



**CONSERVATION STRUCTURAL ENGINEER'S REPORT IN SUPPORT OF PRIOR  
NOTICE FOR CHANGE OF USE UNDER CLASS Q OF THE GPDO 2015**

**Pennywink Farm**

Report No. J9277-ST-R001

14 May 2025

Revision 00

[Kentchurch Court Estate](#)

## Document Control

### Project

Pennywink Farm

### Client

Kentchurch Court Estate

### Document

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## [1] Introduction

- [1.1] Ayesa were appointed by Mr Joss Lucas-Scudamore, owner of the Kentchurch Court Estate to inspect this agricultural building on Pennywink Farm and, in conjunction with Communion Architects and DK Planning & Development Limited, provide a report on the structure of the building in support of a prior notice application under Class Q of the GPDO 2015 for change of use from agricultural to residential.
  
- [1.2] The general arrangement of the building as existing and as proposed in the context of the surrounding site is shown on Communion Architects drawings and documents which form part of this notification and are therefore not reproduced here. Selected photographs are included to illustrate key aspects of the building as described in this report and called up as **P0XX**.
  
- [1.3] The barns were inspected on Friday morning, 14th February 2025 when the weather was overcast but dry.
  
- [1.4] This report is based on this visual inspection only without any trial pits or opening up at this time but with the benefit of 50 years' professional experience of the design and assessment of agricultural and residential buildings and drawing also on an upbringing in a farming environment. In this case, as is usual with agricultural buildings, the structure is almost completely exposed throughout and open to inspection.
  
- [1.5] All directions and geographical compass sense are given as shown on the architect's drawing with the entrance end facing east, but with all directions shown on the key plan at paragraph 3.2.
  
- [1.6] This report has been prepared by a Conservation Accredited Chartered Structural Engineer for an assessment of the building in the context of prior notification under the GPDO and is not a traditional building survey in the usual commercial or domestic sense and does not cover building services, surface finishes and other non-structural aspects. This report is prepared for the sole benefit of the client, Mr Joss Lucas-Scudamore of the Kentchurch Court Estate, and no liability is extended to any third party whether in contract or in tort.



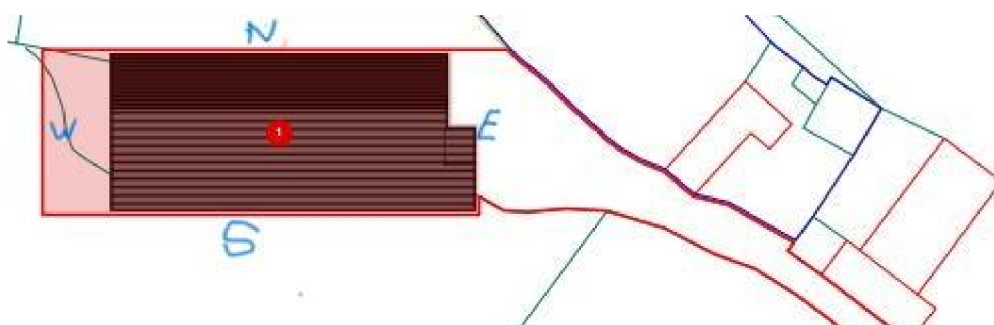
## [2] Objective

- [2.1] The objective of this report is to explain the present condition and structural arrangement of the building and to assess and explain how this arrangement fits into the proposed residential use as shown on the architect's drawings, particularly drawings A452.13.01-P.03 and 13.01-P.10 and to explain that the present structural arrangement of the building as it exists is adequate within the context of the GPDO, subject to the caveat of repairs that may be required and without any significant structural amendments and absolutely within the existing building envelope without any extensions or enlargements.
- [2.2] In this context it is noted that the guidance (Planning Practice Guidance as revised 22<sup>nd</sup> February 2018) indicates that internal works are not generally considered to be "development" and that there is no longer reference to "new structural elements".

### [3] Existing Structure

[3.1] The present building as currently arranged and recorded on Communion Design's Existing Ground Floor Plan A452 13.01 - E03 in these proposals for prior notification under Class Q of the GPDO is currently about 38m long by 17.7m wide on plan. The submitted proposal for residential use removes part of the current building as shown on the architect's drawings which form part of this notification but in inspecting and commenting on the condition of the existing structure, it is helpful to consider the whole building as found during the inspection.

[3.2] The layout of the building as existing is shown on the key plan below.



KEY PLAN AS EXISTING.

[3.3] Timber framed building, **P36**, 10 bays long with central access aisle, **P40**. Single aisle of stalls to the right and open aisle to the left, another penned-in aisle to the left of that and a narrow access aisle along the left-hand, south side, **P66**.



P36



P40



P66

[3.4] Roof completely covered in square corrugated industrial style steel sheeting to a very shallow slope with flat central portion which for about 50% of the length is raised to give ventilation P41.. The ends are open apart from a concrete blockwork construction at the front left-hand corner for a fuel tank. P62. The long sides are sheeted with similar industrial sheeting full height along the north side P60, and on the south side with about a 400mm gap for ventilation at the top. P42.



P62



P41



P42



P60



- [3.5] All the vertical structure is identical timber posts, about 145mm square set in earth, in varying states of condition. There are about 77 such posts. Typical examples are shown in **P46** and **P48**.



**P46**



**P48**

- [3.6] The primary rafters are double timbers set on top of the posts with timber blocks to hold purlins, and in the centre a butt joint between these primary rafters secured with pieces of compressed wood board. **P45**.



**P45**

- [3.7] The posts appear to be reasonably vertical. There are no specific structural bracing members in either to the left or to right lateral or lengthwise directions, rather stability is provided by the sheeting fixed to the sheeting rails and the 77 posts each secured into the ground at the base.
- [3.8] The site is fairly level front to back and the land generally slopes down from left to right , ie from south to north, but only a slight cross slope within the building. .
- [3.9] The narrow passage along the left-hand side is 1200mm wide between posts. Along this passage the headroom under the primary rafters is 1800mm at the lowest point.
- [3.10] The rafters are 150 deep x 75mm wide sawn timber. The purlins are 150 x 50mm sawn or planed timber.
- [3.11] The timbers vary in size. These are typical examples. Each bay is about 3.8m, that is centre line to centre line, this being the span of the purlins. The width of each aisle being about 3.7m, but again this is a general typical dimension. The right-hand bay about 3.8m.
- [3.12] The spacing with the purlins seems to vary. in the left-hand main bays, the purlin central on the post. On the left of the bay left-hand of the aisle, the purlin is offset from the post.
- [3.13] There are simple nailed connections between the purlins sitting on the rafters and the rafters sitting on the posts, nothing that could be construed as a serious moment or stiffness connection. **P53**



**P53**

[3.14] The central aisle about 4.5m wide.

[3.15] The posts either side of the main aisle have 2.7m headroom to the underside of the primary rafters.

[3.16] The posts forming the side of the left-hand aisle, the headroom 2.2 under the purlins.

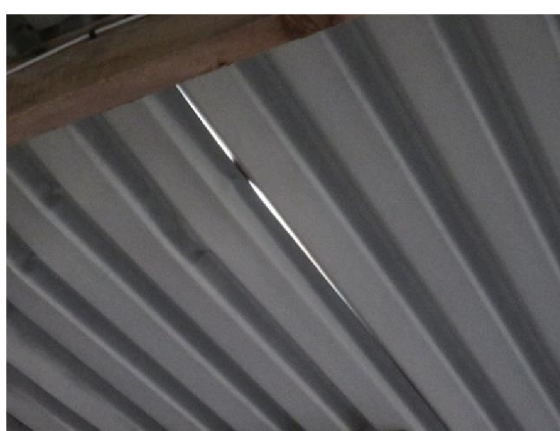
[3.17] Some timbers are green stained showing signs of presumably preservative treatment before erection, others are not.

[3.18] Because the primary rafters and purlins are protected by the roof sheeting, they all seem in fair order although those along the open ventilation strip are rather more weathered.

[3.19] Some of the edges of the corrugated sheeting is corroded suggesting leaks through the nail fixings or corrosion at overlap or significant water penetration from the laps being too short. Also examples of where the side laps or overlaps of the sheets are not sufficient. The flat roof of the ventilated strip which seems to be just flat sheet metal nailed to 50 x 50mm timber runners. **P54, P55, P56**



P54



P55



P56

[3.20] The building is partially open lengthwise giving generous ventilation, so the wind blows through. If it were sealed it would attract greater wind loads but the roof sheeting provides distribution of wind loads to all of the sheeted walls.

[3.21] The building is sheltered to the south with the ground rising up but is completely open to the other three sides in a fairly exposed position. Typical post to single primary rafter connection is one timber plate about 300 x 150 plywood or other timber boarding. **P57, P63.**



P57



P63

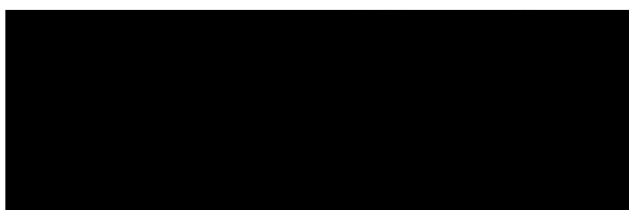
## [4] The Proposals

- [4.1] The proposed layout is shown on the architect's drawings specifically plan A452 13.01- P03 and A452 13.03- P10 and associated sections and elevations.
  
- [4.2] Although the architectural arrangement is intended to provide convenient domestic arrangements, it also takes full account of the nature of the building as described above and as explained further below.
  
- [4.3] Therefore, as is sometimes the case the enhancement of the site is largely achieved by the removal of unsightly or over-prominent elements such as the blockwork tower at the east end and reduction of the enclosed area to a sensible workable area and in compliance with the GPDO.
  
- [4.4] The essential elements of the building remain, the steel sheeted walls and cladding and the timber framing. Although not overt repairs the new dwelling will have the inherent structural benefits of several internal alterations. The cellular domestic layout of new blockwork walls is inherently stable and can support the obligatory insulation. The timber posts which are secured into the soil will be supported both in vertical and stabilising sense by the new concrete floor.
  
- [4.5] The continuous sheeting to the external walls will provide stability as at present, though with the benefits of localised repairs as necessary.



## [5] Conclusions

- [5.1] The age of this agricultural building is not defined but is verified as at least 25 years and, by inspection, probably double that. As such it has stood undamaged in a fairly exposed site. This test by time is a useful and valid demonstration of its robustness.
- [5.2] The ad-hoc additions will be removed.
- [5.3] All of the timber rafters, purlins and posts will need to be inspected as a matter of routine good practice and any localised decay remedied by small-scale structural interventions to mitigate the defect.
- [5.4] As indicated above the constructional provisions inherent in the residential conversion, rather than having any adverse structural implications, will instead have a significant positive effect on the stability, robustness and load-bearing capacity of the building as found. As pointed out in Part 2 above, 'Objectives', such internal work does not count as development but are in fact an enhancement to the building and by their nature provide appropriate investment in the long term.
- [5.5] It is therefore concluded that this building, most of which is retained in the submitted scheme, is of a permanent and durable construction which has been in place for many years and capable of this appropriate conversion without significant structural alterations or repair.



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