Safety Action Notice

Reference: SAN2602 **Issued:** 15 January 2026

Glazing installations: potential to fall following breakage or shatter resulting in risk of injury and other concerns

Summary

Glazing may fail causing it to shatter or fall. Where installed overhead or at height, this can result in risk of injury to anyone below, or risk of fall or injury where there is reliance on the glazing to act as a protective barrier, in addition to other concerns. Given recent reported incidents, including in healthcare environments (Appendix A), this notice requires that locations, details of each installation and existing inspection / maintenance arrangements should be established to facilitate risk assessment.

Action

1. Bring this notice to the attention of all appropriate managers and personnel.
2. Identify all glazing installations based on the descriptions in the background information section.
3. Establish the following to gain an understanding of the details and condition:
   a) Glazing specification of panels.

      This may be toughened (tempered) or laminated glass but also Georgian wired for older installations. Identification of the glazing type can be by design, specification, installation, details or visually by safety marks / kite marks on the glass.

   b) Age of installation.

      This is particularly important where toughened (tempered) glass has been identified. Spontaneous glass breakage due to 'nickel-sulphide (NiS; see Background Information) inclusions' only occurs in this glass type and can take 5-10 years to occur.

      It is also recognised that NiS inclusions cannot be established through inspection. Consequently, risk assessments and mitigations should be informed by the age of any toughened (tempered) glass identified.

   c) Installation components.

      All components forming part of the overall installation such as primary and secondary support, fixings and junctions.
4. Review and confirm any ongoing maintenance and inspection regimes or condition surveys for the panels and all installation components.
5. Carry out a risk assessment to help identify any hazards associated with the installations, the associated risks, whether any mitigations are currently in place and what further mitigations may be needed. A process for risk assessment is described in Appendix B of this notice.

Background Information

Glazing installed overhead or to act as a protective barrier may be glass or glazing materials installed in a horizontal or sloped position, typically in roofs, skylights, or other overhead applications such as canopies. Such installations must meet specific safety and performance criteria to ensure they can withstand various loads and impacts. Descriptions of affected installations include:

- all types of façade (vertical and sloping);
- glass roofs and canopies; and
- glass barriers including internal/ external balustrades, internal screens or windows installed at height providing protection from a fall.

These glazing installations can fail and shatter for a number of reasons such as objects striking glass, deliberate attack, human impact, system or component failure, extreme environmental conditions or nickel-sulphide (NiS) inclusions causing spontaneous glass breakage. They have the potential to fall on breakage or shatter, causing risk of injury and other concerns.

The intention of this notice is to bring attention to the risk of failure of glazing and actions that can help identify and mitigate any associated risk of failure.

Research (Appendix A) indicates that failures may occur for a variety of known and unknown reasons resulting in difficulty being encountered in rectification works. This may have been due to a lack of understanding of the glazing type and associated components forming part of the installation that failed. The actions given in this notice have therefore been developed to avoid any difficulties in rectification as well as allowing an opportunity to mitigate the risk of failure in the first instance.

It is recognised that specialist advice may be required from external sources to help determine and understand the full details and risk implication of what is expected to be a variety of glazing types. Similarly, it is recognised specialist advice may also be required to determine the design and specification of any appropriate replacement glazing or component.

In Scotland, access to specialist advice such as project managers, building surveyors and architects can be provided through the Frameworks Scotland 3, Lead Advisor Framework. Alternatively, health boards and Trusts may utilise their own local frameworks and supply chain to support any actions required.

Suggested onward distribution (may not include all affected departments)

Director of Estates & Facilities Health and Safety Risk Management

References and other resources

BS 6262-4:2018 Glazing for buildings Part 4: Code of practice for safety related to human impact
BS EN 12150 Glass in Building Thermally toughened soda lime silicate safety glass
BS EN 14179 Glass in Building - Heat soaked thermally toughened soda lime silicate safety glass
BS EN 14449 Glass in Building - Laminated glass and laminated safety glass
BS EN 12600 Glass in building - Pendulum test. Impact test method and classification for flat glass
BS 6180:2011 Barriers in and about buildings. Code of practice
SHTM 55 Building Component Series Windows
HBN 00-10 Part D: Windows and associated hardware

Information about IRIC

Incident Reporting & Investigation Centre (IRIC), Facilities Division, NHSScotland Assure
NHS National Services Scotland, Tel: 0131 275 7575, email: nss.iric@nhs.scot

Accessibility: Please contact us using the above details if you are blind or have a sight impairment and would like to request this alert in a more suitable format.

IRIC remit: general information about adverse incidents, safety alerts and IRIC's role can be found in DL(2024)32, *Safety of Health, Social Care, Estates and Facilities Equipment: NHS Board and Local Authority Responsibilities*, issued 16 December 2024.

To find safety alerts:
scan the QR code or click this link to visit our website

To report an incident:
scan the QR code or click this link to visit our website

NHS National Services Scotland is the common name for the Common Services Agency for the Scottish Health Service https://www.nss.nhs.scot/

Appendix A

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Appendix B

Failure of a glazing installation has the potential to cause injury or harm to persons as well as damage to built assets or vehicles. The following process for risk assessment focuses on the person risk and is based on risk categories from BS 6262-4:2018 section 9 *'Risk areas associated with overhead sloping glazing'* which notes:

'The risk of injury from glazing in roofs or canopies should be evaluated under three categories:

a) risk of injuries sustained from broken glazing falling;
b) risk of injuries sustained from objects falling through the glazing;
c) risk of falling through the glazing while standing on it.

It is acknowledged that category c) is an unlikely scenario within healthcare environments.

The risk scenarios described above should be considered relative to the following:

- location of glazing, including facades (vertical or sloping), glass roofs and canopies and glass barriers.
  - to assist with location review, BS 6262-4:2018 defines and illustrates (figure 2) 'Critical Locations' as *'part of a door, wall or other part of a building most likely to be subject to accidental human impact'.*
  - where glazing is present as a barrier, BS 6180:2011 gives recommendations and guidance for the design and construction of such barriers
- type of glass within glazing system
- human and vehicle traffic and usage of area including any change of use
- environmental factors such as wind, rain and snow loading
- all components including glass, support, fixings, and junctions involved in the installation are fitted in accordance with British Standards and manufacturers recommendations
- condition of all components including glass, support, fixings, and junctions involved in the installation
- any record of rectification works along with confirmation manufacturer recommendations have been followed

Should the outcome of the risk assessment determine a form of mitigation is required, the following should be considered:

- create buffer zone and re-route access away from under glazing. This could be by zoning off areas and creation of alternative access routes
- determine if buffer zone could be a permanent fixture allowing risk identified to remain
- removal and replacement any glazing with glazing of appropriate specification
- removal and replacement any glazing with another material of appropriate specification
- removal of glazing without replacement
- removal or replacement of any component identified as a risk with an appropriate replacement
- removal of the entire glazing installation.

Appendix B (continued)

Where toughened (tempered) glass has been identified in addition to the above, mitigation should consider the following:

- Age of the glass with an awareness that the risk of spontaneous glass breakage will pass after 5 -10 years allowing mitigation measures to be removed in the future.
- As NiS inclusions cannot be identified through inspection, mitigation may also consider an ongoing routine inspection process with a view to identify any signs of failure at the earliest opportunity.
- The potential of failure based on industry accepted likelihoods of 1 in 10,000m2 for untreated toughened glass, or 1 in 1,000,000m2 for heat-soaked toughened glass.

The above list of potential mitigations is not exhaustive, and it is therefore accepted that a means of mitigation may differ from those forming part of this notice.

It is acknowledged the above risk assessment process is based on BS 6262-4:2018 section 9 and not NHS guidance documents related to windows and glazing such as ‘HBN 00-10 Part D: Windows and associated hardware’ and SHTM 55 Building Component Series Windows. The reasoning for this approach is that this notice seeks to address risks beyond those considered with these existing guidance documents. These documents will however be relevant and should be utilised to risk assess and determine appropriate window, glazing and hardware types where the approach to mitigation may include replacement with glazing of an appropriate specification.