

STRUCTURAL REPORT

Produced on behalf of Mr. & Mrs. J. Malone

Conversion of redundant farm buildings to form a single dwelling

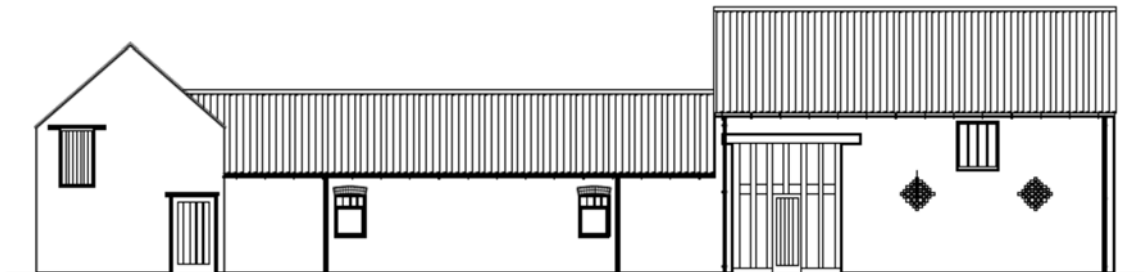
With associated garaging and outbuildings

Field House Farm

Main Street

Asselby

DN14 7HE



30 April 2021

Project Number : 3526



Introduction

There is a proposal to convert the existing farm buildings into a single dwelling.

The buildings are currently not being used for anything other than long term storage.

Planning permission is being sought for the scheme.

This report is required to show that the buildings will be capable of retaining their structural integrity and is economically capable of being converted to residential use.

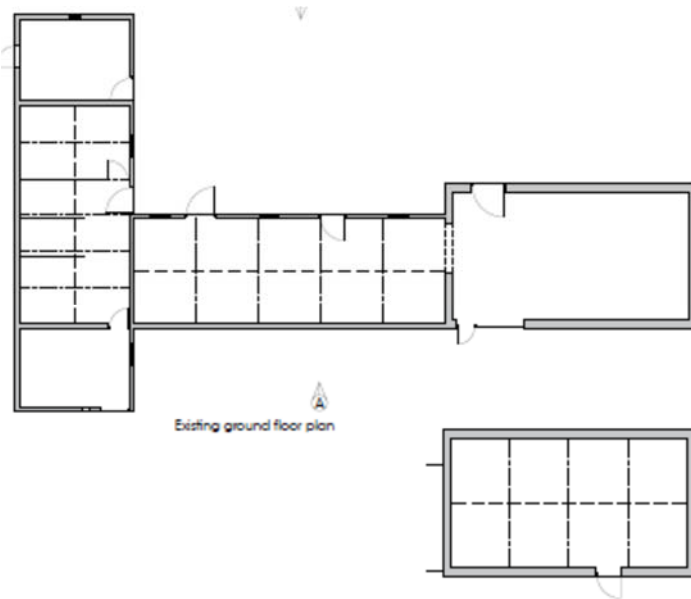
The site has a series of buildings which are not worthy of be retained and do not fit into the scheme design.

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There are three portal framed steel buildings which are to be dismantled and removed from the site.

The building concerned in the main part of this report is the "T" building at the centre of the site. This comprises a single storey building constructed of brickwork supporting a double pitched roof finished with clay pantiles. The supporting structure is made up of timber King Post trusses supporting purlins and rafters which in turn support the pantile finish. The southern section of the building is potentially two storey in height. To the north of this the remaining buildings are single storey with a mixture of rafter, purlins and collared construction and rafter, purlins and king post trusses.



Existing plan

Survey

Walls

The walls are of 238mm and 397mm thick solid brickwork supported by stepped brick footings set approximately ????? below the existing ground level.

The southern block is potentially two storey in height but as it exists is constructed with walls of 397mm brickwork. There is currently no intermediate support for the walls.

The southern gable is totally covered by ivy so at this time cannot be surveyed.





Internally the wall is well mortared and pointed and shows no signs of structural damage.





The northerly gable brickwork is shown above internally.

It is evident that the timber lintel over the opening which gives access from the two storey area to the single storey area has over its life deflected. This is shown by the repaired brickwork. There is a subsequent diagonal crack rising from the rise hand side rising up towards the ridge level.



The following set of pictures show that the brickwork and structure is generally in good condition unfortunately misled by the amount of waste in the areas.



Note the window and door head brick arches all appear to be in good condition with no signs of fracture cracks.









This picture shows the worst crack and piece of structural damage on the whole of the building. It can be quite clearly seen that door has been placed in the corner and hence there is no strength in the wall over the height of the door. That combined with the timber lintel creates a weak form of construction and as a consequence it has failed as would be expected.

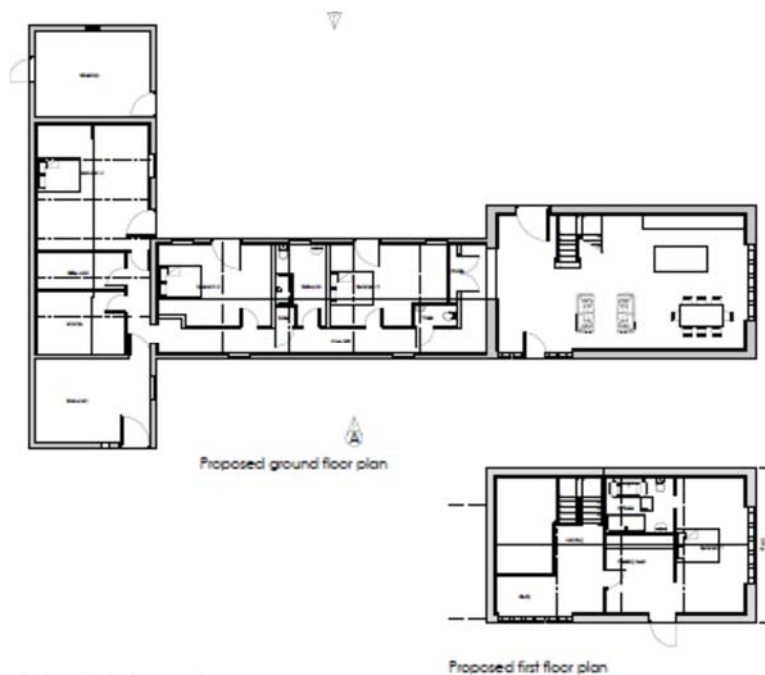


The stable block is in good condition. Note the straightness of the ridge.



Conclusions

The buildings have obviously not be used for their original purpose for a number of years and appear to have become a dumping ground for all manner of materials. The lack of effective gutters and fallpipes have lead to damage being caused to the roof and walls. The roof timbers, purlins and kingpost trusses appear in reasonable condition but must be checked for their integrity and continued use. The should be treated for worm infestation and a guarantee taken on completion.



The provision of a new first floor construction will provide additional structural stability to the two storey section.

Checks have been carried out to establish and confirm the type of foundation used. It has been found that shallow stepped brick footings have been used. It would be advantageous to provide additional protection externally by the use of perimeter paving.

The structural repairs are straight forward, steel lintels should be provided to the inner supporting leaf in place of existing timbers.

There is absolutely no doubt that if all the works described are attended to as part of the conversion to a single dwelling that the result will be a substantial dwelling house which retains all the character, history and construction details reflecting its former use.