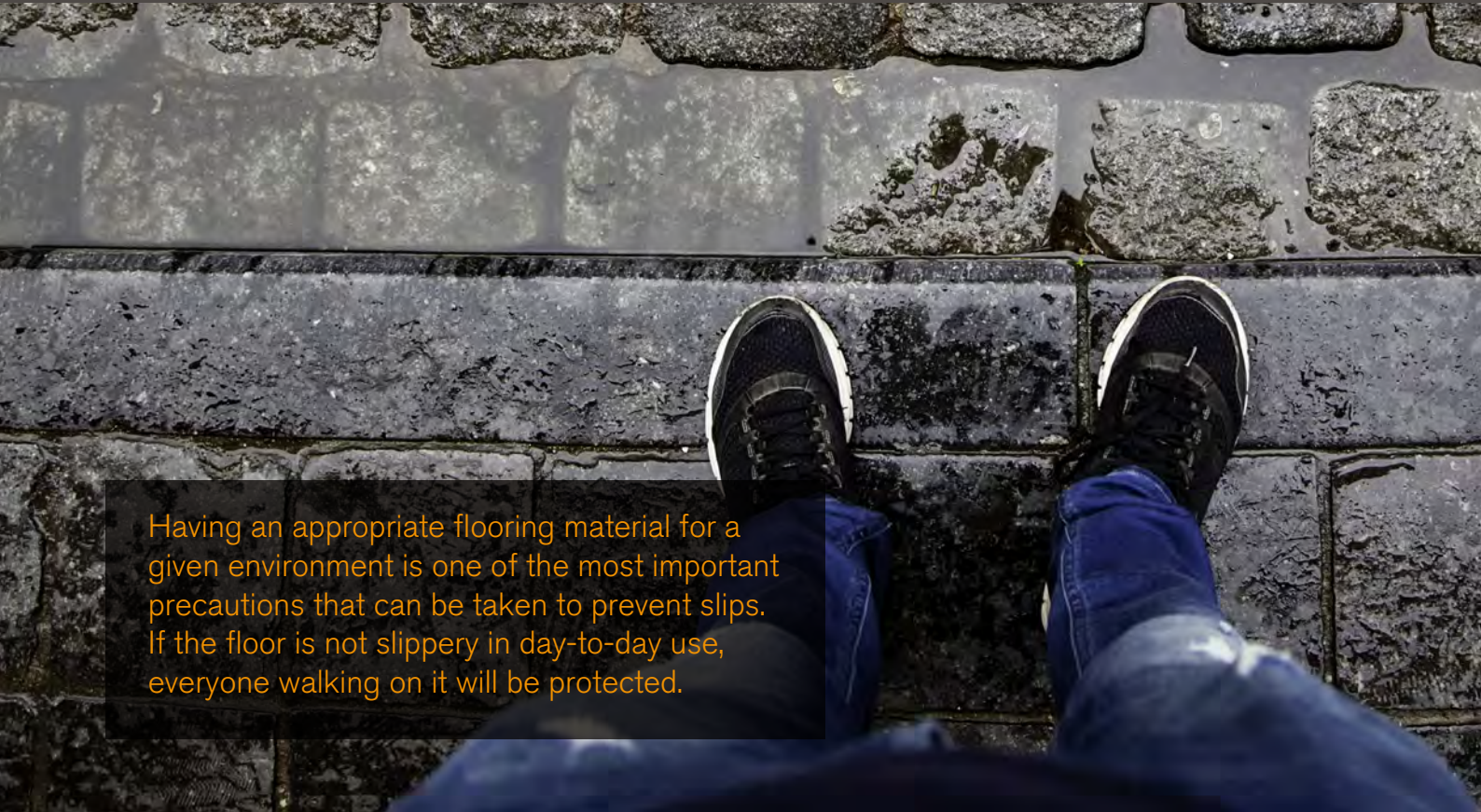


5.1 Preventing Slips: Flooring



Having an appropriate flooring material for a given environment is one of the most important precautions that can be taken to prevent slips. If the floor is not slippery in day-to-day use, everyone walking on it will be protected.

Introduction

When we refer to flooring we mean **any surface** that a person may walk on. This surface could be indoors or outdoors, on steps or stairs and even on vehicles.

The amount of grip (or 'slip resistance') the flooring offers to a person walking on it will depend on:

- the surface finish of the floor; and
- any contamination on it (see [module 5.5, Preventing slips: Contamination](#)).

All flooring will offer good slip resistance when clean and dry but the presence of even small amounts of water, dust or grease can make smooth floors very slippery.

Best practice

These include:

- **Where flooring is likely to get contaminated during normal use**, such as outdoors, in toilets or in food preparation areas, it should offer enough slip resistance in the contaminated condition to minimise the risk of slips. There is a wide range of flooring available which is not slippery when wet or even when contaminated with oil. In many cases, choosing a slip-resistant finish would not make the flooring unattractive or prevent it from being cleaned effectively (see [module 5.2, Preventing slips: Cleaning](#)). Flooring with a raised profile, such as metal chequer plate, does not necessarily offer improved grip and is often found to be slippery when contaminated.



Choosing a suitable slip-resistant floor might be possible when making alterations in the historic built environment.

- **When choosing new flooring,** follow Health and Safety Executive's (HSE) guidance set out in the technical information sheet 'Assessing the slip resistance of flooring', GEIS 2, available on the HSE website. Usually, it costs no more to choose a suitable slip-resistant floor over a smooth floor at the design stage. Over the lifespan of a building, making the right choice can save a lot of money by preventing slips.
- **Where it is not practical to install slip-resistant flooring,** consider treating the flooring which is slippery when contaminated to improve its slip resistance. Not all treatments will work on all types of flooring and they are likely to need reapplying periodically. Particular caution should be exercised where treatments are sold with a recommended cleaning chemical. This chemical often contains the same ingredients as the treatment (usually an acid) and can be harmful if used incorrectly. It also has the potential to damage flooring which may have historical significance.



Different types of flooring that are adjacent to each other may pose a slip hazard if they present unexpected changes in slip resistance.

- **Avoid creating changes in adjacent flooring surfaces** that can give rise to a risk of slips. Unexpected changes in the amount of slip resistance particular flooring offers will significantly increase the risk of someone having a fall.
- **Monitor the slip resistance of flooring periodically using a portable slip tester.** Obviously, flooring which offered suitable slip resistance when new may not do so forever. To monitor the slip resistance of flooring, HSE recommends the use of the pendulum test, one of the few portable slip tests that produces valid results. Further information is set out in www.hse.gov.uk/pubns/geis2.htm.
- **Manage the flooring carefully to keep it clean and dry** where it is not practical for it to be replaced, modified or treated. Here, it would be necessary to think about where contamination comes from, if there are leaks that could be repaired, whether the current cleaning method is effective and how spills are dealt with (see [module 5.2, Preventing slips: Cleaning](#)).

Challenges for historic properties

When it comes to flooring, the principal challenge in many historic properties is that it is often part of the historic fabric of the building. Therefore, replacing or modifying it may not be practical, particularly if there are significant conservation restrictions.

Where this is the case, and the flooring does become slippery when contaminated, suitable precautions should be taken and clear procedures need to be in place. These should include precautions to minimise the risk of contamination, deal with spillages as soon as possible and exclude visitors from high-risk areas if necessary. It should be remembered that floors must be completely clean and dry in order to minimise any risk.

The procedures required should be clearly documented and evidence kept of when and how they have been followed. They should also be regularly reviewed and updated if the use of or access to the area changes.

Other possible solutions

These include:

- **Consider the use of slip-resistant flooring, particularly when refurbishing or extending premises.** Although it may not be practical to install such flooring in many areas in historic properties, this should not be viewed as a reason to ignore the important role that it can play in reducing the risk of slips in other high-risk areas. These could include toilets, kitchens, restaurant areas and gift shops.
- **Treat the existing flooring to improve the slip resistance it offers when contaminated.** Possible treatments include chemical modifications such as acid etches or physical treatments such as a resin coating containing aggregate. This may not be appropriate for many historic premises as this may damage the historic material concerned. Therefore, it will be important to check with the relevant conservation officer (e.g. Historic England, CADW etc.). You could also seek advice on suitability from suppliers when selecting a product.



A mixture of surfaces can be challenging, and gravel can migrate making other surfaces more hazardous.

- **Consider unexpected changes in grip** e.g. treating potentially slippery drain covers in walkways by applying a resin coating containing aggregate.
- **Look at how people circulate and use the premises,** to determine if the layout can be improved.
- **Highlight designated pathways around challenging surfaces** (e.g. cobbles or gravel paths), particularly if they are made worse by adverse weather conditions.

- **Use other 'engineering' solutions** such as having tarmac car parks with gravel on top to increase durability, whilst maintaining the historic aesthetic.



The type of pointing should be considered when identifying possible solutions for cobbled surfaces.

- **Implement suitable precautions** (e.g. providing adequate entrance matting) to prevent flooring becoming slippery from walk-in contaminant (e.g. water) – see [module 5.5, Preventing slips: Contamination](#).
- **Adopt appropriate cleaning methods taking account of individual flooring finishes.** For example, with wooden floors that need to be waxed, consider if this increases the risk of slips. If so, identify the correct treatment processes and materials to be used; the frequency of treatment required and the precautions to be taken in doing so – see [module 5.2, Preventing slips: Cleaning](#).
- **Manage riskier flooring** (e.g. cobbled areas) through regular maintenance, carefully ensuring they are regularly inspected at appropriate intervals and keeping a record of the inspections.
- **Where you have a challenging surface, highlight it in your visitor information** or access documentation so people are aware of potential risks and the precautions to be taken.

Need to contact us?

For further advice Ecclesiastical customers can call our Risk Management Advice Line on **0345 600 7531** (Monday to Friday 09:00 to 17:00, excluding Bank Holidays) or email us at **risk.advice@ecclesiastical.com** and one of our experts will call you back within 24 hours.



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