

Scottish Borders Consolidated Local Plan

Supplementary Planning Guidance

Replacement Windows and Doors

October 2015



Supplementary Planning Guidance: Replacement Windows & Doors

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Supplementary Planning Guidance: Replacement Windows & Doors

1 Introduction

1.1 This Supplementary Planning Guidance has been prepared to not only provide information about the importance of historic windows and doors; but also to elaborate and clarify how the provisions of the policies contained within the Development Plan will be applied to proposals for change to windows and doors through the planning and listed building application process.

1.2 The previous Replacement Window Guide was published by Scottish Borders Council in April 2012. This Supplementary Planning Guidance aims to provide clear and consistent advice as to the current policy in operation for both windows and doors, as well as providing information on Building Standards issues. The document has been produced taking account of the need to balance the desire for improving thermal efficiency and retaining the character of historic buildings.

1.3 Who is this Guidance for?

This guidance has been formulated for owners of historic buildings, householders, builders, trades people, architects, designers and all those who are involved in preparing and processing applications for development affecting historic windows and doors in Listed Buildings and Conservation Areas.

1.4 What type of development does this Guidance apply to?

This guidance applies to development proposals affecting windows and doors in Conservation Areas, Listed Buildings and in flats outwith Conservation Areas. The document also sets out design guidance relevant to any application.

1.5 Appendix 1 contains a flow chart to assist in determining if planning or listed building consent is required.

2 Why protect historic windows and doors?

2.1 Windows, doors and their associated furniture are important features which contribute to the character and appearance of an individual building, groups of buildings or even a street; they are important elements of a building's design and aid us to understand when a building was constructed or altered, as well as how a building was used.

2.2 Characteristics of historic windows and doors:

The characteristics and the significance of windows and doors are derived from a number of factors. These include their **form or shape, design pattern, materials, details of construction, method of opening, finish or paint colour** as well as **associated fixtures** such as ironmongery. The existence of **historic glass** is an

important element. The use of **fanlights and glazing** in doorways are also key features.



Figure 1: Historic Windows and Door - Peebles



Figure 2: Historic Street Frontage - Yetholm



Figure 3: Historic Properties - West Linton

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3 Policy Context and Application

3.1 In setting its policy position the Council are required to take into account Scottish Government policy in the form of Scottish Planning Policy, Historic Scotland's Scottish Historic Environment Policy, and the relevant Managing Change in the Historic Environment Guidance Notes. The policy contained within this Supplementary Planning Guidance has been formulated to take cognisance of the above documents.

3.2 It is always recommended that advice is sought from the Development Management section as early as possible and certainly before installing any new windows or doors even where 'Like for Like' replacements are proposed; This may demonstrate that consent is not required. See definition below on 'Like for Like'.

3.3 Details of Conservation Area boundaries and the "Prime Frontage" or "Core Areas" and information on whether your property is Listed can also be obtained from your local Development Management Officer.



Figure 4: Traditional Street Frontage

'Like for Like' Replacements:

3.4 Throughout this document 'Like for Like' is regularly referred to. 'Like for Like' can refer to both the repair and the replacement of either doors or windows. The definition for 'Like for Like' is set out below:

'Like for Like':

The same materials, details of construction, dimensions, opening method, decorative finish and details as existing including glazing type and fixing of glass (e.g. putty). The original proportions and glazing pattern should always be respected. This applies equally to doors as it does to windows.

3.5 It should be noted that "almost the same", "looks similar, but moves differently" is not 'like for like'. In addition and in relation to windows, false astragals/glazing bars, and/or casement movement instead of sash and case does not constitute a 'like for like' replacement.

3.6 In almost all cases, repair of components on a "like for like" basis is preferable to replacement of a whole unit, as this will best maintain the character and historic fabric of the window or door.

3.7 The assessment of any proposal in relation to windows and doors will require the following general principles to be considered:

General Principles:

1. The position of the window(s) / door(s) proposed for replacement on the building - are they publicly visible or on more modern extensions or later parts of the building?
2. Any remaining original windows / doors on the property - have some / all been replaced?
3. Wider Context - what is the predominant character of the surrounding properties?
4. Maintaining or improving the current position – consider the extent that any new window could have on improving the current position.

3.8 In considering any application for replacement windows or doors, any proposal should always seek to maintain or improve the current position. This then reflects the requirement that new development should be seen to enhance the listed building or the conservation area in which the proposal relates.

3.9 This improvement could be taken as re-introducing an element of uniformity' within a property, building or a street; this may be as a result of where over time uniformity has been lost due to replacements previously undertaken.

3.10 In addition, where windows or doors have previously been replaced and where the replacement material or design is now considered inappropriate, support will

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be given to applications which seek to install replacement windows/doors which are considered to represent an improvement in material and/or design following the processing of a formal application.

Some Examples of Improvements where 'Like for Like' is not proposed

Windows:

- Where aluminium windows have been installed – their replacement to uPVC may be considered an acceptable improvement;
- Alternatively, where uPVC casement windows have been installed where once timber sash and case windows would have been in place, uPVC sliding sash windows may be considered appropriate.

Doors:

- Where a modern aluminium door has been installed, a uPVC door with timber effect finish in a style which better reflects the historic character of the property may be considered an acceptable improvement.
- Alternatively, where a uPVC door has been installed, a composite door or a mass-produced timber door in a colour and style which better reflects the historic character of the property may be considered an acceptable improvement.

Application Requirements:

3.11 Any application for altering or replacing either a window or door should be accompanied with all relevant information required to assess that application. Appendix 2 sets out the key parts required when submitting any application for the replacement of a window or door.

3.12 It should also be noted that where an application relates to a listed building, a detailed condition survey, on a window by window or door by door basis, including the identification of any historic glass, will be required to support any application to completely replace a window/door. (A Condition Survey template is included in Appendix 3).



Figures 5 & 6: Ornate Windows in Peebles



Figure 7: Historic Street Frontage - Peebles



Figure 8: Main Doorway in Denholm



Figure 9: Sunroom in West Linton

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Category 'A' and 'B' Listed Buildings

General Policy:

3.13 The replacement of windows and doors in Category 'A' and 'B' Listed Buildings shall be carried out in accordance with the guidelines and advice contained in the *"Managing Change in the Historic Environment: Windows (October 2010)"* and *"Managing Change in the Historic Environment: Doorways (October 2010)"* produced by Historic Scotland. Historic Environment Scotland will be consulted on all applications that relate to a category 'A' or 'B' Listed Buildings.

3.14 In general the repair of components on a like for like basis is preferable to the replacement of a whole unit.

Windows:

3.15 Where there is no alternative to the replacement of historic windows, or elements of their joinery or glazing, the new elements should match the original in all respects. Historic glass should be reused where this contributes to a buildings character.

3.16 Slim profile double-glazing (with a maximum overall thickness of 16mm) may be acceptable where it can be incorporated within the original joinery of the historic windows or where the existing windows are beyond repair and the new windows will match the original joinery. This solution will not be appropriate where there is the loss of historic glass.

3.17 Replacement windows which incorporate double glazing, may be used where it can be demonstrated that the

existing windows are beyond repair, and that the new windows will match the originals as closely as possible. However the replacement unit should be of the same material as the original window, have the same glazing pattern and method of opening. Where glazing bars or astragals are required these must be of the same proportion, material and design to match the original window. The glazing should also be fixed using putty. The use of stick-on astragals will not be permitted.

3.18 In exceptional circumstances, such as some conversions, there may be grounds for the removal of existing windows and their replacement with new, more thermally efficient ones. Normally this will only be considered where the existing windows are inappropriate or incapable of repair and the new windows can match the detailed design of the historic ones.

3.19 It should be noted that details of proposed double glazing will be required to support an application for its installation.

Doors:

3.20 Where there is no alternative to the replacement, any replacement door should match the original design as closely as possible. This should include replication of the proportion, dimensions, opening method, materials, design, finish, as well as associated fixtures and features. Glazed features such as fanlights and glass panels frequently form part of the design of historic doorways, and historic glass should be reused where this contributes to a buildings character. Doors should be painted in an appropriate dark or muted colour, bright glosses, white paint and varnished timber should be avoided.

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Category 'C' Listed Buildings General Policy:

3.21 In general the repair of components on a like for like basis is preferable to the replacement of a whole unit.

Windows:

3.22 The policy for category 'C' Listed Buildings in relation to replacement windows is different to that for category 'A' and 'B' listed buildings and is generally less restrictive.

3.23 The introduction of double glazing may be acceptable in the replacement windows in category 'C' Listed Buildings. In specific and justified circumstances it may be acceptable for replacement with uPVC. The replacement unit should have the same glazing pattern and method of opening. Where glazing bars or astragals are required these must be of the same proportion and design to match the original window. The use of stick-on astragals will

not be permitted.

Doors:

3.24 Where there is no alternative to the replacement, any replacements should match the original design as closely as possible. This should include replication of the proportion, dimensions, opening method, materials, design, finish, as well as associated fixtures and features. Glazed features such as fanlights and glass panels frequently form part of the design of historic doorways, and historic glass should be reused where this contributes to a buildings character. Doors should be painted in an appropriate dark or muted colour, and bright glosses, white paint and varnished timber generally avoided.

3.25 What consent is needed for Category 'A', 'B' or 'C' Listed Buildings?

Where windows or doors are replaced on a basis of "like for like" (refer to section 3.4 for definition of "like for like"), planning permission and Listed Building Consent will not be required.

3.26 In all other instances including replacement windows incorporating double glazing or where existing windows will be retained but re-glazed with double glazed units, Listed Building Consent will be required. Also, where the listed building lies within a Conservation Area and where changes are proposed (excluding "like for like" or the replacement of single glazing to slim profile double-glazing in windows) planning permission will also be required.



Figure 10: Eddleston Street Frontage



Figures 11 & 12: Historic Houses

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Prime Frontage/Core Areas of Conservation Areas

General Policy:

3.27 Within conservation area locations that are defined as “Prime Frontages” or “Core Areas”, there is a requirement to maintain or improve visual appearance.

3.28 In the consideration of proposals for the alteration of windows and doors in the Prime Frontage or Core Areas, the ‘General Principles’ set out in Section 3.7 shall be taken into account. Following consideration of the ‘General Principles’ in relation to a particular proposal the outcome may be either:

- Replacement generally on a ‘like for like’ basis required as set out in this policy section, or
- Replacement through the use of new materials (which may include uPVC for windows) but retaining the design pattern, dimensions and method of opening.

Windows:

3.29 The introduction of double glazing may be acceptable in the replacement windows of properties within Prime Frontages and Core Areas. The replacement unit should generally be of the same material as the original, have the same glazing pattern and method of opening. Where glazing bars or astragals are required these must be of the same proportion, material and design to match the original window. The use of stick-on

astragals will not be permitted. The buildings within these areas are considered to be particularly important to the character of the conservation area. In these locations windows other than those which are currently well concealed from public view and which are unlikely to be exposed to public view as a result of imminent or programmed developments, should generally be replaced on a “like for like” basis. Where the original windows have been lost and the current windows do not mirror the original form, there will be a presumption that any future replacements will attempt to mirror the form of the original windows or enhance the historic context of the location.

Doors:

3.30 Doors should be repaired on a like for like basis; this is preferable to the replacement of the whole unit. Where there is no alternative to the replacement, any replacements should match the original design as closely as possible. This should include replication of the proportion, dimensions, opening method, materials, design, finish, as well as associated fixtures and features. Glazed features such as fanlights and glass panels frequently form

part of the design of historic doorways, and historic glass should be reused where this contributes to a buildings character. Doors should be painted in an appropriate dark or muted colour, and bright glosses generally avoided.

3.31 In areas where original doors and their ironmongery are no longer present, reinstatement or replacement doors which better represent the period of the building or enhance the historic context of the location will be encouraged. Original features which would have contributed to the buildings character such as glass panels, fanlights or transom lights should also be incorporated into any new replacements. Replacement doors such as composite or timber doors in a style and detail which better reflects the historic character of the building will be acceptable. Standard white uPVC doors will not be acceptable or appropriate in Prime Frontage/Core Areas or on public elevations within Conservation Areas. Doors should be painted/coloured in an appropriate dark or muted colour, and bright glosses avoided. Integral fanlights within doors are not historically accurate and should therefore be avoided, glazed panels within doors as an alternative may be acceptable.

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Elsewhere in Conservation Areas

General Policy:

3.32 In acknowledgement of the improvements achieved in the design of new windows and doors, alternative materials will be acceptable in these areas provided the replacements closely match the original window glazing pattern / traditional door design.

Windows:

3.33 Where white painted timber sash and case units are the predominant window type, white u-PVC or white coated aluminium sash and case units will be acceptable alternatives although timber is preferred. Similarly, white coated or painted dual swing and similar units which retain the distinct step of sash and case windows and which give the appearance of a sash and case window in all respects except when open, will also normally be acceptable. However, care should be taken when considering introducing new materials to ensure that the dimensions of the replacement window closely match that of the original window. A section through an acceptable uPVC replacement window is shown in section 4.32 of this SPG. Replacements must be installed in the same way as the original (see 4.28). Traditionally in historic buildings, windows are installed behind a check in the outside wall.

3.34 In all instances the general glazing pattern should mirror the existing unless there are strong reasons for permitting a change, e.g. to reinstate some consistency

or unity to a building or street frontage where a different glazing pattern predominates and where there is no sound reason for maintaining a different pattern. Where glazing bars or astragals are required, these must be carefully designed and detailed to match the original or, where appropriate the predominant window style.

Doors:

3.35 Outwith the Prime Frontage/Core Area and on public elevations of Conservation Areas new replacement doors may be acceptable. Timber or composite doors of traditional design and detail that reflects the historic character of the property may be considered appropriate. However, white uPVC and aluminium doors will not be considered acceptable unless on elevations which are well concealed from public view.

3.36 New replacement doors should match the original design as closely as possible in relation to proportions, dimensions, opening method and design. Original features where they contribute to a buildings character such as glass panels, fanlights or transom lights which frequently

form part of a historic doorway must be retained or incorporated into any new replacement door/doorway. Doors should generally be painted/coloured in an appropriate dark or muted colour, and bright glosses avoided. Integral fanlights within doors are not historically accurate and should therefore be avoided, glazed panels within doors as an alternative may be acceptable.

3.37 In areas where original doors and their ironmongery are no longer present, reinstatement or replacement doors in a style which better represents the period of the building will be encouraged.

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3.38 What consent is needed within a Conservation Area?

Where windows or doors are replaced on a “like for like” basis (refer to section 3.4 for definition of “like for like”) or single glazing within a window is replaced with slim profile double glazing, planning permission will not be required. In all other instances, including replacement windows incorporating standard double glazing, a planning application will be required, even where the alteration relates to a concealed elevation.



Figure 13: Kelso Conservation Area

Flats Outwith Conservation Areas General Policy:

3.39 In flats outwith Conservation Areas and where the property is not a Listed Building, planning consent will not be required where:

- The existing window or door apertures are neither enlarged nor reduced by infilling panels;
- Any existing mullions, whether stone or timber, are retained;
- Any existing stone transoms are retained.

3.40 What consent is needed for Flats outwith Conservation Areas?

Where the exceptions set out above are not met, planning permission will be required. Such applications will be judged on their own merits having regard to the nature of the proposed change, and the character of both the building itself and the surrounding area.

3.41 Non Residential Properties

A separate Supplementary Planning Guidance on Shop Fronts and Shop Signs (including shop windows) is available. Proposed alterations to other non residential buildings should generally be assessed against the criteria laid down for alterations to residential buildings. For example alterations to offices in core conservation areas should be on the basis of like for like replacements other than where the windows or doors are well concealed from public view.



Figures 14: Supplementary Planning Guidance on Shop Fronts and Shop Signs

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4 Design and Maintenance

Considerations

4.1 Scottish Borders Council recommend that you read this document in conjunction with Historic Scotland's "Looking after your sash and case windows: A short guide for homeowners" (revised and updated in October 2003), Managing Change in the Historic Environment Guidance Note: Windows, and Managing Change in the Historic Environment Guidance Note: Doorways.

4.2 Issues to Consider with All Windows and Doors

In addition to requirements of the Building Regulations as specified in section 5, other issues that should be considered in choosing replacement windows and doors may include:

- Sound insulation
- Heat insulation
- Ease of maintenance and repair
- Cost to the environment
- Security
- Ease of opening and closing
- Disturbance to finishes during installation

4.3 Traditional Windows

It is not essential that all the windows on the same building are exactly the same - differing pane sizes, astragal profiles and even window types are important evidence of the building's history and contribute to its character and interest.

Sash and Case Windows:

4.4 The traditional sash and case window has been in constant use since the 17th century and despite slight alterations in its style, it still remains a feature in our streetscape proving its effectiveness and construction. Early windows were constructed using thick astragals (glazing bars) but these were reduced in thickness in Georgian and early Victorian times. As technology advanced and it became possible to produce larger panes of glass, astragals became less common but because the glass was thicker the sashes needed to be heavier. Horns were then used to strengthen the window.



Figure 15: 6 on 6 Sash & Case Window

4.5 An important feature that can be found in many later Victorian properties is the use of stained glass. This notable feature should be preserved wherever possible.

Metal Windows:

4.6 Whilst a great number of our traditional buildings were fitted with timber windows, there are also a large number of buildings where the original windows are made of metal. Many ecclesiastical buildings were glazed using these windows with the familiar diamond and square shaped arrangement pattern in stained glass. By the 1850's metal windows were used in many hospitals, schools and industrial buildings as well as houses.



Figure 16: Traditional Metal Window with Lead Detailing on a Residential Property

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4.7 It was particularly for casement rather than sash type that metal windows were commonly used. However, it wasn't until after the First World War that the major metal-window manufacturers developed standard window sizes for domestic use. It is specifically for that reason that their use in 'modern' buildings increased, and particularly so as a thin profile metal casement window were stronger than the equivalent size of a timber window.

Importance of Crown Glass, Cylinder and Window Fixtures

4.8 Where the original glazing exists, be it 'crown' or 'cylinder' every effort should be made for it to be retained. The small air bubbles, waves and ripples are the features that give old glass a character and sparkle in comparison to the perfectly flat modern glass.

4.9 Similarly original window fixtures should also be retained where possible. Where these items have been lost, every effort should be made to replace the items with the same or similar to the period of the property. Original ironmongery should also be retained.

Elements of a Traditional Timber Sash and Case Window

4.10 Old photographs, where they exist, can often be useful in identifying original window patterns. Sometimes it is also possible to see where astragals have been cut out or to find an original window on a rear elevation or a similar neighbouring property.

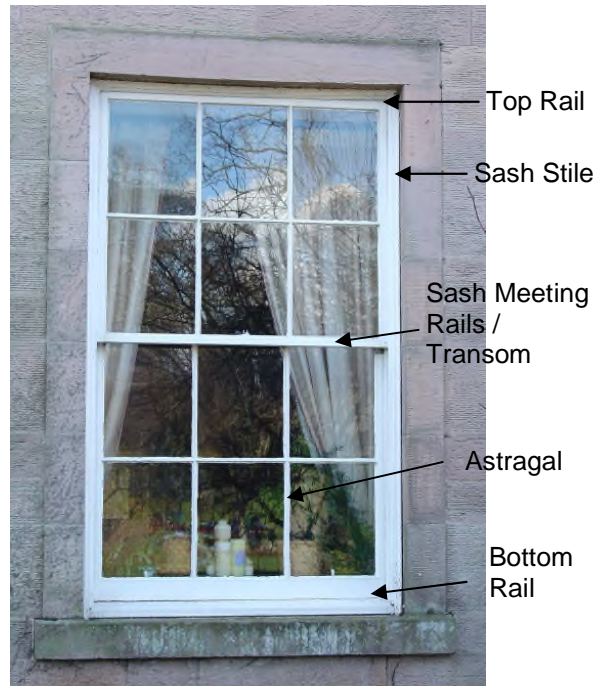
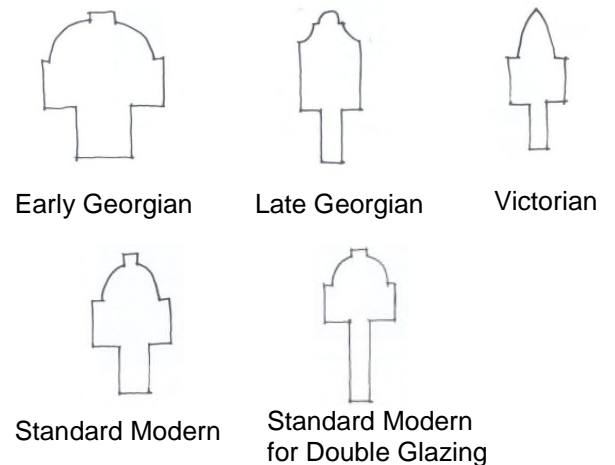


Figure 17: Traditional Window Details



Figure 18: Traditional Window Detail - Horn Detail

Examples of Cross Sections Through Different Timber Astragals



4.11 In many cases the first preference with all traditional windows is to consider repairs rather than replacement and a number of specialist firms, as well as local joiners now undertake this work.

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4.12 Appropriate Window Alterations

In properties that are Listed Buildings or within a Conservation Area the majority of windows are traditional painted timber sash and case windows. Changing these windows for modern materials can dramatically affect the appearance of a building. The use of “stick on” astragals for example, is often inappropriate and devaluing to the original appearance.



Figure 19: Replacement Window, which removes the central mullion and changes the whole character



Figure 20: Replacement Window within stone opening, with mid hung sash. This results in a 'heavy' appearance on the lower half of the window.

4.13 Why Retain Old Windows?

Both traditional timber windows and metal windows can be economically repaired and made energy efficient avoiding the need for complete replacement, and there are now a number of firms who specialise in this type of work. Complete window replacement is not always required and often only specific parts require attention. Many traditional windows have often lasted for over 100 years with regular maintenance.

4.14 Many of the problems that occur in the traditional sash and case windows can be overcome by a suitably qualified and experienced contractor, and likewise with metal windows. Below are some topical problems that owners may experience with their existing buildings:

Timber windows:

- Heat loss
- Condensation
- Timber decay
- Wet & dry rot
- Draughts
- Loose Joints

4.15 These defects are however to be expected through age but can be overcome when the existing windows are renovated. Work such as repairing or replacing decayed timber parts, replacing cords, glass and servicing of pulleys can be carried out. Draught-proofing can also be undertaken at the same time as the windows are being overhauled to reduce heat loss and combat against draughts.

Metal windows:

- Heat loss
- Rust
- Draughts

4.16 The renovation of metal windows can be carried out either on site or off depending on the design of the window

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and the type of work that is required. With regards to rust, what may look non-repairable may possibly have decades of life remaining. It should be noted rust can occupy seven times the volume of un-oxidised iron and may seem to be a lot more serious than it really is. Work such as re-straightening and re-glazing can be carried out by a specialist firm often at the fraction of the cost of complete replacement, whilst draught-proofing can also be carried out at the same time.

4.17 Do's and Don'ts in Window Repair

Do's

- research prior to restoration
- concentrate on repair and not just replacement
- find and remedy the root cause of the problem
- remember that shutters can be used for insulation
- paint windows rather than stain as stains were not historically used
- do consider alternative modern weather stripping as an alternative to double glazing
- keep usable details as patterns for present and future work.

Don'ts

- dip traditional sash and case windows in a caustic mix
- scrape off paint unless it is interfering

- with the workings of the window
- ignore dampness – it's a sign of a problem.

4.18 Painting and Colour of Traditional Sash and Case Windows

Replacement timber windows should be at least primed before delivery to site - this is to ensure that the timber is well protected before being installed. Traditionally the top coat of paint was applied on site and this produced a softer and less uniform finish than a factory applied spray finish for example.

4.19 Special attention is required when painting windows that have had draught-proofing measures carried out. Draught strips of the 'brush-type' can become clogged when paint has been applied and likewise while paint may not adhere well to the rubber-type, paint solvents can cause damage.

4.20 Timber windows should be repainted and the putty checked every five years. When repainting, all elements of the window (sashes and frames) should be painted in a sequence that avoids the sashes sticking.

4.21 Traditionally windows were painted in off-white, reds, browns, greens and occasionally blue. Generally white is a comparatively recent colour, but has now become the most common colour. 'Brilliant

white' can appear harsh and it is often better to use an 'off white' e.g. BS4800 colour '10 B 15' to retain an authentic tone. Where properties are in multiple occupancy such as flats or steading conversions for example, windows should be painted the same colour to avoid an irregular appearance.

4.22 As a general rule, stained windows are not appropriate, especially brown / gold stains which are not traditional. Advances in paint technology continue and the boundaries between staining and painting have become more blurred, solid colour however is preferred for replacement windows in historic buildings.

4.23 Draught-proofing and Secondary Glazing to Windows

Both traditional timber sash and case and metal windows can have draught-proofing installed to minimise draughts. This method is one of the best ways as well being the least intrusive of improving the performance of traditional windows. Very importantly draught-proofing does not damage the visual aesthetics of an historic building.

4.24 Secondary glazing is considered to be a cheaper yet more sympathetic alternative to the installation of sealed double-glazed units whilst offering the same advantages of draught-proofing. Once installed, secondary glazing can be easily removed. However, some windows due to

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the narrowness of the internal sill may not be able to accommodate secondary glazing, or where there are working internal shutters, particularly in these situations draught-proofing is the preferred solution.

4.25 Specialist Firms and Products

There are several firms that specialise in the refurbishment; repair and draught-proofing of existing traditional windows to bring them up to the modern standards of insulation however, Scottish Borders Council are unable to recommend an individual firm. Planning staff can advise on the suitability of an individual design and specifications as well as suggesting alternatives where replacement is required.

4.26 Replacing Traditional Windows

In almost all cases, repair of components on a “like for like” basis is preferable to replacement of a whole unit, as this will best maintain the character and historic fabric of the window.

4.27 Where the traditional window has deteriorated excessively and it is impracticable to repair the window, replacement obviously must take place, like wise with metal windows. The replacement window should match the existing windows exactly unless they are obviously modern and out of character. Where the current windows are not modern but are clearly from a later date than that of the building the

question as to whether or not to revert to the original design requires professional advice.

4.28 Issues of Importance when Replacing Traditional Sash and Case Windows

- It is essential to the character of the building when replacing traditional windows to retain the original features exactly in all three dimensions.
- Use the same material as in the original
- Use the glazing bars that are of an appropriate thickness and profile – this is usually the same as that being replaced but not in all occasions.
- Correct placement of window within the opening (as illustrated below).

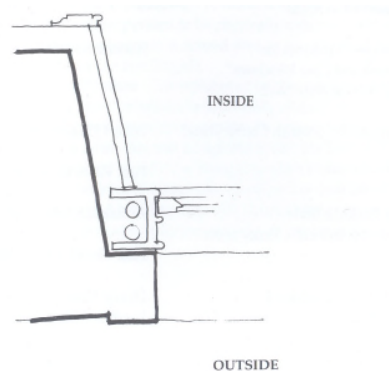


Figure 21: Sketch showing how a typical sash & case window is normally fitted into checks behind stone surrounds to windows - this provides both a good weather seal and also only shows a thin frame externally.

4.29 It is imperative when replacing windows, that the replacement window is positioned correctly. The sketch on the left shows how a typical sash and case window is normally fitted into checks behind stone surrounds – providing both a good weather seal and only showing a thin frame. It is a combination of these details that give us the familiar appearance of older buildings.

4.30 The photo below shows the appearance of correct window installation. Failure to consider this correct fitting when replacing windows can result in a substantial loss of the daylight allowed in the property.



Figure 22: Acceptable Replacement Window

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4.31 All the windows of a building may not be exactly the same – differing pane sizes and astragal profiles are important evidence of the building’s history and contribute to the character and interest.

4.32 When Installing Replacement Windows that are Double Glazed UPVC

Ensuring that the dimensions of a replacement window are as closely matching that of the original window will aid in preserving the character and appearance of the individual building concerned. To the right are acceptable sized sections through a double glazed replacement window.

4.33 However, it is recognised that some uPVC window frames can be thicker than that of traditional sash and case windows. Where this is the case, it may be acceptable to disguise the thickness of the frames by fitting them into the checks behind the stone surrounds to the windows. Where this is proposed, the applicant will be required to submit details confirming the dimensions of the window frame which will be exposed.

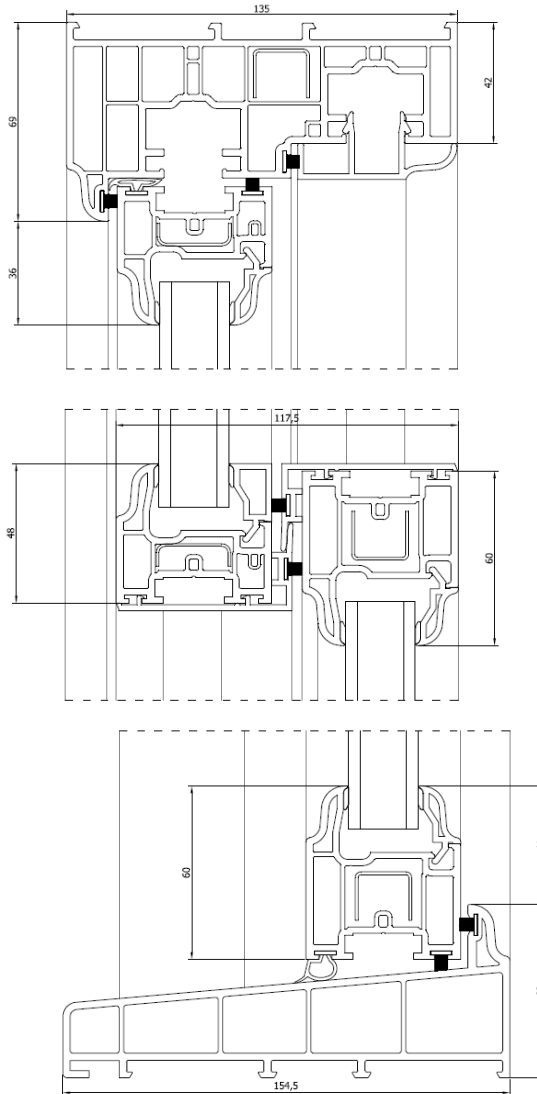


Figure 23: Sections through an acceptable uPVC Double Glazed Replacement Window

4.34 Traditional Doors

Doors contribute significantly to the character and interest of a property, and are usually a key element of its design, weatherproofing and security, as well as assisting us to understand how a building was used. It should be noted that the contribution of a single door can be greatly felt not only on the property in which it sits, but also on the group of buildings in which it sits or even its street. Whilst panelled doors (generally 6 panelled in Georgian buildings and 4 panelled in later Victorian buildings) were commonly used, especially in high status buildings; boarded doors (with beaded or “v” jointed boards) were often used in farm cottages, steadings or rear doors.



Figure 24: Example of a Panelled Main Entrance Door

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Elements of Traditional Doors



Figure 25: Traditional Door Elements

4.35 Appropriate Door Alterations

Alterations to a door, especially to one that is positioned on the primary or public elevation can result in a negative impact on the character and appearance of the property. Therefore only alterations that are in keeping with the character of the property should be undertaken. Proposed changes that alter the width, height or the opening arrangement of the door should be avoided. Caution is also required when proposing to introduce new materials as their use can often be inappropriate and devaluing to the original appearance.



Figure 26: Door Alteration - Replacement of upper timber panels with glazing to allow additional light internally.

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4.36 Why Retain old Doors?

Traditional timber doors can be economically repaired and made energy efficient avoiding the need for complete replacement, and there are now a number of firms who specialise in this type of work. Complete door replacement is not always required and often only specific parts require attention. Many traditional doors have often lasted for well over 100 years with regular maintenance.

4.37 Many of the problems that occur in the traditional doors can be overcome by a suitably qualified and experienced contractor. Below are some problems that owners may experience with their existing traditional doors:

Heat loss
Timber decay
Wet & dry rot
Draughts
Loose Joints

4.38 These defects are to be expected through age but can be overcome when the existing doors are renovated. Work such as repairing or replacing decayed timber parts can be carried out. Draught-proofing can also be undertaken at the same time as the doors are being overhauled to reduce heat loss and combat against draughts.

4.39 Do's and Don'ts in Door Repair

Do's

- research prior to restoration
- concentrate on repair and not just replacement
- find and remedy the root cause of the problem
- paint doors with a matt or semi-gloss finish rather than high gloss paints or stain as neither were historically used
- retain associated fixtures such as letter boxes, handles and knockers
- do consider draught-proofing and additional insulation as an alternative to complete door replacement.

Don'ts

- dip traditional doors in a caustic mix
- scrape off paint unless it is interfering with the workings of the door
- ignore dampness – it's a sign of a problem.



Figures 27 & 28: Historic Timber Boarded Doors



Figure 29: Matching Traditional External Doors (with internal door in entrance) - retaining matching doors on a street assists in protecting the character and appearance of the street.

4.40 Painting and Colour of Traditional Doors

Traditional doors would never have been painted using a high gloss finish, nor would they have been finished with a stain or varnish. Matt or a semi-gloss finishes are historically the most appropriate.

4.41 A number of paint companies offer a range of heritage colours which may be suitable, generally dark or muted colours are most appropriate for traditional properties.

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4.42 Doors on a single building or groups of buildings such as within an estate, were often painted using a uniform colour and this has often continued through to today. Where this is the case, it is often possible to sample underlying layers of paint to establish previous colour schemes. This might also be appropriate in a converted steading for example when an “estate” colour can be selected for external joinery to retain a homogenous appearance.



Figures 30, 31 & 32: Examples of Historic Doors

4.43 Insulating and Draught-Proofing Traditional Doors

Whilst it is considered that the frame of a traditional timber door generally performs well thermally, improvement may still be made if required. Where on the traditional door there can be panels which are made from a thinner wood, these could be insulated by adding a layer of insulation material on the inside of the door whilst still retaining the character of the door on the outside. The finished insulation should be kept flush with the door framework, and new beads may be required to finish the edge. Draught or weather stripping around the edge of the door and to the letter box can also be applied.

4.44 Replacing Traditional Doors

In almost all cases, repair of components on a “like for like” basis is preferable to replacement of a whole unit, as this will best maintain the character and historic fabric of the door/doorway.

4.45 Where a traditional door has deteriorated excessively and it is impracticable to repair, replacement obviously must take place. The replacement door should match the existing exactly unless it is obviously modern and out of character. Where the current door is not modern but is clearly from a later date than that of the building the question as to whether or not to revert to the original

design requires professional advice.

4.46 The use of modern materials for doors on historic buildings is rarely successful, and so careful consideration should always be given to their introduction.



Figures 33, 34, 35 & 36: Examples of New Replacement Doors

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4.47 Issues of Importance when Replacing Traditional Doors

- It is essential that any new replacement door should be in keeping with the character of the building
- Care should be taken to ensure that the new door is correctly positioned in the opening
- Existing features such as fanlights or transom lights should be incorporated into any replacements
- Doors should be painted with a matt or semi-gloss finish
- Where possible existing features such as letter boxes, handles and knockers can be reused and incorporated into the new door.

4.48 It is imperative when replacing doors, that the replacement is positioned correctly within the opening. It should be noted that the retention of existing features such as fanlights, letter boxes and handles, can contribute greatly to the character and appearance of the building.



Figures 37, 38 & 39: Images of Windows and Doors



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5 Building Regulations

5.1 Various building standards apply to the fitting of replacement windows and doors.

5.2 Where the work does not involve a complete replacement of the door or window then the replacement part(s) should be to a standard that is no worse than exists at present.

5.3 Where a window or door is being replaced in its entirety then the replacement window should fully comply with the current standards.

5.4 If the door or window opening is not being altered then a Building Warrant is not required, but the work must still comply. If however it is intended to remove mullions, raise or lower cills and lintels, increase or decrease width or form a new opening then a Building Warrant is required.

5.5 The following items require consideration when installing replacement windows and doors:

- Ventilation
- Natural light
- Safe cleaning
- Means of escape in the event of a fire
- Safety glass
- Barriers and guarding
- Security
- Thermal performance

5.6 If you have any questions regarding your proposed replacement windows please contact Building Standards.

5.7 Please note the guidance given below primarily relates to domestic properties and reflects the standards in force at the time of writing.

5.6 Ventilation

The three main considerations to satisfy the Building Regulations with regard to ventilation are:

1. Some part of the opening section of the window and the trickle ventilator should be located at a height that prevents stratification. This is generally achieved by locating part of the opening and trickle ventilator at least 1.75 metres above the floor level.
2. The opening area of the window should be a minimum of one thirtieth of the floor area of the room which it serves. The opening area may be made up with more than one window into a room. External doors can also be utilised to provide ventilation, but only in domestic properties.
3. Rooms should also have trickle ventilation. This is usually provided by the fitment of a separate trickle ventilator the head of the window but a window that is partially openable on a night latch can achieve the required performance.

On existing dwellings where infiltration rates are likely to exceed $10\text{m}^3/\text{h}/\text{m}^2$ @ 50 Pa, trickle ventilation to apartments should be at least $8,000\text{mm}^2$ and other rooms should be at least $4,000\text{mm}^2$. In newer properties where infiltration rates are lower than mentioned above trickle ventilation should be provided at the rate of $12,000\text{mm}^2$ and $10,000\text{mm}^2$ respectively.

5.7 It is also possible to provide ventilation to rooms by mechanical means.

5.8 If there are open flued combustion appliances within rooms where replacement windows are proposed you should check that sufficient permanent ventilation is maintained for combustion purposes.

5.9 Natural Light

Windows serving apartments (living rooms, lounges, sitting rooms, dining rooms, studies, bedrooms and other similar rooms) should have glazing that is a minimum of one fifteenth of the floor area of the room served.

5.10 Natural light does not need to be provided to kitchens, utility rooms, bathrooms, toilets, shower rooms or stores.

5.11 The minimum glazed area may be calculated from more than one window serving the same room. External glass

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doors also can contribute to the minimum glazed area required. The area of glazing is the glass only excluding astragals or glazing bars.

5.12 Safe Cleaning

In dwellings, any glazed surface more than 4 metres above the level of the adjacent ground should be capable of having its internal and external glazed surfaces cleaned safely. This generally should be achieved from the inside of the building but, where there are fixed panes that form a particular architectural feature alternative means of cleaning may be considered such as the use of commercial cleaning using high reach poles or self cleaning glass.

5.13 Windows to be cleaned from within should be of a design that makes it safe to do so. In general large fixed panes at upper floor levels are not suitable and as such the maximum reach from an opening part of a window should not exceed:

- 850 millimetres measured horizontally
- 610 millimetres measured vertically

5.14 Please note these figures refer to reach, the actual size of fixed pane would therefore need to be less than this to allow for cleaning into corners of the pane.

5.15 Safety depends on the act of cleaning being carried out when standing on

the floor. The use of steps to reach glazed surfaces should be avoided.

5.16 With regard to traditional sash and case windows, safe cleaning can be achieved by the fitment of a 'Simplex' hinge system or other similar devices. This type of system allows the lower sash to be opened so that its outside face can be cleaned. The top sash can then be lowered so that it too can be cleaned safely on both the internal and external faces. (Further information on this can be found within Historic Scotland's 'Looking after your Sash and Case Windows: A short guide for homeowners'.)

5.17 Side hung casements may only be cleaned safely if fitted with extended leg hinges to enable the outer surface to be reached between the frame and the wall.

5.18 The notes given here highlight some potential problems. For full information reference should be made to British Standard Code of Practice 8213: Part 1: 2004. Alternatively please contact your Building Standards who will be able to give advice.

5.19 Means Of Escape In The Event Of Fire

A suitably designed and located escape window should be provided in every apartment within a dwelling which is located on an upper storey which is not more than

4.5 metres above the adjacent ground level.

5.20 Similarly an escape window should also be provided in every inner room within a dwelling.

5.21 Escape Windows

An Escape Window should meet the criteria as set out below:

1. The Escape Window must be situated in an external wall or roof.
2. It must have an unobstructed openable area that is a minimum of 0.33m² and be at least 450 mm high and 450 mm wide. The route through the window may be at an angle rather than straight through.
3. The bottom of the openable area should be no more than 1100 mm above the floor.

5.22 The window design must be such that a person can climb through the opening window to escape the effects of fire.

5.23 Basements

A basement storey that contains an apartment must be provided with either:

1. An alternative exit from the basement storey, which may provide access to the external air from which there is access to a place of safety at ground level, or
2. A suitably designed and located escape window in every basement apartment.

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5.24 Safety Glass

The glass in windows and doors should be suitable for the purpose depending on their location. Toughened or safety glazing may be required to be provided to windows in certain circumstances and always within doors.

5.25 Barriers and Guarding

Window openings at upper floors and at ground floor where the finished surface is more than 600mm above the adjacent ground should all be provided with a suitable barrier to reduce the risk of a fall. Barriers should be at least 800 mm above the floor level and have balustrading that prevents climbing and has no gaps that would allow passage of a 100 mm sphere.

5.26 French windows and patio doors should also be provided with suitable barriers where the floor level is more than 600mm above the adjacent ground level. Barriers should be at least 1,100 mm above the floor level and have balustrading that prevents climbing and has no gaps that would allow passage of a 100 mm sphere.

5.27 Where the outer surface of windows located on floors more than 4.5 metres above ground level are to be cleaned from within the dwelling, suitable guarding should be provided to the opening.

5.28 Guarding should be at least 1,100 mm above the floor level and have balustrading that prevents climbing and has no gaps that would allow passage of a 100 mm sphere.

5.29 Security

Windows, external doors and glazing where vulnerable to unlawful entry should be designed, constructed and installed to deter housebreaking and protect the safety and welfare of dwelling occupants.

5.30 Thermal Insulation/ Insulated Glass

Windows and external doors should achieve an appropriate thermal performance. This is expressed as a U-value in W/m^2K with the lower the figure having the best thermal performance.

5.31 Generally, where the replacement windows and / or doors are being installed to a dwelling constructed after 1983 they should achieve a U value of 1.6 W/m^2K or better. Replacement windows and doors to dwellings constructed prior to this date should achieve a U value of 1.4 W/m^2K or better.

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6 Definitions

For the purposes of this document, the following definitions shall apply:

Architrave - Moulded surround to any opening.

Astragal – As known in Scotland, glazing bar between panes.

Building Standards - A section within Regulatory Services which checks proposals for building operations to ensure compliance with minimum building standards.

Building Regulations - National standards for buildings set out by the Building Standards Division (BSD)

Building Warrant - An approval issued by Building Standards following the submission of an application and after an assessment of the proposals under the Building Regulations.

Casement - A side hung hinged window.

Conservation Area - An area designated under “The Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997” as being of special architectural or historic interest, the character or appearance of which it is desirable to protect.

Core Conservation Area - A group or groups of buildings and other space so defined being particularly important to the character of the conservation area.

Emergency Escape Window - A window capable of being opened sufficiently to allow persons to make their own means of escape from a building.

Fanlight - Usually a fan-shaped glazed area above a door which was designed to allow light into hallways.

Fittings/Furniture – Either door or window, can include items such as door knockers, letterboxes, window stays, finger lifts to name but a few.

Like for like - The same materials, details of construction, dimensions, opening method, decorative finish and details as existing including glazing type and fixing of glass (e.g. putty). The original proportions and glazing pattern should always be respected. This applies equally to doors as it does to windows.

Listed Building - A building of special architectural or historic interest, included on a list drawn up by Scottish Ministers (Historic Environment Scotland).

Mullion - Upright member dividing the lights of a window.

Muntin - Vertical timber central part of the door between panels.

Panels – Raised or fielded sections of door.

Panel Moulding - Mouldings holding panel in place to door.

Plinth Block - Square or rectangular blocks which the Architrave sits on.

Prime frontage - A range or ranges of properties of being particularly important to the character of the conservation area.

Rails - Horizontal members of door between panels - top, frieze, lock and bottom rail.

Replacement Door - The replacement of the door element only, not including “new” doors in structurally altered “existing” door openings.

Replacement Window - The replacement of the window element only, not including “new” windows in structurally altered existing” window openings. (e.g. new openings formed by the removal of mullions.)

Sash and Case - A form of window in which the glazing slides in two parallel frames within the case, the upper sliding outward of the lower.

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Stile - Vertical timbers on each side of a timber panel door, hanging stile and shutting stile.

Storm / Weather Bar - Bar fitted to the bottom rail of a door and is designed to keep the rain out.

Transom - Horizontal member dividing the lights of a window.

Transom Light – Rectangular window above a door.

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7 Further Information

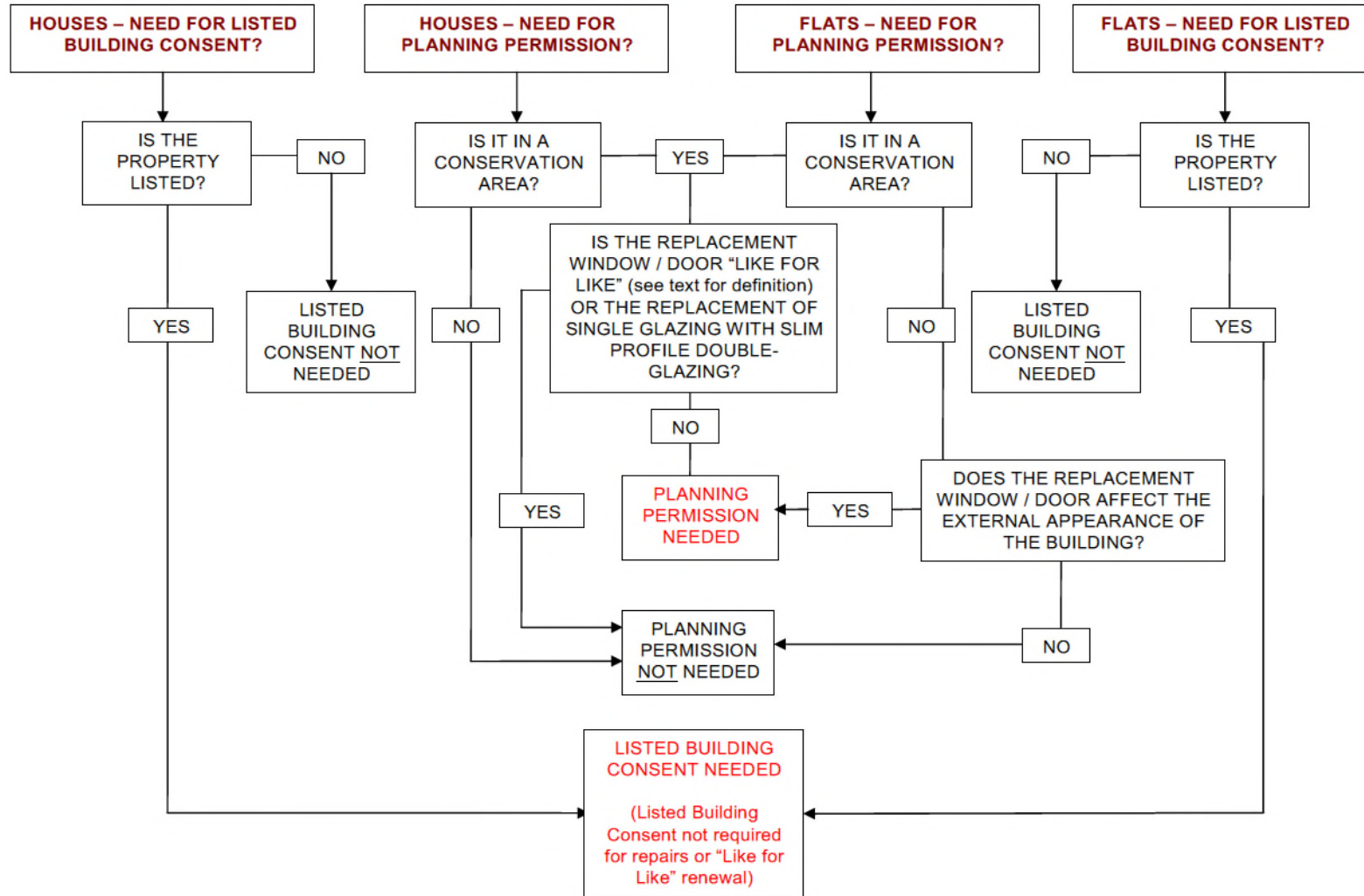
Scottish Historic Environment Policy	Scottish Building Standards Agency)
Managing Change in the Historic Environment Guidance Notes - Doors	Buildings of the Scottish Countryside (Robert J Naismith) Published by Victor Gollancz
Managing Change in the Historic Environment Guidance Notes - Windows	Putting Back the Style - a Directory of Authentic Renovation (Alexandra Artley (Ed)) Published by Ward Lock, London
Looking after your Sash and Case Windows: A short guide for homeowners (Historic Scotland)	Care and Conservation of Georgian Buildings (Davey, Heath, Hodges, Ketchin, Milne) Published by Butterworth Architecture.
Maintaining your Home: A short guide for homeowners (Historic Scotland)	
Inform – Information for Historic Scotland Buildings Owners: External Timber Doors (Historic Scotland)	Building Scotland – Celebrating Scotland's Traditional Building Materials (Historic Scotland)
Inform – Information for Historic Scotland Buildings Owners: Maintaining Sash and Case Windows (Historic Scotland)	
Guide for Practitioners 3 - The Conservation of Timber Sash and Case Windows (Historic Scotland)	
Guide for Practitioners No 6: Conversion of Traditional Buildings. Application of Scottish Building Standards. Part 1 – Principles and Practice Part 2 – Application (Technical Conservation, Research and Education Group, Historic Scotland,	

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Appendix 1 - Flow Chart

REPLACEMENT WINDOWS/DOORS – THE NEED FOR PLANNING PERMISSION AND/OR LISTED BUILDING CONSENT

(This chart is for domestic properties only, generally all non-domestic properties will require planning consent for alterations).



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Appendix 2 - Application Requirements

Any application for altering or replacing either a window or door should be accompanied with accurate scale drawings showing both the existing situation and the proposed works in context. It is normally helpful to provide detailed technical information and photographs. A brief description of the interest of the window/ door and an explanation of the impact of the alterations are always helpful in assessing change. Historic photographs, if available, should also be submitted, especially where it is intended to reinstate an earlier pattern.

Where an application relates to a listed building, a detailed condition survey, on a window by window or door by door basis, including the identification of any historic glass, will be required to support any application to completely replace a window/ door. (A Condition Survey template is included in Appendix 3).

Planning Application Forms, and a Guidance Note on the requirements for accompanying documentation are available on the Council Website - www.scotborders.gov.uk

In the case of applications for replacement windows and doors, it should be noted that in addition to the information noted above, a scaled site location plan at 1:1250 or 1:2500

will be required. These can be obtained from the Ordnance Survey, or their agents.

Checklist for Key Submission Requirements:

Key Parts of Submission	Included in Submission?
Accurate scale drawings showing both the existing and proposed works in context	
Detailed technical information on proposed windows / doors	
Photographs (Where the application proposes to reinstate an earlier pattern – historic photographs will also be required).	
A brief description of the window / door and an explanation of the impact of the proposed alterations	
Detailed Condition Survey (where the property is Listed – refer to Appendix 3)	
Site Location Plan at 1:1250 or 1:2500 scale	

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Telephone: 0300 100 1800.

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