

Heritage statement for Green Farmhouse, Harleston

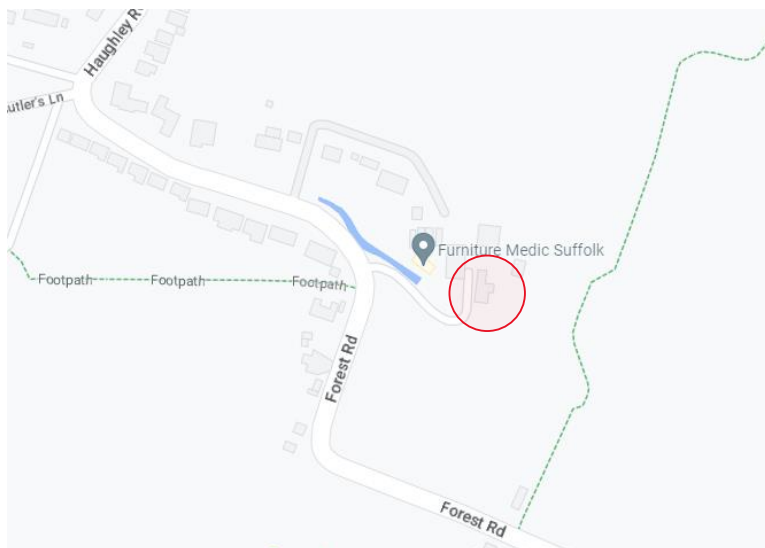
In support of listed building consent application.

August 2023

SITE PLAN

Green Farmhouse stands towards the edge of Harleston, a hamlet in the environs of Stowmarket, Mid-Suffolk.

A 1:2500 scale map is provided separately, and a location map can also be found here: <https://heritage.suffolk.gov.uk/Monument/MSF42931>



Historic England Grade 2 entry number 1352280 - Listed 15th March 1988

HARLESTON FOREST ROAD TM 05 NW

6/51 Green Farmhouse

GV II Farmhouse, late C16 with C17 alterations. 3-cell lobby entrance plan. 2 storeys. Timber-framed and plastered with mid C20 herringbone pargetting in panels. Pantiled roof, once thatched. An axial C17 chimney of red brick, the shaft mainly rebuilt in C19, another of C19 to left. To right is an external C17 end chimney. Small-pane casements, mainly of late C19. Boarded and battened mid C20 door at lobby-entrance position; a C19 boarded door at left hand end.

Listing NGR: TM0157359942

Noted in Mid-Suffolk's heritage statement as follows:

Green Farm, Harleston. 16th century farmstead and farmhouse. Regular courtyard U-shaped plan formed by working agricultural buildings with a second smaller yard. The farmhouse is set away from the yard. Partial loss (less than 50%) of the traditional farm buildings. Located within a hamlet (S1-6).

Grid reference Centred TM 0155 5995 (75m by 49m)

Map sheet TM05NW

Civil Parish HARLESTON, MID SUFFOLK, SUFFOLK

Type and period classed as:

- [BARN \(16th century – 1500 AD to 1599 AD\)](#)
- [FARMSTEAD \(16th century – 1500 AD to 1599 AD\)](#)
- [REGULAR COURTYARD U PLAN \(19th century – 1800 AD to 1899 AD\)](#)
- [FARMHOUSE \(16th century – 1500 AD to 1599 AD\)](#)

Recorded as part of the Farmsteads in the Suffolk Countryside Project. This is a purely desk-based study and no site visits were undertaken. These records are not intended to be a definitive assessment of these buildings. Dating reflects their presence at a point in time on historic maps and there is potential for earlier origins to buildings and farmsteads. This project highlights a potential need for a more in depth field study of farmstead to gather more specific age data.

Green Farmhouse would be defined by Heritage England as an example of a vernacular house.

A. A SUMMARY OF THIS APPLICATION

We have lived in Green Farmhouse since 2001.

Our house is currently heated using oil fired central heating (this also provides our hot water). This boiler will soon require upgrading and, conscious of both available options and our carbon footprint, our preference would be to replace it with an air-source heat pump.

Extensive surveys by air-source heat pump suppliers have revealed the extent to which our walls and windows leak heat from the house. This heat loss means that air-source technology will not work effectively for us without additional action being taken to improve the thermal efficiency of the house.

To make air-source heating viable, we need to increase the levels of thermal efficiency provided by the walls and the windows.

Conversations with specialist builders and lime renderers suggest we could achieve the required improvement to thermal efficiency by replacing the cement render with a thermally insulative lime render.

In so doing this will additionally afford us the opportunity to take the house back to its' original finish, once again enabling it to 'breathe' – something the cement casing in which it has been sealed for the last c.50 years has prevented.

With the cement render removed and the whole frame exposed, it makes sense to use the opportunity to replace our ageing 20C windows and so we are also seeking approval to replace the existing windows with slimlite double glazed units to further increase the buildings' thermal efficiency.

The added benefit of upgrading the windows at the same time as we replace the render is that it will cause significantly less disruption to the frame of the house, and it will reduce the need for piecemeal future repairs which would damage the integrity of the lime render and further impinge on the frame of the building.

This application is to seek approval for these works.

Green Farmhouse as it is today



The main part of the house is timber framed and dates from c.1580, the house was extended within 50 years of the original build (you can see the step down in the sole plate of this part of the house).

When we bought the house, it was rendered in painted cement which we believe was applied in the 1970's or '80's.

In 2001, our surveyor noted that a cement render on metal lathe and not timber lathe is present as they have been wholly replaced, which was not ideal for a house of this

construction, as it does not allow the structure to breathe, but stated that it appeared to be in sound condition and would likely last for some decades before it required replacement.



We replaced a single story rear extension built in the 1950's with a double height extension in 2008.

This extension was built with a timber frame and lime render to ensure it was sympathetic to the original structure of the main house, rather than using cement render which is sub-optimal.

This traditional construction was successfully enhanced with sheep-wool insulation, and double glazed windows to make it more thermally efficient.

20 years on, the cement render on the original house is beginning to deteriorate and so it requires attention.

B. SCHEDULE OF WORKS:

We are seeking approval to future-proof Green Farmhouse for ourselves and for future owners in two ways: replacing the render and insulating behind, and upgrading windows.

1. Render replacement

Given our thermal efficiency objective, we propose to replace the existing cement render with insulative products that are an honest updated application to satisfy both insulative and breathability requirements - we are not looking to match a heritage application as this is not currently present.

We are therefore proposing to carefully strip the cement render from the exterior, counter batten to exposed studs, retain existing infill but incorporate 75mm sheeps-wool insulation into any voids between exposed studs, fit Savolit wood wool board, and apply two coats of Thermaline and Fine lime render to the forward face of the boards to approximately 20mm thickness.

The finished building will have an equivalent wall thickness to the existing building, and as such will not impact on junctions with plinth, eaves, verge and fenestration.

As experts in working on this type of structure, we have engaged recommended craftsmen Rickards Period Plastering Ltd. on this project. More information on the company can be found here: <https://www.period-plastering.co.uk/>

Rickards Period Plastering Ltd. will ensure that works are undertaken to a high standard and in accordance with best practice. They have significant experience of working on similar period properties in the region, and of liaising with MSBDC's Heritage Officers during works when the frame has been exposed, and in ensuring that historic building requirements are appropriately met at all times.

Investigative test holes have indicated that we will need to replace sections of sole plate to the front (west), right gable (south) and rear right (east) elevations. Sole plate repairs will be made with English oak of like for like dimension, and will be mortice and tenon jointed. If plates are found to be salvageable, localised repair with steel plates and oak will be made as applicable. Photographs and frame plans will be made and shared on exposure.

We understand that we will need to maintain communications with MSDC Heritage team throughout the proposed works, to share updates as to what we find when we have removed the cement render, and to set out our proposed plan of action in writing in order to gain approval to proceed with necessary works.

Example of a similar projects can be found on their website here: <https://www.period-plastering.co.uk/recent-work/>

Our plans is to start with the rear left hand end of the East elevation, and to progress with the South gable end, then the front West elevation during the first phase of works.

C. PROPOSED MATERIALS AND FINISH

More information on the proposed materials are set out below.

Sheeps-wool insulation

As well as being entirely natural, renewable and sustainable, sheeps-wool insulation offers thermal conductivity at 3.6 per inch and an R-value of between R-13 to R-19. It also delivers additional gains over and above the insulative benefit for a house of this period:

- Moisture and climate control – Wool absorbs and adsorbs moisture against 65% relative humidity.
- Suppression of mould and mildew – natural keratin prevents against the spread of mould and mildew.
- Fire resistance – wool will not support a flame below 1100F; conforms to Class A of the ASTM E84 test.
- Long lasting – inherent characteristics allow stated R-values to exceed other forms of insulation.

Savolit Woodwool board

Investigations have confirmed that the existing cement render is attached to metal lath, and that no wooden lath is present.

As wooden lath has not been found, our strong preference is for replacement with savolit woodwool board as this permits us to achieve a greater thermal efficiency with no compromise to the buildings' appearance.

Furthermore, with a board we will be able to fit a greater depth of sheepswool insulation as a full void fill cannot be achieved with a wooden lath without compromising the 'nib' of the base coat render.

More information regarding the benefits of using Savolit Woodwool board can be found here: <https://www.savolit.co.uk/products/savolit-plus/>

Thermalime render:

Insulating using Thermalime DryReadymix lime plaster allows us to retain warmth without compromising the integrity of the building.

Thermalime is comprised of chalk, St Astier lime binder, fibres and an insulating component. This unique mix provides an element of thermal insulation to the interior or exterior of buildings, without losing the breathability and visual beauty of a soft lime plaster.

It can be used externally as a render or internally as a plaster. It is lightweight, breathable, flexible, durable, there is zero shrinkage and therefore no cracking, and because of its speed of set it has an added freeze thaw protection over other lime plasters and renders.

Thermalime has a lambda value of 0.1372W/(m.K) (Thermal Conductivity test in accordance with BS EN 12667:2001). Data sheets for Thermalime and Finelime can be supplied on request.

Pargetting: The existing render is pargetted to the front elevation only with a simple 'herringbone' panel detail.

20C photographs of the house before the cement render was applied show a smooth finish to the front of the house and our current plan is to revert to a smooth finish on all elevations.



Our builder – an expert in lime render – has indicated that pargetting is generally unique to each property. He is keen to discuss the possibility of adding some marks to the front façade given that it is unique to the East Anglian vernacular.

At this stage we have not discussed this in any detail, but we would like to reserve the opportunity to discuss any proposals for pargetting with the heritage team when we are closer to a final render coat for their consideration.

Paint: Following our builders' recommendation, we will be using a Keim mineral paint in a pale pink finish to match the existing colour. Keim produce mineral paints which are breathable, hard wearing and UV stable. Representatives from Keim have visited the house and conferred with our decorator, and we have applied test areas to the existing lime render to ensure compatibility.

More information on Keim paints can be found on their website.

2. Windows

Whilst we have maintained the windows over the last 20+ years, repairing, patching and filling existing frames, it is correct to say that they are in a poor state of repair.

Despite draft proofing, our existing windows are draughty, and due to swelling they do not open and close during Autumn, Winter and Spring months which makes airing the house difficult – this is particularly important given moisture needs to flow in and out of a property of this period. We live with significant condensation on the windows for large parts of the year and this results in mildew building up around the frames, particularly in bedrooms and our bathroom.

Our joiner has indicated that over half of our window frames are nearing or at the end of their natural lives and will require replacement within the next 1 – 5 years.

Our existing windows are described in the heritage listing as ‘mainly 19th Century’ – but they are not original, and 11 of the 13 windows are not old. This was confirmed by heritage officer Thomas Pinner during his site visit.

In your guidance notes for listed buildings, you state that:

*If the window is not in itself historic or significant, for example it was constructed in the 1960s, but it is located within an historic part of the building, then its **replacement can be considered**. The replacement needs to show an improvement in design and joinery on the inappropriate modern window, but in some cases double glazing might be possible. In these circumstances the slim double-glazed units (typically 12mm – 14mm) can be used.*

Given our goal is to significantly improve the energy efficiency of the house, and taking advice from your heritage officer, we are therefore seeking approval to replace 11 of the 13 existing windows with slimline double glazed windows.

We have employed local firm TD Joinery who are specialists in work such as this. Their website can be found here <http://tdjoinery.com/>, and examples of their work can be found here: <http://tdjoinery.com/projects.html>

Extracts from a testimonial for TD Joinery relating to another Suffolk listed property demonstrating their suitability for this project can be found below:

We have undertaken the conversion of a substantial Grade II listed Suffolk brick barn. Listed Building Control were strict with us ... From start to finish, we were extremely well served and the resulting doors and windows really are faithful to the style and heritage of the barn...we would thoroughly recommend that you contact them.
8/6/2016

Our proposed replacement windows will be designed to closely match the existing windows where these are of good quality, or improve on existing inferior windows that have been installed over the second half of the 1900's – again we have taken guidance from Thomas Pinner on this. Careful repairs will be made to the two windows that he has indicated should be retained.

Using slimline double glazing will significantly increase the windows' thermal efficiency. The air gap will contain argon to further improve the U-Value of the windows, reducing heat loss scores from circa 5.8 to 1.8. As we have 13 windows, replacing 11 of them will significantly improve the overall thermal efficiency of the house.

Indicative designs and cross sections for these windows can be found in the attached PDFs – bespoke drawings for each window will be undertaken before any works go ahead, assuming approval is given.

As you can see, great care will be taken to ensure replacement windows are appropriate to the buildings character and appearance.

E. Annotated photographs detailing the extent of the project.

<p>Front (West) elevation</p> <p>All render to be removed and replaced.</p> <p>Window 1 to be retained.</p> <p>Windows 2,3,4,5,6,7,8 to be replaced.</p>	
<p>Gable end (South elevation)</p> <p>Images show section to right and left of chimney</p> <p>All render to be removed and replaced.</p>	
<p>Rear (East elevation)</p> <p>Windows 9, 10, 11, 13 to be replaced.</p> <p>Window 12 to be retained.</p> <p>The rear extension was built in 2008 and will not form part of these works.</p>	

F. Justification for the works

With Suffolk County Councils' stated net zero Carbon target by 2030, every home in Suffolk needs to address energy efficiency and energy saving.

Historic England support this approach setting out in their advice to listed building owners that *'it's worth considering whether you could make changes to increase [your homes'] energy efficiency at the same time. For example, if you are carrying out repairs to the roof, floors or walls, you may wish to have insulation installed at the same time. This will be more cost-effective than carrying out such works separately and, if you were considering taking energy saving measures anyway, can also minimise any disruption.'* <https://historicengland.org.uk/advice/your-home/looking-after-your-home/repair/>

This project offers us the opportunity to make significant improvements to the thermal efficiency of our home (as set out above). In turn this will both reduce our energy usage and enable us to move away from oil fired to air-source heating.

Assessment of the impact of proposed works on architectural significance.

When completed, we are confident that the proposed works to Green Farmhouse will not impact on the way it looks – however the function of the building will be significantly improved.

Vernacular houses can pose challenges in being adapted for modern living, but listed status does not preclude appropriate adaptation once the special qualities of the building in question are understood and respected.
Listing Selection Guide – Domestic 1 – Vernacular Houses

Replacing the cement render on metal lath and incorporating insulative products that are an honest updated application will satisfy heat loss reduction requirements and ensure breathability, whilst also ensuring synergy with heritage requirements regarding the original construction (we are not looking to match a heritage application as this is not currently present).

Replacing the inappropriate late 20C cement render with Thermalite render will help us to achieve improvements to thermal efficiency, but also significantly reduce the risk of moisture getting trapped within the structure. This means that the house will no longer be encased in non-breathable cement, reducing the risk of moisture damage to the timber frame in the future.

Removal of cement render will also enable us to ensure the timber frame beneath it is sound, and to repair it in accordance with best practice as required.

Replacing rotten and poorly designed windows with bespoke slim-line double glazed windows will further improve the buildings' thermal efficiency and ensure the integrity of the building for the next generation.

Thus our proposals will *improve* the house, taking it back to how it looked and functioned before the cement render was applied, whilst securing its' future viability as both a heritage asset and a modern family home.

We would be delighted to discuss any aspect of this application in more detail, or to provide clarifications to our proposals on request.