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LIMITED STRUCTURAL INSPECTION REPORT

on

Tractor Shed

at

Isles of Scilly Airport, St Mary's



For: Council of the Isles of Scilly
Ref: 05704E – SHED - 01
Date: 27.11.23




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REVISION RECORD					
Rev	Description	Date	Originator	Reviewed	Approved
-	Initial Issue	27.11.23			

1.0 BRIEF

structureHaus were asked to carry out a limited site inspection further to Currie & Brown (C&B) having carried out a condition survey. Our survey was carried out by Chartered Structural Engineer. Mark Harris on 30th October 2023. The weather was dry and cool.

This report is to consider the structural condition as observed on the day of the survey, it is not to justify any of the structural elements in terms of their capacity.

2.0 INTRODUCTION AND GENERAL DESCRIPTION

The structure is timber frame, clad with cement sheeting to the roof and the sides, the stability is through the stiffness of the truss and column connections in the short direction and cross bracing in the other direction.

The timber columns are cast into metal shoes which are bolted down to concrete plinths.

The roof has timber purlins running between the timber trusses which support the roof cladding.

There is a low blockwork wall around the perimeter which runs outside of the timber columns. The rear of the shed has a timber constructed mezzanine storey.

There is a ground bearing concrete slab which appears to be of a reasonable condition but not integral to the buildings structure.

3.0 EVIDENT STRUCTURAL CONDITION

The building is not insulated and not heated given it's purpose as a tractor and storage shed, the timber grade is unknown, but it is clear that the amount of water ingress is having a detrimental affect on the timber elements.

As such, the integrity of the building is being compromised by the holes in the cladding, particularly the roof and the even more so the ridge.

In general, the majority of the timber frame, at present, is not detrimentally affected and should the issue with water ingress be relieved as soon as possible then we would be satisfied with the structure remaining in use once the immediate remedial works are carried out.

The columns need immediate attention as they are rotten beyond their capacity and risk of localised collapse could be imminent. An economical and sensible solution would be to increase the height of the concrete plinth and thus reduce the length of the columns such that the rotten

ends can be cut off. The columns could be reduced one at a time with temporary propping to accommodate this.

The other issue is the inadequately spliced purlins, these need to be replaced such that the same size as the original is installed in a timber grade of at least C24.

4. CONCLUSIONS AND RECOMMENDATIONS

The tractor shed could be retained for use, but only after the holes in the cladding are covered, the timber columns reduced in height by cutting out the rotten end and the concrete plinth height increased and finally the spliced purlins replaced.

The external perimeter of the shed should be cleared from vegetation and remained clear to assist with the level of water ingress and it's detrimental affect on the timber structure.

5. RESERVATIONS

As instructed, we have only carried out a limited survey of the areas affected and have not inspected foundations or other miscellaneous outbuildings, nor the rest of the site. In addition, we have not inspected woodwork or other parts of structures which are covered, unexposed or inaccessible and are therefore unable to report that any such part of the site is free from defect. As a result, this report does not in any way constitute or can be construed as constituting a representation or warranty, actual or implied, regarding such parts.



Mark Harris
CEng MStructE

structureHaus

