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Our Ref: 077572

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Shenton Group
3 Oxford Court
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Cuerden Hall - Second Floor Attic above Central Wing

Dear Colin,

Curtins have accessed the attic space in this location. Our high-level observations are as follows:

Current Condition

- The structure appears to be in a generally serviceable condition
- There are localised areas of structural distress.
- The roof structure in this area has been altered on a number of occasions

Previous alterations have been undertaken in a progressively uncontrolled manner, with apparently little structural design/ analysis.

Should any adaptations be made to the existing roof structure in this section, it would require unpicking past alterations in order to design new structural remodelling work. Detailed analysis of the current structural form is likely to reveal it to be statically indeterminate and “working” in a relatively fragile state of equilibrium.

Any alteration, however minor, is likely to lead to knock on implications elsewhere in the structure. We envisage the requirement for extensive, rather than localised structural analysis and intervention.

Alteration Proposals

We understand that there is a potential proposal of creating a new access to this second floor through extending an existing staircase in the courtyard wing. This would require the building of a dormer to allow the headroom to access into the space. This would also mean significant remodelling of an existing truss and hipped roof which have been previously altered.

While the addition of a dormer is not normally an extensive issue, the previous structural changes mean that any alteration would likely have a knock on effect across the roof. As structural engineers, we would need to prove that the alteration would work and not have an adverse effect on other areas. In this situation, we would have to undertake a disproportionate structural analysis and design when compared to the scope of the alteration, in order to satisfy this criteria.

The same would apply for any other alteration made to the roof structure in this section.



Recommendations

Our recommendations for this second floor attic area depend on the client and architect's requirement. As it stands, we understand that this space will not be refurbished but will potentially be used for storage.

Our recommendation at this stage is to "leave alone" the roof structure and not undertake any further alterations until a holistic refurbishment approach can be taken. As previously stated, the amount of structural intervention required will be extensive and a fully considered analysis is required.

Periodic maintenance and localised fabric repairs should still be undertaken as needed to ensure the building below is kept weather tight.

The floor structure is currently sagging in places under current dead load only conditions. Should the area be accessed regularly to be used for storage etc. the floor structure would likely require widespread strengthening to allow for the additional imposed loading. We therefore recommend the area not be used for storage at this phase of the project.

Yours faithfully

Andy Roberts
Director
For and on behalf of
Curtins Consulting Ltd