100% Safe Managers guide

MORGAN SINDALL CONSTRUCTION

Manual Handling

REFERENCE	PROCESS PARENT	REVISION	OWNER	DATE
SHE XX GUID XX	SHE PRO XX	Rev 2		Month/Year

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Introduction

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There are approximately 500,000 work-related musculoskeletal disorder (MSD) cases every year.

83% are related to the upper limbs, neck or back.

Manual handling is reported as the root cause of more than a third of all workplace injuries.

9 to 12.5m working days lost in UK every year due to manual handling injuries.

The average time off work per person due to manual handling injuries is 14 to 19 days

In the construction industry, manual handling injuries account for 38% of over 7 day injuries and 14% of specified injuries.

Manual handling injuries are costly to the industry and to us as a business.

Case Studies – Case Study 1

A 300kg steel beam was manually loaded onto a wheeled bogey and manoeuvred by 2 operatives around the site over rough ground. The route was narrow in places and one operative trapped his hand between the beam and a scaffold as it was mover around a tight corner. He sustained a crush injury to his fingers.

Case Studies – Case Study 2

An operative was trying to move a water pump from a distance by pulling sideways on the hose. He slipped, lost his grip and fell forward breaking his wrist.

He should have moved the pump by lifting it using the handle which is attached to the pump.

Case Studies – Case Study 3

Operatives were manually handling rolls of single ply membrane from the loading bay, along the scaffold and over the parapet wall. The IP and a colleague were on the scaffolding and they lifted a roll onto the top of the parapet where other operatives were positioned on the roof to take it from them. As it was on the top of parapet it spun and hit the IP hard in the chest which in turn made him hit his back on a scaffolding pole.

Mechanical means of lifting the materials to the top lift of scaffold was in place but there was no provision for mechanically placing the rolls onto the roof.

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What is Manual Handling

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The term manual handling is typically associated with the movement or transportation of an object, or load, from point A to point B.

Manual handling actually encompasses a range of activities, including lifting, twisting, pushing, pulling, lowering and carrying either by hand or by using 'bodily force'.

Tasks in the workplace are becoming increasingly automated. The use of equipment and machinery can mean that workers do not have to rely solely on their physical capabilities any longer, however, this does not negate the need for manual handling completely.

It is vital that workers do not overstretch or overburden their bodies at work, whether they are assisted by technology or relying solely on manpower to shift and carry loads around.

Whilst machinery can be repaired or replaced, once damaged, the human body can sometimes struggle to repair itself adequately.

This means that after a work-related incident of ill health, some workers will have their lives changed forever.

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Manual Handling Examples

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- Manual handling is not just about lifting and positioning loads. It is any activity that puts strain on the body to move, lift and manouvre objects and materials :

- Manually attempting to hold a load whilst it is being cut is putting all 3 operatives at risk of sprain/strain injury.

- Using a chopsaw on the floor puts strain on the body whilst getting into position, operating the machine and getting back up from the floor.

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Assessing the Risk – Manual Handling Risk Assessment

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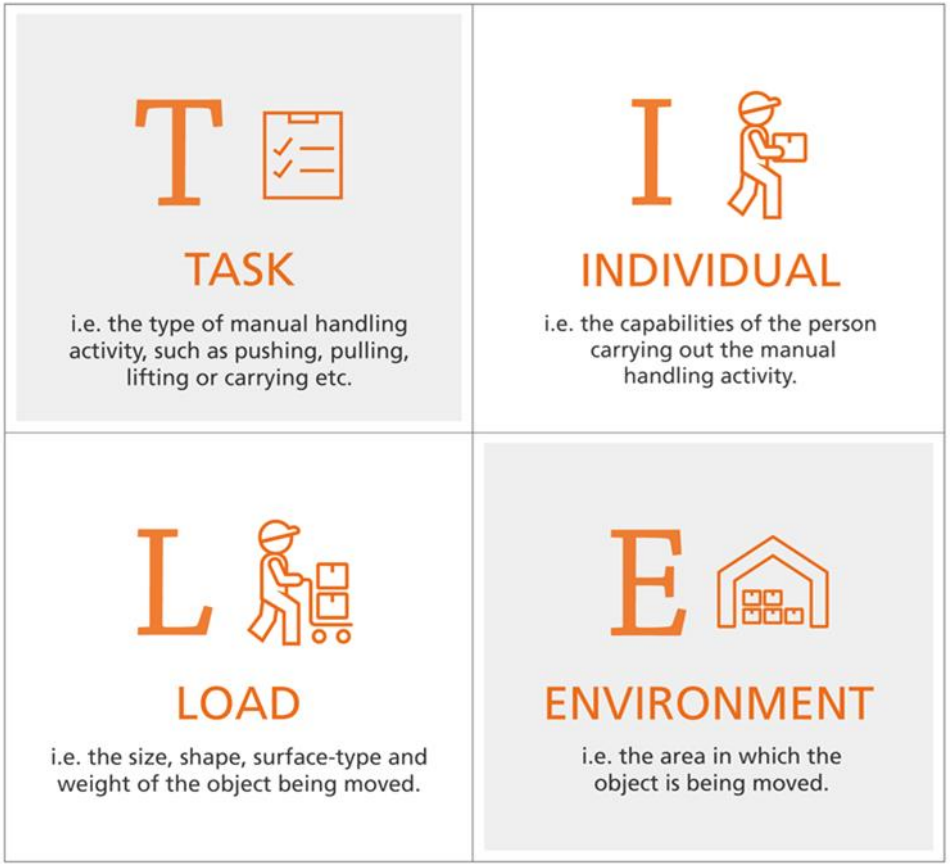
Assess the risk of injury from any hazardous manual handling operations that cannot be avoided.
Consider the task, the load, the working environment and individual capability, for example:

- the postures adopted
- how far the load is lifted, lowered or carried
- the frequency of the task
- the weight of the load
- the nature of the load (for example hot, sharp or slippery)
- cramped work areas
- poor floor surfaces
- poor lighting, extremes of temperature
- workers' strength, fitness and underlying medical conditions (for example a history of back problems)
- workers breathing heavily and sweating
- workers who complain of excessive fatigue



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Assessing the Risk – Avoiding Manual Handling

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Hazardous manual handling operations can be avoided by:

- re-designing the task to avoid moving the load
- automating or mechanising the process
- Early consideration of the risks - design the layout of a process so there is very little movement of materials.
- introducing, for example, a conveyor, a chute, a pallet truck, an electric or hand-powered hoist, or a lift truck to reduce the risk of injury.
- Using mechanical aids to help reduce or eliminate risks from manual handling.

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Assessing the Risk – Reducing the Risk of Injury

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If manual lifting is the only option then there are options to consider to reduce the risk

- make the load smaller or lighter and easier to grasp
- break up large consignments into smaller loads
- modify the workplace to reduce carrying distances, twisting movements, or the need to lift things from floor level or above shoulder height
- change the work routine to avoid excessive work rates and tight deadlines
- improve the environment – more space, better flooring, extra lighting or changing the air temperature can make manual handling easier and safer
- Rotate the workforce for frequent repetitive handling tasks
- ensure the person doing the lifting has been trained to lift as safely as possible

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Assessing the Risk - Training

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Training can be important in raising awareness and reducing risk, but it won't ensure safe manual handling on its own.

Manual handling operations should be designed in the first instance to be as safe as reasonably practicable.

Procedures need to be monitored and reviewed to make sure workers understand and apply them.

Training should be relevant to the type of work carried out and should cover:

- manual handling risk factors and how injuries can happen
- how to use mechanical aids
- how to carry out safe manual handling, including good handling techniques
- systems of work relevant to the worker's tasks and environment
- practical work so the trainer can identify anything the trainee is not doing safely and put it right

The content of any training in good handling technique should be tailored to the tasks the workers carry out.

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The 6 Principles of Good Manual Handling Technique

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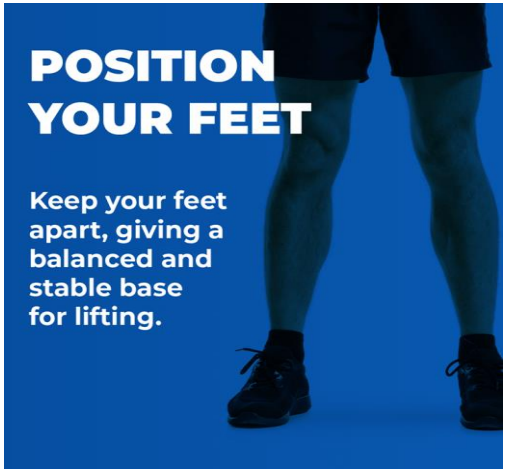
PLAN YOUR LIFT

Ensure the object is light enough to lift, steady, and unlikely to shift or move.

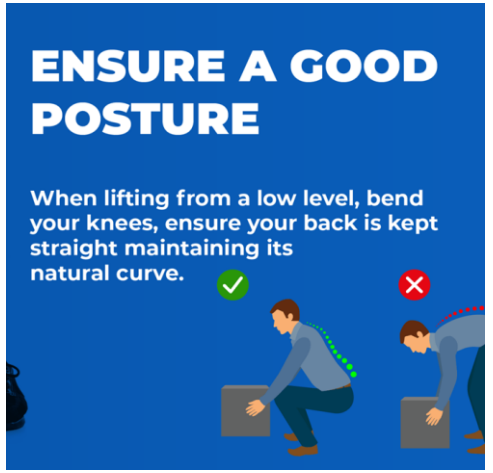
POSITION YOUR FEET

Keep your feet apart, giving a balanced and stable base for lifting.



ENSURE A GOOD POSTURE

When lifting from a low level, bend your knees, ensure your back is kept straight maintaining its natural curve.

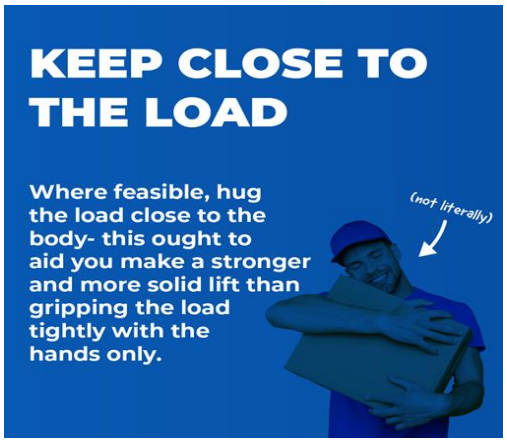


MAINTAIN A FIRM GRIP

Whilst holding onto something, a hook grip is less strenuous than keeping your fingers straight.

KEEP CLOSE TO THE LOAD

Where feasible, hug the load close to the body- this ought to aid you make a stronger and more solid lift than gripping the load tightly with the hands only.



MAKE SURE YOU LIFT SMOOTHLY

Lift your chin as you commence the lift, ensuring control of your head. Look ahead, not down at the load, once it has been held securely.

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Practical Advice – Pre-Construction Considerations

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Planning and designing the works well in advance will help to reduce manual handling risks by identifying those tasks and activities that pose the greatest risk during the construction phase. This will allow sufficient time to plan how the risks can be eliminated or reduced.

There are some obvious examples of how “safe by design” principles can be applied to the most obvious risks. Here are some examples :

Challenge designs that specify heavy blocks – there is almost always a more manageable alternative eg lighter blocks or reduced size blocks. Two man lifting is rarely successful.

Check re-bar designs for excessively heavy duty rebar in terms of diameter/length. Investigate design change.

Some plasterboard alternatives are much heavier than plasterboard. Look at alternative materials or reduced sized sheet materials.

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Practical Advice – Manual Handling – Safe by Design

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Ensure there is a comprehensive materials management plan for the project that details all the required vertical, horizontal and local movements of materials and how they will be safely achieved. For example:

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Practical Advice – Manual Handling Aids

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The wheel is man's most important invention and is one of the easiest ways to reduce the need to manually handle materials.

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Practical Advice – Manual Handling Aids

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There are many types of equipment that can be used for handling sheet materials

Practical Advice – Manual Handling Aids

Where space is limited, mini ride on tracked dumpers are preferable to a wheelbarrow.

Practical Advice – Manual Handling Aids

Mobile storage cages and racks help with horizontal transportation of materials and avoid double handling of materials that would otherwise be laid on the floor. Cages also provide secure storage and housekeeping improves significantly.

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Practical Advice – Manual Handling Aids

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Suction devices can be a useful manual handling aid.

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Practical Advice – Manual Handling Aids

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Summary text Mechanical aids are available for pretty much anything, it's worth researching the options before resorting to manual handling.

Practical Advice – Manual Handling Aids

Conveyors can be very useful in transporting materials locally, whether that is for raising roof tiles to a roof on an inclined hoist, or removing excavated waste from a basement or into a skip.

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Summary

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Manual handling injuries can impact severely on people's lives and for the most part they are totally avoidable.

Stop and think about the risks at your workplace, identify them and manage them.

Remind people of the risks, drive a culture where the risks of MSD's is unacceptable.

Engage with the supply chain, they often have more answers than we do.