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Our Ref: SS128

Date: 22 May 2018

STRUCTURAL REPORT
DENHAM VILLAGE HALL, HOXNE ROAD, DENHAM IP21 1PN

1.0 INTRODUCTION

1.0.1 The Brief

1.0.2 On the instructions of the Parish Council, I have been engaged to carry out a visual structural survey of the Village Hall as there are concerns over the property.

1.0.3 This report is prepared as a result of a single visit to the property on 9 May 2018.

1.1 Methodology

1.1.1 Prior to visiting the site, desk studies were carried out to consult geological maps available to determine the likely subsoil for the area. A visit to the site and walk over survey was carried out, initially to assess the topography and to note any trees or influences which may affect the structure.

1.1.2 A visual examination of the structural elements was carried out to determine the condition and state of the building, with a view to making recommendations and preparing this report.

1.2 Limitations

1.2.1 The report is prepared with respect to the structural elements of the building and does not include comment on fitments and fittings, unless it is considered that any such would have an impact on the structural elements.

1.2.2 Please note that we have not inspected any part of the structure which is covered, unexposed or inaccessible and we are, therefore, not able to report that any such part is free from defect.

1.2.3 Photographs are included at the rear of this report to indicate the damage discussed. Please note that these photographs are included to show the nature of any damage discussed and are not intended to portray the full extent of any problem.

1.2.4 Please note that any comments made within this report are with respect to the structural elements of the property and not intended to indicate or imply any financial valuation.

1.2.5 During a single visit of a property it is generally not possible to gauge whether cracks are progressive or have ceased movement. If possible the cracks will be assessed by their condition and state to form consideration as to whether such cracking is recent and whether it poses a potential problem.

1.2.6 If the condition of the cracks does not indicate historic movement, it may be necessary to monitor them over a period of time or to open up parts of the structure for further investigation.

1.2.8 Stroud Associates Ltd cannot be held responsible for any use of this report or its contents for any purpose other than that for which it was prepared. The copyright in this report and other plans and documents prepared by Stroud Associates Ltd is

owned by them and no such plans or documents may be reproduced, published or adapted without written consent. Complete copies of the report may be made and distributed by the client as would be expected in dealing with matters related to its commission. Should the client pass copies of the report to any other party for information, the entire report must be copied, but no professional liability or warranties shall be extended to any other parties in this connection without the explicit written agreement of Stroud Associates Ltd.

2.0 DESCRIPTION

2.1 The Village Hall is a single-storey long rectangular building. It has a ridge line following the length of the rectangle with cement-based corrugated roof sheeting and a half-pipe ridge finish. As viewed from the car park and entrance way there is a central single door. The walls are of a half brick thickness brickwork with a thick cement render over. On the front elevation there are two buttresses and there is an indication of a third which has been removed historically. The walls and brick piers are rendered. Located on the roof to the left-hand end there is a square ventilation boxing. The rear elevation reflects the front elevation where there are four buttresses, again with an indication that one has been removed historically towards the right-hand side. The two gables are rendered masonry with two buttresses at third points in the gable.

2.2 This is a wartime single-storey building which used to be part of the gatehouse/ guardroom to the airfield at Eyke, occupied by war time USAF. It is based on the typical model and originally would have had brick buttresses at 3m centres along both elevations, with common brick wall construction rendered.

2.3 The surrounding area to this building is locally paved immediately around the building as an access strip then grass. On the rear elevation, approximately 20m away is a row of trees. There is a closer row of trees including a chestnut off to the left-hand side and on the right-hand side trees about 15m away. The ground level is generally even with a slight fall towards the roadway.

3.0 DESK STUDIES

3.1 Study of the 1/50,000 geological map sheet for this area indicate that the subsoil is Lowestoft Till. This was formerly described as Boulder clays, typically a brown clay becoming blue-grey with depth and containing occasional chalk nodules, flints and sand lenses. The classification of this clay with respect to shrinkage and tree influence is normally classed as medium to low shrink ability. This does mean that this clay subsoil is subject to tree influence.

4.0 EXAMINATION

4.1 <u>EXTERNAL INSPECTION</u>

4.1.1 Externally the visual appearance of the building is extremely poor. The external applied render has cracked, and sections of the render are falling away. Other sections have been poorly repaired by applying a patch render over loose render which has again worsened the appearance of the render and building as a whole. On the front right-hand corner there is evidence of a small plant growing through the render from the internal face.

4.1.2 The right-hand gable end, as faced from the driveway, has been re-rendered but

already this is showing signs of deterioration. I understand this render was applied not many years ago.

4.1.3 The rear elevation appears much as the front elevation, with sections of render dropping away and many sections being loose which will deteriorate rapidly.

4.1.4 The right-hand gable is much as the left-hand gable with the render in poor condition.

4.1.5 The roof profile is straight and even with the exception of the far-left hand gable, where the ventilation box has sagged locally.

4.2 INTERNAL INSPECTION

4.2.1 Internally the building is split into three rooms, the left-hand end being a kitchen area which also contains the electrics on the rear left-hand gable. When probed with a damp meter the walls were damp with readings generally off the scale or in excess of 30%.

4.2.2 The dividing wall is a half brick thick brick wall which passes up the ceiling line and is load-bearing and supporting the roof purlins. It is carrying the roof purlins. This wall also has damp on the returns and at low level, again with readings +30%.

4.2.3 The main hall room front and rear walls are board-lined, so the masonry could not be reviewed, and the ceiling has an under-lining finish of a board which has started to sag, and this is probably due to damp and condensation issues with lack of insulation to the roof sheeting over.

4.2.4 The cross wall at the right-hand end forms two small units against the gable wall which are the male and female toilets. The male toilet wall is extremely damp with

algae growth evident around the window of the front wall. This section externally has the plant growth from inside the render. The female toilets on the rear right-hand corner are not in such a poor condition but again damp is evident in all the walls abutting any outside wall and at low level.

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 On first review the building appears in appalling condition. Close inspection shows no signs of major structural failure or movement. The cracking observed, which is widespread to external walls of the building façade, is mainly due to the render cracking and parting from the brickwork structure.

5.2 This is a half brick (100mm) thick wall with buttresses which would originally have been about 3.0m (10ft) centres. Many of the buttresses have been removed but have caused no detriment noted to the building as a result.

5.3 The render has been patched poorly in the past and in many cases the repairs have exacerbated the condition. Also, the has render has been taken right down to ground level with no break and has resulted in damp migration up through and behind the outer render increasing the demise of the finishes and the condition of the building.

5.4 The roof structure has not been fully examined as internally there is a lining. There is a depression at the left-hand end by the ventilation cowling which would have perhaps been an old stove chimney position, and this is likely to require some local strengthening to remove the depression.

5.5 The walls to the building appear in alignment, both vertically and horizontally.

5.6 Internally the ground floor slab shows no sign of irregularity and is serviceably level.

5.7 In principle, the repairs required are not structural and would not normally form part of this report; but we have been asked to provide advice in a general manner on measures that would bring this building back into a useable condition. Any repairs to the condition of the building will be a compromise, given the thickness of the masonry walls and the lack of damp proof course. Therefore, I would recommend the following are addressed, but will need Building Regulation approval.

5.7.a All cementitious render to be stripped off to expose the underlying brickwork outside brick. Piers still in place which have deteriorated should have the badly eroded/ frost shattered bricks removed, and new bricks cut in and re-mortared.

5.7.b A damp-proof course should be injected around the base of the masonry walls internal and external to assist in controlling rising damp and a Specialist should be consulted. In the past we have used TL Flower Ltd for advice.

5.7.c The asbestos roof cladding would need to be stripped off and an insulated panel sheeting applied. It is almost certain that the roof sheeting is cement-asbestos sheeting, so specialist advice should be sought, and specialist contractors used to remove and dispose of the old sheets. The new sheets will need to have the approval of Building Regulators.

5.7.d New external protective render needs to be applied but this should have a break within it and a bell drip above ground level, so that the render does not proceed down to ground level; so, there is a break at 150 mm above ground level and a damp-proof injection zone created which should then create a damp proof course

and prevent damp from rising up the walls. The bell drip on the outside face of the render will shed the water away from the lower structure. Perhaps the lower brickwork could be either bitumen painted or rendered as a face protection.

5.7.e A small drainage protection filled with shingle around the perimeter of the building would be good in assisting stopping rainwater build-up, but this would be subject to a check on the foundations.

5.8 You asked for a budget costing on this and I am not able to do these. In the repair of the building the Owners or Management Team, need to set the level that is to be achieved in finish standards. Also, the repairs will need to comply with Building Regulation requirements and the Disability Act for access. These later may have significant cost implications, as this is a public building. At this stage it may be a better option to look at the building and see what costs you can raise and justify and see how far that will take the project.

The refurbishment repairs are architectural, and you are advised to seek the services of a competent Architectural Technologists to prove a drawing and specification for upgrade to meet the requirements for Building Regulations etc... which can then either be cost evaluated by sending out for quotes or by reference to a Quantity Surveyor (we have been using Hyams Surveyors from Claydon) for such services in the past.

PHILIP STROUD BEng CEng MICE MIStructE

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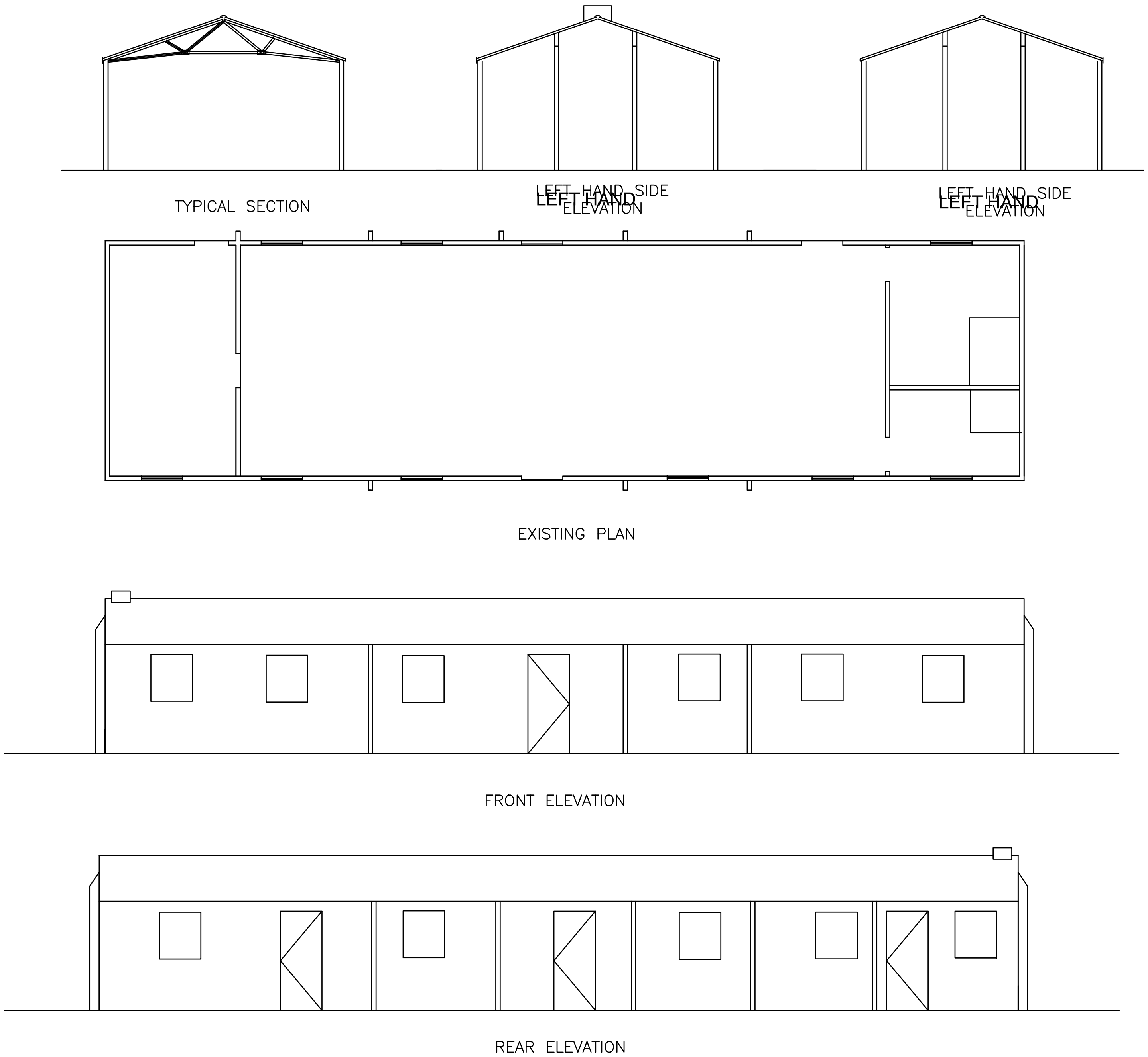
Photo 1-part front elevation

Photo 2 rear elevation

Photo 3 typical internal view



Revision	Date	By

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Project
REPORT ON DENHAM VILLAGE HALL, HOXNE ROAD, DENHAM IP21 5DN
REPORT ON DENHAM VILLAGE HALL, HOXNE

Title
EXISTING PLAN, SECTION AND ELEVATIONS
EXISTING PLAN,

Date	MAY 2018	Drawn	PS
Scale	1/100 @ A3		
Drawing No	SS128 01		