# Homeowner's guide to roof work





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# INTRODUCTION

Undertaking roof renewals, maintenance or repair work can be a daunting task. The purpose of this guide is to provide you with a better understanding of the design of the roof on your house and the materials used to keep you warm and dry. It will take you through step-by-step of what to do and what to look out for when selecting a roofing contractor. There is also a handy form at the back of this guide where you can store important information regarding the construction of your roof(s) and the type of materials used to waterproof your home. Simple things like knowing the age of your home can really help determine the construction and materials used on your roof, which can assist when planning work.

There are two types of roof maintenance that you are likely to undertake as a homeowner-proactive or reactive. By undertaking proactive maintenance of your roof, you should help to mitigate the risk of reactive maintenance, just like servicing a car. Unfortunately, when undertaking reactive maintenance, this will probably be due to water coming into your property– this is where the selection of a trained, qualified and trustworthy tradesman is critical, especially if you don't have an understanding of your roof coverings.

Before looking at the design of your roof, it is worth understanding some common roofing terms:

#### 1. VALLEY .....

A drainage channel between two different slopes of a roof.

2. RIDGE -----

The highest point of the roof.

**3. EAVES** ..... The lowest point where the guttering is situated.

#### 4. VERGE ------

The end of the roof that follows the slope from the eaves to the ridge.

#### 5. GABLE WALL ----

A brick wall that goes from the ground floor up to the top of the roof.

#### -- 6. FLASHING

Flashing prevents the passage of water into the structure from a joint.

# Understanding the design of your roof

There are many different designs of roofs used throughout the British Isles. Some designs tend to be complex to improve the look of a building both internally and externally, for example, vaulted ceilings can create a focal point inside your home. However, the basic roof designs can be seen below:



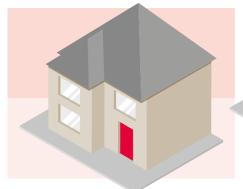
#### **GABLE DESIGN**

The gable roof is a traditional 'up-and-over' design and is available in almost any type of roof pitch, from low pitched homes to steep A-frames. These roofs only have a gutter on two sides at the lowest points.



#### **HIP DESIGN**

Hipped roofs usually do not have a verge like a gable design but will have a gutter running around all four sides of the house.



#### **HIP AND VALLEY**

A hip and valley roof is a modified or extended hip roof which allows the home to form the shape of a right angle.

#### DORMER

A dormer roof creates usable space out of the roof, adding natural light and headroom. These can either have a flat roof covering or a pitched roof like the main roof.

# Types of pitched roof coverings

Pitched roofs tend to be covered with roof tiles of varying shapes, sizes and materials, the most popular of these are:



INTERLOCKING ROOF TILES

Interlocking tiles are usually made of concrete and are the most common way of covering a pitched roof.



PANTILES

The forerunner to interlocking tiles, pantiles are manufactured in clay and are widely used in the east of England.



### **PLAIN TILES**

The smallest of the tiles, plain tiles are made of either clay or concrete and give the roof a more traditional look.



#### **SLATES**

Natural slate is available in different sizes and colours depending on the country of origin, with Spanish and Welsh being the most commonly used in the UK. Man-made fibre cement slates are a modern alternative.



#### LEAD

Lead is mostly used on domestic properties for flashing material, around chimneys and at roof junctions.



METAL

Metal roofing is laid in sheet form and the two most popular metals currently being used are zinc and copper.

# **Types of flat roofs**

Flat roofs are commonly found on extensions or garage roofs and occasionally on modern architecture-styled homes.

Traditionally, domestic flat roofs like garages and extensions were usually covered with multiple layers of bituminous felt as the roof covering. Today, there is a broader choice of waterproofing materials and systems which can be used on flat roofs, for example:

- Torch-on felt-Applied either with a propane gas torch which produces a naked flame or a hot-air gun which uses hot air to melt the bitumen on the rear of the felt to enable the product to bond. Typically installed in a two-or three-layer roof system.
- Single ply–Single-ply membranes are manufactured in sheet form and are jointed by either hot air or a solvent.
   PVC is the most common type of single ply and once installed, they form a continuous weatherproofing layer.
- **EPDM**–A synthetic rubber roofing membrane that is widely used and popular in the domestic market, it comes in sheets usually made to measure with its own flashing systems.



 Mastic asphalt–Commonly associated with flat roofing applications and is a tough and durable waterproof membrane. At the end of its useful life, mastic asphalt is 100% recyclable making it an environmently-friendly option. • Liquid applied-The most common system used in the domestic market is Glass Reinforced Plastic (GRP) utilising a relatively-rigid polyester resin with a glass fibre re-enforcement. Liquid applied polymer systems are also available.

When considering replacing or repairing a flat roof covering it is imperative that you take the following points into account:

- 1. The contractor should be trained and qualified in the system to be installed.
- Proof of training to be confirmed with certificates or approved applicator cards.
- 3. Does the roof system that the contractor is proposing come with a workmanship guarantee?
- 4. Is the roof system guarantee backed by the manufacturer or is it insurance backed?
- 5. Is the product/system being offered approved by your home insurance company?
- 6. If you are replacing and/or renewing more than 50 per cent of your roof then under Building Regulations, you must upgrade your insulation to the current minimum standard.



### Using your roof for solar power

When considering whether to install solar panels on your roof as a way of generating clean energy for your home, you should consider the following:

- Existing roofs should have an expected life span of no less than that of the solar panels. This applies to the complete roofing system and not just the roof covering. As such, you should have a roof condition report carried out by a competent individual and undertake any remedial work or re-roofing that may be required before the solar installation.
- Consideration should be given when working off the roof coverings when installing solar panels so not to damage the existing roof. The contractor should provide, install and remove adequate protection during the installation of the solar panels.
- Special attention must be given when working in close proximity to fragile elements such as roof lights.

- Under the structural requirements of the Building Regulations, a structural engineer may need to check and prove the ability of the existing roof structure to carry the additional load (weight) of the solar system as some strengthening work may be required.
- Integrated solar systems, for example, those which form part of the roof covering, could be considered to avoid adding additional weight to the roof, and will also prevent roosting of birds and other mammals between the panels and roof tiles.
- On existing roofs, the individual or company that is installing the solar panels should be able to prove competency in the installation of the solar panels, have the correct knowledge and training of the roof system that the solar panels are being installed on and also have the required training and knowledge to work at height safely.

# **Green Roofing**

A green roof is a layer of vegetation planted over a roof system which can be installed on top of either a flat or sloped roof. The appropriate depth of any green roof depends on the roof structure, the plants chosen, annual rainfall, and location.

Generally, it is the extensive systems

as they are lightweight and require

It is important that you consider the

roof covering's ability to withstand the work involved when installing the green

roof system and that it is suitable for the

system to be installed on. As such, we

would always recommend a thorough

any additional protection that may be

survey of the existing roof covering; and

required is added prior to the installation.

minimal maintenance.

that are used on a domestic property,

Traditionally there have been three broad classifications for green roofs:

- Extensive-are designed to be low maintenance, lightweight systems where there is no general access. Typically, these range from sedums to small grasses, herbs, and flowering herbaceous plants.
- Semi-intensive roofs-are generally used within highly-visible areas to improve aesthetic design using small shrubs, forbs, and grasses. They require a higher level of maintenance compared to extensive roofs, due to the vegetation, and substrates used.

Intensive green roofs– consist of much deeper substrates which give far greater scope to design and grow more complicated and elaborate gardens onto concrete structures.





# **Birds**

If you, or your roofing contractor, find an active birds' nest in your roof, it's illegal to remove it. Under the Wildlife and Countryside Act 1981, it's an offence to intentionally take, damage or destroy any active wild bird's nest in the UK. Therefore, you mustn't start roofing work on your home if you know birds are nesting.

If a nest is discovered during roof work it is best to leave it alone where possible. If work can't be paused until the young have flown the nest, contact your Statutory Nature Conservation Organisation (SNCO) for advice. For more information visit **www.rspb.org.uk**.

## Bats

In the UK, all bats and their roosts are protected by law. A roost is defined as any place a wild bat uses for shelter or protection.

Having bats roosting in your roof does not mean that roof repairs cannot take place. Your Statutory Nature Conservation Organisation (SNCO) can provide free advice to homeowners. Contact your SNCO when planning the work and follow their advice on how to proceed. In many cases they will send a trained licensed bat worker to inspect your roost and provide advice, free of charge. Always keep in mind the possibility of finding bats when doing any roof work. If bats are found, the work should stop and your SNCO should be consulted immediately. For more information visit **www.bats.org.uk**:

# STATUTORY NATURE CONSERVATION ORGANISATIONS (SNCO)

 Department of Agriculture, Environment and Rural Affairs (DAERA):

www.daera-ni.gov.uk

- Natural England
  www.gov.uk/government/organisations/
  natural-england
- Scottish Natural Heritage
  nature.scot
- Natural Resources Wales
  naturalresources.wales/splash

# **Moss on roofs**

The signs of moss or lichen visible on a roof is not uncommon and under normal circumstances a small amount of growth will not be harmful to the roof covering. Only in extreme cases it may affect the flow of water off the roof and increase the risk of leaks or damage. There are several methods for removing moss from roofs.

The preferred method would be the use of a system from the ground which eliminates any working at height. Alternatively it could be scraped away or brushed off using hand tools. Once moss and lichen have been removed from the roof copper strips can be attached across the high level of the roof to prevent regrowth.



The use of surface treatments, such as painting roof coverings after cleaning, may invalidate manufacturers guarantees of performance and life expectancy of the roof covering.

It is **not recommended to remove moss by pressure washing** as this can force water into the roof space, particularly if sprayed upward from ground level.



# **Spray Foam Insulation**

Caution must be taken if a homeowner is considering retrofitting spray foam insulation to the underside of their existing roof as a means of reducing heat loss by increasing the amount of insulation within the roof space.



A pitched roof on a domestic property is fundamentally designed in one of two ways, these being either a "cold roof" where the insulation is fitted at ceiling level between the joists and so the roof space is cold or a "warm roof" where insulation is fitted at roof level between the rafters and so the roof space is warm.

Predominately domestic properties are designed as a cold roof where the insulation at ceiling level keeps the warm air within the living space of the house and if any warm air rises into the cold roof space the moisture vapour within the warm air turns to a liquid (condensation) and is ventilated externally via the air gaps that have been designed into the roof system which keeps the condensation within acceptable limits.

However, when spray foam insulation is applied to the underside of the roof coverings this alters the design of the roof space from cold to warm, but if the ventilation strategy for the roof is not designed to accommodate this change in design, then harmful condensation can occur which could damage the property.

In addition, the application of spray foam insulation directly to the roof covering may adversely affect the performance of the roof system and invalidate any guarantee/warranty that may be in place.

Our advice to reduce heat loss would always be to first consider increasing the amount of fibre insulation within the roof space at ceiling level as this would be substantially cheaper and would work in accordance with the existing ventilation strategy of your roof space to prevent harmful condensation.

# **Building regulations**

Building regulations are minimum standards for the construction and refurbishment of a property aimed at protecting the health and safety of the people living in them and to help preserve fuel and power.

They cover areas such as fire and electrical safety, installation of heating appliances and the thermal performance of a building (the amount of insulation that you have in your roof). Please note that all homeowners are legally responsible for ensuring that any structural or alteration work undertaken on their property complies with building regulations.

If you are **replacing and/or renewing more than 50 per cent of your roof** then under Building Regulations, you must:

- upgrade your insulation to the current minimum standard;
- notify your Local Authority a minimum of 48 hours before work commences.

The responsibility for notifying the local authority prior to commencing any works can be assigned to your contractor-however, it is you the homeowner who is responsible for ensuring that your home and any works undertaken complies with all relevant building regulations. This process can be simplified by using a roofing contractor who is part of the **NFRC Competent Person Scheme**; as they have the ability to self-certify their work, and the scheme will notify your local authority. See **nfrccps.com/ homeowners** for more details.



# **Party Wall**

A party wall is a dividing partition that sits at the junction between two adjoining properties and is shared by the occupants of either house or business owners. The party wall can either be a parapet wall or the roof covering can continue over the adjoining properties, in some cases a bonding gutter can be used where the roof coverings or adjoining properties differ.

Any works carried out to a party wall are covered by the Party Wall Act 1996. (*The Act does not apply to Scotland or Northern Ireland*). The Act provides a framework for preventing or resolving disputes in relation to party walls, party structures. If you intend to carry out work to a party wall you must inform all adjoining owners before work commences. You and your contractor must provide temporary protection for adjacent buildings and property where necessary. The adjoining owners may require reasonably necessary measures to be taken to protect their property from foreseeable damage and for their security. They also have the right to not be caused any unnecessary inconvenience from the works and compensated for any loss or damage caused by relevant works. They can also appoint a surveyor to resolve any dispute.

The adjoining owner must where necessary let in your workmen and your own surveyor or designer etc, to carry out works in pursuance of the Act (but only for those works) and allow access to any surveyor appointed as part of the dispute resolution procedure. You must give the Adjoining Owner and occupier notice of your intention to exercise these rights of entry. The Act says that 14 days' notice must be given.



A party wall is a wall built to divide two adjoining buildings

#### Note

The party wall between two dwellings is critical not only for the structural stability of the building but also to ensure that in the event of an outbreak of fire, smoke or flames cannot propagate from one dwelling to the next. It is imperative that when any roofing works are undertaken above a party wall an approved and correctly-installed fire barrier is installed as part of the roofing works.



# Health and safety

Working on and repairing roofs without putting the relevant control measures in place to prevent injury to the workers, is high-risk, with more workplace accidents and fatalities resulting from falls from height than any other activity.

It is therefore essential that the roofing contractor you employ to carry out your roof work has the necessary skills, knowledge and experience to complete the works in a safe way and should be able to prove this by way of training cards, being an audited member of a roofing federation or by evidence of previous examples.

Safe working is also strongly linked to the quality of the installation that you can expect from your roofing contractor. If a contractor cuts corners on their safety procedures to keep workers safe they may also be cutting corners on using the correct materials and techniques to ensure your roof meets all the relevant regulations and standards, which can lead to damage to your property and further costly repairs. So, for your peace of mind, choose a roofing contractor who places a strong emphasis on safe working practices and on high-quality installation, such as those who are members of the NFRC<sup>1</sup>, are registered with NFRC Competent Person Scheme<sup>2</sup> or has RoofCERT accreditation<sup>3</sup>.



#### Guarantees

Investing in a property, property improvements and maintenance is a sound financial investment for the homeowner who should ideally only employ contractors who offer them a guarantee to undertake these works. What is often overlooked is what is covered by the guarantee. It is common to see a guarantee or warranty from the contractor for their workmanship and a product warranty from the manufacturer if their products have been installed as per their recommendations and in accordance with British Standards.



Where possible, which could be dependent on the scope of works or value of the works, always enquire if an Insurance Backed Guarantee (IBG) is available for the works being undertaken, as having an IBG in place would allow the homeowner to still make a claim under the terms of the original guarantee in the event that the contractor who undertook the works is no longer trading.

# How to select a contractor

Unfortunately, finding a reliable contractor can be a minefield. We would always recommend using a contractor that is regularly audited and complies with a strict code of practice, and is a member of a trade federation. However, there are certain steps that we would **always** advise you to take:

- Always obtain a minimum of three quotes for any work.
- Always request quotes in writing and that they clearly identify what the works consist of and what is not included.
- Don't just select the cheapest quote, do your research, and compare the quotes to ensure they are like-for-like.
- Ask the contractor to clarify any points on the quote you are unsure of.
- Ask if they are registered with a trade body like NFRC.

- Ask if they can provide a Building Regulations Compliance Certificate (BRCC) upon completion.
- Request a contract specifying the contractor's terms and conditions.
- Ask what measures they are going to take to ensure the health and safety of their operatives and the occupants of the property.
- Do they have insurance, and what does the insurance cover?

# The benefits of using an NFRC member

When it comes to the repair, maintenance or improvement of your roof, you want to be sure that the company carrying out the work will complete the work to the required standard, in a professional manner and also that your legal obligations are met. To ensure that NFRC contractors offer the highest standards in workmanship and customer service, all member contractors are rigorously vetted before joining NFRC and every three years thereafter.

A roofing contractor must meet the following vetting criteria:

- A satisfactory trading record, including financial stability.
- Inspections of past contracts to verify quality craft skills and technical competence.Satisfactory Public, Employers, and Third-Party insurance cover.
- Compliance with Health and Safety legislation.
- Compliance with the NFRC Code of Practice as well as British and European Standards.

- If the NFRC member is also registered with the NFRC Competent Person Scheme they will be able to self-certify their own work greatly reducing the cost of getting building regulation approval.
- The NFRC member may also be part of the government-endorsed TrustMark<sup>4</sup> scheme, of which NFRC Competent Person Scheme is an approved scheme operator, set up to help the general public find reputable tradesmen to carry out work on their home.

# Find a contractor website search

The NFRC website **nfrc.co.uk** has a number of search capabilities to help you find a suitable roofing contractor to work on your home. All listed contractors are members of NFRC and you can specify the type of roofing you need assistance with.

#### nfrc.co.uk

Quick contractor search at the top of the NFRC website home page.

#### nfrc.co.uk/find-a-roofing-contractor

Search for a roofing contractor with specific skills based on your project (choose 'domestic property' for your home).

#### nfrc.co.uk/a-to-z-search

Alphabetical listing of our memberscheck if a specific roofing contractor you are considering is a current member of NFRC.



# Your roof information

Property address:	
Year or decade when property was built	the
Type of main roof des	ign
Type of roof covering NOTE: If possible, log manuf	
Type of roof insulation	n
Other roof types and coverings on your property NOTE: If possible, log manufacturer and product name:	
Garage	
Porch	
Bay window	
Dorma	
Extension	
Garden building	
Roofing Contractor's contact details:	
Other information:	



Further information

- <sup>1</sup> NFRC 'find a contractor': <u>www.nfrc.co.uk/find-a-roofing-contractor</u>
- <sup>2</sup> NFRC Competent Person Scheme: <u>nfrccps.com</u>
- <sup>3</sup> NFRC RoofCERT Roofing Accreditation: <u>roofcert.co.uk</u>
- <sup>4</sup> Trustmark scheme: <u>www.trustmark.org.uk/</u>

Should you require further information, please contact the NFRC helpdesk, which is available to help members of the public. **020 7638 7663** | **helpdesk@nfrc.co.uk** 



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