

Structural Engineers

Cambridge Ltd

Report on Structural Inspection

At

Land to Rear of
26 High Street
Stretham
Ely
Cambridgeshire
CB6 3JQ

Job No. 23-652
November 2023

Inspection by:



Andrew T Chapman

Authorised by:

Charles Tallack B.Eng(Hons), C.Eng, MIStructE, MIMechE, ACGI

Structural Engineers Cambridge Limited
The White Horse
London Road, Pampisford
Cambridge CB22 3EF

INTRODUCTION

At the request of Graham Eldridge, I visited the above address on 14th November 2023 in order to inspect and comment on the structural integrity of the building and its suitability to be converted into habitable accommodation.



The layout of the property is described in the accompanying plan. A visual examination of the exterior was made from ground level, and the interior was viewed throughout. The roof structure was inspected from the loft space.

Unless specifically described in this report, no concealed parts of the building were opened up for inspection at this time and no elements concealed from view or inaccessible for inspection can be considered free from defect or decay.

This report does not constitute a full building survey and specifically excludes the following:

- a) The condition of the property with respect to dampness, dry rot, timber infestation and the like, unless structurally relevant
- b) The condition of services
- c) The location of the property, its value and other aspects such as searches, boundaries etc.

No monitoring, long term investigation, testing of materials of construction or calculations have been carried out at this stage.

This report is prepared solely for the named client and their professional advisers, and no liability is extended to any other person who may seek to rely on it.

OBSERVATIONS

The property in question is a single storey barn. The front of the barn faces roughly East. It is estimated to date from the late 19th or early 20th Centuries. There is a lean-to extension to the south side. The lean-to is at a lower level than the main barn.



Greg Saberton Architectural Design Consultancy have surveyed the buildings, and their plans are appended to this report.

The barn is constructed as follows:



Ground bearing concrete slab – it is not known if this is reinforced in any way.

Solid brick walls up to a height of between 2.2 and 1.4m. Cracking can be seen to a number of the brick elevations.



Timber framing above the brick wall to a height of around 4.2m – to eaves level.

Horizontal timber boards clad the timber framing above the plinth wall. A number of these are missing and



The roof structure consists of a number of timber trusses.

The roof coverings are corrugated sheets – presumably asbestos.

Ridge height of 6.4m.

The foundations consist of a stepped (corbelled) brick arrangement. These are at varying levels to account for the changes in ground level seen on the site.



The lean-to structure to the left-hand side is timber framed with corrugated steel sheet cladding to the exterior.

Damage could be seen to the timber framing, where the timbers are exposed, they have been subject to moisture penetration.

The brick plinth walls are distorted, they exhibit a degree of out of plumb over their height. Moisture penetration damage can be seen to the brickwork at ground level, this has been caused by moisture penetration.

Substructure

Although the foundations were not inspected by a trial pit what could be seen showed a stepped brick footing at a relatively shallow depth by modern standards. On a suitably firm stratum this type of foundation is normally satisfactory but may not be resistant to movement or local weakening of the soil due to changes in the moisture content of the soil.

From published geological maps^[1], the subsoil in the locality is identified as Woburn Sands Formation – Sandstone. This non-cohesive granular soil does not tend to shrink and swell with changes in moisture content but can suffer from foundation movement due to compaction of the soil under the weight of the building, particularly when saturated.

CONCLUSIONS

The barn is in fair condition but would require the following to make it suitable for conversion to habitable accommodation over two storeys:

Excavation of the floor slab.

Propping of the timber structure including the roof.

Propping and repair of the brickwork.

Underpinning of the foundation.

Replacement of damaged or undersized timber sections in walls and roof.

Addition of suitable insulation to floors, walls and roof.

Replacement of roof coverings.

Creation of first floor structure.

Tanking of ground floor structure – which if the ridge height is to remain as currently seen will effectively be a partial basement.

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Ref. No. 23-652

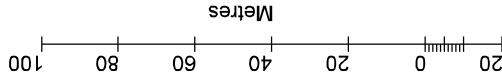
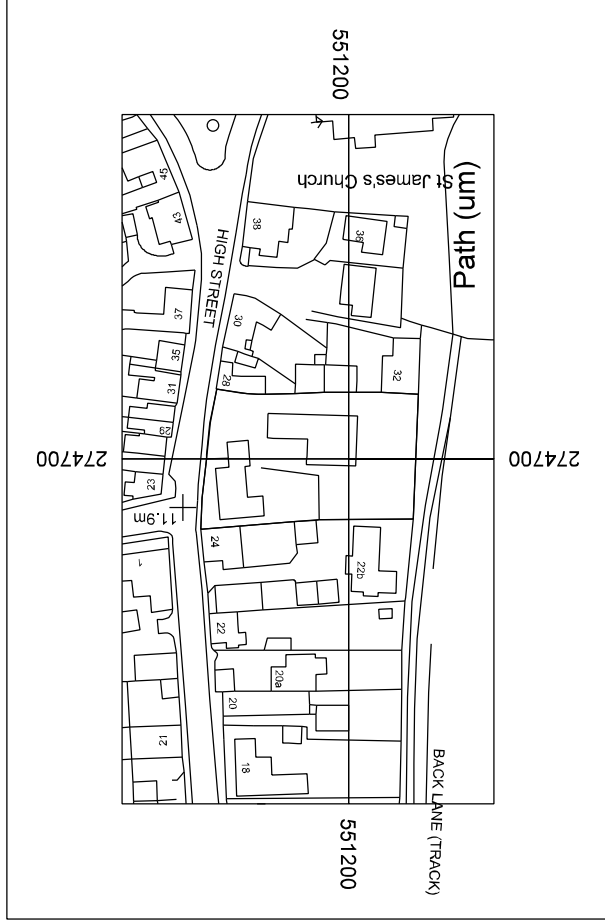
26 High Street Stretham Ely CB6 3JQ

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RECOMMENDATIONS

We do not consider the barn is an economically viable proposition to convert to habitable accommodation.

Stanfords Planning Map Data



Production Date: 25 May 2023

Top Left: 551162.058 274789.844 Bottom Right: 551258.989 274610.21

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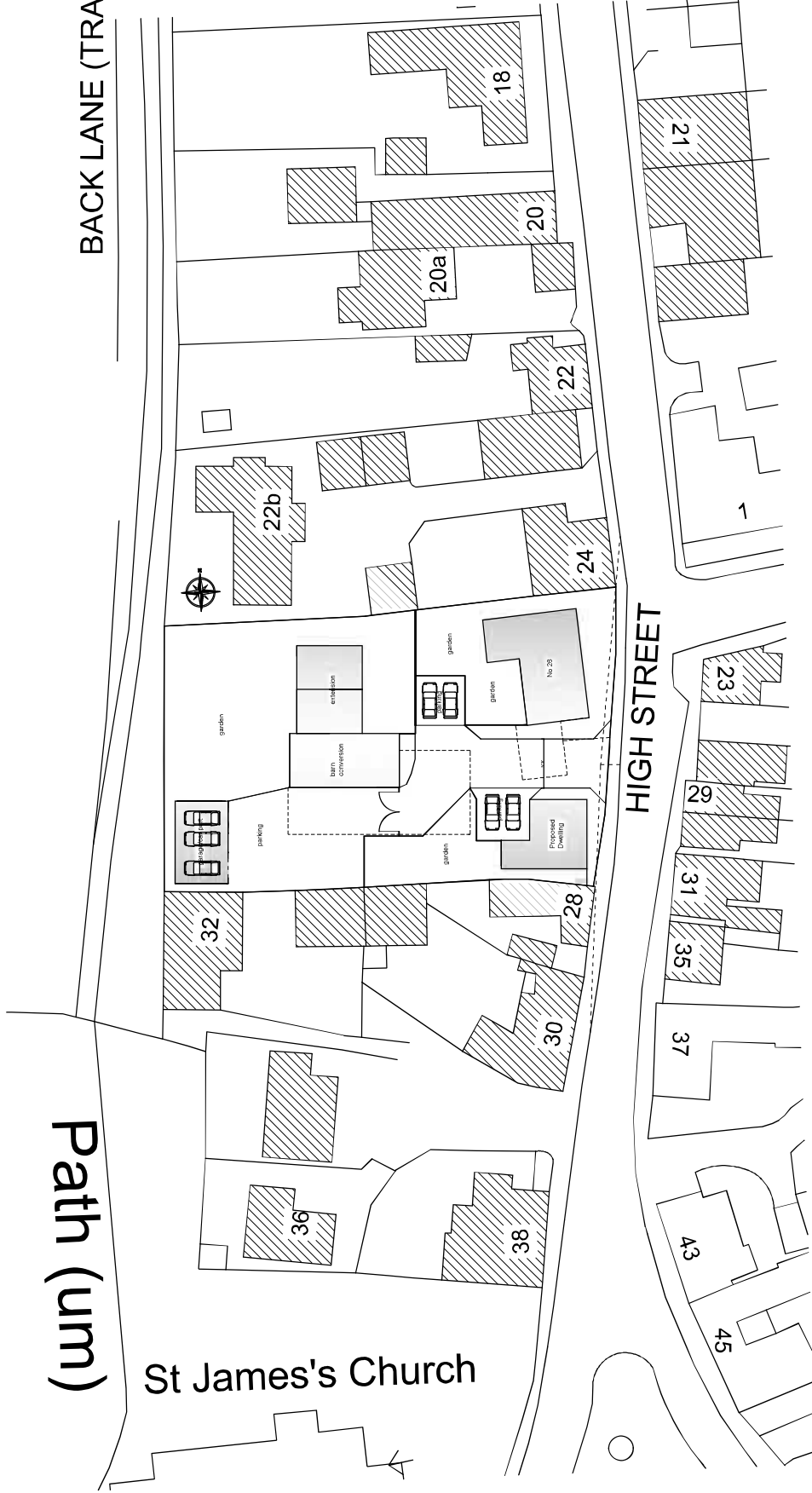
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<p>Contract : BARN CONVERSION - LAND TO REAR OF 26, HIGH STREET, STRETHAM, EL., CAMBS.</p>	<p>Title : LOCATION PLAN</p>	<p>Revisions :</p>	<p>Scale : 1 : 1250 Date : MAY 2023 Drawing Number : 01 / 3133 / 23</p>
<p>GREG SABERTON DESIGN ARCHITECTURAL DESIGN CONSULTANCY Tom's Hill Barn, Church Lane, El., Cambridgeshire, CB7 4UR Tel: 01353 657669 Fax: 01353 657669 Email: greg@sabertondesign.co.uk</p>			

Path (um)

BACK LANE (TRACK)

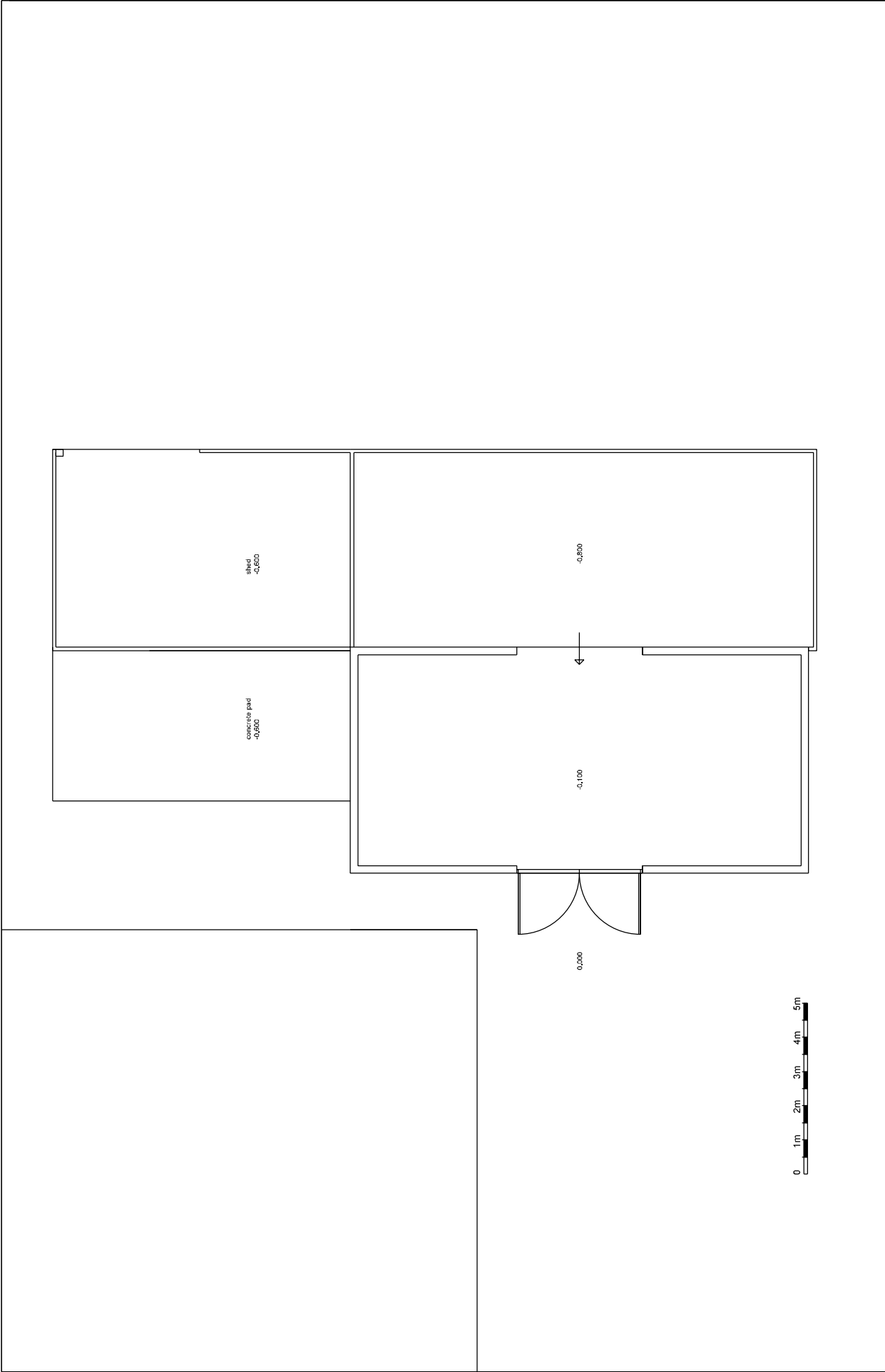
St James's Church



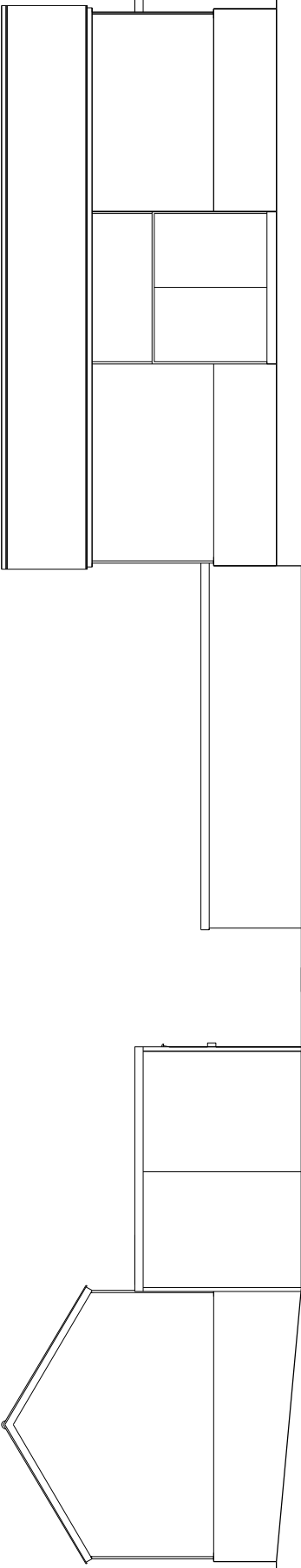
SITE PLAN 1:500

<p>Contract : BARN CONVERSION - LAND TO REAR OF 26, HIGH STREET, STRETHAM, EL., CAMBS.</p>	<p>Title : SITE PLAN</p>	<p>Revisions : -</p>	<p>Scale : 1 : 500 Date : MAY 2023 Drawing Number : 02 / 3133 / 23</p>	<p>GREG SABERTON DESIGN ARCHITECTURAL DESIGN CONSULTANCY Tom's Hill Barn, Churchfields, Churchfields, Cambridge, CB3 4UR Tel: 01223 557699 Fax: 01223 557699 Email: greg@sabertondesign.co.uk</p>
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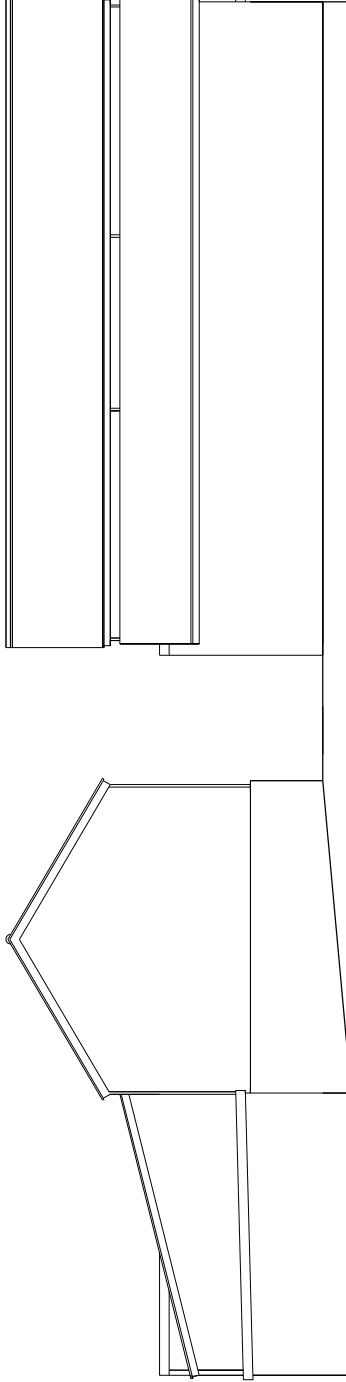


<p>Contract : BARN CONVERSION - LAND TO REAR OF 26, HIGH STREET, STRETHAM, EL., CAMBS.</p>	<p>Title : BARN PLAN AS EXISTING</p>	<p>Revisions : .</p> <p>These drawings are the COPYRIGHT of Greg Saberton Design. Unauthorised copying is not permitted.</p>	<p>Scale : 1 : 100 Date : MAY 2023 Drawing Number : 03 / 3133 / 23</p>	<p>GREG SABERTON DESIGN ARCHITECTURAL DESIGN CONSULTANCY Tom's Hill Barn, Churchfields, Churchfields, Cambridgeshire, CB7 4UR Tel: 01353 657669 Fax: 01353 657669 Email: greg@sabertondesign.co.uk</p>
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REAR
ELEVATIONS (as existing) 1:100

SIDE



FRONT

SIDE



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