always the lowest-cost option. Value comes from head protection that matches the risk, fits the worker and makes the right PPE easier to use. In some applications, integrated technology can also support lone worker safety through alerts, location sharing or faster assistance after an event.



In today's dynamic work environments, head-impact risks are not limited to vertical impacts from falling objects.

Lateral and rearward impacts, along with slips, trips, and falls from standing height or low elevation, can be present across many roles.

In response, many organisations have adopted multi-impact tested helmets that more accurately reflect the realities of modern worksites.



Choosing head protection should be simple, but it is often made harder than it needs to be.

The decision is often reduced to “does it meet a standard?” or “what is the price?”

A continued shift towards enhanced head protection

The commercial construction and infrastructure sectors have already started the shift towards advanced multi-impact tested head protection to provide better worker protection from lateral impacts.

Traditional hard hats were designed around a familiar risk: falling objects striking the crown of the head. That risk still exists, but modern worksites involve more than vertical impact. Head impacts can occur from multiple directions, particularly where a worker slips, trips, falls or loses balance.

This is why many organisations have moved towards advanced helmets with multi-impact testing, improved retention, better stability and compatibility with other PPE. The shift is not only about meeting a newer standard. It is about selecting protection that better matches how workers may actually be injured.

Residential construction faces many of the same risks, but often with less formal site control. That makes practical helmet selection even more important. For small builders, the issue is not whether they should copy every requirement used on major commercial projects. The issue is whether their own workers face credible head-impact risks that are not adequately addressed by traditional crown-impact protection.

A residential building company does not need to add unnecessary complexity to improve head protection decisions. The starting point is to identify and assess the risk in the conditions workers are actually facing. If the likely outcome is a minor injury, normal site controls may be enough. If the foreseeable outcome includes head impact, a fall from height, loss of consciousness or another serious harm event, stronger control measures are required.

Where a slip, trip or fall risk remains after other controls have been applied, the selected head protection should match the risk. If the credible outcome includes lateral or off-crown head impact, a multi-impact tested helmet may provide a practical and proportionate way to reduce the risk of traumatic brain injury.

Where advanced head protection is selected, the business should also set clear expectations. Workers should know when helmets are required, how the chinstrap is to be worn, how accessories are fitted, when the helmet must be replaced, how damage is reported, and how the helmet integrates with eye, face and hearing protection.

For a technical overview of industrial helmet standards and advanced head protection, including AS/NZS 1801:2024, BS EN 397:2025, EN 12492, retention systems, off-crown impact protection, refer to ZERO's white paper, *Advancing Head Protection in the Building and Construction Industry*.

<https://zeroheightsafety.com/advancing-head-protection-in-the-building-and-construction-industry>

Using advanced head protection as a PPE platform

Modern advancements in head protection can also support better use of other PPE. Residential builders and trades do not only face head impact risk. They may also face eye, face, hearing and sun exposure risks on everyday general site activity.

For many small businesses, PPE use can be affected by convenience. If eye, face, hearing and sun protection becomes too cumbersome to apply, workers may delay use or use the wrong item or work without the right protection. An advanced helmet that functions as an integrated PPE platform can help reduce that friction.

Modern helmets often have the ability to attach compatible eye protection, face protection, hearing protection, sun protection and other accessories. This can improve practical compliance because the right PPE is easier to access, easier to fit and more likely to be used when the task changes. This matters on residential sites because work changes quickly and PPE requirements change with it.

Digital safety features may also have a role in some applications. Technology that supports identification, emergency information, lone worker alerts, immobility alerts or location sharing may help improve response when a worker is isolated or when an event is not immediately witnessed. These features should not be treated as a substitute for supervision, planning or emergency procedures, but they may add value where the work context supports their use.

When selecting head protection, businesses should consider more than impact performance

alone. The helmet should suit the tasks, the work environment and the supporting PPE required to achieve safer and more practical outcomes.

Comfort, fit and worker acceptance

A helmet only protects a worker if it is worn correctly. Comfort and fit are practical safety issues. If a helmet is uncomfortable, unstable, hot, poorly balanced, difficult to adjust or incompatible with other PPE, workers are less likely to wear it properly. They may loosen the harness, remove the chinstrap, wear it backwards, take it off between tasks or leave it in the vehicle.

This is particularly relevant for small residential builders because site culture is often set by a small number of people. If the owner, foreman or lead carpenter treats head protection as optional, the rest of the team is likely to follow. If the business selects protection that workers accept and wear properly, compliance becomes easier.

The right head protection decision should consider the users, the tasks and the conditions. A helmet should fit the team, remain stable during movement, work with other PPE, suit the climate, allow practical adjustment and be supported by clear expectations on when and how it is worn.



Conclusion

Slips, trips and falls are common, but common does not mean low risk. In many cases, they may result in minor or moderate injury. In other situations, particularly on residential construction sites, the same type of event can become a critical risk and result in traumatic brain injury, loss of consciousness, serious eye injury, facial injury, a fall from height or death.

Where there is a credible risk of serious harm, reasonably practicable steps should be taken to eliminate or minimise the risk. This means slips, trips and falls should not be treated as a single low-level category. They should be identified and assessed in context, with control measures selected according to the potential consequence.

For residential construction, head protection has a clear role where a slip, trip or fall could result in head impact. It should not be seen as a substitute for good site control, but it can form part of a practical and proportionate approach to managing critical risk.

Advanced helmets with multi-impact testing can help reduce the consequences of foreseeable

head impacts, particularly where the risk includes lateral or off-crown impact. They can also support clearer PPE expectations where workers move through changing site conditions and face different task-related hazards throughout the day.

This approach supports better decision-making, stronger injury prevention and more consistent head protection choices.

For residential builders, the aim is not to make health and safety more complicated. It is to identify the risks that could cause serious harm, apply suitable control measures, and protect workers in a way that reflects the conditions they face on site.

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ZERO HEIGHT SAFETY (NZ/AU) LIMITED

NEW ZEALAND

CHRISTCHURCH (HEADQUARTERS)
16 Waimakariri Park Drive,
Kainga, Christchurch 8083
New Zealand

AUCKLAND SUPPORT OFFICE
Unit A01, 930 Great South Road
Penrose, Auckland 1061
New Zealand

AUSTRALIA

BRISBANE
4/15 Porter Street
Hemmant, Queensland 4174
Australia

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