

Morton & Hall Consulting Limited

Consulting Structural Engineers & Building Design

Ref: H8379/MH/sg

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ENGINEER'S INSPECTION REPORT

OF

CHAMBERS FARM

WHITECROSS ROAD

WILBURTON

CAMBS

CB6 3QB

V.A.T 876 0014 34
Reg: 5525923

1.0 **INTRODUCTION**

1.1 **Client**

Mrs H Goodjohn, 12 New Road, Mepal, Cambs, CB6 2AD

1.2 **Date of Inspection**

Thursday 23rd June 2022

1.3 **Brief**

To investigate and report upon the structural elements only of the property.

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1.4 **Age and Type of Construction**

The property was a detached two storey dwelling with single storey wings about the rear constructed of load bearing masonry construction which faced approximately south onto the main road.

All reference to the property was made as viewed from the front.

The property was estimated at being in excess of 120 years age.

The roof pitched from front to rear with gable ends about both sides.

At ground floor level the gable ends appeared to be a full brick stretcher thickness.

At the time of the site visit the site particularly at the front, was overgrown.

About the rear of the property there were single storey lean to wings, which were in a very poor condition and partially collapsed. Beyond the property there was a single storey outbuilding which was largely overgrown. The outbuilding was approximately 1m x 1.5m and is the outside toilet to the property.

1.5 **Extent of Examination**

The inspection comprised an external examination from ground level together with an internal inspection, where possible.

At the time of the site visit the property had been derelict for a number of years and internally there was vandalism.

We did not inspect woodwork or other parts of the structure which were covered, unexposed or inaccessible and we were therefore unable to report that any such part of the property was free from defect. Where there was extensive quilt insulation laid in the loft space, this covered the ceiling structure preventing a detailed assessment from being made.

The surface of all floors not covered with fixed coverings was inspected as far as was practical. Fixed floor boards were not lifted and equally fitted carpets were not lifted but the Engineer had, where possible, lifted accessible corners sufficiently to indicate the nature of the finish beneath.

Below ground drains were not inspected.

We have not undertaken a detailed Environmental Search or Flood Risk Assessment.

The inspection was limited to the structural aspects only and has not included for a detailed assessment of items of fabric, finishes, fixtures, fittings or services and potential asbestos materials. No checks were made whether there was Japanese Knotweed over the site.

1.6 **Occupancy & Condition**

At the time of the site visit the property was vacant.

All furniture was set at both ground and first floor level.

The property was in a very poor condition with sections about the rear partially collapsed.

The layout of the property appeared to be largely as originally built.

1.7 **Appendices**

There are the following Appendices at the end of this report:-

Appendix A ~ Photographic Survey

2.0 SITE INSPECTION AND INVESTIGATION

2.1 The Site

The property was located in the open countryside beyond the villages of Witchford and Wentworth.

Where the dwelling is to be set, the ground is generally level and the overall site is set approximately 0.3m below the level of the main road.

British Geological Survey Sheet Cambridge 188 indicated soils at the site to comprise Kimmeridge Clay.

On reviewing the Environment Agency's Flood Map, this site was located within Flood Zone 1, low risk.

Adjacent to the main road there was a drainage ditch approximately 1.5m in depth, which would be approximately 7m from the front wall of the property.

Over and adjacent the site there was the following vegetation:-

<u>Tree</u>	<u>Height</u>	<u>Location</u>
Ash	up to 18m	within 11m from the rear wall of the property
Willow	up to 18m	within 20m from the left hand side wall of the property

Along the front boundary and all in front of the front elevation of the property, the site was overgrown with vegetation and no access could be gained, with vegetation approximately 4m in height.

About the right hand side boundary of the curtilage of the property and rear boundary, there was a hedge of approximately 2.5m in height.

Access to the site was via a double gate from the main road which was approximately 9m from the front left hand corner of the property.

The property and site were not tested for any form of contamination, pollution or any other environmental impairment and we are therefore unable to make any comment in this regard.

2.2 **Roof Exterior**

The roof was clad with slate tiles on both the front and rear pitches and these continued down to a section of the lean to extension.

The single storey conservatory area was covered with an asbestos clad cement sheet.

Viewing along the roof line to the main property, this was reasonably well aligned where ridge tiles were set.

The slate tiles in areas had been lost and had slipped and overall the tiling was in a poor condition due to a lack of maintenance.

There was not excessive sagging to the roof pitches.

2.4 **Chimney Stacks**

There were chimney stacks set to either gable end of the main two storey property and a further chimney stack set to the left hand side gable end in the single storey wing which would have been a kitchen area.

All stacks lean inwards as viewed from ground level.

There was no flashings set about the base of the stacks where these continued down to the roof slope, as there was merely cement set about.

Clay pots are set to all stacks and there was evidence of mortar erosion to the stacks.

2.5 External Walls

The external walls of the property at ground floor appeared to be of a brick stretcher thickness.

At first floor level the front wall appeared to continue as a brick stretcher thickness however the thickness of the gable ends above first floor could not be ascertained.

No access could be gained to the front elevation as this was overgrown.

On viewing from ground level the front elevation above first floor level bows to centre.

The left hand side gable end bowed above first floor level which continued to the ridge line.

Although there was no evidence of structural cracking to the front section of the gable end, there would be a lack of tie at first floor level and ceiling level together with the weight of the chimney stack on the gable ends.

Where the chimney stack was made about the rear section of the gable, mortar erosion was present together with a structural crack to the top left hand corner of the lounge window opening.

The elevation was partially overgrown by Ivy.

The rear elevation to the single storey wing had thrust out slightly at eaves level.

Structural cracking was present adjacent the return of the wall at the left hand side gable end of up to 10mm thickness.

The continuation of this wall was the conservatory wing which the joinery had all been lost and was propped up by an acro prop.

The remainder of the rear wall was enclosed by the conservatory and plastered.

No structural cracking was evident through the ground floor section of the rear wall.

On viewing along the right hand side gable end, this also had bowed at first floor level, continuing beyond eaves level due to a lack of tie and the chimney stack being set to the gable.

The elevation was partially overgrown by Ivy.

Mortar was missing from joints particularly where the stack was set and above eaves level.

No distinct structural cracking was noted to this elevation.

2.6 **Damproof Course & Subfloor Ventilation**

Viewing about the main two storey property, there was no evidence of any subfloor ventilation.

Viewing about the original property, there was no evidence of a slate or bitumen damproof course about the property.

2.7 **Roof Interior**

There was no loft hatch to the property and access could not be gained into the main two storey roof.

There was no loft hatch to the single storey lean to roof or to the conservatory roof.

2.8 Chimney Breasts

The chimney breast continued down from the gable end into the single storey kitchen about the rear left hand gable end.

The stack itself, as viewed from ground level appeared in reasonable condition, internally.

There were chimney stacks to the left and right hand side gable end in the main property which continued through the ground and first floor levels and we assumed continued through the roof space, however this could not be confirmed.

Stacks appeared reasonably well aligned internally with no distinct structural cracking through.

2.9 Ceilings, Walls & Partitions

Ceilings within the property were in a very poor condition and cracked through at ground floor level.

The ceilings within the rear single storey wing were also in a poor condition with coving lost in numerous areas and the ceiling unaligned by approximately 50mm in places.

The ceiling within the ground floor conservatory was being propped up by acro props and sloped approximately 100mm to the rear.

At first floor level flat ceilings were set which then sloped down towards eaves level, both front and rear.

Ceilings were cracked through and were generally in a poor condition.

Internally at ground floor level, the main partitions front to rear, either side of the staircase were of brick construction with plaster finishes over.

Partitions were structurally cracked through about door openings.

The right hand side partition against the staircase continued up to the underside of the ceiling.

A banister had been lost above the left hand side partition.

The timber staircase internally allowed access at first floor level, front to rear with no handrails and the banister being lost.

The staircase was uneven underfoot.

2.10 **First Floor Structure**

Timber first floor joists were set spanning front to rear through the property with timber floorboards over.

On gaining access onto the first floor, joists deflected underfoot and would be undersized for their spans.

Within the left hand side bedroom, the floor had distorted where there was previously a banister.

There were gaps about the skirting board underside against the floorboards.

Some limited carpets and rugs were set but these were in a very poor condition.

2.11 **Ground Floor Structure**

On walking through the main property this appeared to be a concrete slab which was expected to have no insulation or damproof membrane

The thickness of the concrete was unknown however it was expected this would be minimal.

On walking over the floor this was uneven underfoot and dropped to edges of external and internal walls.

Due to the debris within the property the finishes of the floors was not lifted.

Within the single storey kitchen wing, there was debris over the floor, however it is expected that this is a minimal concrete slab.

On viewing this, this was very uneven underfoot and about doorways was cracked through.

The ground floor structure within the conservatory area could not be ascertained as vegetation had grown through the window openings and the majority of the outside walls of the conservatory had been lost.

2.12 **Drainage**

Internally within the property there was no shower or bath.

There was a sink within the kitchen at ground floor level.

A later toilet had been set at ground floor in the lounge to the rear.

It is assumed that there was a septic tank within the grounds of the property, however the location of this was unknown.

Where there was a brick outbuilding beyond the rear elevation of the property, it was expected that there would be a toilet within this building, however this was overgrown at the time of the site visit.

The roof drained into cast iron gutters about the property which were rusted through.

Ivy had overgrown the property and no access could be made to the front elevation.

It is expected that the gutters would merely drain onto the surrounding ground.

2.13 **Foundations**

Trialholes were not excavated to expose the foundations however we would expect the property to be founded upon shallow brick corbelled foundations.

The lean to conservatory area which was partially collapsed was expected to have limited, if any foundations.

Overall the property does not appear to have experienced overall foundation movement in any distinct direction.

2.14 **Rear Conservatory Extension**

The rear single storey conservatory extension was in a very poor and partially collapsed.

Only limited access was gained to this.

Reference should be made to the photographs, however this required to be demolished.

2.15 **Joinery, Services, Fixtures & Fittings**

It was not in our brief to examine the joinery, services, fixtures and fittings and services and no further comment is made in this regard.

We have not carried out tests to the services, recourse should be made to appropriate specialists for detailed advice.

3.0 **CONCLUSIONS**

3.1 **Structural Stability**

There had been no maintenance undertaken to the property for a number of years.

The single storey conservatory wing had partially been lost and propped up and was in a dangerous condition.

The main property had been subject to vandalism.

Overall structural works would be required to the property of tying in first floors, strengthening first floors, tying in eaves level and possible strengthening of the roof and ceiling structure.

A new ground floor structure would be required throughout the property.

The conservatory would need to be demolished and rebuilt.

The rear single storey wing would also require new ground structure together with roof strengthening works.

Chimney stacks would require to be demolished and rebuilt to line and level.

The property would also need to be repointed where there is mortar erosion.

The front elevation could not be surveyed, however it is likely there would be repointing works and tying in works.

3.2 **Refurbishment of the Property**

The property required full refurbishment throughout.

All finishes would need to be removed and the property stripped back to the basic structure.

There was no bathroom within the property and therefore if a bathroom was set, it is likely the property would then become a one bedroom property which would not be suitable for modern living standards.

4.0 **RECOMMENDATIONS**

4.1 **Asbestos Survey**

An Asbestos Survey should be undertaken of the property prior to any works commencing on site.

The Asbestos Survey should identify any asbestos containing materials and give recommendations of their suitable removal and disposal.

4.2 **Demolition of the Property**

The property is in a poor condition and requires full refurbishment throughout and areas require partial demolition.

There was limited headroom within the property particularly at ground floor level and the property does not have a bathroom.

Due to the substantial amount of renovation and structural works that are required, we would recommend that the property is demolished, reusing existing materials where possible in a replacement.

4.3 **Drainage & Services**

There would be a requirement to set all new below ground drainage, both for foul and surface water drainage.

Appropriate services would also need to be set for the dwelling.

There appeared to be BT and electrical services on the site and we would also assume there was water.

4.4 **Planning & Building Regulations Approval**

The demolition and rebuilding of a property would be subject to a Planning Application to the Local Authority and a Building Regulations Application to the Local Authority.

4.5 **CDM Regulations**

The CDM Regulations 2015 in terms of Health & Safety would apply to this project. There would be a requirement to appoint Principle Contractors and Principle Designers and all roles would need to be discussed and agreed.

The client would need to make appropriate appointments for the project.

4.6 **Vegetation Management**

As a general rule no trees or large shrubs should be planted within 5.0m of any building and elsewhere trees and shrubs should be kept pruned at heights no greater than their distance from any building.

4.7 **Limitations**

These recommendations are based on the findings of our site investigation. We point out that other conditions may exist elsewhere on the site of which we have no knowledge and accept no responsibility. The site has not been tested for contamination. The final foundation design will be dictated by the proposed type of superstructure and performance specification of the building.

Signed
Matthew Hall - I.Eng. AMIStructE

ACIOB MFPWS

Director

For and on behalf of

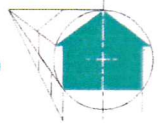
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APPENDIX A

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PHOTOGRAPHIC SURVEY

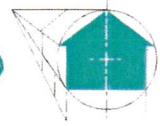
1. Overall view of the property from the main road.
2. View of the drainage ditch to the front of the site.
3. View of vegetation to the front of the site.
4. View of mature Ash tree to the rear of the site.
5. View of the left hand side gable end and rear elevation.
6. View about the right hand side gable end and conservatory which was in very poor condition.
7. View of the chimney stacks from the rear garden area above the roof line, showing these leaning inwards.
8. View of the conservatory being propped up and partially lost.
9. View of the kitchen area showing debris and poor condition.
10. View of the dining room from the kitchen entrance door.
11. View of the lounge area from the entrance door.
12. View of the left hand side first floor bedroom, as viewed from the front.
13. Structural cracking through the rear wall finishes, as viewed from the staircase.
14. View of cracking through the front wall and internal partition as viewed from the landing area.
15. View of cracking through ceiling finishes at eaves level.
16. View of the outbuilding with assumed toilet internally.



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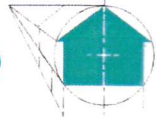
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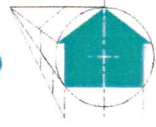
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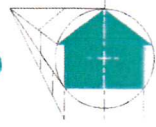
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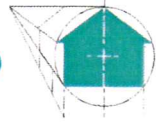
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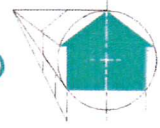
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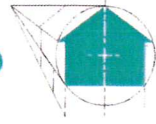
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