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Date : MARCH 2024

Our Ref : C278

Your Ref :

STRUCTURAL INSPECTION REPORT.

Visual Structural Inspection in Relation to Proposed Conversion of Existing Barn at Bell House, Humble Green, Little Waldingfield, Suffolk, CO10 0TB .

Mr T. Miller.

Job No: C278

1.0 Brief and Introduction

Steven James Allen Limited were instructed by Mr T. Miller, the owner of the existing barns to undertake a structural inspection of the barn and report on its condition and suitability for conversion to domestic use.

This was a visual non-intrusive survey to determine how the works may be undertaken in compliance with the Town and Country Planning Order, Schedule 2, Part 3, Class Q, to gain permission for the development.

This Engineer's report only deals with the above mentioned and our liability in respect of this report is limited to you as our client. There is no intention to confer any third-party rights as described in the Contracts (Right of Third Parties) Act 1999.

Please also note that we have not inspected any parts of the property which are covered or unexposed and cannot therefore report that such parts of the property are free from defect.

We have not carried out any structural analysis of the buildings and any comments on the stability are based on experience of similar structures. All measurements are approximate. Left and right should be read when looking towards the element referenced and photographs referred to are included at the end of the report.

The Inspection was undertaken on 13th March 2024. The weather was mild and overcast. The structure was inspected from ground level. No destructive investigations took place. A photographic record of inspection is appended to this report and should be viewed in conjunction with the text.

A trial pit was exposed by the client and was inspected and dimensions taken by SJA. Refer to plan and trial pit section Appendix C.

2.0 General Description

The existing barn is made up from 8 sections built at different times extending and evolving the barn. The overall plan size is approximately 25.340m x 24.255m.

Please refer to Appendix A – Survey documents: Existing Site Plan, Floor Plan & Elevations by Wincer Kievenaar.

We have marked on to the Floor Plan survey the different sections (1to9 inc) with differing construction methods (Refer to Appendix B) with the trial pit location shown, as detailed below:

Section 1 : 4” Soft Red Brick work plinth to the external wall with plastic sheeted and boarded timber frame above plinth. The roof is timbered with Asbestos corrugated Roofing Sheets. The floor to the area is a ground bearing concrete slab in sound condition. Refer to Photograph A.

Section 2 : The external walls are 9” brick work with timber purlin roof covered using asbestos corrugated sheeting. The floor to the area is a ground bearing concrete slab in sound condition. Refer to Photograph B.

Section 3 : The external walls are 9” brick work and blockwork plinth to the external gable wall with timber framing over the plinth with a timber boarded finish. It has a timber purlin roof covered using asbestos corrugated sheeting. The floor to the area is a ground bearing concrete slab in sound condition. Refer to Photographs C & D.

Section 4 : (Side & Rear Lean-to)Blockwork & asbestos sheet cladding with timber & angle side rails to external walls to each end with asbestos corrugated walls & an asbestos corrugated roofing sheet roof over. Supported by the wall plate of rear internal walls to areas 1 to 3. Concrete ground bearing slab throughout in sound condition. Refer to Photographs E & F.

Section 5: Blockwork & asbestos sheet cladding with angle side rails to external wall to one end with Precast Concrete Portal Frames with PCC Purlins supporting an asbestos corrugated roofing sheets with occasional glassfibre sheet corrugated rooflights, there is a lean-to element to one end of the portal with timber structure and metal corrugated walls with an asbestos corrugated roofing sheet roof over. Concrete ground bearing slab throughout in sound condition. Refer to Photographs E & F.

Section 6: Timber Battens fixed onto brickwork walls with timber roof supports and asbestos corrugated sheeting with sprayed on insulation, blockwork internal wall with is a ground bearing concrete slab in sound condition. Refer to Photograph H.

Section 7: Is a concrete block walled lean-to off the main structure rendered externally with timber roof supports and asbestos corrugated sheeting with is a ground bearing concrete slab in sound condition.

Section 8: Timber frame boarded walls on 3 sides with membrane against stud work (no sheathing ply seen) with timber beams spanning across onto Section 6 wall and onto t/f external wall with timber purlins all in very good condition with a ground bearing concrete slab in sound condition.

Section 9: Carport area with an asbestos corrugated sheet roof with timber purlin supports and a corrugated metal sheet side wall and solid brick wall to rear, there is a ground bearing concrete slab in sound condition. Refer to photograph J.

Exclusions and Limitations

During the inspection the Engineer inspected as much of the buildings as is practical. Unless stated otherwise in the report fixtures, fittings and finishes were not disturbed and therefore we are unable to confirm that concealed elements are free from defect.

Unless mentioned in the report the condition of finishes, joinery, and damp proofing were not the subject of the inspection and these elements will need to be assessed by the necessary specialists.

No ground investigations were undertaken during the inspection only the trial pit as previously mentioned and therefore any recommendations relating to substructure works will need to be confirmed following the undertaking of an appropriate investigation

Conclusions.

The roofs and walls to each section of the barn building are generally in good condition and currently performing adequately, there was evidence of previous repairs where a tree branch had gone through the roof some time ago to section 1. There were rotten timbers to some areas of roof which will need replacement.

It is assumed that the asbestos roof is to be removed and another lightweight roofing sheet installed with insulation and plasterboard etc.

The loading to the roof is lightweight sheeting although we consider the roof could not accept a heavier roof covering unless subject to detailed assessment. It is therefore considered the roof will be replaced with a roof and finishes no heavier than the existing asbestos roofing sheets such as Slate effect Metal Composite panel with PIR foam core, this weighs 10.44 kg/m². The average weight of used asbestos sheets in the UK is 16kg/m² using this material would allow a spare 6kg/m² for boarding finish such as 9mm plasterboard and paint.

Some localised areas of brick/blockwork walls will need rebuilding/repair/strengthening. Any original timber which is in a sound condition, should be retained and restored. Any cracks in masonry should receive a helical bar crack stitch repair to restore integrity. The introduction of damp proof course and membranes will be required by specialist. The existing PCC frame should be closely inspected for any reinforcement corrosion or spalling of concrete.

Generally, there is no significant evidence of foundation movement and if levels are maintained similar to the existing levels we do not consider general improvement to the foundations will be warranted. We base this on the trial pit information however other conditions may exist on site.

Summary

We consider that the barns are generally robust and constructed from well-proportioned structural elements to be suitable for conversion with limited repair and improvement being required as long as the new roof loadings are kept within previously stated limits.



PHOTOGRAPH A – SECTION 1



PHOTOGRAPH B – SECTION 2



PHOTOGRAPH C – SECTION 3



PHOTOGRAPH D – SECTION 3



PHOTOGRAPH E – SECTION 4 & 5



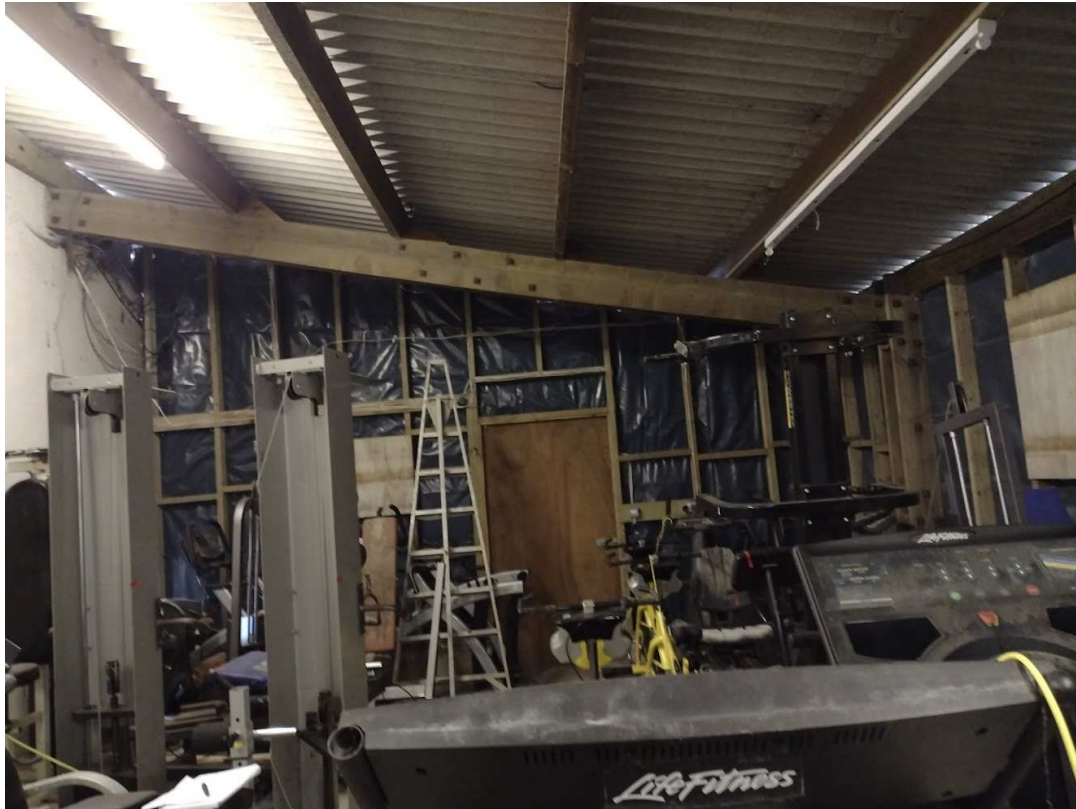
PHOTOGRAPH F – SECTION 4 & 5



PHOTOGRAPH G - SECTION 5



PHOTOGRAPH H - SECTION 6



PHOTOGRAPH J – SECTION 8



PHOTOGRAPH K – SECTION 9

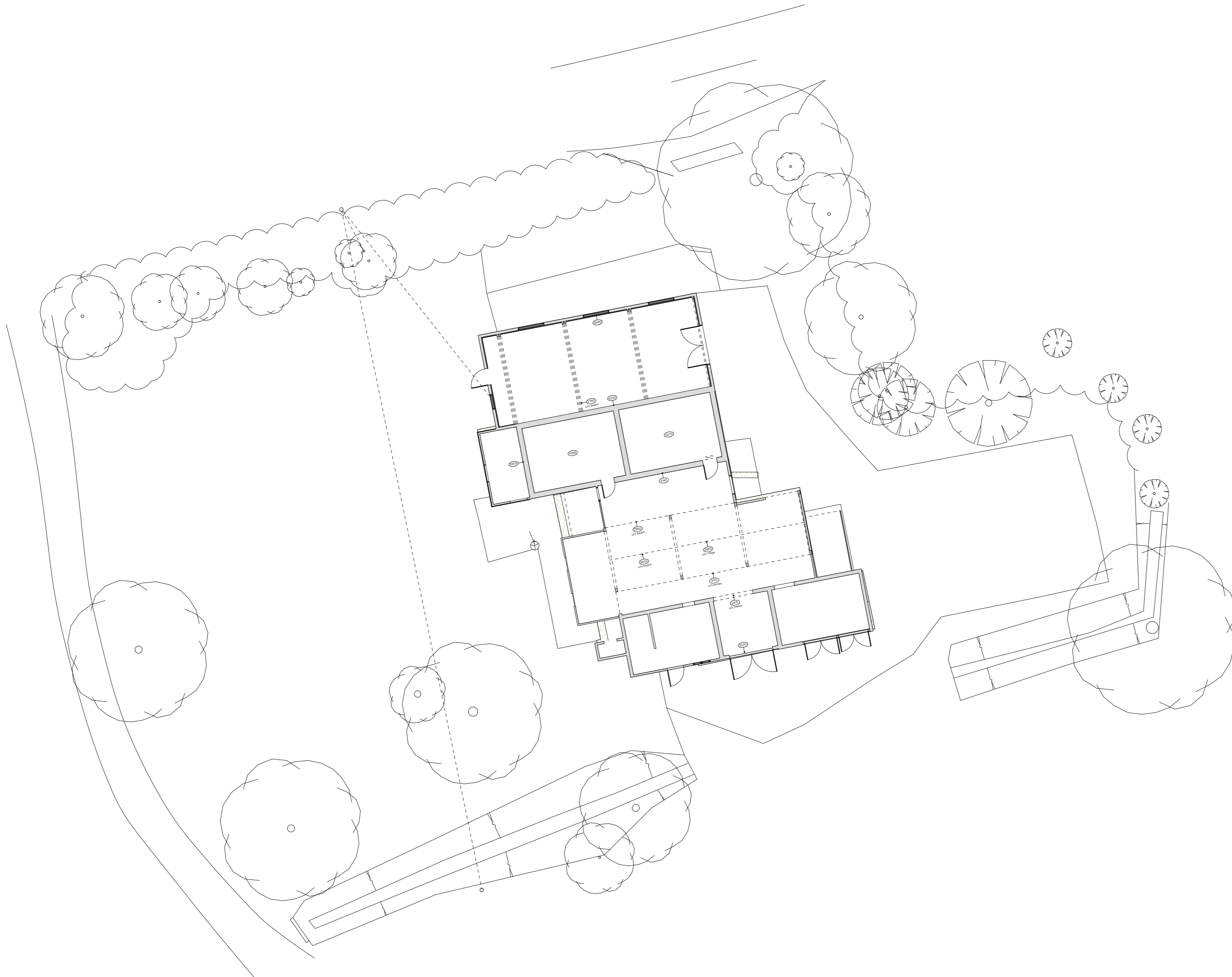
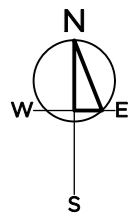


PHOTOGRAPH L – EXTERNAL VIEW



PHOTOGRAPH M – EXTERNAL VIEW

APPENDIX C



REVISION	DESCRIPTION	DATE	DRAWN	CHECK
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JOB No.	5952	DRAWING No.	SU_02	REVISION
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► TITLE Existing Site Plan

► SCALE 1:100 SHEET SIZE A2

ISSUE DATE 20/03/2024

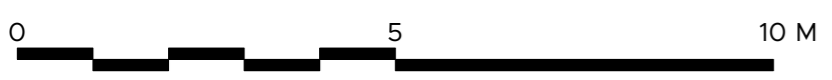
AUTHOR BT CHECK TL

► PROJECT Proposed Class Q Conversion of Existing Barn
Bell House, Humble Green,
Little Waldringfield, Suffolk, CO10 0TB

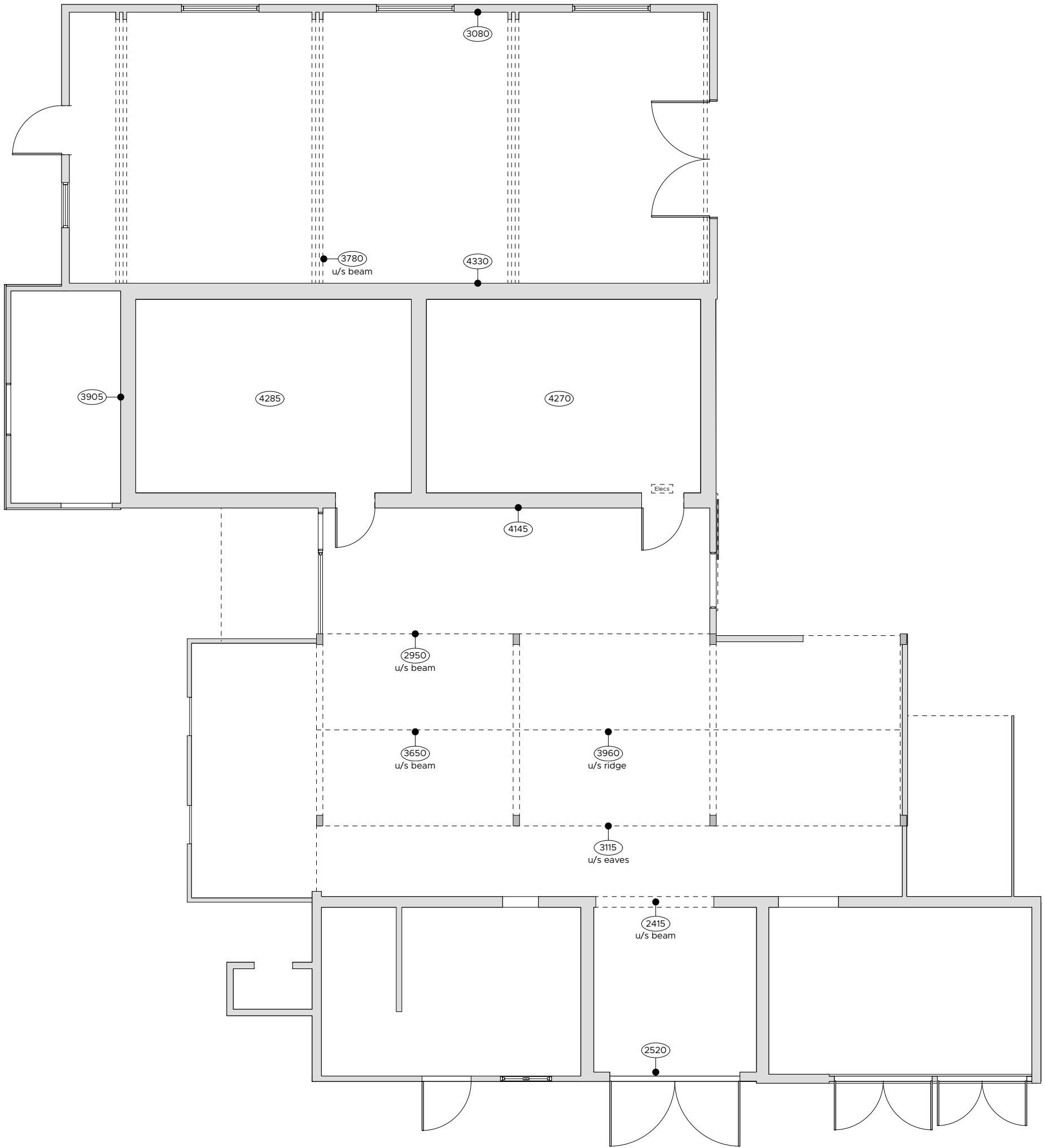
CLIENT Oliphant and Miller Limited

► STATUS SURVEY

Existing Site Plan
Scale: 1:100

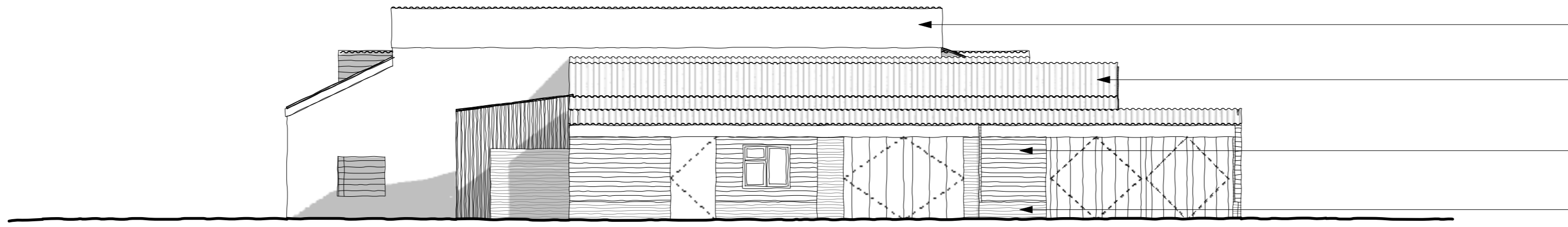


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T / 01473 827992 E / enquires@wkc-architects.co.uk
Do not scale from drawing; work to figured dimensions only.
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5952_SU_01_Bell House.vwx



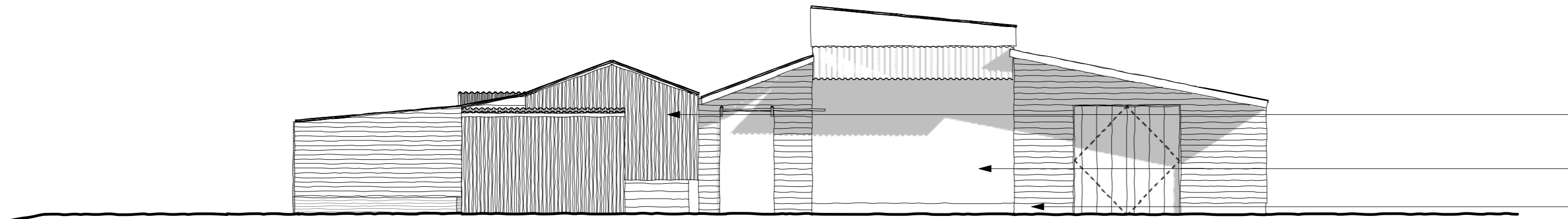
Existing Floor Plan
Scale: 1:100





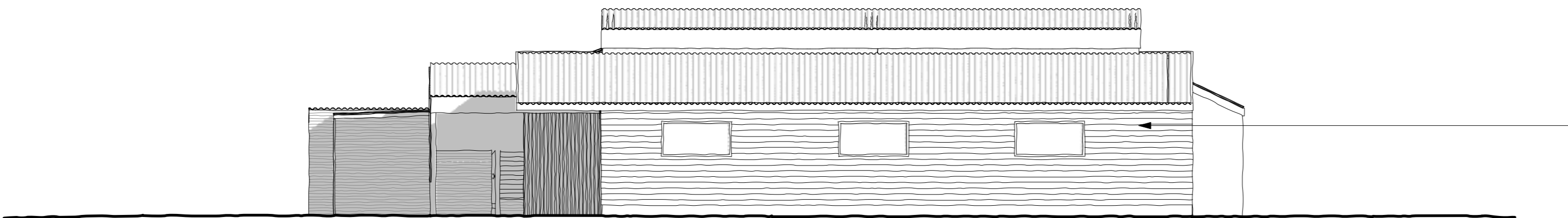
South Elevation
Scale: 1:100

- Timber Sheathing
- Corrugated Asbestos
- Timber Cladding
- Brick Plinth



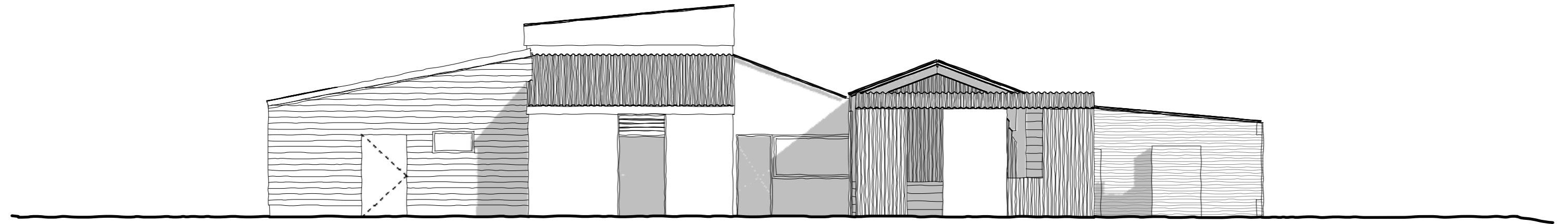
East Elevation
Scale: 1:100

- Corrugated Asbestos
- White painted blockwork wall
- Black painted blockwork plinth



North Elevation
Scale: 1:100

- Timber Cladding



West Elevation
Scale: 1:100

REVISION	DESCRIPTION	DATE	DRAWN	CHECK
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JOB No.	5952	DRAWING No.	SU_04	REVISION
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TITLE	Existing Elevations			
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SCALE	1:100	SHEET SIZE	A2	
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ISSUE DATE	20/03/2024			
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AUTHOR	BT	CHECK	TL	
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PROJECT	Proposed Class Q Conversion of Existing Barn Bell House, Humble Green, Little Waldringfield, Suffolk, CO10 0TB			
CLIENT	Oliphant and Miller Limited			

STATUS	SURVEY			
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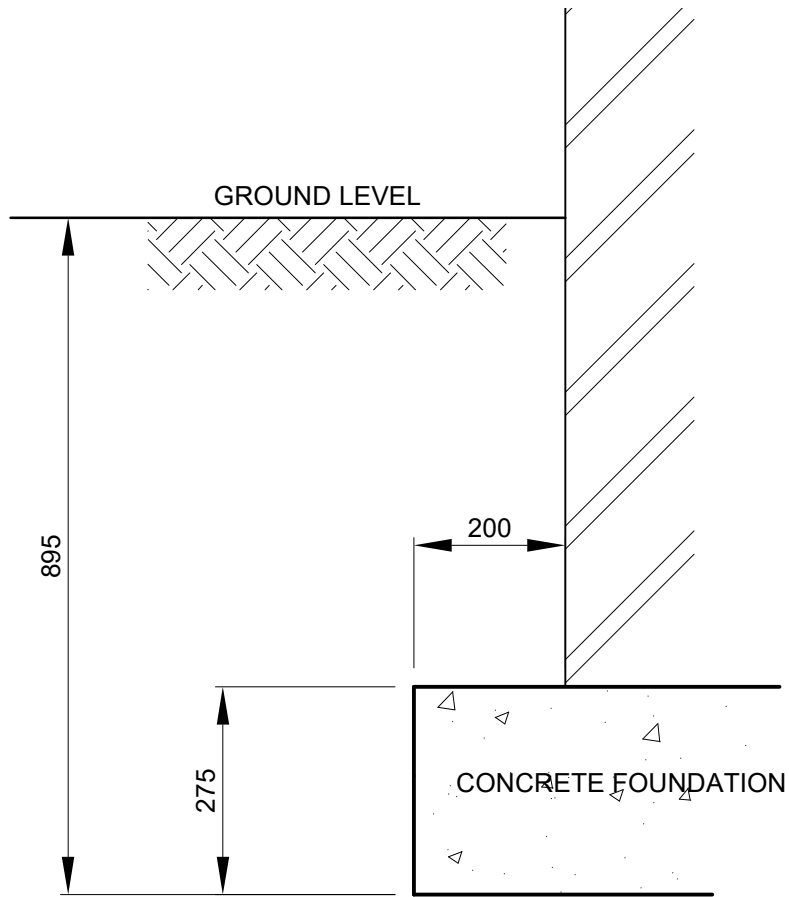
APPENDIX B



EXISTING FLOOR PLAN SHOWING DIFFERENT CONSTRUCTION AREAS AND PHOTOGRAPH CALL UPS.

SCALE 1:50

APPENDIX C



FIRM BOULDER CLAY STRATUM

TRIAL HOLE 1 (TP1) INFO.