

Campaign report

Leadership in major contractors: preventing sprain and strain injuries in the construction industry

June 2016

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Executive summary

Introduction and background

The *Leadership in major contractors: preventing sprain and strain injuries* campaign (the campaign) reviewed the impact that principal contractors (PC) have on influencing workplace culture. The campaign focussed on leadership regarding the provision of adequate systems and resources for managing the risks of hazardous manual tasks (HMT) at construction worksites. The campaign, conducted by Workplace Health and Safety Queensland (WHSQ), assessed leadership activity in various HMT safety management system elements and how they were implemented onsite. The campaign aimed to decrease musculoskeletal disorders (MSD), commonly known as sprains and strains, to construction workers.

The Office of the Federal Safety Commissioner (OFSC) welcomed this initiative to highlight the prevalence and human and financial costs of MSD arising from HMT. The OFSC noted the strong imperative to further emphasise to companies the importance of properly assessing and controlling HMT as part of a thorough risk assessment process.

Campaign scope

Twenty one organisations participated in the WHSQ assessments, including nine civil contractors, nine commercial contractors and three energy infrastructure and retail organisations. Participants included major and large PCs with projects costing up to \$100 million.

Method

The advisory intervention was conducted from October 2014 to September 2015. WHSQ assessment teams reviewed the principal contractor's HMT risk management systems and their implementation of them.

A detailed desktop assessment of key HMT elements of the safety management system was firstly completed, followed by the assessment team verifying the extent to which it was implemented and managed on a work site. The site verification was conducted by observation of, and interview with, two subcontractors carrying out work involving manual tasks.

The campaign assessment tools detailed best practice guidance to the PC, identified ways for them to benchmark their results against industry and produced a specific gap analysis for them of HMT risk management. The assessment findings were debriefed to their executive management of the organisation.

Key findings

Key outcomes found that:

- MSD and HMT were not managed as a work health and safety priority.
- Manual task risks were not systematically identified and controlled.
- Senior management rarely monitored data on prevention of MSD from HMT as a result of infrequent use of HMT-specific risk management targets and lead indicators.
- Safety management systems, including policy, planning, implementation, training and consultation were not sufficiently HMT-specific to ensure the control of manual task risks.
- Three quarters of all manual tasks assessed on PC sites did not comply with work health and safety (WHS) legislation for controlling the risk of MSD.
- Sources of risk were frequently outside the scope of the subcontractors' control. Risk controls generally relied on low order administrative controls and were not evidence based or effective.
- PC staff at all levels, including key decision makers, health and safety advisors, operational staff and frontline workers had significant gaps in HMT risk management skills, knowledge and competency.
- Use of generic assessment tools hindered identification and control of the HMT risk factors.

Discussion

The campaign identified gaps in current HMT risk management practices at both a system and at an operational level. These findings are significant as they reflect non-compliance with the WHS legislation.

Many gaps in the PC's systems directly impacted the subcontractors' ability to control the risk of HMT. PC's leadership particularly in relation to design, planning, and procurement was found to be critical to manage HMT in construction. A high number of campaign participants' systems lacked HMT targets, lead performance indicators, resources, HMT hazard specific tools, suitable and adequate HMT training and people with HMT competencies.

The results highlight the need for the industry to demonstrate leadership to manage workplace health risks. This challenges officers and senior managers to be better versed in HMT and energised to develop best practice systems and procedures ensuring, at a minimum, compliance with HMT legislation. It is important that decision makers understand the extent of the MSD problem, legislative obligations and the benefits of managing these disorders to make them a priority for action.

The findings indicate that the construction industry requires people with an understanding of [good work design](#)¹ and skills in human factors and ergonomics. Collaboration is needed between all stakeholders to develop new approaches and provide the resources required for an integrated, holistic approach to HMT risk management together with other workplace risks.

¹ *Handbook - Principles of good work design*: Safe Work Australia

Opportunities

Key opportunities and considerations for construction stakeholders and PCs regarding HMT risk management are to:

- demonstrate leadership and management commitment to MSD prevention
- make manual tasks a priority focus for control
- set targets and performance indicators specific to HMT risk management and MSD prevention
- adopt a broad, holistic approach with active support from leaders and workers to health and safety risk management to ensure all risks are identified and managed
- ensure the principles of good work design are included in the design and planning phases
- provide resources to workers, including those with HMT risk management skills and knowledge
- use HMT specific assessment tools and processes in developing WHS policies and procedures
- increase awareness, information and education at all levels of the organisation about risk management for HMT.

Outcomes

This campaign influenced PCs with participants reporting that the campaign was positive and assisted them in identifying gaps in their HMT systems. As a result of the campaign, several organisations commenced implementing changes such as modifications to their HMT risk management processes including procurement requirements, training and induction programs, assessment tools, and the use of [PErforM](#) – a participative ergonomics program.

There has also been increased executive management and organisational awareness and interest in HMT risk management. PCs now have a clear baseline of their MSD prevention performance in preparation for follow up assessments in late 2016.

1 Introduction and background

The *Leadership in major contractors: preventing sprain and strain injuries* campaign (the campaign) was a significant intervention campaign conducted by Workplace Health and Safety Queensland (WHSQ) on strains and sprains in the Queensland construction industry. The campaign examined the role of leadership in achieving injury and risk reduction on construction worksites.

The campaign assessed the principal contractor's (PC) role in leading risk management for hazardous manual tasks (HMT) at construction worksites. Key HMT safety management system elements and their implementation were examined to understand how HMT risks are controlled by the PC and to identify ways to decrease musculoskeletal disorders (MSD), commonly known as strains and sprains, to construction workers.

MSD caused by HMT continue to be a significant cost and productivity issue for the construction industry. Between 2010-15 financial years, MSD accounted for 56 per cent of workers compensation claims for the Queensland construction industry. Manual task body stressing injuries represented over half (54 per cent) of these MSD claims². Reducing MSD is a priority target for WHSQ and Australia nationally as outlined in the *Australian Work Health and Safety Strategy 2012-22*.

MSD are specifically addressed by legislation in the Work Health and Safety Regulation 2011. HMT are deemed in chapter 4.2 s60 to be hazardous work for which the risks to health and safety relating to musculoskeletal disorders associated with the manual task must be managed using a risk management approach to eliminate or minimise the risk.

Research and industry data highlights that the construction industry faces numerous issues and challenges that impact on MSD caused by HMT and work health and safety generally. These issues include a high rate of workers compensation claims for sprains and strains from HMT, a non-recognition of the MSD risk factors, both physical and psychosocial, and complicating factors including an aging and diverse workforce, a shrinking pool of young workers and chronic disease factors, such as obesity. Adding further complexity, the industry has its own unique culture with a predominantly male workforce and complex contractual arrangements including a high number of subcontractors and self-employed workers.

This campaign is in response to the current construction industry data and builds on previous WHSQ campaign findings. These findings identified gaps in HMT risk management systems including consultation about HMT and effective control of the risks. Previous campaigns conducted in other industries demonstrated that systematically managing HMT achieves a better outcome. The role of leadership is critical in setting the workplace culture and ensuring adequate systems and resources are provided to manage safety. This campaign therefore sought to determine the effect of PC leadership on HMT-specific safety systems and subsequent implementation of HMT controls at construction worksites.

The Office of the Federal Safety Commissioner (OFSC) welcomed this initiative to highlight the prevalence and human and financial costs of MSD arising from HMT. The OFSC noted a strong imperative to further emphasise to companies the importance of properly assessing and controlling HMT as part of a thorough risk assessment process.

² Queensland workers compensation data

1.1 Campaign objectives

The campaign's objectives were to:

- assess and benchmark current industry leadership practice on HMT risk management
- assist senior managers to identify leadership opportunities to improve HMT risk management
- provide guidance about HMT risk management principles and practice
- advise on and encourage a systematic approach to managing HMT risks
- evaluate and share the campaign findings with industry and other stakeholders
- increase control of manual tasks risks to reduce MSD in the construction industry.

1.2 Why the focus on principal contractors

PCs have a legal duty and critical role in eliminating or minimising HMT risks at construction worksites. Obligations include influencing the planning, design and work processes before work starts and to manage subcontractor work processes and health and safety performance during construction.

The large PCs have mature health and safety management systems that involve rigorous internal and external auditing requirements. However, previous campaigns have indicated that safety management systems may not be hazard-sensitive nor sufficiently resourced to ensure effective control of manual tasks risks.

The campaign sought to benchmark what is being done well and where there are gaps in HMT-related safety systems to inform industry about PC performance in managing MSD. This will assist PCs to better manage these risks which, in turn, should result in better safety outcomes for all construction organisations.

2 Method

2.1 Campaign

The campaign was conducted from October 2014 to September 2015. WHSQ assessment teams, comprised of construction and ergonomic advisors and inspectors, reviewed and evaluated selected PC's management of HMT risks. The PC's safety management systems were assessed for their specificity and effectiveness for managing HMT.

The detailed desktop assessment of the PC's safety management system's HMT elements was followed by site verification of the implementation with subcontractors at project level. An advisory approach was taken in order to facilitate positive engagement, learning and discussion with campaign participants.

2.2 Campaign scope

The campaign was designed to cover:

- commercial and civil construction sectors
- private and public sectors
- PCs from Tier 1 and large major construction companies
- projects in Queensland up to the value of \$100 million
- HMT risk management
- PCs safety management systems inclusive of HMT elements
- verification of PCs' implementation of HMT systems on sites.

Note: Although this campaign's primary focus was on the physical HMT risk factors, known psychosocial (organisational) risk factors for HMT were also noted.

2.3 Campaign phases

The campaign consisted of six phases as outlined in Table 1.

Table 1: Campaign phases

Number	Phase
1.	Campaign development including construction specific HMT risk management systems and site verification assessment tools.
2.	Industry consultation and information sessions.
3.	Assessments and data gathering: <ul style="list-style-type: none">• HMT risk management systems assessment of the PC• site verification of implementation of the PC systems with two subcontractors• PC management debriefing on findings• post assessment survey of PC participants and• post assessment focus group of assessment team members.
4.	Evaluation and report.
5.	Industry forum to present campaign findings (to be conducted).
6.	Follow up assessments in to start in late 2016 (to be conducted).

2.4 Assessment tools and data gathering

Desktop and site verification tools

The following HMT assessment tools were developed for the campaign:

- the construction HMT risk management desktop assessment tool (Appendix 1)
- the HMT site verification assessment tool (Appendix 2).

The tools were developed in consultation with the construction industry and were:

- based on Standards Australia. AS/NZS 4801:2001 *Occupational Health and Safety Management Systems-specifications and guidance for use*; the Work Health and Safety Regulation r.60; and the *Hazardous manual tasks code of practice 2011*
- made available to participants prior to the commencement of the assessments
- made available to industry via the WHSQ [website](#).

The tools provide best practice guidance and examples to assist in benchmarking and a gap analysis of HMT risk management.

WHSQ assessment teams were given training on the campaign objectives and in the use of the specially developed HMT systems and site assessment tools.

Survey

A post intervention survey tool was developed for PC. At the completion of the desktop and site verification assessments, a short survey was sent to PC representatives who had participated in the assessments and/or post assessment debrief. The aim of the survey was to gather information including the appropriateness and effectiveness of the campaign approach. Survey Monkey was used to conduct the survey.

Focus group

At the completion of the assessments a focus group was held with a representative sample of the teams who conducted the assessments. The aim of the focus group was to elicit additional data which would inform the data analysis and assist in the development of opportunities for improvement.

Focus group questions sought supplementary information on:

- the observed gaps and barriers to HMT risk management
- the current MSD prevention initiatives that are occurring on projects
- PC response and actions following the campaign.

The focus group questions are shown at Appendix 3.

2.5 Industry consultation and communication

Key industry and WHSQ stakeholders were consulted throughout the development of the campaign and the assessment tools.

Information sessions

Two information sessions were held with representatives from industry associations and PCs were invited to attend. The sessions included information about the campaign background and how the campaign would be conducted. The assessment tools were introduced and participants were given an opportunity for discussion and questions.

Communication

Campaign consultation and information dissemination occurred through direct contact with industry associations, provision of construction eSafe articles and online information and the information sessions.

2.6 Assessments and data gathering

Principal contractor assessment visits

PCs meeting the criteria for the intervention were invited to participate in the intervention. At commencement, a PC office location for the desk top assessment and a project worksite for the assessment team site visit were agreed on by the assessment team leaders and a representative of each PC.

WHSQ assessment team leaders strongly encouraged participation of the PC's senior management in the assessment process. The aim was to ensure leadership issues were fully canvassed and that the assessment findings assisted leaders to influence change for improved HMT risk management.

Systems desktop assessment

PC's senior executive or operations managers were asked to provide examples of their HMT specific systems and documentation. The team assessed whether HMT systems were in place, their effectiveness and whether they met the requirements set out for managing HMT in Work Health and Safety Regulation 2011 s60.

The assessments sought to identify specific HMT elements for:

- management commitment and leadership
- targets and lead performance indicators
- integration of safe design in the risk management process
- tools and materials used
- procurement – management of supply chain and subcontractor HMT
- performance review and accountability
- consultation
- procedures for identification of HMT and control of manual tasks risks
- competency
- induction and training.

HMT systems and gaps noted during the desk top review were highlighted for attention and verification during the site visit.

Site visit assessments

The site verification assessment was done at a suitable and mutually agreed PC project site shortly after completion of the systems assessment. The assessment involved reviewing implementation of the PC systems.

Firstly, the assessment team identified and observed two subcontractors' workers undertaking HMT on site. The assessment team assessed the HMT for compliance with the Work Health and Safety Regulation r. 60. They also identified the risk factors and sources of risk involved.

Secondly, the assessment team completed further site verification questions by examining site documentation and discussion with both subcontractors and PC site management. Responses were gathered from each subcontractor about the task observed by the assessment team along with subcontractor knowledge and practices for controlling HMT. Subcontractors were asked about their experiences with the PC's monitoring and oversighting of the subcontractors' systems and practices for managing HMT. The PC site operations management representative was also interviewed about the manual tasks observed on site and how the subcontractors' management of HMT risks was monitored.

The detailed information gathered by the team included:

- procedures:
 - HMT risk management
 - consultation
 - assessment tools used
 - integration of safe design in the risk management process
 - procurement
 - management of supply chain and subcontractor HMT
 - purchasing
- competency
- induction and training.

Post assessments debrief

At the completion of both assessments the PC was offered a management debrief session with the assessment team. Assessment results were fed back and discussed with senior managers in a meeting or a teleconference.

2.7 Follow-up assessments

WHSQ will conduct a follow up assessment with participating organisations approximately 18 months after the initial assessments. The purpose of the follow up assessments is to measure the PC's changes regarding HMT risk management and compliance with Work Health and Safety Regulation 2011 s60.

3 Results

3.1 Participants

A total of 21 organisations out of a potential 26 participated in the assessments. Participants included organisations from commercial and civil construction sectors including:

- nine civil contractors, including one public sector organisation involved in predominantly civil construction work
- nine commercial contractors
- three energy infrastructure and/or retail organisations.

The three energy infrastructure and/or retail organisations were included due the value of their infrastructure construction projects.

Overall:

- Two or more PC staff assisted with the assessments. Most frequently these staff included an operational manager, a health and safety manager and an advisor. Most PC took the opportunity to conduct a self-assessment using the campaign assessment tool while the WHSQ assessment team conducted their assessment.
- The majority of PC took up the opportunity of a post assessment debrief meeting with executive management to discuss the assessments findings and consider opportunities to manage the risks identified from the gaps in their systems.
- The advisory approach facilitated extensive discussion about HMT risk management with campaign participants.
- A number of PCs took action immediately to improve systems including the use of more hazard specific tools.

3.2 Summary of results

The following is a summary of results detailed in this section:

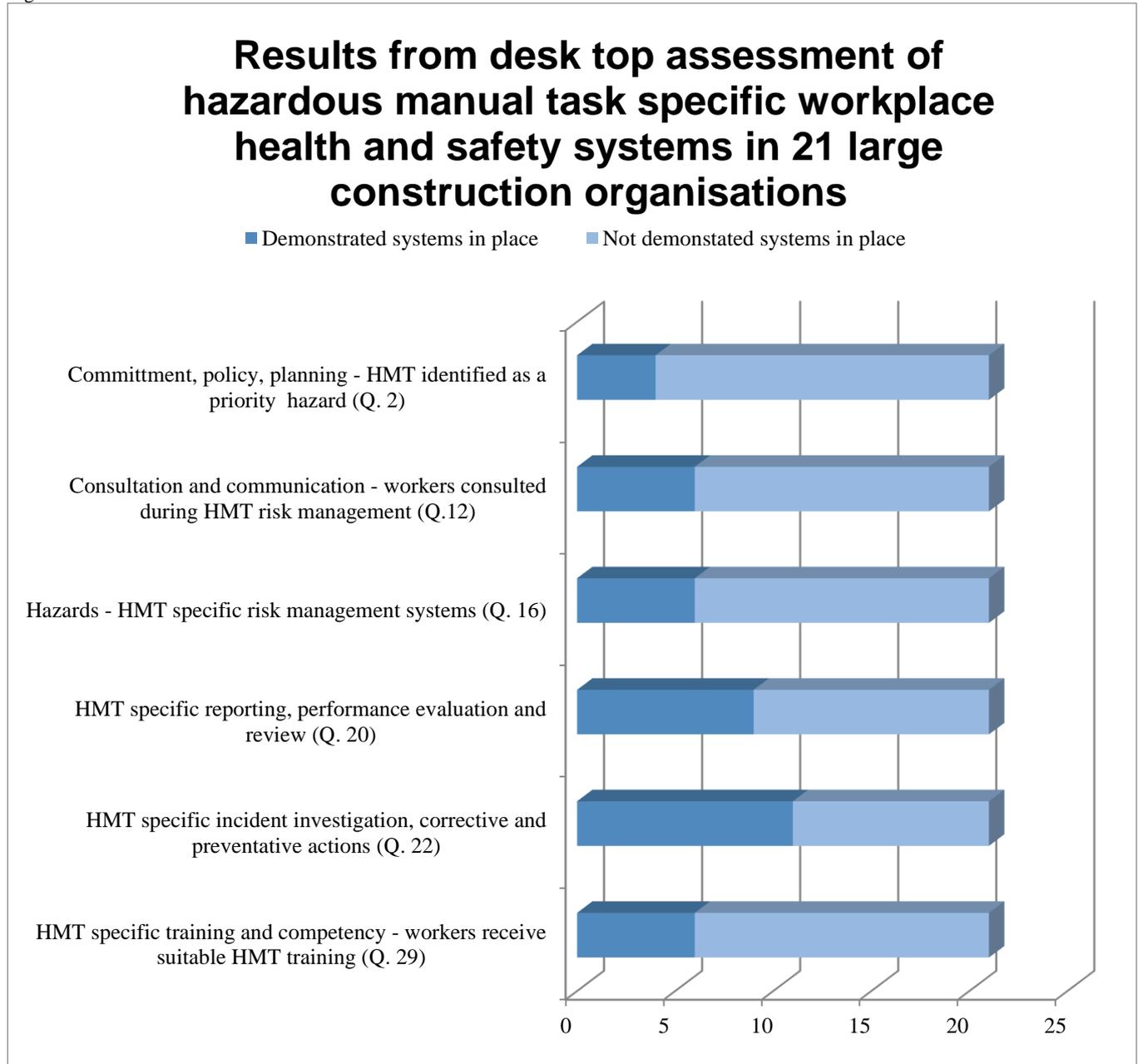
- MSD and HMT were not managed as a work health and safety priority.
- Manual task risks were not systematically identified and controlled.
- Senior management rarely monitored data on prevention of MSD from HMT as a result of infrequent use of HMT-specific risk management targets and lead indicators.
- Safety management systems, including policy, planning, implementation, training and consultation were not sufficiently HMT-specific to ensure control of manual task risks.
- Three quarters of all manual tasks assessed on PC sites did not comply with WHS legislation for controlling the risk of MSD.
- Sources of risk were frequently outside the scope of the subcontractors' control. Risk controls generally relied on low order administrative controls and were not evidence based or effective.
- PC staff at all levels including key decision makers, health and safety advisors, operational staff and frontline workers had significant gaps in HMT risk management skills, knowledge and competency.
- Use of generic assessment tools hindered identification and control of the HMT risk factors.

De-identified raw data from the assessments and survey is available upon [request](#).

3.3 PC desk top systems assessment of HMT systems

The safety management systems desktop assessments identified gaps in HMT risk management. Figure 1 shows the key HMT-specific findings.

Figure 1: Results from desktop assessment of hazardous manual task specific workplace health and safety systems in 21 large construction organisations



Commitment policy and planning

Systems for commitment, policy and planning for reducing MSD were assessed against nine items on the systems assessment tool. While 10 out of 21 organisations had an OHS policy that referred to MSD/HMT, only four organisations demonstrated that they identified manual tasks as a priority hazard in their organisation. Three organisations had an executive manager specifically responsible for overseeing the prevention of MSD from HMT. Six organisations reported investing in research and development regarding the prevention of MSD caused by HMT.

Consultation and communication

Nine out of 21 organisations reported having a consultation process with relevant stakeholders throughout HMT risk management. In a question specific to consultation, only seven of the 21 organisations reported having a consultation process with workers throughout the HMT risk management process.

HMT risk management

Six of the 21 organisations were able to demonstrate elements of systematic HMT risk management, with only three organisations having a HMT register.

Reporting performance and review

Nine organisations were able to demonstrate where MSD caused by HMT were included in OHS performance reports that were reviewed by their senior management. These reports included predominantly lost time injury rates (LTIR) and lost time injury frequency rates (LTIFR). Three organisations included reporting on targets and lead indicators specifically for the prevention of MSD caused by HMT, however the majority of performance measures reported to the boards were outcome based LTIR and LTIFR lag indicators.

Incident investigation, corrective and preventive action

Eleven organisations demonstrated that completed investigation reports go to all relevant managers and stakeholders. Five organisations included specific procedures for investigating an MSD, such as using a HMT risk assessment tool in the incident response.

Training and competency

Six organisations demonstrated that workers and staff received suitable and adequate training about HMT. The PC's manual task specific training was frequently not based on the Work Health and Safety Regulation 2011 s39 or the *Hazardous Manual Tasks Code of Practice 2011*.

Further, relevant HMT training for key decision makers was frequently not evident. Behaviour based training programs that are known to be ineffective for control of manual tasks risks. For example, those on lifting techniques, back care, core stability and stretching programs were prominent in induction and training materials viewed by assessment teams.

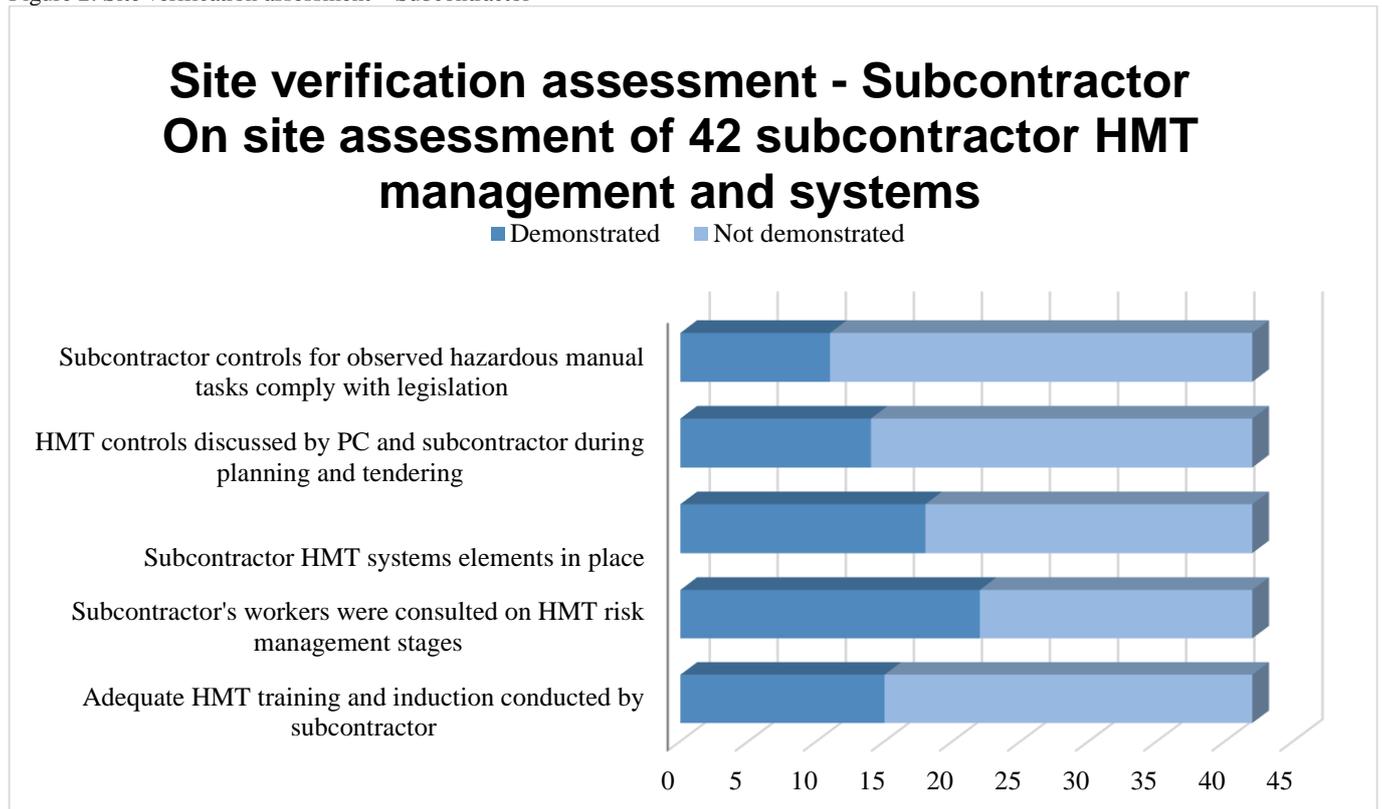
3.4 Site verification – Subcontractor

Verification gaps

Site verification assessments of 42 subcontractors’ HMT management systems at 21 PC project sites demonstrated there were gaps in the implementation of the PCs’ safety management systems and risk management.

Key site verification findings from the subcontractor assessments and the PC site assessments are reported separately below.

Figure 2: Site verification assessment – Subcontractor



Compliance with the legislation – Subcontractor

Forty-two hazardous manual tasks were assessed for compliance with Work Health and Safety Regulation 2011 s60. In 10 of the tasks assessed, the risk of MSD was controlled in compliance with the regulation. Thirty two of the observed tasks did not control for the risk of MSD and did not comply with the regulation. Of the 32 uncontrolled HMT, 21 involved high or sudden force as the predominant risk factor.

Twenty-eight of the uncontrolled tasks had sources of risk that were outside the scope of the subcontractors' control. In descending order of occurrence, the sources of risk outside the subcontractors' control included the:

- **Nature, size, weight or number of things handled in performing the manual task.** Examples observed included:
 - Fire and sound-rated plasterboard specified for the job was extra heavy, large and awkward to manually handle. Workers were exposed to repeated and sustained force in awkward postures during the handling and installation of this product.
 - A large, heavy and awkward switchboard was craned on to the site and then manually positioned above shoulder height by four workers and two pallet trolleys. Workers were exposed to high force in sustained and awkward postures during the installation of the switchboard.
- **Design or layout of the work area.** Examples observed included many narrow access ways and small work areas that resulted in the inability to use mechanical aids such as electric pallet jacks, elevated work platforms or trolleys.
- **Environment in which the manual task was performed.** Examples observed included poor lighting when working in a high-rise development; and carrying loads in windy conditions.
- **Systems of work.** Examples observed included high workloads, pace of work and hours of work.

Consultation on HMT risk management – Subcontractor

The level of consultation with workers was not uniform throughout the HMT risk management process. The highest level of consultation occurred at the start during the identification phase. Workers from nearly three quarters of participating subcontractors confirmed they had been consulted about identifying hazardous manual tasks.

Only half (21) of the subcontractor's workers reported that they had been consulted during the risk assessment and determining the sources of risk phase or recalled being consulted during development, implementation and review of controls and, purchasing and trialling of equipment.

Workers interviewed by the assessment team confirmed they had been consulted during the development of safety procedures for HMT in 25 of the 42 participating subcontractors.

Twenty-two subcontractors reported that the PC had consulted with them and other stakeholders about HMT relevant to the scope of works before work started on the project.

HMT risk management – Subcontractor

HMT risk management achievement levels varied. Less than half (18) of the 42 subcontractors reported that controls for HMT specific to their scope of works were discussed and specified at the tendering stage. Workers from 28 of the participating subcontractors confirmed that the PC conducted proactive, onsite audits that include HMT.

Workers from 29 of the participating subcontractors reported that both the PC and subcontractor resolved HMT issues raised by workers by following the hierarchy of controls.

Out of the 42 HMT assessed, 21 had been previously reported to the PC by the subcontractor as a HMT.

Musculoskeletal injuries and HMT had been documented as being reported on the 21 project sites on five occasions. Workers from 11 of the participating subcontractors reported that there had been corrective actions implemented as a result of a musculoskeletal injury or identification of a HMT on the current project.

Workers from 10 of the participating subcontractors reported that work procedures had been updated after a HMT risk assessment or MSD incident.

Induction and training – Subcontractor

Induction and training on HMT and prevention of MSD varied widely. Workers from 22 of the participating subcontractors reported receiving training about HMT on the project.

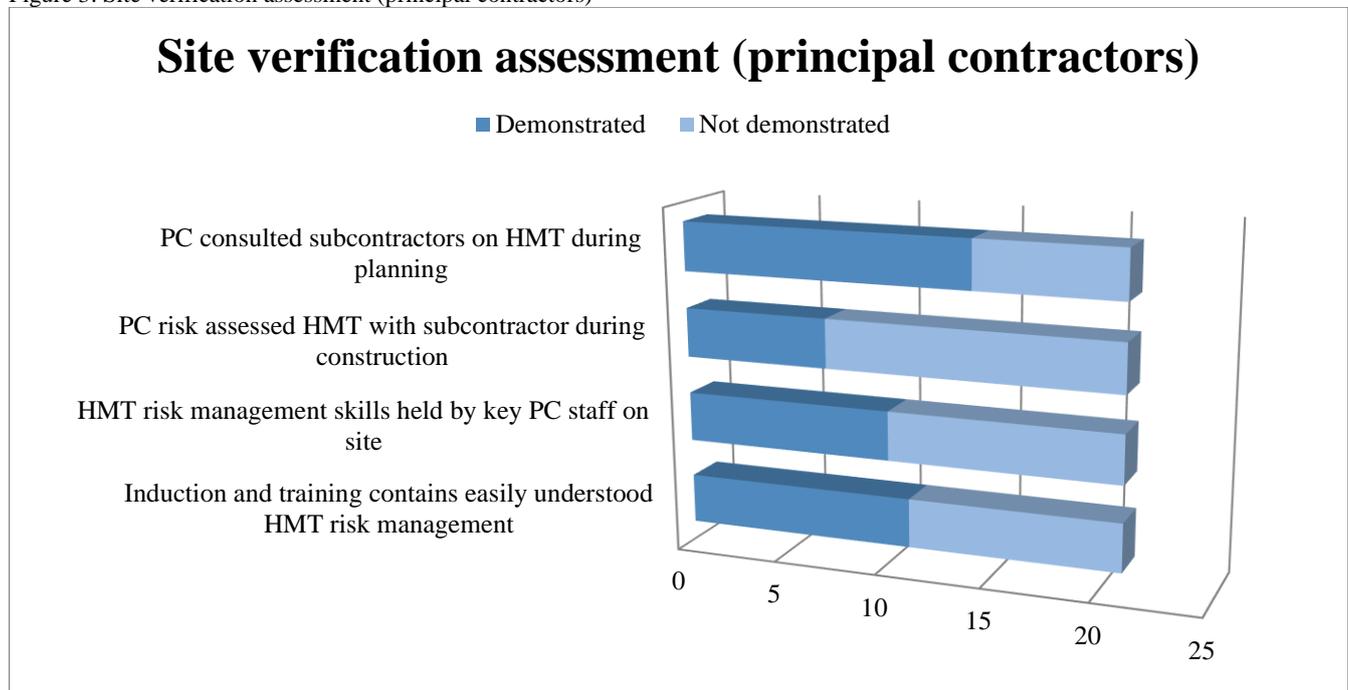
Workers from 15 of the participating subcontractors reported receiving training content that was assessed as suitable and adequate as per Work Health and Safety Regulation 2011 s39 (the regulation) and the *Hazardous manual tasks code of practice 2011* (the HMT COP). However, similar to the PC findings, it was observed that the majority of subcontractors’ induction and training programs were not suitable and adequate. Nor were these programs evidence based. They were predominantly worker behaviour based training programs such as teaching lifting techniques, back care, core stability and stretching programs.

3.5 Site verification – Principal contractor

Verification gaps

Below is a summary of key findings from assessment of the PC site management systems and practices for managing HMT.

Figure 3: Site verification assessment (principal contractors)



HMT planning and consultation – Principal contractor

Fourteen of the 21 PCs reported that they had consulted with the subcontractor and other stakeholders about HMT relevant to the subcontractor’s scope of works before work started on the project.

Nine PCs reported that controls for HMT specific to their scope of works were discussed and specified at the tendering stage.

Sixteen PCs reported consultation with workers at every stage of HMT risk management.

Skills of key staff – Principal contractor

Ten PCs demonstrated they had key staff with HMT risk management skills on the project.

Training and induction – Principal contractor

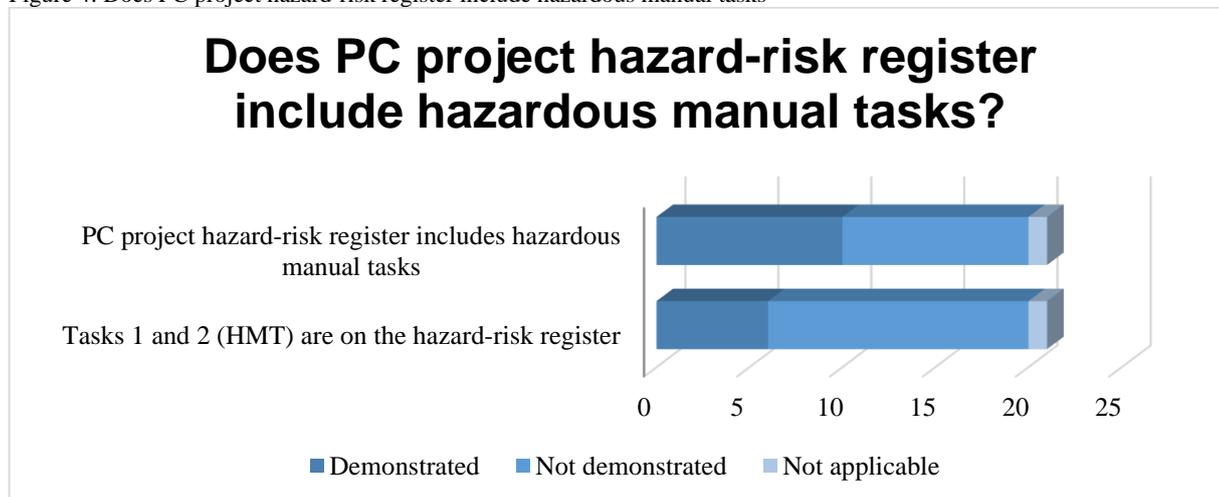
Eleven PCs included information about HMT procedures and risk management in their project/site induction and training. The quality and content of PC induction and training for HMT varied. There was low compliance with the *Work Health and Safety Act 2011* s19(3)(f), *Work Health and Safety Regulation 2011* s39; and guidance outlined in the *Queensland Hazardous manual tasks code of practice 2011*.

Eight PCs were audited for HMT training content and records to ensure consistency and quality on the project.

Hazardous manual task risk management – Principal contractor

Seven PCs reported that the HMT identified by the WHSQ assessment team had previously been assessed in consultation with the subcontractor and relevant others.

Figure 4: Does PC project hazard-risk register include hazardous manual tasks



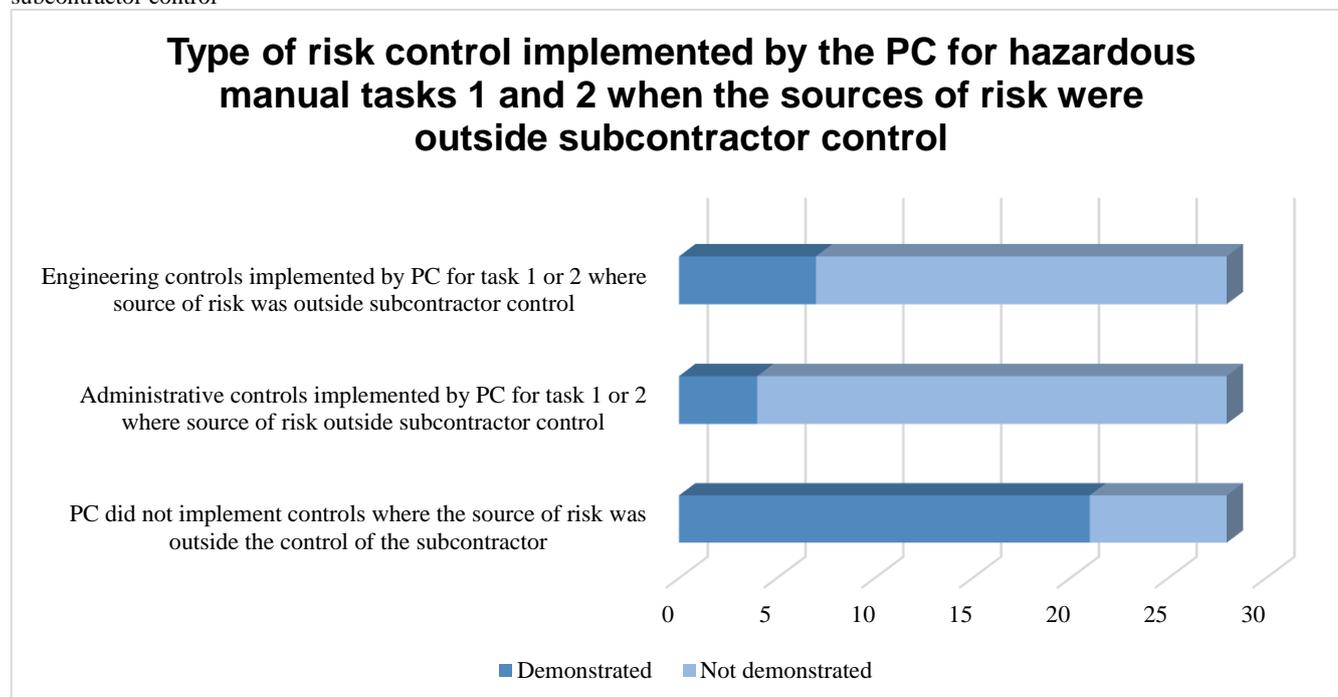
Ten PCs included HMT on their hazard/risk register. Of these six had included the HMT, observed by the WHSQ team, on their risk register.

Principal contractor actions when source of risk was outside subcontractor control – Principal contractor

There were 42 tasks assessed. The results found:

- 32 tasks were assessed to have a risk of MSD
- 31 of these 32 tasks had sources of risk outside the scope of the subcontractors' control.

Figure 5: Type of risk control implemented by the PC for hazardous manual tasks 1 and 2 when the sources of risk were outside subcontractor control



Controls

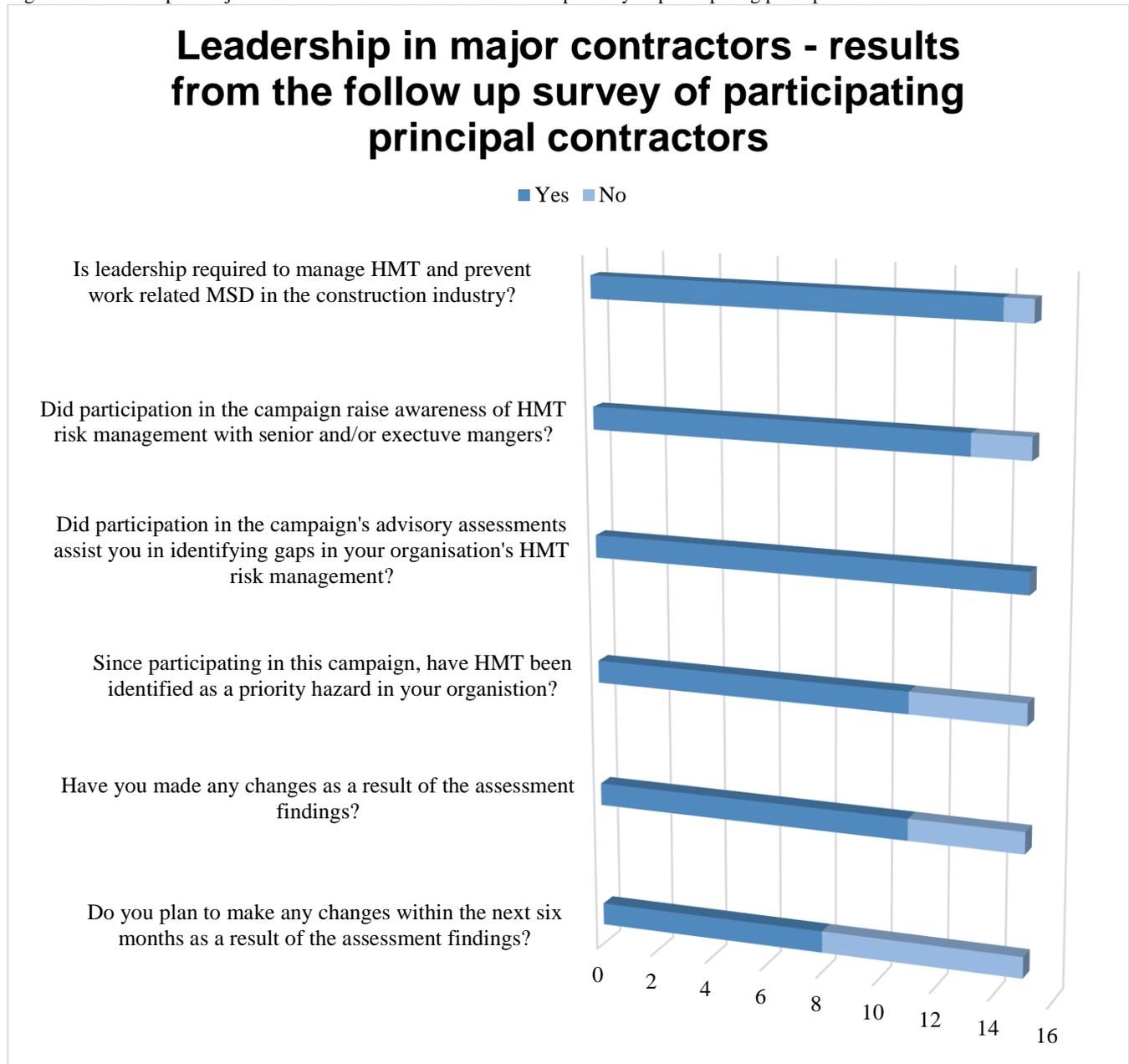
Of the 31 tasks with sources of risk outside the scope of the subcontractors' control, PC controls were as follows:

- In seven instances the PC had implemented engineering, substitution or isolation controls. Design control examples include:
 - reduced size of fence panelling as a result of a safety in design process
 - use of speed panel to significantly reduce the amount of block laying
 - use of a remote automatic earth compactor
 - use of elevating work platform with appropriate plasterboard attachment.
- In one instance the PC had also implemented administrative controls.
- In three other instances the PC had implemented administrative controls only.
- In 22 out of the 31 tasks the PC had not done a risk assessment and had not implemented any controls.
- In three instances where the risk had been controlled, the PC had done a risk assessment and implemented engineering/redesign controls and also admin controls.

3.6 Post campaign principal contractors survey findings

There were 15 participants who responded to the survey from a total 31 surveys sent. The survey questions are shown at Appendix 3. Survey results are summarised below.

Figure 6: Leadership in major contractors – results from the follow up survey of participating principal contractors



Principal contractor survey findings

The majority of survey respondents were safety managers likely to report to an officer with duties under the *Work Health and Safety Act 2011* or a board. Respondents reported that the campaign was positive and assisted them in identifying gaps in their HMT systems.

Respondents from several organisations reported that, as a result of the campaign, their organisation had commenced implementing changes such as modification to HMT risk management processes including procurement requirements, training and induction programs, assessment tools, and use of a consultative, participative risk management program

They also reported increased executive management and organisational awareness and interest in HMT risk management.

The most frequent change made by PCs as a result of the campaign assessment process, were to implement the use of HMT-specific risk assessment tools, updating and amending manual tasks policy and procedures, and the implementation of a consultative risk management program such as the Participative Ergonomics for Manual Tasks (PERforM) program³.

Respondents felt that more web based information would be very useful together with films and increased mobile technology agreeing that Apps for PERforM, Manual tasks risk assessment (ManTRA), accelerometer and slips assessment tool would be beneficial.

Respondents also felt that they would benefit from more HMT risk management presentations, case studies and an industry focus groups to discuss HMT issues and identify strategies for the prevention of work related MSD in the construction industry.

The survey showed that the respondents were very satisfied with the campaign's advisory rather than compliance approach and welcomed the opportunity for assessment feedback and discussion. The majority of participants were also very satisfied with the assessment tools.

3.7 Advisor and inspector focus group findings

The WHSQ assessment team focus group was held after assessments were completed. The assessment team members reported the campaign appeared to facilitate a good working relationship between WHSQ staff and construction businesses and added to the knowledge base regarding work health and safety in the construction industry. Focus group discussion findings are listed below.

Focus group observations – gaps and barriers

Team members expanded on the following areas of particular concern observed during desktop and site assessments.

Legislation

- There were low levels of compliance with the Work Health and Safety legislation, specifically the *Work Health and Safety regulation 2011* s60.
- All levels of leadership and line management demonstrated gaps in understanding the *Work Health and Safety regulation 2011* s60.

³ PERforM provides a framework to help employers engage with workers at all levels to identify, assess and control manual tasks risks within their workplace. It is a simple manual task risk management program based on participative ergonomics.

Assessment tools

- There is widespread use of generic tools, particularly the likelihood and consequences risk matrix. As these are not specific to HMT risk assessment, it was noted that they significantly underestimated HMT risk. Lower, inconsistent detection of risk compounded problems across all elements of the safety management system and inhibited effective management of HMT.
- Many organisations reported using systems and tools to obtain a holistic approach across multiple hazards however current versions of integrated tools with poor sensitivity to health hazards are resulting in a superficial, non-holistic approach for health hazards like HMT.
- For the few organisations who did include HMT specific tools in their safety management system there were gaps and varying degrees of competency in using the tool.
- Psychosocial risks for HMT, for example high production pressures, long hours of work, low control, did not feature in HMT risk assessments and controls.

Performance measurement

- The primary performance measures reported to the board were the outcome based LTIR and LTIFR lag indicators. Few positive performance indicators were reported.

High risk work

- The construction industry's primary focus is on high risk work - described generally by industry as work where there is a potential for a fatality or critical injury; and also specifically prescribed in the work health and safety legislation. This focus appeared to detract from effective action on managing HMT.

HMT risk management

- Good work is being done across the industry regarding reducing MSD, but it is ad hoc and not systematic. This includes general attention to reducing HMT on a number of sites using, for example, more crane time, hoists, bin lifters and trolleys. These controls however are generally not the result of a systematic process for managing specific high risk manual tasks.
- There were varying levels of competency for HMT risk management across all tiers of management, operational staff and subcontractors.
- High risk manual tasks were not systematically tabled at safe design forums. There were good safe design processes in a number of organisations, however HMT were generally not included. Safe design forums focused on safe design for the end user rather than constructability and worker health and safety. It was noted however, that in managing other risks through safe design processes there have been instances where improved design had resulted in significant reduction of manual tasks risk. For example, planning the use of an advanced formwork system that results in decreased HMT risks as well as efficiencies in speed of construction.
- Design and planning issues impacting manual tasks were raised by subcontractors and site managers. Several gave examples of designs which were difficult to build and needed to be adapted on site creating a HMT.
- Health and safety managers and operational managers who had been involved in participative ergonomics programs on other projects had greater knowledge about HMT and were positive about the use of consultative and participative approaches to find controls. General onsite communication was very good on the majority of sites. However, HMT were not systematically identified and managed using a consultative process.
- Many PC and subcontractors were using non-evidence based training as their major HMT activity. Training programs were predominantly aimed at changing worker behaviour for example lifting techniques, back care, core stability and stretching training programs. These programs were not deemed suitable and adequate as per Work Health and Safety Regulation 2011 s39 and the *Hazardous manual tasks code of practice 2011*.

Safe work method statements

- There was a heavy reliance on safe work methods statements (SWMS) to document compliance. The general nature of these frequently revealed that HMT risk management, specific to the project and task, had not occurred.
- SWMS frequently contained generic, non-task-specific controls developed without HMT-specific risk assessments or targeted controls.
- SWMS demonstrated an ad hoc approach to implementing higher order controls and a focus on worker behaviour and administrative controls. PCs on the whole had accepted this style of SWMS from subcontractors as sufficient for managing HMT risk.

Competency

- There were varying levels of competency for HMT risk management across all tiers of management, operational staff and subcontractors.
- The development of knowledge and skills in health and safety risk management appears to be compromised by prescriptive approaches and the competing resources required for developing and maintaining complex safety management systems.

Investigations

- There were very few detailed or high level investigations of musculoskeletal injuries.
- Escalation criteria for HMT investigations mostly relied on achieving higher ratings on the likelihood and consequences assessment matrix or other generic tools. The severity of musculoskeletal injuries and long term outcomes were generally underrated. As corrective action was not based on a detailed HMT risk assessment, the suggested post incident controls often involved a focus on low level controls such as training in back care and lifting techniques and administrative controls such as task rotation.

Economic climate

- The current economic climate in the Queensland construction industry has resulted in many organisations restructuring and with a several reducing the number of health and safety staff.

Focus group observations – Principal contractors’ current MSD prevention initiatives

During the desktop and project site assessments the WHSQ assessment team noted a number of initiatives on sites that reduce the risk of MSD. Examples included:

- procurement phase requirement for subcontractors to have completed PERforM risk assessments on their scope of works prior to commencement on site
- consultation in the planning stage of the project with the subcontractor and others in the supply chain regarding design changes to materials and equipment
- logistics planning for use of cranes, mechanical aides and placement of loads
- prescription of higher concrete slump on some commercial projects
- increased prefabrication off site
- using the participative program, PERforM, with executive support
- reducing the amount of work done on the ground and below mid-thigh level
- design forum consideration of manual tasks.

Focus group observations – planned changes in managing HMT reported by principal contractors

The focus group reported that the majority of organisations were responsive to the assessment findings and started planning or implementing changes for improved HMT risk management. Many organisations approached WHSQ ergonomics inspectors and advisors, for example, to request assistance with PERforM workshops, tool box talks, review of procedures, assessment tools and induction and training content.

As a result of the campaign, the focus group reported the following PC changes:

- modifying procurement requirements with subcontractors on projects including:
 - specifying a HMT risk assessment tool to be used
 - requirement to undertake participative HMT risk management training via PERforM workshops
 - requirement to implement the PERforM program
- up-skilling PC key staff about HMT
- PERforM workshop for managers and safety personnel nationally
- project based PERforM workshops for managers and operational personnel
- updates to HMT procedures, for example, to review, improve and include specific HMT assessment tools in safety management system
- toolbox talks to target HMT
- induction and training content changes.

These are consistent with the changes reported in the PC post assessment survey.

4 Discussion of findings

Overall, the campaign findings indicate that HMT were not systematically identified and managed as required in the Work Health and Safety Regulation 2011 s60. This significant non-compliance confirms that HMT and the prevention of MSD are not a priority work health and safety focus in the construction industry, despite being the most frequent and costly injury type.

A high number of campaign participants' systems lacked HMT targets, lead performance indicators, resources, HMT hazard specific tools, suitable and adequate HMT training and people with HMT competencies.

Although assessments were performed with a relatively small sample of organisations, the detailed quantitative and qualitative data gathered provides very specific, in-depth insights. The gap analysis of systems and practices identified many leadership opportunities for executive, operations and safety managers both in participating organisations and for the broader construction industry stakeholders. Fortunately many issues identified in the campaign can be readily addressed by industry.

This discussion considers important leadership issues and system management elements impacting on managing HMT in the construction industry.

4.1 Organisation

Leadership and culture

When advocating a strong, sustainable safety culture, leaders in construction organisations and industry bodies need to highlight the importance of managing HMT to achieve a strong holistic approach. Fundamental to this approach is genuine, informed engagement with relevant stakeholders about HMT.

Those who have an ongoing safety leadership role need to have safety leadership competencies in HMT risk management and, more strategically, competency in the application of good work design principles including physical, cognitive and organisational aspects of work. Further, leaders and managers need facilitation and communication skills to engage with their workers and embed evidence based participatory risk management approaches.

Accountability at a very senior level will prevent officers in the organisation from being compromised in regard to their due diligence responsibilities for HMT. Appointing an executive decision maker to be accountable for determining HMT policy can be an important strategy for ensuring strong HMT leadership. Such a role can report on targets, review HMT performance, assist other decision makers understand the extent of the problem, promote the benefits of managing MSD, advocate to make them a priority for action equivalent to high risk construction work and ensure systems and resources are in place.

Leadership for reducing MSD relies on detailed HMT-specific targets and good management information. Effective leadership of an organisation's performance in controlling HMT is considerably restricted when reporting only LTIR and LTIFR to senior managers and executives. These measures do not provide information on whether high risk manual tasks have been identified or managed by the organisation. HMT therefore can remain undetected by the board or executive management despite the actual presence of uncontrolled high risk manual tasks within the organisation's operations. For example, the low number of HMT that were included on project risk registers is indicative of gaps in identification and management of HMT. This gap in due diligence can be redressed by, for example, using lead indicators on organisational progress with identifying and controlling HMT.

There is strong evidence that overall business performance is improved when organisations address work health and safety risks along with other important business risks (AMP Capital - OH&S Position Paper 2005). Reducing the number, cost and impacts of MSD in the construction industry will benefit health, safety, productivity, workforce sustainability and viability in to the future.

Role of the principal contractor

The PC has a critical role and duty (*Work Health and Safety Act 2011 s20*) in leading the strategies to reduce work related MSD in construction. Selection and monitoring of subcontractors based on their systems and practices for controlling HMT is essential. Equally it is vital that PC have strategies in place for those manual tasks where the sources of risk are outside the scope of subcontractors' control. The design of the building, work processes and the materials and equipment specified for use often create HMT. Control of the risks is best achieved when it occurs from the start of the planning and design stage and continues for the life cycle of the project.

The campaign found risks that should have been identified during design or planning stages, but were not identified for corrective action. Reasons for this might include the absence of high risk manual tasks on the hazard/risk register, lack of awareness of the responsibilities of designers and planners, issues of practicality not being raised with designers, poor HMT competencies by designers and planners and the use of non-HMT specific risk assessments. PCs often have more influence during the planning than the design stage, however a number of organisations have a role as both client and PC. This presents the PC with an opportunity to influence the planning, design and work processes, before work starts, to eliminate or minimise the manual tasks risks. A PC can play a role in sharing any resultant design changes with current and future clients and subcontractors. PC and industry striving to influence design will contribute to reducing MSD in construction.

Hazardous manual tasks specific risk management systems

PCs have mature safety management systems, yet the campaign findings demonstrate that these safety management systems are not sufficiently hazard-sensitive or resourced to ensure effective control of manual tasks risks. HMT gaps in the overall safety management system impact on PC decision making, prioritising of health and safety targets and performance. The challenge is to look for new approaches to improve health and safety performance including HMT.

Safe work method statements (SWMS)

The WHS legislation requires the person in control of a business or undertaking (PCBU) to develop SWMS for high risk construction work. However, on review of SWMS, it was evident that the HMT risk management process had not been undertaken prior to their development. Information provided regarding HMT was generic, ad hoc in respect to high level design controls, and included a focus on worker behaviour and administrative controls. The information in the SWM should be based on the HMT risk management process and be task and site specific.

4.2 Barriers to HMT risk management

Focus on high risk construction activities

In addition to their primary duty of care, PCs have duties prescribed by regulation in relation to managing risks associated with the carrying out of construction work (Work Health and Safety Regulation Chapter 6 s297). Eighteen construction activities are listed as high risk construction work under s291. These include work involving falls from height, demolition, energised electrical installations, mobile plant, gas and chemicals, artificial extremes of temperature, and work over water.

The focus on high risk work is well acknowledged in the industry. Audits of these high risk activities are a primary focus during internal and external audits. Typically, audits are conducted to verify compliance with:

- internal systems
- AS 4801: 2001; and/or as a part of accreditation under the Office of the Federal Safety Commission (OFSC) accreditation scheme
- the pre-qualification criteria (PQC) in Queensland, where accreditation is required for government funded work.

Large construction organisations understandably devote a sizable portion of their work health and safety resources to meeting legislative duties and achieving and maintaining accreditation in relation to these high risk activities and other criteria.

High risk construction work can contain risk factors for MSD such as high or sustained force in awkward postures, high workload demands and time pressures. These compounding physical and mental risk factors had not previously been recognised as relevant to the management of high risk construction work and requires a more prominent focus during the audit process.

While HMT are not listed as high risk construction work, they do feature elsewhere in regulation (s60), as being hazardous work for which the risks to health and safety relating to MSD, and associated with the manual task, must be managed using a risk management approach to eliminate or minimise the risk.

All risks to health and safety, including health risks such as manual tasks, occupational stress and noise, must be managed under the WHS legislation. There is a lost opportunity for improved health and safety outcomes if the focus remains on high risk work at the expense of what is perceived as lower risk work such as HMT and other workplace health risks.

In considering these issues the Federal Safety Commissioner has indicated he would support the development and promotion of improved awareness and communication activities, in conjunction with the industry, to ensure HMT is considered in a company's risk assessment processes.

Lack of worker consultation and participative programs

While PCs were observed to be good at communicating general health and safety messages to workers, only a small proportion of workers interviewed on PC sites could confirm that they had been canvassed for their ideas on solutions to HMT issues. Even fewer had been involved in a systematic consultation on HMT or been engaged by the PC in a full participative process to identify HMT and generate ideas for workable control measures. Developing control measures for HMT in construction is multifaceted and involves people, including workers, collaborating, problem solving, developing solutions and driving changes that are meaningful and effective.

Under recognition of work organisation risk factors

The Work Health and Safety Regulation 2011 s60(2)(a) – (g) specifies all the relevant matters that must be considered when managing the risk of MSD and associated with HMT. Such matters include the physical nature of the work being performed, the environment and layout of the work area, and broader organisational and systems factors influencing the flow, pace and workload.

Research⁴ in the late 1990s showed the emerging linkages between psychosocial factors, organisational factors and MSD, which has been further strengthened in recent years⁵. These linkages are well established and should consider in an integrated way and not in isolation.

Effectively managing physical and psychosocial risk factors will positively impact on organisational measures, including injury rates and their severity, productivity, absenteeism and turnover.

Strategies to address health, safety and wellbeing should be holistic and target the work performed, the work environment and the workers' physical, emotional and mental capabilities and needs. The Safe Work Australia [Principles of good work design handbook](#) provides information on how to achieve good design of work and work processes.

It is important that organisations have a broad, holistic approach that focuses on the design of the work where physical and psychosocial hazards are managed together. As such, organisations can benefit from expertise in all three dimensions of the human factors and ergonomics discipline: physical, cognitive and organisational.

Inadequate HMT incident and injury investigations

Despite MSD being the most frequent and most costly injuries sustained in construction, incident and investigation reporting systems did not systematically and effectively identify or investigate MSD caused by HMT. Tools lacking in sensitivity to detect HMT risk and/or a lack of HMT skilled assessors resulted in the severity of musculoskeletal injury risk and outcomes being under rated. The onset of MSD is rarely immediately disabling, resulting in MSD usually not meeting current investigation escalation criteria for most PCs. Using skilled people and employing MSD specific investigation tools and escalation criteria is an important part of reducing the risk of re injury and future MSD.

Outmoded HMT training and induction

One method that is heavily promoted and widely used in the construction industry is the use of behaviour based training programs. These programs focus on the individual. Typically the worker is taught lifting techniques, back care, core stability and stretching programs.

⁴ Musculoskeletal Disorders and the Workplace: Low Back and Upper Extremities. National Research Council (US) and Institute of Medicine (US) Panel on Musculoskeletal Disorders and the Workplace. Washington (DC): [National Academies Press \(US\)](#); 2001.

⁵ Workload, stress and psychosocial factors as hazards for musculoskeletal disorders. (Macdonald, 2004)

These behaviour based programs do not reflect scientific research, evidence based practice or legislation regarding the control of HMT risks. These programs are low level administrative controls and better suited to worker rehabilitation or with worker wellbeing programs. While acknowledging behaviourally based training programs do not control risk, the majority of PC and subcontractors still cite them as control measures. For example, on SWMS, they should not be the main strategy to manage HMT in the workplace as they do not replace systematic HMT risk management.

Using a participative ergonomics approach, as part of the risk management process, can deliver good HMT risk management outcomes. Participative ergonomics is an evidence based risk management approach for reducing MSD where key people, including workers, problem solve, develop solutions and implement changes.

PCs need to develop the participative HMT risk management systems prior to delivering new training content that meets WHS legislation⁶. Training content that describes a HMT risk management process when that risk management system or participative process is not in place is likely to be ineffective and frustrating to all parties.

Paucity of research and development

The construction industry would benefit from industry specific research on how to improve control of manual tasks risks, particularly integrating this within a holistic risk management framework.

It is important that regulators, peak bodies and individual organisations undertake collaborative partnerships and sponsor research into reducing MSD in construction. Examples of potential research topics are:

- implementation of a holistic risk management approach including work health
- the impact of targeting MSD prevention on safety during high risk work
- organisational culture targeting work health issues
- leadership and management commitment targeting MSD prevention
- participative engagement of workforce targeting MSD prevention
- recruitment and development of staff with HMT risk management skills
- recruitment and development of staff with human factors and ergonomics/good work design knowledge and skills
- the use of HMT specific risk assessment tools.

⁶ *Work Health and Safety Act 2011* s19(3)(f), and *Work Health and Safety Regulation 2011* s39; and guidance outlined in Queensland's *Hazardous manual tasks code of practice 2011*.

5 Conclusion

The campaign identified deficits in current HMT risk management practices at both systems and operations levels, which directly contributed to HMT on work sites not being controlled in accordance with legislation. However, numerous areas where changes could be readily made were identified and many organisations have made changes as a result.

These findings challenge officers and senior managers to be better versed in HMT and energised to develop best practice systems and procedures to ensure, at a minimum, that there is compliance with HMT legislation. Reducing MSD in construction requires strong industry leadership and collaboration with all stakeholders to develop HMT risk management approaches, where all of the risks, including risks to health from HMT, are identified and managed holistically.

Participants were engaged throughout the assessment process. Executive management and organisational awareness and interest in HMT risk management processes increased as a result of the campaign.

Action to prevent MSD in the construction industry will have a significant and positive impact on health, safety, productivity and workforce sustainability into the future.

What's next?

WHSQ will undertake follow up assessments to measure change and assess HMT compliance. These will commence by the end of 2016.

6 Opportunities

Key leadership opportunities for consideration by PCs and construction industry stakeholders are outlined below.

6.1 All stakeholders

It is recommended that all stakeholders:

- demonstrate leadership and management commitment for HMT risk management
- collaborate to develop new approaches and resources to better integrate HMT into safety management systems
- consider sponsoring research and industry partnerships for shared learnings, skills development and innovative design changes
- share initiatives that reduce risk of MSD at project level, across organisations and with others in the industry to increase industry information and learning.

6.2 Principal contractors

It is recommended that PCs and other PCBUs consider:

- **making manual tasks a priority focus** by:
 - developing specific targets and lead performance indicators aimed at controlling manual tasks risks and reducing MSD
 - ensuring responsibilities and accountabilities for HMT targets and lead performance indicators for all levels of management
 - committing resources to this hazard area.
- **raise HMT awareness** by delivering education and information about HMT to subcontractors, key managers and decision makers that covers:
 - the extent of the problem in the construction industry
 - effective, evidence based risk management strategies
 - the business benefits of an integrated holistic approach
 - HMT impact on risk control in high risk work
 - HMT relevance to long term workforce sustainability and business viability.
- **provide HMT leadership** by demonstrating management commitment and leadership for HMT risk management through:
 - championing reduction of MSD
 - using the principles of good work design
 - engaging with workers and managers about HMT using a participative approach
 - developing leaders with HMT skills and knowledge to facilitate engagement and participation within the workforce and supply chain throughout the construction lifecycle
 - supporting and including a more prominent focus on HMT during internal and external audit processes.

- **implement a systematic HMT risk management process in the safety management system by:**
 - ensuring HMT specific elements are integrated in sufficient detail in all the PC’s workplace health and safety systems including in: policy, planning, implementation, hazard and risk management, training and competency, consultation communication, reporting, documentation, data, measuring and evaluation.
 - identifying and managing all processes likely to impact manual tasks risks, both physical and psychosocial during the planning and design phase including:
 - identifying and stating relevant HMT on the design register
 - referring prioritised HMT in typical core project activities to the relevant team such as a safe design forum or ergonomics, engineering or content expert
 - procuring goods and services.
 - systematically identifying and implementing controls as required under s60 of the Work Health and Safety Regulation 2011.
 - using appropriate HMT specific assessment and risk management tools for all relevant processes and documentation including audit checklists and incident investigations.
 - identifying and documenting prioritised HMT on a central risk register, particularly those HMT in core activities.
 - developing specific task controls for HMT in typical core activities, particularly where the subcontractor has no control over the sources of the risk, for example, installation of plasterboard that has specific sound or fire rating specifications.
 - using standards, based on detailed risk assessments, for the use of specified elimination and design risk controls for common, prioritised high risk manual tasks. These could be used, with minor customising, in SWMS and other procedures across projects and with subcontractors.
 - using a systematic, evidence based, legislatively compliant approach to HMT risk management which includes worker and subcontractor participation.
- **integrate manual task risk management across all hazards** by identifying the manual task and psychosocial (organisational) components in all work activities, including:
 - high risk construction work
 - adopting a broad, holistic approach to health and safety where all the risks are identified and managed in an integrated manner.
- **increase HMT competencies, knowledge and skills by:**
 - conducting a training needs analysis. Identify the competencies required for various tiers of management, designers, front line workers and subcontractors to the level required of their role such as:
 - due diligence with executives
 - the ability to manage HMT during planning, safe design, procurement and purchasing
 - the ability to advise and consult workers and managers and to lead teams of workers in a participative approach for the development of HMT controls.
 - providing HMT training that complies with the *Work Health and Safety Act 2011* s19(3)(f), and *Work Health and Safety Regulation 2011* s39; and guidance outlined in the *Queensland Hazardous manual tasks code of practice 2011*. Ensure manual task specific training is relevant to position for key decision makers including:
 - executive and senior managers
 - contracts and procurement managers
 - engineers and project managers
 - front line workers and subcontractors
 - safety advisors.

- considering recruiting, developing or contracting someone with human factors/ergonomics expertise.
- **align procurement and HMT procedures** by developing specific requirements for HMT risk management at the tender stage including for example:
 - the purchase of materials and supplies
 - how materials are to be handled including assistive equipment required
 - standards for subcontractors regarding HMT risk management including SWMS
 - use of specific HMT tools to assess tasks and equipment
 - implementation of participative ergonomics program for HMT
 - minimum standardised HMT training content for workers and subcontractors that complies with the legislation.
- **conduct more detailed MSD incident investigations** by:
 - reviewing the escalation criteria regarding MSD
 - ensuring high risk manual tasks are investigated using investigators with HMT skills and knowledge and suitable HMT specific risk assessment tools
 - including identification and assessment of workplace health risks (physical and psychosocial) in all investigations, particularly after serious and critical incidents
 - ensuring executive managers prioritise MSD based on analyses of disability, costs and impact of incidents.
- **increase HMT communication** by promoting key messages with all stakeholders about HMT risk management for example:
 - MSD are a priority
 - all stakeholders will be consulted regarding HMT risk management from the planning and design phase and throughout the lifecycle of the project.

References

Journal articles:

- Workload, stress and psychosocial factors as hazards for musculoskeletal disorders: *Journal of Occupational Health and Safety, Australia and New Zealand*. Volume 20 Issue 1 (Feb 2004)
MacDonald, Wendy
- “Work-related musculoskeletal disorders: the epidemiologic evidence and the debate” *Journal of Electromyography and Kinesiology*. Volume 14, Issue 1, February 2004, Pages 13–23. Punnett, L and Wegman, David H.

Publications:

- *Issues with measurement and reporting of Work Health and Safety performance: a review*: O’Neil, Dr Sharon; Martinov-Bennie, Professor Nonna and Cheung, Angela
- *Musculoskeletal disorders and the workplace: low back and upper extremities* (National Research Council and Institute of Medicine, 2001)
- Standards Australia. AS/NZS 4801:2001 *Occupational Health and Safety Management Systems- specifications and guidance for use*

Online resources:

- [Audit criteria – Office of the Federal Safety Commissioner](#)
- [Centre for Workplace Leadership](#)
 - [Study of Australian Leadership](#)
- [Guide to Best Practice for Safer Construction – CRC Construction innovation](#)
- [Model client resources – Office of the Federal Safety Commissioner](#)
- [Preconditioning for success. Characteristics and factors ensuring a safe build for the Olympic Park Health and Safety Executive \(HSE\)](#)
- [Safety initiative reports – Australian Constructors Association](#).
 - *Health and safety culture*. RMIT Centre for construction work health and safety research. Lingard, Helen; Zhang, Rita; Harley, James; Blismas, Nic; Wakefiled, Ron
 - *Safety in Design*. RMIT Centre for construction work health and safety research. Lingard, Helen; Pirzadeh, Payam; Harley, James; Blismas, Nic; Wakefiled, Ron

Glossary

Administrative control. A method of work, a process or a procedure designed to minimise risk but does not include an engineering control or the use of personal protective equipment (schedule 19).

Consultation. The process by which the organisation provides relevant information to workers and seeks and considers workers' views before it makes a decision and advises of the outcome in a timely manner.

Due diligence. Officers with a due diligence duty under *Work Health and Safety Act 2011* s27, includes the requirement for officers to:

- acquire and keep up to date knowledge of core hazards and risks associated with the business operations, including core HMT
- ensure that the organisation's safety management system is fit for purpose with appropriate resources and processes to eliminate or minimise risks to health and safety from work carried out as part of the conduct of the business, including HMT
- ensure processes for receiving and considering information regarding incidents, hazards and risks and the organisation is responding in a timely way to that information
- ensure that the business has, and uses processes for complying with duties or obligations under the *Work Health and Safety Act 2011*.

Hazardous manual task. A task that requires a person to lift, lower, push, pull, carry or otherwise move, hold or restrain any person, animal or thing that involves one of the following:

- repetitive or sustained force
- high or sudden force
- repetitive movement
- sustained or awkward posture.

A hazardous manual task is a type of hazardous work for which the risks to health and safety relating to musculoskeletal disorders associated with the manual task must be managed using a risk management approach to eliminate or minimise the risk.

HMT - hazardous manual task.

MSD - musculoskeletal disorder.

ManTRA - a manual tasks risk assessment tool.

Officer. A person who makes or participates in making decisions that affect the whole or a substantial part of the business. In the *Work Health and Safety Act 2011* (as per Act Schedule 5 Dictionary p342) officer means an officer within the meaning of section 9 of the *Corporations Act 2001* of the Commonwealth or another State within the meaning of section 247 or an officer of a public authority within the meaning of section 252.

Participative approach. A means of maximising the involvement of workers in problem solving and decision making processes in the workplace health and safety systems.

Participative ergonomics. An internationally recommended, evidence based risk management approach for reducing musculoskeletal disorders where key people, particularly workers with first-hand knowledge of the work, problem solve, develop solutions and implement changes in the workplace.

PERforM. An acronym for Participative Ergonomics for Manual Tasks program. PERforM provides a framework to help employers engage with workers at all levels to identify, assess and control manual tasks risks within their workplace. It is a simple manual task risk management program based on participative ergonomics.

Mental health hazards. Include but aren't limited to stress, violence, bullying and fatigue. The risk factors for work related stress include organisational, environmental and individual characteristics.

Safety management system (SMS). A set of elements that establish and describe a coordinated and systematic approach to managing health and safety risks in the workplace. Safety management systems include health and safety policies and procedures to achieve WHS objectives aimed at preventing injury and ill health to workers and providing a safe and healthy workplace. Safety management systems integrate planning, implementation and review processes with organisational management and consultative arrangements.

SAT. Slips assessment tool.

SWMS. Safe work method statement.

Appendices

Appendix 1

HMT risk management systems tool

Construction industry

Hazardous manual tasks risk management systems assessment

Advisory details

CISR code – LMCD	Date
CISR advisory No.	Region
Office	Inspector
Principal contractor	
ABN	
Legal name	Trading name
Head office address	
Contact details	
Name	
Phone	Email
Job title	
Name	
Phone	Email
Job title	
Name	
Phone	Email
Job title	
Name	
Phone	Email
Job title	

Below is a list of the key documents that may be viewed during the assessment. Please include any other documents that have relevance and demonstrate hazardous manual tasks risk management.

Document checklist	Viewed	
	Yes	No
Work Health and Safety (WHS) policy		
WHS plan		
<ul style="list-style-type: none"> • Objectives and targets 		
Procedures <ul style="list-style-type: none"> • Hazardous manual tasks (HMT) risk management <ul style="list-style-type: none"> - legislation - recruitment - resources - competency and training - consultation - risk assessment tools - safe design - procurement - investigations - data and reporting 		
Roles and responsibilities <ul style="list-style-type: none"> • position descriptions • key performance indicators 		
Consultation and communication records for internal and external stakeholders regarding HMT		
Hazard/risk register - HMT		
Safe design register - HMT		
Documented HMT risk management process (x2) undertaken for control of prioritised HMT in core activities from major project e.g.: <ul style="list-style-type: none"> • consultation with relevant stakeholders • reference to safe design forum • completed HMT risk assessments and controls implemented following hierarchy of controls • update to hazard register and WHS plan 		
Incident records for HMT that resulted in a musculoskeletal disorder (MSD)		
Incident investigation reports (x2) for a MSD caused by HMT		
Data and performance evaluation reports for MSD and HMT		
Induction training content for various workgroups including managers, workers		
HMT training content for various workgroups including managers, workers		
Board report which includes information about WHS performance		
Management meeting minutes which include HMT information		

Hazardous manual tasks risk management desktop assessment

When responding to the questions, if the organisation has the element and it is specific to HMT, tick **Y (Yes)**.

If the element exists but is not specific to HMT, tick **G (Generic)**.

If no element exists, tick **N (No)**.

Questions	Evidence guide	Y	N	Generic	Comments
Commitment, policy and planning					
Work health and safety policy and plan					
<p>1. Does the organisation have an OHS Policy? <i>Examples</i> The policy is:</p> <ul style="list-style-type: none"> • simple • easily understood • represents the organisation’s occupational health and safety (OHS) business risks • includes all hazards including HMT. 	View policy				
<p>2. Have manual tasks been identified as a priority hazard in the organisation? <i>Examples</i></p> <ul style="list-style-type: none"> • The work health and safety plan specifies the prevention of MSD from manual tasks as a priority hazard. • The plan includes objectives and targets for the prevention of MSD from HMT. • The plan has been reviewed and updated to reflect data and research for example: <ul style="list-style-type: none"> • The objective is to reduce the incidence and severity of MSD caused by HMT on all projects by 40 per cent over the next five years. • Targets include: <ul style="list-style-type: none"> ○ Reducing the number of MSD claims and costs on all projects by 30 per cent compared to previous similar projects. ○ Implement a specific number of controls that reduce the manual tasks risks and focus on elimination or re-design (target set as percentage of identified HMT). 	View: <ul style="list-style-type: none"> • Work Health and Safety plan • HMT objectives and targets • HMT specific procedures 				

Questions	Evidence guide	Y	N	Generic	Comments
<ul style="list-style-type: none"> ○ All business areas should follow HMT risk management procedures as per HMT regulation s60 and HMT COP 2011 and utilise HMT specific risk management tools. ○ The organisation should develop and implement an ergonomics and HMT risk management competency criteria and framework. ○ All key managers need to have a key performance indicator (KPI) against a HMT risk management target. ○ Key managers are to set HMT risk management target(s) in consultation with stakeholders (subcontractors, workers, supply chain). 					
<p>3. Are hazardous manual tasks procedures included in all relevant business decisions including design and procurement?</p> <p><i>Examples</i></p> <ul style="list-style-type: none"> ● The procedures for HMT risk management specify: <ul style="list-style-type: none"> – Compliance with the WHS legislation, specifically HMT regulation s60 and code of practice 2011. – Specific HMT risk management process including: <ul style="list-style-type: none"> ● manual tasks risk assessment tools to be used ● participative ergonomics throughout the risk management process ● consultation with and provision of HMT information to relevant stakeholders and subcontractors prior to and during the tender process specific to the scope of works that they are undertaking ● participation of a person who meets the human factors and ergonomics competency criteria ● realistic project programming, work scheduling and rostering to ensure effective risk management process sustained for life of project. <p><i>Safe design:</i></p> <ul style="list-style-type: none"> ● There is a documented process/procedure outlining: 	<p>View:</p> <ul style="list-style-type: none"> ● HMT specific procedures: <ul style="list-style-type: none"> – HMT risk management process – HMT tools to be used during audits, risk assessment and incident investigations – referral to safe design procedure – procurement procedure – HR procedures re hours of work, shift work ● recent procurement documents ● OHS in design risk register ● evidence of design review ● new revisions to design plan 				

Questions	Evidence guide	Y	N	Generic	Comments
<ul style="list-style-type: none"> - consultation with all relevant stakeholders during the planning and constructions stages - the procedures for HMT risk management in design and specifies: <ul style="list-style-type: none"> • when the principal contractor is involved in the design or has input into the design • HMT risk assessments are undertaken at the design stage to identify, assess and manage OHS buildability issues that may arise during construction • issues for the end user. - systematic referral of prioritised HMT to the safe design forum, for example, design changes were made to the following: <ul style="list-style-type: none"> • concrete slump increased to 100 mm to improve workability • corridors and work areas were redesigned to allow for use of scissor lifts and vacuum lifters when handling fire rated/sound proofed plasterboard and other sheet materials to reduce the manual tasks risks. - HMT are included in the OHS in design risk register. <p><i>Procurement</i></p> <ul style="list-style-type: none"> • There is a documented process/procedure outlining the specific HMT requirements to be included in all procurement activities and contracts for example, contracts specify: <ul style="list-style-type: none"> - purchase of plant and materials requires consultation and HMT risk management prior to purchase - communication with subcontractors. For example: <ul style="list-style-type: none"> • subcontractors are provided information prior to or during the tender process, so that project specific OHS hazards including HMT and head contractor prescribed controls can be incorporated into the subcontractor processes and safety planning for example: <ul style="list-style-type: none"> - how identified HMT are to be managed in core business activities and - these requirements were priced in to the contract - no lift policy for certain materials 	<ul style="list-style-type: none"> • designs that reflect changes where necessary • evidence that subcontractors are provided information prior to or during the tender process, so that project specific OHS hazards including HMT and head contractor prescribed controls can be incorporated into the subcontractor processes and safety planning (emails, letters) • pre-tender or pre-contract interview checklists including the discussion of project safety related information. • itemised list of prevention of MSD caused by HMT inclusions into tender/contractor packages. • evidence of communication of the project safety information, such as (but not limited to) email, document transmittal. • evidence of HMT risk management documents attached to purchase 				

Questions	Evidence guide	Y	N	Generic	Comments
<ul style="list-style-type: none"> - HMT risk management requirements for example, contracts specify: <ul style="list-style-type: none"> • subcontractors have knowledge, understanding of and compliance with HMT relevant legislation • subcontractor requirement to demonstrate an evidence based, systematic risk management approach for HMT including: <ul style="list-style-type: none"> - HMT assessment tools - participative risk management and - requirement to follow hierarchy of controls. 	<ul style="list-style-type: none"> request for plant/materials • completed HMT procedure compliance audits (e.g. evidence of outcome of referral of HMT to safe design forum, procurement packages to specify HMT specific criteria, training content in line with HMT COP 				
<p>4. Does the organisation invest in research and development regarding the prevention of MSD caused by HMT?</p> <p><i>Examples</i></p> <ul style="list-style-type: none"> • The organisation contributes to a collaborative research project that targets design and engineering controls for HMT in core business. • The organisation contributes to a collaborative research project that targets improved design of plant/materials in core business. • Funds have been allocated for the development of mechanical aids in collaboration with a materials handling company. 	<p>View:</p> <ul style="list-style-type: none"> • research proposals and plans, correspondence, outcomes 				
<p>5. Is there is an executive manager responsible specifically for overseeing the prevention of MSD from HMT?</p> <p><i>Example</i></p> <ul style="list-style-type: none"> • There is a position statement(s) or role description(s) that confirms allocation of responsibility for prevention of MSD from HMT and specifies the reporting requirements to senior management or board. 	<p>View:</p> <ul style="list-style-type: none"> • position statement/role description 				

Questions	Evidence guide	Y	N	Generic	Comments
<p>6. Do key managers have accountabilities and KPI for HMT risk management?</p> <p><i>Examples</i></p> <ul style="list-style-type: none"> • There are accountabilities and KPI including lead indicators specifically for HMT risk management for all levels of management including: <ul style="list-style-type: none"> - executive managers - project managers - engineers - site managers/supervisors and - OHS managers. • Performance evaluation procedures are undertaken (e.g. audits of compliance with HMT). 	<p>View</p> <ul style="list-style-type: none"> • position/role description • managers' KPI for HMT risk management • KPI specific to prevention of MSD from HMT • reports on KPI results • procedure audit results and outcomes 				
<p>7. Do key staff in the organisation have HMT risk management skills?</p> <p><i>Examples</i></p> <ul style="list-style-type: none"> • The safety professionals and others responsible for provision of reports, information and advice about HMT risk management: <ul style="list-style-type: none"> - understand and apply the HMT related legislation - have the practical experience, knowledge, understanding and application of ergonomic principles and HMT risk management - meet the human factors and ergonomics competency criteria and - have professional membership with relevant association/institute • Recruitment procedure includes competency criteria for example human factors and ergonomics competency in identified key roles. 	<p>View</p> <ul style="list-style-type: none"> • competency framework and criteria for HMT risk management/human factors and ergonomics • professional membership • recruitment procedure 				
<p>8. Are current HMT risk management interventions based on evidence and research?</p> <p><i>Examples</i></p>	<p>View:</p> <ul style="list-style-type: none"> • ergonomics/HMT risk management research articles 				

Questions	Evidence guide	Y	N	Generic	Comments
<ul style="list-style-type: none"> • People in key roles who have health and safety responsibilities promote evidence based HMT risk management practices for example participative ergonomics programmes such as PERforM. • The organisation does not promote behaviour based training programmes for example lifting techniques, back care, core stability and stretching programs for the main risk management strategy for HMT. • The organisation recognises that these behaviour based programmes should not be the main risk management strategy for HMT and understands why (e.g. these programs are not effective in controlling the risk of MSD as the risk factors are not changed.) <i>These training programs are administrative controls and have value within the worker health and well-being and MSD rehabilitation portfolios but do not replace systematic HMT risk management.</i> 	<ul style="list-style-type: none"> • evidence of attendance at relevant seminars/workshops. • HMT policies and procedures reflecting evidence based initiatives for example the implementation of participative ergonomics (e.g. PERforM) on all projects • use of the MAnTRA/other tool • current initiatives • consultant invoice(s) and • consultant engagement criteria/contract 				
<p>9. Are resources allocated to HMT activities and targets?</p> <p><i>Examples</i></p> <ul style="list-style-type: none"> • People in key roles who have health and safety responsibilities: <ul style="list-style-type: none"> – are allocated time for proactive work and HMT risk management – do systematic, specific HMT audits on all projects – have access to key decision makers for urgent issues – seek external expertise when needed for example an ergonomist depending on the complexity of the task being considered. • Funds are allocated for design solutions, equipment and maintenance including HMT. • Time is allocated for proactive preventative initiatives and HMT audits. 	<p>View</p> <ul style="list-style-type: none"> • Project audit schedules for HMT. Audit content completed with findings and actions signed off by relevant stakeholders. • Evidence that risks identified are controlled using hierarchy of control (meeting minutes, equipment purchase orders). • Reports identifying that HMT targets are met. • Emails, other correspondence, meeting 				

Questions	Evidence guide	Y	N	Generic	Comments
	minutes to and from key decision makers.				
Legislation					
<p>10. Is the relevant HMT legislation (WHS regulation part 4.2 and HMT code of practice) accessible within in the organisation and on site?</p> <p><i>Examples</i> HMT relevant legislation accessible:</p> <ul style="list-style-type: none"> • register • referenced in: <ul style="list-style-type: none"> - WHS plan - SWMS/JSA • technology – tablets 	<p>View:</p> <ul style="list-style-type: none"> • procedure for accessing legislation • OHS Legal and other requirements register • OHS plan and Job Safety Analysis (JSA)/Safe Work Method Statements (SWMS) samples (with relevant HMT legislation, identified/listed/summarized within) 				
Consultation and communication					
<p>11. Are all relevant stakeholders consulted throughout the HMT risk management process?</p> <p><i>Examples</i></p> <ul style="list-style-type: none"> • All relevant stakeholders are identified at the outset of the planning phase of the project regarding priority HMT. • Consultation includes relevant stakeholders such as workers, subcontractors, engineers, manufacturers, suppliers, designers and technical experts for example, an ergonomist depending on the complexity of the task being considered. • Subcontractors have opportunities to consult with the PC about risk control measures when the source of risk is outside scope of subcontractor to manage. • Consultation continues for the life of the project with relevant stakeholders. 	<p>View evidence of:</p> <ul style="list-style-type: none"> • process for identification of relevant stakeholders in the planning stage • meeting minutes and attendance at safe design forum • relevant stakeholder consultation during HMT risk management stages: <ul style="list-style-type: none"> - hazard ID - risk assessments - implementation of controls - monitor and review. 				

Questions	Evidence guide	Y	N	Generic	Comments
<p>12. Are workers consulted during HMT risk management?</p> <p><i>Examples</i></p> <ul style="list-style-type: none"> • Workers are consulted routinely in every stage of the risk management process including: <ul style="list-style-type: none"> – hazard ID – risk assessment – identification and implementation of controls – monitor and review. • Management are responsive to staff feedback positive and negative. • MSD/HMT standing agenda item at all OHS meetings. • Attendance is well supported (management attend and/or support staff attendance). • Management meetings include WHS as an agenda item, regularly focusing on MSD/ HMT and include: <ul style="list-style-type: none"> – actions arising from minutes delegated to a responsible person – sign off by relevant stakeholders after completion and review. • Senior managers regularly visit the site and discuss OHS issues specifically including HMT with site management and employees. 	<p>View:</p> <ul style="list-style-type: none"> • HMT audits and hazard and incident notifications • records of consultation about the above • completed reports and actions • worker consultation on completed risk assessments, identification of controls and during the monitoring and review process • OHS and management meeting agendas, minutes and attendance list includes stakeholders/ worker/worker representative • HMT communications (emails, safety alerts, posters, tool box talks) • evidence of site visit and outcomes actioned 				
<p>13. Is information about HMT disseminated to and from managers, workers and other stakeholders?</p> <p><i>Examples</i></p> <ul style="list-style-type: none"> • HMT related information is consistently and clearly communicated via a range of forums for example: notice boards, newsletters, safety alerts, tool box talks, meetings, and emails. 	<p>View:</p> <ul style="list-style-type: none"> • completed reports and actions • meeting agendas and minutes, attendance list • HMT communications (notice boards, emails, safety alerts, posters, tool box talks) 				

Questions	Evidence guide	Y	N	Generic	Comments
<ul style="list-style-type: none"> Relevant HMT legislation (WHS Regulation s60) and HMT code of practice is communicated within the organisation and on the project/site. 	<ul style="list-style-type: none"> records are available to demonstrate that workers have been advised of relevant project OHS legislative requirements including HMT and/or how to access relevant legislation toolbox/site meeting records and content induction content and records 				
Hazardous manual tasks risk management					
Hazard identification					
<p>14. Are HMT systematically identified?</p> <p><i>Examples</i></p> <ul style="list-style-type: none"> HMT are systematically identified during the project planning and throughout the life of the project by: <ul style="list-style-type: none"> inspecting the workplace consulting subcontractors and their workers reviewing available information for example <ul style="list-style-type: none"> safety meetings incident reports and injury data consulting with manufacturers, suppliers and others utilising industry knowledge and risk assessments from previous projects 	<p>View</p> <ul style="list-style-type: none"> Completed audits with evidence of: <ul style="list-style-type: none"> worker consultation consultation with other relevant stakeholders. musculoskeletal injury data evidence of consultation with stakeholders (emails, meeting minutes/attendance list) 				
<p>15. Is there a HMT register?</p> <p><i>Examples</i></p> <ul style="list-style-type: none"> Hazard/risk register includes HMT identified in the supply chain for example HMT due to the design of structure, choice of materials or suppliers' product specifications. 	<p>View:</p> <ul style="list-style-type: none"> HMT incident reports hazard/risk register <ul style="list-style-type: none"> updated 				

Questions	Evidence guide	Y	N	Generic	Comments
<ul style="list-style-type: none"> • HMT in core activities are included for example: <ul style="list-style-type: none"> - operation of plant - manual screeding, raking and finishing concrete - form work – erection and removal - steel fixing - manual handling and installation of the following materials <ul style="list-style-type: none"> ▪ landscaping materials <ul style="list-style-type: none"> - crib wall components - stone blocks - paving ▪ steel rebar ▪ formwork components ▪ scaffolding ▪ cement blocks ▪ fire rated/sound proof plasterboard ▪ other sheet materials (standard plasterboard, compressed fibre cement sheets) ▪ glass ▪ oversized mirrors ▪ air conditioning ▪ tiles. • The HMT register is reviewed and updated regularly. 					
Risk assessment and risk control					
<p>16. Are HMT systematically assessed?</p> <p><i>Examples</i></p> <ul style="list-style-type: none"> • The risk assessment considers the characteristics of a HMT including: <ul style="list-style-type: none"> - repetitive or sustained force - high or sudden force - repetitive movement - sustained and/or awkward posture - exposure to vibration. • HMT assessed risks are systematically prioritised. 	<p>View:</p> <ul style="list-style-type: none"> • names and roles of duty holders identified for participation in HMT risk management • stakeholders involved in risk assessments • HMT risk assessment/ management tools used 				

Questions	Evidence guide	Y	N	Generic	Comments
<ul style="list-style-type: none"> There is systematic referral of HMT to management meetings/ safe design forum/other. 	<ul style="list-style-type: none"> completed risk assessments with identified risk factors meeting minutes and attendance at safe design forum 				
<p>17. Are relevant stakeholders included in HMT risk assessments and identification of suitable controls?</p> <p><i>Examples</i></p> <ul style="list-style-type: none"> All duty holders are identified and included in risk assessments, including identification of who is responsible for the source of risk and implementation of controls. Workers participate in the HMT risk assessments and identification of suitable controls. 	<p>View:</p> <ul style="list-style-type: none"> Worker and other relevant stakeholders signed names against: <ul style="list-style-type: none"> hazard identification risk assessment and identification of sources of risk controls development and implementation purchasing equipment development of safety procedures trailing and reviewing manual tasks solutions before a final decision or purchase. 				
<p>18. Are suitable HMT risk assessment tools used?</p> <p><i>Examples</i></p> <ul style="list-style-type: none"> HMT risk assessments use specific tools to gather information about the risk factors and sources of risk, such as <i>Hazardous manual tasks code of practice 2011</i> (appendix D) Manual tasks risk management worksheet, PErforM (Participative Ergonomics for Manual Tasks) or ManTRA (Manual Tasks risk assessment tool). 	<p>View:</p> <ul style="list-style-type: none"> HMT risk assessment/management tools used. 				

Questions	Evidence guide	Y	N	Generic	Comments
<p>19. Are effective processes used during the identification and implementation of HMT risk controls?</p> <p><i>Examples</i></p> <ul style="list-style-type: none"> • If there is a risk then the source of the risk is also determined. For example, work area design and layout, nature, size, weight or number of things handled in performing the manual task, systems of work and the environment the manual task is performed. • Participative decision making is used and includes workers, supervisors, managers and relevant others. • HMT assessed risks are systematically prioritised. • There is systematic referral of HMT to management meetings/ safe design forum/other. • At the safe design forum consideration is given to: <ul style="list-style-type: none"> – the manual tasks risks when designing the structure and selecting materials – the choice of materials – specifically the nature, size, weight or number of materials that will be handled – how, when and where the materials are to be handled and stored and the manual tasks risks when manually handled. • A person with HMT risk management competency participates in HMT risk management processes. • A person with ergonomics expertise is consulted about complex HMT. • There is an action plan including identification of controls and person/team/committee responsible for: <ul style="list-style-type: none"> – approving the controls – putting controls in place – agreed implementation and review date – review of controls to ensure that the risk of MSD has been controlled for the HMT. 	<p>View:</p> <ul style="list-style-type: none"> • control implementation plans • plans actioned • sign off from stakeholders (subcontractors/engineers/project manager) and workers • purchase invoice for controls, emails/correspondence • evidence of HMT that have been referred to safe design forum (agendas, outcomes and attendees) • meeting minutes, emails • agenda and sign off of risk controls at management meetings/safe design forum • update to hazard register following MSD incident investigation reports, audit findings • risk assessments/ investigations/JSA/ SWMS/ SWP signed off by a competent person and other relevant stakeholders 				

Questions	Evidence guide	Y	N	Generic	Comments
Reporting and performance evaluation / monitoring and measurement					
<p>20. Are OHS performance reports including MSD caused by HMT produced and regularly reviewed by senior management?</p> <p><i>Example</i></p> <ul style="list-style-type: none"> • OHS performance including MSD caused by HMT is reported in the annual report. Data includes: <ul style="list-style-type: none"> - number of MSD claims and costs - number of controls implemented that reduce the manual tasks risks and focus on elimination or re-design (target set as percentage of identified HMT). 	<p>View:</p> <ul style="list-style-type: none"> • reports • review and update of : <ul style="list-style-type: none"> - OHS plan - procedures to reflect MSD prevention strategies and HMT risk management. 				
<p>21. Do reports include targets and lead performance indicators for the prevention of MSD caused by HMT?</p> <p><i>Examples</i></p> <ul style="list-style-type: none"> • Targets include: <ul style="list-style-type: none"> - Reduce the number of MSD claims and costs on all projects by 30 per cent compared to previous similar projects. - Specified number of controls implemented that reduce the manual tasks risks and focus on elimination or re-design (target set as percentage of identified HMT). • Lead performance indicators (PPI) that target prevention of MSD from HMT are included in reports to senior management. Examples of PPI include the following: <ul style="list-style-type: none"> • High risk manual tasks in core activities such as concreting, steel fixing and form work identified and targeted at construction Safety in Design forums at planning stage. • Number of identified high risk work groups for MSD injury that have participated in a participative ergonomics programme. 	<p>View:</p> <ul style="list-style-type: none"> • reports <ul style="list-style-type: none"> • MSD/HMT targets included in reports to the board • MSD data • MSD research • MSD/HMT targets and activities • lead performance indicators. 				

Questions	Evidence guide	Y	N	Generic	Comments
<ul style="list-style-type: none"> • Manual task specific training for: <ul style="list-style-type: none"> - managers - supervisors - workers. • Consultative networks established to improve design related issues in: <ul style="list-style-type: none"> - supply chain - plant and materials - structures (buildability). • Safety meetings where manual tasks is a standing agenda item. • Management meetings where manual tasks is an agenda item. • Toolbox talks on HMT risk management. • Number of workgroups using Participative Ergonomics programme for example PErforM. • Use of Participative Ergonomics programme after incidents. • Number of controls implemented that reduce the manual tasks risks and focus on elimination or re-design. • Time frames set and met for implementation of changes. • Specific inclusions (identified high risk manual tasks) in site safety plan. • Tendering criteria specifying requirement for improved risk management specific to each contractors' high risk manual tasks. • Specific inclusions regarding manual task risk management in contracts. • Contractor inductions include the information about the PErforM initiative or other participative ergonomics programs. • Monitoring and reviewing manual tasks related activities for example, control implementation action date, sign off and closure. • Recruitment criteria of key staff includes human factors and ergonomics competency. • Work related MSD/HMT evidence based research undertaken and reported on. 					

Questions	Evidence guide	Y	N	Generic	Comments
Incident investigation, corrective and preventative action					
<p>22. Are MSD caused by HMT incident notifications systematically reported and investigated on all projects and reported to head office?</p> <p><i>Examples</i></p> <ul style="list-style-type: none"> • There is an incident reporting process in place. • Risk assessments are undertaken on all MSD caused by HMT incidents. • Information about HMT (Hazard ID, consultation, audit and incident investigation results and actions) is reported systematically to head office? 	<p>View:</p> <ul style="list-style-type: none"> • incident reporting procedure • HMT incident register • completed reports • emails, reports communications, meeting minutes with head office staff • updates to hazard register • HMT procedures. 				
<p>23. Do the completed investigation reports go to all the following?</p> <ul style="list-style-type: none"> • OHS committee • senior executive • project manager • line manager(s) • OHS staff • subcontractor • relevant stakeholders? 	<p>View:</p> <ul style="list-style-type: none"> • reports tabled at <ul style="list-style-type: none"> – OHS committee meeting – senior executive meeting • report distribution list • emails. 				
<p>24. Are there procedures regarding the incident response following a MSD caused by a manual task?</p> <p><i>Examples</i></p> <ul style="list-style-type: none"> • All HMT/MSD incidents are investigated using HMT risk management procedure and HMT risk management tools. • Participative ergonomics is utilised during the investigation process. 	<p>View:</p> <ul style="list-style-type: none"> • HMT investigation procedure. • Completed report with risk assessment attached and sign off from relevant stakeholders: 				

Questions	Evidence guide	Y	N	Generic	Comments
<ul style="list-style-type: none"> Investigation reports identify risk factors, review of controls, recommendations, consultation, timeframes for implementation. Proactive audits are scheduled. Audit reports are distributed to management/others. Recommendations and corrective actions are implemented in specified timeframes. Changes in the procedures resulting from incident investigations and corrective and preventative actions are implemented and recorded. 	<ul style="list-style-type: none"> HMT risk management tools used. Records of re-evaluation of work practices after the investigation has been completed and reported. Evidence of project OHS plan, risk register, procedures and SWMS being updated as a result of investigation. 				
<p>25. Do those listed below participate in the investigation?</p> <ul style="list-style-type: none"> Workers, line managers and relevant stakeholders? Competent person (able to demonstrate knowledge and skills regarding HMT risk management/meets competency criteria)? 	<p>View:</p> <ul style="list-style-type: none"> Name(s) of workers, line managers, technical expert and their sign off on completed reports and actions. Evidence of human factors and ergonomics competency of lead investigator/investigation team member. 				
<p>26. Is a senior manager(s) responsible for actioning controls following prioritised MSD injury incidents?</p> <p><i>Examples</i></p> <ul style="list-style-type: none"> Reporting lines are clearly defined including roles and responsibilities for actions. The senior executive is responsible for actioning controls for prioritised MSD injury incidents. The safety committee review incident and reports. 	<p>View:</p> <ul style="list-style-type: none"> procedures role description/KPI incident report report tabled at committee meeting evidence of implemented controls and sign off from responsible person. 				

Questions	Evidence guide	Y	N	Generic	Comments
Training and competency					
<p>27. Is there a documented process for providing training and ensuring competency in the knowledge of health and safety legislation including HMT and HMT risk management principles and practices for key roles (senior managers, engineers, site managers, OHS managers and supervisors)?</p> <p><i>Examples</i></p> <ul style="list-style-type: none"> • There is a training competency framework that includes criteria for human factors and ergonomics skills for key roles in the organisation. • There is a competency register that includes both executive and operational managers. 	<p>View:</p> <ul style="list-style-type: none"> • training procedures for HMT <ul style="list-style-type: none"> • content • competency framework/criteria • competency register. 				

Questions	Evidence guide	Y	N	Generic	Comments
<p>28. Do all inductions (head office and on site) include relevant information about HMT risk management including HMT policies and procedures?</p> <p><i>Examples</i></p> <ul style="list-style-type: none"> • There is consistency of induction and training HMT content and requirements across all projects. • Induction includes information about HMT risk management including HMT policies and procedures. 	<p>View:</p> <ul style="list-style-type: none"> • induction content for HMT • induction records for head office and site 				
<p>29. Do workers receive suitable and adequate training about HMT?</p> <p><i>Examples</i></p> <ul style="list-style-type: none"> • Training is provided to all workers. • Training content is at a level relevant to their position. • Delivery in suitable formats for workers (e.g. simple language, non-English speaking background). • Training is based on hazardous manual tasks regulation and code of practice 2011. • All subcontractors are required to provide training that is aligned with the <i>Hazardous manual tasks code of practice 2011</i> to all their workers. 	<ul style="list-style-type: none"> • training procedures • training content for HMT • training records for <ul style="list-style-type: none"> - mangers - subcontractors - workers. 				
Management review					

Questions	Evidence guide	Y	N	Generic	Comments
<p>30. Are MSD from HMT included in the mangement review process?</p> <p><i>Examples</i></p> <ul style="list-style-type: none"> • Current work related MSD research is reported on. • There is a documented process at the senior management level for identifying and capturing organisational wide OHS issues and ensuring that lessons learnt are communicated throughout the organisation. • Data is accessible, reviewed and analysed. • Both data and research are used to set priorities/objectives and PPI's. • There is a separate risk management or health and safety committee as a subset of the board, chaired by a senior executive with OHS responsibilities and KPI. • Minutes of senior management group or board meetings where significant MSD incidents, MSD from HMT performance and other significant OHS issues are reviewed and addressed. • Reports or presentations are made to senior management group or board. 	<p>View:</p> <ul style="list-style-type: none"> • data and interpretation report • documented process at the senior management level for identifying and capturing organisational wide OHS issues including HMT and ensuring that lessons learnt are communicated throughout the organisation • position description(s) identify review responsibilities for HMT • changes to hazard register and procedures that reflect HMT issues • amended WHS plan to reflect changes in objectives and targets. 				

Appendix 2

Site verification assessment tool

Construction industry Hazardous manual tasks site verification assessment tool

Assessment details

CISR code – LMCSV	Date
CISR assessment no.	Region
Regional office	Inspector
Subcontractor 1 details	
Legal name	Trading name
ABN	Address
Contact details	
Name	
Phone	
Job title	
Name	
Phone	
Job title	
Subcontractor 2 details	
Legal name	Trading name
ABN	Address
Contact details	
Name	
Phone	
Job title	
Name	
Phone	
Job title	
Principal contractor (PC)	
What is the category of construction work taking place? Non-residential/Commercial/Civil	Project name
Project number	ABN
Legal name	Trading name
Site address	
Contact details	
Name	
Phone	
Job title	
Name	
Phone	
Job title	

Hazardous manual tasks site verification assessment tool

Manual task risk management ⁷	Evidence	Comments
SUBCONTRACTOR 1		
1. What are the hazardous manual tasks (HMT) on this job?	<ul style="list-style-type: none"> • observations • talk to workers View: <ul style="list-style-type: none"> • risk/hazard register • risk assessments • SWP/JSAs 	
Task 1 assessment		
2. What is the manual task that is being assessed?		
a. Name of task or activity:		
b. Location where task occurs:		
c. Who performs the task:		
d. General description:		
3. Does the above task involve any of the following risk factors? Tick all that are relevant. <input type="checkbox"/> repetitive or sustained force <input type="checkbox"/> repetitive movement <input type="checkbox"/> sustained and/or awkward posture <i>(‘Repetitive’ means that a movement or force is performed more than twice a minute and ‘sustained’ means a posture or force is held for more than 30 seconds at a time.)</i>		
4. Does the task involve long duration? Tick all that are relevant. Is the task done:		

⁷ Refer to the [Hazardous manual tasks code of practice 2011](#) or the [Overview of the hazardous manual tasks regulation and code of practice 2011](#) for guidance.

Manual task risk management ⁷	Evidence	Comments
<input type="checkbox"/> for more than a total of two hours over a whole shift? <input type="checkbox"/> continuously for more than 30 minutes at a time?		
5. Does the task involve high or sudden force? <input type="checkbox"/> Yes <input type="checkbox"/> No		
6. Does the task involve vibration? <input type="checkbox"/> Yes <input type="checkbox"/> No		
7. Is there a risk of musculoskeletal disorder (MSD) (i.e. the risk has not been controlled)? <i>The task involves a risk of MSD if you have ticked any boxes or answered 'yes' to either:</i> <input type="checkbox"/> Question 3 AND Question 4 <input type="checkbox"/> Question 5 <input type="checkbox"/> Question 6 (<i>If you answered 'yes' to Question 6 the task may be a risk but it will require further investigation. Further guidance on vibration can be obtained from www.worksafe.qld.gov.au</i>). <input type="checkbox"/> Yes <input type="checkbox"/> No If you ticked yes then the task is a risk and risk control is required.		
8. What are the sources of uncontrolled risk that are outside the scope of the subcontractor to control? <i>Tick all that are relevant and provide details.</i> <input type="checkbox"/> problem with the nature, size, weight or number of things handled in performing the manual task <input type="checkbox"/> problem with the design or layout of the work area <input type="checkbox"/> problem with the environment in which the manual task is performed <input type="checkbox"/> problem with the systems of work <input type="checkbox"/> none Provide details:		
Verification of systems		

Manual task risk management ⁷	Evidence	Comments
<p>9. Are workers consulted on any of the following with regards to HMT? <i>Tick all that are relevant.</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> hazard identification <input type="checkbox"/> risk assessment and identification of sources of risk <input type="checkbox"/> controls development and implementation <input type="checkbox"/> purchasing equipment <input type="checkbox"/> development of safety procedures <input type="checkbox"/> trialling and reviewing manual tasks solutions before a final decision or purchase 	<ul style="list-style-type: none"> • Confirm with workers 	
<p>10. Did the PC induction include information about HMT procedures and risk management that was easily understood by you and your workmates?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>Ask workers if they:</p> <ul style="list-style-type: none"> • know how to report hazard/incident • are aware of and understand HMT risk management and hierarchy of control 	
<p>11. Have workers received training about HMT on this project?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<ul style="list-style-type: none"> • Confirm with workers 	
<p>12. Does manual tasks training include information on:</p> <ul style="list-style-type: none"> • manual task risk management including: <ul style="list-style-type: none"> - the characteristics of hazardous manual tasks - specific manual task risks and the measures in place to control them. • how to perform manual tasks safely (including the use of mechanical aids, tools, equipment and safety working procedures), and • how to report a problem or maintenance issue. <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>Ask workers if they know and understand:</p> <ul style="list-style-type: none"> • the HMT risk factors • HMT risks associated with task 1 (or other HMT) • controls implemented and • how to perform the task safely 	
<p>13. Do the subcontractor managers and/or supervisors resolve the manual tasks issues raised by workers following the hierarchy of controls?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<ul style="list-style-type: none"> • Confirm with workers 	

Manual task risk management ⁷	Evidence	Comments
<p>14. Do the PC managers and/or supervisors resolve the manual tasks issues raised by workers following the hierarchy of controls? <input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>Confirm with:</p> <ul style="list-style-type: none"> • workers • foreman • subcontractor management 	
<p>15. Have there been any HMT or musculoskeletal injuries reported on this project? <input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>Confirm with:</p> <ul style="list-style-type: none"> • workers • foreman 	
<p>16. Has task 1 been reported to the PC by the subcontractor as a HMT? <input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>Confirm with:</p> <ul style="list-style-type: none"> • workers • foreman 	
<p>17. Are proactive audits undertaken that include HMT on this project? <input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>Confirm with:</p> <ul style="list-style-type: none"> • workers • foreman 	
<p>18. Have there been any corrective action(s) implemented as a result of a musculoskeletal injury or identification of a HMT on this project? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><i>Please describe:</i></p>	<p>Confirm with:</p> <ul style="list-style-type: none"> • workers • foreman <p>View:</p> <ul style="list-style-type: none"> • risk assessments, • OHS meeting minutes and actions • worker/subcontractor sign off on corrective actions 	
<p>19. Have any procedures/work practices been updated as a result of a HMT risk assessment or MSD incident on this project? <input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>Confirm with:</p> <ul style="list-style-type: none"> • workers • foreman <p>View:</p> <ul style="list-style-type: none"> • procedures 	

Manual task risk management ⁷	Evidence	Comments
<p>20. Are HMT controls monitored and reviewed by the subcontractor? <input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<ul style="list-style-type: none"> • Confirm with workers <p>View:</p> <ul style="list-style-type: none"> • risk assessments, amendments to work procedure 	
<p>21. Did the PC consult with subcontractor 1 and other stakeholders before work started on the project about HMT relevant to the subcontractor's scope of works? <input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>Confirm with:</p> <ul style="list-style-type: none"> • foreman • subcontractor management 	
<p>22. During the planning stage, did the PC assess and manage any specific HMT (for example manual screeding and raking concrete, manual handling of rebar, manual handling of fire rated/sound rated plasterboard) operation of plant with consideration of any of the following? Tick all relevant.</p> <ul style="list-style-type: none"> <input type="checkbox"/> postures, movements, forces and vibration relating to the HMT; and <input type="checkbox"/> the duration and frequency of the HMT; and <input type="checkbox"/> workplace environmental conditions that may affect the HMT or the worker performing it; and <input type="checkbox"/> the design of the work area for example: <ul style="list-style-type: none"> • site access • access and space inside • ability to use mechanical aids: and <input type="checkbox"/> the layout of the workplace; and <input type="checkbox"/> the systems of work used; and <input type="checkbox"/> the nature, size, weight or number of persons, animals or things involved in carrying out the HMT for example: <ul style="list-style-type: none"> • Choice of material including: <ul style="list-style-type: none"> – the specifications such as size, weight and shape of the materials; and – how the material will be handled safely: <ul style="list-style-type: none"> • during delivery; • on site; and • during installation. 	<p>Confirm with:</p> <ul style="list-style-type: none"> • foreman • subcontractor management <p>View:</p> <ul style="list-style-type: none"> • completed risk assessments that include: <ul style="list-style-type: none"> • identification of the risk factors: <ul style="list-style-type: none"> • repetitive or sustained force • high or sudden force • repetitive movement • sustained or awkward posture • exposure to vibration • duration • sources of risk • controls that have been implemented • site specific procedures that reflect these controls 	

Manual task risk management ⁷	Evidence	Comments
<p>23. At the tendering stage for the work, were controls for HMT discussed and specified? <input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>Confirm with:</p> <ul style="list-style-type: none"> • foreman • subcontractor management <p>View:</p> <ul style="list-style-type: none"> • SWP/SWMS that reflect application of the hierarchy of controls such as telehandlers, trolleys, sheet lifters, smaller sheets, alternative materials 	
SUBCONTRACTOR 2		
<p>24. What are the hazardous manual tasks on this project?</p>	<ul style="list-style-type: none"> • observations • talk to workers <p>View:</p> <ul style="list-style-type: none"> • risk/hazard register • risk assessments • SWP/JSAs 	
Task 2 assessment		
<p>25. What is the manual task that is being assessed? e. Name of task or activity:</p>		
<p>f. Location where task occurs:</p>		
<p>g. Who performs the task:</p>		
<p>h. General description:</p>		

Manual task risk management ⁷	Evidence	Comments
<p>26. Does the above task involve any of the following risk factors? <i>Tick all that are relevant.</i></p> <p><input type="checkbox"/> repetitive or sustained force</p> <p><input type="checkbox"/> repetitive movement</p> <p><input type="checkbox"/> sustained and/or awkward posture</p> <p><i>(‘Repetitive’ means that a movement or force is performed more than twice a minute and ‘sustained’ means a posture or force is held for more than 30 seconds at a time.)</i></p>		
<p>27. Does the task involve long duration? <i>Tick all that are relevant.</i></p> <p>Is the task done:</p> <p><input type="checkbox"/> for more than a total of two hours over a whole shift</p> <p><input type="checkbox"/> continuously for more than 30 minutes at a time?</p>		
<p>28. Does the task involve high or sudden force?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>		
<p>29. Does the task involve vibration?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>		
<p>30. Is there a risk of musculoskeletal disorder (MSD) (i.e. the risk has not been controlled)? <i>The task involves a risk musculoskeletal disorder if you have ticked any boxes or answered ‘yes’ to either:</i></p> <p><input type="checkbox"/> Question 26 AND Question 27</p> <p><input type="checkbox"/> Question 28</p> <p><input type="checkbox"/> Question 29 <i>(If you answered ‘yes’ to Question 6 the task may be a risk but it will require further investigation. Further guidance on vibration can be obtained from www.worksafe.qld.gov.au).</i></p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If you ticked yes then the task is a risk and risk control is required.</p>		

Manual task risk management ⁷	Evidence	Comments
<p>31. What are the sources of uncontrolled risk that are outside the scope of the subcontractor to control? <i>Tick all that are relevant and provide details.</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> problem with the nature, size, weight or number of things handled in performing the manual task <input type="checkbox"/> problem with the design or layout of the work area <input type="checkbox"/> problem with the environment in which the manual task is performed <input type="checkbox"/> problem with the systems of work <input type="checkbox"/> none <p>Provide details:</p>		
Verification of systems		
<p>32. Are workers consulted on any of the following with regards to hazardous manual tasks (HMT)? <i>Tick all that are relevant.</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> hazard identification <input type="checkbox"/> risk assessment and identification of sources of risk <input type="checkbox"/> controls development and implementation <input type="checkbox"/> purchasing equipment <input type="checkbox"/> development of safety procedures <input type="checkbox"/> trialling and reviewing manual tasks solutions before a final decision or purchase 	<ul style="list-style-type: none"> • Confirm with workers 	
<p>33. Did the PC induction include information about HMT procedures and risk management that was easily understood by you and your workmates?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>Ask workers if they :</p> <ul style="list-style-type: none"> • know how to report hazard/incident • are aware of and understand HMT risk management and hierarchy of control 	
<p>34. Have workers received training about HMT on this project?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<ul style="list-style-type: none"> • Confirm with workers 	

Manual task risk management ⁷	Evidence	Comments
<p>35. Does manual tasks training and includes information on:</p> <ul style="list-style-type: none"> • manual task risk management including: <ul style="list-style-type: none"> - the characteristics of hazardous manual tasks - specific manual task risks and the measures in place to control them • how to perform manual tasks safely (including the use of mechanical aids, tools, equipment and safety working procedures), and • how to report a problem or maintenance issue. <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>Ask workers if they know and understand:</p> <ul style="list-style-type: none"> • the HMT risk factors • HMT risks associated with task 2 (or other HMT) • controls implemented and • how to perform the task safely 	
<p>36. Do the subcontractor managers and/or supervisors resolve the manual tasks issues raised by workers following the hierarchy of controls?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<ul style="list-style-type: none"> • Confirm with workers 	
<p>37. Do the PC managers and/or supervisors resolve the manual tasks issues raised by workers following the hierarchy of controls?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>Confirm with:</p> <ul style="list-style-type: none"> • workers • foreman • subcontractor manager 	
<p>38. Have there been any HMT or musculoskeletal injuries reported on this project?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>Confirm with:</p> <ul style="list-style-type: none"> • workers • foreman 	
<p>39. Has task 2 been reported to the PC by the subcontractor as a HMT?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>Confirm with:</p> <ul style="list-style-type: none"> • workers • foreman 	
<p>40. Are proactive audits undertaken that include HMT on this project?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>Confirm with:</p> <ul style="list-style-type: none"> • workers • foreman 	

Manual task risk management ⁷	Evidence	Comments
<p>41. Have there been any corrective action(s) implemented as a result of a musculoskeletal injury or identification of a HMT on this project? <input type="checkbox"/> Yes <input type="checkbox"/> No Please describe:</p>	<p>Confirm with:</p> <ul style="list-style-type: none"> • workers • foreman <p>View:</p> <ul style="list-style-type: none"> • risk assessments, amendments to work procedure 	
<p>42. Are HMT controls monitored and reviewed by the subcontractor? <input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>View:</p> <ul style="list-style-type: none"> • risk assessments, amendments to work procedure 	
<p>43. Have any procedures/work practices been updated as a result of a HMT risk assessment or MSD incident on this project? <input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>Confirm with:</p> <ul style="list-style-type: none"> • workers • foreman • view procedures 	
<p>44. Did the PC consult with the subcontractor and other stakeholders before work started on the project about HMT relevant to the subcontractor's scope of works? <input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>Confirm with:</p> <ul style="list-style-type: none"> • foreman • subcontractor manager 	
<p>45. During the planning stage, did the PC assess and manage any specific HMT (for example manual screeding and raking concrete, manual handling of rebar, manual handling of fire rated/sound rated plasterboard) operation of plant with consideration of any of the following? Tick all relevant. <input type="checkbox"/> postures, movements, forces and vibration relating to the hazardous manual task; and <input type="checkbox"/> the duration and frequency of the hazardous manual task; and <input type="checkbox"/> workplace environmental conditions that may affect the hazardous manual task or the worker performing it; and <input type="checkbox"/> the design of the work area for example:</p>	<p>Confirm with:</p> <ul style="list-style-type: none"> • foreman • subcontractor management <p>View:</p> <ul style="list-style-type: none"> • completed risk assessments that include: <ul style="list-style-type: none"> • identification of the risk factors: <ul style="list-style-type: none"> • repetitive or sustained force 	

Manual task risk management ⁷	Evidence	Comments
<ul style="list-style-type: none"> • site access • access and space inside • ability to use mechanical aids: and <input type="checkbox"/> the layout of the workplace; and <input type="checkbox"/> the systems of work used; and <input type="checkbox"/> the nature, size, weight or number of persons, animals or things involved in carrying out the hazardous manual task for example: <ul style="list-style-type: none"> • Choice of material including: <ul style="list-style-type: none"> - the specifications such as size, weight and shape of the materials; and - how the material will be handled safely: <ul style="list-style-type: none"> • during delivery; • on site; and • during installation. 	<ul style="list-style-type: none"> • high or sudden force • repetitive movement • sustained or awkward posture • exposure to vibration • duration • sources of risk • controls that have been implemented • site specific procedures that reflect these controls 	
<p>46. At the tendering stage for the work, were controls for HMT discussed and specified?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>Confirm with:</p> <ul style="list-style-type: none"> • foreman • subcontractor management <p>View:</p> <ul style="list-style-type: none"> • SWP/SWMS that reflect application of the hierarchy of controls such as use of telehandlers, trolleys, sheet lifters, smaller sheets, and alternative materials. 	
PC HMT systems		
<p>47. Is there a hazard/risk register for this project?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>View:</p> <ul style="list-style-type: none"> • hazard/risk register 	
<p>48. Does the register include HMT?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>View:</p> <ul style="list-style-type: none"> • hazard/risk register 	

Manual task risk management ⁷	Evidence	Comments
<p>49. Are tasks 1 and 2 included on the PC hazard/risk register? <input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>View:</p> <ul style="list-style-type: none"> hazard/risk register 	
<p>50. Did you, the PC consult with subcontractors and others in the planning stage about any HMT relevant to the scope of works? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A</p>	<p>View:</p> <ul style="list-style-type: none"> meeting minutes, emails, hazard register, completed risk assessment agenda and sign off at safe design forum 	
<p>51. During the planning stage, did you, the PC assess and manage any specific HMT (for example manual screeding and raking concrete, manual handling of rebar, manual handling of fire rated/sound rated plasterboard) operation of plant with consideration of any of the following? Tick all relevant.</p> <ul style="list-style-type: none"> <input type="checkbox"/> postures, movements, forces and vibration relating to the HMT; and <input type="checkbox"/> the duration and frequency of the HMT; and <input type="checkbox"/> workplace environmental conditions that may affect the HMT or the worker performing it; and <input type="checkbox"/> the design of the work area for example: <ul style="list-style-type: none"> <input type="checkbox"/> site access <input type="checkbox"/> access and space inside <input type="checkbox"/> ability to use mechanical aids; and <input type="checkbox"/> the layout of the workplace; and <input type="checkbox"/> the systems of work used; and <input type="checkbox"/> the nature, size, weight or number of persons, animals or things involved in carrying out the hazardous manual task for example: <ul style="list-style-type: none"> • Choice of material including: <ul style="list-style-type: none"> - the specifications such as size, weight and shape of the materials; and - how the material will be handled safely: <ul style="list-style-type: none"> • during delivery; • on site; and • during installation. 	<p>View:</p> <ul style="list-style-type: none"> hazard/risk register OHS in design risk register risk assessments including relevant stakeholders evidence of design review new revisions to design plan designs reflect changes where necessary evidence that subcontractors are provided information prior to or during the tender process, so that project specific OHS hazards including HMT and head contractor prescribed controls can be incorporated into the subcontractor processes and safety planning-emails/letters pre-tender or pre-contract interview checklists including the discussion of project safety related information including HMT. 	

Manual task risk management ⁷	Evidence	Comments
51. Continued.	<ul style="list-style-type: none"> • itemised list of prevention of MSD caused by HMT inclusions into tender/contractor packages. • evidence of communication of the project safety information, such as email, document transmittal • evidence of HMT risk management documents attached to purchase request for plant/materials 	
52. Do key staff on this project have HMT risk management skills? <input type="checkbox"/> Yes <input type="checkbox"/> No	View: <ul style="list-style-type: none"> • recruitment process • competency framework and criteria for HMT risk management/human factors and ergonomics • professional membership in relevant association/ institute 	
53. Are workers consulted with regards to HMT during every stage of risk management? <input type="checkbox"/> Yes <input type="checkbox"/> No	View - Worker names against: <ul style="list-style-type: none"> • hazard identification • risk assessments and identification of sources of risk • controls development and implementation • purchasing equipment • development of safety procedures • trialling and reviewing manual tasks solutions before a final decision or purchase 	

Manual task risk management ⁷	Evidence	Comments
<p>54. Do HMT risk assessments, audits and investigations include identification of the HMT risk factors?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>View:</p> <ul style="list-style-type: none"> • risk assessments • all HMT risk factors assessed i.e., repetitive movement, sustained or awkward postures, repetitive or sustained forces. • tasks involving long duration are assessed • HMT risk assessments consider tasks involving high or sudden force • HMT risk assessments consider tasks involving vibration 	
<p>55. Are suitable HMT assessment tools used?</p> <p><i>Examples</i></p> <ul style="list-style-type: none"> • HMT risk assessments use specific tools to gather information, such as Hazardous Manual Tasks Code of Practice (appendix D), Manual tasks risk management worksheet, PErforM (Participative Ergonomics for Manual Tasks) or ManTRA (Manual Tasks risk assessment tool), SAT, force gauge <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>View:</p> <ul style="list-style-type: none"> • HMT risk assessment and management tools used 	
<p>56. Was Task 1 risk assessed by you, the PC in consultation with the subcontractor and relevant others during the construction stage?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A</p>	<p>View:</p> <ul style="list-style-type: none"> • meeting minutes, emails, hazard register, completed risk assessment • agenda and sign off at safe design forum 	

Manual task risk management ⁷	Evidence	Comments
<p>57. Was Task 2 risk assessed by you, the PC in consultation with the subcontractor and relevant others during the construction stage? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A</p>	<p>View:</p> <ul style="list-style-type: none"> meeting minutes, emails, hazard register, completed risk assessment, agenda and sign off at safe design forum 	
<p>58. What risk controls were implemented by you, the PC for Task 1? Tick all that are relevant. <input type="checkbox"/> Level 1: Elimination <input type="checkbox"/> Level 2: Engineering, substitution, or isolation <input type="checkbox"/> Level 3: Administration or personal protective equipment (PPE) <input type="checkbox"/> None <input type="checkbox"/> N/A Include details:</p>	<p>View:</p> <ul style="list-style-type: none"> sign off from stakeholders (subcontractors/engineers/project manager) workers purchase invoice, emails/correspondence 	
<p>59. What risk controls were implemented by you, the PC for Task 2? Tick all that are relevant. <input type="checkbox"/> Level 1: Elimination <input type="checkbox"/> Level 2: Engineering, substitution, or isolation <input type="checkbox"/> Level 3: Administration or personal protective equipment (PPE) <input type="checkbox"/> None <input type="checkbox"/> N/A Include details:</p>	<p>View:</p> <ul style="list-style-type: none"> sign off from stakeholders (subcontractors/engineers/project manager) workers purchase invoice, emails/correspondence, 	
<p>60. Are implemented HMT controls monitored and reviewed by you, the PC? <input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>View:</p> <ul style="list-style-type: none"> risk assessments, sign off from stakeholders 	

Manual task risk management ⁷	Evidence	Comments
<p>61. Is a manual tasks risk assessment always conducted when a HMT is identified or when an incident related to the performance of a hazardous manual task is reported?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>View:</p> <ul style="list-style-type: none"> • HMT incident register and completed reports 	
<p>62. Are proactive audits undertaken specifically targeting HMT on this project?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>View:</p> <ul style="list-style-type: none"> • audit checklist • risk assessments and tools used • completed audits • actions taken as result of findings 	
<p>63. Have there been any corrective action(s) implemented as a result of a musculoskeletal injury or identification of HMT on this project?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>View:</p> <ul style="list-style-type: none"> • control implementation plans • plans actioned • sign off from stakeholders (subcontractors/engineers/project manager) workers • purchase invoice for controls, emails/correspondence • evidence of HMT that have been referred to safe design forum <ul style="list-style-type: none"> - agendas - outcomes - attendees • meeting minutes, emails • agenda and sign off of risk controls at management meetings/safe design forum 	

Manual task risk management ⁷	Evidence	Comments
63. Continued.	<ul style="list-style-type: none"> • update to hazard register following MSD incident investigation reports, audit findings • risk assessments/ investigations/JSAs/ SWMS/ SWP signed off by a competent person and other relevant stakeholders 	
64. Has the project OHS plan and/or hazard/risk register been updated as a result of an HMT risk assessment or MSD incident? <input type="checkbox"/> Yes <input type="checkbox"/> No	View: <ul style="list-style-type: none"> • evidence of project OHS plan • risk register • procedures being updated as a result of investigation 	
65. Have any procedures/work practices been updated as a result of an HMT risk assessment or MSD incident on this project? <input type="checkbox"/> Yes <input type="checkbox"/> No	View: <ul style="list-style-type: none"> • procedures 	
66. Is information about HMT (Hazard ID, consultation, audit and incident investigation results and actions) reported to head office? <input type="checkbox"/> Yes <input type="checkbox"/> No	View: <ul style="list-style-type: none"> • emails, reports communications, meeting minutes with head office staff 	
67. Does your PC induction include information about HMT procedures and risk management that was easily understood by all your workers? <input type="checkbox"/> Yes <input type="checkbox"/> No	View: <ul style="list-style-type: none"> • induction content. Refers to: <ul style="list-style-type: none"> • how to report an injury/hazard • HMT procedures • HMT risk management and the hierarchy of control as per the regulation and HMT COP 	

Manual task risk management ⁷	Evidence	Comments
<p>68. Have all workers received training about HMT on this project?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>View:</p> <ul style="list-style-type: none"> • worker training records 	
<p>69. Do you, the PC view or audit subcontractor HMT training content and records to ensure consistency and quality of HMT training on this project?</p> <p><i>Example</i></p> <ul style="list-style-type: none"> • Manual tasks training is suitable and adequate and includes information on: <ul style="list-style-type: none"> • manual task risk management including: <ul style="list-style-type: none"> • the characteristics of hazardous manual tasks • specific manual task risks and the measures in place to control them - how to perform manual tasks safely (including the use of mechanical aids, tools, equipment and safety working procedures), and - how to report a problem or maintenance issue. <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>View:</p> <ul style="list-style-type: none"> • HMT training policy and procedure • training content • subcontractor contract requirements re training • training audit results • worker training records 	

Appendix 3

Post assessment survey questions

Leadership in major contractors: Post assessment participant survey

Thank you for participating in the Workplace Health and Safety Queensland Leadership in major contractors: preventing sprain and strain injuries campaign. Your feedback is appreciated and will assist us in meeting the needs of the construction industry.

The survey is being conducted using Survey Monkey which is not based in Australia. Information you provide on this survey will be stored on a server located outside of Australia. By completing this survey, you agree to this arrangement. Information collected by this survey will not be used for any other purposes.

Which of the following best applies to you?

- I am a **CEO/Executive** likely to have officer duties under the *Work Health and Safety Act 2011*.
- I am a **Safety Manager** likely to report on safety to the Officer or the Board.
- I am a **Safety Advisor** likely to report to the Safety Manager.
- I am a **Manager** likely not to be an officer and likely not to be part of the health and safety team.

My job title is: _____

1. Is leadership required to manage hazardous manual tasks and prevent work related musculoskeletal disorders in the construction industry? Yes/No
2. Did participation in the campaign's advisory assessments assist you in identifying gaps in your organisation's hazardous manual tasks risk management? Yes/No
3. Did participation in the campaign raise awareness about hazardous manual tasks risk management with senior and/or executive managers? Yes/No
4. Since participating in this campaign, have hazardous manual tasks been identified as a priority hazard in your organisation? Yes/No
5. Have you made any changes as result of the assessment findings? Yes/No

If yes, please tick all changes

- Introduction of specific targets/lead performance indicators to reduce the incidence of musculoskeletal disorders caused by hazardous manual tasks
- Responsibility/accountabilities against the targets assigned to both senior operational and senior executive levels
- Use of hazardous manual tasks specific risk assessment tool(s)
- Development of hazardous manual tasks risk management/ergonomics competency criteria for key staff
- Recruitment of person(s) with hazardous manual tasks risk management knowledge and skills and/or human factors/ergonomics expertise
- Provision of training in hazardous manual tasks risk management to key staff at the level required of their role
- Updated and amended manual tasks policy and procedures
- Principal contractor implementation of participative ergonomics program for example the PERforM program
- Inclusion of hazardous manual tasks risk management requirements for subcontractors during procurement phase for example, subcontractors required to use hazardous manual tasks assessment tool; implement the PERforM program;

- Allocation of resources for hazardous manual tasks /musculoskeletal disorder prevention
 - Other - please describe
6. Do you plan to make any changes within the next 6 months as a result of the assessment findings? Yes/No
If yes, please describe.
7. How useful would you find the following to assist you in managing hazardous manual tasks at your workplace?
- Very useful Moderately useful Not very useful
- Webinars and podcasts
 - Web based information
 - Printed information
 - Films
 - Industry magazines
 - Social media for example Facebook, Twitter, other
 - Mobile technology for example ergonomics apps (PERforM, ManTRA, accelerometer, slips assessment tool [SAT])
 - Access to Workplace Health and Safety Queensland staff with knowledge about construction hazardous manual tasks risk management
 - Compliance focus on the Work Health and Safety Regulation 2011, s60 during audits and site inspections
 - Other (please specify)
8. What would help the construction industry better manage hazardous manual tasks risks?
- Inclusion of hazardous manual tasks in Federal Safety Commission audit criteria
 - Industry focus group to discuss hazardous manual tasks issues and identify strategies for the prevention of work related musculoskeletal disorders
 - Industry workshops
 - Hazardous manual tasks risk management presentations/case studies
 - Construction industry specific occupational health conference/seminar
 - Increased focus on hazardous manual tasks risk management by industry associations
 - Undergraduate training in hazardous manual tasks/human factors and ergonomics for project managers/engineers/architects/OHS/health professionals
 - RTOs to have standardised minimum hazardous manual tasks training content
 - Other - please describe
9. How satisfied have you been with the following regarding the campaign process?
- Very satisfied Moderately satisfied Not very satisfied
- The overall assessment process
 - Advisory versus compliance approach
 - Specific focus on hazardous manual tasks

- Opportunity for assessment feedback and discussion
- Hazardous manual tasks systems assessment tool
- Hazardous manual tasks site verification assessment tool

10. What could Workplace Health and Safety Queensland do differently next time?

Please describe

11. Do you have any other comments?

Thank you for your time and participation.

Appendix 4

Focus group questions

Leadership in major contractors: preventing sprains and strains campaign WHSQ focus group

The aim of this focus group is to get WHSQ inspector and advisor feedback about the campaign.

The focus group questions are as follows:

- During your site assessment, what existing MSD prevention initiatives and higher order controls did you see where risk of MSD was eliminated or minimised on site?
- What were the gaps in the safety management systems and their implementation?
- What actions have PCs taken in response to the assessments?
- What were the barriers to HMT risk management?