

Mr A Holt

Barn at Lower Hud Lee Farm, Longridge Road, Hurst Green, BB7 9QP

Structural Condition Survey for Conversion to Dwelling



PSC-907

August 2024

Paul Snape Consulting
Lower Stanalee Farm
Stanalee Lane
Goosnargh
Preston PR3 2E



Mr A Holt
Structural Condition Survey
Barn at Lower Hud Lee Farm

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Structural Condition Survey

Barn at Lower Hud Lee Farm

1.0 Terms of reference

Paul Snape was appointed by Mr Holt to carry out a visual structural inspection and produce a structural condition survey report for the existing barn at Lower Hud Lee Farm, Longridge Road, Hurst Green. A location plan and layout of the farm is included in Appendix A.

2.0 Purpose of the survey

It is proposed to convert the barn to form a dwelling. The proposals have been prepared by ALH Design Services and are included in Appendix A together with details of the existing layout. The visual structural survey is required to confirm the current condition of the building and to assess its suitability for conversion. There are photographic records of the building in Appendix B and these are referenced throughout the report.

The drainage and electrical systems of the building have not been inspected. These will be renewed as part of the proposals and detailed for Building Regulation purposes.

We have not inspected parts of the structure that are covered, unexposed or inaccessible. Hence, we are unable to report if such parts of the property are free from defect.

Our inspection was undertaken on 15th August 2024 at which time the weather was fine and overcast following rain.

The survey was undertaken by a Chartered Civil Engineer, Paul Snape BEng (Hons) CEng MICE

3.0 Description of Building

The building is a single storey stone barn. The roof is slate on timber rafters, and a steel ridge. The building has an earth floor throughout.

4.0 External Survey

West Gable (Photo 1)

This elevation is built in random sandstone and the wall is 500mm thick. The wall is in good condition. It is plumb and well pointed. There are no signs of previous or ongoing movement. The only opening is a small vent opening to the upper north end.

North Elevation (photos 2 to 6)

This elevation is random stone wall with some patches of clay brick (photo 5) and is 500mm thick at the west end, reducing to 350mm at the eastern end where it has a block inner leaf. A boundary wall to the adjacent property meets this wall along its length (Photos 4 & 5). The wall is in good condition. It is plumb and well pointed and there are no signs of previous or ongoing

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Barn at Lower Hud Lee Farm

movement. This elevation has two window openings and a timber door opening, all at the western end.

East Gable (Photo 7)

This elevation is built in random sandstone with a block inner leaf and the wall is 350mm thick. The wall is in good condition. It is plumb and well pointed. There are no signs of previous or ongoing movement. There is a single door opening at the centre.

South Elevation (Photos 8 to 10)

This elevation is a 350mm thick random stone wall with a block inner leaf. The wall is plumb, reasonably well pointed and free from signs of movement. The elevation has a large central opening with a standard door to the west end and a large window to the east end.

Roof (Photos – External – photos 11 & 12)

Viewed externally, the main barn roof appears in very good condition with no sign of damage, slate loss, or deflection.

5.0 Internal Survey

(Photos 13 to 20)

Internal inspection indicates that all the walls are free from signs of previous or ongoing movement. The majority of the barn has 350mm thick walls with a 100mm block inner leaf plus 250mm of stone to the exterior (photo 14). The west gable and a short section of the north elevation are built in solid 500mm thick stone (photos 15 & 16). The interior is whitewashed.

The barn has an earth floor only (photo 17).

The roof to the barn has timber rafters spanning from the steel (structural) ridge to the wall plates, with timber ties to restrain spread (photo 18). The wall plates are strapped to the walls (photo 20). The ridge has a steel column towards the west end which has a concrete pad foundation (photos 18 and 19). The timber rafters are 140x43 mm sections and the steel sections are 254x146 UB sections. The roof is felted and all the timber is in good condition, free from any sign of rot or infestation. The steel sections have surface rust only and are in good condition.

6.0 Suitability for Conversion and Method of Construction

It can be seen from the survey detailed above that this barn is in a good condition structurally, with no sign of previous movement and no sign of ongoing movement. It is considered suitable for conversion to a dwelling. When converting barns, it is essential that the construction techniques and sequence are carefully considered.

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Conversion will require the construction of an insulated inner leaf. This may comprise of a cavity with insulation plus a block inner leaf. With this technique, care must be taken as the existing walls may be founded at a shallow depth. Trial holes should be dug to ascertain the actual depth. Ground floor levels should be set as high as possible and we would recommend the use of a concrete floor slab with thickened edges along external walls and thickenings under new internal walls. The thickening can be taken down to a similar depth as the existing walls. We would recommend a minimum depth of 400mm for the thickenings. Levels lower than the existing foundations should be avoided and if this is necessary an Engineer should be consulted as underpinning may be required. The new inner leaf (and backing block if used) should be tied to the existing wall with suitable cavity and/or specialist ties.

As an alternative, the new internal leaf could be formed with SIP panels if this is felt appropriate. Any new internal walls could be formed in masonry, SIP panels or timber stud walls as appropriate.

It is recommended that the new internal skin is in place and the internal walls, ground and first floor are put in place prior to any works to the roof although the roof. This will add stability to the existing walls. The barn currently has a good standard of roof and works to this area will be limited.

The existing rafters and ties appear to be in good condition with no sign of rot or infestation. Any timber retained should be assessed by a timber specialist, with regard to rot and infestation. All retained timber should be treated against rot/infestation and an indication of residual section given for structural purposes. All retained timber to be used structurally should be checked for structural adequacy. The ridge and column steel sections should be cleaned and painted with an appropriate paint to inhibit corrosion. They should also be checked against the final design details for structural adequacy but they appear to be suitable for purpose.

It is noted that no new openings are proposed but given the good condition of the barn walls, if any new openings were introduced in the barn this should not affect the overall stability of the building.

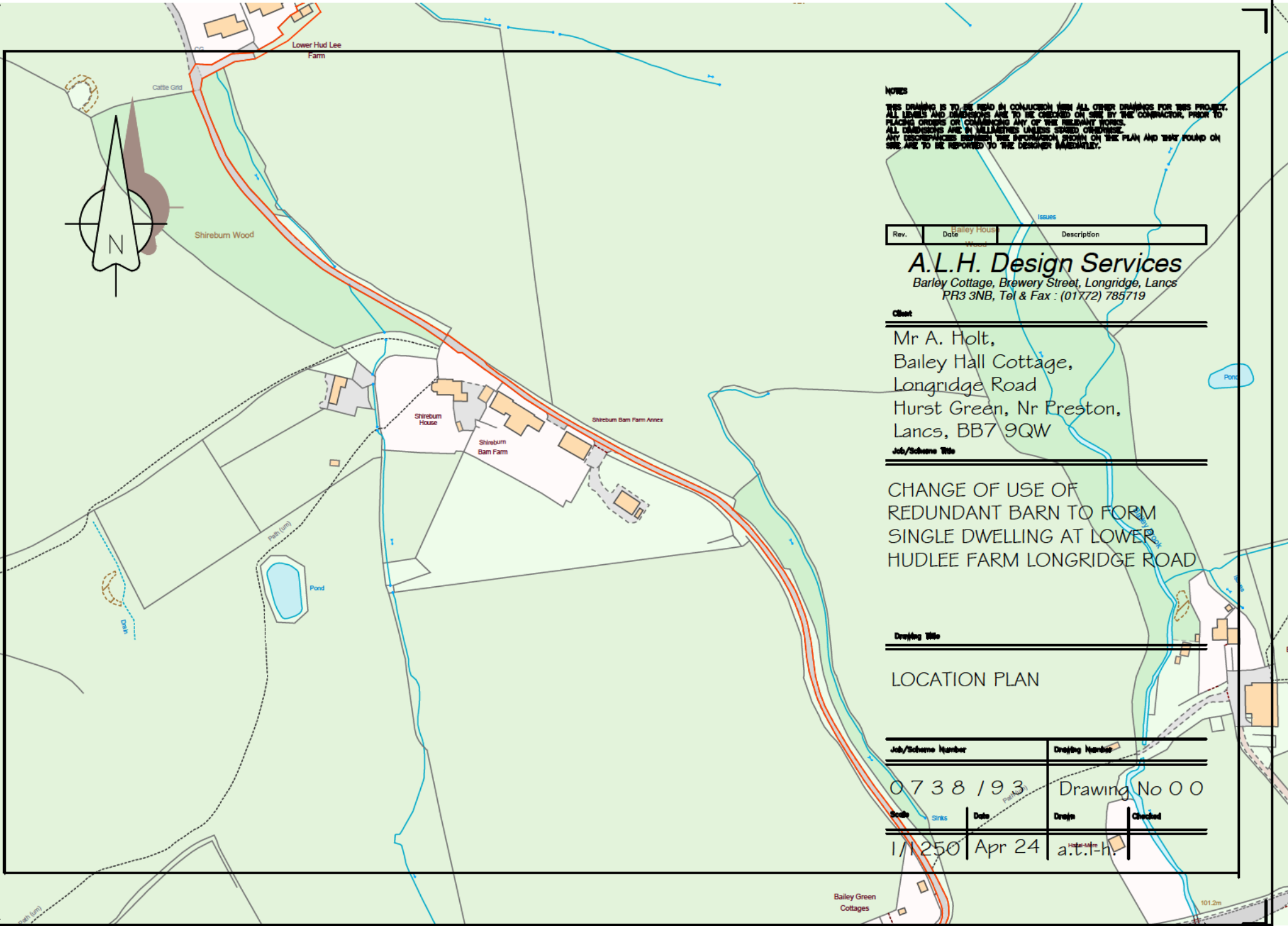
The dwelling will require connection to a suitable foul and surface water system. Foul sewers are not in place at this location, and a sewage treatment plant will be required meeting all current regulations in terms of treatment and outfall requirements. A sustainable surface water system will also be required for discharge to a watercourse, soakaway/drainage field or suitable surface water drain.

7.0 Conclusions

The barn is considered suitable for conversion to a dwelling. The construction should follow the guidance set out above and a structural engineer should be consulted with regard to the final layout for Building Regulation compliance.

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Structural Condition Survey
Barn at Lower Hud Lee Farm

Appendix A
Drawings



NOTES
 THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER DRAWINGS FOR THIS PROJECT. ALL LEVELS AND DIMENSIONS ARE TO BE CHECKED ON SITE BY THE CONTRACTOR, PRIOR TO PLACING ORDERS OR COMMENCING ANY OF THE RELEVANT WORKS. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS STATED OTHERWISE. ANY DISCREPANCIES BETWEEN THE INFORMATION SHOWN ON THE PLAN AND THAT FOUND ON SITE ARE TO BE REPORTED TO THE DESIGNER IMMEDIATELY.

Rev.	Date	Description
		ISSUES

A.L.H. Design Services
 Barley Cottage, Brewery Street, Longridge, Lancs
 PR3 3NB, Tel & Fax : (01772) 785719

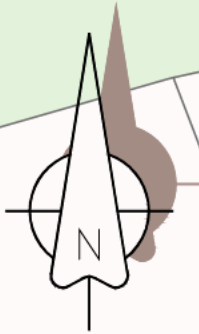
Client
 Mr A. Holt,
 Bailey Hall Cottage,
 Longridge Road
 Hurst Green, Nr Preston,
 Lancs, BB7 9QW

Job/Scheme Title
 CHANGE OF USE OF
 REDUNDANT BARN TO FORM
 SINGLE DWELLING AT LOWER
 HUDLEE FARM LONGRIDGE ROAD

Drawing Title
 LOCATION PLAN

Job/Scheme Number		Drawing Number	
0738/193		Drawing No 00	
Scale	Date	Drawn	Checked
1/250	Apr 24	a.t.-h.	

Adamson House



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Job/Scheme Title

CHANGE OF USE OF
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SINGLE DWELLING AT LOWER
HUDLEE FARM LONGRIDGE ROAD

Drawing Title

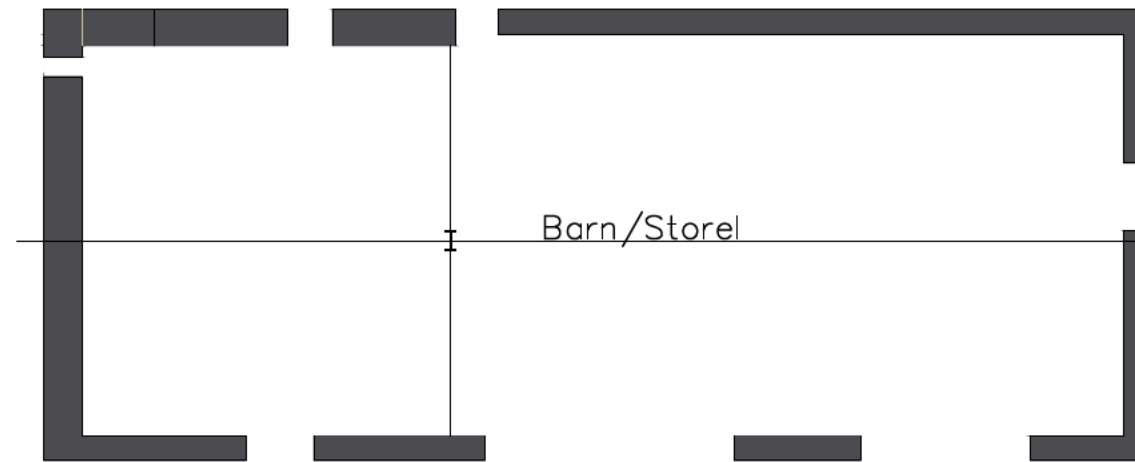
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Scale	Date	Drawn	Checked
1/1500	Apr 24	a.t.l-h.	

Lower Hud Lee
Farm

CG

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Ground Floor Plan



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Drawing Title

EXISTING FLOOR PLANS

Job/Scheme Number		Drawing Number	
0 7 3 8 / 9 3		Drawing No 0 3	
Scale	Date	Drawn	Checked
1 / 100	Apr 24	a.t.l-h.	

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WEST

SOUTH

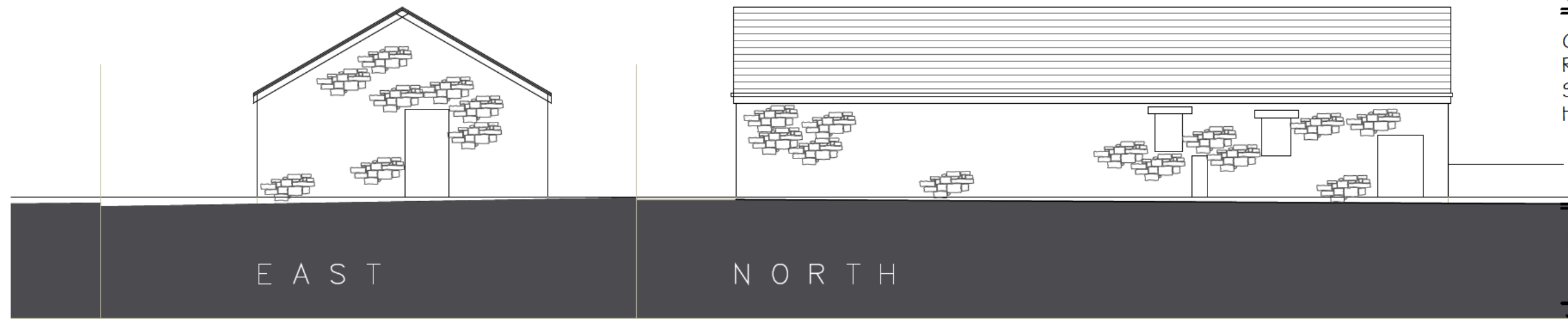
A 15.04.24 Elevations annotated for planner

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CHANGE OF USE OF
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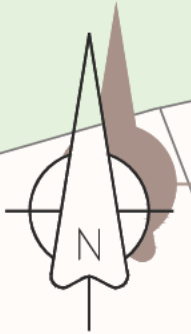
EAST

NORTH

Drawing Title
 EXISTING ELEVATIONS

Job/Volume Number	Drawing Number		
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Scale	Date	Drawn	Checked
1 / 100	Apr 24	a.t.l-h.	

Adamson House



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Drawing Title

PROPOSED SITE PLAN

Job/Scheme Number	Drawing Number
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0 7 3 8 / 9 3 Drawing No 0 5

Scale	Date	Drawn	Checked
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1/1500 | Apr 24 | a.t.l-h. |



garden area shown and marked by post and rail fence in timber, with stock fencing against it

form path 900mm wide, 300mm off face of bldg to allow for drainage soakaway, see details

form two number of parking spaces 4800x2400 and edgings are to be in s.w. treated timber

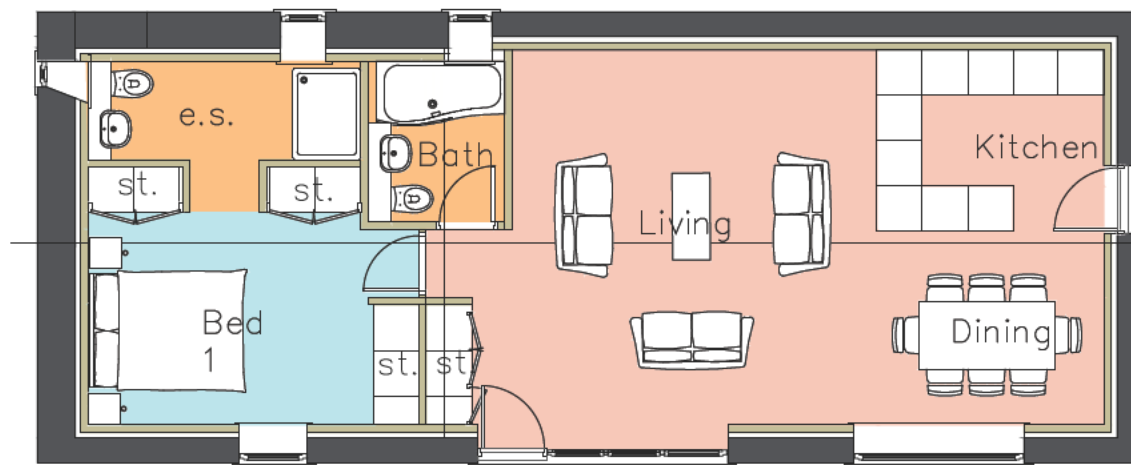
Lower Hud Lee Farm

form drive from existing tarmac in road planning and be 3600mm wide and extending beyond parking spaces to allow to turn round and exit in forward gear

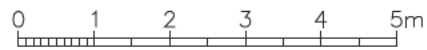
existing tarmac drive

CG

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Ground Floor Plan



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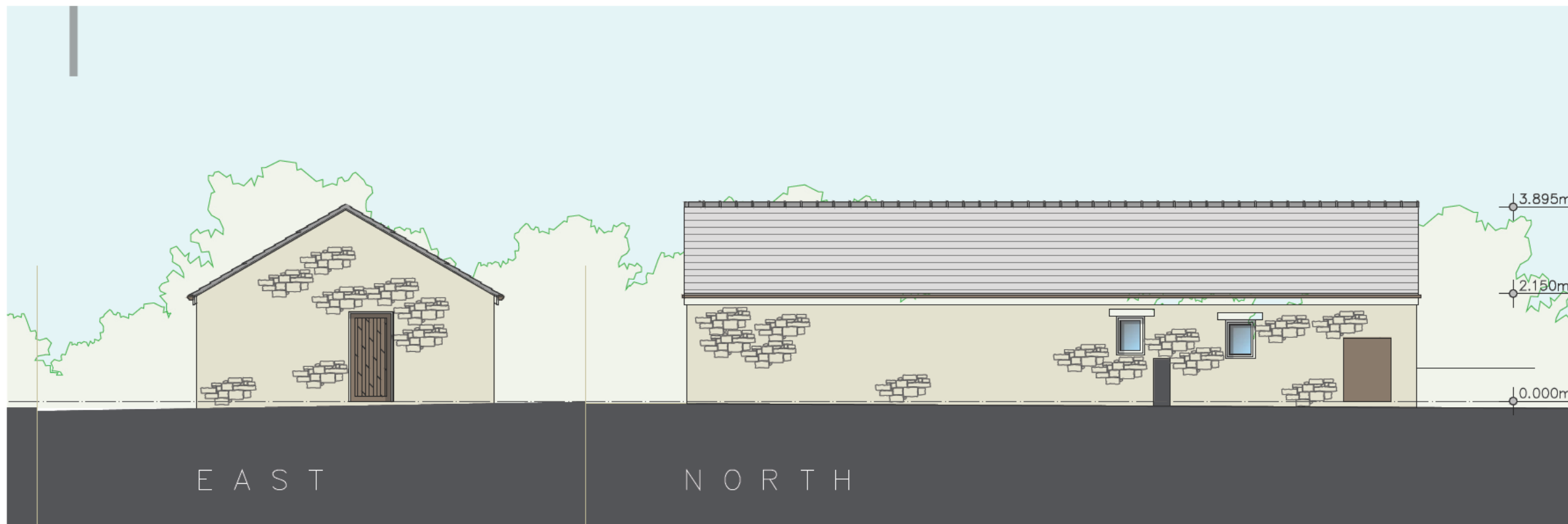
CHANGE OF USE OF
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Drawing Title

PROPOSED SKETCH PLANS

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Scale	Date	Drawn	Checked
1 / 100	Apr 24	a.t.l-h.	

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Drawing Title

PROPOSED ELEVATIONS

Job/Scheme Number	Drawing Number
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0738193 Drawing No 15A

Scale	Date	Drawn	Checked
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1 / 100 | Apr 24 | a.t.l-h.

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Appendix B
Photographs



Photo 1 - West Gable



Photo 2 – North Elevation – west end



Photo 3- North Elevation – east end



Photo 4 – North Elevation at boundary wall



Photo 5 – North Elevation at boundary wall



Photo 6 – North Elevation



Photo 7 – East Gable



Photo 8 – South Elevation



Photo 9 – South Elevation



Photo 10 – South Elevation



Photo 11 – Roof to North



Photo 12 – Roof to south



Photo 13 – Internal looking east



Photo 14 - Internal looking south



Photo 15 - Internal looking west



Photo 16 – Internal looking north



Photo 17 – Internal floor



Photo 18 – Internal – roof structure



Photo 19 – Internal – column to ridge beam



Photo 20 – Internal – wall plate and strapping

