STRUCTURAL CONDITION REPORT

PEWTER HOUSE FARM,
CARR LANE, BALDERSTONE,
RIBBLE VALLEY BB2 7LN

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fusion cse
civil | structural | environmental

CONTROL SHEET

CLIENT:	**Pewter House Developments Ltd**
PROJECT TITLE:	**Pewter House Farm, Carr Lane, Balderstone**
REPORT TITLE:	**Structural Survey Report (Class Q Application)**
PROJECT REFERENCE:	**22111**

Issue and Approval Schedule:

ISSUE 1 **<STATUS>**	Name	Signature	Date
Prepared by	Adam Hirst	[redacted]	28.03.24
Reviewed by	Mark Steel		28.03.24
Approved by	Adam Hirst		28.03.24

Revision Record:

Issue	Date	Status	Description	By	Chk	App
2						
3						
4						
5						
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Contents

1.0 Terms of reference

Fusion CSE Limited were appointed by Mr Hussain to carry out a visual structural inspection and produce a structural condition survey report for the existing agricultural building at Pewter House Farm, Carr Lane, Balderstone.

2.0 Purpose of the survey

It is proposed to convert the barn to form 5 No. dwellings under a Class Q Planning Application.
Proposed layouts have been prepared by C49 Architecture Ltd and it is intended to keep the existing steel frame and provide living space on two floors. The existing and proposed layouts are detailed on drawings prepared by C49 Architecture, and these are included as Appendix A.

The blockwork to the lower elevations would be retained, along with cladding to the upper elevations. The visual structural survey is required to confirm the current condition of the building and to assess the suitability for conversion.

There are photographic records of the building in Appendix B.

The drainage and electrical systems of the building have not been inspected. Therefore, we are unable to confirm that these are in a satisfactory condition.

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.

3.0 Description of Building

The building is a steel framed construction, with a steel portal frame in a duo-pitched steel portal framed structure which adjoin each other. Each structure contains four bays. Supporting a cement profile sheeted, pitched timber purlin roof.
The elevations consist of part lower concrete block walls with timber/corrugated cladding to the upper sections.

The building has a concrete ground floor. The building has a large concrete yard to the west and north elevations, with grassed areas to the south and east.

4.0 External Survey

West Elevation (Gable)

This gable is a mainly open elevation with a cladded section to the south end.
The main portal columns are 305x127x37 UB sections (based on flange thickness) and the rafters appear to be the same section.
Although some rust is evident, the steel is generally in good condition. All of the portal frames are constructed with the same section sizes. Given the age of the building (constructed within the past 30 years) it is assumed that the frames are founded on adequate pad foundations. There is no evidence of movement in the frame with all sections plumb in both directions.
The cladding is in reasonable condition.

North Elevation
This elevation has a concrete block wall to the lower section, constructed between the portal frames. The upper section of the wall consists of timber cladding which is in good condition.

South Elevation
This elevation has 215mm blockwork to the lower section of the wall. The upper section of the wall consists of timber and corrugated cladding.
The portal frames have little sign of rust and are generally in good condition with no structural damage or loss of section. The timber cladding is in good condition.

East Elevation (Gable)
The upper section of the wall consists of corrugated cladding which is in good condition.

Roof
The existing roof is cement profiled sheeting, carried on timber purlins which run between the portal frames. The roof is in good condition with no evidence of rot or infestation to the timber and no excessive movement or deflection. There may be some isolated repair works to some cement sheeting but these will be replaced where required with like for like as would be expected to be undertaken as a use for a barn.
The frames and roof are fully braced.

5.0 Internal Survey
Internal inspection shows that the floor is of a concrete construction (see photographs). There was no evidence of any structural movement or damage to the floor. Internal inspection of the frame and walls confirm the external findings noted above i.e. the building is in good condition structurally.

6.0 Suitability for Conversion and Method of Construction
It can be seen from the survey detailed above that this building is in a good condition in terms of structure. There is no sign of movement to the steel frame and the walls and floor slab appear solid with no movement.

Proposals for the conversion have been prepared by C49 Architecture Ltd.
The proposals are for five dwellings, and it is expected that the steel frame and the blockwork to the lower elevations would be retained, along with cladding and glazed areas to the elevations.

My inspection of the existing building noted that the external cladding and roofing materials were in good condition and there is no reason why the majority of the external elements of the building could not be retained with isolated areas to be repaired with like for like.

The existing foundations will be retained together with the existing floor slab. New internal walls would be provided to form party walls and the individual rooms/areas within the dwellings.

The proposed dwellings would be single storey and the height of the existing building will easily accommodate this.

In converting the building, it would be necessary to provide an inner skin to the existing external blockwork/cladding, forming an insulated cavity wall. The conversion will require new internal walls, and these may be built off the existing slab with any required

strengthening works incorporated within the new insulated floor slab to be provided above this.

These works will not require any works to the existing foundations or any works outside of the envelope of the existing building.

The internal walls would be structurally independent of the existing steel frame and would take the loading from new ceiling structures.
The height of the building will allow the existing floor slab to be retained and a new insulated floor laid over it.
Cores should be taken through the existing floor to ascertain the construction i.e. concrete depth, reinforcement details, hardcore depth and subgrade. This will provide the necessary detail to assess whether internal loadbearing walls can be built directly off the slab or whether new foundations will be necessary.

If new foundations are necessary, these can be formed by cutting through the slab to the minimum width necessary.
It will be essential that any new foundations do not affect the existing foundations to the columns and blockwork to be retained.
Trial holes should be hand dug to ascertain the detail of the existing pad footings to the frame and any existing strip footings to the walls, prior to detailed design. Any new foundations for the internal walls will be wholly within the envelope of the existing building.

The existing portal frame structure is in good condition and the frame will need to be assessed for the proposed loading from the roof, cladding and glazing.
The drawings indicate that the existing roof is to be retained, being repaired where necessary. This would therefore not increase loading on the frame. It should also be possible to install the insulation as part of the new internal structure therefore avoiding adding load to the rafters.

The portal frame will need a full assessment, including the haunch and apex connections, to take account of any revised loading but with the existing roof covering being retained, loading should be similar to existing and the rafter sections adequate.

The cladding and glazing to the elevations should be easily accommodated by the existing frame given the section sizes of the columns.
The steelwork will need cleaning and given a protective coating as necessary. The nature of the structure means that the openings introduced for the glazed sections would have no effect on the structural frame and integrity of the building.

I am satisfied that the building is capable of conversion and considering the case of Hibbitt, the scheme amounts very clearly to a conversion with most of the external elements of the current building being suitable for retention with the conversion and without requiring any works outside of the envelope of the existing building.

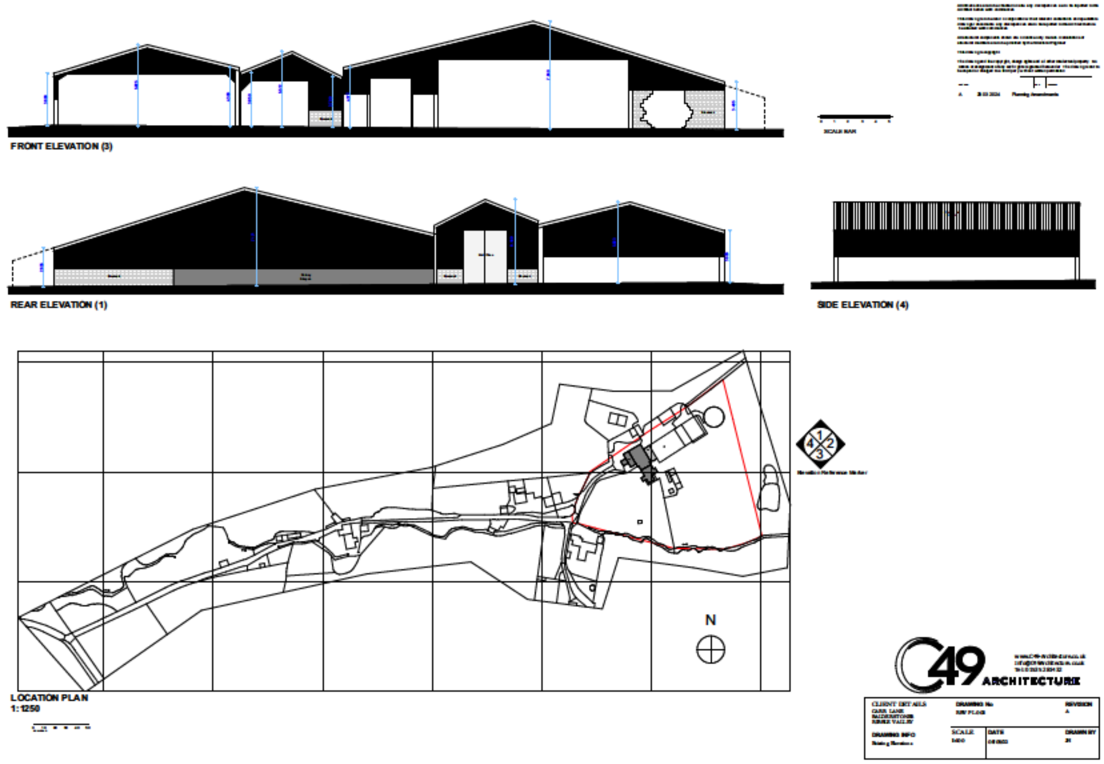
Given the proposed construction options briefly outlined above, it is considered that the building is suitable for conversion to dwellings. When converting agricultural buildings, it is essential that the construction techniques and sequence are carefully considered.

7.0 Conclusions

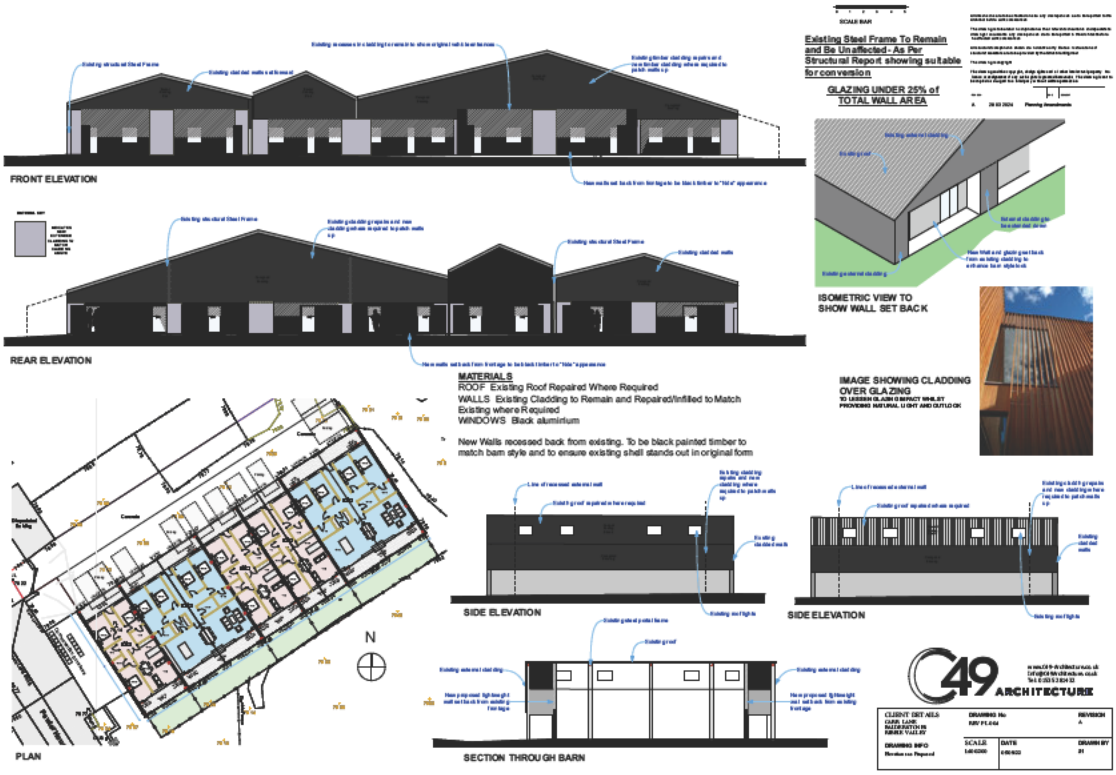
The building is in a good structural condition and is considered suitable for conversion by the methods and options outlined above. The new internal structure should be independent of the existing steel frame and be designed to have little or no effect on the existing structure. The existing portal frames and foundations should be assessed for the proposed roof structure and cladding to the elevations indicated.

Appendix A: Plans

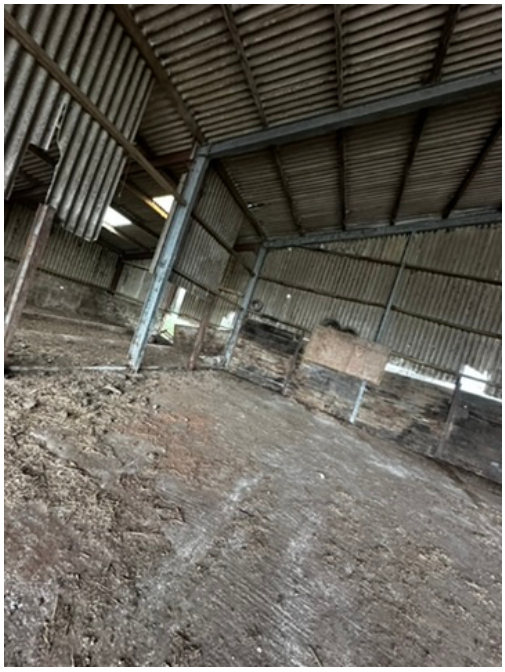

East Cottage
Dilapadated Building
Concrete
Concrete
Grassed Area
Grassed Area
Electric Fence
Electric Fence
Pewter House
SEE ENGINEERS REPORT FOR STRUCTURAL INTEGRITY
C49 ARCHITECTURE

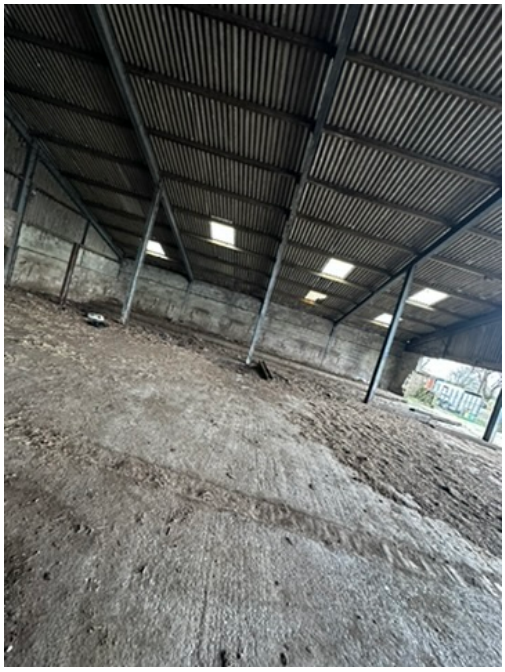

FRONT ELEVATION (3)
REAR ELEVATION (1)
SIDE ELEVATION (4)
LOCATION PLAN
1:1250
N
C49 ARCHITECTURE


East Cottage
Dilapadated Building
Former Storage/ Tractor Turning Area
Electric Fence
Parking
Communal Bin Store Area
Eaves Level 84.15
Ridge Level 86.77
Pewter Hou
MATERIALS
ROOF Existing Roof Repaired Where Required
WALLS Existing Cladding to Remain and Repaired/Infilled to Match Existing where Required
WINDOWS Black aluminium
New Walls recessed back from existing. To be black painted timber to match barn style and to ensure existing shell stands out in original form
Existing Steel Frame To Remain and Be Unaffected - As Per Structural Report showing suitable for conversion
C49 ARCHITECTURE
CLIENT DETAILS
DRAWING INFO
SCALE
DATE
DRAWN BY
REVISION


SCALE BAR
Existing Steel Frame To Remain and Be Unaffected - As Per Structural Report showing suitable for conversion
GLAZING UNDER 25% of TOTAL WALL AREA
FRONT ELEVATION
REAR ELEVATION
ISOMETRIC VIEW TO SHOW WALL SET BACK
IMAGE SHOWING CLADDING OVER GLAZING
MATERIALS
ROOF Existing Roof Repaired Where Required
WALLS Existing Cladding to Remain and Repaired/Infilled to Match Existing where Required
WINDOWS Black aluminium
New Walls recessed back from existing. To be black painted timber to match barn style and to ensure existing shell stands out in original form
SIDE ELEVATION
SIDE ELEVATION
PLAN
N
SECTION THROUGH BARN
C49 ARCHITECTURE
CLIENT DETAILS
DRAWING No
REVISION
SCALE
DATE
DRAWN BY
DRAWING INFO

Appendix B: Photographs





Standard Terms

1) This report is the property of Fusion CSE Limited and is confidential to the client designated in the report.
2) Whilst it may be shown to his/her professional advisors, the contents are not to be disclosed to, or made use of, by any third party, without our express written consent. Without such consent we can accept no responsibility to any third party.
3) We will consider the re-issue of the report in its original form to a third party within 6 months of the original report date for an administrative fee (currently £50.00 excluding VAT). Upon lapse of a 6-month period the report can only be re-issued following a full reinspection, which will attract a full survey fee.
4) We reserve the right to refuse copies of the report to any third party (other than those named above). We also reserve the right to amend our opinions in the event of additional information being made available at some future date.
5) Whilst every effort will be made to fully inspect those parts of the building requested of us, no permanent or secured fixtures and fittings will have been removed. We will not have inspected woodwork or other parts of the structure which were covered, unexposed or inaccessible and we are unable to report that any such part of the property is free from defect.
6) External elevations and the roof will be viewed from ground level, using binoculars where necessary.
7) In the event that defects have been purposely concealed and not disclosed, for instance by recent re-decoration or placing of furniture, Fusion CSE Limited shall not accept responsibility or consequence for resulting undetected defects.
8) Our inspection will not research the presence, or possible consequences, of contamination of the ground or buildings by any harmful substance. Many building materials in the past have contained asbestos, and our inspection will not therefore comment upon asbestos as this cannot be readily identified by a purely visual inspection. Should the client have concerns on this aspect then we would recommend that an independent specialist survey for asbestos is commissioned.
9) We will not inspect plumbing, heating, electrical or gas installations, or the internal condition of any chimney, boiler or flue, and would recommend that these are inspected separately by suitably qualified people.
10) We will not carry out a Flood Risk Assessment of the property unless specifically agreed in writing before carrying out the inspection.
11) Fusion CSE Limited certify that they have carried out the works contained herein with due care and diligence to their best belief and knowledge based on the time and information available. Any report is based on an opinion in respect of the property at the date of inspection. It is not a guarantee that nothing will change in the future.
12) This report is made on behalf of Fusion CSE Limited. By receiving it and acting on it, the client – or any third party relying on it – accepts that no individual is personally liable in contract, tort or breach of statutory duty (including negligence).