



Material delivery and site management in residential construction

Campaign report

The construction trades industry has a high rate of serious musculoskeletal injuries.

The material delivery and site management in residential construction campaign aimed to reduce the number of musculoskeletal injuries associated with the tasks of delivering and storing building materials at residential construction worksites.

This report provides industry with the outcomes of the campaign as well as practical guidance to better manage work health and safety (WHS) risks through consultation, cooperation and coordination with their supply chain.

Key issues

Over 50 per cent of accepted workers' compensation claims within the Queensland construction industry are for musculoskeletal disorders (MSDs). More than half of these claims are caused by hazardous manual tasks.

Previous campaigns undertaken by Workplace Health and Safety Queensland (WHSQ) have identified that the delivery and management of building materials on residential construction sites can contribute to risks associated with hazardous manual tasks. These campaigns have identified that gaps in risk management by residential builders often occur with:

- poor planning and programming of construction activities
- insufficient consultation with workers, sub-contractors and materials suppliers

- processes relating to the delivery, storage and handling of materials
- over-reliance on administrative control measures imposed on sub-contractors.

Due to the specific expertise required for various aspects of residential construction work, there is a need for multiple sub-contractors. Residential builders can significantly influence the sub-contractors and suppliers that they work with through effective consultation, cooperation and coordination because of their position in the supply chain. However, previous campaigns have shown that this is often under-utilised.



The campaign

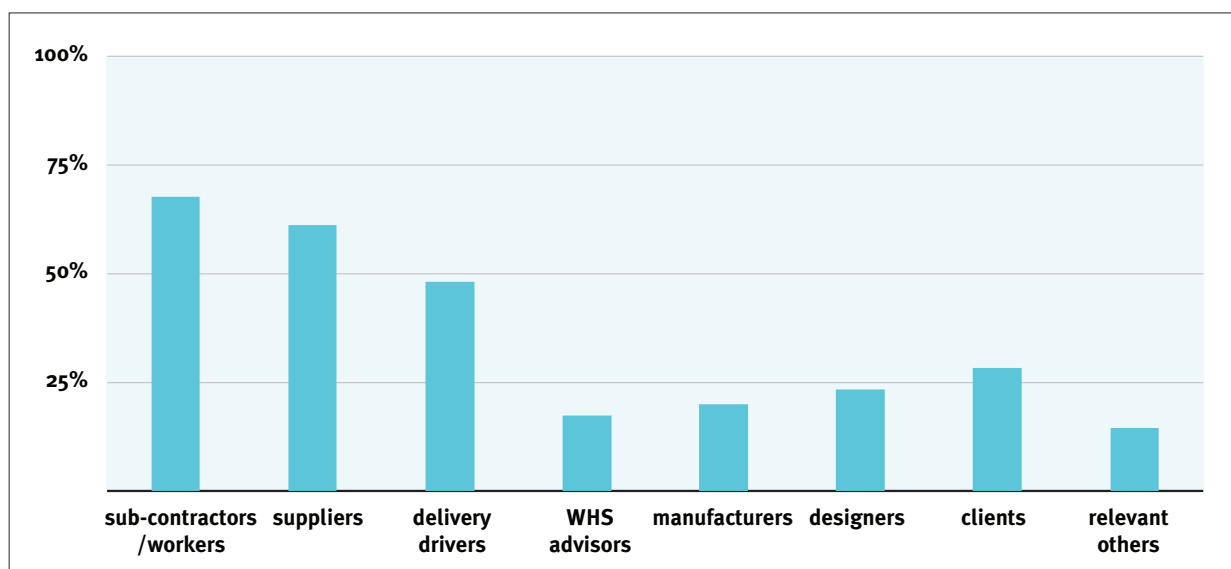
This campaign engaged directly with small and medium-sized residential builders across Queensland to focus on:

- hazardous manual tasks caused by ineffective delivery of bulk construction materials to worksites (e.g. plasterboard, fencing, tiles and bricks)
- processes used by builders to manage risks associated with the delivery of materials to worksites
- how builders consult, cooperate and coordinate with other stakeholders regarding site management practices.

During the campaign, WHSQ inspectors completed 198 desktop assessments, which involved a review of builders documented systems and procedures.

Where it was identified that a builder had consultation mechanisms in place for the safe delivery and storage of building materials, inspectors then completed 56 site verifications to assess how these mechanisms were being implemented.

Who the builder consults about hazards prior to delivery of materials to site



Campaign findings

Desktop assessments

Almost all builders (96 per cent) reported that they plan and coordinate the delivery of bulk construction materials to site in some way. However, several builders reported that this planning is often not documented, done on an ad-hoc basis and relies on verbal communication between the builder and their sub-contractors and suppliers.

A significant proportion of builders did not consult with workers, sub-contractors and suppliers about hazards such as manual tasks prior to their delivery.

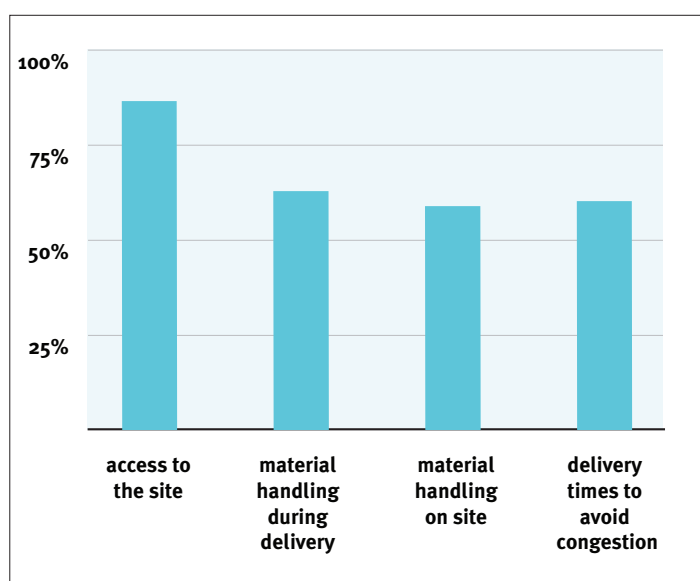
The graph below indicates that the builder did not consult with a range of people about the hazards prior to the delivery of materials to site.

Less than 60 per cent of builders specify in the tender/ contract stage how the delivery, storage and handling of bulk construction materials will be managed.

The graph below demonstrates that builders do not always consider issues such as site access, delivery times and how materials will be handled safely prior to construction commencing. This can limit the effectiveness of the control measures implemented.

Instead of using higher-level control measures such as elimination, substitution, isolation and engineering, builders may rely on administrative controls imposed on sub-contractors.

Issues the builder considers and manages during the planning stage / prior to starting work.



A number of builders demonstrated good examples of consultation, coordination and cooperation, such as:

- project schedule completed prior to work starting, using a cloud-based site planning system accessed by all sub-contractors, suppliers and clients
- site inspection at tender stage to determine access points, storage areas and review surrounding environment (e.g. nearby schools, busy roads)
- site meetings with each new sub-contractor prior to starting work
- use of mechanical lifting aids to unload trucks and handle construction materials safely (e.g. mobile cranes, vehicle-loading cranes, telehandlers)
- 'just-in-time' deliveries to ensure small amounts of materials are delivered when required to avoid unnecessary storage and handling of materials at site

- builder coordination of delivery drivers to negotiate ideal timing of deliveries, (e.g. late or early when work vehicles are not on site, outside school hours)
- site supervisors authorised to turn away delivery if not planned or to schedule
- plasterboard lifted by crane on to multi-storey houses prior to trusses being installed
- site inspections with documented report completed at key project milestones.

In summary, most builders stated they had some form of system for safely managing the delivery of construction materials. However, closer review of these systems found that they often:

- weren't implemented on site
- were ineffective in managing risks
- didn't consider all relevant issues.

Site verification

The site verifications found that only 65 per cent of builders who reported having a documented process for consulting with sub-contractors, and the safe delivery, storage and handling of construction materials, had actually implemented the process.

Inspectors identified that uncontrolled risks relating to the delivery, storage or handling of construction materials still remained on almost 10 per cent of worksites where builders had a documented process for consultation about these risks.

This indicates that documented systems and processes are not always effective. This is likely to be due to either breakdowns in communication between builders and their sub-contractors and suppliers, or builders not reviewing how control measures are being implemented.

Campaign resources

The findings of this project highlight the importance of effective consultation, coordination and cooperation across supply chains in keeping workers in the residential construction sector healthy and safe.

For a practical guide to improving how your business consults with workers and other duty-holders, refer to the *Work Health and Safety Consultation, Co-operation and Co-ordination Code of Practice 2011*.

A range of further information, tools and resources relating to the campaign findings are available, including:

- Hazardous manual tasks resources
- *Serious about safe business pack* - contains tools and information to help small or medium-sized businesses make their workplaces safer
- *Supply chains and networks* – Australian Strategy Topic Paper

Future actions

Under the *Queensland Construction Trades Industry Action Plan 2014-2017* and *Civil Construction Industry Action Plan 2014-2017*, WHSQ will continue to:

- raise awareness of the impact of the supply chain on musculoskeletal disorders and work-related stress management
- develop an industry partnership program for the construction supply chain and small business
- engage with relevant stakeholders to incorporate safety in the concept, tendering and procuring stages of a construction project
- encourage workers and contractors to be actively involved in the development of safety documents required by regulation (e.g. safe work method statements and work health and safety management plans).

More information

For more information, visit worksafe.qld.gov.au or call 1300 362 128.

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