

CIVIL AND STRUCTURAL ENGINEERS

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Dear Mr & Mrs Donahue

GROVE FARM, GOODMANHAM LANE GOODMANHAM, YORK, YO43 3HX

An inspection of the outbuilding to Grove Farm, Goodmanham Lane was carried out during Monday 10 May 2021; the inspection being undertaken in order to comment upon the structural suitability of the unit for conversion into a residential dwelling.

The outbuilding to the rear of Grove Farm is a traditionally built brick building likely to have been used as a storage/stable block. Accommodation is provided on two floors with the upper floor being within the roof space. A visual inspection of the East and North elevation was limited due to the presence of an existing structure abutting the outbuilding

The inspection looked at the visible faces of walls and found as follows:

• The front elevation of the outbuilding (West elevation) has four brick arches forming openings into the lower floor. Above the arches are vented louvres within the first-floor brickwork. There is also evidence of previous openings having been filled along the full elevation. The brick arches forming the support to the brickwork over the ground floor openings are very flat and shown signs of settlement. No cracking was currently observed within the arches or within the brickwork over.

- To the gable elevation of the outbuilding (South elevation)
 a visual inspection was limited due to plant growth
 however, the gable appears to be free from significant
 defect and tending to be overall vertical.
- A limited inspection to the rear elevation (East elevation) revealed the property to be free from significant structural defects with walls tending to be overall vertical.
- Internally, the first floor is supported using large timber beams spanning between the brickwork pillars to the front elevation and the rear elevation. Timber joists then span left to right onto the timber supporting beams. The main supporting timber beam has also been used as a lateral tie by means of brackets front and back through the masonry elevations and into the timber beams. We understand that as a part of the works the first floor is to be removed and replaced at a higher level.
- To the first floor an inspection of the roof space revealed the roof to be supported using traditional purlins and rafters onto timber trusses. It is our understanding that the roof is to be completely removed with the walls raised to a full first storey height and a new roof constructed.
- The ground floor to the outbuilding consists of a cast concrete slab. We understand that the slab is to be removed and a new insulated concrete slab constructed. Care is to be taken not to undermine the existing foundations with the engineer being informed on completion of the formation dig out to ensure the correct detail is utilised.

Based on the above observations the following comments can be made:

- As a part of the new works the new first floor and the new roof structure should be tied into the elevation walls to provide lateral restraint to the building in accordance with Building Regulations.
- The arches to the front elevation appear to be performing in a satisfactory manner with deflections showing likely seen at construction phase. The arches would benefit from additional support from the new first floor structure to be installed. We would recommend that a steel beam be inserted parallel to the front elevation and tied in to provide additional support to the masonry arches. The

foundations to the brickwork piers between the arches should be exposed and confirmed as adequate for the proposed additional loading.

 The brickwork to the gable elevation and the rear elevation to the outbuilding should be made good where necessary and repointed.

The inspection of the outbuilding to Grove Farm revealed that the outbuilding is suitable for conversion into a residential dwelling with minimal structural remedial works required. Additional lateral restraints should be provided by the new first floor and roof structure during the construction works. Elevation walls should be made good where necessary and repointed. As part of the works it would be recommended to provide additional support to the brick arches in order to ensure long-term serviceability of the building.

We have not inspected parts which are covered, unexposed or inaccessible, and are therefore unable to report that any such part is free from defect.

This report is for the sole use of the addressees and their professional advisers. The report cannot be assigned without the written authority of Holdgate Consulting Ltd.

Yours sincerely

Ryan Peel

for Holdgate Consulting