NFRC

LEADING ROOFING EXCELLENCE

SAFETY PASSPORT

Health and Safety best practice for the UK Roofing Industry

Issue 6

December 2024

Contents

Introduction

This Safety Passport has been prepared by the NFRC Safety, Health and Environmental Committee to meet the need for a day-to-day reminder to roofing operatives of the safe working practices that must always be considered an essential part of all site working.

Employers are required to have a proper understanding of their legal obligations under the present statutory requirements for the health, safety and welfare of their employees, other contractors and members of the public. This will include a written 'company safety policy' along with appropriate method statements and risk assessments and provision of adequate welfare facilities.

It must be understood that the information and guidance in this passport in no way supersedes any of these particular responsibilities.

Further guidance on special legal requirements is detailed in the current version of the publications listed below:

- The Health and Safety at Work etc. Act 1974.
- The Management of Health and Safety Work Regulations.
- The Construction (Design and Management) Regulations.
- Personal Protective Equipment at Work Regulations.
- Workplace (Health, Safety and Welfare) Regulations.
- The Control of Noise at Work Regulations.
- The Control of Vibration at Work Regulations.
- Control of Asbestos Regulations.
- The Health and Safety (Safety Signs and Signals) Regulations.
- Provision and Use of Work Equipment Regulations.
- Lifting Operations and Lifting Equipment Regulations.
- Hazardous Waste (England and Wales) Regulations.
- Control of Lead at Work Regulations.

- The Reporting of Injuries, Diseases and Dangerous Occurrences Regulations.
- Control of Substances Hazardous to Health Regulations (COSHH).

Health and Safety at Work Act 1974

The basis of British health and safety law is the Health and Safety at Work Act 1974. The Act sets out the general duties employers have towards employees and members of the public, and employees have to themselves and to each other

Employers are required by law to provide you with:

- A safe place of work.
- Safe plant and equipment.
- Safe materials.
- Safe methods and systems of work.
- Employers should:
- Eliminate or avoid risks where possible.
- Tell you about the hazards and risks and how they will be controlled.
- Provide information, instruction and training so that you can do your job safely.
- Communicate with you and allow you to have your say.

You will have the responsibility to:

- Look after your own safety and not take unnecessary risks.
- Follow this site rules and your safe system of work.
- Do not take chances; shortcuts can be dangerous.
- Attend safety inductions briefings.
- Follow the risk assessment method statement.
- Report anything you think is unsafe.
- Ensure any Personal Protective Equipment (PPE) is used correctly.
- Report any damage or faults with your PPE.

Safe Systems of Work

The law requires employers to develop safe systems of work; a safe system of work is a method of carrying out each job in safe way. The following documentation can form part of the safe system of work:

- Health and safety policy.
- Risk assessments.
- Method statements.
- Construction phase plan.
- Permits to work.
- Surveys (for asbestos, noise and vibration for example).
- Health and safety policy.

The health and safety policy will give you information on how your company manages health and safety, the arrangements in place for managing healthy and safe working practices and as well as who is responsible for doing what, including what you and your fellow workers must do.

Surveys

Surveys are carried out for a variety of reasons, to identify asbestos for example. The survey will form part of a safe system of work as they will show where the hazards might be.

Risk assessments

The risk assessment will identify the hazards of the work you are undertaking, working at height, for example. It examines the significant risks (falling from height) and identifies the control measures needed to remove or minimise the risk of harm (safe working platform).

By carrying out a robust risk assessment your employer will ensure the best way of protecting your and their business, as well as ensuring they are complying with the law. The risk assessment should be conducted before you or any of your co-workers conducts a task which presents a risk of injury or ill-health.

There are five steps to writing a risk assessment which can be followed to ensure that a risk assessment is carried out correctly, these are:

- Identify the hazards
- Decide who might be harmed and how
- Evaluate the risks and decide on control measures
- Record the findings and implement them
- Review the assessment and update if necessary

Method statements

The method statement will explain how the job is done safely. It will tell you this sequence and method of work, the materials and equipment to be used and the number of people and skills needed to safely carry out this task.

The method statement should include important items, such as:

- The project
- The activity
- Date of assessment
- Responsibilities
- Hazards (and reference to relevant risk assessment)
- Work procedure and control measures including:
- Sequence of work
- Access provisions
- Security and safety of others
- Plant and equipment
- Safety precautions
- Health precautions
- PPE requirements
- Management arrangements
- First aid
- Welfare
- Monitoring
- Emergency procedures
- Acknowledgement and sign off

It's important that you read and understand the risk assessment and method statement.

Construction phase plan

A construction phase plan is required for every construction project large or small; it must be regularly reviewed and may be added to or changed as the project progresses. It will give you information on the main dangers on-site and how they will be controlled, how the work has been planned with safety in mind, how this site is organised and how people will work safely together.

Not only is a construction phase plan a legal requirement under CDM, but it is also an important health and safety document. The key benefit of the plan is to improve safety planning and management for the project. By setting out the health and safety arrangements and requirements for the project, the entire team can work together to reach high safety standards.

The construction phase plan does not need to be complicated and mobile apps such as the CITB's CDM Wizard for Apple iOS or Android devices can simplify the process.

Permit to work

A permit-to-work is used for controlling high-r such as hot-works. A permit-to-work has strict control measures and limitations which must be followed; you must never start a task which requires a permit-to-work until all the control measures are in place.

A permit-to-work for hot works should consider the following:

- Undertake a pre-hot work inspection to confirm that hot work can be managed safely.
- Complete relevant sections of the hot work permit with the permit issuer.
- Ensure all precautions required by the hot work permit, including the provision of a suitable extinguisher(s), are always in place during the hot work.
- Strictly comply with the requirements of the hot work permit at all times.
- Deploy firefighting equipment, as required, in accordance with the training you have received.
- Activate the site fire alarm should the hot works process cause a fire incident.
- Actively inspect the hot work location for the duration detailed on the hot work permit.
- Close and return the permit to the permit issuer on completion of works/expiry of the permit.

Workplace accidents

On average 40 construction workers are killed each year due to accidents—half of these are attributed to working at height. Year after year, the same types of accidents and incidents are repeated. The most common types of accidents and incidents are:

- Falling from height.
- Slips, trips, and falls on the same level.
- Manual handling.
- Being struck by vehicles or plant.
- Contact with electricity.
- Contact with moving machinery.
- Being trapped by something collapsing.

These accidents could have been avoided by taking simple precautionary measures such as maintaining a clean workplace (slips, trips and falls).

Prevention

We all have a duty to prevent accidents on-site; you can do this by:

- Making sure you fully understand the safe system of work.
- Follow site rules.
- Worked to the instructions you're given.
- Do not take shortcuts.
- Keep your work and storage areas tidy (good housekeeping).
- Keep all access routes clear of materials and equipment.
- Report anything you think might be unsafe to your supervisor or line manager.

Reporting

You must make sure that any unsafe condition or near miss is reported so that action can be taken to prevent them from becoming an accident. If you see something which is unsafe or witness a near miss, you must tell someone. If more unsafe conditions and near misses were reported, it is likely there will be fewer accidents.

Any accident or injury you have has to be reported and recorded in the accident book including the injured person's name and address; the date and time of the accident; the location of the accident; how the accident happened and what injury was sustained.

More serious accidents and those that result in more than seven days off work have to be reported by your employer to the HSE.

Safe working at height

Any work on a roof is high risk because it involves work at height. High safety standards are essential—however long or short term the work is. The nature of the precautions needed may vary from one job to another.

The *Working at Height Regulations* sets out a simple hierarchy for managing and selecting equipment for work at height:

- Avoid work at height where you can.
- Prevent falls where work at height cannot be avoided.
- Minimise the distance and consequences of a fall where you cannot eliminate the risk.

Prevention

Using work platforms, such as scaffolding, mobile towers, cherry pickers and scissor lifts and edge protection will provide collective measures to protect you and your fellow workers when working at height.

Mitigating a Fall

Providing adequate platforms and edge protection may not always be possible or reasonably practicable. If so, safety nets or soft-landing systems, such as bean bags or inflatable airbags, can minimise the consequences of any potential injury.

Training

The law requires anyone carrying out work to have the necessary skills, knowledge, experience and training to complete tasks safely. You should never be put in a position where you have to carry out a job or task which you don't have the necessary competence or training. If you have any concerns, it's important you raise them with your supervisor or line manager immediately.

Roofing operatives need to have appropriate experience and training to work safely at height. If you are a trainee or apprentice, you should be under the supervision of an experienced work colleague. They need to be able to

recognise the risks, understand the appropriate systems of work and be competent in the skills to carry them out, such as:

- Installing edge protection.
- Operating a Mobile Elevated Working Platform (MEWP).
- Erection of tower scaffolds; and
- Installing and wearing harness systems (including rescue procedures).

You will need training and experience to achieve these competencies. It is not enough to hope that you will ‘pick up safety on the job’.

Access

Getting on and off the roof is a major risk. A secure means of entry and exit is essential. A general access scaffold or tower scaffold (preferably of the stairway design) will provide suitable access. A properly-secured ladder is the minimum requirement.

Scaffolding

Make sure that scaffolding is erected by a competent person who will issue a handover certificate to say the scaffold is safe to use. The scaffold should then be inspected every seven days by a competent person and, if necessary, maintained. If the scaffold is unsafe—do not use it.

Before starting work on a roof, ensure that the proper scaffold and rails are correctly fixed and in position, with toe-boards as required at eaves, verge and leading edges, that is, at your working level.

Platforms should be no more than 300 mm below the roof level. Eaves and verge protection main guard rail should be at least 950 mm above the working surface.

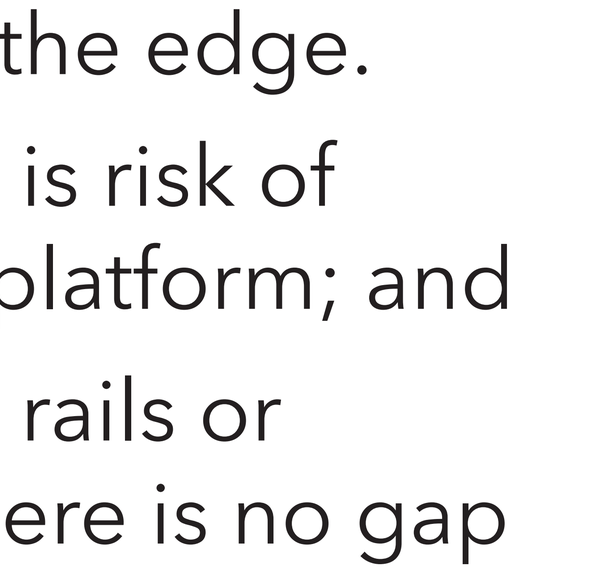
Wherever anyone could fall, the first line of defence is to provide adequate edge protection to prevent a fall occurring. This should include or be equivalent to:

- A main guard rail at least 950 mm above the edge.
- A toe board and brick guard where there is risk of objects being kicked off the edge of the platform; and
- A suitable number of intermediate guard rails or suitable alternatives positioned so that there is no gap more than 470 mm.

For more information visit: https://nasc.org.uk/.

Mobile Tower Scaffold

Anyone erecting a tower scaffold should be competent to do so. They should have received training under an industry recognised training scheme, for example, the Prefabricated Access Suppliers' and Manufacturers' Association (PASMA): https://pasma.co.uk/.



Along with this specialist training, you will need to follow the installation instructions supplied by the manufacturer or the hire company. Important points to remember when using a mobile tower include:

- Only use tower scaffolds on a sound, solid and level base unless it can be adjusted to compensate for a variation.
- Make sure that ground conditions are safe and hard-packed when using tower scaffolds.
- Tower heights must never exceed the height given with the instructions, and suitable for the job (correct working height).
- Do not overload towers with roofing and cladding materials. Ensure you know the maximum load which can be placed upon the tower.
- Daily visual inspection by a competently trained person and a thorough checklist to be actioned weekly.
- Gain access/egress via designated internal route–never climb up the outside.

Mobile Elevated Working Platforms (MEWPs)

In many cases, mobile elevating work platforms (MEWPs) provide safe and quick access to the roof and a secure working platform; however, MEWPs can still topple if they are overloaded or poorly maintained.
It is safe to use MEWP's for access in some cases, but this will need to be confirmed within the risk assessment, method statement, and rescue plan.

It is recommended that anyone operating a MEWP completes an International Powered Access Federation (IPAF) accredited training course. Once the training and assessment have been completed, successful trainees receive a PAL Card (Powered Access Licence), a safety guide, a logbook and a certificate which clearly identifies the operator and lists the categories of MEWP they are trained to operate.

For more information visit: https://www.ipaf.org/en-gb.

Edge Protection

Where the roof design does not provide permanent edge protection, such as a solid parapet wall of at least 950 mm in height, temporary edge protection will be required.

Traditionally, edge protection would have always been by means of tubular scaffolding and, therefore, usually installed by scaffolders. It has now become more common for purpose-designed edge protection systems to be used on many sites, for which more specific training is essential.

For more information visit: https://epf-uk.org/.

Safety nets

If nets are used, they need to be properly installed by competent riggers who have completed Fall Arrest Safety Equipment Training (FASET) qualification, as close under the work surface as possible to minimise the distance fallen.

You must never tamper with the nets or carryout any hot works in the vicinity of the netting.

The safety net, supporting frame and anchorage points should be inspected by a competent person immediately following erection and weekly after that. Such inspections should be recorded, and records of the inspections should be kept on-site. A handover certificate will need to be issued for the safety net installation or adaption. The safety net should also be inspected after adverse weather conditions, or after it has been used to arrest a fall.

For more information visit: https://www.faset.org.uk/.

Harnesses

Safety harnesses are Personal Protective Equipment (PPE) and should only be used if there are no other means of protection from the risk of falling and the user has had suitable training in the correct use of harnesses and the associated equipment.
The two most common categories of equipment used for working at height are Work Restraint and Fall Arrest.

Although these two categories share a common theme, they are actually quite different.

Work Restraint

Work Restraint prevents you from falling in the first place and should always be the first option when working at height.

Work Restraint equipment is generally used when work is taking place at the edge of a roof, such as cleaning gutters. The equipment allows the user to perform the work needed but stops them from being able to lean or reach any further than the job requires.

Fall Arrest

Fall Arrest is **NOT** a fall prevention device. Fall Arrest equipment stops you from hitting the ground, after you have already fallen. It also acts to limit the impact of the force created on the human body, that falling generates. Fall Arrest equipment generally provides more freedom of movement to the user, but it brings a greater risk of falling.

When suspended in mid-air after a fall has occurred, Suspension Trauma is a serious possibility. Due to the nature of most harnesses and the leg straps they utilise, when left to hang, there is a considerable amount of pressure placed onto the arteries on the legs. This pressure causes the blood being pumped around the body to begin to pool in the legs, which in turn reduces the oxygen supply to the brain. If left for even ten minutes, the user will have seriously high levels of stale blood in their legs. Because the blood is pooled in the legs, the brain cannot receive the required amount of oxygen necessary to function correctly, thus causing you to faint and in danger of death.

Line Systems and Anchor Points

Line Systems and Anchor Points are used to keep the operative safe by connecting them to the system using appropriate harness and lanyard. The system comprises cable, post and fixings that are tested to take the fall of the user.

Portable anchorage systems are available and can provide short term safety where edge protection is not available.

Anchorage systems for work restraint and fall arrest must have a valid certificate of inspection.

Rescue Plans

The Work at Height Regulations state that emergency procedures must be considered for circumstances such as stuck access equipment or deployed fall arrest so that a person(s) can be rescued. There must be a rescue plan in place that outlines how someone would be recovered should they fall. The details of the rescue plan should form part of the method statement to brief people who will be working at height and will be involved in a rescue plan.

The rescue plan should include:

- Details of the rescue equipment to be used.
- Configuration of the equipment for different types of rescue.
- Identification of anchor points where necessary.
- Limitations of the plan for adverse weather such as high winds; and
- The need for trained, competent rescue personnel.

Ladders

Ladders are not banned under health and safety law. Ladders are still regularly used for access and in some cases, they can be a sensible and practical option for low-risk, short-duration tasks, although they should not automatically be your first choice.

Make sure you use the right type of ladder and know how to use it safely. You should only use ladders in situations where the ladder will be level and stable, and where the ladder can be secured.

Before using a ladder, you should always carry out a ‘pre-use’ check to spot any obvious visual defects to ensure it is safe to use.

Check the stiles—make sure they are not bent or damaged, as the ladder could buckle or collapse.

Check the feet—if they are missing, worn or damaged, the ladder could slip.

Check ladder feet—when moving from soft/dirty ground (dug soil, loose sand/stone, a dirty workshop) to a smooth, solid surface (paving slabs), to make sure the foot material and not the dirt is making contact with the ground.

Check the rungs—if they are bent, worn, missing or loose the ladder could fail. Check any locking mechanisms—if they are bent, or the fixings are worn or damaged, the ladder could collapse. Ensure any locking bars are engaged.

Using a ladder

The one-in-four rule ensures you are placing your ladder at the right angle. Any leaning ladder should be at a 75-degree angle, and the simplest way to achieve this is to have the ladder one unit out from a wall for every four units up.

Make sure you tie in the ladder, use a strong upper resting point rather than, for example, plastic gutters, and consider using an effective stability device.

Climb using three points of contact and work in the same way wherever possible.

While climbing, always face the ladder and grip it firmly. Use a tool belt rather than climbing with anything in your hand.

Use the belt-buckle test to avoid overreaching to the sides. If the area where your belt buckle should be is outside of the stiles, you are overreaching and should go back down and reposition the ladder. Never adjust the ladder while on the rungs.

Make sure ladders are long enough for the work; they should preferably extend at least 1.0 m above its resting place, or above the rungs on which the user stands.

Avoid overhead power lines—do not work within six metres horizontal to one unless it has been made dead or protected with insulation. Any electrical work should involve a non-conductive ladder made of, for example, fibreglass or timber.

Roof Ladders

On sloping roofs, roof workers should not work directly on slates or tiles, as they do not provide a safe footing,

particularly when they are wet. Use roof ladders and suitable work platform to enable safe passage across a roof. They must be designed for the purpose, of good construction, properly supported and securely fixed by means of a ridge hook placed over the ridge, bearing on the opposite roof. They should be used in addition to eaves-level edge protection. Gutters should not be used to support any ladder.

To position the roof ladder in place, use the wheels to allow you to push it up the roof. When the wheels reach the top of the roof ridge, turn the ladder over and hook it securely over the ridge of the roof.

For more information visit: https://ladderassociation.org.uk.

Falling materials

There is a risk from falling materials during roof work. You should always take precautions to prevent materials falling where they may cause danger to anyone. Never throw anything from a roof or scaffold and use enclosed rubbish chutes or lower materials to the ground in containers.

There is also a significant risk of dropped objects when using tools and equipment at height. Therefore, it is recommended that all tools and equipment used at height are secured against falling.

To prevent items falling from height, implement the following steps to reduce the risks:

- For work over public areas, a double-boarded platform with a polythene sheet in between the boards prevents small items such as nails and bolts from falling.
- Platforms should be made so that materials or objects can’t fall and cause injury to anyone or anything below. Close-boarded platforms on most projects are usually sufficient.
- On scaffolding and tower scaffolds consider using brick guards, netting or other suitable protection to prevent materials falling.
- Toe boards also prevent anyone kicking items off the edge of platforms.
- Providing a covered walkway is another way to protect people below.
- Covered chutes are an effective and quick method of removing debris from work areas.
- Tools such as drills, can be tethered. If they’re accidentally dropped, the lanyard prevents them falling below the work area.

Weather conditions

The Work at Height Regulations 2005 specifically state that work should not be carried out if weather conditions could endanger the health and safety of workers.

Always check risk assessments when working in icy, rainy or windy conditions. Anyone carrying a roof sheet can easily be blown off the roof if they are caught by a gust of wind.

Further information is in the NFRC '*Roofing and Cladding in Windy Conditions Guidance*', see https://www.nfrc.co.uk/resource-library-search.html?information_type=health-safety-guidance.

Protecting the public

All roofing work should be planned and carried out to ensure the health, safety and welfare of members of the public and/or tenants or occupiers of buildings on or near a site.

Plan the storage of materials and equipment in order to avoid endangering the health, safety and welfare of members of the public or any other persons not directly involved in your roofing and construction work.

Ensure that all work areas are adequately separated from the public and other persons by means of exclusion zones and physical barriers to prevent unauthorised access.

Ensure that warning signs are erected in prominent locations to warn all persons of work activities and the associated hazards.

Ensure that risks to the public are kept at a minimum by regularly monitoring the protection methods and materials being used.

Ensure when leaving site, all tools and equipment are securely stored, and no materials are left loose to cause a hazard at any time to the public or other trades.

Never block access routes or doorways.

Lifting equipment and hoists

Inspect hoists and lifting tackle daily before use; look for broken welds, bent struts or hoist/tackle problems and ensure equipment is not used until any faults are corrected.

Only trained personnel should operate hoists, lifting tackle or conveyor mechanisms.

Make sure that the equipment is certificated correctly, and you know the Safe Working Load (SWL) of the lifting equipment.

Ensure no lifting in the proximity of overhead services.

Make sure that guards are in place.

Ensure the ground beneath and around the hoist is level and compact and that access is clear.

Check angles, loading and counterbalance before use. Construction material must not be used for counterbalancing.

Do not exceed the rated capacity of the hoist or tackle.

Never ride on a hoist.

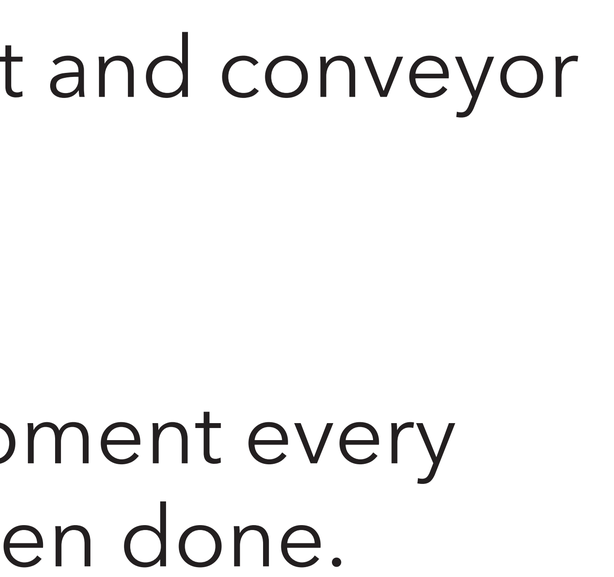
Never hoist a load over anyone's head or allow anyone to walk under a suspended load.

Keep your clothes and fingers away from hoist and conveyor mechanisms.

Do not override safety devices.

A competent person should inspect the equipment every seven days and keep a record that this has been done. The equipment will also require a full inspection every twelve months.

Gin wheels



Gin wheels are often used to lift materials onto a scaffold; however, you must ensure that the gin wheel and rope:

- Have been inspected within the last six months and have clear identification.

- They are in good condition and run freely with no visible signs of corrosion.
- The edge of wheel is free from any sharp edge that could damage the rope.
- The 18 mm rope is in good condition and fits snuggly into the gin wheel.
- A maximum safe working load of 50 kg must not be exceeded.

Manual handling

Every year an estimated 900,000 working days are lost due to manual handling injuries. Repeated twisting, training and incorrect lifting techniques can lead to injury. manual handling must be avoided if possible. If manual handling cannot be avoided, you must take the following considerations into account before lifting a load:

- How heavy is the load and do you need to move the load?
- Are you capable of lifting it comfortably on your own?
- Where is the centre of gravity of the load?
- Has the load any sharp edges and/or corners?
- Is the load balanced?
- Are there any nails or splinters?
- Is there a safe route via which to carry the load?
- Do you have the correct PPE?
- Do weather conditions hinder lifting / carrying?
- A guide to lifting properly includes:
- Wearing gloves to protect your hands.
- Keeping your feet slightly apart.
- Bending your knees.
- Keeping your back straight.
- Taking a good firm grip.
- Keeping your head up when lifting.
- Holding the load as close to your body as possible.
- Only lift loads that are comfortably within your capabilities.
- When lifting loads to shoulder, do so smoothly, keeping back straight.
- Take regular rests when loading out and avoid long periods of continuous loading.

Tools and equipment

All tools must be used in conjunction with risk assessment and method statement and any control measures that are in place.

Points to check before use:

» Are you trained to use the equipment safely?

» Have you read the manufacturer's instructions before using the equipment?

» Give the equipment a visual inspection before use, check for any faults, including:

- The condition of the outer shell, blade, drill, or head of tool.
- That the cable is not damaged.
- Safety devices are in place.
- Check when the tool was last PAT tested and advise the Contract Manager if out of date.
- Listen for loss of running speed, irregular running noise or overheating in power tools.
- **DO NOT** change a cutting disc or blade in any equipment unless you have been trained to do so.
- **DO NOT** use the tool if you suspect it is dangerous.
- Wear the appropriate PPE, gloves, safety glasses, safety boots, face mask etc.
- Only use the tool for the appropriate task.
- Ensure that guards are in place where they are required.
- Ensure that the power tool can be switched off quickly.
- Make sure that power tools have been maintained in good repair.
- If the equipment requires fuelling, make sure it is situated in a suitable drip tray.
- Tools and equipment used at height need to be secured against falling.

Control of Substances Hazardous to Health

What is COSHH?

COSHH is the law that requires employers to control substances that are hazardous to health. You can prevent or reduce workers exposure to hazardous substances by:

- Finding out what the health hazards are.
- Deciding how to prevent harm to health.
- Providing control measures to reduce harm to health and making sure they are used.
- Keeping all control measures in good working order.
- Providing information, instruction and training for employees and others.
- Providing monitoring and health surveillance in appropriate cases.
- Planning for emergencies.
- Hazardous substances you may come across in your work include:
  - Substances used directly in work activities (adhesives, paints and primers).
  - Substances generated during work activities (fumes from soldering and welding).
  - Naturally occurring substances (dust).
- Safety data sheets and product labelling will inform you of the precautions you will need to take when handling and working with hazardous substances.

Health hazard / hazardous to the Ozone Layer

Explosive

Corrosive

Gas under pressure

Serious health hazard

Acute toxidity

Hazardous to the environment

Oxidising gases, liquids and solids

Flammable gases, aerosols, liquids or solids

Working on or near fragile surfaces

Falls through fragile surfaces, particularly fibre-cement roofs and rooflights, account for 22 per cent of all fall from height fatal injuries in the construction industry. Workers undertaking roof work and building maintenance can die or be permanently disabled when they fall through fragile surfaces.

Those carrying out small, short-term maintenance and cleaning jobs are over-represented in the injury statistics. Everyone involved in this type of work, including clients and contractors, should treat falls through fragile surfaces as a priority hazard.

Fragile surfaces and materials will not safely support the weight of a person and any materials they may be carrying. All roofs, once fixed, should be treated as fragile until a competent person has confirmed that they are non-fragile. In particular, the following are likely to be fragile:

- **Fibre-cement sheets**—non-reinforce sheets irrespective of profile type.
- **Rooflights**—particularly those in the roof plane that can be difficult to see in certain light conditions or when hidden by paint.
- **Liner panels**—that are not fully fixed on built-up sheeted roofs.
- **Metal sheets**—where corroded.
- **Glass**—including wired glass.
- **Chipboard**—or similar material where rotted.
- **Others**—including wood wool slabs, slates and tiles.

Steps to be taken to deal with the danger are:

- **Avoidance**—plan and organise work to keep people away from fragile surfaces so far as possible, such as by working from below the surface on a mobile elevating work platform or other suitable platform.
- **Control**—work on or near fragile surfaces requires a combination of staging's, guard rails, fall restraint, fall arrest and safety nets slung beneath and close to the roof.

- **Communication**—warning notices must be fixed on the approach to any fragile surface. Those carrying out the work must be trained, competent and instructed in use of the precautions required.
- **Co-operation**—contractors should work closely with the client and agree arrangements for managing the work.

Flat roofing fire safety

The NFRC **Safe2Torch** guidelines have been accepted by the RBM industry to reduce roof fires caused by gas torches. If you are working on the roof that has flammable details like a tiled roof Junction; the minimum distance you are allowed to use a gas torch must be determined by the risk assessment but not less than 900 mm. The Safe2Torch guidance can be viewed here: https://nfrc.co.uk/safe2torch.

LPG Gas Cylinders

It is important that LPG cylinders are stored in the upright position and removed from the workplace when not in use and cylinders should be stored in a lockable gas cage when not in use. When moving or handling gas cylinders, it is important to bear in mind the following:

- Plan the Lift; a gas cylinder should always be upright when lifted to the place of work.
- Move gas cylinders with a purpose-made trolley that has a chain attached to secure the cylinder.
- Always use the proper lifting technique when moving gas cylinders.

The greatest hazard in working with LPG is that when mixed with air, it can burn or explode if there is a source of ignition. Containers of LPG are liable to explode if they are involved in a fire. Leaks may be identified by smell, noise or an approved leak detection solution or leak detector; never search for leaks with a naked flame.

Gas Torches

Gas torches require a steady pressure to ensure best performance, the recommended bar for fixed regulator is four-bar pressure. The gas regulator should be a left-hand threaded for fuel gases, with the hexagon nut on the union connections notched to aid identification. It should also have a safety cut-off valve that stops the gas supply to the hose if the hose becomes damaged during use. LPG gas hoses should be orange in colour and of a suitable length. Hoses are relatively

vulnerable pieces of equipment that play a vital and valuable role in ensuring a flow of gas to your torch; therefore, they should be selected and stored with care. Routinely check your gas hose for visual signs of cuts, cracks, fading, brittleness and hot spots. The normal useful service life for a hose is approximately five years, so do remember to replace them at the end of their life span.

Gas torches should be fitted with a stand to ensure the hot burner doesn't come into contact with the roof surface, or materials with the work area. Torches that self-ignite and extinguish by using an electronic ignition system are safer and use less gas. Gas torches that are manually lit, must be extinguished after use; never leave a gas torch running on a pilot flame.

Gas torches must be used correctly, and be cleaned and maintained at regular intervals:

- Do not use torch with gases and pressures other than those for which it is intended.
- Use only with propane fuel gas.
- Inspect all equipment before use. Do not use damaged, defective, or improperly adjusted equipment.
- Make sure valves work properly, threads on equipment are clean (no grease or oil) and not deformed, and fittings are properly sized for the cylinder.
- Make sure torches are clean (no grease or oil) and manufacturer's maintenance instructions are followed.
- Be sure all connections are tight.
- Do not use torch if you smell gas. Check system for leaks with an approved leak detection solution or leak detector.

Fire Extinguishers

Fire extinguishers should have an up-to-date service record. It is important to select an appropriate fire extinguisher for the task:

Water—Water fire extinguishers can be used on fires involving wood, paper, textiles and similar materials. They are not suitable for combustible liquids, oil, petrol or fires involving electricity.

Dry Powder—Dry powder fire extinguishers can be used on fires involving wood, paper, textiles and similar materials. Dry powder can also be used on fires involving electrical equipment however, they do not cool the fire, so it can re-ignite.

Foam—Foam fire extinguishers are most suited to extinguishing liquid fires such as petrol or diesel and are more versatile than water jet extinguishers because they can also be used on solids such as wood and paper. The foam extinguishes liquid fires by sealing the surface of the liquid, preventing flammable vapour reaching the air and starving the fire of fuel. Foam is not suitable for fires involving electricity.

CO2—CO2 fire extinguishers can be used on any type of fires, including electrical equipment and is an effective way to put out fires and prevent fire from reoccurring because of the lack of oxygen and the ice-cold temperature of the CO2 when released from the extinguisher.

You must NEVER use a water fire extinguisher on a bitumen fire.

Environmental protection

Environmental impacts will arise at any construction project, irrespective of the location, size or nature of the development, and can affect the immediate neighbourhood, and also the natural and built environment. Impacts can take many forms, such as noise or pollution, and can affect surrounding flora and fauna. Good environmental practice enables these issues to be managed positively.

The greater accountability of preventing environmental impacts or minimising the risk of potential impacts at site level demands higher standards of environmental awareness by all who work in construction.

When constructing building we need to manage the impact for a range of environmental issues which includes:

- Resource management.
- Waste.
- Materials.
- Energy efficiency.
- Water efficiency.
- Land contamination.
- Ecology–protected species and habitat.

Construction work can be a nuisance to the surrounding environment which will also need to be managed, issues include:

- Dust, emissions and odours.
- Lighting.
- Noise and vibration.
- Traffic management and vehicle use.

Materials storage

You must keep every part of your construction site in ‘good order’ and every place of work clean. The objective is to achieve what is usually called a good standard of ‘housekeeping’ across the site. In addition, all contractors must monitor their work, so it is carried safely and without risks to health. This includes careful planning on how the site will be kept tidy and housekeeping actively managed.

Safe and efficient materials storage depends on good co-operation and co-ordination between everyone involved including, client, contractors, suppliers and the construction trades.

Tips for materials storage on smaller projects include:

- **Storage areas**—Designate storage areas for plant, materials, waste, flammable substances, such as flammable liquids and propane and hazardous substances such as primers and adhesives;
- **Pedestrian routes**—Do not allow storage to ‘spread’ in an uncontrolled manner on to footpaths and other walkways. Do not store materials where they obstruct access routes or where they could interfere with emergency escape;
- **Flammable materials**—Will usually need to be stored away from other materials and protected from accidental ignition.
- **Storage at height**—If materials are stored at height, make sure they are safely secured;
- **Structurally safe**—Only load materials on a roof that has been confirmed structurally safe by a structural engineer otherwise it could cause collapse.
- **Tidiness**—Keep all storage areas tidy, whether in the main compound or on the site itself;
- **Deliveries**—Plan deliveries to keep the amount of materials on site to a minimum.

Waste management

There is legislation governing the proper disposal of waste, ranging from low risk waste through to hazardous waste. These laws are enforced by the Environment Agency and Local Authorities.

Tips for waste management on smaller projects:

- **Flammable Materials**–Make sure that all flammable waste materials (such as packaging and timber offcuts) are cleared away regularly to reduce fire risks.
- **Work areas**–Make clearing waste a priority and that everyone is aware of what is required that it is being done.
- **Skips**–Waste materials need storing safely before their removal from the site so make sure that you allow sufficient space for waste skips. Plan where the skips can be positioned and how often they will need to be collected.

Asbestos

Asbestos is a harmful substance that continues to kill many people every year. It is the biggest occupational killer in the UK. The microscopic asbestos fibres are invisible and are easily disturbed, breathing in any type of asbestos fibre can lead to lung diseases such as mesothelioma, asbestosis and lung cancer.

It's really important that you understand the risks of working near asbestos as it is not always obvious where asbestos is hidden, the NFRC have developed an asbestos awareness course specifically aimed at the roofer and can be found by clicking the following link: https://learning.ghtechnical.com/catalog/info/id:134 (if you who wish to purchase the course online, simply follow the link and enter the discount code *NFRCMbr* when prompted to receive a 40 per cent discount).

You must take precautions to protect yourself against asbestos on every job, even the small ones; asbestos can be in places that you might not expect, so you could come into contact with it without knowing.

REMEMBER:

- Think about the asbestos risk on every job.
- All business premises and public buildings built pre-2000 should have a plan showing any asbestos in the building, so ask to see it before you start.
- If possible, plan the job to avoid disturbing any asbestos.
- If it has to be disturbed, don't start work until you have double-checked how to do it safely and that you have the right information and training.

These simple things will help keep you safe when doing asbestos work.

Sun safety

Research shows that construction workers have a greater risk of skin cancer than any other occupation. It is estimated that the risk of developing skin cancer increases significantly with five or more years of outdoor work.

The following is a list of protective measures that can help to protect yourself from the sun's harmful rays:

- Keep a top on—tightly woven fabrics are especially good at keeping the sun at bay.
- Wear a hat—ideally, one that can protect your ears and neck is also important.
- Stay in the shade wherever possible. Working at the earliest and latest parts of the day are best and having your break during the hottest part of the day at lunchtime will help manage the length of time that you are exposed to the sun.
- Use a sun protection cream—with a sun protection factor of at least 30 SPF.
- Avoid becoming dehydrated—drink plenty of water. Aim to drink a minimum of two litres a day.
- Keep an eye on your skin, moles especially, for any changes and see your doctor for regular checks.
- Take care to protect yourself. Skin cancer is one of the most common causes of cancer.
- If you are fair skinned/freckled or you have red hair you will burn before you tan.
- If you have a large number of moles (50 or more) you will be at a greater risk.
- In extremely-hot weather additional short breaks and extra fluids must be taken to counter the possible effects of dehydration.

See NFRC HSGS41 'Working outdoors in hot weather': https://bit.ly/4epsaOg.

Dust

Construction dust is not just a nuisance; it can damage your health and some types can eventually even kill–we need to control our exposure to silica dust; even a quick task can create dangerous levels of silica dust.

Silica dust is produced when solid materials are broken down into fine particles, like cutting a concrete roof tile for instance. Generally, the finer the particles are, the more hazardous they are, since it can get deeper into your lungs. Microscopic particles of silica can be found in many construction materials such as bricks and roof tiles. Prolonged exposure to silica dust can lead to lung cancer and other life changing or life shortening conditions.

To prevent exposure to harmful dusts your employer must provide you with the correct type of respiratory protective equipment (RPE (face mask)). The choice of RPE will depend on the nature of the hazard from which the protection is required, in most cases an FFP3 rated face mask would be a minimum. Dust can also be suppressed by wet cutting which is an effective way of minimising exposure although the operative cutting will still need to wear the appropriate PPE, including RPE.

Noise and vibration

Noise

Noise is part of everyday life, but too much noise can cause permanent and disabling hearing damage. This can be hearing loss that gets worse over time, damage caused by sudden, extremely loud noises, or tinnitus (permanent ringing in the ears).

However, there is no need for your hearing to be damaged by your work – your employer has a duty to protect you and should be working on measures to reduce the risk. You can play a part in helping your employer to protect you.

Co-operate—help your employer to do what is needed to protect your hearing. Make sure you properly use any hearing protection and follow any working methods that are put in place.

Wear any hearing protection you are given—Wear it properly (you should be trained how to do this), and make sure you wear it all the time when you are doing noisy work, and when you are in hearing protection zones. Taking it off even for a short while really reduces the overall protection you get, meaning your hearing could still be damaged.

Look after your hearing protection—Your employer should tell you how to look after it and where you can get it from. Make sure you understand what you need to do.

Vibration

Construction workers are at high risk of ill-health from using vibrating tools like sanders, grinders, disc cutters and hammer drills When using these tools, vibration is transmitted into the worker's hands and arms—causing hand-arm vibration. Regular hand-arm vibration can result in a number of conditions collectively known as hand-arm vibration syndrome (HAVS). Employers need to plan and implement measures to reduce this risk. They have to assess the risk to health from vibration, find out what levels of vibration workers are exposed to and reduce the level of vibration as far as possible. In addition to the employer's duties there are a number of ways in which you can help to reduce the vibration level you are exposed to:

- Always use suitable low-vibration tools.
- Always use the right tool for each job.
- Before using a tool make sure it has been properly maintained and repaired to avoid. increased vibration caused by faults or general wear.
- Make sure cutting tools are kept sharp so that they remain efficient.
- Reduce the amount of time you use a tool in one go, by doing other jobs in between.
- Store tools so that they do not have very cold handles when next used.
- Encourage good blood circulation by keeping warm and dry (when necessary, wear gloves, etc).
- Massage and exercise your fingers during work breaks.

Mental health

What is Mental Health?

Mental health is the way we think and feel and our ability to deal with ups and downs. We all have mental health, and just like our physical health, sometimes things go wrong. However, it's not as easy to spot the signs, and often, it's difficult to know who, when and where to turn to.

What can cause poor Mental Health?

With one in four people suffering from mental health issues at some point in their lives a number of factors can contribute to poor mental health.

- Transient work—the inability to obtain steady employment.
- Workplace pressures.
- Chronic illness or injury.
- Financial and legal problems.
- Bereavement.
- Relationship breakdown.
- Child custody issues.
- Alcohol and drug abuse.

This effects of mental health on a business can be costly with a decrease in productivity, higher risk of workplace accidents and absence from the workplace are all possible outcomes if the signs aren't recognised and support offered to the sufferer. Changes in behaviour that can indicate mental ill health can include:

- Late or low attendance.
- Loss of sense of humour.
- Lack of concentration.
- Problems coping.
- Withdrawal.
- Seeking reassurance.
- Confusion / indecision.

How can I support a work colleague?

If you notice a change in a work colleagues mental health, there simple things you can do to help. Take them for a coffee and ask how they are. Listen without judging and be careful not to offer opinions on how they should manage their mental wellbeing. It is good to be aware of relevant personal issues affecting staff such as illness, bereavement and other stress related factors that may contribute to a colleague struggling to cope in the workplace.

You don’t have to know all the answers, but you can help them explore some of the options they might have. Share what’s happening with your own work and life too. It’s amazing how much better we feel when we talk about the real stuff affecting all our lives.

Get Help

Have a look through the resources on the Building Mental Health website. Many of the services listed below will also be able to help you, either by giving you tips on how to support a colleague, or by offering support to you.

Construction Industry Helpline
lighthouseclub.org | 0345 605 1956.

The Samaritans
samaritans.org | 116 223.

CALM (Campaign Against Living Dangerously)
thecalmzone.net | 0800 58 58 58.

M.I.N.D
www.mind.org.uk | 0300 123 3393.

NFRC

LEADING ROOFING EXCELLENCE

NFRC
31 Worship Street
London
EC2A 2DY

020 7638 7663
nfrc.co.uk

MRK267:v1.0 12/2024