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Planning Condition Discharge Document

PROPOSED REPLACEMENT OF WINDOW SYSTEMS
Condition Number 2 of *2012/6219/L*
Rev A

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INTRODUCTION

Under Listed Building Consent condition 2 of application reference *2012/6219/L* this report has been undertaken to assess which elements of the existing windows will need replacing. This will enable the restoration of the windows to a serviceable condition.

Building regulations and planning policies require windows to be thermally and acoustically rated to allow peaceful enjoyment of the space within the apartment.

The planning report showed that the existing windows do not perform to current building control standards in the reduction of sound. Maintaining the visual appearance of the windows to the listed building is of paramount importance and so mitigation measures to reduce the noise into the apartment should not impact on the appearance of the building.

The windows that will be assessed are shown below in fig 1.

Fig 1: Front façade of the building with original box sash windows

Consistent with this the team propose to mitigate noise intrusion to the apartments and thermal heat loss by the following measures:

1.) Draft proof stripping
2.) Thermal rated replacement double glazed glass to the existing elements.

EXAMINATION AND REPAIR OF BOX SASH WINDOWS

The team propose that the first step is to assess the components shown in fig 2. This will identify any elements requiring refurbishment or repair in the windows on site.

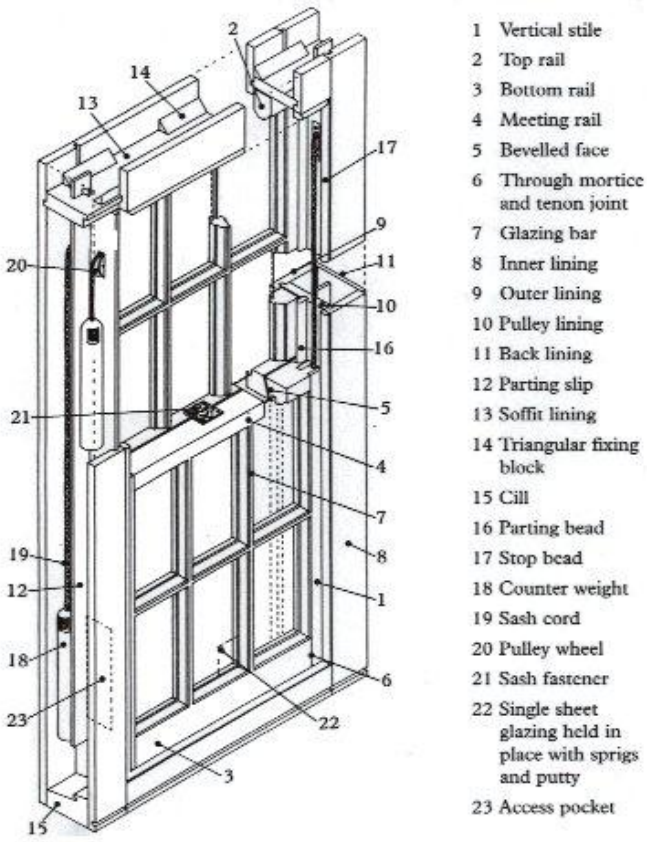

Fig 2: Exploded diagram of a box sash window

INSTALLATION OF NEW DROUGHT PROOFING STRIPS

Once the windows have been refurbished back to their original condition; the draft proofing strips will be installed. This provides thermal and acoustic protection the apartments within.

Fig 3 shows where the draft proofing strips will be located in the window.

Fig 4 shows in detail the brush seal strips and where they are located in the frame.

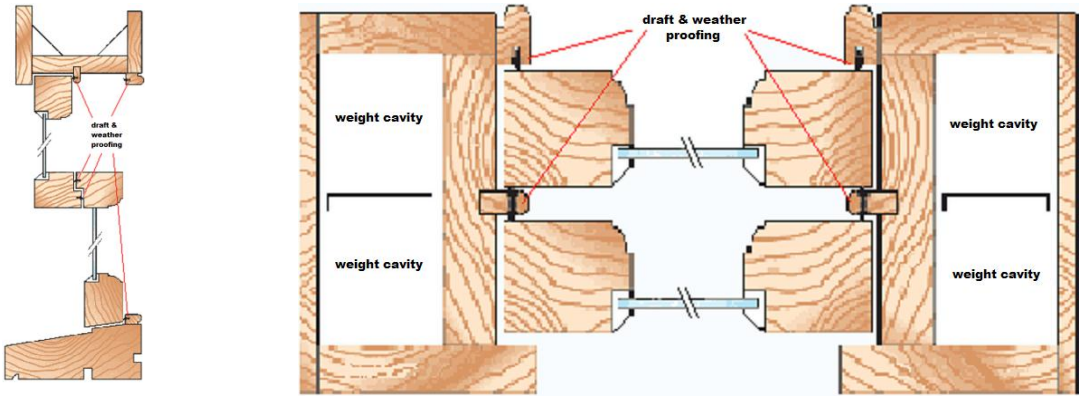

Fig 3: Diagram showing where the drought proofing will be inserted

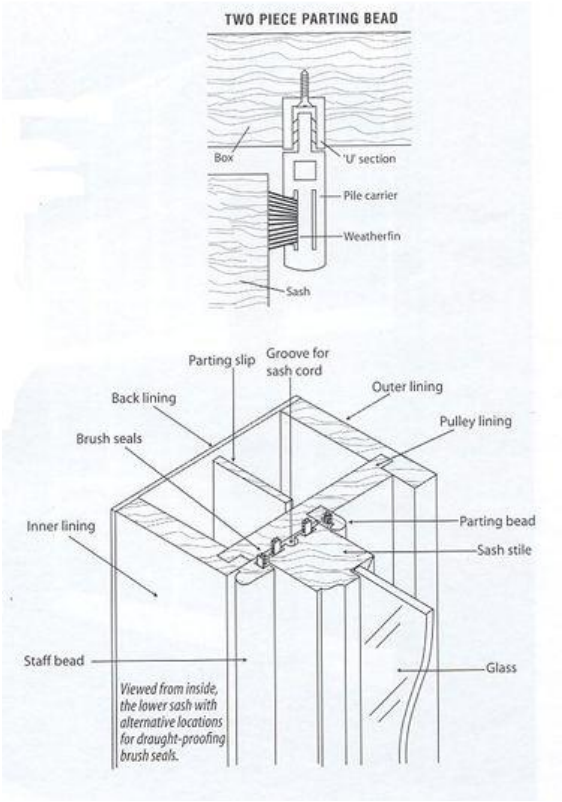

Fig 4: Diagram showing location of Brush seals

REPLACEMENT OF SLIMLITE GLASS

The windows will be further upgraded in their performance by the installation of Slimlite glass, shown in fig 5.

Edinburgh City Council, Historic Scotland and Edinburgh World Heritage have approved the use of Slimlite Double Glazed Units for A Listed and B Listed buildings in Edinburgh which has the largest stock of Listed Buildins of any City in the UK except London.

Double Glazed Units have been around for many years and is known to provide insulation. However the degree or amount of insulation that can be provided is not widely known and is the most important factor in today's escalating heating costs (see note below).

By adapting and maximising the latest technology a double glazed unit can be produced which is very slim with an overall perimeter seal depth of 5mm, suitable for most single glazed windows, and most importantly with unbeatable insulation properties.

Rising Energy Costs
A recent commissioned report claims that since de-regulation of prices in 2002 and from 2002 to 2005 average energy prices have risen by about 60% more than inflation.

Investment Return
Figures published in 2005 stated that replacing single glazing with Low E Double Glazed Units will provide payback in 3 years, presumably less in 2008.

Carbon Emissions
Replacing one square metre of single glazing with Low E Double Glazing will produce a saving of approximately 90Kg of carbon dioxide emissions per year.

Fig 5: Timber Georgian Sash and Case with Super Slimlite Glazed Unit.