



**RCA STRUCTURES**  
STRUCTURAL ENGINEERING AND DESIGN

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**Job No. 25454**

**NISSEN HUT,  
LAND REAR OF THE BULL,  
LANGLEY LOWER GREEN,  
ESSEX CB11 4SB**

**REPORT  
ON  
STRUCTURAL INSPECTION**

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The Institution of  
**StructuralEngineers**





18<sup>th</sup>. September 2023

Our Ref : ID / 25454

Mr. J. Harvey,  
50, Blythwood Gardens,  
Stansted,  
Essex CM24 8HH.

Dear Mr. Harvey,

**Re : Structural Inspection of Existing Nissen Hut behind The Bull P.H., Langley Lower Green, Saffron Walden, Essex CB11 4SB.**

## 1.0 Introduction

- 1.01 In accordance with your instructions, we visited this property on the 18<sup>th</sup>. September 2023.
- 1.02 The purpose of our visit was to carry out a structural inspection with particular regard to refurbishing and renovating the existing Nissen Hut into use as a residential dwelling.

## 2.0 Description of Property

- 2.01 The property is located on the main road through Langley Lower Green and is located on land behind The Bull P.H., Langley Lower Green, near Saffron Walden, in Essex.
- 2.02 The existing Nissen hut consists of T-shaped Metal Ribs and metal purlins, clad externally in corrugated iron sheeting.
- 2.03 Externally there are lots of mature trees, some very near to this hut.
- 2.04 We understand that the proposals are to completely renovate this property and bring it back into use as a dwelling.

### 3.0 Structural Inspection

- 3.01 The renovation will consist of removing the corrugated iron sheeting, grit/sand blasting the steel ribs and purlins to remove all corrosion and rust and then painting these ribs with a primer and protective coatings to prevent any further corrosion. These existing ribs and purlins will be exposed and expressed on the interior, as a feature and new SIPS panels will be fixed to the exterior.

### 4.0 Conclusions & Recommendations

- 4.01 Following our inspection, in our opinion, this property is capable of being renovated with some substantial structural works and renovation/ refurbishment required.
- 4.02 We would recommend that new SIPS profiled panels are added to the exterior of the ribs and purlins, after removal of the corrugated iron sheeting. These ribs and purlins must be grit or sand blasted to remove all corrosion and rust and then painted with a primer and protective coatings to prevent any further corrosion. These existing ribs and purlins will be exposed and expressed on the interior as features, but will also support the weight of the new SIPS panels.
- 4.03 The new SIPS panels will weigh slightly more than the existing corrugated iron covering, but not by a great deal, so the existing structural T-ribs, partly because of their hooped shape, will take this small additional loading.
- 4.04 The mature trees around this hut should be removed completely and the roots ground out to prevent any re-growth.
- 4.05 Should you require any further clarification of any points in this report, or further information or assistance, please do not hesitate to contact the writer.

Yours faithfully,



Ian Devonshire

# APPENDIX – ANNOTATED PHOTOGRAPHS

Existing Nissen Hut.



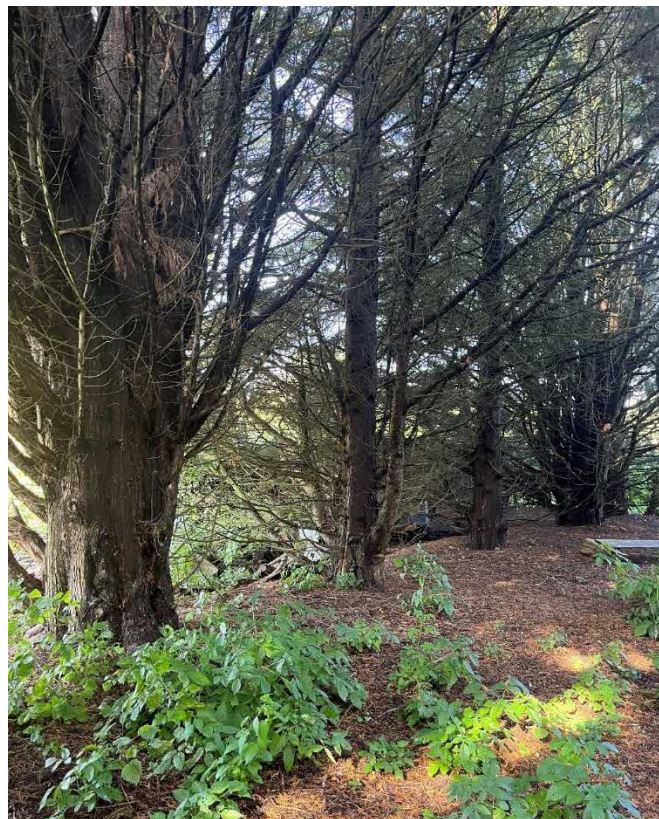
Side Elevation, showing the existing corrugated metal (Iron) sheeting.



Side Elevation, showing the existing corrugated metal (Iron) sheeting.



Trees nearby  
will need to be  
removed  
completely.



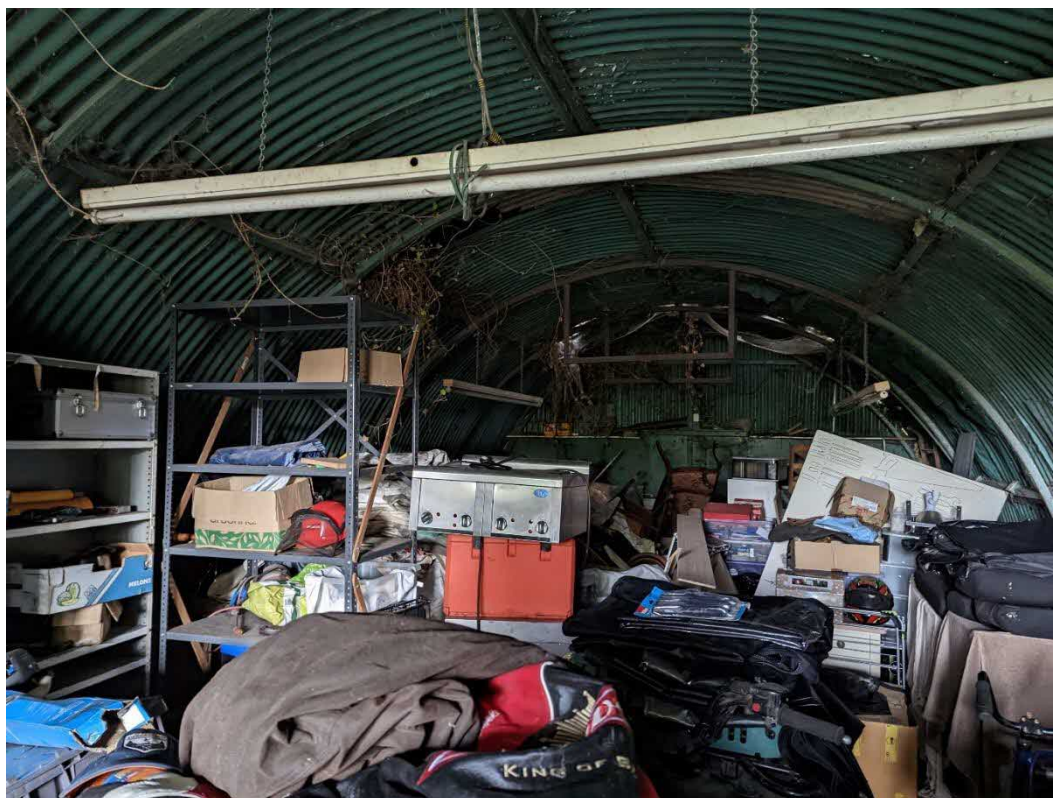
Trees nearby  
will need to be  
removed  
completely.



Internal view of Nissen Hut, showing the curved structural T-Shaped ribs, purlins and corrugated Iron sheeting exterior.



Internal view of Nissen Hut, showing the curved structural T-Shaped ribs, purlins and corrugated Iron sheeting exterior.







Internal view of Nissen Hut, showing the curved structural T-Shaped ribs, purlins and corrugated iron sheeting exterior.

