



Safe Work at Height – Projects Involving Works to an Existing Roof

A Simple Guide for Contractors and Design Teams Involved In Refurbishment Projects Where Work Is Undertaken to an Existing Roof

The guidance given in this document is intended as general advice based on present understandings of the Regulations, the 2005 Act and HSA's publications. While legal advice has been sought and taken into account in preparing the guide, the advice given should not be regarded as a legal interpretation of the Regulations or of the Act (No. 10 of 2005). Advice given here must be considered in the context of professional judgement being exercised by competent persons; it is not intended to provide the definitive approach in any situation. In all circumstances those best placed to decide on the appropriate action will be the parties undertaking the particular risk assessment and resulting control measures. Appropriate legal and insurance advice should be sought as necessary.

What is ISHA?

The Irish Safety at Height Association (ISHA) was formed by a number of companies, Skyway Safe Access Equipment, Brandon Agencies, Bruce Shaw Safety Management and Garland Safety Management with the aim of promoting safe work at height practices in Ireland.

Introduction

The purpose of this guide is to inform design team members and main contractors involved in construction projects where alterations are made to existing roofs. This guide is focussed on responsibilities for providing a future safe workplace for maintenance rather than on the construction works associated with the refurbishment phase itself.

Why must we consider safety at height?

Since working at height is a dangerous activity there are moral and ethical reasons to do so. Over the past ten years a significant proportion of all construction related fatalities have been attributed to falls from height. Given the definition of construction is so broad this covers a vast array of activities being carried out by individuals at height in Ireland on a daily basis. Legislation is also in place that requires everyone involved in the design, construction and maintenance of a building to consider how falls from heights are prevented. The potential consequence of ignoring legislation and/or an operative getting injured, fatally or otherwise, is jail or a hefty fine and a loss of reputation as a minimum. Applicable legislation includes the Safety, Health and Welfare at Work Act 2005, Safety, Health and Welfare at Work (Construction) Regulations 2013 and the Safety, Health and Welfare at Work (General Applications) Regulations 2007. The Health and Safety Authority have also published a Code of Practice For Safety in Roof Works, which came into effect on the 1st of September 2011, which imposes requirements on duty holders. **Corporate manslaughter is now a reality**, (HSENI vs JMW Farms, May 8 2012).

Where do I start?

The most basic requirement of Irish work at height legislation can be summarised in two words "**Risk Assessment**". You must consider the risks to persons undertaking maintenance of the roof and any items located on it. Upon consideration of the risks you must determine appropriate control measures to be applied and implemented for future works at height. You may need help and advice with this process and this is readily available through competent and adequately resourced safety professionals.



Surely, I can pass on my responsibilities?

No – this is a common misconception. Section 17 of the 2005 Act places onerous duties on those who design construction work to apply the principles of prevention for those who maintain what is constructed. This requires consideration and allowances for future safe system of work, including safe access and egress. You are not able to sub-contract your legislative duties. However, those carrying out the maintenance works have a role to play as well. Contractor's etc, must have their own insurance, carry out their own Risk Assessment and produce Method Statements for the work. They must provide appropriate training to their direct employees.

Can I simplify the Risk Assessment process?

Yes, there are some key steps that can be taken to ensure an appropriate and comprehensive risk assessment is undertaken and documented. The most fundamental question is to consider – “How often will people need to access this roof and what will they be doing when they are up there?”

To answer the question you must first look at the type of existing roof you have and what is on it:

1. If you have a flat roof and you are adding additional plant and equipment that needs maintenance regularly, that will require maintenance personnel up on the roof at different times throughout the year. Therefore a high frequency of access to the roof will be required with a varying degree of tools and spare parts required to be brought to the roof. Given the high frequency of access the possibility of an accident occurring is high, a risk assessment will likely determine that the installation of collective protection measures is required. This means system that protects all persons on the roof, not just an individual, which is in place without requiring user intervention to make it work. This type of system would include a high parapet or permanent guardrails around the edge of the roof.



2. On the opposite end of the scale if you have a curved barrel vault roof with no frequent access requirements (i.e. no plant, smoke vents or rooflights, etc. on it) and the gutters are easily accessed by a mobile elevated working platform (MEWP) from the perimeter of the building, then your risk assessment is likely to conclude that you should restrict access to the roof and adopt a suitable system to maintain the gutters from the safety of the basket of an MEWP. However, if the roof guarantee requires you to clean down the roof at regular intervals, then you may need a permanent safety system.

What do I do if I have established I am adding something to an existing roof that requires frequent maintenance?

If you have a high frequently accessed roof with a high chance of a fall similar to item 1 above then the first thing you need to consider is initial access onto the roof. Access must be easily achievable; you cannot access a roof similar to this with a ladder, as operatives will need to carry tools and spare parts to the roof. You must have a stairs (internal or external) leading on to the roof.

The roof edge itself must be protected (i.e. 1100mm high parapet or free standing guardrail system). This is known as “collective protection” as it protects all on the roof area. No special training or equipment is required as the system works “passively”, meaning no measures are required to be taken by the individual to make the system operable. Should a passive collection measure be provided the chance of an accident are low.

What do I do if I have established I am making modifications to the roof that requires infrequent maintenance access?

You need to consider the current situation and determine by risk assessment, if this situation is currently suitable and remains suitable after your project.

Given the frequency of access is low, a full passive collective protection system may not be required and the risk assessment may determine that a fall prevention cable system be reasonably practicable. A cable system is a permanent fall prevention system whereby operatives tie off with their harnesses. This is known as “individual protection” and also as being “active” which means the system only covers the person attached to it and it requires users to manually engage the system. With this type of system the risks are much higher as there is so much more that can go wrong. The equipment used must be certified and fit for purpose. Also, the operatives using the system must be trained in harness systems; they must have the right equipment and must be competent in its use. Professional safety advice is a must when dealing with individual and active protection.



Remember, “collective protection” is always better no matter what the circumstances.

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What if I am making modifications to the roof that has existing fall prevention cable systems and the modifications do not change the frequency of access?

You need to consider the current situation and determine by risk assessment, if this situation is and remains suitable. Remember that fall prevention systems are designed and installed to be used in very project specific manners. You should review the safety file and fall prevention system operation and maintenance (O+M) manual for guidance on how the original system was designed and installed to be operated. You should compare this to the roof modifications being made in case these impact on the intended use and operation of the original system. Alterations maybe necessary to the system to accommodate any changes or additions made to the roof. You may need help and advice with this process and this is readily available through competent and adequately resourced safety professionals and fall prevention system designers.



Rooflight Cover (and roof with fall prevention cable system)

I am doing work on a building without suitable roof protection but we are not altering or affecting the roof in any way, what do I need to do?

You will, most likely, not be legally required to consider altering the existing roof safety regime, however, you should advise your client, especially if they are the building owner, in control of the workplace or sending their employees or others onto the roof, that they should consider upgrading the roof safety regime in line with best practice and consider including this upgrading work within the project. Section 15 of the 2005 Act places onerous duties on those in control of the workplace including the access and egress to the workplace. If your client is the person in control of the building or work being undertaken on the roof, they have a number of legal responsibilities they must be shown to have discharged. Correctly upgrading the existing roof safety regime would be a large step towards adequately discharging these duties.



What if I am making modifications to an existing roof with no high parapets or other edge protection?

The safest thing to do is always provide for collective protection where ever possible such as free standing guardrail systems – these ensure instant protection and do not penetrate the roof membrane. Otherwise you need to carry out a Risk Assessment to determine if a lesser

Do I need to worry about existing rooflights?

Absolutely – more people are killed from falling through fragile rooflights than from the edge of the building. Always assume rooflights are fragile unless you have evidence to prove otherwise. Again, go for collective protection like rooflight covers or replacement of the rooflight with a solid panel or a non-fragile specification. Where roof access is regular or cannot be controlled, the relevant roof assembly must be designed to a high classification of non-fragility (e.g. Class B to ACR[M]001:2005) and this level of non-fragility must be expected to last for the envisaged design life of the building when the assembly is fitted in accordance with the manufacturer's instructions.

What if I am still not sure what is best?

Bring in a professional safety company or consultant to ensure you provide the most reasonable system available to prevent operatives from falling from height. Have a design prepared for you complete with drawings and specifications backed up with the company's Professional Indemnity insurance.

Remember, if you end up in court the judge will ask whether you carried out a risk assessment and whether you provided "reasonable" protection to operatives working at height. You need the assurance of being able to answer yes to both questions.

Do we need a PSDP and PSCS for the project?

More than likely, Yes you do. Find out for sure using this very useful tool from the Construction Safety Partnership (CSP) which is available here:

http://www.csonline.ie/documents/FinalClientAssessment_001.pdf