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THE OLD FORGE

WROTHAM ROAD,
MEOPHAM,
GRAVESEND,
KENT
DA13 0JE

DESIGN AND
HERITAGE
STATEMENT
REV 0

JANUARY 2024

FOREWORD

This document has been produced to accompany the Householder Planning Application and Listed Building Application to seek consent from Gravesham Borough Council for internal and external alterations

at

The Old Forge, Wrotham Road, Meopham, Gravesend, Kent, DA13 0JE

Issue/ Revision	Date	Description
Rev 0	January 2024	

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1. INTRODUCTION

This document has been produced to accompany the Householder Planning Application and Listed Building Application for the following works at The Old Forge, Wrotham Road, Meopham, Gravesend, Kent, DA13 0JE:

- Installation of wood-fibre insulation board with lime plaster and breathable paint to the internal side of the external walls.
- Removal of existing asbestos and impermeable plaster / paints by a specialist.
- Replacement of the deteriorated modern timber casements windows and doors with new white timber double glazed windows and doors to improve energy efficiency.
- Additional brick steps to the stair between the kitchen and the music room as well as to the stair between the garden room and the living room, to improve accessibility within the house (i.e. reducing the steepness of the stairs).
- Removal of an internal door and installation of a sliding door to bedroom 4, to allow a study desk to be placed in the bedroom.

Reasons: To improve the energy efficiency and thermal comfort of the Grade II listed building while allowing the building to breathe as appropriate with buildings of traditional construction. To improve the accessibility/safety of the building.

The Design and Heritage Statement is to be read in conjunction with the architectural drawings produced by James Clague Architects.

Relevant Planning History

Planning permission (application ref: 20200654) and listed building consent (application ref: 20200655) have already been granted on 1st December 2020 for the following proposals:

- Refurbishment within the main house, the attached Victorian cottage and their extensions.
- Partial removal of internal and external walls at both ground and first floor.
- New window openings and rooflights.
- Conversion of double garage into an education area with playroom, study and craft room.
- Alteration, extension and conversion of existing attached side infill (currently used as a storage area).
- Conversion of detached garage into annex accommodation.
- Replacement of flat roofs.
- Replacement of windows and doors as indicated on drawings.
- Various repairs required for the well-being of the Listed Building.

The approved development commenced on site on the 15th June 2022.

The next two pages show the approved planning drawings.

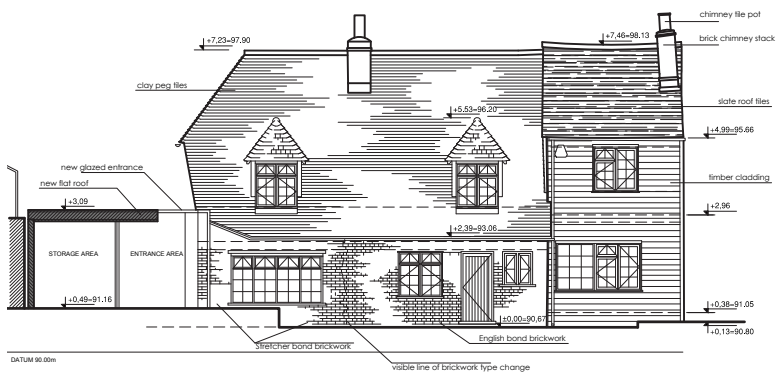


Fig.1 - Proposed North East Elevation.

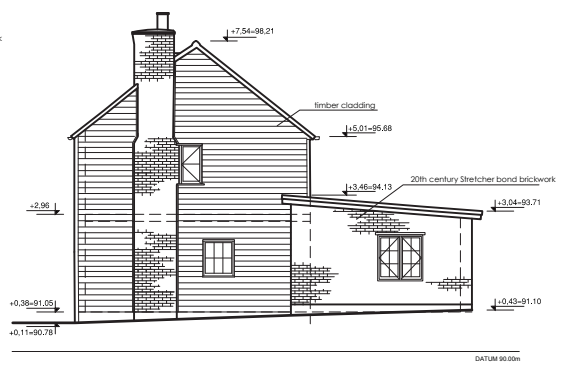


Fig.2 - Proposed North West Elevation.

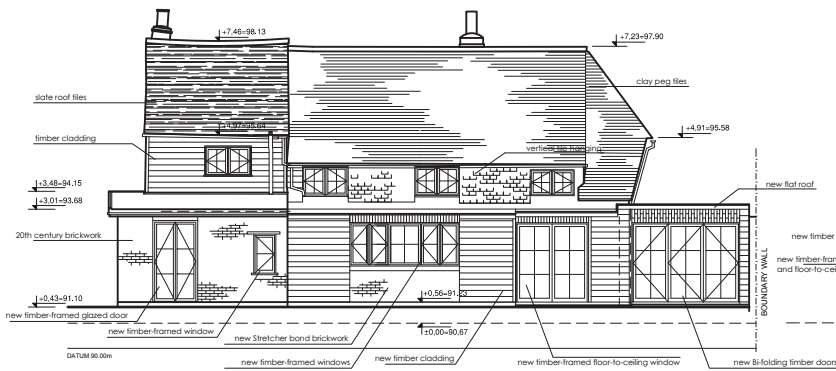


Fig.3 - Proposed South West Elevation.

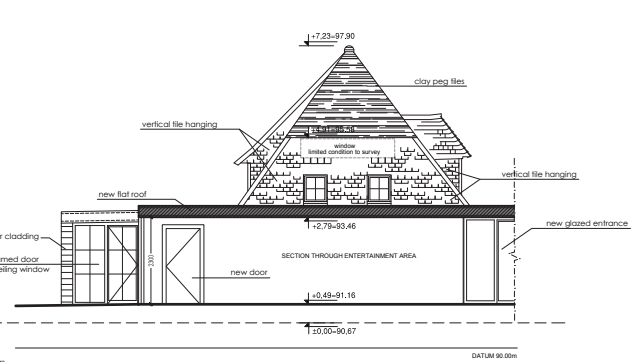
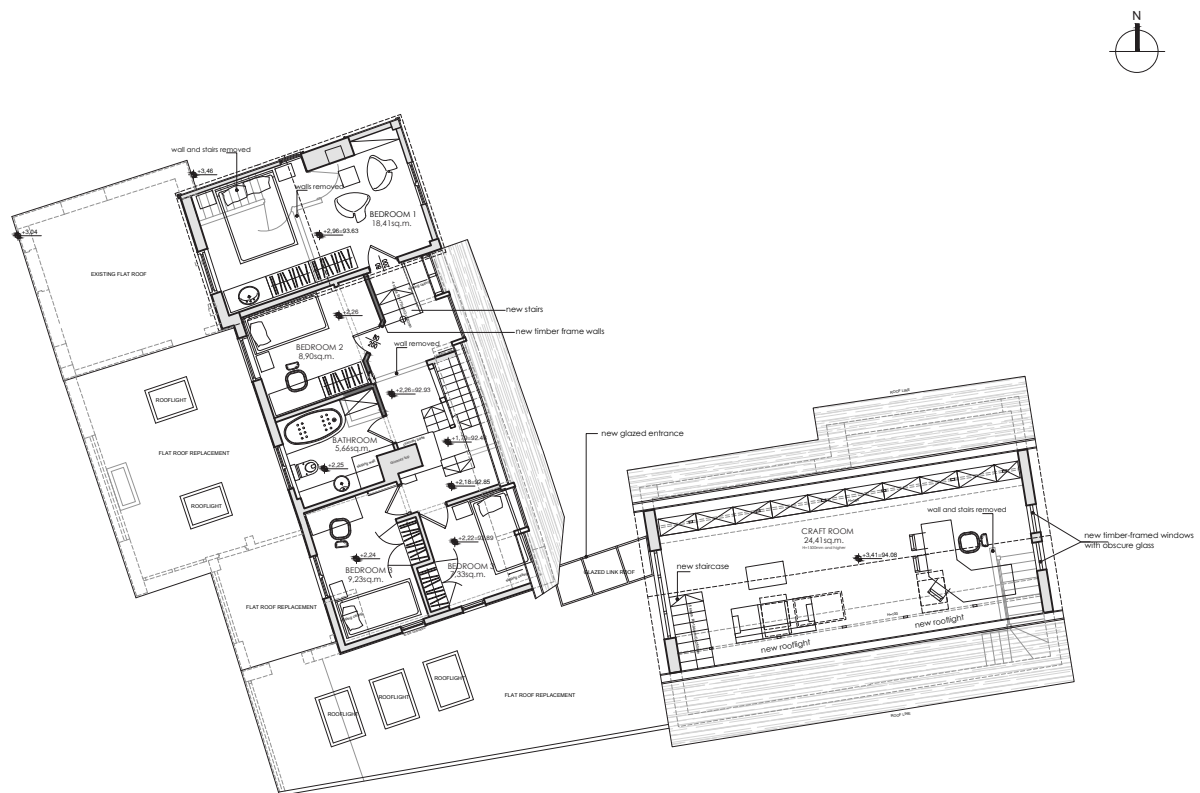
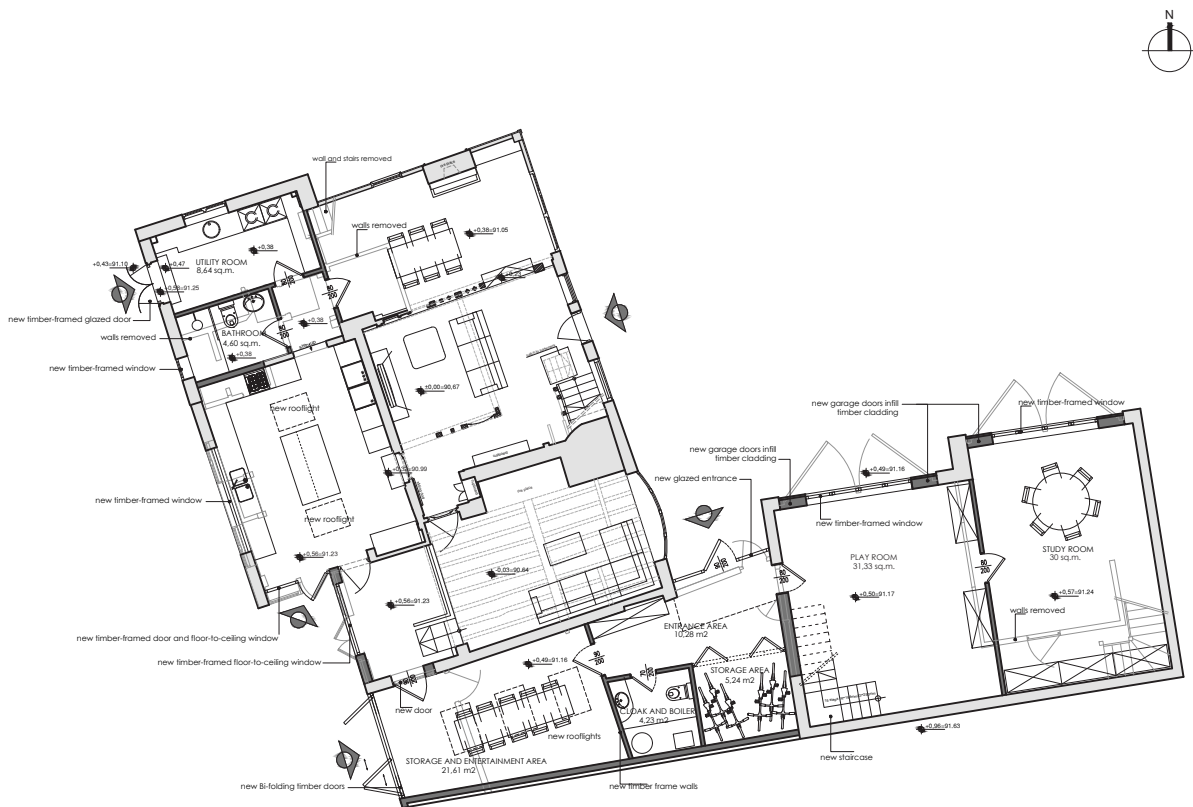


Fig.4 - Proposed South East Elevation.



2. THE SITE AND THE PROPERTY

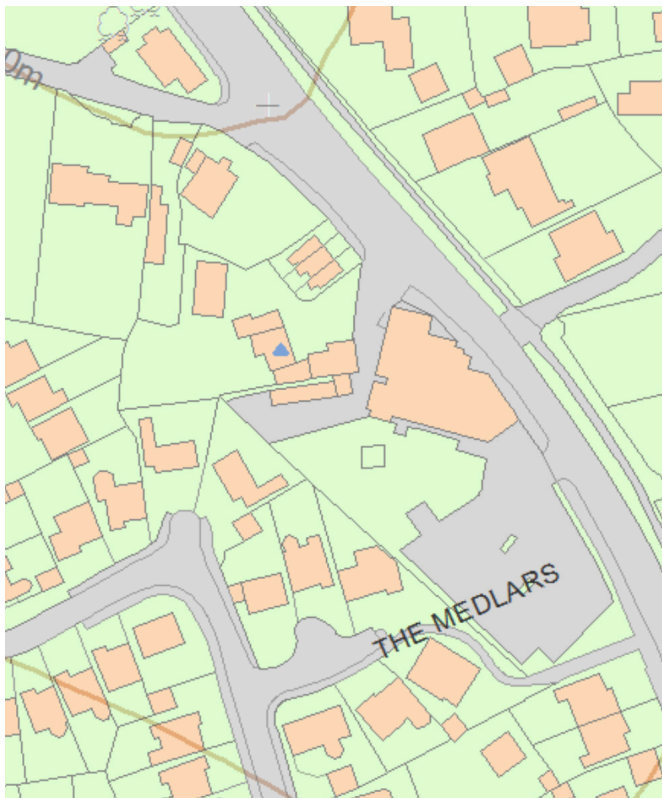
The Old Forge is a Grade II Listed Building that lies in the Hook Green Conservation Area. The house consists of a section of timber framed hall house, masonry construction and a Victorian timber framed extension. There are also late extensions built on the West (rear) of the house. On the ground floor, there are three reception rooms (living room, dining room and snug), a kitchen, a cloak room and a bathroom. There is a small cellar beneath the central reception room. On the first floor, there are five bedrooms and one bathroom. Two of the bedrooms are part of the late 19th century Victorian cottage and are accessed via a separate staircase.

The original building remains a largely timber frame structure but some areas are now supported on brick walls and by brick infill panels. Many of the timber frame members have been cut or removed so they are no longer performing the structural function that was originally intended. There is wattle and daub and flint infill which does not appear to be original.

The roofs of the main house and Victorian cottage are pitched. The main house is hipped with clay peg tiles and the cottage is slate with gables on both ends. There is evidence that the main house was once thatched. The later extensions have flat roofs covered with roofing felt.

The windows are modern timber casements with glazing bars. The front door has vertical boarding. The ground floor is of solid construction except over the cellar which has a suspended treated softwood floor. Both the cellar and the first floor are accessed via modern timber staircases in the entrance hallway.

Historic England Official List Entry



Heritage Category: Listed Building

Grade: II

List Entry Number: 1367140

Date first listed: 11-Jun-1974

List Entry Name: THE OLD FORGE THE OLD FORGE COTTAGE

Statutory Address 1: THE OLD FORGE COTTAGE, WROTHAM ROAD

Statutory Address 2: THE OLD FORGE, WROTHAM ROAD

From internal evidence part of a late C14 "hall house". Two storeys brick and weatherboarding. Half hipped roof with 2 "eyebrow" dormers with casements. Long window under eaves at south end. Modern additions and C19 cottage at north end. Internally large timbers, 2 centred arch to service doorway and crown post roof with braces. Collars jointed with open tenons.

Listing NGR: TQ6430767297

3. METHODOLOGY STATEMENT

The methodology statement takes the following elements and documents into consideration:

- Building Survey of The Old Forge by Stuart Little (Chartered Building Surveyor).
- Asbestos Refurbishment Survey by KD Drainage and Asbestos Ltd.
- Design, Access & Heritage Statement of the original planning applications.
- SPAB's technical advice notes.
- Historic England's technical conservation guidance.
- Site visits.

From desktop research and visual inspection, The Old Forge consists of three different types of external wall constructions - the older masonry solid wall construction, the timber stud wall construction and the more modern cavity wall construction (refer to the architectural drawing I9I90.I_PL_20 for the indicative location of the different wall constructions).

The Asbestos Refurbishment Survey carried out by KD Drainage and Asbestos Ltd has identified there are asbestos concealed within the walls and ceiling behind the existing paints.

Taking all of the above findings and the potential risks of different intervention methods into consideration, it is concluded that the principles of the proposed interventions should be as follows:

- The external solid walls and timber stud walls should be made breathable again where opportunities come, with late impermeable plaster and paints stripped off, to reduce the risk of unnecessary damp issues, movement and crystallisation of salts, growth of mould on the inside surfaces of walls.
- The removal of asbestos must be carried out by experienced, trained specialists and should be carried out as recommended in the Asbestos Survey, due to the fact that the existing asbestos would be easily disturbed during the refurbishment works as approved in the Householder Planning Application (Ref: 20200654) and Listed Building Consent (Ref: 20200655).
- Any new internal insulation, plaster and paint used shall be adequately breathable and allow excessive moisture to find its way out of the building fabric.
- Every decision must be carefully made and their effect on the special interest of the listed building should be kept to a minimum. Special interest and features of the historic building should be left exposed.
- Allow sufficient time to dry any walls that have damp issues, once the existing impermeable coating is removed.
- The thickness of the insulation should take the size of the rooms into consideration and should not be over specified that it might cause condensation problems.
- All external modern windows, doors and lead flashings are to be replaced. While all of the existing windows / doors are in poor condition where some are rotten, none of them are the originals or have any significant heritage values. They are detrimental to the character of the house. The new windows and doors should aim to improve thermal comfort and provide adequate background ventilation, while not harming the character of the historic property.

4. INSTALLATION OF INTERNAL INSULATION

4.1 Internal Side of the External Walls / Underside of Ceilings

General

The Asbestos Refurbishment Survey identified the existence of asbestos concealed behind interior paints on the internal side of some of the external walls and underside of the ceilings. The majority of the asbestos found are chrysotile and have a score range of 4 / 5 - which are low risk and have low potential to release fibres if disturbed. The report recommends to remove the asbestos.

As set out in the methodology statement, one of the main goals is to enable the walls to breathe again and allow excessive moisture to escape from the building. The existing impervious internal wall plaster and paint should be carefully removed and replaced with lime plaster and breathable paints.

The building owners would want to improve the energy efficiency of the historic building for the benefits listed below:

- Lower carbon emissions and fuel bills.
- Increase thermal comfort.

A balance should be struck that the characters and appearance of the Listed Building and Hook Green Conservation Area would be protected and maintained, while the thermal efficiency of the building fabric is being upgraded. It is crucial to avoid unintended consequences such as moisture accumulation, overheating, worsening indoor air quality and fabric damage.

Taking the above into consideration, it is proposed to -

- Carefully remove asbestos by experienced specialists.
- Carefully remove impermeable internal plaster and wall paint.
- Install wood-fibre tongue and groove insulation board internally to external walls.
- Apply lime plaster finished (or lath and lime plaster at ceilings) with breathable paint.

Characteristic building features such as the original timber frames should not be covered and will remain exposed.

4.2 Pitched Roof Insulations

Insulation at ceiling level (Loft insulation)



Fig. 7 - Photo of the loft space above the proposed bedroom 1.

The condition of the existing wool insulation should be examined for any signs of dampness, deterioration and life forms. Replace with new sheeps wool insulation if required.

Install insulation between the ceiling joists and extra layers of insulation above and perpendicular to the joists. The overall thickness of the insulation should be approximately 300mm.

The sheeps wool insulation should be fitted tightly between the ceiling joists to avoid gaps and cold bridges. Seal cracks and gaps around services to prevent infiltration of moist air from below.

The insulation should lap over the head of the external walls at the eave junction, or have an upstand of approximately 225mm above the top of loft insulation against the gable walls to minimise thermal bridgings. Maintain eaves ventilation by placing proprietary spacers to provide a 25mm minimum ventilation gap at eaves.

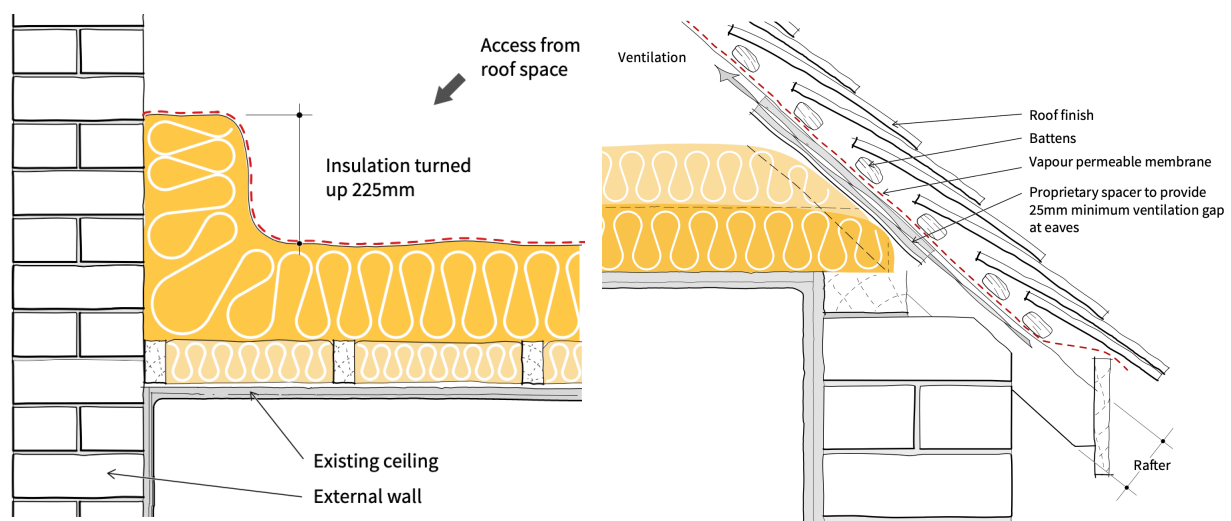


Fig. 8, 9 - Images from Historic England's guidance 'Energy Efficiency and Historic Buildings - Insulating Pitched Roofs at Ceiling Level'.

Separate the insulation from damp chimneys and walls by using vapour permeable building papers.

Insulation at rafter level



Fig. 10 - Photo of the loft space under the main clay tile roof.

Under the main clay tile roof, the loft space is being used as a storage and place to accommodate the water tanks/cylinders. The insulation is installed at the rafter level.

Replace the existing insulation between the rafters with sheeps wool insulation such as Thermafleece and install an extra layer of wood-fibre tongue and groove insulation board below the rafters, followed by applying breathable lime plasters.

Ensure the gaps between the rafters and the insulation are kept to a minimum as the gaps can result in air infiltration. A minimum of 25mm gap will be left between the top of the insulation and the top of the rafters which will allow the breather membrane to drape between the rafters.

Why is Historic England not advising on using vapour barriers, as quoted from their guidance 'Insulating Pitched Roofs at Rafter Level':

Whilst the installation of vapour barriers to control condensation within insulation and associated structures is theoretically effective, it is in reality very difficult to install them in historic buildings -

i) Where the insulated roof slope abuts permeable construction, the vapour barrier will be easily by-passed causing increased condensation and potential damage.

ii) Where there is a risk the vapour barrier may be punctured in use. Where punctures occur, condensation and consequent damage will normally occur within the historic construction this exposes.

5. OTHER PROPOSED INTERNAL ALTERATION



Fig. 11 (left) - Photo of the existing stairs between the kitchen and the music room.



Fig. 12 (right) - Photo of the existing stairs between the garden room and the living room.

It is proposed to create one additional brick step to each of the stairs above to improve safety / accessibility. The steps are too high at the moment.

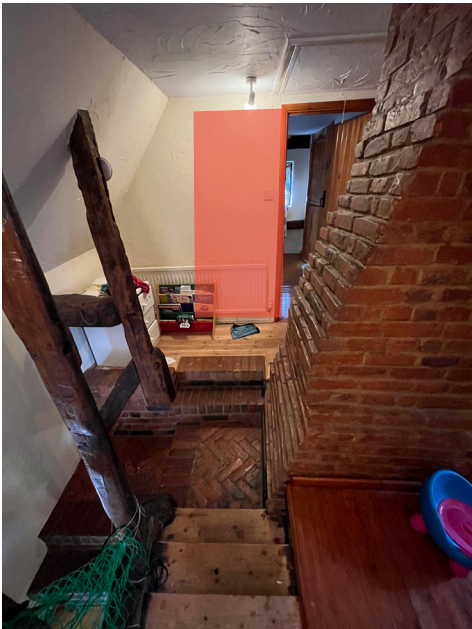


Fig. 13 (left) - Photo looking toward Bedroom 4 from the landing.



Fig. 14 (right) - Photo of bedroom 4.

An opening to be formed to allow for the installation of the sliding door to bedroom 4.

6. REPLACEMENT OF WINDOWS AND DOORS

All external modern timber windows, doors and lead flashings are proposed to be replaced with white timber double glazed casement units and new lead flashings. While all of the existing windows / doors are in poor condition where some are rotten, none of them are the originals or have any significant heritage values. They are detrimental to the character of the house. The new windows and doors should aim to improve thermal comfort and provide adequate background ventilation, while not harming the character of the historic property.

The glazing bar arrangement would match the existing and the design of the replacement casement windows / doors would be in traditional style. The proposed profile details from the window manufacturer is submitted with the application.



Fig. 15 - WG01.



Fig. 16 - WG02, WF01.



Fig. 17 - WG03.



Fig. 18 - WF02.



Fig. 19 - WG05, EDG02, WG04.



Fig. 20 - WG06.



Fig. 21 - WF10.



Fig. 22 - WF09, WF08, WF07.



Fig. 23 - WF05, WF06.



Fig. 24 - WF04.



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