



# J.Bell designandconservationltd

Planning - Design - Listed & Historic Buildings - Heritage Advice

Suite G2, Holly House Business Centre

220-224 New London Road, Chelmsford, Essex, CM2 9AE

T: 07484 791794

E: [REDACTED]

W: [www.designandconservation.co.uk](http://www.designandconservation.co.uk)

## Heritage Statement

**Site:** Harpers, Shooters Hatch Road, High Easter, Chelmsford, CM3 1HU

**Proposal:** Single storey extension. Internal and external alterations.

**Date:** October 2023



Registered company J BELL DESIGN AND CONSERVATION LTD

Registered in England and Wales No. 12353012 , VAT Registration Number GB 341919396

Registered Address: Suite G2, Holly House Business Centre, 220-224 New London Road, Chelmsford, Essex, CM2 9AE

## 1.0 Introduction

1.1 This Heritage Statement has been written and prepared by JBell Design and Conservation Ltd, to accompany a listed building consent and householder application for single storey extension, open porch and internal and external alterations at Harpers, Shooters Hatch Road, High Easter, Chelmsford, CM3 1HU.

1.2 The property is a grade 2 listed building (refer to appendix A for list description) and therefore any proposed additions, changes or alterations will need to be sympathetic to the fabric, appearance and character to ensure no harm to the significance of the building. This heritage statement will describe the proposals and assess the level of impact on the significance of the building.

1.3 The heritage study covers the following headings;

- Understand the history and evolution of the building
- Identify the significance of the building
- Describe the proposals
- Assess the impact of the proposals on the character and significance of the building
- Justify the proposals

1.4 This Heritage Impact Assessment has been prepared in conjunction with Section 16 of the 2021 National Planning Policy Framework (NPPF 2023)

194. In determining applications, local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the assets' importance and no more than is sufficient to understand the potential impact of the proposal on their significance. As a minimum the relevant historic environment record should have been consulted and the heritage assets assessed using appropriate expertise where necessary. Where a site on which development is proposed includes, or has the potential to include, heritage assets with archaeological interest, local planning authorities should require developers to submit an appropriate desk-based assessment and, where necessary, a field evaluation.  
(P56, NPPF, 2023)

- 2.0 Description and history of the building
- 2.1 Harpers is located on the North side of Shooters Hatch Road approximately 2miles North of High Easter. The property is set back from the road within a mature wooded setting. To the front of the site (South) is a timber framed and rendered barn and garage that are not listed but are within the curtilage of the listed building.
- 2.2 Harpers is a 2-storey 17<sup>th</sup> century timber framed house constructed across 3-bays. The list description describes the house as having a 'hall' with cranked braces, however, as described in the historic building report by Barry Hillman-Crouch, the cranked braces were a later addition. There is no access to the loft area within the historic part of the building, so the rafters could not be inspected for blackened timbers, which could have indicated a hall section and open fire arrangement. Internally the original house has exposed studs and beams and brick central fireplace in both rooms.
- 2.3 The front (south) section of the building is the original 3 bay house with single storey outshot. This is the only part of the building of historic significance. The rear (north) the building is a large extension constructed around 1964 designed by LO Webb. The approved plans of the 1964 extension reflect the current layout of the house. The extension is 2-storey and comprises of a link section and perpendicular gable to mirror the front historic range. The extension has changed the front door location and orientation of the building to now face East, where formerly the principal elevation was to the South, facing the road.
- 2.4 The building is plastered externally with clay peg tile roof to the historic building and clay plain tiles to later extension. The historic principal elevation to the South has exposed studs and beams. The historic section has a central chimney stack with diagonally arranged stacks.
- 2.5 The windows have been changed throughout as part of the 1964 extension and alterations. The windows to the original house are all Oak framed windows with Oak casements and lead light windows. The windows to the later extension are softwood white windows with lead lights. The internal doors throughout date from the 19<sup>th</sup> century. The front door to the original house is a later door but with earlier ironmongery.
- 2.6 To the South of the site is a garage and barn. These are later timber frame construction and date from around the late 19<sup>th</sup> century. This is evident from the softwood and lime washed studwork construction.



Fig 1. South elevation (original 17<sup>th</sup> century building)



Fig 2. West elevation (original 17<sup>th</sup> century building and outshot with later extension to North)



Fig 3. West elevation (Later 1964 extension)



Fig 4. West elevation (Later 1964 extension)



Fig 5. East elevation (original 17<sup>th</sup> century building and adjoining Later 1964 extension)



Fig 6. East elevation (later 1964 extension forming an H shape courtyard and new front door facing East)



Fig 7. East elevation (later 1964 extension gable)



Fig 8. Internal view of Outshot



Fig 9. Internal view of West bay of 17<sup>th</sup> century building



Fig 10. West bay of 17<sup>th</sup> century fireplace



Fig 11. West bay, 1<sup>st</sup> floor of 17<sup>th</sup> century building



Fig 12. East bay, 1<sup>st</sup> floor of 17<sup>th</sup> century building



Fig 13. East bay, 1<sup>st</sup> floor of 17<sup>th</sup> century building



Fig 14. View within adjoining section of later extension looking towards rear wall of 17<sup>th</sup> century building.



Fig 15. Staircase within later extension





Fig 16. Later faux fireplace within 1964 extension



Fig 17. 1964 Extension. Faux Oak timbers within wall.

3.0 Historic Maps analysis

3.1 Analysis of historic maps reveals the evolution of buildings on the site. The house is indicated on the 1777 Andre and Chapman Maps (although un-named) with another building to the South-West. The building to the South-West may have been a barn, adjacent to the road, however disappears after the late 19<sup>th</sup> century. The later constructed barns to the South are indicated on the late 19<sup>th</sup> century map. Although it does seem part of the North end of the garage was demolished at some point after the mid-20<sup>th</sup> century.

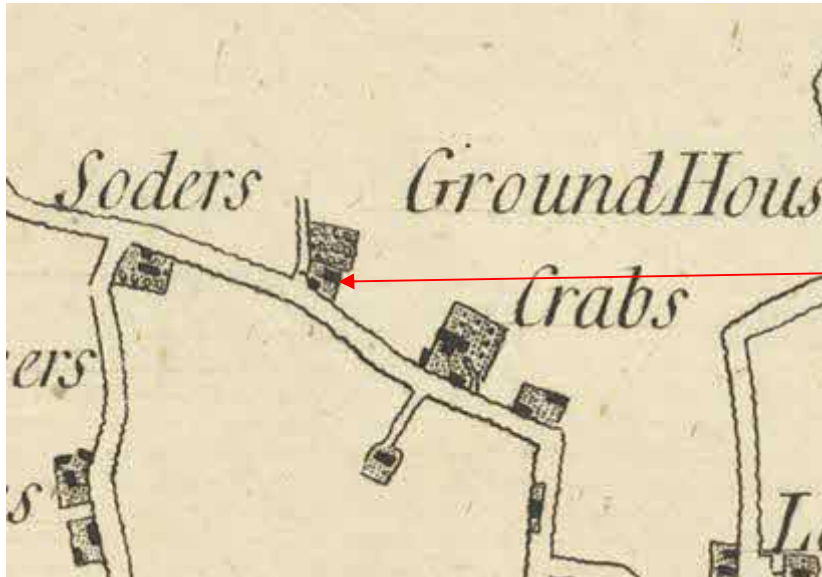


Fig 18. 1777 Andre and chapman map

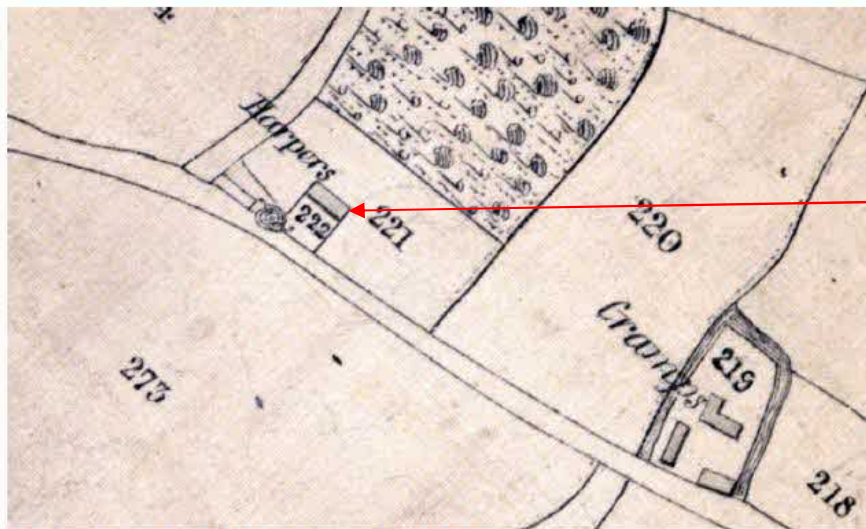


Fig 19. 1884 Tithe map

The 1848 Tithe Map for High Easter. IR29/12/118.

Essex Sheet XXXIII  
Surveyed: 1875, Published: 1881  
Size: map 61 x 92 cm (ca. 24 x 36 inches), on sheet ca. 70 x 100 cm (28 x 40 inches)

ce Survey > OS Six-inch England and Wales, 1842-1952

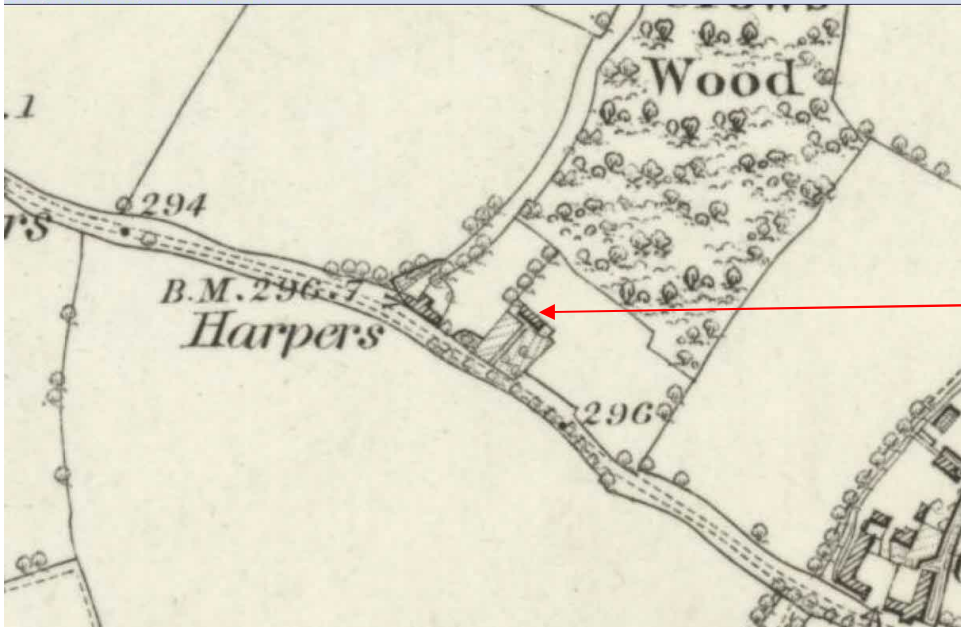


Fig 20. 1878 OS map

Essex Sheet XXXIII.SW  
Revised: 1895, Published: 1897  
Size: map 31 x 46 cm (ca. 12 x 18 inches), on sheet ca. 43 x 58 cm (ca. 17 x 23 inches)

ce Survey > OS Six-inch England and Wales, 1842-1952

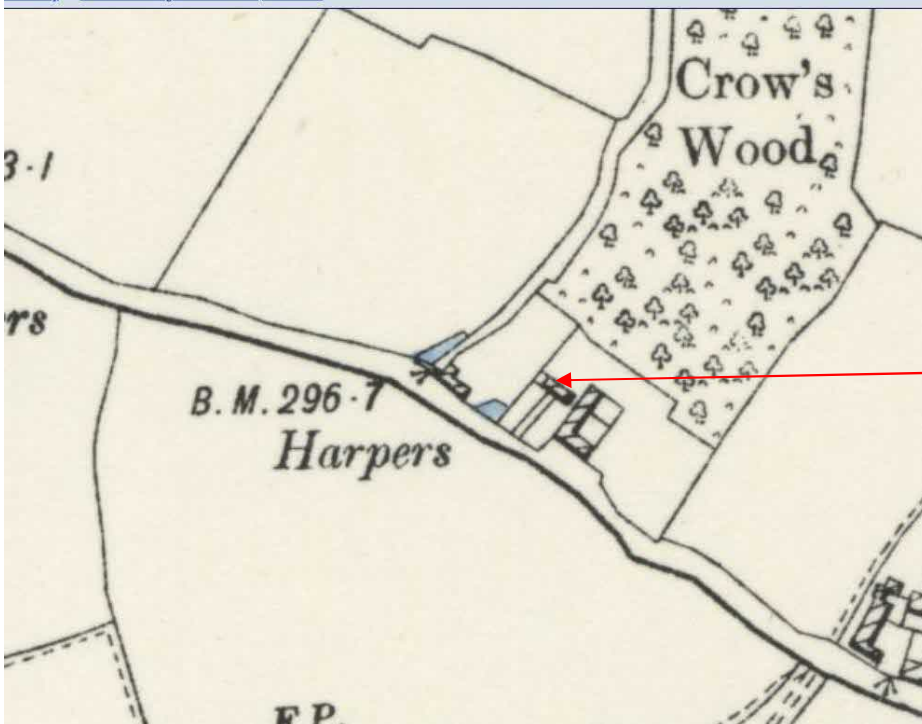


Fig 21. 1895 OS map

Essex Sheet nXLIII  
Revised: 1916 to 1918, Published: 1923  
Size: map 61 x 92 cm (ca. 24 x 36 inches), on sheet ca. 70 x 100 cm (28 x 40 inches)

Survey > [OS Six-inch England and Wales, 1842-1952](#)



Fig 22. 1916 OS map

Revised: 1946, Published: 1951  
Size: map 61 x 92 cm (ca. 24 x 36 inches), on sheet ca. 70 x 100 cm (28 x 40 inches)

Survey > [OS Six-inch England and Wales, 1842-1952](#)



Fig 23. 1946 OS map

- 4.0 Statement of significance
- 4.1 Harpers is a grade 2 listed 17th century timber framed building and represents a good example of a lobby entrance house from the period. There are many examples of similar houses throughout Essex that would have been constructed for farm workers or a yeoman with a small holding.
- 4.2 The main components of the original house are of high significance. This includes; the timber frame structure (walls, roof and 1<sup>st</sup> floor), the fireplace and chimney stack. The ground floor is a later concrete floor with 20<sup>th</sup> century floor tiles. The infill between the studwork is plasterboard and gypsum plaster. The external render is cement render on EML mesh.
- 4.3 The building is in a poor condition. The concrete ground floor has resulted in some of the soleplate rotting. The foundations supporting the frame has failed over time resulting in the main posts dropping. The cement render has trapped water between the exposed studwork resulting in rotting of the timber frame. The timber frame has been coated with a heavy coat of varnish resulting the frame rotting within crevasses. The gypsum plaster and plasterboard finishes have resulted in the building unable to breathe leading to damp and mould.
- 4.4 To conclude; The original house is of high significance, however, due to changes throughout the 20<sup>th</sup> century it is now in a poor condition and immediate intervention is required to ensure the future conservation of the building and stop the building falling into disrepair, leading to further loss of historic fabric.



**General phase plan.**

## 5.0 Proposals

5.1 The proposals include alterations to both the original house and later extension to the rear. The plans also include for a modest infill rear (west) extension. Below is a comprehensive list of the proposals, further described in more detail;

5.2 Alterations to 17<sup>th</sup> century house and 18<sup>th</sup> century outshot consist of;

- (1) Alterations to cupboards adjacent to chimney stack off bedrooms
- (2) Removal of cement render and installation of lime plaster of chestnut laths to external walls
- (3) Insertion of lamb or sheeps wool batts within external walls
- (4) Internal lime plaster on chestnut laths
- (5) Replacement of windows (refer to 12-17)
- (A) Ice blasting of internal and external beams

(1) There are some cupboards to one side of the chimney stack which can be accessed from both rooms either side of the stack. The cupboards are formed with softwood timber and plasterboard finish. The cupboards are not of any historical significance. The proposal is to block up the cupboard off one of the bedrooms to form a large cupboard to the other.



Fig 25. View of cupboard from East bedroom

(2) The external walls are in a very poor condition with little to no insulation. The proposal is to remove the cement render, both to infill panels between studs and over studs, and replace with chestnut laths and lime render. The proposal will improve the appearance of the building, improve the weather resistance, reverse the unsympathetic cement render and improve the breathability of the building.



Fig 26. View of poor condition timber and cement lime render.

(3) The external walls have very little or no insulation installed. The insulation that is installed is mineral wool insulation. The proposal is to remove the mineral wool insulation and insert new sheep or lambs wool insulation between the studs on the historic section of the building. The new insulation will improve the thermal efficiency of the building, whilst continue to let the fabric of the building breath.

(4) Internally, the walls are currently lined with plasterboard or cement render on EML mesh. The proposal is to remove the cement render and plasterboard and replace with chestnut laths and lime plaster. Where the studwork is currently exposed within the rooms, the laths will be installed between studs to ensure they continue to be exposed. Refer to method statement within appendix B for lime plastering internally and externally.

(5) (refer to 12-17)

(A) The proposal is to ice blast the beams internally and externally. The beams have been painted in various paints and externally in a heavy varnish. This has a negative impact on the appearance of the building and will lead to further deterioration of the timber frame. The ice blasting technique will sympathetically remove the painted coverings to reveal the original timber. Externally the beams will be oiled to preserve the timber, whilst internally the beams will remain un-treated. Refer to method statement appendix C.



Fig 27. View of external wall within 17<sup>th</sup> century building showing plaster on EML both internally and externally

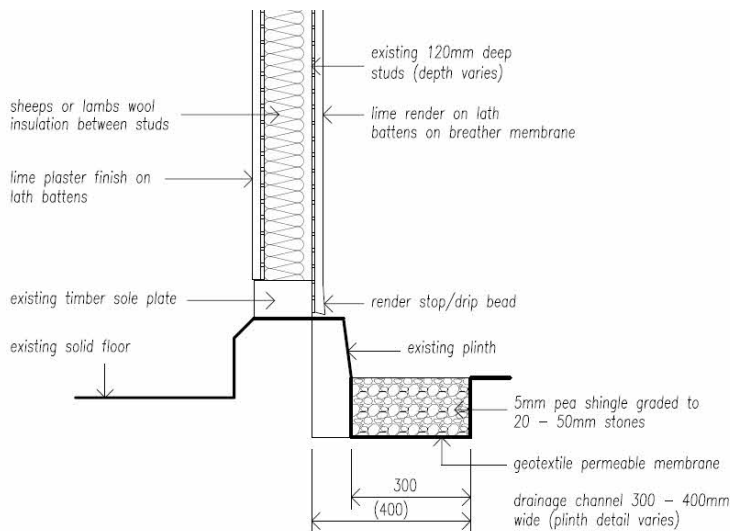


Fig 28. Architects detail for proposed external wall build up.

5.3 Alterations to the 20<sup>th</sup> century extension consist of;

- (6) Demolish existing single storey section to provide new ground floor toilet and cloaks area and new utility room.
- (7) Remove existing staircase, replace with new staircase and cupboard to the hall.
- (8) Remove fireplace and boiler room to the ground floor of the north-east wing and create new kitchen and dining room.
- (9) Carry out alterations to bathroom off landing to form new shower room.
- (10) Form partition to landing with double doors to enter new master bedroom and ensuite facilities to first floor of the north-east wing.
- (11) New internal lining to the external walls with insulation to improve the thermal performance of the property.
- (12) South-west elevation: Replacement timber cottage style windows, remove existing single first floor window to the central link and replace with 2 windows, provide new porch
- (13) North-west elevation: Replacement timber cottage style windows, 2 windows to ground floor replaced with single window.
- (14) North-east elevation: Replacement timber cottage style windows, alterations to windows to central link, Existing windows removed to ground and first floor of north-east wing, new french doors to first floor and new sliding folding doors to ground floor of northeast wing.
- (15) South-east elevation: Replacement timber cottage style windows.
- (16) South-east elevation b-b: Replacement timber cottage style windows, existing French doors to ground floor removed and replaced with single window.
- (17) North-west elevation a –a: Replacement timber cottage style window to first floor.
- (18) re-render all elevations of the property with a smooth lime render finish on lath battens.
- (19) replace the existing septic tank with a new treatment plant with an outlet drainage system comprising perforated pipes.



(6) The plans include for the demolition of a single storey extension and construction of a single storey extension to the rear elevation (West). The extension will form a downstairs coat room and W.C and utility room accessed off the kitchen. The extension will have rendered external finish and lead rolled roof. The break throughs to access the extension will not remove any historic fabric as it is off of the 1960's softwood studwork extension. A lead valley will need to be formed between the extension the rear of the historic outshot.



Fig 29. Existing single storey extension to be demolished.

(7) The existing staircase is a 1960's pine staircase, handrail and balustrade. The proposal is to replace the staircase with a more in-keeping staircase with a better arrangement. The insertion of the new staircase will not alter any historic fabric due to it being located in the later 1960's extension.



Fig 30. Existing 1960's staircase to be demolished.

(8) The proposal is to remove the boiler flue chimney located off of the kitchen external wall. The chimney is not historic and removal will assist in the improved layout. The fireplace located between the dining and kitchen room has been constructed stonework and bricks, all materials from the 1960's period. It is also proposed to remove the false fireplace and replace with a simpler fireplace layout with wood burning stove.



Fig 31. Faux fireplace to be removed

(9) The proposal is to re-arrange the stud wall layout on the 1st floor landing forming the current bathroom. The current bathroom layout is complicated and blocks a lot of light to the hallway. The proposal is to regularise the layout, as shown below. (alterations to the cupboard between bedrooms (item 1) is shown below also).

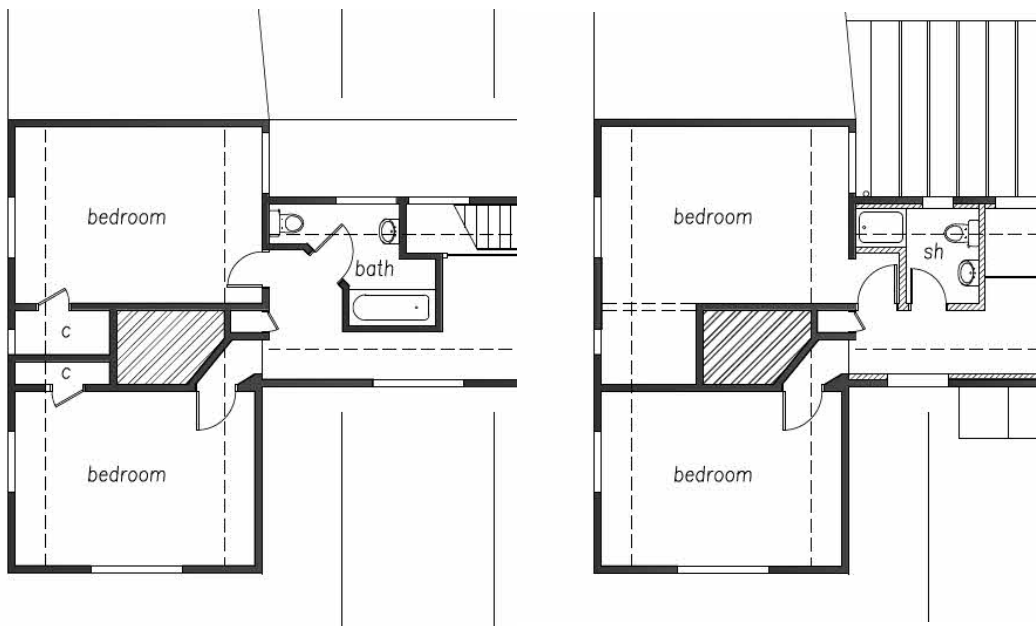


Fig 32. Extract from proposed plans

- (10) A new stud wall will be constructed on the landing to separate the North wing from the landing. The North wing is to be converted into a master suite bedroom, so the new stud wall will form the separation.
- (11) The external walls to the entire 1960's extension is constructed from pine studwork. The proposal is to internally line the walls with insulated backed plasterboard to greatly improve the thermal efficiency of this part of the building.



Fig 33. 1<sup>st</sup> floor external walls within 1960's extension.

- (12 to 17) The existing windows are 1960's construction throughout. The windows to the 1960's extension are softwood timber windows with lead comes and the to the historic section are Oak with lead comes. The proposal is to replace the windows with more sympathetic timber hardwood windows with timber glazing bars, held in place by putty. The windows will be slim double glazed and painted white and will be flush casements.

Additionally, a set of bi-folding doors and Juliet balcony doors are shown to the West elevation within the 1960's extension. The insertion of these doors will not alter the historic fabric and will be at the other end of the building when compared to the position of the original building.

- (18) Currently the render finish is a mixture throughout consisting of pargetting panels and rough cast render, and all constructed from cement render. All the render has been constructed around the 1960's or later and none of the pargetting is historic (refer to BHC historic building report). The proposal is to re-render the entire property with a smooth render finish. To the historic part of the building, this will be constructed using lime render, whilst the modern 1960's extension will be constructed using cement render over the existing cement render.

## 6.0 Heritage Impact Assessment & Justification

6.1 As described in the statement of significance (section 4.0) the entire North section of the building is a 1960's extension of no historic significance and is constructed from softwood studwork and cement render. It is therefore considered that minor alterations to this section of the building is not going to impact on the significance of the listed building (when compared to the existing layout, appearance, and impact). The historic building to the South is mostly original. The frame, roof and tiles are original, however, the render infill between studs, the windows, concrete floor, internal linings are later 20<sup>th</sup> century construction.

6.2 The proposals have been designed to reflect the significance of the building, which consider the amount of modern intervention that has occurred. The proposals have been described in section 5.0. Each proposal has been assessed in isolation regards to the level of impact on the significance of the building, below;

### (1) Alterations to cupboards adjacent to chimney stack off bedrooms

The cupboards to the side of the chimney stack have been constructed from modern materials. The blocking of the cupboard door to form additional room within the bedroom opposite will not impact on historic fabric and the original proportions of the rooms will remain legible. It is therefore considered the proposal will result in no harm to the significance of the building.

### (2) Removal of cement render and installation of lime plaster of chestnut laths to external walls

The cement render is leading in damp to the timber frame and resulting in deterioration of the structure. Looking at some of the inspection holes, the cement render has been applied over a EML mesh. The removal of the render therefore maybe possible without harming the structure of the building. The proposal is to install chestnut laths and lime render. The proposal will both improve the appearance of the building, plus improve the breathing quality of the fabric, thus leading to the long-term conservation of the building. It is therefore considered the proposal is an enhancement and will result in no harm to the significance of the building.

### (3) Insertion of lamb or sheeps wool batts within external walls

To maintain humidity levels within the building, the external walls require insulation. The proposal to insert lamb or sheeps wool insulation will improve the energy efficiency of the building, whilst continue to allow the building to breathe. The insertion of the insulation will result in no harm to the fabric of the building and therefore will result in no harm to the significance of the building.

### (4) Internal lime plaster on chestnut laths

The external walls are lined with plasterboard or gypsum plaster on EML. This is resulting in the further trapping of damp in the external walls. The proposal to plaster the walls on laths (both between exposed studs and over studs where currently over studs) will return the internal appearance back to its original appearance, whilst improve the breathability of the walls leading to the long-term conservation of the building and therefore will result in no harm to the significance of the building.

(5) (12-17) Replacement of windows

The current windows are not historic and were inserted in the 1960's. There is no evidence of the appearance of the original windows, however, the current windows are in a very poor condition and require replacement. The proposals is to insert new flush casement timber windows with cottage timber glazing bars. The proposed windows will be inserted through the entire house to ensure the appearance is regularized.

The proposals will result in a change in appearance, however, the proposed windows are sympathetic in appearance and reflect what could have originally been installed. It is therefore considered that the proposed windows will make no impact on the character of the building and a neutral change, resulting in no harm to the significance of the building.

The proposed bi-folding doors and Juliet balcony doors to the West elevation within the 1960's extension will also change the appearance of the building, however, they are located at the furthest point away from the historic building and on the rear elevation. It is therefore considered they will result in no impact on the character of the historic and original building.

(A) The proposal is to ice blast the beams internally and externally will sympathetically remove the painted coverings to reveal the original timber. Externally the beams will be oiled to preserve the timber, whilst internally the beams will remain un-treated. The proposal will therefore improve the appearance whilst ensuring conservation of the building, resulting in no harm to the significance of the building.

(6) Demolish existing single storey section to provide new ground floor toilet and cloaks area and new utility room.

The proposal is to demolish the existing single storey extension and construct a new rear extension. The existing extension is of no historical merit, and therefore demolition will result in no harm to the significance of the building. The proposed extension is modest in size, and due to its discrete position, to the rear of the historic building, will result no impact on the character of the building and a neutral change resulting in no harm to the significance of the building.

(7) to (11) Internal stud wall changes and internal linings to 1960's extension

The internal changes to stud walls within the 1960's extension, plus fireplace arrangements, will be broadly similar to the current layout, but slightly improved. All the internal changes within this part of the building will have no impact on the significance of the listed building due being of no historical significance. The internal lining of the walls will improve the energy efficiency of the building, which in turn will also improve living the standards of the historic building.

(18) re-render all elevations of the property with a smooth lime render finish on lath battens to historic building and cement render to later extension.

Currently the house is rendered with a mixture of poorly executed pargeting, some well-constructed pargeting, and a mixture of rough cast cement render. All the render is cement render on EML. The proposal to uniform the appearance of the render will regularise the mismatched patterns and improve the appearance of the building to better reflect the original appearance. The proposal is therefore an improvement and resulting in no harm to the significance of the building.

(19) replace the existing septic tank with a new treatment plant with an outlet drainage system comprising perforated pipes.

The proposals also include a new foul treatment plant to the West of the building. The new plant will be underground and therefore will have no impact on the listed building. The area where the treatment plant is shown is not in the location of any previous buildings on the site and therefore an archaeological condition is not required.

- 7.0 Conclusion
- 7.1 The building subject to the proposals is the grade 2 listed. This heritage statement has been produced to assess the level of impact of the proposals on the appearance, character and significance of the building.
- 7.2 Harpers is a 17<sup>th</sup> century, 3-range timber framed house with single storey outshot to the West. The house is orientated to face South and positioned central within a mature wooded plot. The layout and frame of the original house is relatively un-altered. In the 1960's the house was extended considerably to the rear (north) to form a large 'H' shape building.
- 7.3 The original 17<sup>th</sup> house is of high significance, however, over time it has been subject to some poor alterations resulting in the replacement of floors, walls linings and windows. This has resulted in the loss of historic fabric and dilution of the significance of the building. Nevertheless, the frame and roof are still present and the appearance still represents what the building may have looked like when it was first constructed. The large 1960's extension to the rear is a softwood timber construction extension with cement render walls and of no historical significance.
- 7.4 The proposals to the existing 1960's rear extension include the re-modelling of the internal layout, replacement windows and doors and single storey extension to the West. The internal remodelling within the 1960's extension will not result in loss of historic fabric and have no impact on the listed building. The proposed single storey extension to the West will replace an existing extension, and due to its position, modest appearance and size, will not impact on the character and appearance of the original 17<sup>th</sup> century building. The replacement windows will be sympathetic to the character and appearance of the building and therefore will have no impact on the listed building. The proposed new doors are to the far North wing of the 1960's extension, and therefore by virtue of distance, will not impact on the appearance of the listed building.
- 7.5 It is therefore concluded that the proposals to the rear 1960's extension of the building and single storey extension will result in 'no harm' to the significance of the listed building.
- 7.6 The proposals to the original 17<sup>th</sup> century timber framed building represent a wholistic scheme of refurbishment designed to improve the appearance of the building, improve the energy efficiency of the building, and preserve the fabric of the building. The proposals have been assessed in isolation and all the proposals will offer improvement whilst resulting in 'no harm' to the significance of the listed building.
- 7.7 In accordance with paragraph 199 of the NPPF, 'great weight should be given to the assets conservation'. The proposals that form this application offer an opportunity to restore and improve the building, and therefore any minor levels of harm need to be weighed against the great benefits of the scheme, leading to the long-term conservation of the building.

## APPENDIX A – LIST DESCRIPTION

Entry Name: Harpers

Listing Date: 20 September 1985

Grade: II

Source: Historic England

Source ID: 1112531

English Heritage Legacy ID: 121331

County: Essex

District: Uttlesford

Civil Parish: High Easter

Traditional County: Essex

TL 61 NW HIGH EASTER 1/13 Harpers - II House. Late C16. Timber framed and plastered, but with framing exposed on front elevation. Half hipped peg tile roof with single storey extension bay at west end with hipped catslide roof. Of 2 storeys with large rear C20 extension. Central ridgeline stack with rectangular base and 2 rebuilt diagonal shafts. Windows are C20 leaded light casements. Jowled posts, internal cranked wall bracing on corners, 'hall' section has C16 floor with soffit tenons with diminished haunches. Roof is side purlin type with arched wind bracing. C17 rebuilt window in front wall with moulded mullions. Moated site. RCHM 9.:



## Appendix B – Method statement for lime plastering and upgrading external walls.

External and internal wall finishes to the 17<sup>th</sup> century building are to be repaired using lath and plaster, with insulation inserted, in accordance with the below method statement;

1. Remove all blown or loose lime plaster from over and between the timbers. Check all timbers are free from rot, insect activity, and are generally sound. Hand tools to be used only. Use a brush to get rid of any residual materials and vacuum to remove dust. De-nail all timbers. All cement plaster to be removed using hand tools to ensure no harm to the laths or structure.
2. Provide either oak or chestnut riven laths. The textured surface and exposed grain provides a better key. Laths to be nailed either over timber studs or between studs to battens fixed to the side of studs, spaced leaving approx 5-10mm gap, using 40mm Stainless Steel Annular Ring Shank Nails. Fix every lath the same way until you come to fix the eighth lath, move this one over one joist, to create a staggered joint, this will help prevent long, continuous cracks from developing.
3. Thoroughly wet laths. To remove the absorption from the laths spray with "Westox RAP primer or similar" thoroughly wetting the laths top and bottom, also soak the exposed edges of the plaster around the repair with the primer to "kill" the suction. This also helps to remove the problem of warped laths when the wet plaster is applied. Soaking laths makes them easier to cut with a lath hammer, prevents splinters in the fingers during fixing, makes them easier to nail with less splitting and prevents the expansion of laths following the application of wet plaster which causes key breakage. Lime plasters are badly affected by too much suction so it is important that all suction is controlled.

Once the whole ceiling or wall is lathed it should be dampened about 10minutes prior to the application of the first coat, this gives time for any excess of water to run off and gives you time to knock up the lime mix. There shouldn't be any droplets of water on the laths, as this will cause the plaster to slide across the laths rather than stick to them.

### 4. PLASTERING Traditional Plastering Specification

#### a. MATERIALS

- Plastering Sand. Pitt sand is preferred.
- Slaked Lime Putty (minimum 14 days old) (If hydrated bag lime is used pre-soaking to a putty is necessary to provide the correct volumes)
- Cow or Ox hair for reinforcement

#### b. PREPARATION OF MATERIALS

Roughly mix the sand and lime together at the ratio of 3 parts sand to 1 part lime and 1 part of teased hair. (all parts are by volume and the same part measurement should be used for each component) Mix by placing 1 portion of lime into a mixer with water and the fibers followed by three portions of sand, tip out after turning over 6 or 7 times. Form a pile of the material until enough mortar has been mixed that is required for the render and float coats. Cover the pile with a plastic sheet and leave for a minimum of 14 days before using if the lime has not been previously aged. (All measuring should be with gauging boxes, not shovels)

#### c. MORTAR.

Take 3 portions of the mixed material (e.g. 3 x 20 litres) this measure will consist of 60 litres of sand and 20 litres of lime (Lime mixes with the sand without increasing the bulk).

#### d. LIME SCRATCH COAT

Mix the lime plaster in a clean mixing vessel using clean water, mix to a usable consistency and apply a scratch coat directly over the laths at a 45 degree angle to the laths so the plaster passes through the wire and laths curling over to form a key on the back of the laths, apply so approximately 5 to 8mm of the plaster is left on the underside of the laths, allow for initial set and scratch thoroughly ready for the following float coat. After the material has cured for several days mix fresh mortar and fill the area to be repaired or form screeds around the perimeter of the ceiling at the required finished level, if plastering a large area form box screeds to the perimeter screeds, fill between the screeds and rule and devil float to a flat keyed surface ready for the following set coat. If a lime set is preferred allow three or 4 days before applying the lime set over the float coat (depending on the drying conditions)

#### e. SET COAT

In a suitable mixing vessel, place 3 portions of lime to 1 portion of sand, and mix to a usable consistency. Apply the mix to the float coat in an even coat at the approximate thickness of 3 to 4mm. After the initial application, lay the material flat and scour the surface with water and a wooden float to compact the material and prevent crazing. (If crazing occurs, increase the portion of sand to 1½ or 2 parts). When the material is well compacted, apply a 'laying in' coat tightly over the surface to fill any voids and finish with a steel trowel and water to a smooth even surface and leave ready for painting.

#### f. Paint

Once the lime render has cured over 2-3months a breathable paint can be applied. This will consist of 2-3 coats of a silicate based paint. Paint colours will be an earthy shade, similar to a colour that could be achieved traditionally by mixing lime with a pigment.

## Appendix C – Method statement for Ice Blasting beams

- 1) Equipment is taken to the work place and the work area is checked for adequate lighting
- 2) The compressor will need to be placed outside in a secure area. It will be barriered off with tape. 3) The work area will be checked and if possible barriered off. All persons working in the vicinity will need to wear hearing protection.
- 4) Polythene sheeting will be taped to all surrounding surfaces. This will then be removed after the work is completed.
- 5) The operative will confirm the level of diesel in the compressor to ensure that it will last the whole job or day. There will be no filling of the compressor on site. They will then check the compressor hoses for any holes, nicks or scratches prior to running them out to the dry ice blasting machine. The hoses will be checked that they are not a trip hazard or could be damaged in any way prior to attaching them to compressor and blasting machine.
- 6) The blasting machine needs electricity and this can be provided by a small generator if none is on site or the use of a transformer if only 240v electricity is available. Again the leads will be laid so that they are not a trip hazard and cannot be damaged in any way.
- 7) The blasting hose will be run out from the blast unit to the work area, it will be checked for damage and then a protective cover will be put on. The nozzle will then be screwed into place ready to start.
- 8) The operative will now switch in the compressor and leaving it running for a minute to let the engine warm up a little before opening the valve to let the compressed air flow.
- 9) An operative will then use a bucket and shovel (if necessary) to carry the dry ice pellets from the insulated container to the blaster and pour the dry ice into the hopper at the top of the blaster. The operative will ensure that the insulated container lid is closed after removing the pellets and that the top of the hopper is also closed during blasting
- 10) The Operative will then switch on the blasting machine ensuring that the pressure gauge to set at a low reading approx 4 bar of pressure and a low flow of ice pellets.
- 11) The operative will start at the top corner to the area to be cleaned checking to ensure that the correct results are being obtained. The operative will slowly increase the pressure and ice flow until the optimum cleaning is achieved ensuring that there is no chance of damage in the surface underneath.
- 12) The operative will then clean across and down ensuring that pressure is reduced every time a new type of surface is being cleaned and then slowly raised as necessary to ensure optimal cleaning. 13) The hopper will need to be refilled at regular intervals. The operative will ensure that the lids are replaced each time so that no build-up of moisture occurs on the hopper of the insulated dry ice container.

14) Once the cleaning process has been completed then the operatives will ensure that the hopper is empty. They will then turn off the blaster they will then close the valve on the compressor. They will then turn off the compressor. They will unplug the electrical supply, remove the blasting hose and nozzle, and then disconnect the pressure hoses. All will be neatly and carefully place back in the van securely fastened so that no damage can happen in transit.

15) The area will then be cleaned of the removed waste, polythene removed and left in the same state that it was found