



Our commitment to a safer environment

In the UK there are an estimated 500,000 workers suffering from work-related Musculo-Skeletal Disorders (MSD) and in each construction year 50,000 workers suffer from a MSD caused by their work. We have created the following guidance as we have a commitment to make the construction environment a safer place where people and communities can flourish.

The progress on prevention of sudden, single-incident accidents in construction, such as falls from height, cuts, collisions, etc. has been considerable over many years and a new focus is being applied to gradually-operating health issues such as noise, vibration, mental health, lung disease and MSDs. Here it is rarely possible to identify a single cause or task that led to ill-health.

The effects of operating unsafely can reduce productivity, earnings and quality of life. It can even in the worst cases cut short working careers and create a negative perception of the industry when we want to attract new talent into construction careers.



Construction involves moving, assembling and installing many types of potentially hazardous items or loads to create a finished building. The heaviest items always require mechanical handling, for example craning of preformed floor slabs, but many other types of handling such as plasterboard handling fall within a weight range where either mechanical or manual handling, or a combination of the two is possible.

The following guide will help you understand the guidance by taking you through the necessary steps to make informed decisions.

Understanding the guidance

Handling operations are governed by the <u>Manual Handling Operations Regulation</u>, and it's guidance is based on the legal requirements which are:

- Avoid hazardous manual handling operations so far as reasonably practicable
- Assess any manual handling operations that cannot be avoided
- Reduce the risk of injury to as low as reasonably practicable

These steps should be followed in the given order, starting with elimination or avoidance of risk.

In addition, current COVID-19 guidance from the Government and the Construction Leadership Council (CLC) is based on maintaining social distancing wherever possible, and taking mitigating actions where it is not possible. (Note, this guidance is updated regularly and some details differ between the devolved administrations, so please check for the most up to date information on the relevant government website).

Plasterboard handling process

Reviewing mechanical and manual handling simultaneously we consider a plasterboard handling process flow as follows:

Reduce manual handling

Use mechanical handling systems such as trolleys, lifters. The Gypsum Products Development Association (GPDA) have published a guide outlining what is available, where to use these systems and how to optimise them on-site.

Key questions to consider when using mechanical handling systems:

- Are routes unobstructed and wide or high enough?
- Can steps and slopes be avoided?
- Are floors unobstructed and capable of carrying point loads from wheels or trestles?
- Where is the power supply, charging and fuelling points for powered equipment?

Simple handles, trolleys and trestles can mitigate some risks.

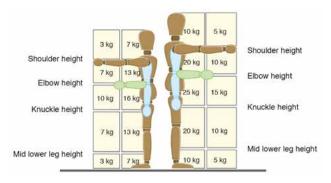
In best practice, plasterboards are not manually handled at all until the final step of adjusting the position of individual boards to fix them.

2 Improve manual handling

Some construction sites may not be suitable for mechanical handling systems; when manual handling of boards is required, assessment is necessary to ensure plasterboard handling can be done safely by one person. If so, the COVID-19 risks are easier to manage.

Requirement for assessment

Most plasterboard handling tasks are over the filter weights which trigger the requirement for assessment. It is important to note these values are NOT limits, but the filter values above which a risk assessment must be carried out. For certain combinations of task, person and load it may be that weights over 25kg can be handled safely or that weights under 25kg cannot. The detail of an assessment is required to determine this. The following image can be found in the HSE.



An assessment tool

Use the <u>"MAC" tool</u> to assess risk factors. This is an easy to use tool that gives numerical and "traffic light" output to quickly identify where risk reduction changes would be most beneficial.

It covers the following risk factors:

It is important to note that while load weight (plasterboard weight) is a lifting and carrying risk factor, making improvements in many other factors may be easier to implement and just as effective in

Lifting risk factors	Carrying risk factors
Load weight / frequency	Load weight / frequency
Hand distance from lower back	Hand distance from lower back
Vertical lift zones	Asymmetrical torso or load
Torso twisting and sideways bending	Postural constraints
Postural constraints	Grip on the load
Grip on the load	Floor surface
Floor surface	Carry distance
Environmental factors	Obstacles on route
	Environmental factors

lowering the overall risk. Installers can also benefit from the general smooth operation of the site, such as good housekeeping of walkways and maintaining a cleaner and drier environment in the building.

Reduce the risks

Look for ways to reduce red risk factors to amber or green, and to reduce amber risk factors to green.

Final review

After this, identify any tasks which still represent an unacceptable overall risk if done by one person.

3 Two person handling during COVID-19

For tasks needing two people, plasterboard handling can be manageable alongside the COVID-19 mitigating actions.

The following table highlights key information from Government guidance and the CLC guidance that can help you make more informed decisions:

From <u>Government</u> guidance	From <u>CLC</u> guidance
Further increasing frequency of hand washing and surface cleaning	Minimise the frequency and time workers are within 2m of each other
Keeping the activity time involved as short as possible	Minimise the number of workers involved in these tasks
Using screens or barriers to separate people from each other	Workers should work side by side or facing away from each other, rather than face to face
Using back to back or side to side working (rather than face to face) whenever possible	Regularly clean common touchpoints
Reducing the number of people each person has contact with by using fixed teams or partnering (so each person only works with a few others)	Increase ventilation in enclosed spaces
	Workers should wash their hands before and after using any equipment
	Keep groups of workers together in teams

Complete risk assessments are required for any tasks or methods. You can use the RAPP tool for pushing/pulling, team handling for two-person carrying (using the relevant part of the MAC tool), use of board lifters for one-person ceiling installation etc.



Best practice sector examples

Below we have listed two examples of likely practical improvements to improve plasterboard installation productivity and improve on site safety:

Commercial sector and high-rise buildings

We recommend mechanising horizontal movement of boards where possible by using board trolleys or other mechanical handling systems. If loading equipment is a manual procedure with two people, they can work at a separation distance of approximately the board length to do so.

Only when boards are standing vertically is there a need for two people to work at less than 2m, so the mitigating actions in the Governments and CLC guidance should be adopted.

For the heavier board types, consider cutting them to shorter length for easier handling – this will create additional joints but with appropriate detailing it has little or no effect on system performances.

Low-rise housing

The key step that often needs team working is to move the plasterboards upstairs in a dwelling, except in rare cases where they can be lifted to a balcony or large window mechanically from outside the building. The use of floor "slots" is generally preferable to carrying boards up stairs (particularly kite-winder stairs).

Consider improving the carry route (minimise distance by placing stacks as close as possible to the unit under construction, create ramps to avoid steps, keep unobstructed and dry, etc). Consider cutting boards to size earlier in the process, to avoid double-handling of the offcuts and to make the main load a little lighter and smaller.

If necessary, consider using narrower boards especially for upstairs rooms e.g. 900mm. This will make board movement easier but require framing centres to be adjusted. The increase in number of studs & joints is often quite small given the room sizes, but there are more fixings to place. System performances are generally unaffected apart from a slight reduction of sound insulation performance due to stiffer walls.

Consider using board lifters to enable one-person installation of ceiling boards. Reducing board width to 900mm for ceilings normally has no effect on system performance as they run perpendicular to joists/trusses, hence many ceilings are finished with 900mm boards already.

If you have any questions about this guidance or manual handling of plasterboard in general, please contact us by email: technical.enquiries@bpb.com



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British Gypsum BG-SHGC-01 September 2020

