Design/Access & Heritage statement:

The works detailed below have been designed to retain the character and heritage of the property. The window design mirrors the original window design. The design of the retaining wall was changed from a dry stone wall to a block wall. The reason for this change is that the dry stone construction did not provide the necessary strength to retain the weight of the soil banking and was therefore not fit for purpose. The new wall was rendered and painted to match the existing render and paint on the house.

Access was not negatively impacted by any of the works. The upper floor window access was improved in keeping with current fire safety requirements. The access to the rear of the property was improved because the distance between the retaining wall and house wall was increased.

The character and heritage of the property was maintained and the longevity of the property has been improved by addressing the various damp and condensation issues.

Wndows Background:

The existing windows were estimated to be several decades old, but clearly 20th century windows and not original given that the oldest part of the property was built in 1705. The condition of many of the windows was terminal. They were all rotten to a greater or lesser degree. Some of the window frames had gaps to the interior allowing ingress of draughts and water. One window was almost falling out of its frame. The condition of the windows was such that some of the sandstone mullions were very wet with damp on the interior and some of the sandstone was starting to crumble and flake off. In several rooms, the rooms were always damp resulting in the ceiling paint flaking off. Condensation formed daily, resulting in mould around the windows and on the walls. Two windows on the south elevation were different to the rest of those in the 1705 part of the property. One was a white UPVC double glazed unit (South elevation, no. 54) and the other was a timber double glazed unit with a standard 25mm glazing unit and aluminium spacer (South elevation no. 45). One of the original timber window units remains as it was accidentally missed off the replacement list. This is a small 1 ft square unit (North elevation No. 37) which shows significant decay and will need to be replaced in the very near future. The 5 Georgian sash windows (North elevation no's 38-42) in the 1729 part of the property were not replaced, they are still in a reasonable condition, however, being single glazed, they produce lots of condensation and the bedrooms are cold and draughty. There is also a single leaded coloured glass window that was not replaced, we do not think it to be original. It is in reasonable condition, however, within a few years the timber frame will deteriorate, and a new frame will be needed (West elevation, no. 62)

Replacement Windows:

The 58 windows that were replaced were of the same design, which matched the vast majority of those they replaced. The two exceptions were the two non-standard double-glazed units on the south elevation previously mentioned, these were replaced with windows to match the rest of the property.

The replacement windows were all timber units, the design matched those they replaced. All the opening windows replicated both the location and direction of the existing windows. The timber was painted white to match the existing colour. The double-glazed units were all heritage sealed units measuring 14mm (4-6-4), argon filled/low E, with white spacer bars in order to remain in keeping with the original windows and design of the property. Due to the low sightline created by the heritage units and the white spacers, it is difficult to tell that the units are double glazed without

close inspection. The handles on all opening windows are black cast iron ‘monkey tail’ handles matching those we replaced, (see photograph in the supporting documents section). Undoubtably these were not original to the property but a 20th Century addition, probably when the windows were last replaced several decades ago.

As a result of the phased installation, the property is now watertight, draughts, damp and condensation have been eliminated (with the exception of the two bedrooms that still have the original Georgian sash windows), heating costs have reduced significantly and the deterioration of the stone mullions has stopped.

In conclusion the deterioration of the property due to the poor condition of the windows has been halted, yet the character of the property has been maintained if not enhanced due to the removal of some non-standard windows such as the UPVC unit and timber double glazed unit on the south elevation. As a result of this installation the property has been preserved for several decades and the environmental impact and carbon footprint of the property has been significantly reduced.

Wall background:

The original retaining wall was located approximately 500mm from the rear house wall. It was a dry stone wall set into the soil bank. The external floor level is approximately 750mm higher than the internal floor level. The soil bank is approximately 900mm higher than the external floor level. In total, therefore, the height of the bank is approximately 1250mm higher than the internal floor level.

The existing dry stone wall had collapsed in several places allowing soil from the bank to tumble onto the house wall. This resulted in damp penetrating into the house.

Rain water from the neighbouring barns was flowing onto the soil banking. The only drainage was via gullies and piping all of which were blocked and therefore ineffective.

Replacement retaining wall:

The new wall was constructed from concrete blocks that were laid flat to maximise the retaining potential. The wall is approximately 250mm thick and 900mm high. The wall is rendered and painted white to compliment the white paint on the house. The wall was moved further away from the house and is now 1 metre away from the house wall.

Between the retaining wall and the soil bank is a new French drain. This drain connects to the original drainage pipes that have now been cleared of blockages. Between the new retaining wall and the house wall is a second French drain. This drain has been placed into a trench which has been dug deep enough to now be below the internal floor level of the house.

All drainage runs into a new sump which has been constructed on the eastern corner of the south elevation. Accumulated water is pumped from the sump to the stream on the north elevation using an automatic electric float pump.

The guttering on the neighbours barns has been renewed ensuring rainwater is diverted away from the soil bank and back onto the neighbours land.

As a result of these works, there is now a strong retaining wall to the rear of the property, which effectively retains the soil bank. Water is effectively captured and diverted away from the property, this has resulted in a dry rear wall both externally and internally.