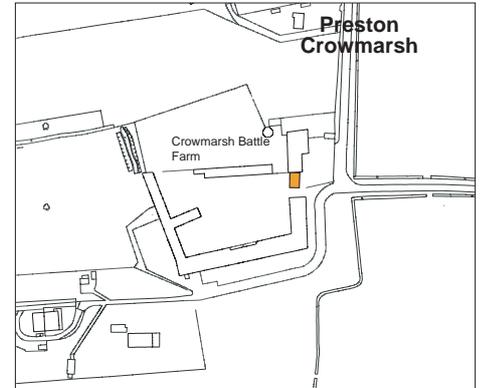




Location:
Granary at Crowmarsh Battle Farm
Preston Crowmarsh, Oxfordshire

Client:
Crowmarsh Battle Farms Ltd



HISTORIC STUDY

Repair and refurbishment of derelict granary and conversion to farm office

'An exemplary essay in how to repair and exploit the character of an historic structure'
- RIBA awards judging panel, 2005

Crowmarsh Battle Farm in Preston Crowmarsh near Wallingford, Oxfordshire consists of a working arable farm and an extensive redevelopment involving the conversion of redundant agricultural buildings to office use.

Adjacent to the farmhouse, a derelict granary facing the original farmyard has been recently repaired and converted to a private study and farm office for the owner.

The Grade II listed granary dated 1800 - evidenced by a carved legend on a central post of the existing timber frame - was in a very poor state of repair, with significant subsidence having occurred beneath the fourteen staddle stones on which it stands. The ground subsidence was attributed to the lack of proper footings and any form of

rainwater drainage since the building was first erected.

The lower part of the buildings timber frame was in very poor condition too, with the original timbers significantly reduced through rot and insect infestation. Many of the connections had deteriorated completely, which had further contributed to the structure's leaning appearance.

To enable works to new foundations and below-ground services, the entire building was stabilised with temporary bracing before being lifted by crane onto concrete blockwork supports some 40 feet away.

In its new location, the timber frame was repaired using a combination of traditional carpentry and proprietary resin-based solutions such that most of the original

structure was retained.

The staddle stones, each comprising a tapered square shaft and separate round 'mushroom' cap to prevent both moisture and vermin ingress to the granary, were re-bedded on the new footings and the granary was once again craned back into its original location for the remainder of the works.

In addition to the repairs of the foundations and the timber frame itself, the building envelope now provides a weather tight enclosure and good levels of thermal insulation appropriate to its new use. This work has been carried out as much as possible without affecting the external or internal appearance of the Granary.

Above Entrance with original door, which can be closed over the frameless glass entrance at night.

Right The refurbished granary structure, on repaired staddle stones.

Below Granary before refurbishment.





Prior to the refitting of the internal lining, the walls of the granary building were reconstructed utilising a modern vapour control layer, mineral wool insulation between the frame members, and a breathable waterproof sheeting inside the weatherboarding outer face. The ground floor has been similarly improved prior to the existing floorboards being re-laid. New roof insulation with a plasterboard finish was provided over the existing rafters to give an improved level of thermal comfort while retaining the character of the half-hipped timber roof structure. A large

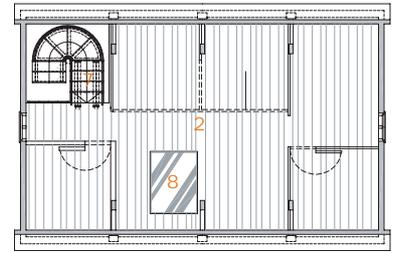
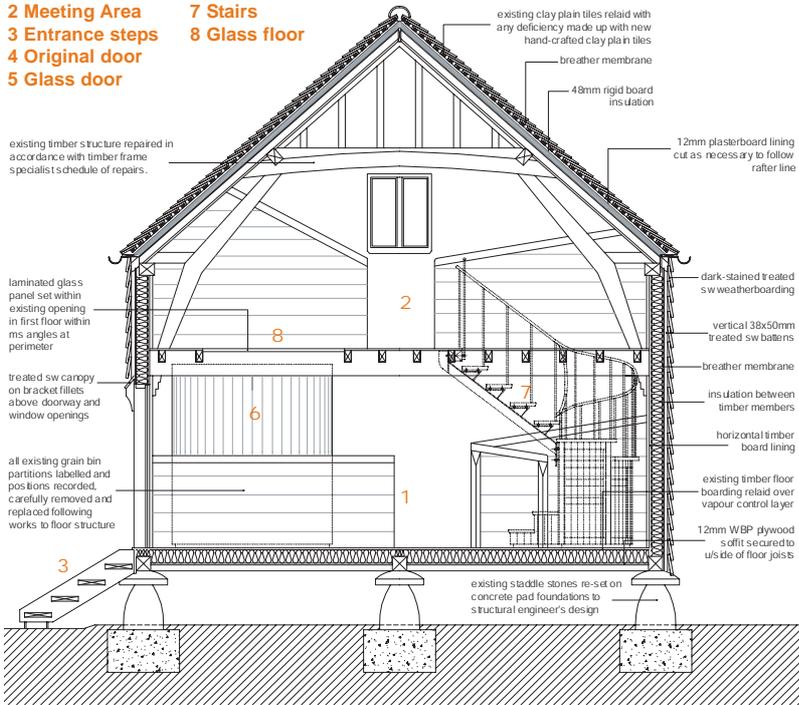
majority of the existing clay plain tiles were salvaged, set aside and reused in the re-roofing of the Granary.

Internally, the timber lining boards were marked up before removal so that those in suitable condition could be refitted in their original location. Where necessary, new boards were beaded to match the profile of the originals and all timbers were treated with a preservative before being re-fixed. Many of the grain bin partitions have been retained, while some have been modified to allow access to parts of the building.

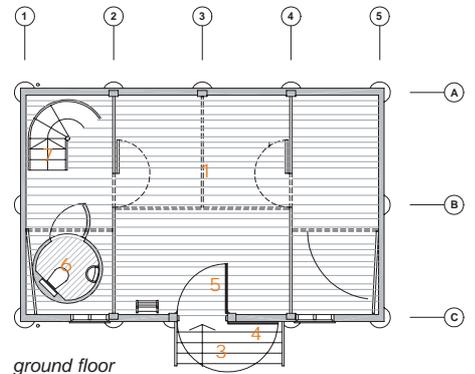


Top First floor, circular wc visible through glass floor panel on left and a series of rectangular holes in the floor boards trace the position of the original grain bins
Above far left Ground floor with modified bin partitions and glass entrance door
Far left First floor during repair. Roof tiles have been stripped off and set aside for reuse over a new layer of internal lining and insulation
Left In many instances, the timber sole plate had completely rotted at the staddle stone locations
Above Roof structure viewed from ground floor: before (L) and after works

- 1 Farm office
- 2 Meeting Area
- 3 Entrance steps
- 4 Original door
- 5 Glass door
- 6 WC 'pod'
- 7 Stairs
- 8 Glass floor



first floor



ground floor

Those partitions that have been removed can still be traced in the holes that are left in the first floor boards.

Both timber wall linings and the remaining grain bin partitions were then further treated with a clear brush-applied fire protection coating.

In order that the refurbished building could operate as a self-contained farm office, toilet facilities are provided in the form of a 'pod', circular in plan and occupying one grain bin at ground floor.

A new bespoke stair has been inserted in lieu of an existing ladder access that had previously sufficed.

These new elements are clearly expressed as such and are treated as items of 'furniture' within the space, rather than an integral part of the original building fabric. For instance, the circular plan of the WC means that it does not touch the walls of the granary, and its appearance provides a contrast to the natural timber lining elsewhere. The stairs too, with their circular base and steel strings, touch the fabric of the original building only lightly, and the

balustrade is held away from the walls as an independent structure.

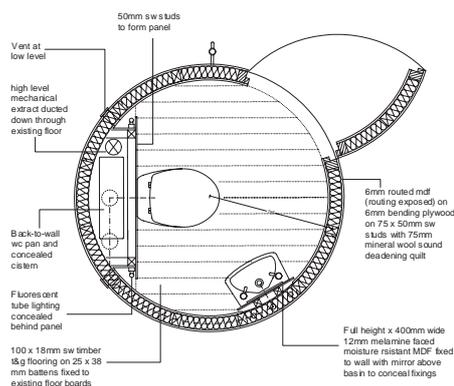
During the detailed design stage it became apparent that some of the character of the original building might be lost if a replacement entrance door was provided.

The original door is thus retained, with the minimum repair required to keep it from falling apart, and in addition a new frameless glass door sits behind the original frame. This door seals and secures the building generally, while the original can still be closed at night to maintain privacy. The glass door allows occupants the ben-

efit of impressive views across the farmyard as well as providing much improved daylight levels within the building.

Ground floor lighting is provided by a flexible system of spotlights on powered tracks, set into the wall lining at high level. This discreet solution allows for many of the buildings original details to be highlighted and gives the occupant the option to rearrange the lighting as their needs change over time. This solution leaves the underside of the original first floor free of clutter.

Top Typical section, floor plans
Below left Plan of wc 'pod'
Below WC 'pod' from staircase





At first floor, lighting is provided in the form of a tensioned wire system running beneath the ridge of the roof structure. Again this arrangement allows an infinite degree of flexibility in lighting placement, while remaining independent of the roof structure itself.

Similarly, typical wall mounted radiators were rejected in favour of a more flexible strategy of independent portable electric heaters. These will provide good local heating and fast response times within the highly-insulated building.

At first floor level a 32mm thick laminated glass panel has been fitted within the now-redundant loft access opening. This has been carefully detailed to ensure that the metal frame is not visible from below. The glass panel maintains a visual connection between the floors and allows one to view the roof structure from ground floor level and so appreciate the overall volume of the building. The panel also allows a good deal

of borrowed light (from the glass entrance doorway) to reach the first floor, which is now used as a meeting room in connection with the farm business.

Both the new glazed entrance and this glass floor panel have been crisply detailed and clearly expressed as modern additions against the rugged, original timber frame with its original carpenters markings and assorted black iron hooks and brackets which have been retained. In this respect they belong to the larger interventions of toilet and stair, which follow a strategy of contrast with the original structure ensuring that the distinction between the new and the old is not blurred.

In this way, the Granary represents a 'warts-and-all' refurbishment that transforms a derelict structure into a fresh working environment. Contrast and layering are employed as the means by which modern services and new interventions can successfully sit cheek-by-jowl with the original interior of this characteristic building. KJB

Project Particulars

Contract Period: February - July 2003

Contract Value: £114, 000

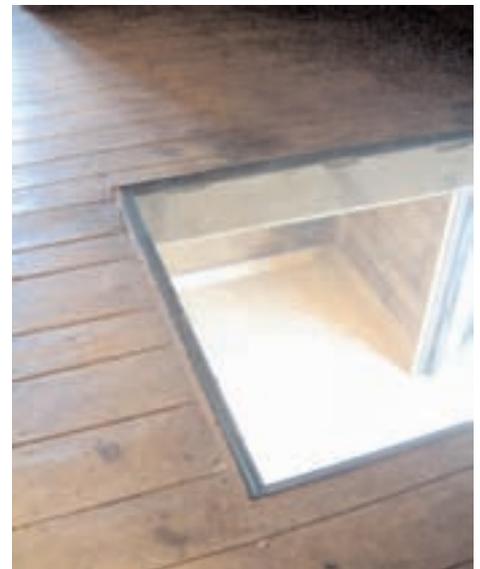


Above left Tensioned wire lighting at first floor.
Above right Granary being carefully lifted onto temporary supports

Left Repaired staddle stones - the ground beneath the granary has now been finished with a pea gravel layer

Below Detail of new door set behind the original frame

Right Glass floor panel set into original opening, leaving notched timbers exposed



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