

1. INTRODUCTION

More than a quarter of the injuries reported each year by NASC members to enforcing authorities are associated with manual handling and NASC analysis show that the majority of scaffold related manual handling injuries are sprains and strains to the upper body, shoulders, arms, wrists, hands and fingers.

Many scaffolders suffer long term effects from poor handling techniques or work-related upper limb disorders (WRULD's) through the repetitive nature of scaffolding operations. Scaffolding has been referred to as a 'young man's game', with many leaving the industry prematurely due to manual handling related injuries or ill health.

Therefore, manual handling is the most significant occupational health hazard faced by the scaffolding industry today. Very rarely do scaffolders reach retirement age still working on the spanner!

Scaffolders spend most of their time lifting and handling scaffolding materials under a variety of conditions. Manual handling is an inherent part of the scaffolding trade. The specialist skills and techniques used by scaffolders when handling heavy and often unwieldy materials are the basic enabling skills of the scaffolding industry.

In the average working day, a scaffolding gang can typically handle over 15 tonnes of materials. The average scaffolder, in their working life, could handle more than 150,000 tonnes of scaffolding materials, the equivalent of Cunard's cruise ship the Queen Mary II.

The nature of the job dictates that scaffolders must be mentally alert to the inherent dangers of a physically strenuous job.

Several factors in scaffolding can make manual handling tasks difficult. Scaffolders are often required to:

- support loads, often in awkward positions.
- move heavy and unwieldy materials.
- carry loads over rough, uneven ground or within buildings.
- carry out highly repetitive tasks.

Some items of scaffolding material are of such a weight that they require special handling techniques to prevent injury e.g. 6.4m (21ft) scaffold tube, 3.9m (13ft) scaffold board, a bag of loose fittings, long ladders or beams. Although scaffolders do require certain physical capabilities most of the more strenuous, awkward or unwieldy tasks rely more upon special techniques than pure strength.

The recommendations within this guidance note should help scaffolding operatives and their employers reduce the risk of injury and long-term health problems associated with manual handling in scaffolding.

2. LEGISLATION

The Management of Health and Safety at Work Regulations 1999 require employers to make a suitable and sufficient assessment of the risks to the health and safety of their employees whilst at work. Where this general assessment indicates the possibility of risks from the manual handling of loads, the requirements of the Manual Handling Operations Regulations 1992 must be followed.

The Manual Handling Operations Regulations 1992 (MHO) apply to all scaffolding work, including yard operations. They set out a framework for employers to tackle the risk from manual handling. Under these regulations, if you cannot avoid manual handling and there is a risk of injury, then you must assess the manual handling operations and take steps to reduce the risk of injury to the lowest level reasonably practicable.

The Construction (Design and Management) Regulations 2015 (CDM) apply to most construction work. Under CDM, everyone involved in the construction process must give adequate regard to health and safety. For manual handling this is especially appropriate for the Architects, Designers and Principal Contractors when considering the layout of the site and access for the scaffolding contractor and materials.

Good layout of site and access arrangements could mean that mechanical handling could be used to minimize the amount of manual handling associated with the movement of materials as opposed to the construction / striking a scaffold structure.

Risk associated with movement of materials can be reduced through:

- Employing mechanical handling.
- Introducing partial mechanism.
- Assessing the risk of manual handling tasks.

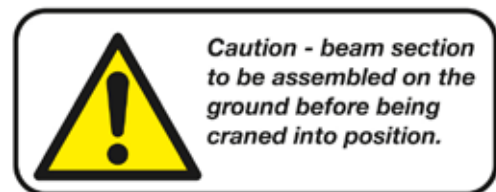


Figure 1

CDM duties extend to temporary works design. Scaffold Design Engineers must consider manual handling hazards and where significant risks cannot be designed-out then such significant hazards or hazardous work sequences that remain should be highlighted to the scaffolders on the drawings.

In addition to these statutory duties, employers have a common law duty of care towards employees to take all reasonable steps to prevent foreseeable manual handling injuries.

The Health and Safety Executive (HSE) does not publish an Approved Code of Practice (ACoP) for the Manual Handling Operations Regulations, but instead produces general guidance on manual handling at work which represents good practice. This guidance is very general and not specific to any trade or task. It contains information about establishing loads for lifting and lowering that **MUST** be considered in its entirety, as it is often misinterpreted or misquoted. There is no maximum load specified in the HSE guidance, as all manual handling operations must be subject to a manual handling risk assessment.

3. PLANNING FOR MANUAL HANDLING

Scaffolding contractors must consider manual handling as an integral part of the planning process. Estimators, management and supervisors must consider manual handling as part of the initial risk assessment process when they are surveying and considering the scope for the job. Manual handling issues should be raised with the client and considered together as part of the pre-contract negotiations and pre-start meetings. Arrangements to reduce carrying distances and manual handling risks on site could include:

- **Access to site for vehicles and materials**
 - How close can vehicles be parked, or materials stored to the workplace, to minimise carry distances?
 - Are there any time / security constraints for materials being delivered or collected?
 - Are there any road closures or highway permits required, to allow the vehicle to be adjacent to the workplace?
 - Are there any safety considerations because of vehicle movement – is a Banksman required?

- Local or site traffic restrictions one-way systems, waiting or parking limits that may hinder vehicle access?
 - Is the terrain suitable for the vehicles? If not, who's responsible for preparing the ground?
 - **Loading and unloading requirements**
 - Is there a specific location identified for delivery and removal of materials?
 - Will there be fall prevention requirements for unloading / loading vehicles at site?
 - **Storage of materials onsite and at the workplace**
 - Is there a specific laydown area, storage facilities or satellite storage facilities at the workplace?
 - **Use of shared mechanical handling equipment e.g. forklift truck, hoists or cranes**
 - Are mechanical means available when required?
 - Who is to operate the equipment?
 - Are all machinery operators competent for the equipment they intend to use e.g. hoist operators to be trained, is a slinger / signaller required?
 - Are the ground conditions suitable for manual handling of materials?
-

Study #1 – Hoists

A NASC member has invested in a fleet of small goods hoists that attach to the scaffold for the purpose of raising and lowering scaffolding materials on taller structures.

The main benefit of these hoists on taller scaffolds has proven to be efficient, both in the physical effort required and human resources used. Typically, scaffolding contractors will chain materials (hand to hand) requiring more manpower or use a rope and wheel which is time consuming and causes fatigue. The hoists can carry many more items at a time. Often customers see these hoists in use by the scaffolders and ask for the hoist to be left on hire, thereby generating further business.

3.1 Avoiding Manual Handling

Where it has been assessed that there is a risk of injury from manual handling, the first consideration should be whether the load needs to be handled at all, or whether the requirement for handling can be minimised. The scope for eliminating the handling of loads in most scaffolding operations is very limited. However, through careful planning, organisation and, where appropriate, innovative scaffold design, manual handling risks can be avoided or reduced for some scaffolding tasks.

In most cases, the planning and organisation of material deliveries and storage areas can reduce carrying distances and the amount of handling required. Where load-handling operations are essential, consideration should be given to the use of mechanical handling, for example by the use of lifting equipment onsite such as forklifts, cranes and hoists. Arrangements should be made with client to agree the use of shared mechanical handling equipment at the planning stage of each contract or job (see Study #1 above).

More and more scaffolding contractors are seeing the benefits from greater use of mechanical handling equipment, for example the use of demountable body vehicles, lorry-loader cranes, hoists and winches (Figures 2, 3 & 4).



Figure 2 – Examples of goods hoists adapted for scaffold materials.

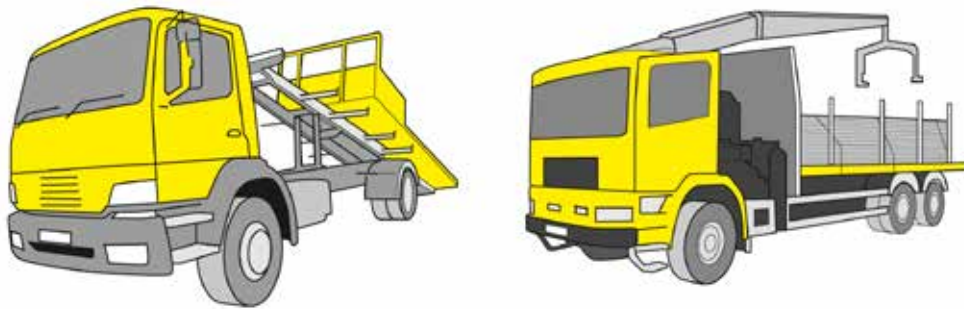


Figure 3 – Examples of mechanical handling equipment for scaffold materials.



Figure 4 – Examples of site mechanical handling equipment utilised for scaffolding.

3.2 Carrying out a manual handling assessment

Under the Manual Handling Operations Regulations 1992 (as amended) the employer has legal duties to:

- Avoid the need to carry out manual handling operations wherever possible.
- If manual handling cannot be avoided the task should be automated or mechanised in some way, in order to reduce the amount of manual handling required.
- If manual handling cannot be avoided, an employer must assess the risks involved with the operations and take steps to avoid them.

This assessment is necessary to ensure that employees do not suffer injuries from manual handling tasks and it is important to note that there is no maximum weight given for manual handling tasks.

Health & Safety Executive (HSE) Manual handling assessment charts (MAC tool) – helps assess the risks posed by lifting, carrying and team manual handling activities. The MAC tool also assists the assessor to understand, interpret and categorise the level of risk of the various known risk factors associated with these activities. It also has a numerical and colour coding score system to highlight high-risk manual handling tasks.

Using the MAC tool will help to identify high-risk manual handling activities within the workplace. However, the MAC tool is not appropriate for all manual handling operations and may not comprise a full risk assessment. To be 'suitable and sufficient', a risk assessment will normally need to take account of additional information such as individual capabilities and should conform to the requirements in the Manual Handling Operations Regulations 1992.

Manual Handling Assessment Charts (MAC tool)

SG6 contains an example Manual Handling Risk Assessment Form.

3.3 Scaffold Material Weight

Detailed below are approximate weight of scaffold material.

Item	Weight	Item	Weight	Item	Weight
4.0m ladder beam	48.0kg	4.0m Alloy Beam (750mm deep)	32.0kg	4.0m Alloy Beam (450mm deep)	21.0kg
5.0m tube	20.9kg	2.4m tube	10.40kg	1.5m tube	6.5kg
3.0m Metal Ladder	20.0kg	1.0m TRADLOC Transoms	8.5kg	4 +2 Extendable transom	8.1kg
20 doubles	24.0kg	35 clips	23.0kg	20 sleeves	22.0kg
4.0m scaffold board	20.0kg	3.0m scaffold board	15.4kg	2.4m scaffold board	12.3kg
3.0m System Upright	16.5kg	2.5m System Deck	20.0kg	2.5m System Bridging Ledger	18.0kg
2.5m System Ledger	12.0kg	2.5m System Toe board	6.0kg	1.0m System U-transom	5.0kg

When making a more detailed assessment the following categories should be considered:

- The TASK
- The INDIVIDUAL CAPABILITY
- The LOAD
- The working ENVIRONMENT

(These can be easily remembered by the acronym TILE)

Each of these on its own can have an effect, although, more commonly, it will be a combination of these factors that influences the risk of a manual handling injury. When carrying out a manual handling assessment, it is important that the activity is taken as a whole and the interaction between these four characteristics is considered. Consultation with your workers, and those who have had past experience of such work, can be of considerable assistance when identifying manual handling hazards.

Task

- The nature of the task – find out how much reaching, bending, stooping, stretching and twisting is involved.
- The position of the load relative to the handler is important in determining the degree of control and effort required to do the task. If a load has to be lifted above head height, then the degree of control and effort needed will be greater than if the activity were carried out at waist height e.g. when topping out a standard on a tall hemp compared to a short one.
- The frequency and duration of the handling are important in determining the degree of risk. Where there are repetitive lifting operations combined with repeated bending, twisting and reaching over a period of time, the effect of all these tasks added together significantly increases the likelihood of injury, e.g. chaining materials in a restricted space or working on a short lift.

Individual Capability

- Does the job require someone of unusual height or strength?
- Does the individual have an existing health problem which increases the risk?
- An individual's age, strength, level of skill and experience will affect how much a person can safely handle.
- It is recognised that scaffolding requires certain physical capabilities, but it is more important to utilise the specialist techniques of the trade developed over decades, known as kinetic handling techniques.

Load

- The nature of the load: is it heavy, bulky, hard to grasp?
- The weight, size, shape and stability of the load all contribute to the degree of control and effort needed for the activity.
- The unwieldy nature in which the load needs to be handled e.g. long components held vertically such as a hoisted tube, or away from the centre of gravity when passing out scaffold boards in advance to form a working platform.

Environment

- The nature of the working environment: is it hot, cold, windy or poorly lit?
- Working at height adds another dimension to manual handling tasks and scaffolders must ensure that they create a safe working platform so that manual handling at height does not increase the risk of a fall or even the risk of manual handling injury (All work at height must be carried out in accordance with the latest edition of NASC Safety Guidance SG4). The risk of falling objects from poor manual handling techniques also needs to be considered when working at height.
- Are there slopes, uneven ground or poor access arrangements? Poor ground conditions make slips and trips more likely.
- Constraints on posture (such as confined or restricted spaces) increase the degree of control and effort needed for the task, increasing the risk of injury.
- Carrying items on slopes requires greater effort than carrying on the level.
- Adverse weather conditions need to be considered, as carrying sheet materials in windy conditions could make the manual handling task more difficult.

If manual handling cannot be avoided then the objective for employers is to reduce the possible harmful effects of manual handling to as low a level as is reasonably practicable.

As manual handling is an inherent part of scaffolding, the manual handling risk assessment does not necessarily need to be recorded as a separate assessment and should be considered as part of the general risk assessment, method statement or scaffold plan.

3.3. Training, Information and Instruction

- Providing information and training alone will not ensure safe manual handling.
- The first objective should always be to design the handling operations to be as safe as reasonably practicable.
- Manual handling training is important to further manage the risk of injury if the task cannot be avoided and you have already taken action to reduce the risk.
- However, on its own, it can't overcome:
 - a lack of mechanical aids;
 - badly designed tasks;
 - unsuitable loads;
 - an unsuitable working environment.
- The information covered by manual handling training should be specific to the job and should include:
 - manual handling risk factors and how injuries can happen;
 - appropriate systems of work for the individual's tasks and environment;
 - use of mechanical aids;
 - how to carry out safe manual handling, including good handling techniques;
 - practical work relevant to the job, to allow the trainer to identify and put right anything the trainee is not doing safely;
 - how to report symptoms and injuries.
- SG6 Manual Handling in the Scaffolding Industry – (User Guide):
 - SG6 User guide is made available to all operatives either from CISRS approved training providers during their industry recognised training COTS, Apprenticeship, Pt1, Pt2, and Advanced Scaffolding courses, or directly from their employer.



Figure 5 – CISRS Manual Handling Training.

3.4 Physical Capabilities, Health Screening & Surveillance

It is important employers ensure that scaffolding operatives, including drivers, labourers and yard staff, have the physical capabilities to carry out the manual handling aspects of their job. The health screening and surveillance arrangements carried out by employers could include, in addition to statutory medicals and those required by clients:

- **Pre-employment Medical Questionnaires** – can be used to vet potential new employees to ensure they have the necessary physical capabilities for the role and identify pre-existing conditions to be considered.
- **Baseline Medical Examination** – used to establish the base fitness for work and to help identify any underlying health problems that might affect an employee's ability to work safely.
- **Health Surveillance Medicals** – carried out periodically, at a frequency to suit the nature of the work and determined by the employers own risk assessment.
- **Return to Work Medical Checks** – an employee returning to work after injury or an extended period of absence from ill health, could have a medical check to prove their fitness.
- **Physical Capabilities** – taking the action described here will help prevent injuries and ill health, but you can't prevent all musculoskeletal disorders (MSDs). Encourage workers to report any signs and symptoms to you or their worker representative at an early stage, before they become more serious, so you can take steps to reduce the risk. If your workers have developed symptoms, consider taking advice from an occupational health provider on a worker's fitness for work, and any restrictions or adaptations to their work that may be required.

Case Study #2 – Medical Questionnaire

A man was employed as a yard labourer in a busy scaffolding yard. He received a company induction and some basic training from the yard foreman, which included some handling techniques and a manual handling video. After a few days he was placing scaffold tube into a stillage, when his back seized and was unable to move. An ambulance was called, as he was in a great deal of pain and he was taken to hospital for treatment.

When he was interviewed as part of the accident investigation, it came to light that he had been involved in a car accident some years earlier that required major surgery to a back injury. Doctors had advised him not to carry out any heavy lifting for the rest of his life. However, he had spent his compensation and was desperate for work to avoid having his home repossessed. He had lied on the pre-employment questionnaire that he completed as part of the application form. A subsequent personal injury claim was successfully defended by the scaffolding contractor.

4. MANUAL HANDLING RISKS IN SCAFFOLDING

Scaffolding contractors need to consider manual handling from both a strategic level for the business as a whole and on a job-by-job basis. This section explores the steps employers and scaffolding operatives can take to reduce the risk of injury where manual handling cannot be avoided. We also look at the measures taken by employers that can be considered as best practice.

4.1 Manual Handling Aids

The use of manual handling aids can benefit scaffolding operations by increasing efficiency and reducing the risk of fatigue and manual handling related injuries.

- **Gin Wheel and Rope** – if used correctly are a safe method of raising and lowering materials when working at higher levels. However, this tends to be laborious as only small quantities of materials can be raised or lowered at a time (Figure 6).
- The gin wheel and rope must be serviced and inspected in accordance with the Lifting Operations and Lifting Equipment Regulations 1998 (LOLER).
- Care must be taken to segregate the work area and ensure the suitable knots and hitches are used to secure materials. Employers must ensure that all operatives including labourers have been trained in the safe use of gin wheels, ropes and knots.
- *Note:* The use of gin wheels is part of the Construction Industry Scaffolders' Record Scheme (CISRS) syllabus.

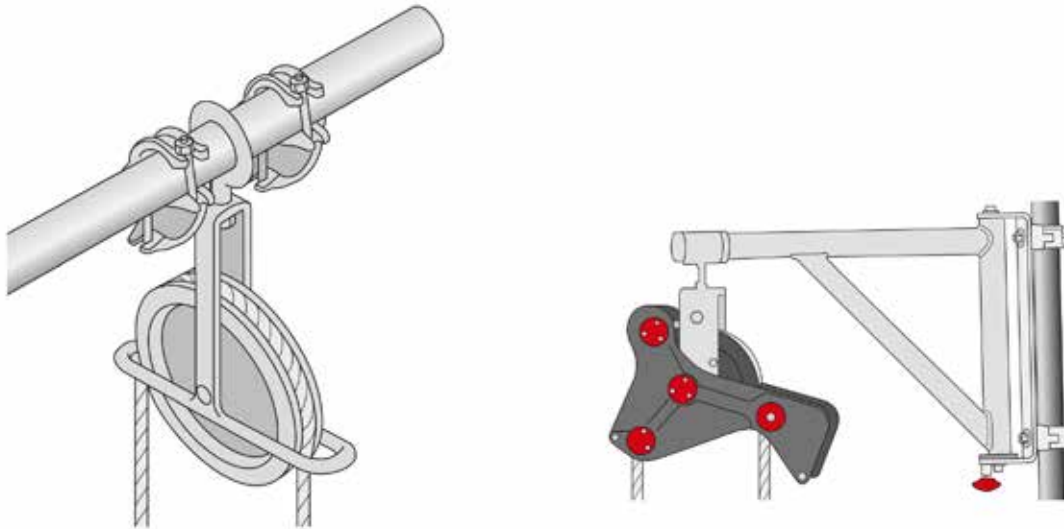


Figure 6 – Traditional gin wheel and braked version.

- Hand Lines (or light lines as they are sometimes referred to) – offer a similar advantage to scaffolders as gin wheels but at lower levels where materials cannot be passed hand to hand.

Case Study #3 – Hand lines

A major scaffolding contractor issues each gang with a 10m rope and a karabiner or hook spliced to the end. The use of the hook is for quick attachment and release, that securely fits to scaffold components and ancillaries such as fitting bags. For tubes and boards standard knots and hitches are used.



- **Fitting Bags** – are used for raising and lowering quantities of loose scaffold fittings. Bags can be passed from hand to hand or by rope. Proprietary bags and buckets are marked with a maximum load which must be observed (Figure 7).



Figure 7 – Fitting bag and bucket displaying the load rating.

- **Trolleys, trucks and wheelbarrows** – can be used to move bulk materials around site where mechanical handling equipment is not accessible e.g., building floors (Figures 8 & 9).

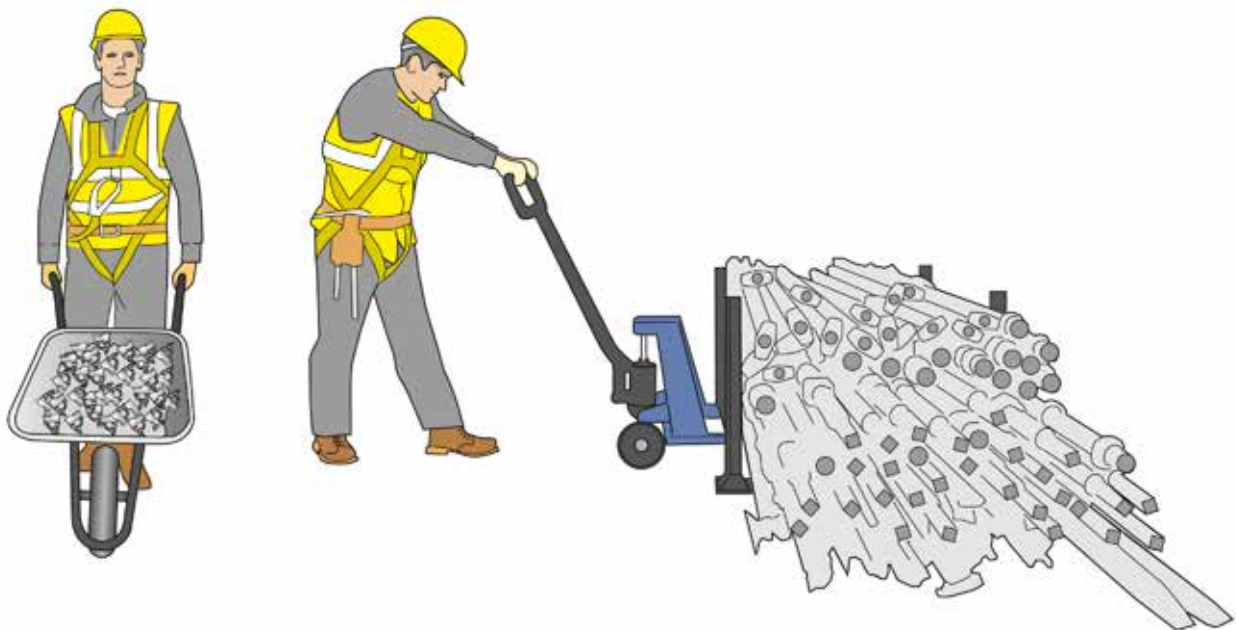


Figure 8 – Pallet trucks and wheelbarrows are examples of manual handling aids used in scaffolding operations.

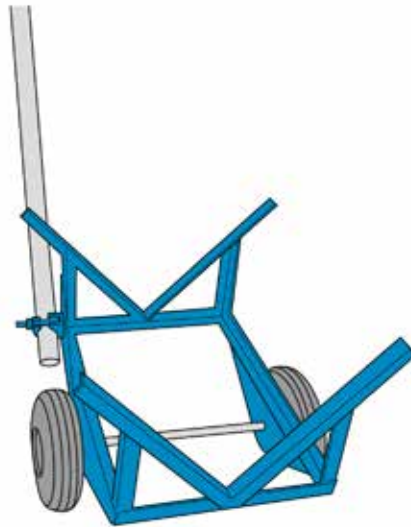


Figure 9 – Bespoke scaffolding trolley for moving tube and/or boards.

4.2 Selection of Materials

- **Long Scaffold Tubes** – The use of long tubes has been the subject of much debate in recent years. An EN39 (BS1139) 6.4m (21') x 48.3mm (1 29/32") galvanised steel scaffold tube, with a 4mm wall thickness, typically weighs more than 28 kilograms (62lbs). The practice of hoisting and hemping a long tube is one of the most strenuous and unwieldy tasks for scaffolders. It requires special techniques, skill and physical strength to do safely.



Case Study #4 – Shorter Tubes

A scaffolding contractor has opted to use shorter tubes for hemping standards at height following their own risk assessment. Whereas they still routinely use long tubes (6.4m/21ft) for ledgers, guardrails and standards at the base. Special consideration had to be given to the design of scaffolds for the greater frequency of joints in standards, particularly for taller structures.

- **System Scaffolding** – Proprietary system scaffolding requires different manual handling techniques to traditional tubes, fittings and boards, which needs to be addressed as part of the risk assessment and planning process. Manufacturers are required to carry out ergonomic assessments when designing components to ensure they can be handled and used safely.

Case Study #5 – System Scaffolding

A popular modular system scaffold is available in bay sizes of up to 3.09m. However, a scaffolding contractor who uses this system scaffolding extensively, chose to standardise on a maximum bay size of 2.57m, after carrying out a manual handling risk assessment, to reduce the weight of ledgers, steel decks and braces making them easier to handle by their scaffolders.

4.3 Personal Protective Equipment

When carrying out a manual handling risk assessment, personal protective equipment (PPE) needs to be considered as a last resort. However, the intensive physical nature of scaffolding means that most employers and site rules require minimum levels of PPE that can help prevent manual handling related injuries.

In relation to the risks associated with the handling of scaffolding materials, hand and head protection have become minimum requirements for the majority of the scaffolding industry.

Under the Personal Protective Equipment at Work Regulations 1992 (PPE Regs) employers have to carry out a PPE assessment to determine the suitability of the equipment for the task. For example, do the gloves selected provide adequate grip for steel and timber, with the right level of protection and dexterity to prevent injury, without compromising performance.

Employers should consult with the operatives, trial samples and seek feedback into how different PPE performs. Employers who involve operatives in the selection of PPE and value feedback, generally experience greater levels of co-operation and compliance.

4.4 Consequences of Poor Manual Handling

The consequences of poor manual handling can be split into three main areas:

- (a) Short-term and/or superficial injuries – mainly involves cuts, bruises, sprains, tears, small fractures, muscle strain, etc. Usually caused by sudden and unexpected accidents, e.g. losing grip and dropping a load, lifting an excessively heavy load at an awkward angle, or falling while carrying a load.
- (b) Long-term injuries – mainly involves damage to the musculoskeletal system of the body, including muscles, tendons, bones, joints, ligaments, nerves, and blood vessels, usually caused by long-term, gradual wear-and-tear because of repetitive strenuous activities; commonly known as musculoskeletal disorders.
- (c) Mental health issues – mainly involves long-term stress and anxiety, and depression. Physical ailments are more readily recognised than mental health issues related to poor manual handling. Long-term injuries can have a serious effect which can lead to poor mental health triggered by long-term physical issues and / or an individual having to gain new employment, where manual handling is not a significant risk.

Section A – Preliminary Assessment Detail

Company:		Location: (Site)	
Assessment Date:		Review Date:	
Assessors Name:		Job Title:	
Task: Manual handling assessment associated with scaffold operations.			
Reason for Assessment: <input type="checkbox"/> Initial Assessment <input type="checkbox"/> New Procedures / Process <input type="checkbox"/> Equipment Change <input type="checkbox"/> Post Incident <input type="checkbox"/> Review <input type="checkbox"/> Other _____		Assessors Signature: 	

Note to assessors: Manual handling operatives who will be undertaking this task should be consulted during the assessment process.

Section B – Lifting and Carrying – More detailed assessment where necessary.

Questions to Consider	If yes, tick appropriate level of risk			Problems occurring from the task (make rough notes in this column in preparation for the possible remedial action to be taken)	Possible remedial action (e.g. changes that needs to be made to the task, load, working environment etc. Who needs to be involved in implementing the changes?)
	Low	Med	High		
Task – does it involve?					
• Holding loads away from the trunk?					
• Twisting?					
• Stooping?					
• Reaching upwards?					
• Large vertical movement?					
• Long carry distances?					
• Strenuous pushing or pulling?					
• Unpredictable movement of loads?					
• Repetitive handling?					
• Insufficient rest or recovery?					
• Work rate imposed by a process?					

Questions to Consider	If yes, tick appropriate level of risk			Problems occurring from the task (make rough notes in this column in preparation for the possible remedial action to be taken)	Possible remedial action (e.g. changes that needs to be made to the task, load, working environment etc. Who needs to be involved in implementing the changes?)
	Low	Med	High		
Individual Capability:					
• Require unusual capability?					
• Pose risks to those with health problems, physical or learning difficulties?					
• Pose a risk to pregnant women?					
• Call for special information / training?					

Other Factors			
Protective Clothing	Place tick as appropriate	Problems occurring from the task (make rough notes in this column in preparation for the possible remedial action to be taken)	Possible remedial action (e.g. changes that needs to be made to the task, load, working environment etc. Who needs to be involved in implementing the changes?)
• Is movement or posture hindered by clothing or personal protective equipment (PPE)?	Yes <input type="checkbox"/> No <input type="checkbox"/>		
• Is there an absence of correct / suitable PPE being worn?	Yes <input type="checkbox"/> No <input type="checkbox"/>		

Questions to Consider	If yes, tick appropriate level of risk			Problems occurring from the task (make rough notes in this column in preparation for the possible remedial action to be taken)	Possible remedial action (e.g. changes that needs to be made to the task, load, working environment etc. Who needs to be involved in implementing the changes?)
Are the Loads:	Low	Med	High		
• Heavy					
• Bulky or unwieldy?					
• Difficult to grasp?					
• Unstable / unpredictable?					
• Intrinsically harmful (e.g. sharp or hot)					

Questions to Consider	If yes, tick appropriate level of risk			Problems occurring from the task (make rough notes in this column in preparation for the possible remedial action to be taken)	Possible remedial action (e.g. changes that needs to be made to the task, load, working environment etc. Who needs to be involved in implementing the changes?)
Working Environment:	Low	Med	High		
• Constraints on posture?					
• Poor floors?					
• Variations in levels?					
• Hot / cold / humid conditions?					
• Strong air movements?					
• Poor lighting conditions					

Questions to Consider	Place tick as appropriate	Problems occurring from the task (make rough notes in this column in preparation for the possible remedial action to be taken)	Possible remedial action (e.g. changes that needs to be made to the task, load, working environment etc. Who needs to be involved in implementing the changes?)
Work Organisation:			
• There is a lack of planning of tasks & rest breaks?	Yes <input type="checkbox"/> No <input type="checkbox"/>		
• There is poor communication on safety between managers & employees?	Yes <input type="checkbox"/> No <input type="checkbox"/>		
• There are insufficient mechanisms for dealing with sudden or seasonal changes in workload?	Yes <input type="checkbox"/> No <input type="checkbox"/>		
• They have insufficient training & information?	Yes <input type="checkbox"/> No <input type="checkbox"/>		
• Poor lighting conditions	Yes <input type="checkbox"/> No <input type="checkbox"/>		

Section C – Summary of Actions

Remedial Action	Responsibility	Priority / Target	Status
1.			
2.			
3.			
4.			
5.			

Section D – Summary of Risk

Risk Matrix		Potential consequence of harm		
		1 – Minor Injury (e.g. hazard can cause illness, injury or equipment damage but the results would not be expected to be serious)	2 – Significant Injury (e.g. hazard can result in serious injury and / or illness, over 7-day absence)	3 – Major Injury (e.g. hazard capable of causing death or serious and life threatening injuries)
Likelihood of harm	1 – Unlikely (injury rare, though possible)	1 – Low	2 – Low	3 – Medium
	2 – Possible (injury could occur occasionally)	2 – Low	4 – Medium	6 – High
	3 – Probable (injury likely to occur, can be expected)	3 – Medium	6 – High	9 – Extreme

Risk Evaluation

This is calculated by multiplying the likelihood against the consequence e.g. taking a likelihood of 1, which is classified as Unlikely and multiplying this against a Potential Consequence of 2, which is classified as Significant Injury, would give an overall Risk Rating of 2, which would result in an overall evaluation as a low risk.

1 to 2 = Low risk – Low risks are largely acceptable, monitor periodically to determine situation changes which may affect the risk, or after significant changes

3 to 4 = Medium risk – Medium risks at the upper end of this band should only be tolerated for the short-term and then only whilst further control measures to mitigate the risk are being planned and introduced, within a defined time period. Risks on the lower end should be reduced if practicable.

6 = High risk – High risks activities should cease immediately until further control measures to mitigate the risk are introduced. The continued effectiveness of control measures must be monitored periodically.

9 = Extreme Risk – Work should not be started or continued until the risk has been mitigated. Immediate action is required to reduce exposure. A detailed mitigation plan must be developed, implemented and monitored by senior management to reduce the risk before work is allowed to commence.

Assessment Score				
Overall assessment of the risk of injury? (As assessed from detailed assessment above)	Low <input type="checkbox"/>		Medium <input type="checkbox"/>	High <input type="checkbox"/>
Risk Matrix Score – If score 3-4 or above additional controls to be considered and / or professional advice sought.	Consequence (1-3)	X	Likelihood (1-3)	= Risk score (1-9)
		X		=

Whilst every effort has been made to provide reliable and accurate information, we would welcome any corrections to information provided by the author which may not be entirely accurate, therefore and for this reason, the NASC or indeed the author cannot accept any responsibility for any misinformation posted.

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