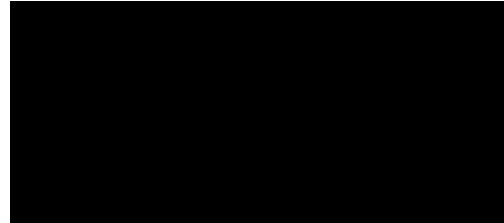




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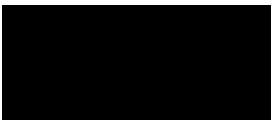


Date: 13th December 2023
Project No: 23266

Structural Report For Derelict Barn

- Structural survey carried out for Mr N. Choudry
- Survey date – 28th November 2023
- Site location – Rear of 33 High Street, Barton-Upon-Humber, DN18 5PD
- Report Number – 23266-SR1

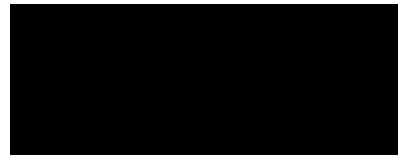
Report compiled by:



Sam Strangeway BSc (Hons)
PDS Design Ltd



Report approved by:



Paul Strangeway I.Eng., A.M.I. Struct. E.
PDS Design Ltd



BRIEF:

The client appointed PDS Design Ltd to inspect, report and appraise the existing structure of the exiting derelict barn building at the rear of; 33 High Street, Barton-Upon-Humber, DN18 5PD.

SCOPE OF REPORT:

This report is confined to an inspection of the structural elements of the property. Therefore, the report excludes any inspection or comment on electrical/ mechanical services, decorative conditions, damp proofing, non-structural timber fixtures, fittings, mouldings, coverings and all other non-structural matters unless they exhibit visible defects or are having an adverse effect on the structure. Whilst we will use all reasonable skill and care in preparing this report, it should be appreciated that we cannot guarantee that the property will be free from future defects or that existing ones will not suffer from further deterioration.

DESCRIPTION:

The property is part single/ part double storey brick faced building with a duo-pitched roof which is finished with roof tiles. The roof structure is of traditional build comprising of timber purlins & rafters, along with mid-height ceiling ties. The existing walls are constructed out of solid brickwork (225 wide walls). The ground floors are a mix of various cobbled floors at various levels throughout the building.

'Refer to photographs in Appendix 1' – Photos 1 to 9.

'Refer to site location plan in Appendix 2'.

'Reference should also be made to CK Architectural Planning drawings'.

Inspection/ Recommendations:

- External Walls:

The existing solid brickwork (shell) walls are generally in poor condition structurally.

The front gable elevation (A) has had major movement with some large/ significant cracking and open mortar joints which will need re-building/ making good throughout.

The left-hand corner has subsided & moved/bowed outwards to an extent in which would require re-building.

The left-hand elevation (B) has some large/ significant cracking and open mortar joints which will need re-building/ making good throughout.

There is a section of wall which is partly external and partly a shared wall with the adjoining link building which should be able to be retained to avoid disturbance to this building.

The right-hand elevation (C) has also bowed outwards, (possibly due to the fallen tree) albeit not quite as significant as the left-hand/front side. There is some large/ significant cracking also to this elevation and areas of missing mortar joints which will all need re-building/ making good as required. The corner to rear elevation (D) could be retained for a short length to the start of the bowing.

The rear elevation (D) was externally inaccessible due to the site boundary and neighbouring trees/ hedge line, therefore the inspection was only carried out internally to this elevation. Internally the walls look in reasonable condition for their age with minimal signs of cracking. This elevation should be able to be retained as part of the conversion with making good of any minor cracks/ weathered joints as required. This would be subject to removal of the collapsed trees/ hedge line & further inspection of the rear boundary wall.

All timber lintels/ beams will need replacing with suitable P.C concrete/ solid wall lintels.

- Two Storey Roof:

The existing main roof structure is in very bad condition with areas sagging and collapsing with the timbers having signs of rotting/ splitting therefore will need replacing with new timbers throughout. The roof can then be insulated/ dampproofed & brought up to present day building regulation standards.

- Single Storey Roof:

The existing roof structure is in very bad condition with areas sagging and collapsing with the timbers having signs of rotting/ splitting therefore will need replacing with new timbers throughout. A tree has also fallen onto this section of roof causing major damage to several of the roof timbers. The new roof should then be insulated/ dampproofed & brought up to present day building regulation standards.

- First Floor:

The floor timbers are in generally a very poor condition, with many of the joists sagging and being uneven, some of which have lost the end bearing onto the supporting walls. The timber ends show signs of rotting and splitting in several locations, therefore the floor joists should be replaced throughout & brought up to present day building regulation standards.

- Ground Floor:

The existing ground floor floors are a combination of various cobbled floors at various levels throughout the property. These will need to be taken up and replaced with new insulated concrete floor to current standards for the conversion.

- Foundations:

There were no trial pits excavated at the time of the survey to assess the existing foundation details or ground conditions. However, it is possible that the existing foundations may not be deep enough/adequate due its age and proximity to trees. Any walls that are being retained would need trial holes digging to determine their depths & suitability for the conversion, these may require possible underpinning.

SUMMARY/ FINAL RECCOMENDATIONS:

- Roof: (Two storey & single storey)

The roof is in very bad condition and in state of collapse. Roof is to be fully removed & replaced with new roof to current day standards.

- 1st Floor Structure:

The 1st floor timbers are in a very bad condition and in a state of collapse. Floor timbers are to be fully removed & replaced with new to current day standards.

- Ground Floor Structure:

Ground floor to be dug up & replaced with new floor to current day standards.

- External walls:

Front wall, right-hand side wall & part left-hand side walls to be demolished & re-built.

Rear wall & part left-hand wall to be retained where possible. Rear wall would need all trees/ hedges to boundary removed to check final external condition of wall. Once uncovered this may require underpinning, or re-building.

Part of the left-hand side wall (shared with link) to be retained where possible.

The derelict barn building is in a very poor structural state and in our opinion, this should be demolished and fully re-built, with the exception of the left-hand side shared wall and possibly the rear boundary wall subject to findings once the trees/ hedges are removed and full extent of wall is visible.

APPENDIX 1 – BUILDING PHOTOGRAPHS



Photo 1 – Front Elevation (A)



Photo 2 – Left-hand side Elevation (B)



Photo 3 – Right-hand side Elevation (C)



Photos 4/5 - Movement/ bulging to front left corner

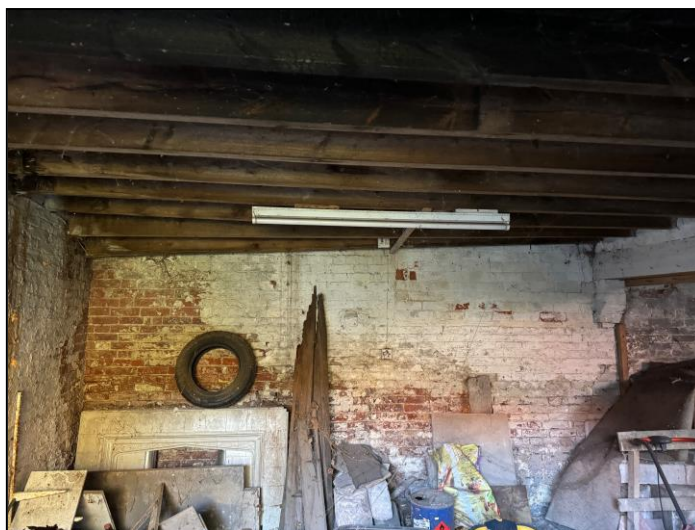


Photo 6 – Sagging 1st floor joists



Photo 7 – hole/damage to single storey roof

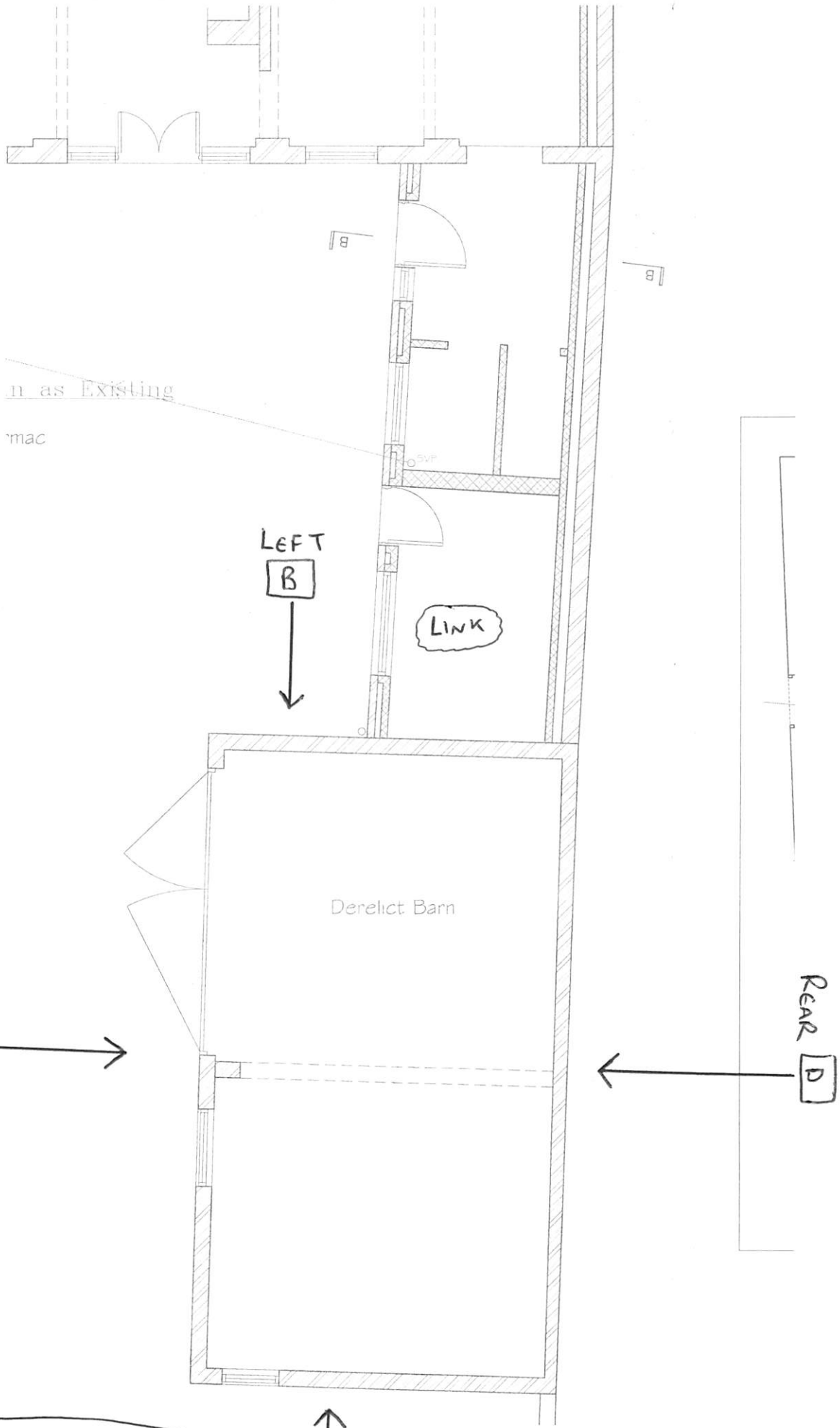


Photo 8 – 2 storey roof (rotten/ sagging members)

Photo 9
Cobbled ground floor



APPENDIX 2 – SITE LOCATION PLAN



n as Existing

mac

LEFT

B

LINK

Derelict Barn

FRONT

A

REAR

D

SITE LOCATION PLAN

0 0.5m 1m 2m 5m

1:50

C

RIGHT