

Guidance for the Evaluation of Method Statements for Roof Work

What is roof work?

Roofs can be hazardous work areas particularly when working on pitched roofs or when working on roofs with no edge protection. Some roofs also carry plant and have flues and outlets from chemical processes terminating on them. All roof access is controlled by key access and permit to access and permit to work systems.

Permit to access roofs are issued to staff and contractors who need to access roofs for the purpose of inspections and surveys. This type of permit does not allow physical work to be undertaken.

Register of Roof Access Statements

Coventry University maintains a register of all roofs and a detailed access statement relating to the roof of each building. This register should be referred to when evaluating method statements for entry onto these areas, as the register will identify what hazards are present and the precautions to be taken.

Hazards in roof work

Persons Falling – this could include persons tripping over plant and other services on the roof surface causing a fall on the level or a fall from height, in the most serious case this could result in a fall from the roof to the ground below.

Loss of consciousness of personnel due to the presence of poisonous gas, fume or vapour – this could be from pipe work and ducts in buildings that are used to extract toxic and other hazardous substances.

Fire or explosions – caused by the presence of flammable gas or fume in sufficient quantities to be within the substance's lower and upper explosion limit. Fire caused by the ignition of flammable material from cutting, welding and other hot work may cause smoke generation which could put personnel at risk.

Falling Tools, Equipment and Debris – building materials, loose masonry, tools and equipment could fall from roofs creating a hazard for any pedestrians and vehicles below.

Exceeding the roof's safe working load – The design of the roof may include materials that are either fragile surfaces or are of a construction that is not intended to have any significant load placed upon it.

Extreme Weather Conditions – high winds, heavy rain and ice and snow can increase the likelihood of a fall on or from a roof.

Precautions for Roof Work

As a **minimum** the following precaution should be applied to all roof work;

1. The entry onto the roof must be subject to the University's Permit to Work System; no other local arrangements or contractors systems should be accepted. There permit must not be issued until a suitable and sufficient risk assessment and safe system of work has been supplied by the company or individuals undertaking the work.
2. The whole activity should be supervised by an individual who has the responsibility to ensure that all of the necessary precautions are implemented and must have received training in working on roofs.
3. Where no edge protection is available on a roof temporary edge protection should be considered before resorting to fall prevention and fall arrest equipment.
4. If fall protection equipment is used a full body harness should be worn by all staff working on the roof with a fixed length lanyard attached to a tested and certified anchor point. The fixed length lanyard should be **sufficiently short** that the worker cannot reach **within one metre of any point of fall** i.e. the roof edge.
5. If fall arrest equipment is used a full body harness should be worn by all staff working on the roof with a deceleration / shock absorbing lanyard attached to a tested and certified anchor point. **Fall arrest equipment should only be used as a last resort** when all other methods of fall prevention have been exhausted. The use of fall arrest equipment will require a **minimum of two people** to be working on the roof at all times so that a rescue can be initiated should a fall and unintended suspension occur.
6. Where fall arrest equipment is used there should be a suitable rescue plan developed in writing and in place to recover workers who fall and become suspended during the work; this **must not** rely on the fire service, University security or any other emergency services. The rescue plan must be able to be initiated and the **suspended worker rescued within 30 minutes of the fall occurring**.
7. There must be a suitable method of communication between those working on the roof and the project manager overseeing the work. This could be by radio and or mobile telephone where network coverage permits.
8. Suitable lighting should be available during the task where work is undertaken during night times. This can be either from existing lighting in the area or supplementary lighting installed during the task. In either case emergency lighting should be available to aid escape in the event of a power failure.
9. All tools used within one meter of the point of fall should be tethered on tool lanyards to help prevent falling objects.
10. All method statements relating to roof work should include a statement relating to the controls for working on fragile surfaces and any weight restrictions on the roof. This information should be taken from the roof access statement.
11. A statement regarding the adverse weather conditions and above set wind speeds or in the presence of ice and snow that the work would be suspended until the weather conditions improve.

Other Precautions

Depending on the nature of the risk the following precautions will need to be included in the method statement produced by those working on the roof;

1. The wearing of personal gas detectors by personnel if the presence of known toxic substances in the form of fumes, gas or vapour could become present on the roof during the works. These should be calibrated and certificates confirming their calibration should be sought.
2. The isolation of gasses, fumes or vapours that could flow onto the roof. Isolation requires the physical disconnection of services in such a way that they cannot be accidentally reconnected. This will usually require using blanking plates, closing and locking off valves or disconnecting and removing pipe work leading to the roof. Any devices used to lock off valves should only be removable by those working in and controlling the work area.
3. Isolation of mechanical and electrical equipment. Isolation requires the physical disconnection of the flow of power to the equipment in such a way that they cannot be accidentally reenergised. This will usually require isolation and locking off of the plant at the distribution board or at the local isolation switch. Any devices used to lock off equipment should only be removable by those working in and controlling the work area.
4. The wearing of Personal Protective Equipment (PPE) such as overalls, safety footwear, gloves, safety helmets and dust masks. Consideration should be given the specification of PPE where a flammable atmosphere may exist as clothing could generate static electricity which could ignite flammable dust, gasses, fumes or vapours.
5. The wearing of Respiratory Protective Equipment (RPE) such as dust masks, respirators, air fed respirators and self contained breathing apparatus. All RPE should be face fit tested to the worker and be subject to pre-use inspections. Self contained breathing apparatus should only be used by trained and competent workers and be subject to a formal inspection. Certificates confirming their inspection should be sought.
6. Detailed controls for undertaking hot works on roofs will be required if any cutting, welding, brazing, soldering, grinding or work with open flame torches or bitumen / tar burners. These are detailed in the guidance for hot work.

Further Guidance

Further guidance on the safety in roof work can be gained from the Safety and Risk Management Team and Roof permit authorisers in the Estates Department.

Additional guidance is available in HSE publication HSG33 – Safety in Roof Work which can be accessed at <http://www.hse.gov.uk/pubns/priced/hsg33.pdf>