

Manual handling is defined as any activity where transporting or supporting a load by hand or bodily force is required.

Handling of rods, casings, or samples obtained during geotechnical investigations, from the drill site through to transportation of samples, to the laboratory testing technicians, often involves activities using manual handling. This includes a wide variety of activities including the handling of drill rods, casings, materials, sample bags, tubs, jars, core boxes and undisturbed samples such as piston samples and UT100 tubes from the drill site to loading at the transport vehicle, to unloading and storage of these rods, casings, materials, and samples in storage areas.

Injuries that are sustained during this manual handling process commonly include:

- One off injury, such as cuts, bruising, hernias, trap injuries/crushing
- Recurring injuries, such as strains and inflammatory diseases including tendonitis
- Long term and chronic injuries such as spinal disc damage, or repetitive strain injuries

We need to protect against all of the above categories of injury when planning manual handling activities. Our activities today, should not impact on our ability, or the ability of others involved in the manual handling process, to enjoy life without the legacy of a manual handling injury.

Employers have a responsibility to avoid manual handling through the use of engineered solutions considered at the planning stages of an activity. This approach may include the use of pallets and pallet trucks or telehandlers, rod/casing handlers, tail lifts and lorry mounted cranes, to move items and also load vehicles to transport items to and from the work site. Use of these lifting aids helps avoid manual handling, at the work location, during drilling processes. Reductions in the distance that items need to be manually carried to vehicles, through planned access and parking is key to reducing the lifting and carrying requirements of drilling rods, casings, materials, core boxes, piston samples, disturbed bags, pots and bulk samples and should be considered when planning access on to any site.

Communication and collaboration between the employer and employee is key to the implementation of engineered solutions to manual handling. Amended ways of planning and working and acceptance of the change of pace of an activity, may be required in return for a reduction in the risk of manual handling injuries.

For Core Sampling on site, reducing the volume of sample obtained and the associated weight of an individual sample, can be achieved through engineering means: Core boxes can be reduced to single channel for all diameter cores, this approach can be used alongside core run length reductions for large diameter cores. Bulk disturbed samples can be taken in multiple labelled bags, for the sample to be remixed at the laboratory, rather than as a single excessively heavy bag. This reduction in sample volume and weight are controlled via the reduction in dimensions of the bulk bags purchased.

For other drilling activities, shorter lengths of rods and casings, especially at wider diameters, can significantly reduce strain on any residual manual handling tasks.

Laboratory technicians and sample store persons repeatedly handle each sample during the life cycle process of sample receipt, storage, retrieval, testing and disposal at the end of the contract. Cumulative daily lifting totals can be a risk to those working in the warehouses and sample receptions. Within the laboratories, consideration should be given to the use of additional manual handling aids such as pallet trucks, forklift trucks and accessories, trolleys, scissor lift devices and conveyor belts.

Manual handling tasks that are repeated many times a day should be targeted first for substitution with mechanical means where practicable, and rotation of personnel undertaking the lift where this is also practicable. These can significantly reduce the long-term effects of any residual manual handling.

Training in manual handling should be specific to the type of task and hazards raised in the workplace including the type of load and location where manual handling is required, for many of us manual handling takes place on multiple sites, in changing weather and ground conditions.

Effective manual handling training should include:

A discussion and practical collaborative demonstration of high-risk manual handling activities. The training should include the tooling, ground conditions and constraints from working on sites and provide strategies to protect against likely manual handling injuries. In sample warehouses and laboratories, the training should cover the process from sample receipt to disposal and the need for varied daily activities to reduce the risk of repetitive and cumulative manual handling injuries. For site-based activities, training should include assessing the Task, Individual requirements, the Load, and the Environment (T.I.L.E) at point of work.