



Paul Grinyer Associates Ltd

Structural Engineers
& Party Wall Surveyors

Structural Engineering Report

WICKENDEN MANOR, CHILLING STREET, SHARPTHORNE, EAST GRINSTEAD:

Preliminary visual inspection report & structural appraisal of the existing stables buildings.



Client

Mr A Tucker – Netherhall Education Association
c/o Mr A Bateman, 139 Kipling Avenue, Brighton, East Sussex, BN2 6UF

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Instruction

Paul Grinyer Associates Ltd were instructed by Mr A Tucker, acting on behalf of the client, Netherhall Education Association, to carry out a review of a structural inspection and report carried out in September 2020, on the general condition and suitability of the existing stables buildings for potential conversion and change of use to ancillary accommodation and meeting rooms.

Limitations

This report, and our previous report, is intended for our client's own private and confidential use and for their legal and professional advisors. It should not be reproduced in whole or in part or relied upon by third parties for any use whatsoever, without our express written authority.

We have not inspected parts of the structures or property, which are covered, unexposed or inaccessible, and we are therefore unable to report that any such part of the property is free from defect and cannot comment on the integrity of the same.

Our inspection was of the stables buildings only and was limited to only those parts of the buildings which were accessible both internally and externally. Inspection was limited due to access restrictions, vegetation growth and the site boundary. Internal and external inspection was from ground level only. No investigative work or destructive testing was undertaken as part of the inspection.

Inspection

Our inspection to review the condition of the stables buildings was carried out on 28th July 2025. Our original inspection was undertaken on 16th September 2020. Access to the stables buildings was possible without meeting anyone at the premises. At the time of our inspection the weather was dry and bright. Inspection within all parts of Buildings A & B was not possible. Building C had been demolished since our previous inspection.

General description

A site plan showing the existing stables buildings is provided in Appendix B and will be used for general reference purposes. It should be noted that since our inspection in September 2020, Building C has been demolished and removed.

The stables buildings comprise three separate structures of differing forms of construction and age. For the purpose of this report the buildings will be referred to as Building A (small brick structure), Building B (large brick structure) & Building C (formerly a concrete framed barn now removed). The buildings are loosely arranged around a central courtyard.

The buildings are set in a rural location, within the grounds of Wickenden Manor. The stables are on a sloping site falling west to east generally and with a slight change in level from north to south.

It should be noted that not all internal areas of Building A or B were fully accessible.

Observations

Building A (small brick structure)

A load bearing masonry building, with a steel framed roof with steel purlins supporting corrugated cement sheet roof coverings. The ground floor was of concrete construction, sloping slightly to the east. The building was thought likely to be of mid / late 1950's construction. (Photo 1, 2, 3, 4 & 5)

The building was orientated with its ridgeline running approximately north to south.

The rear (west) elevation of the building could not be inspected externally as it was largely obscured by vegetation. Part of the south elevation and the north end of the east elevation were also obscured externally by vegetation.

The building was generally open plan internally, with a single part height dividing wall to the northern end of the building.

The external walls were of half brick thick (102mm) with intermediate buttress / support piers at the locations of the steel trusses forming the roof. No significant cracking was noted to the external walls, as far as could be practicably observed, and they appeared to be plumb to within building tolerances usual to the type and era of construction.

The steel roof trusses were formed using light gauge steel angle sections, welded to one another to form each truss. Steel purlins spanned between the trusses and supported the corrugated cement sheet roof. All elements of steel forming the trusses and purlins were corroded and had not been painted or otherwise maintained, likely since original construction of the building. (Photo 6).

The east walls of the building appeared to be infill to what would have been an open sided structure facing in to the central courtyard. The east walls were part height only and did not extend to the eaves of the east elevation.

To one of the piers on the east side of the building it was noted that a brick corbel or spread type foundation appeared to be present, close to ground level.

The west external wall was retaining around 800mm of ground to the west side of the building and the brickwork was noted, internally, to be wet and with damp and moisture staining. The brickwork appeared undamaged, other than the staining noted. (Photo 7).

To the south east corner of the building, on the south elevation, a horizontal tapering crack was noted at around 150mm above the internal slab level and where it appeared localised downward movement of the foundation had occurred to the corner of the building. (Photo 8).

No other significant movement or deterioration was noted since our inspection of September 2020.

Building B (large brick structure)

A part precast concrete framed and part load bearing masonry building structure having a lightweight steel framed roof with steel purlins supporting corrugated cement sheet roof coverings. The ground floor was of concrete construction and the levels split along the length of the building, with the southern end of the building having a floor level around 0.5m lower than the centre and northern end of the building. It appeared the building was largely formed (originally) using precast

concrete eaves beams supported on precast concrete columns. It was thought likely the building had been constructed in the late 1950's or early 1960's. (Photos 9, 10, 11, 12 & 13).

The building was orientated with its ridgeline running approximately north to south.

The external walls were generally non-load bearing and were infill elements enclosing the internal spaces and providing lateral and longitudinal stability to the building. The external walls were of half brick thickness (102mm) generally, with the original gable walls being one brick thick (215mm). The north end of the building was a more recent addition, possibly dating to the mid 1970's and where the walls were possibly of cavity brick construction.

Much of the west elevation of the building could not be viewed externally due to vegetation growth and approximately 1/3 of the internal part of the building structure could not be inspected as there was no access inside.

The steel roof trusses were formed using light gauge steel angle sections, welded to one another to form each truss. Steel purlins spanned between the trusses and supported the corrugated cement sheet roof. All elements of steel forming the trusses and purlins were corroded and had not been painted or otherwise maintained, likely since original construction of the building. (Photo 14)

Precast concrete eaves beams spanned between precast concrete columns. Many of the precast concrete columns were noted to have been clad or encased in brickwork, though some were still exposed to the south end of the west elevation. Corrosion of reinforcement in the precast elements had resulted in spalling and damage to the concrete forming many of the elements, including the columns (where visible) and the eaves beams. (Photos 15, 16, 17 & 18).

To the east elevation, at the south end of the building brick piers were present and vertical cracking was noted to the bottom sections of the piers on the two side faces and the front face of the pier. The piers appeared to be encasing precast concrete or steel columns, supporting the concrete eaves beams over the door openings to the east elevation. (Photo 19, 20 & 21).

A cast concrete block or foundation was noted to the north end of the twin door openings in the east elevation of the building, possibly cast over or around the base of the original pier or precast concrete column. (Photo 22).

To the north west corner of the building cracking of up to 10mm wide was noted to the brickwork where embedded metal tubes were set into the brickwork and were corroding. Cracks were vertical to the north elevation and horizontal to the west elevation, running south around 0.6m. (Photo 23 & 24).

To the north east corner of the build, on the north elevation a tapered horizontal crack was present from the eaves of the east wall, extending back to the head of the window on the north elevation. (Photo 25). A tapered vertical crack was present to the sill of the north elevation window, of around 3mm wide and which extended and diminished into four brick courses below the sill. (Photo 26).

To the south west corner of the building a horizontal tapered crack was noted at DPC level, and it was also noted the guttering to the rear roof above was damaged and rainwater had been saturating the wall and ground adjacent to the low level cracking. Added to this it was evident the external concrete slabs to the rear courtyard also sloped toward the southwest corner of the building.

To the visible sections of the external walls no evidence of significant cracking was observed, other than mentioned above and the walls all appeared to be plumb to within building tolerances usual to the type and era of construction.

No other significant movement or deterioration was noted since our inspection of September 2020.

Building C (concrete framed barn)

This building has been demolished and is no longer present.

General Observations

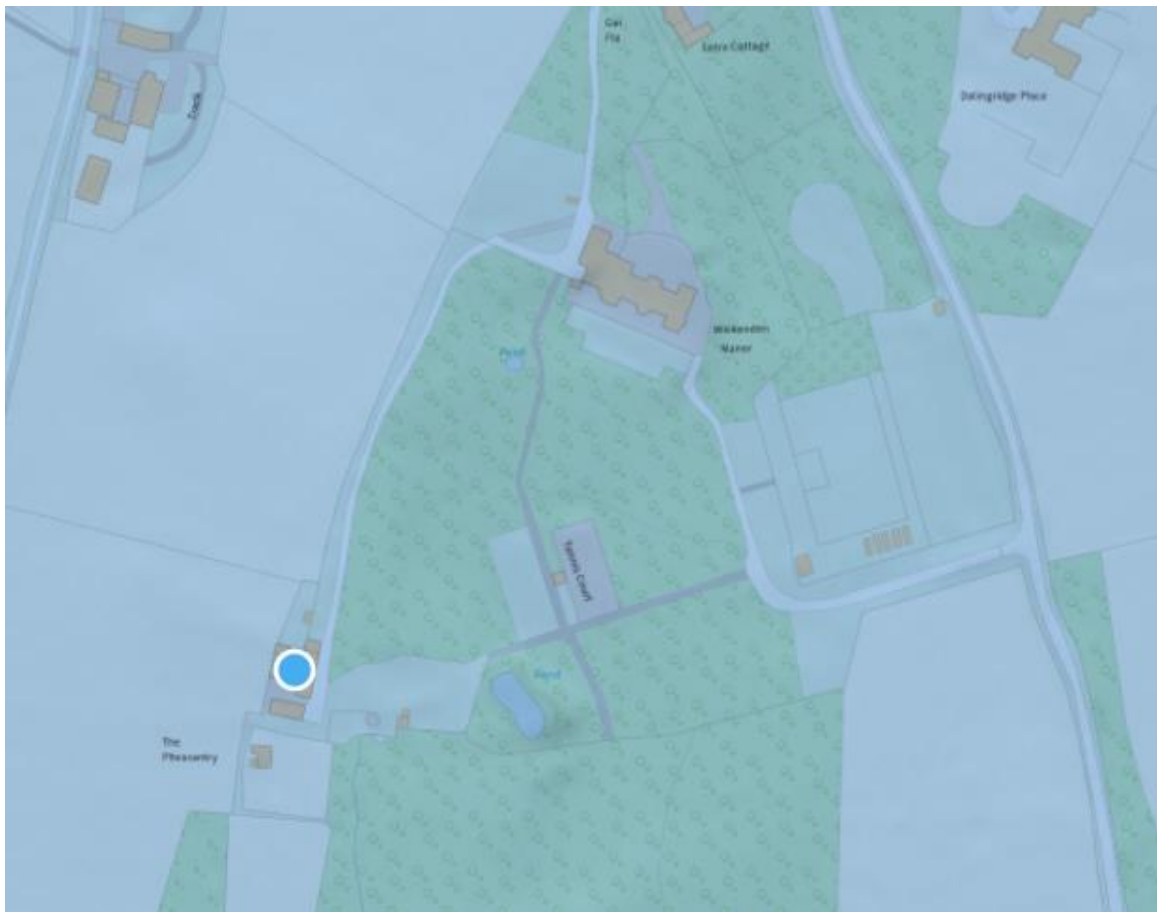
In close proximity to the buildings and within potential influencing distance of the foundations, there were a number of mature and maturing trees, including Oak, Ash and Pine, varying in height between 10m and 18m tall and in proximity between 1.0m and 15m.

The ground conditions appeared to comprise a very sandy clay / sandstone.

The site was toward to top of a small valley, with the buildings being on the west side of the same and where the valley slopes to the south.

Geology

The British Geological Survey Map data for the area indicates the site underlain by Ashdown Formation a sedimentary Sandstone & Siltstone Bedrock. It is also noted the small wood to the east is referred to as Sandpit Wood, suggesting the presence of sand and possibly historic sand extraction.



Discussion

GENERAL CONDITION

Building A

This structure was in fair to poor general condition, as would be expected for an agricultural building of its age and form. The external walls appeared to be generally sound though were on 102mm thick. The roof structure was of lightweight steel construction and in poor condition and it would not be capable of supporting load from a suitably insulated composite roof construction. The floor slab did not exhibit signs of significant defect, but it sloped toward the east external wall and was likely of ground bearing concrete construction.

Localised downward movement of the foundations was noted to one corner of the building. This will likely require localised underpinning.

It should be possible to retain the existing external walls of the building, though it is likely, as is common with agricultural building being converted to domestic or similar use, there may be a need to underpin foundations to ensure they are of a sufficient depth to be below that of external ground levels and below the level of reduced dig for any replacement internal floor slab.

The internal floor slab will not be insulated and will need to be replaced. This would give opportunity to support internal lining and insulating walls off of a new slab and which could possibly be used to support the replacement roof structure.

There is no evidence of significant further deterioration of this building and the observations from September 2020 are reflective of the general current condition, perhaps with the exception of the steel trusses being slightly more corroded than previously evident.

Building B

This structure was in fair to poor general condition, as would be expected for an agricultural building of its age and form. The external walls appeared to be generally sound though were on 102mm thick for the most part in were generally not intended to originally support loads from the roof structure and thus may have limited or no foundations. The roof structure was of lightweight steel construction and in poor condition and it would not be capable of supporting load from a suitably

insulated composite roof construction. The concrete eaves beams showed evidence of deterioration and corrosion of reinforcement and would not be considered to be economically repairable.

Similarly, the precast concrete columns supporting the same were also showing signs of corrosion, possibly significantly so where encased by brick piers to the south end of the building. These elements will need to be replaced.

The floor slab to the north end of the building appeared to be voided beneath and will almost certainly require replacement. It is also likely other floor slabs will require replacement in order to incorporate insulation and the like. This would give opportunity to support internal lining and insulating walls off of a new slab and which could possibly be used to support the replacement roof structure.

It should be possible to retain the existing external walls of the building, though it is likely, as is common with agricultural building being converted to domestic or similar use, there may be a need to underpin foundations to ensure they are of a sufficient depth to be below that of external ground levels and below the level of reduced dig for any replacement internal floor slab. Localised underpinning where movement has occurred will be required.

It appeared there had been some likely foundation movement to the north east corner of the building, which will likely require underpinning or some other form of foundation strengthening and stabilisation system.

Building C

This structure had been removed and is not assumed to be part of the development proposals for the stables structures.

It was noted the structure was found to be in poor general condition during our inspection of September 2020, and had suffered movement due to lateral wind loads, as well as damage to the concrete constituent parts due to corrosion and concrete spalling.

It is assumed it was removed for safety reasons, given its deleterious condition.

PROPOSED CONVERSION WORKS

Building A

The works required to the existing building are fairly straight forward and will essentially require the building to be upgraded by insulating it. This will require internal insulating walls and the floor to be insulated as well as improvements to the roof construction.

New openings in walls can be formed simply, with lintels over the same to support structure over.

Careful consideration will need to be given to changes in floor levels to access in to the proposed extension but should be possible to achieve with underpinning of foundations and in conjunction with the new floor slab construction.

The roof will need to be replaced.

No additional works are considered necessary, beyond those previously recommended.

Building B

In line with Building A the works required to the existing building are fairly straight forward and will essentially require the building to be upgraded by insulating it. This will require internal insulating walls and the floor to be insulated as well as improvements to the roof construction.

New openings in walls can be formed simply, with lintels over the same to support structure over.

Careful consideration will need to be given to changes in floor levels to access in to the proposed extension but should be possible to achieve with underpinning of foundations and in conjunction with the new floor slab construction.

The roof will need to be replaced.

It is evident some damage to the masonry has occurred which will require limited remedial repair by brick stitching and possible introduction of a system of bed joint reinforcement in the damaged areas of structure, including the north east & north west corners, and possibly the north elevation under the window.

Building C

This structure is no longer present and any new structure in the footprint of the original building will need to be designed as a new structure to suit the layout and form of the new building, if required.

Ground conditions

The site appears to be underlain by the Ashdown Formation, comprising Sandstone and Siltstone of varying form. Typically, this is encountered as a very sandy clay, with clay bands and offers good bearing capacity. However, depending on the clay content it is possible such a founding stratum could be found to be shrinkable and thus affected by seasonal changes in moisture content associated with moisture abstraction from nearby trees.

It is therefore possible, if the founding stratum is shrinkable, more significant underpinning or foundation work might be required to guard against foundation movement and to ensure foundations are adequately designed to accommodate heave and avoid subsidence. Without confirmation of the soil properties it is not possible to comment further on the extent of work required.

However, it is worth noting a couple of relevant facts:

- The site is and has always been surrounded by trees of a significant size, perhaps with the exception of the Ash trees and the external walls were not generally noted to have shown signs that significant damage due to foundation related subsidence had occurred. Some localised cracking was noted to Building B's north east corner, though this was adjacent a below ground drain / manhole.
- The ground around the buildings appeared to be very sandy, suggesting the clay or silt content (being the shrinkable component) was potentially low by percentage.
- Historical maps show the area was once known as Sandpit Wood, suggesting it may have historically been used for the extraction of sand for building materials. This would tend to suggest that the ground is sandy rather than having a higher clay content, though sand with a clay content is used for mixing with cement to form mortar for masonry building construction.

It is expected that the founding stratum below the buildings will be of Low shrinkability and thus the impact of foundation depths due to the nearby trees should not be significant. As part of the

design development it will be necessary to obtain a Geotechnical Ground Investigation to confirm soil parameters.

Summary

Building A can be retained but will require the roof structure to be replaced, internal ground floor to be replaced and possible underpinning of foundations to suit the floor slab replacement and proposal to alter internal levels.

Building B can be retained but will require the roof structure to be replaced, internal ground floor to be replaced and possible underpinning of foundations to suit the floor slab replacement and proposal to alter internal levels. Parts of the structure such as precast concrete beams and columns will need to be removed and replaced with modern alternatives, such as steel beams and columns.

Building C has been removed and any new structure proposed will need to be specifically designed for the proposed use.

Conclusions

Paul Grinyer Associates Ltd were instructed by Mr A Tucker, acting on behalf of the client, Netherhall Education Association, to carry out a review of a structural inspection and report carried out in September 2020, on the general condition and suitability of the existing stables buildings for potential conversion and change of use to ancillary accommodation and meeting rooms.

Defects were identified to two of the buildings which were considered to be of a repairable nature and the two same buildings are considered to be able to be converted, subject to works outlined in the summary section.

The previously present third building had been removed at the time of our latest inspection and was previously noted to be in a very poor condition.



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For and on behalf of Paul Grinyer Associates Ltd

Appendix A – Photographs (28.07.25)

Photo 1 – Building A south elevation	Photo 2 - Building A east elevation
 A photograph showing the south elevation of Building A. The building is constructed of dark red brick and has a steep, gabled roof. It is situated on a dirt path with trees and foliage in the background.	 A photograph showing the east elevation of Building A. The building is constructed of dark red brick and has a steep, gabled roof. It is situated on a dirt path with trees and foliage in the background.
Photo 3 - Building A north elevation	Photo 4 - Building A west elevation obscured
 A photograph showing the north elevation of Building A. The building is constructed of light-colored brick and is heavily overgrown with dense green foliage and trees.	 A photograph showing the west elevation of Building A. The building is constructed of light-colored brick and is heavily overgrown with dense green foliage and trees.
Photo 5 Building A east elevation	Photo 6 - Building A Roof arrangement
 A photograph showing the east elevation of Building A. The building is constructed of light-colored brick and is heavily overgrown with dense green foliage and trees.	 A photograph showing the interior of Building A, focusing on the roof arrangement. The roof is made of corrugated metal and is supported by wooden beams. The floor is covered with straw or hay.

Photo 7 – Building A internal west elevation showing moisture penetration. 	Photo 8 - Building A south east corner horizontal tapered crack. 
Photo 9 - Building B north elevation 	Photo 10 - Building B west elevation obscured 
Photo 11 - Building B east elevation 	Photo 12 - Building B east elevation 

Photo 13 – Building B west elevation.	Photo 14 - Building B roof arrangement.
	
Photo 15 - Building B Cracked concrete precast column	Photo 16 - Building B cracked and corroded concrete column
	
Photo 17 - Building B Corroding reinforcement to eaves beam	Photo 18 - Building B Corroding reinforcement to eaves beam
	

Photo 19 – Building B cracked brickwork around precast column.	Photo 20 - Building B cracked brickwork around precast column.
	
Photo 21 - Building B cracked brickwork around precast column.	Photo 22 - Building B cast concrete block to base of pier / column
	
Photo 23 - Building B Building B cracking to brickwork north west corner	Photo 24 - Building B Building B cracking to brickwork north west corner
	

Photo 25 – Building B north east corner horizontal cracking towards window head. 	Photo 26 - Building B vertical tapered crack through north elevation sill & bricks below. 
Photo 27 NOT USED	Photo 28 NOT USED
Photo 29 NOT USED	Photo 30 NOT USED

