Roofing & Waterproofing Guide

WARNING!
IS YOUR SCHOOL ROOF DANGEROUS?
Free advice and guidance inside or call 01257 255 771 now.

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Expert Advice for Schools & Academies
Standards in any school start at the top

Whether Academy, Independent or State, every school has a great responsibility to its pupils and students. Not just to provide an education, but to provide a safe and welcoming environment in which they can learn and thrive.

Your school building is one of your most important and valuable assets, protecting pupils, employees and others residing in it, so maintaining or improving a secure, waterproof roof makes sense as the benefits of improving or replacing a defective roof are extensive. This investment can prevent long term problems such as water ingress and subsequent damage to the building fabric, not to mention the associated costs everyone wants to avoid!

This guide aims to provide you with all the information you will need to make valid and informed decisions when it comes to refurbishing a school roof. It also highlights the tell-tail signs of a failing roof, the hazards and risks that may need to be addressed and the questions that you should be asking when choosing the right partner – from independent advice, consultation and design to installation, inspections and guarantees.

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Flat roof hazards & risks

A well designed, maintained and waterproofed flat roof should not cause problems or leak, but it is worth noting that there are still dangers associated with flat roofs that may need to be addressed. IKO can assess and appraise your current roofing situation, while always putting the safety of you, your staff and your pupils first and foremost.

1. Inadequate or no edge protection
One of the main dangers of any roof is the likelihood of a fall. On a flat roof this is heightened by inadequate or no edge protection such as railings.

2. Roof light dangers
Many flat roof designs have roof lights incorporate into them, allowing natural light to illuminate areas within a school that may not have any or minimal natural light. If not protected and maintained correctly falling through a dilapidated rooflight is possible and could be fatal.

3. Loose material and foreign objects
Poor installation or deterioration over time may produce loose materials that could fall from a flat roof at any moment. Foreign objects left on a roof may also cause similar issues.

4. Trip hazards
Wiring, aerials, vents and uneven roof surfaces can all be classed as trip hazards on a flat roof, resulting in damage to the roofing structure or roofing accessories as well as personal injuries.

5. Unstable and ageing roofing material
On the surface a flat roof may appear safe, yet ageing roofing material can create major issues with its structural integrity and in some instances lead to complete failure. Markings and safe standing areas clearly highlighted can help, but the potential to disturb other dangers such as asbestos are harder to prevent.

6. Poor or unsecure access points
Any access point should be well maintained and protected to avoid access by unauthorised personnel. Unsecure access can create a dangerous situation for the untrained and increase the potential of someone becoming trapped or damaging the roofing structure, unknown to those who maintain the school.

7. IKO can reduce any disruption to a school before, during and after installation
Work is scheduled with the school’s main function in mind, teaching; with the safety of all pupils and staff paramount. This is why all our projects can be delivered at preferred times, flexible enough to cover any unforeseen circumstances.

As we are a British manufacturer, the majority of our products are manufactured and delivered to site via local sources, this allows us to not only deliver at preferred times (outside of school hours); but shorter delivery journeys mean a reduction in CO₂ emissions, benefiting the school, the local community and the environment.
Roofing problems to look out for

A well designed, maintained and waterproofed flat roof should not cause problems or leak, but how would you know that your school roof is not watertight or that problems are just around the corner?

There are a number of tell-tail signs to look out for and spotting them early can save time and money:

**Roof Deck - Surface**
- Debris accumulation and vegetation growth
- Warped, sprung or broken wooden boards (wooden deck)
- Cracks, blistering and wear spots
- Movement in the roof underweight

**Roof Deck - Underside**
- Wood
  - Rot
  - Warped boards
- Concrete / Gypsum
  - Cracks and stains
  - Spots of rust from reinforced rods
  - Chips or splinters
- Metal
  - Rust spots

**Roof Lights & Detailing**
- Cracks and chips
- Leakages around the joints
- Internal moisture and condensation
- Build-up of moss and lichen

**People**
- Unintentional damage
- Puncturing and water ingress
- Poor maintenance
Drainage  
• Ponding / standing water (in cold weather ice accumulation)
• Incorrect or lack of falls
• Blocked drains and gutters

Flashing, Coping & Jointing  
• Damaged or fragile roof lights
• General / thermal movement
• Loose, torn or missing
• Improper installation and bonding
• Visible rust indicating a lack of coating
• Cracks, gaps or damage to the joints

Exterior & Interior Walls  
• Settlement cracks
• Stained, displaced flashing or drainage facilities
• A white / salt coating or surfacing
• Damp or stained walls and ceilings (usually brown in colour)
• Chipped or discoloured paint

Condensation  
• Saturated roofing build-up
• Dampness or mould on the ceiling, walls or within a cavity

Asbestos  
• If the school was built before 2000
• There are several areas throughout the roofing structure where asbestos can potentially be found

IKO’s Long Term Solution  
Remember a flat roof which has been designed and installed in accordance with the relevant British Standards and IKO’s long-term solution can be trouble-free, providing it is properly maintained and checked at routine and regular intervals, with a note made of any items requiring attention. Key detail areas to check include flashings, upstands, penetrations, edge trims and drainage channels. Maintaining these checks will extend the life expectancy of the roof.

IKO also consider the longevity and lifetime value of an existing, updated or new roof, partnering with a school to make sure any future upgrades or developments such as solar or photovoltaic (PV) possibilities, increased insulation benefits, accessibility or additional drainage can be achieved and conform to building regulations.
Be IKO-Proactive, not reactive

There are two ways to deal with your roofing problems:

**Reactive**
- Wait for a problem to manifest
- Possibly causing leaks or even complete failure
- Reactive to:
  - Classroom closures
  - Interruptions in teaching
  - Relocation of pupils and staff
  - Costly repairs

**IKO-Proactive**
- Assess your roof’s condition
- Spot problems early
- Schedule the right solution
- Reduce costs significantly
- IKO-Proactive in safeguarding your assets through bespoke and expert design solutions

Independent advice

IKO can offer the independent advice you are looking for, completing the consultation triangle and allowing each party to focus on their own field of expertise. Free-flowing information makes this process more efficient and hassle free.

Working in partnership alongside specialist building surveyors, with an educational background and detailed experience of the Educational Funding Agency (EFA) system, IKO will provide a **FREE roofing condition report** that also covers the entire building envelope, advising on elements where further funding may be available (e.g. windows, heating, extensions, etc).

FREE IKO roofing condition survey

IKO can offer recommendations on what's needed to be done to maintain your building's waterproofing integrity, whilst improving thermal and energy efficiency in a **FREE, no obligation**, roofing condition survey. Contact the IKO Technical Team for further information on **01257 256 864** or [technical.uk@iko.com](mailto:technical.uk@iko.com).
Choosing the right roofing partner

Whether through funding or otherwise, when partnering with a manufacturer to repair or update your roof there are a number of factors to consider:

**Health and safety**
The Construction (Design and Management) Regulations (CDM) 2015 are the main set of regulations for managing the health, safety and welfare of all construction projects, helping workers, contractors, designers and clients improve health and safety, together. Safeguarding all school pupils, staff and contractors from the potential dangers that may occur on a construction site should be the number one priority in any project.

**Consultation**
Listen, assess and discuss the solutions that best meet the schools requirements for maximum longevity under any budgetary constraints. Both parties should work together drawing on knowledge of the educational system and construction.

**Survey**
A thorough analysis of the building’s waterproofing envelope should be provided, consisting of a detailed report with recommendations for repairs and replacements.

**Design**
Any design should be bespoke, specifically for an individual schools roofing requirements, and also factor out any potential fire risks. A design should incorporate risk management and the development of the best solutions for the schools needs.

**Solution**
Always consider the quality of materials, the guarantees that are offered and the contractor network a manufacturer can provide.

**Installation**
Make sure the project is installed only by trained and approved contractors, with experience of installing IKO roofing systems in a school environment. A schedule of work should always be generated to reduce disruptions during school opening hours, ensuring pupil and staff safety and efficient project management.

**Inspection**
Make sure there are planned visits and regular inspections before, during and after project completion to ensure quality of work and any deadlines are achieved.

**Guarantee**
Depending on your requirements, make sure that any guarantee provided suit your needs (see page 9 for more information).
Finding your way through funding

A partnership in obtaining the independent evidence you need to qualify for funding through the Condition Improvement Fund (CIF) and continual assistance throughout the tendering process and beyond.

What is the Condition Improvement Fund (CIF)?
The CIF is capital funding that academies and sixth-form colleges can apply for each year, which is approved by the EFA (Education Funding Agency). Below is a brief summary of the funding and how IKO can help you throughout the bidding process.

What is it for?
Keeping academy and sixth-form college buildings safe and in good working order, addressing the issues with significant consequences that revenue or Devolved Formula Capital (DFC) funding cannot meet, i.e. poor building conditions, building compliance, energy efficiency and health and safety concerns. It also supports a number of expansion projects.

Who can apply?
- Single academy trusts
- Multi-Academy Trusts (MATs)
- Sixth-form colleges

Dates you need to know - The bidding timeline

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<tr>
<th>Month</th>
<th>Bidding Stage</th>
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<tr>
<td>September</td>
<td>CIF announced</td>
</tr>
<tr>
<td>October</td>
<td>CIF information for applicants published</td>
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<tr>
<td>October</td>
<td>Online application form opens</td>
</tr>
<tr>
<td>November</td>
<td>Registration deadline for new applicants</td>
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<tr>
<td>December</td>
<td>Deadline for submitting applications</td>
</tr>
<tr>
<td>April</td>
<td>Target date for notifying successful projects</td>
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How can IKO help?
Working with IKO means that any changes to the funding process (i.e. where funding is/isn’t available) can be handled efficiently, helping to avoid any unforeseen complications.

Applying for CIF can be a daunting task if taken alone, which is why IKO take proactive steps in creating a comprehensive case for your funding application. A complete description of a building’s current roofing condition increases the chances of qualifying for funding.

What else do IKO offer?
Short Term Goals: Helping you to obtain funding and assisting with tendering by providing any necessary technical expertise, together with an approved nationwide contractor network.

Long Term Gains: Managing the entire waterproofing solution, planning inspections and maintenance schedules to avoid disruption - all tailored to your particular needs and budget.
Roofing Guarantees

It is important that any structural work comes with guarantees and insurance policies, for peace of mind. But not all guarantees offer the same cover, nor does every quote received provide the same level of detail, varying drastically between contractor and manufacturer. The questions you need to ask before entering into an agreement may sound obvious, but shouldn't be overlooked:

An initial quote should cover:
- The location and area of each roof
- Core sample testing and reasons for waterproofing failure
- Proposals for overcoming faults and failure within the roofing structure
- Proposed working schedule and completion date(s)
- Full details of all materials and application methods to be used
- Proposed guarantees and insurance provided
- Health and safety precautions
- Any additional specification to be considered
- Quote validation period

What will the Guarantee cover?
- Materials - What materials are covered?
- Workmanship - Can any contractor be involved or do they have to be approved?
- Length - How long does / will the guarantee last for?
- Caveats - Is there anything specific that may null and void the guarantee?
- Insurance - Is the guarantee covered by insurance?

Before, during and after the project
- Quality Control - Who has final project sign off and decides if a guarantee will be issued?
- Insurance - Is there any insurance provided and what will this cover? Does it start from the beginning of the project or once it is complete? What about defects in any solutions presented?
- Experience - What checks are in place to verify contractor experience and who will inspect the work?

Have the following credentials been checked?
- The Contractor - The National Federation of Roofing Contractors (NFRC)
- The Workforce - Construction Skills Certification Scheme cards (CSCS)
- DBS (Disclosure and Barring Service) Certification - Online Government DBS tool

The IKO Solution: Single Point Guarantees
IKO can offer a comprehensive range of single point guarantees to suit the requirements of any project.

An IKO single point guarantee covers all the components of the installation, including:
- Workmanship defects
- Material quality / performance issues
- Design implementation

Any matters will be resolved, regardless of whether the defect is material, design or workmanship related. IKO PLC guarantees are also insurance backed, making them one of the best all round guarantee packages available in the market.

Assurances on quality of products, specification and workmanship are only achievable due to the following aspects:
- A British Made for British Trade product range
- An extensive approved nationwide contractor network
- An independent technical services department that monitors and reports on all projects, making sure every installation is of the highest quality and conforms to any specific building regulations
- ISO 14001 - Environmental Management Standard
- ISO 9001 - Quality Management Assurance Scheme
- BES 6001 - Responsible Sourcing Standard
Helping schools reach the highest standards

Case Studies

Portslade Academy
24 Roofs of various sizes and shapes required updating due to age and poor insulation. Any intrusive tasks were completed during the summer months with tapered insulation below an IKO Ultra Prevent (Hybrid) Warm Roof System, improving the build-up of ponding water.

Perry Hall Academy
The replacement of the 60 year old built-up roofing system with IKO Goldseal and IKO enertherm insulation boards with a self-adhesive underlay reduced the use of flame onsite. IKO Superlite roof lights were also specified, increasing the natural light within the building and the thermal performance.
Gorse Hill Primary School

Flat and pitched roof requirements due to the failure of a previous waterproofing system. The IKOslate pitched roof system provided an environmentally friendly solution.
Parsons Green School
An IKO Polimar liquid solution was used on this dilapidated roof cladding to rejuvenate and protect.

Carbeile Junior School
The IKO Ultra Prevent torch-on system offered flexibility around detailing and provided a 30 year life expectancy.

Berrybrook Primary School
Using the IKO Goldseal system (including IKO enertherm insulation, a vapour control layer and underlay) stopped the roof from leaking, accompanied by a 20 year single point guarantee.

Kingsland School
Working with our green roof installation partners, an IKOgreen roofing solution was installed for its sustainability and low environmental impact.

Bede School & Community Centre
An IKO Mach One flame-free system (including IKO enertherm insulation) was specified to help reduce heat loss from the school building as well as protecting against all weather conditions.

Brecknock Primary School
With land at a premium, the inner-city School required a robust resolution to waterproofing their roof-top playground and keeping the classrooms below safe. An IKO Permaphalt Mastic Asphalt system offered this by providing a seamless solution.
Selecting the right roofing solution

IKO offer a wide range of solutions for all types of roofing requirements. It is choosing the right solution that is where our experience and knowledge is crucial. Below are the main roof coverings to consider and the buildings or school facilities they often keep waterproof.

Main areas to consider where IKO can help improve the performance of your roof:

- Acoustic Requirements
- Damp Proofing
- Edge Protection
- Flat & Pitched Roofing
- Green Roofs
- Hand Rails
- Insulation
- Listed Buildings
- Solar & PV Systems

We can provide a roofing system that is guaranteed for up to 30 years, depending on the build-up and roof type.

Many of the IKO systems available are flame-free, meaning that under the Construction (Design and Management) Regulations (CDM), the risk of fire from a roof installation can be managed out.

Roof Types

Cold Roof
- Torch and flame-free applications
- Long-term durability

Warm Roof
- Torch and flame-free applications
- Long-term durability
- High-humidity buildings (i.e. canteens)

Inverted Roof
- Protected waterproofing membrane
- Thermal stability
- Simple build-up

Systems / Options

Bituminous Membrane
- Torch and flame-free applications
- Long-term durability
- High-humidity buildings (i.e. canteens)

Hot Melt & Mastic Asphalt
- Seamless system
- Listed building capabilities
- Voidless

Cold Applied Liquids
- Flame-free application
- Ease of installation
- Fast curing
- Seamless application

Single-Ply
- Flame-free application
- Bespoke design
- Quick installation time

Environmentally Friendly Roofing

IKO Carrara ‘Air Care Technology’
- Neutralises harmful oxides
- Quick installation time
- Outstanding fire performance

Green Roof (extensive, intensive & biodiverse)
- Environmental credentials
- Minimal maintenance
- Educational benefits

Pitched Roofing
- Variable options available
- Robust and hard-wearing solutions
IKO: Making education a high priority

We all know that schools in Britain play a major part in education, but even more than that they are an important part of lifelong learning and teaching skills that will stay with us forever. This is why IKO not only take school waterproofing refurbishments seriously, but are involved in a number of programmes with local schools and youth clubs as well as providing internal development courses.

Apprenticeships
Since 2010 IKO have trained 15 apprentices in a host of different professions with more coming on-board every year. The majority of these apprentices (60%) have now become full-time employees at IKO PLC.

Work Experience
Offering opportunities to sample real-life work experiences can be a major asset when it comes to looking for fulltime employment. Learning ‘on-the-job’ is an effective way of developing professional skills.

Training Centres
Various colleges around the country have benefited from product donations in order to provide practical, informative roofing training. Ayrshire College and Birmingham College are two shining examples of this practical based training.

Wigan Youth Zone
IKO PLC is proud to sponsor Wigan Youth Zone. We are not just a sponsor however. IKO regularly attend open days and events, educating young members who are keen to know more about the manufacturing and construction industries.

Internal Development
IKO PLC offer 23 NVQ courses open to all staff members, covering everything from Warehousing to Business Administration.

A Management Development Programme (MDP) is also available to employees looking to take the step up into a managerial position.

British Made for British Trade
As a UK manufacturer we take great pride in the products we produce and the services we provide. Producing quality products within the UK allows us to reduce our carbon footprint, offer comprehensive single point guarantees, as well as continuing to invest in all four of our manufacturing plants at Appley Bridge, Bolton, Grangemill and Clay Cross in Derbyshire.
IKO is a **worldwide enterprise**, with more than 3000 **employees**, and manufacturing plants in Canada, the United States, United Kingdom, Belgium, Holland, France and Slovakia. The company’s operations ships products to **96 countries** around the globe.

The **IKO Group**

Despite tremendous growth, IKO has also remained firmly rooted in its family values of **entrepreneurial spirit, craftsmanship and innovation**. The company maintains the fierce independence of its founder, and his belief of the importance of controlling the raw materials used in its manufacturing process.

IKO also strives to back the **best products** in the industry with the **best service**. The IKO family includes not just the ownership, but the thousands of dedicated employees across its global operations who share the company’s ideals of craftsmanship, attention to detail and world class service for our customers. The commitment of IKO’s employees is the key pillar in the company’s success in today’s competitive marketplace.

The ultimate proof of the company’s commitment to quality and innovation is its own success. From humble beginnings to a modern manufacturer with global reach, IKO has remained committed to the values that were the foundation of the business envisioned by our founder, **Israel Koschitzky**. That combination of old-time values, combined with cutting edge technology and innovation, means IKO will continue to **Set the Standard** both now and in the future.

IKO in the UK

In the UK, the IKO name has become synonymous with delivering dependable waterproofing solutions backed by supreme levels of customer service. This hard earned reputation has been built on a foundation of quality and an ethos of customer service which permeates through the organisation and remains as strong today as it did 100 years ago.

The rewards speak for themselves. IKO PLC is now well established as the **UK market leader** in the design, manufacture and installation of roofing and waterproofing systems. With this enviable position comes an unwavering commitment and responsibility to continue investing in new product solutions, new manufacturing facilities and the industry’s largest team of people, all dedicated to achieving excellence at every level.

www.ikogroup.co.uk
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