HERITAGE REPAIRS REPORT

WCP THE WHITWORTH CO-PARTNERSHIP LLP
CHARTERED ARCHITECTS AND SURVEYORS

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Client: Mr M & Mrs P Bickerton

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(Surveyor to the Fabric of St. Edmundsbury Cathedral)

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AJR/AWM/md/4641.2

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LETHERINGHAM LODGE – HERITAGE REPAIR REPORT

A: INTRODUCTION:

This report has been produced to satisfy condition 5 of the Listed Building Consent granted by Suffolk Coastal District Council ref C13/0374 dated 19th April 2013, to English Heritage Level 4 Standard.

Identification of the premises:

Letheringham Lodge, Nr Wickham Market, Suffolk

Post code: IP13 0NA

Map ref: TM 276 570

The property is a detached building, substantially timber framed, surrounded by a moat, with nineteenth century farm buildings located to the west. The front entrance faces south towards the entrance driveway.

B: HISTORICAL REFERENCES:

1: Listing document:

The listing description as shown on the English Heritage web site is as follows:

"*LETHERINGHAM WICKHAM MARKET ROAD TM 25 NE (North side) 5/91 16/3/66 Letheringham Lodge G.V. II* House, formerly hunting lodge. C16 with later additions and alterations. Timber framed with colour washed render and a plain tiled roof. Two storeys with an attic. South front: stucco to the ground floor, grooved in imitation of ashlar. Massive wooden corner posts at far right and left, jowled at their tops which have miniature arcades to their upper bodies and fleurons. central double doorway with C20 plank doors. Three-light C19 casement to left of this. ,To the jettied first floor are lateral 2-light casements. Hipped roof above to the apex of which is a massive chimney stack. Right hand side: to ground floor level at left is a canted C19 bay window with 3 central lights and 2 to each angle and, at right of this, a 3-light casement with, at right again a further corner post, similar to those on the south front. Immediately to right of this is an extension which has brick walling to the ground floor and a first floor which is not jettied. This section of ground floor walling has a small basement area with a 3-light cambered-headed window and to the ground floor two C19 three-light casements. The first floor level has three 2-light casements extending across the whole of the front. To the attic is a 2-light flat- roofed C20 dormer at left. To the ridge at far right is a massive chimney stack supporting 4 diamond-section flues which have broach bases and banded upper body. Left hand side: projecting staircase tower-wing. Slightly to right of centre, at right of which is the earliest portion with its jettied first floor. The staircase tower has a cross window to the ground floor at left and a 4-light window to the mezzanine level between the ground and first floors and a further 3-light window above this. At right there are 2-light ground and first floor windows, both of early-C19 date. To left of the staircase tower is a lean-to with a plank door and a 3-light casement and a further C20 lean-to at left of that. Behind and to left of it is a ground floor window of 4-lights above a deep brick plinth and at first floor level are three 2-light windows of varying size. North face (rear): brick gable end with a 2-light basement window in the walling which rises from the moat. Blank walling above save to the gable which has later 2- light windows, one of which is partially blocked. The whole of this front has put-log holes in the brick work, now partially filled with loose bricks. Setback between the ground and first floor and kneelers at either side of the gable. Massive chimney stack to the apex. Interior: within the kitchen outshut is a moulded lintel originally to an outside door which bears the date 1610 and the initials E.W. To the right of this is the name J. Blandfield which may be a later addition. The drawing room has late C16 richly-moulded ceiling beams with roll and cavetto mouldings which continue as a cornice around the room. The sitting room has a plain ceiling above which are two separate decorated ceilings, now obscured. The C17 staircase has turned balusters and moulded handrail and is of open-well plan to the lower body and close-stringed above, of 5 flights.*

The first floor has close-studded walls, and richly-moulded lengthy dragon beams to three of the rooms connected to the corner posts by short arched braces. The cross-axial gallery has one 4-centred archway and the springing of a further, similar archway. To the centre of the northern wall is a blocked window of 4-lights with a very richly moulded frame, partially altered to accommodate a doorway through to the extension. Winder staircase to the rear wing. The attic rooms have slender rafters with staggered purlins but this masks an earlier roof which can be seen in the loft space above which has more substantial timber but does not appear to be earlier than the late C17."

2: Historical analysis, complied by Leigh Alston 2014

(see web site detailed below)

3: Research and lecture by Edward Martin, 2014: Martin describes the lodge as a "*unique building and an internationally significant survival from the late middle ages"*. (Full text on web site: www.letheringhamlodge.com).

4: Oxford Dendrochronology Lab report 2013/34 identify a felling date for the main frame of 1472/75, and for rafters of summer 1609, and probably corresponds to the reference "E.W. 1610 " (for Elizabeth Wingfield) inscribed over the entrance door into the present kitchen.

This report is limited to the objective assessment of the timbers exposed during the removal of the cement render to the external wall surfaces and the reinstatement of the eighteenth century window frames. I have not commented on the exposed timbers internally, nor on the historical context.

C: PROJECT DESIGNATION:

Listed building consent was obtained to undertake four main areas of work:

- Repair and reinstatement of the eighteenth century window frames removed without approval and the removal of the double glazed hardwood windows incorporated without consent. The originals came to light only after the present owners completed purchase. The schedule of windows, the condition and repairs were completed entirely in accordance with the submitted schedule, which is attached as Appendix A.
- Removal of the cementicious render and replacement with a lime render. The specification detailed a haired chalk/lime render and limewash.
- Timber frame repairs as found.
- Sundry repairs to the brick plinths, roof tiling in conjunction with the above.

Conservation approach:

The following conventions undergirded the approach:

- Minimal structural intervention: in order to retain as much as practically possible of the original fabric, conducive to ensuring a fifty year sustainable life.
- Minimal removal of worm eaten timbers: no de-frassing took place other than where considered essential in order to secure new structural elements, and later repairs were simply left in position unless removal could be justified to complete structural repairs.
- Retention of all lime render in good order, and the removal of all cementicious render, in order to ensure breathability of the fabric, and minimise jeopardy to the timber framing.
- Like for like replacements: three different timbers were identified: oak, (original framing timbers), Baltic pine (window frames and some later repairs to the main timber frame) and modern European redwood (later repairs to both windows and main timber frame). Where joints were damaged, no amendment to the joint profile was introduced in order to ensure the historical accuracy of the fabric and the continuation of original load paths.
- In the very limited areas where new structural intervention was required without an original context, the best modern materials were used. This was limited almost entirely to the incorporation of lead flashings over the brick plinths and at weatherings to roof abutments, to the use of stainless steel fixings throughout, and to the use of casein based wood glues for gap filling purposes.
- Where wood beetle activity was identified, limited treatment took place to areas of obvious activity and to vulnerable areas where deep seated death watch beetle activity might be present and inaccessible but for the repairs in hand. All timbers used for window repairs were specified to be vacuum treated prior to use and cut ends retreated on completion prior to fixing and priming.
- Later repairs were only removed where this seemed to be expeditious in order to be better able to read the structure.

The conservation approach was set out at the outset, and the extent of timber repairs was agreed with the local authority conservation officer in advance of the repairs being undertaken.

Methodology:

1. An invited tender completion identified the successful contractor who presented the best combination of price and approach.

2. The condition of the window frames was assessed on site with the appointed contractor and invited conservation professionals. A schedule of defects was drawn up with repair proposals detailed and these formed the basis of the instruction to the contractor (see appendix A). The frames were then removed to the contractor's workshop for bench based repairs in order to maximise efficiency and minimise damage. All the frames were repaired in a single phase of work and stored until they could be incorporated in the structure. No significant variation was undertaken after the initial assessment on site.

3. External render repairs were phased partly due to the programme stretching over the winter period and partly to control costs. Although programme was important, quality and cost control were paramount. The east elevation was tackled first due to the anticipated greater areas of decay likely to be found in the timber frame elements, including the sole plate.

4. The order for the works was as follows:

    a. East elevation render and timber frame repairs
    b. East elevation window reinstatement and internal jamb adjustments
    c. South elevation render and timber frame repairs
    d. South elevation window reinstatement
    e. West elevation external render and timber frame repairs
    f. West elevation window repairs
    g. External roof repairs, sundry repairs
    h. lime washing
    i. External landscaping adjustments

The repairs were completed between June 2013 and July 2014

DESCRIPTION OF FINDINGS

(NB: four digit numbers in brackets refer to images as shown on the defect or as built drawings)

D: EAST ELEVATION DESCRIPTION:

1. Render was removed from two thirds of the jettied section and the entire length of the sill beam was exposed. Upper studwork was numbered consecutively from the south and comprised oak timbers pegged to the jetty plate with corresponding cantilevered floor joists beneath.

2. At sill beam level, the original plate was exposed from the south corner dragon post to the bay window w20 (1942) and from w20 to the cellar extension containing w22. Approximate dimensions 240mm deep by 220mm bed dimension, set on lime mortar bed, as far as two studs south of door D4, where the beam had been cut, a brick plinth raised in height and a shallower plate incorporated with a butt edged joint with no mortise or pegging, and a plinth offset brick detail added to the top of the brick plinth. This was associated with narrower studding, in oak, and appeared to represent a rebuilding of this lower section of wall incorporating D4 and w25. Infill predominantly brickwork in lime mortar, both 16th century and eighteenth century dimensions, but appearing to be later in construction and not bonded or secured to the timbers.

3. The base of the dragon post at the southern end was defective, and found to be a nineteenth century repair to the fifteenth century post.

4. The northern dragon post was partly exposed adjacent to the northern jamb of w25, with the relatively un-weathered detail to the capital preserved in lime mortar (1845). This was covered over after photographic recording.

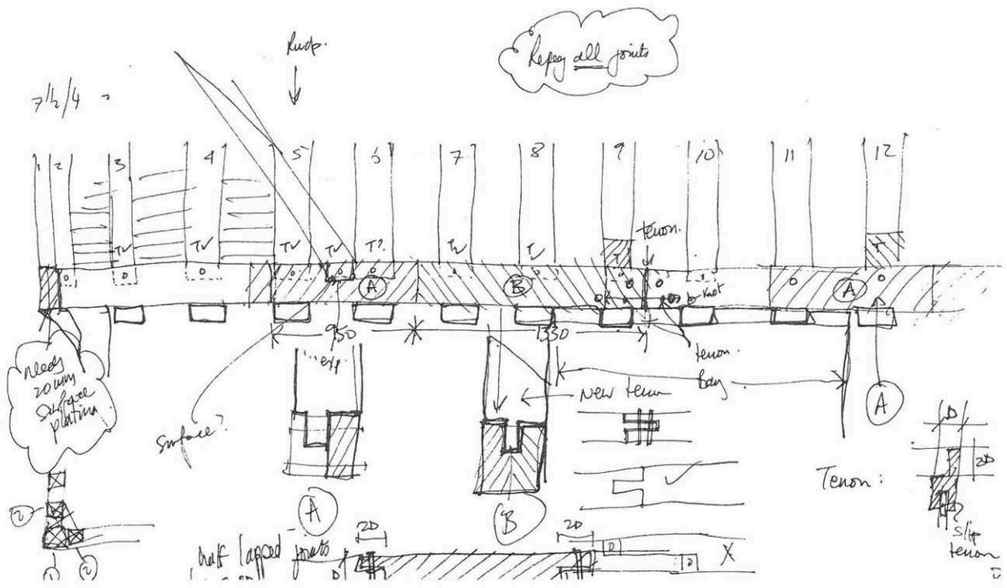
5. At the jetty level, the southern storey post sits on a slice of reused double moulded floor beam, on its side on context. The post is a later intervention, re-pegged to the downward curving brace, itself mortised and pegged into the four passing studs and at its base into the jetty plate. The first three cantilevered joist ends were concealed behind cement mortar repairs, the remainder exposed.

6. Studs 2 to 21 appear to form a continuous sequence of in situ framing timbers, in oak, with brick infill between of slightly finer quality than the ground floor infill, with lathe and plaster behind forming the inner wall surface. Smaller sawn oak timbers noted to the south of w26 might indicate an earlier window opening. A lack of framing timbering noted around w27.

7. End grain to a probably dragon beam noted to the base of stud 21, and a further dragon beam end noted at top of stud 21, although weathered and decayed (1829).

8. There was no evidence of windbracing to the northern end of the first floor structure up to stud 21.

9. Narrow gap and a week half lap joint noted to jetty plate between studs 21 and 22. Plate continues north of stud 22 to similar dimensions, as far as stud 32 (1578, 1580). Render above jetty plate noted to be lime based and thus not removed. Jetty under built between 21 and 37 with a brick structure, part rendered and part covered in a Weathershield type modern masonry paint.



10. Stud 33 appears to be the end of an extension, with the plate half lapped onto it and pegged (1560), suggesting that the extension was added at the same time as the under built brickwork, which takes the load from the first floor structure above. Had this been a separate structure, the plate would have supported the post, rather than been secured to its face only.

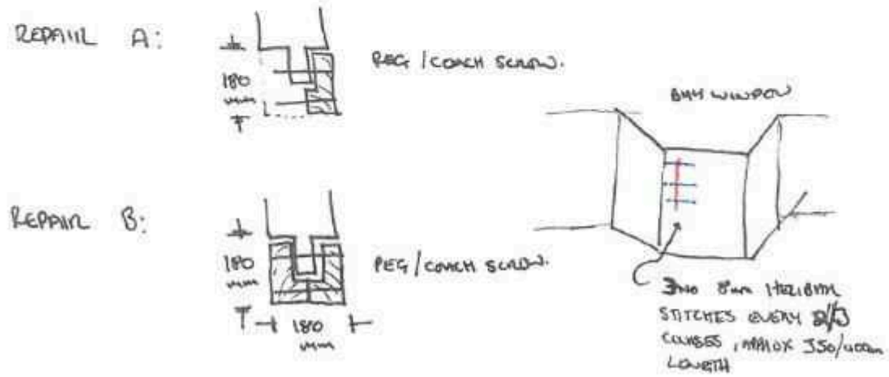
11. The section of jetty plate north of stud 33 has been similarly half lapped onto the post, and Studs 34 to 37 are mortised into the jetty plate. There was no evidence of a structural connection between the northern gable wall and the structure at first floor level. Stud 35 is reused softwood.

12. Downward passing windbracing passes studs 22 to stud 25, mortised and pegged at each junction and into the jetty plate in front of stud 26. A further windbrace rises upwards from stud 29, passing stud 30 and 31 before disappearing behind the retained lime render. This appears to be in band sawn timber and possibly post dates the start of the nineteenth century.

13. Infill between the studs 22 to 28 is wattle and daub, with later twentieth century insulation infill between studs 28 and 30. Wattle and daub reappears between 30, 31 and 32, with nothing between the remainder.

14. Window surrounds to both ground and first floors included a significant amount of modern softwood packing, suggesting either poor dimensioning, or off the peg window frames (less likely). This was substantially removed during the re instatement of the former window frames.

East elevation soleplate repairs – drawing no: SK16



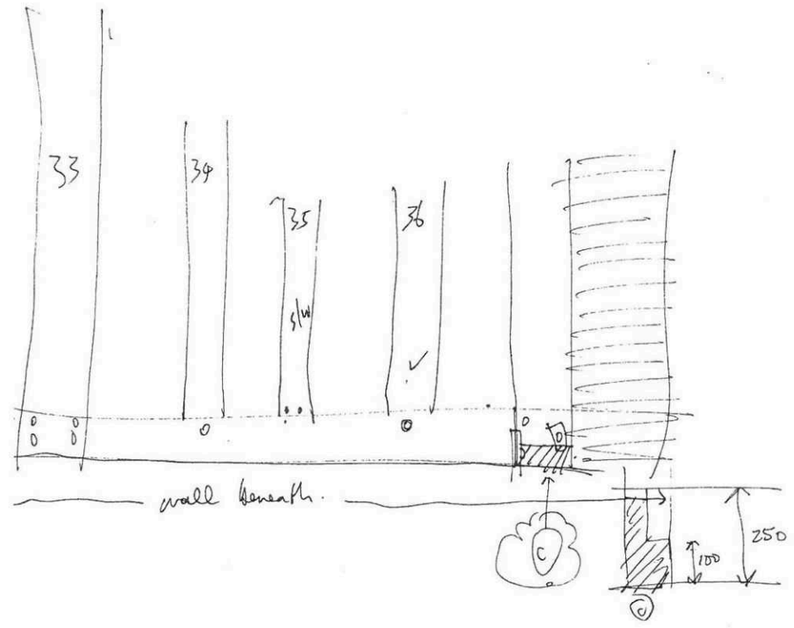
E: EAST ELEVATION: DEFECTS UNCOVERED AND REPAIRS COMPLETED:

1. Sill beam under dragon heavily decayed and post piece repaired in new oak, together with section of plate in south wall adjacent to it (2264).

2. Sill beam to west elevation (w20 to D4 and slightly beyond), heavily eroded due to wet rot and face boarded back to mortise, coach screwed onto plate and re pegged in two sections to replicate original joint (1838,1764). Short feet with false tenons applied to studs 9, 12, 14, 15, 18, 19 and 32 (1836, 1841, 1776).

3. Face repair undertaken to top of stud 21 to support upper dragon post (1829).

4. Upper plate face applied timber above studs 1, 2, 3.



F: SOUTH ELEVATION DESCRIPTION:

1. A short brick plinth supporting the sill beam, which unique to this face has a chamfered top.

2. Lower walling under the jetty is in lime render, lined to imitate ashlar, and was retained except for the exposure of the sill beam. The feet of the studs exposed revealed the structure to be in oak, mortised into the jetty plate.

3. Jetty plate was concealed by cement render, together with the cantilevered floor joists, which were predominantly boarded up either side with softwood floor boards, some of which had traces of white floor paint (1681). Dimensions and details very similar to east elevation, with cruder joint details to the softwood.

4. Studs numbered from the south east dragon post. Studs 4 and 5 were in baltic pine (1763), studs 6 and 9 were in plain square edged softwood, with screw fixings into the jetty plate suggesting a very modern intervention. The remainder in oak, with mortised joints into the jetty plate. There was some considerable variation in centrings between the studs and no infill material, suggesting extensive remodelling in the modern era.

5. No evidence could be found of wind bracing within the exposed areas of studwork. Stud 1 which might be expected to be mortised to receive a wind brace is a modern oak intervention, as is stud 30. Neither of them were mortised.

6. Western most dragon post sits on the sill beam, and was formerly richly caved at the top as for the other three, but now lost due to weathering. Post supports western jetty plate, on top of which sits the southern plate (1757).

G: SOUTH ELEVATION: DEFECTS UNCOVERED AND REPAIRS COMPLETED:

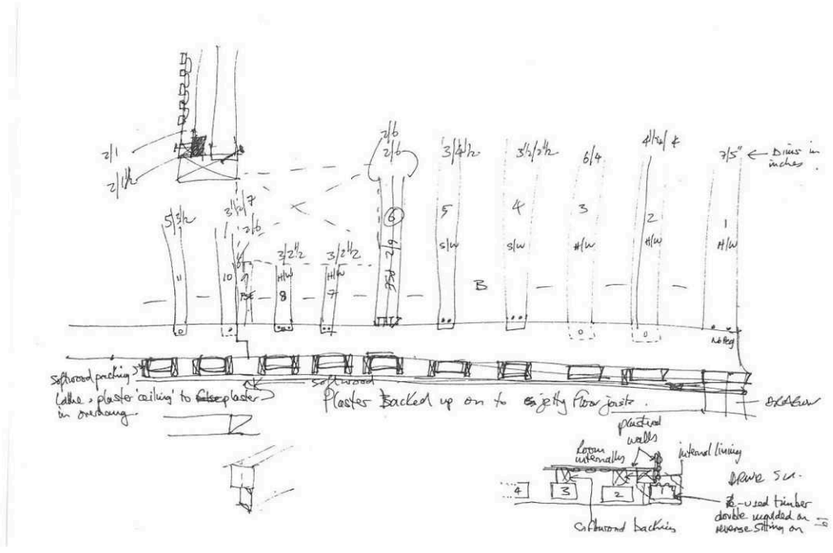
1. Short section of sill beam spliced adjacent to SE dragon beam (1961, 2264, 2699) and new foot scarffed onto first stud, to overcome losses due to wet rot decay.

2. Sill beam left of mid door surface scarffed in two places, similarly.

3. Western dragon post foot scarf repaired, replacing previous repair (2264).

4. Cantilevered rafter feet exposed, later repairs removed, soffit replastered to match detail on east elevation.

5. Jetty plate surface spliced in two places, up to mortise. New plate coach screwed to original, joints re-pegged (1760).



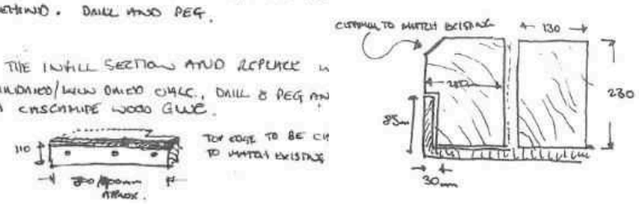
South elevation – west corner soleplate repair.
Drawing no. SK11

South elevation – east corner soleplate repair.
Drawing no. SK15

Scribe in a new section of kiln / air dried oak under the principle corner post, squaring up the oak plate behind, peg a glue in position with cascamite. Cut in a new section of oak in order cover the end section ensuring the end grain matches that of the first repair, peg and glue where possible, alliteratively counter sink and fix with stainless steel coach screws, pelleting them on completion.

OPTION 1: REMOVE EXISTING INFILL CAREFULLY AND REINSTATE IF POSSIBLE INSERTING NEW OAK DRIED/KILN DRY O SECTION BEHIND. DRILL AND PEG.

OPTION 2: REPLACE THE INFILL SECTION AND REPLACE W NEW AIR DRIED/KILN DRIED OAK., DRILL & PEG AN FIX WITH CASCAMITE WOOD GLUE.



H: WESTERN ELEVATION: DESCRIPTION:

This walling is described in three sections, firstly the section south of the staircase, then the staircase itself (all three sides), then the rear section north of the staircase.

1. Section of wall south of the staircase follows the same pattern as the eastern wall. The ground floor wall structure sits on a sill beam over a short brick plinth, with a plinth offset brick forming the weathering under the exposed sill beam. Narrower in dimensions than the southern sill beam, this appears to have been replaced at some stage, to the dimensions noted at the northern end of the east elevation.

2. Render at ground floor is of lime based mortar, lined to imitate ashlar. The lower section was removed to consider the condition of the sill beam, up to a false mortar joint, and subsequently replaced after reasonable condition of the beam had been noted.

3. Jetty plate exposed and constructional details noted as being similar to the eastern elevation. Studs numbered from southern post. All noted to be in oak, with the exception of studs 11, 12, 13, and 14, in softwood.

4. Wind brace curves down from front post over studs 1, 2, 3, 4, and 5, counterpart to East elevation.

5. Staircase enclosure: south wall has a high brick plinth supporting a simple oak framework with lower, middle and upper plates in small oak studs, typically 110 by 63mm. (4" by 2.5"). Over this, a further framework in softwood, almost directly imitating the oak structure and seemingly intended to level out the walling for render. Creates some complex geometry at the south western corner, but concealed behind softwood cover moulds. Staircase structure visible behind.

6. Staircase western elevation: a high brick plinth as for the south elevation, with a concealed softwood plate sitting on top, with broadly spaced oak studs 23 to 33, at ground level trimmed to window w5, and braced with a straight diagonal brace in oak (3401, 3408) A horizontal plate at first floor level with a vertically discontinuous pattern of softwood studs either side of window w8, a further horizontal plate above the window, with three further series of vertically discontinuous studs 11 to 18 (3416) some of them clearly reused timbers, studs 6 to 10, and 1 to 5 in the apex, each nailed to the horizontal plate below. Intermediate landing structure visible and secured to a further plate secured from inside (3412). Curious set of three peg holes noted in plate between studs 1 and 6 (3422), replicated on southern end of same stud. Apex formed by lapping rafters at ridge (3421).

7. Staircase northern elevation above lean to roof to utility entrance: conventional vertical studs, approx dimensions 110 by 63 mm, with softwood boards either side to create level walling (4136,4137).

8. None of the studwork has any form of infill panelling.

9. At eastern end of wall, a broad stud in oak, approximately 220mm on face, in line with the northern elevation of the staircase (4137).

10. In the corner between the staircase and western wall, the vestiges of a haunched post, with a dragon beam, clearly visible internally. Steel strapping above (4572, 4571, 4129).

11. Western wall beyond staircase: close studwork in Oak, containing windows w11, w10 and w9. Approx dimensions 125mm by 88mm (5" x 3.5"), down to mid height plate (or jetty plate), now under built with kitchen wall.

12. Top of diagonal brace exposed above middle plate passing three studs 17,18,19, and mortised into 16.

13. A pair of high level three light mullioned windows in oak with moulded mullions, the one exposed between studs 17 and 20 (4130), with sockets for iron ferramenta in top plate, opening mutilated by window w11. The other between studs 26 and 28 retains its iron ferramenta intact and coloured in red ochre (4138).

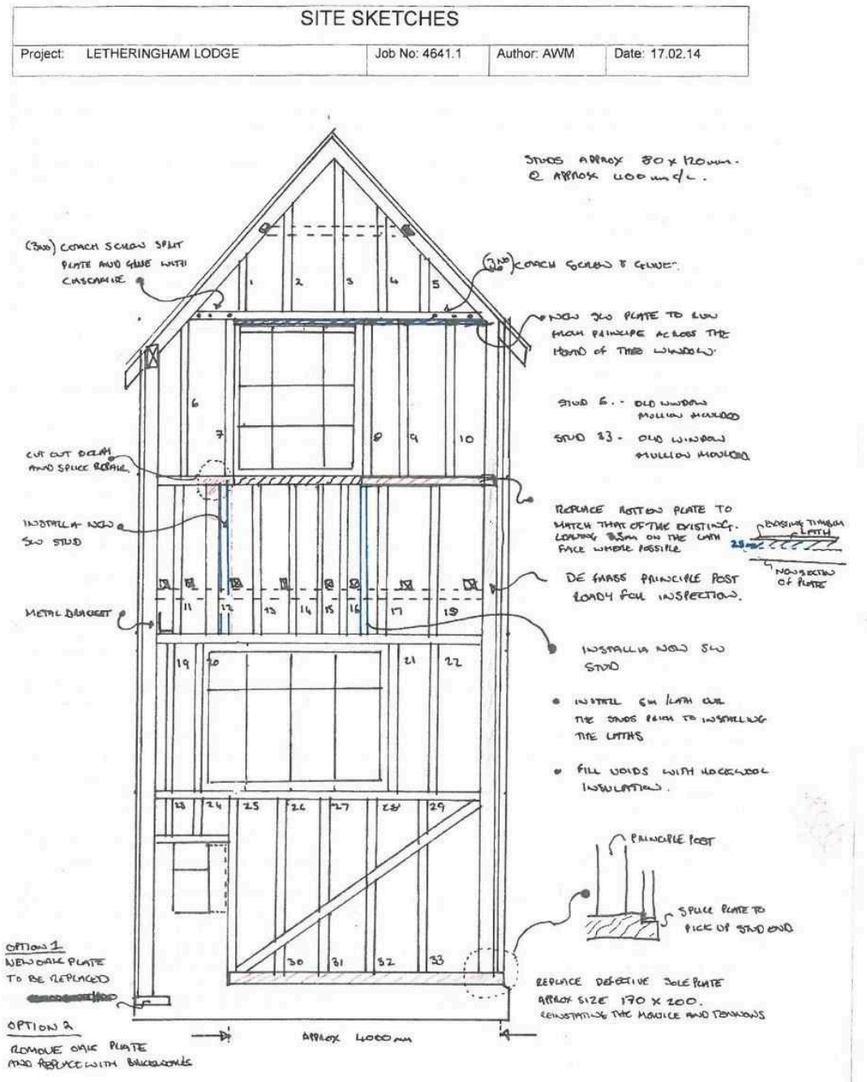
14. Wind brace downwards pointing between studs 29 and 25 (4139), approximately symmetrical with brace referred to in 12 above. Mortised into studs and pegged. Curious detail at foot to stud 26 possibly indicating two stages of build, with the junction between studs 25 and 26 (4139).

15. Infill between studs 15 to 18: wattle and daub, brickwork between 18 and 20, wattle and daub between 20 and 30.

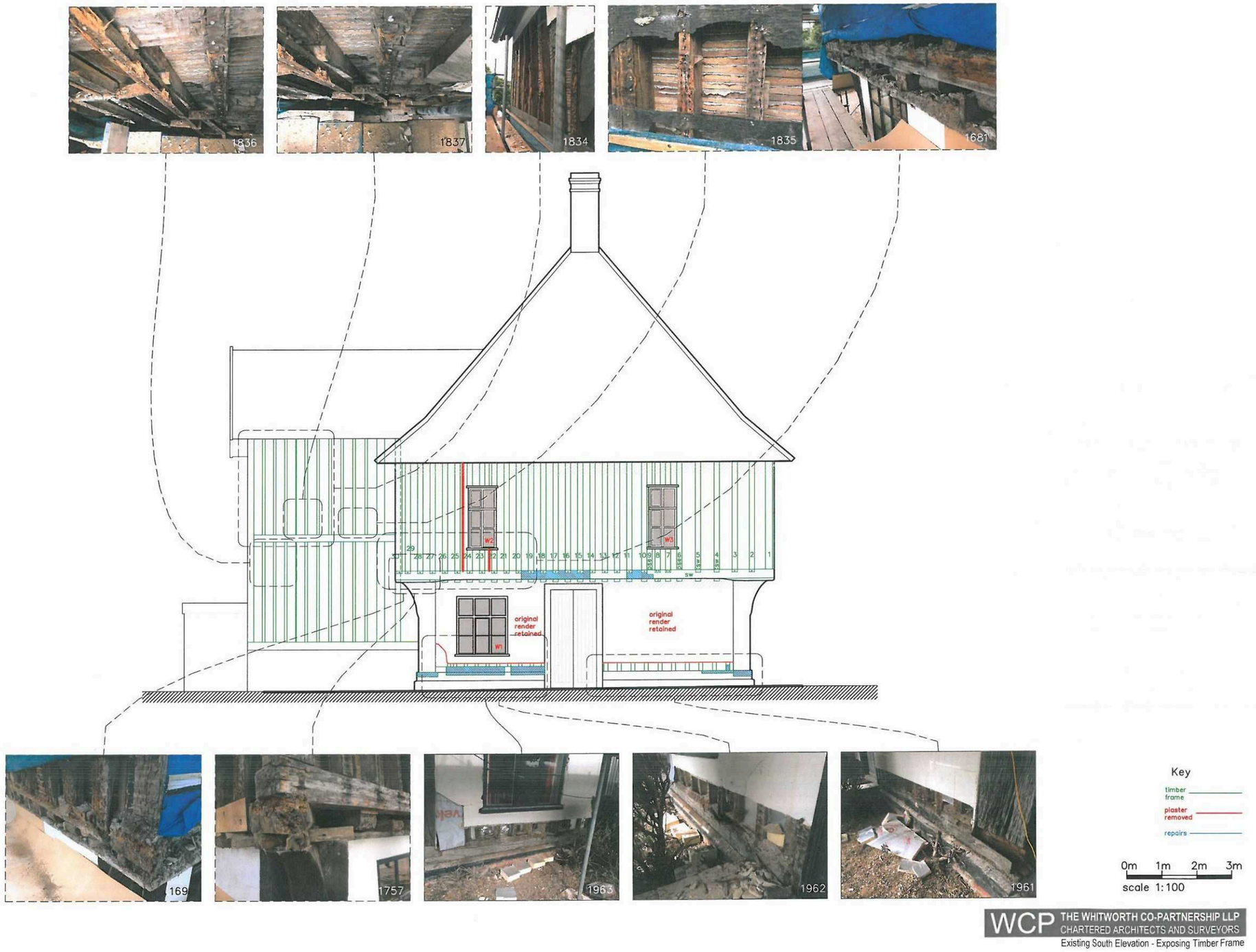
16. Break in mid plate at foot of stud 30, with mortised and pegged joint of plate into post. Studs 31, 32, 33 mortised post into plate. Stud 33 has a halved socket at the top now filled with mortar, which appears to be a half lap upper plate socket (4152).

J: WESTERN ELEVATION: DEFECTS UNCOVERED AND REPAIRS COMPLETED:

1. Jetty plate south of staircase affected by wet rot, affecting plate under studs 1 to 8. Plated to mortise.
2. Short section of jetty plate scarffed under stud 12.
3. No defects found or work undertaken to south elevation of staircase enclosure.
4. Western elevation to staircase found to have seriously defective sole plate, replaced entire length.
5. Softwood packing around window w8 removed and replaced.
6. Softwood plate under window 13 affected by wet rot decay, replaced in entirety (3876).
7. Softwood plate over window w 13 defective at both ends due to wet rot, and replaced in entirety (3878).
8. No significant defects found or repairs undertaken to north elevation of staircase enclosure.
9. Upper haunch to post found to be seriously affected by timber decay (death watch beetle and wet rot), such that discontinuous junction and load path between roof and jetty post. Complex repair undertaken using three sections of oak to rebuild top of post and end of dragon beam.
10. No other defects uncovered or repaired.



K: KEY PLANS - SCALE 1:100



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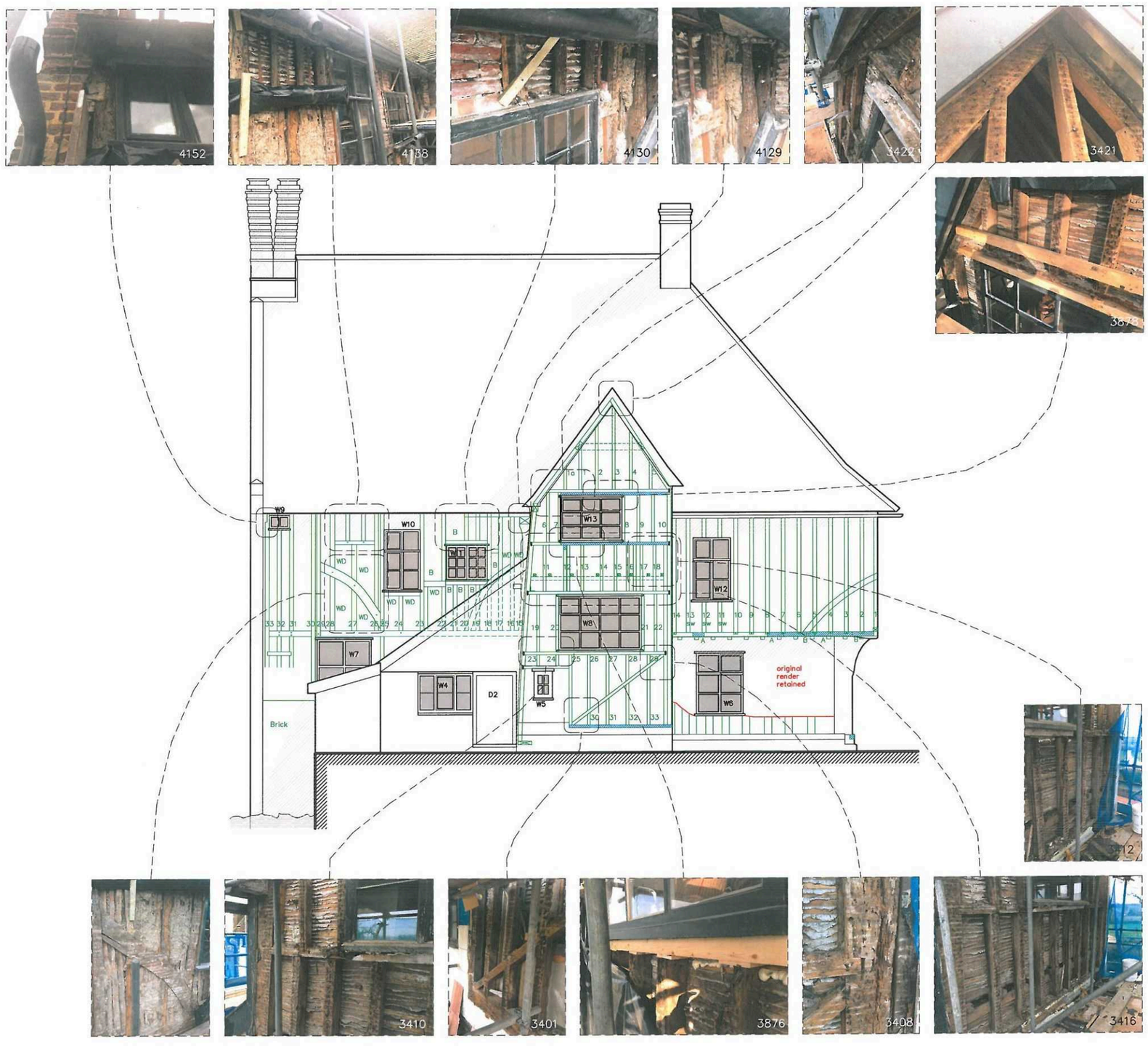
Existing South Elevation - Exposing Timber Frame



Key

timber frame

plaster removed

repairs

0m 1m 2m 3m

scale 1:100

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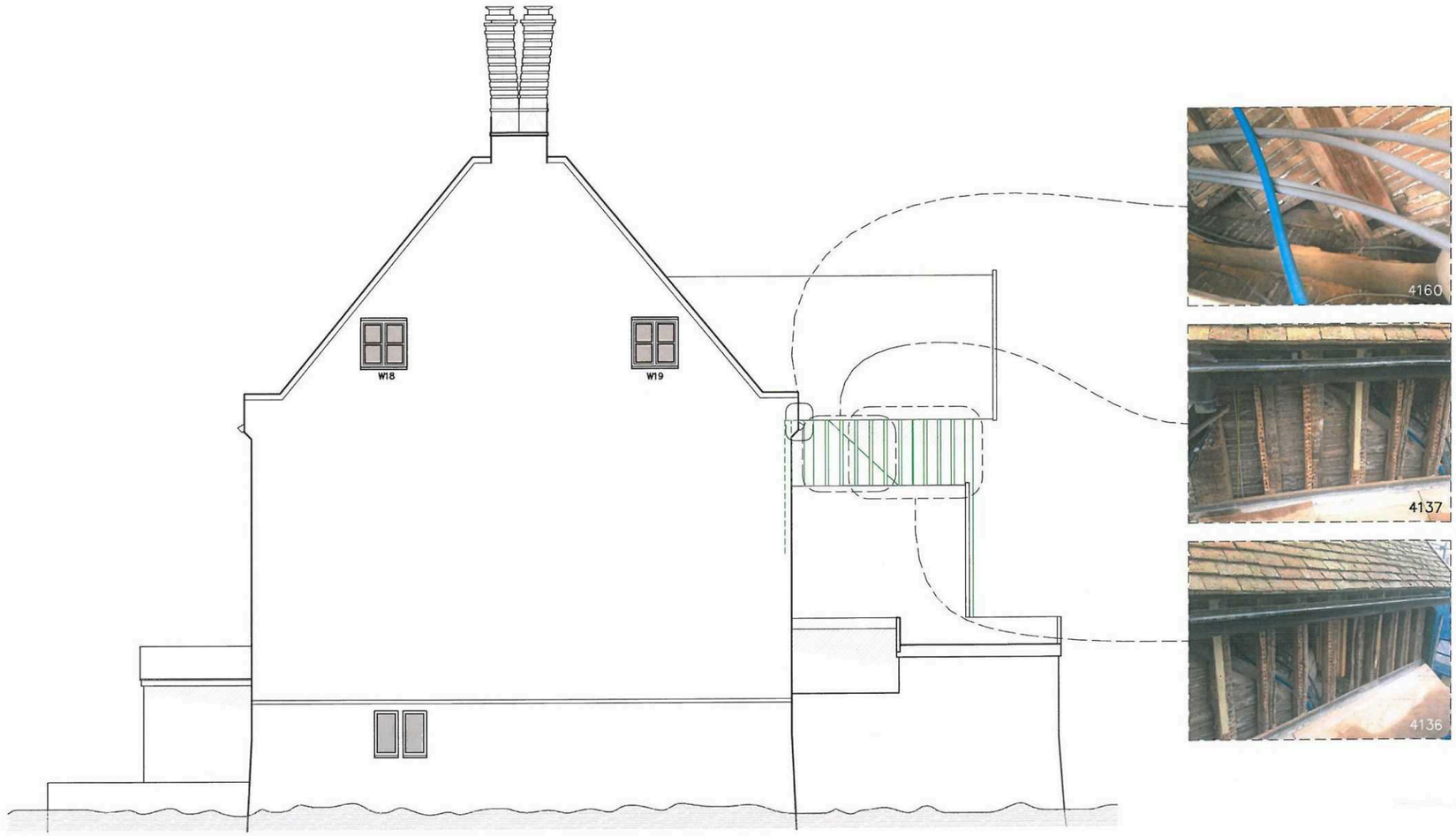
Existing West Elevation - Exposing Timber Frame



Key

timber frame

plaster removed

repairs

0m 1m 2m 3m

scale 1:100

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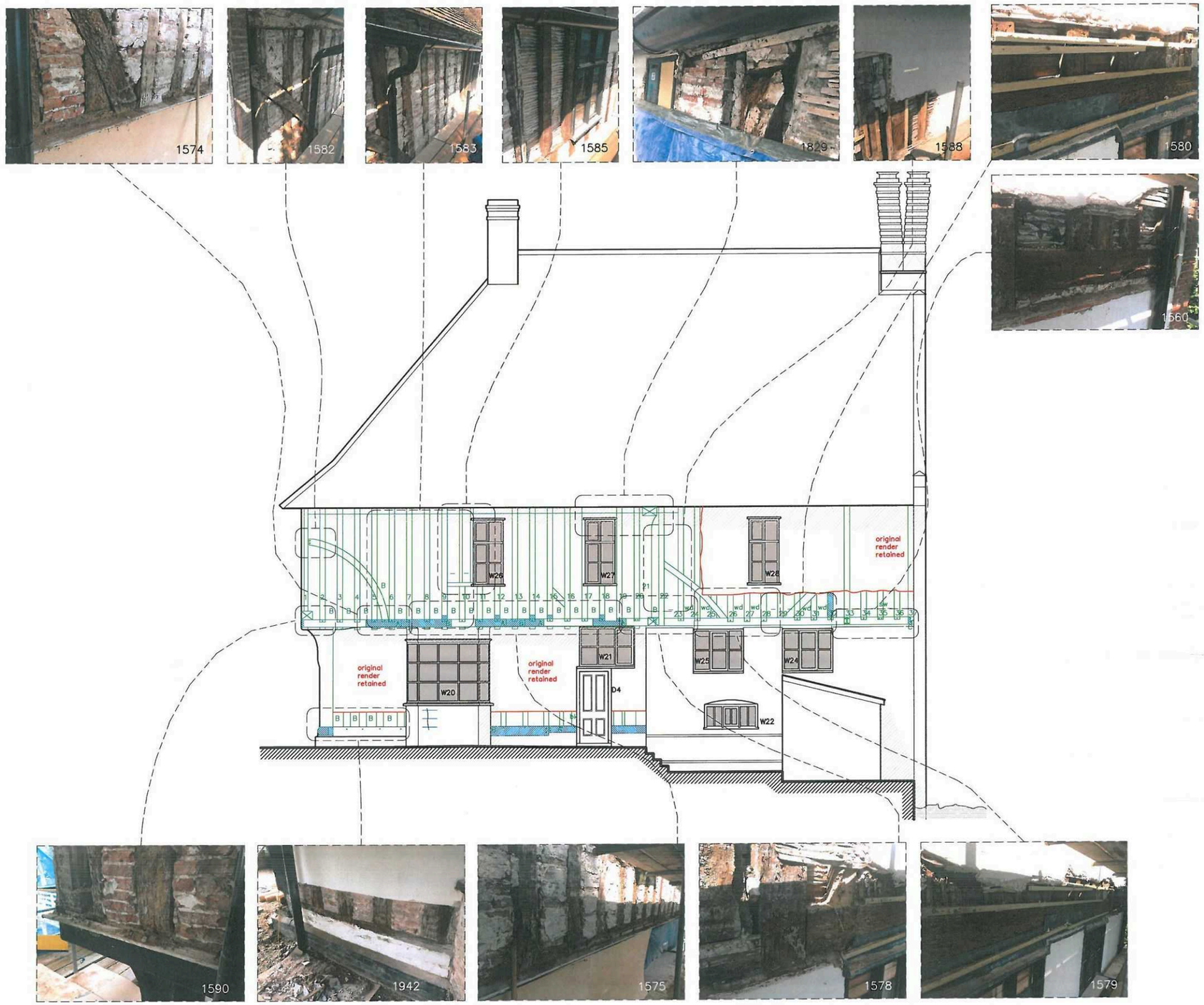
Existing North Elevation - Exposing Timber Frame



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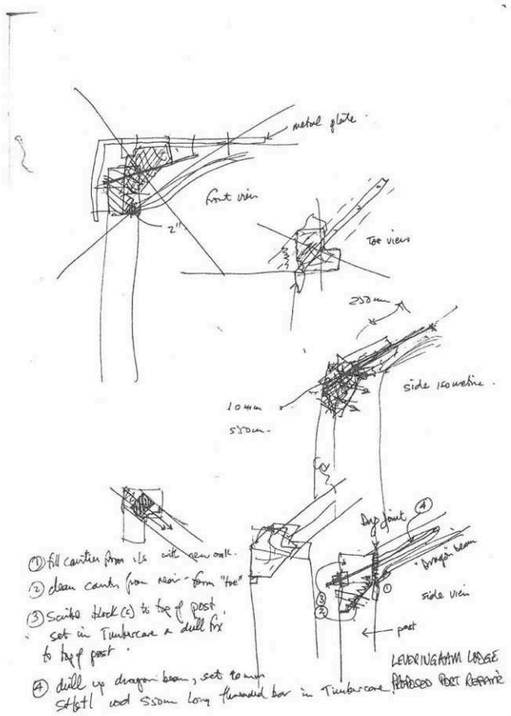
Existing East Elevation - Exposing Timber Frame

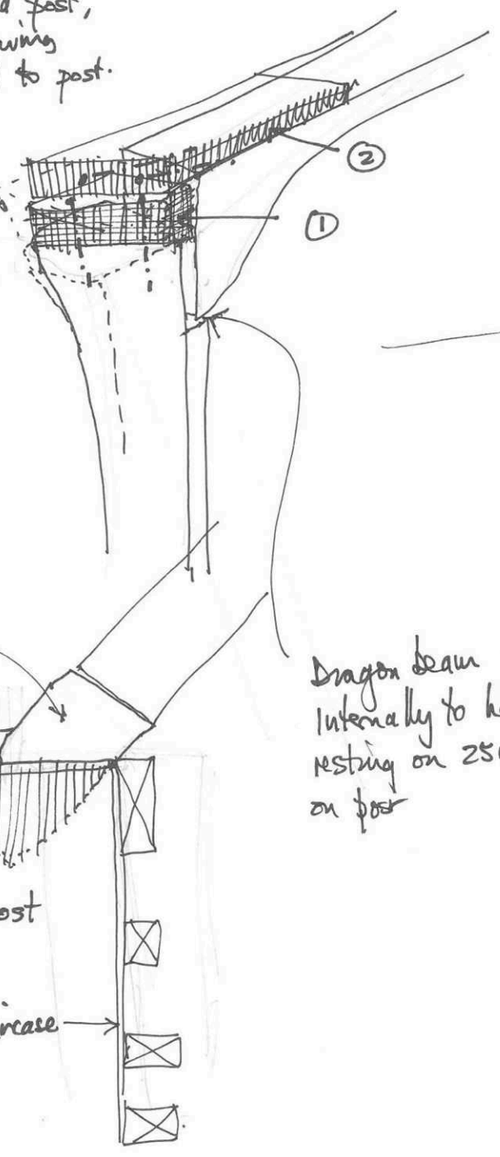
Repairs proposed:

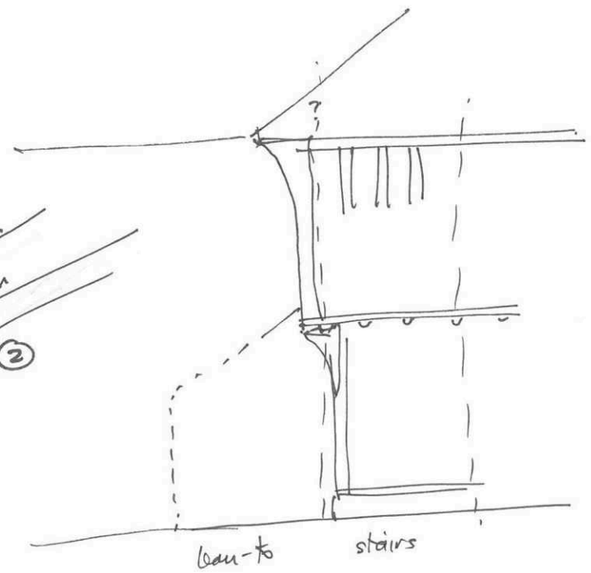
1. Build up top of haunched post, Resin bonding and screwing into top of sound wood to post.

2. Cut to size second oak splice gluing and screwing to top of brace, and additionally into end grain of brace, to form an solid joint.



Site note



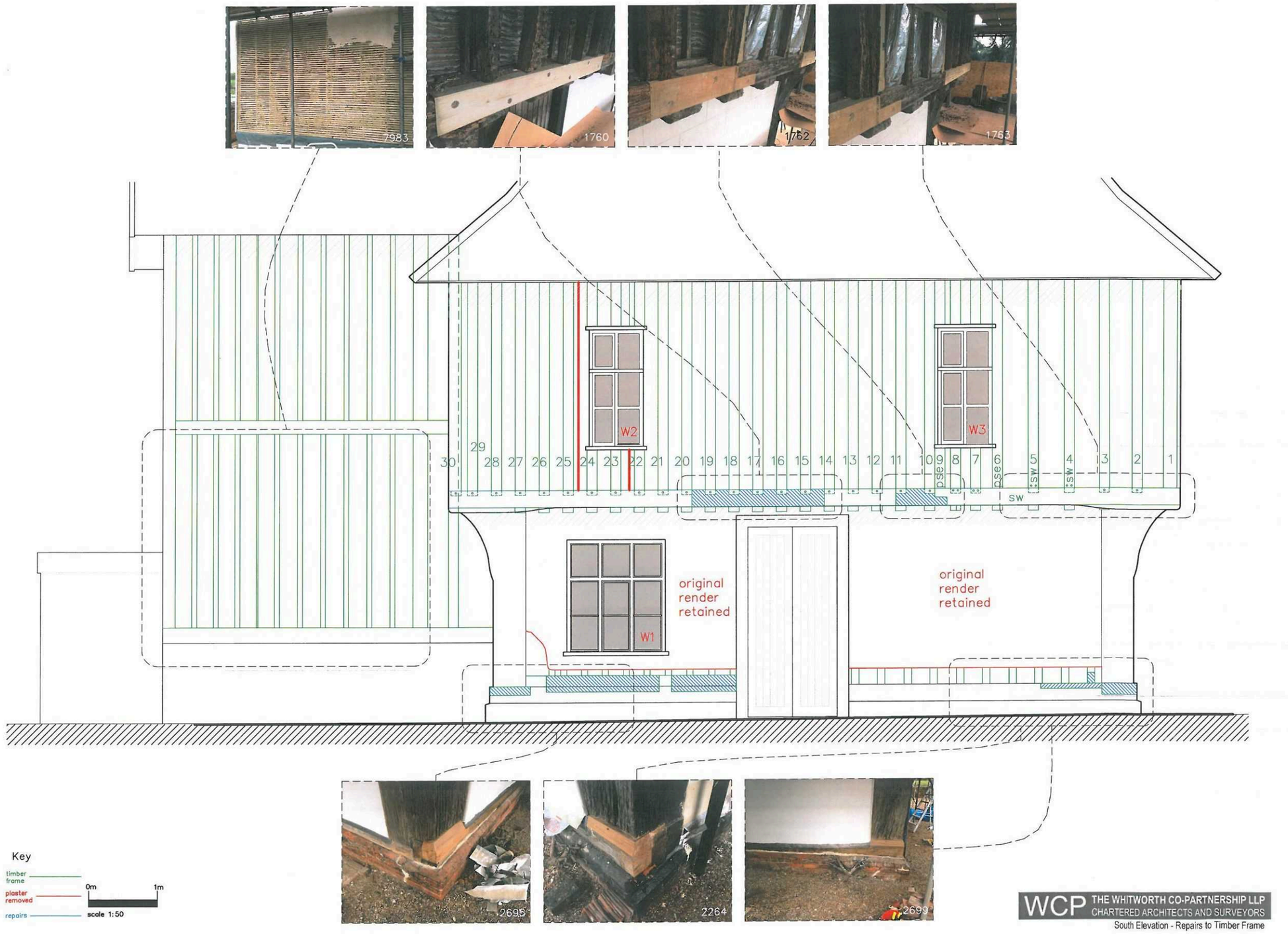


Dragon beam visible internally to hall, actually resting on 25mm of bearing on post

Description of repairs completed to post (item H 10)

TR

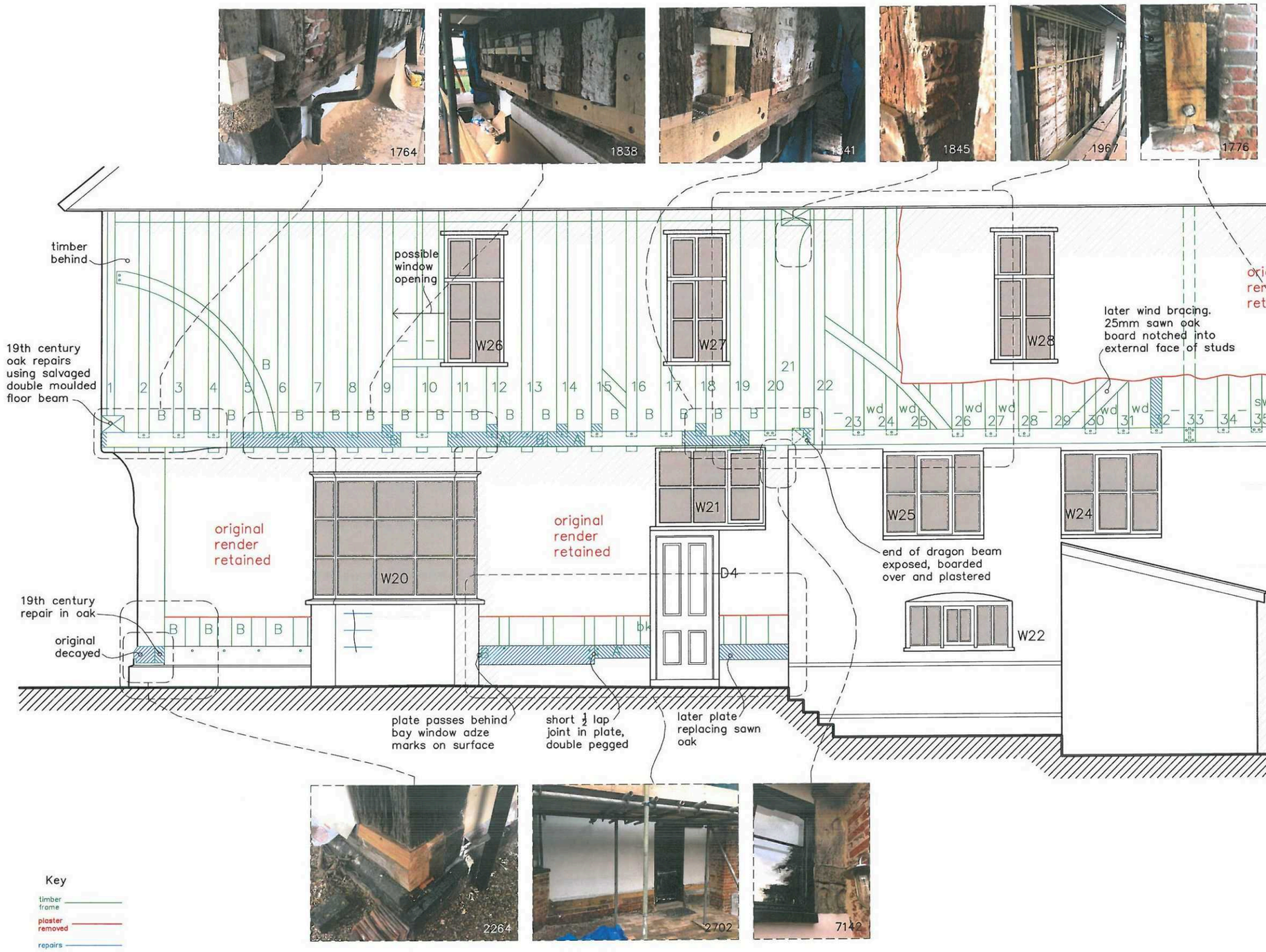
L: COMPLETED REPAIRS PLANS - SCALE 1:50



W9
W10
W11
W13
W12
W8
W7
W4
D2
W5
W6
Brick
original render retained

Key
timber frame
plaster removed
repairs
0m 1m
scale 1:50

WCP THE WHITWORTH CO-PARTNERSHIP LLP
CHARTERED ARCHITECTS AND SURVEYORS
West Elevation - Repairs to Timber Frame



WCP THE WHITWORTH CO-PARTNERSHIP LLP
CHARTERED ARCHITECTS AND SURVEYORS

East Elevation - Repairs to Timber Frame

APPENDIX A:

WINDOW REPLACEMENT & EXTERNAL RENDERING AND SUNDRY REPAIR - SPECIFICATION OF WORKS

WCP

THE WHITWORTH
CO-PARTNERSHIP LLP

SCHEDULE OF WORKS

of

LETHERINGHAM LODGE
LETHERINGHAM
NR WICKHAM MARKET
SUFFOLK
IP13 0NA

for

C/O MR & MRS BICKERTON
LETHERINGHAM LODGE
LETHERINGHAM
NR WICKHAM MARKET
SUFFOLK
IP13 0NA

THE WHITWORTH
CO-PARTNERSHIP LLP

Chartered Architects and Surveyors

18 HATTER STREET,
BURY ST.EDMUNDS,
SUFFOLK,
IP33 1NE

Telephone: (01284 760421)
Facsimile: (01284 704734)

Date 7th February 2013
Ref AJR/awm/4641/2

LETHERINGHAM LODGE, NR WICKHAM MARKET, SUFFOLK, IP13 0NA

WINDOW REPLACEMENT & EXTERNAL RENDERING AND SUNDRY REPAIRS

SCHEDULE OF WORKS

Statement of Justification:

The window replacement work proposed are required in order to address the issues detailed within the enforcement notice which has been put in place by Local Authority. Rendering and supplementary repairs due to correct defects identified in the purchasers survey.

1.0	**PRELIMINARIES:**		
1.1	Show here the amount for contractor's preliminaries to include overheads and profit, insurances, removal of debris etc.	ITEM	
1.2	**ACCESS AND TEMPORARY PROTECTION:** To provide scaffolding costs in order to facilitate the window replacement works and external rendering works taking into consideration the moat which circles the perimeter of Letheringham Lodge. (Refer to SK1 – Sheets 1 – 4 enclosed within the Appendix 1). Scaffolding is to bear on stout sole boards which are laid on levelled ground, with knee rails and guard rails, plastic capped ends to scaffolding tubes and fixed raking ladders and bridging beams to correct length as necessary for access to boarded lifts. Provide an un-climbable 3m height corrugated tin sheeting to the base of the scaffolding with a solid door protected by a heavy duty padlock, which is to be securely locked at the end of the working day to prevent unauthorised access. Withdraw all ladders at the end of the working day as necessary in order to maintain security. Allow to sheet up the scaffolding in mono-flex sheeting. North Elevation..... South Elevation..... East Elevation..... West Elevation..... Maintain during the course of the work and clear away on completion making good all disturbed surfaces prior to leaving site. Number of weeks hire..... i. Hire charge per week: ..... ii. Erection charge: ..... iii. Dismantling charge: ..... iv. Cost for omitting mono-flex sheeting..... ITEM		

1.3	**PROTECTION:** The contractor is responsible for the protection of the existing structure for the duration of the works. Dust sheets and temporary protection are to be used in order to protect internal fixture and fitting and floor finishes.		
1.4	**WATER, POWER, SANITARY PROVISIONS:** Assume that all three will be made available to the contractor during the contract period. Toilet facilities will be provided by the client for the duration of the works.	ITEM	
1.5	**OCCUPATION OPTION 1:** The work will be undertaken whilst the property is in partial occupation; the client will be moving the furniture prior to commencement of the works.	ITEM	
1.6	**OCCUPATION OPTION 2:** The work will be undertaken whilst the property is in unoccupied; the client will be moving the furniture prior to commencement of the works.	ITEM	
1.7	**PHOTOGRAPHS:** Allow photographing each elevation from the scaffolding prior to commencement of the works, which are to be sent to WCP.	ITEM	
2.0	**REPAIRS TO THE ORIGINAL WINDOWS**		
2.1	**WINDOW 1:** Nine paned timber framed window with two mullions, mid level transom, three fixed fanlights, one metal lower level opening metal casement, single glazed, size 59" x 64".  **REPAIRS:** Carefully strip the paint from the window frame and remove the glass where necessary in order to facilitate the repairs. Carry out two squinted half lap splice repairs to jambs forming a new tenon and replace the cill in oak to match that of the existing. Replace one broken pane of glass, re-face putty. Overhaul the opening casements and window furniture to ensure they are operating as intended and prepare ready for redecoration.	ITEM	

2.2	**WINDOW 2:** Six paned timber framed window with central mullion, high level transom, two fixed fan lights, one low level fixed light, one metal opening casements, single glazed, size 40" x 64".  **REPAIRS:** Carefully strip the paint from the window frame and remove the glass where necessary in order to facilitate the repairs. Remove the defective bottom rail and replace the missing sub cill in oak. Carry out a three squinted half lap splice repair to the jambs and mullion at low level forming new tenons. Replace the two broken panes of glass to match that of the existing. Overhaul the opening casement and window furniture to ensure they are operating as intended and prepare ready for redecoration.	ITEM	

2.3	**WINDOW 3:** Six paned timber framed window with central mullion, mid level transom, sub cill, with metal opening fanlight and low level casement, single glazed, size 37.5" x 67"  **REPAIRS:** Carefully strip the paint from the window frame and remove the low level glass where necessary in order to facilitate the repairs. Reinstate the existing cill by carrying out three squinted half lap splice repairs to the two jambs and central mullion. Replace the broken glass and reinstate that previously removed, face putty and prepare for re-decoration. Overhaul the opening casement and window furniture to ensure they are operating as intended and prepare ready for redecoration.	ITEM	
2.4	**WINDOW 4:** Six paned timber framed window with two mullions, metal centrally opening casement, timber prentice board supported off four timber brackets, single glazed, size 54" x 44".  **REPAIRS:** Carefully strip the paint from the window frame and remove the glass where necessary in order to facilitate the repairs. Carry out a squinted half lap splice repair to the left hand jamb. Overhaul the opening casement and window furniture to ensure they are operating as intended and prepare ready for redecoration.	ITEM	

2.5	**WINDOW 6:** Six paned timber framed window with central mullion, high level transom, one fixed fanlight, one metal opening fanlight, one low level fixed light, lower metal opening casements, single glazed, size 49" x 68".  **REPAIRS:** Carefully strip the paint from the window frame and remove the glass where necessary in order to facilitate the repairs. Carry out three squinted half lap splice repairs to jambs and mullion forming a new tenon and replace the cill in oak 5" x 3" to match that of the existing. Replace the missing two panes of glass, re-face putty. Overhaul the opening casements and window furniture to ensure they are operating as intended and prepare ready for redecoration.	ITEM	

2.6	**WINDOW 8:** Twelve paned timber framed window with two mullions, mid level transom, three fixed fanlights, one metal casement fanlight, single glazed, size 79" x 54"  **REPAIRS:** Carefully strip the paint from the window frame and remove the glass where necessary in order to facilitate the repairs. Carry out a squinted half lap splice repair to the left hand jamb forming a new tenon and replace the bottom rail and install a new sub cill in oak to match that of the existing. Replace the head of the window to match that of the existing. Replace five broken panes of glass installing two new metal cames and re-face putty. Overhaul the opening casement and window furniture to ensure they are operating as intended and prepare ready for redecoration.	**ITEM**	

2.7	**WINDOW 9:** Two paned timber framed window with central mullion, one fixed casement, one opening casement, single glazed, size 34" x 24"   **REPAIRS:** Carefully strip the paint from the window frame and remove the glass where necessary in order to facilitate the repairs. Carry out a squinted half lap splice repair to the left hand jamb forming a new tenon and replace fifty percent of the glazing beads. Replace the broken pane of glass and re-face putty. Overhaul the opening casement and window furniture to ensure they are operating as intended and prepare ready for redecoration.	**ITEM**	

2.8	**WINDOW 10:** Six paned timber framed window with central mullion, transom, one fixed fanlight, one metal opening fanlight, one low level fixed light, lower metal opening casements, single glazed, size 38" x 65".  **REPAIRS:** Carefully strip the paint from the window frame and remove the glass, where necessary in order to facilitate the repairs. Carry out two squinted half lap splice repair to the jambs forming a new tenon and replace the lower mullion. Replace the cill in oak to match that of the existing. Replace the missing came and supply and fix two new panes of glass and re-face putty. Overhaul the opening casement and window furniture to ensure they are operating as intended and prepare ready for redecoration.	ITEM	

2.9	**WINDOW 12:** Six paned timber framed window with central mullion, high level transom one fixed fanlight, one metal opening fanlight, one low level fixed light, lower metal opening casements, single glazed, size 40" x 67".  **REPAIRS:** Carefully strip the paint from the window frame and remove the glass, where necessary in order to facilitate the repairs. Allow to replace the three defective panes of glass and repair / replace the defective metal casement window. Overhaul the opening casements and window furniture to ensure they are operating as intended and prepare ready for redecoration.	ITEM	

2.10	**WINDOW 13:** Nine paned timber framed window with two mullions, high level transom, two fixed central fanlights, one metal opening fanlight, single glazed, size 60" x 44".  **REPAIRS:** Carefully strip the paint from the window frame and remove the glass, where necessary in order to facilitate the repairs. Replace the bottom rail and sub cill in oak. Carry out two squinted half lap splice repair to the jambs forming a new tenon and replace the cill in oak to match that of the existing. Replace two defectives metal cames and replace the four missing panes of glass and re-face putty. Overhaul the opening casement and window furniture to ensure they are operating as intended and prepare ready for redecoration.	ITEM	

2.11	**WINDOW 17A:** Single paned timber window, casement and glass missing.  **REPAIRS:** Carefully strip the paint from the window frame and remove the glass where necessary in order to facilitate the repairs. Carry out a squinted half lap splice repair to the right hand jamb 5" x 2.5" forming a new tenon and replace the cill in oak to match that of the existing. Replace missing casement 18" x 24" and re-glaze and face putty supplying and installing new window furniture to suit, prepare ready for redecoration.	ITEM	

2.12	**WINDOW 21:** Six paned timber framed window, single glazed, with one metal opening casement, size 54" x 42.5".  **REPAIRS:** Carefully strip the paint from the window frame and remove the glass where necessary in order to facilitate the repairs. Replace the missing head and repair the defective cill. Supply and install two new panes of glass and re-face putty. Overhaul the opening casement and window furniture to ensure they are operating as intended and prepare ready for redecoration.	ITEM	
2.13	**WINDOW 23:** Timber framed window with centre pivot casement with one horizontal and vertical glazing bar, single glazed, size 19" x 28.5".  **REPAIRS:** Carefully strip the paint off the window frame and renew casement window to match that of the existing, allowing to re-use the glass. Overhaul the window furniture re-install the glass and re-face putty and prepare ready for redecoration.	ITEM	

2.14	**WINDOW 24:** Nine paned timber framed window with two mullions, transom, one fixed central fan light, two metal opening fanlights, single glazed, size 54" x 42"  **REPAIRS:** Carefully strip the paint from the window frame and remove the glass, where necessary in order to facilitate the repairs. Carry out a squinted half lap splice repair to the left hand jamb, forming a new tenon and replace the cill in oak to match that of the existing. Replace two broken panes of glass and re-face putty. Overhaul the opening casement and window furniture to ensure they are operating as intended and prepare ready for redecoration.	ITEM	

2.15	**WINDOW 25:** Four paned timber framed window with two mullions, metal centrally opening metal casement, meshed two pane vented panel without glass, single glazed, size 53" x 41.5".  **REPAIRS:** Carefully strip the paint from the window frame and remove the glass where necessary in order to facilitate the repairs. Remove the defective bottom rail and replace the missing sub cill in oak. Carry out a two squinted half lap splice repair to the mullions. Overhaul the opening casement and window furniture to ensure they are operating as intended and prepare ready for redecoration.	ITEM	

2.16	**WINDOW 26:** Six paned timber framed window with central mullion, transom, one fixed fanlight, one metal opening fanlight, one low level fixed light, lower metal opening casements, single glazed, size 98" x 67".  **REPAIRS:** Carefully strip the paint from the window frame and remove the glass where necessary in order to facilitate the repairs. Carry out a squinted half lap splice repair to the left hand jamb forming a new tenon. Overhaul the opening casement and window furniture to ensure they are operating as intended and prepare ready for redecoration.	ITEM	

2.17	**WINDOW 27:** Six paned timber framed window with central mullion, one fixed fan light, one metal opening fanlight, one low level fixed light, lower metal opening casements, single glazed, size 38" x 64". **REPAIRS:** Carefully strip the paint from the window frame and remove the glass where necessary in order to facilitate the repairs. Carry out a squinted half lap splice repair to the right hand jamb forming a new tenon. Replace the bottom rail and replace the sub cill in oak to match that of the existing. Overhaul the opening casement and window furniture to ensure they are operating as intended and prepare ready for redecoration.	**ITEM**	
2.18	**WINDOW 28:** Six paned timber framed window with central mullion, one fixed fan light, one metal opening fanlight, one low level fixed light, lower metal opening casements, single glazed, size 40" x 67". **REPAIRS:** Carefully strip the paint from the window frame and remove the glass where necessary in order to facilitate the repairs. Replace the bottom rail and replace the sub cill in oak to match that of the existing. Replace the two broken glazed panels. Overhaul the opening casement and window furniture to ensure they are operating as intended and prepare ready for redecoration.	**ITEM**	
2.19	**BASEMENT:** Oak framed window and cill, with three leaded lights, two fixed and one metal opening casement, C17th leaded glass, size 52" x 25.5".  **REPAIRS:** Carefully remove the leaded lights and send to Devlin Plumber Stained Glass Ltd to be refurbished. Remove the paintwork from the window and casement. Allow to replace the defective Oak cill carrying out squinted half lap spice repairs to the lower sections of the jambs and mullions, where necessary to facilitate the replacement of the cill. Allow to carry out an isolated splice repair to the head of the window. Allow to prepare the window and metal casement including the window furniture for redecoration.	**ITEM**	

3.0	**WINDOW INSTALLATION WORKS**		
3.1	**EXTERNAL INSTALLATION WORKS:** Carefully remove the existing windows 1,2,3,4,6,8,9,10,12,13,17A,22,23,24,25,26,27,28 which are identified on the marked up photographs on SK2 – Sheets 1 – 4) which are enclosed in the appendices to the rear of this document. Allow to prepare the openings ready to receive the newly refurbished windows which are detailed in the above section. Allow to alter and adapt the opening as required and install refurbished windows, stainless steel screw fixing are to be used,	**ITEM**	
3.2	**INTERNAL WORKS:** Make good the internally plastered and timber lined reveals including the window boards and prepare ready for redecoration.	**ITEM**	
4.0	**EXTERNAL REPAIRS: (REFER TO SKETCH SK1 – SHEETS 1 – 4)**		
4.1	**EAST ELEVATION – RENDERING:** Carefully remove the existing cement based render, retaining any areas of lime render where practicably possible and disposing of all debris off site. The existing under jetty plaster is to b retained. Prepare the face of the exposed studs and supply and fix 7mm x 35mm treated softwood laths to the framework in preparation for the new render finish. Re-render the external elevations with a lime render 3 coat system, using Anglia Lime Company's haired chalk mix in accordance with their recommendations. (Anglia Lime Company, P.O. Box 6, Sudbury, Suffolk, CO10 6TW. Tel: 01787 313974). The top coat is to be scored to re-create ashalr, after the newly repaired windows have been installed. The low level render is to terminate at the brick plinth and is to be detailed in accordance with WCP standard detail refer to SK1 – Sheet 1, incorporating a code 5 lead flashing with building paper behind, the corner cover moulds to match staircase. Allow and extra over cost for installing 150mm of 'Rockwool' insulation 'to the voids between the timber studs. £.....	**ITEM**	
4.2	**EAST ELEVATION – LOW LEVEL BRICK PLINTH:** Clean up the low level brickwork and repoint in lime mortar 1:2 and is to be left exposed.	**ITEM**	

4.3	**SOUTH ELEVATION - RENDERING:** Carefully remove the existing cement based render, retaining any areas of lime render where practicably possible and disposing of all debris off site. The existing under jetty plaster is to b retained. Prepare the face of the exposed studs and supply and fix 7mm x 35mm treated softwood laths to the framework in preparation for the new render finish. Re-render the external elevations with a lime render 3 coat system, using Anglia Lime Company's haired chalk mix in accordance with their recommendations. (Anglia Lime Company, P.O. Box 6, Sudbury, Suffolk, CO10 6TW. Tel: 01787 313974). The top coat is to be scored to re-create ashalr, after the newly repaired windows have been installed. The low level render is to terminate at the brick plinth and is to be detailed in accordance with WCP standard detail refer to SK1 – Sheet 1, incorporating a code 5 lead flashing with building paper behind. The corner cover moulds to match as **A** as shown on SK1 Sheet 2, (as present on F on upper and lower areas). Allow and extra over cost for installing 150mm of 'Rockwool' insulation 'to the voids between the timber studs. £.....	**ITEM**	
4.4	**WEST / NORTH ELEVATION - RENDERING:** Carefully remove the existing cement based render to elevations E, G, and H, as detailed on SK1 – Sheet 3, disposing of all debris off site. Prepare the face of the exposed studs and supply and fix 7mm x 35mm treated softwood riven laths to the framework in preparation for the new render finish. Re-render the external elevations with a lime render 3 coat system, using Anglia Lime Company's haired chalk mix in accordance with their recommendations. (Anglia Lime Company, P.O. Box 6, Sudbury, Suffolk, CO10 6TW. Tel: 01787 313974). The top coat to elevations E & F are to be scored to re-create ashalr, after the newly repaired windows have been installed. The low level render is to terminate at the brick plinth and is to be detailed in accordance with WCP standard detail refer to SK1 – Sheet 3, incorporating a code 5 lead flashing with building paper behind. The corner cover moulds to match as shown on SK1 Sheet 1, (as present on F on upper and lower areas). Allow and extra over cost for installing 150mm of 'Rockwool' insulation 'to the voids between the timber studs. £.....	**ITEM**	
4.5	**NORTH ELEVATION – BRICKWORK TO THE UTILITY ROOM:** Carefully clean down the brick work to north elevation of the utility room. Allow a provisional sum of £350.00 for any brickwork or re-pointing repairs that may be required following the removal of the paint finish	**ITEM**	

5.0	**EXTERNAL REDECORATION WORKS TO THE EXTERNAL WALLS**		
5.1	**EAST ELEVATION – REMOVAL OF WEATHER SHIELD PAINT OFF EXISTING LIME RENDERING:** Remove the weathershield paint from the original areas of lime render, which have remained in situ and prepare ready for redecoration.	**ITEM**	
5.2	**EAST ELEVATION – REMOVAL OF PAINT OFF EXISTING LOW LEVEL BRICKWORK:** Remove the paint off the low level brickwork as detailed on drawing SK1 – Sheet 1, using a poultice treatment. Allow a provisional sum of £650.00 for any brickwork or re-pointing repairs that may be required following the removal of the paint finish	**ITEM** **PS**	£650.00
5.3	**EAST ELEVATION – REDECORATION:** Re decorate the new and existing lime render with limewash, 4 coats, the first diluted 50:50 with tap water, colour to be selected by the client. The corner cover moulds are be painted in "pozilime" to match the lime wash to the rendering. A small section of the low level brickwork to the north end is to be finished in limewash to match that of the existing, approximately .....m2.	**ITEM**	
5.4	**SOUTH ELEVATION – REDECORATION:** Re decorate new and existing lime render with limewash, 4 coats, the first diluted 50:50 with tap water, colour to be selected by the client. The corner cover moulds are be painted in "pozilime" to match the lime wash to the rendering.	**ITEM**	
5.5	**WEST ELEVATION – REMOVAL OF PAINT OFF EXISTING LOW LEVEL BRICKWORK:** Remove the paint off the low level brickwork to elevation H as detailed on drawing SK1 – Sheet 3, using a poultice treatment. Allow a provisional sum of £650.00 for any brickwork or re-pointing repairs that may be required following the removal of the paint finish	**ITEM** **PS**	£650.00
5.6	**WEST / NORTH ELEVATION – REDECORATION:** Re decorate new and existing lime render with limewash, 4 coats, the first diluted 50:50 with tap water, colour to be selected by the client. The corner cover moulds are be painted in "pozilime" to match the lime wash to the rendering. A small section of the low level brickwork to the north end is to be finished in limewash to match that of the existing, approximately .....m2.	**ITEM**	
5.7	**NORTH ELEVATION – BRICKWORK TO THE UTILITY ROOM:** Carefully clean down the brick work to north elevation of the utility room and apply 3 coat of limewash to match the existing. Allow a provisional sum of £350.00 for any brickwork or re-pointing repairs that may be required following the cleaning down of the brickwork.	**ITEM** **PS**	£350.00

6.0	**EXTERNAL REDECORATION WORKS TO WINDOW**		
6.1	**EAST ELEVATION:** Prepare all of the windows for re-decoration ensuring that the primer and undercoat are applied to the refurbished window prior to installation. Allow to obtain the necessary Defa approval and apply one coat of lead based primer, followed by two coat of lead based undercoat, and finish with two coats of lead based gloss. (Refer to trade clause MX4 270).	**ITEM**	
6.2	**SOUTH ELEVATION:** Prepare all of the windows for re-decoration ensuring that the primer and undercoat are applied to the refurbished window prior to installation. (Refer to MX4 270). Allow to obtain the necessary Defa approval and apply one coat of lead based primer, followed by two coat of lead based undercoat, and finish with two coats of lead based gloss. (Refer to MX4 270).	**ITEM**	
6.3	**WEST ELEVATION:** Prepare all of the windows for re-decoration ensuring that the primer and undercoat are applied to the refurbished window prior to installation. Allow to obtain the necessary Defa approval and apply one coat of lead based primer, followed by two coat of lead based undercoat, and finish with two coats of lead based gloss. (Refer to trade clause MX4 270).	**ITEM**	
6.4	**NORTH ELEVATION:** Prepare all of the windows for re-decoration ensuring that the primer and undercoat are applied to the refurbished window prior to installation. Allow to obtain the necessary Defa approval and apply one coat of lead based primer, followed by two coat of lead based undercoat, and finish with two coats of lead based gloss. (Refer to trade clause MX4 270).	**ITEM**	

	COLLECTIONS PAGE	
1.0	**PRELIMINARIES**	£.....
2.0	**REPAIRS TO THE ORIGINAL WINDOWS**	£.....
3.0	**WINDOW INSTALLATION WORKS**	£.....
4.0	**EXTERNAL REPAIRS**	£.....
5.0	**EXTERNAL REDECORATION WORKS TO THE EXTERNAL WALLS**	£.....
6.0	**EXTERNAL REDECORATION WORKS TO WINDOW**	£.....
		£.....
		£.....
	Total	£.....
	10% Contingency	£.....
	Sub - total	**£.....**
	VAT @ 20%	£.....
	Total	£.....

The Whitworth Co-Partnership LLP
18 Hatter Street
Bury St Edmunds
Suffolk
IP33 1NE

AJR/awm/4641/2

7nd February 2013

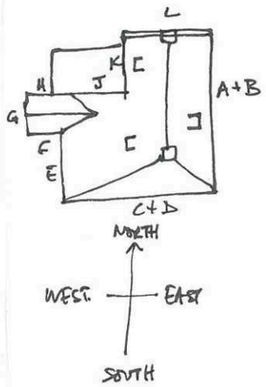
FOR IDENTIFICATION ONLY.
NOT TO SCALE

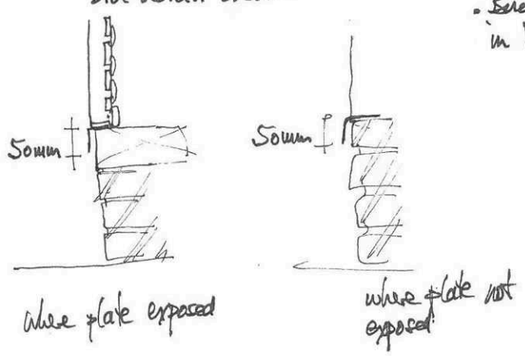
- Photograph details from scaffolding
- Remove existing cement based render, retaining any areas of lime render
- Remove weathershield paint from retained lime render
- Re-lathe, re-render in hair/chalk/lime mix, 3 coats, scoring top coat to re-create ashlar, after incorporating newly repaired windows.
- Assume corner cover moulds to match staircase, painted in "pozilime" to match render.
- Retain existing under jetty plaster soffit.
- Lower render under to terminate at brick plinth as now, not using bell mouth aniss bead, but incorporating cs lead flashing in wcp flashing std detail chase

- Brick plinth to be cleaned, pointed in lime mortar 1:2 and left exposed

- lower section of brickwork: remove paint by poultice treatment. inspect, repair defective bricks. repaint in limewash to match.

EAST ELEVATION





where plate exposed

where plate not exposed

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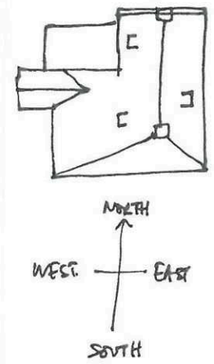
18 Hatter Street, Bury St Edmunds, Suffolk, IP33 1NE T: 01284 760421 E: info@whitcp.co.uk W: www.wcp-architects.com

Project: Letheringham Lodge	Drawn by: TR	Date: 04.02.13
Title: External Elevations	Job No: 4641/2	Drawing no: SK1 – Sheet 1

FOR IDENTIFICATION ONLY
NOT TO SCALE

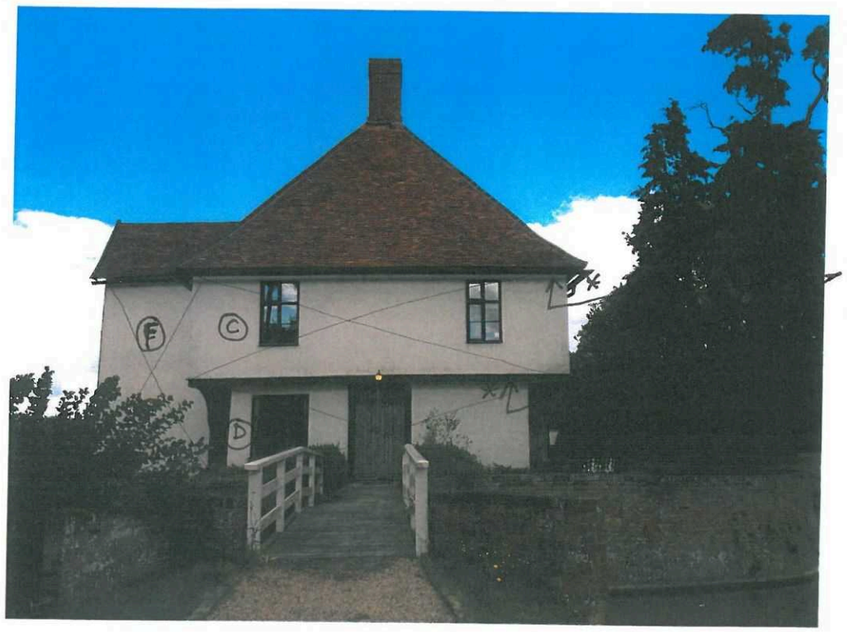


Photograph each elevation from scaffold before work proceeds

Remove, re-bottle, re-render, mark ashlar as elevations (A) & (E)

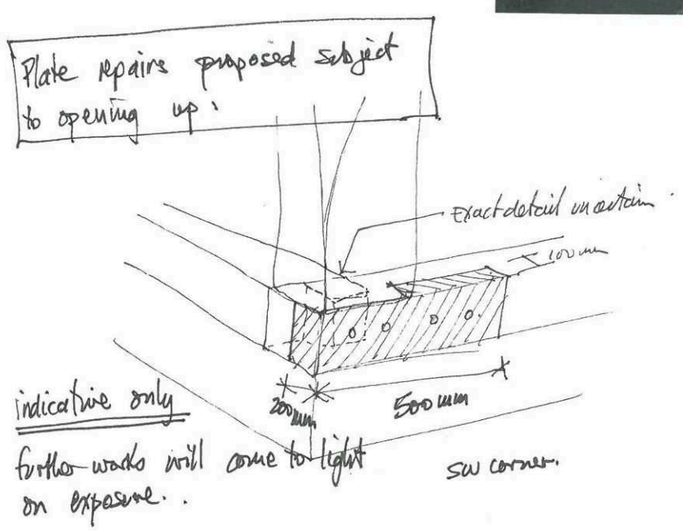
finish at lower plate as for plinth on east elevation.

Add cover moulds as (A) (gutter as present on (F)) on upper and lower areas



Retain jetty & eaves soffit details as existing *

SOUTH ELEVATION.



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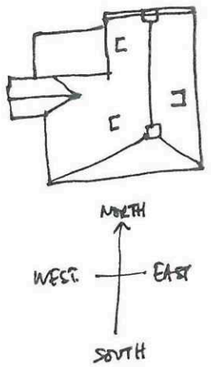
Project: Letheringham Lodge	Drawn by: TR	Date: 04.02.13
Title: External Elevations	Job No: 4641/2	Drawing no: SK1 – Sheet 2

Photograph from scaffolding before work starts.

These elevations (K) and (J) are thought to be lime render. Subject to testing, make good only after window replacements

Remove cement paints from brickwork at base of elevation (H)

Elevations (E), (G) and (H) to be rerendered as (A) + (B). Break Ashlar lining pattern at corner between (E) and (F)



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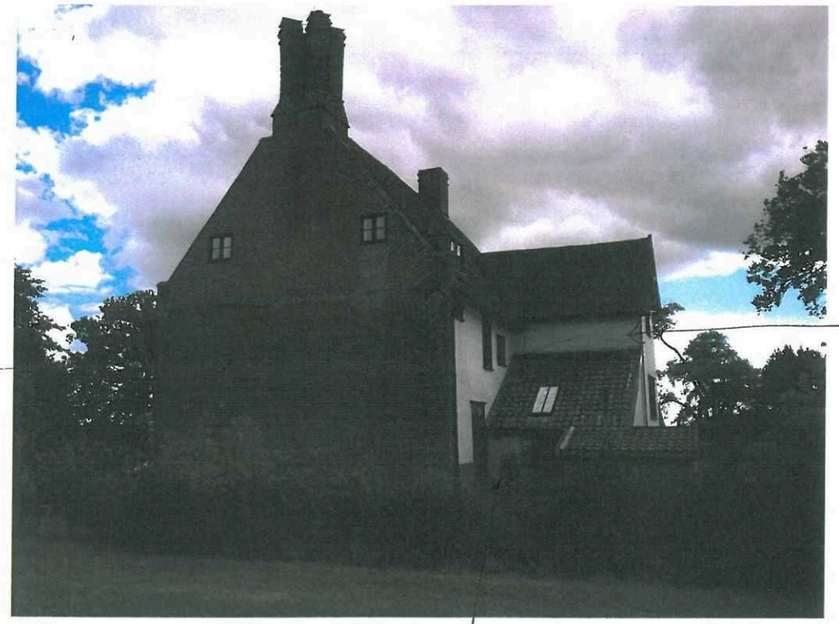
Title: External Elevations	Job No: 4641/2	Drawing no: SK1 – Sheet 3

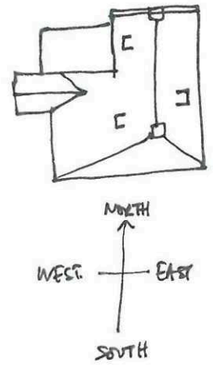


NORTH ELEVATION.

(J) lime render: no work proposed.

No work proposed to Elevation (L)

North elevation (J) to utility room requires cleaning down of brickwork, repair and re-limewashing.



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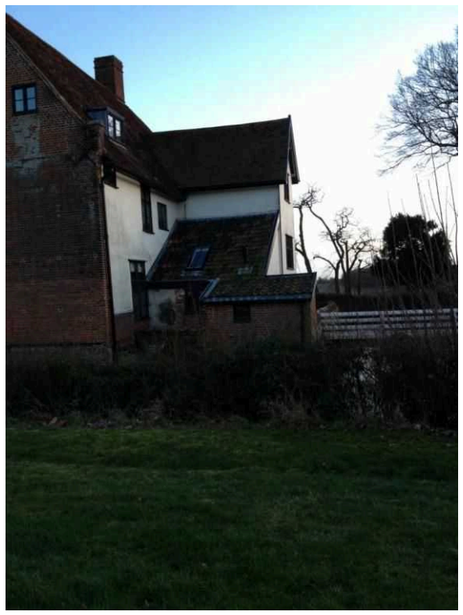
BEFORE AND AFTER PHOTOGARPHS

BEFORE



AFTER