



**ST MARKS PRIMARY SCHOOL,
LOWER BOSTON ROAD,
HANWELL**

**Structural Report for Demolition of
Existing Caretakers House**

Team 4 Consulting Ltd

Structural and Civil Design Engineers

Phoenix House
Phoenix Way
Cirencester
Gloucestershire GL7 1QG

T: 01285 659827

**On behalf of
ARJ Construction Ltd**

Report Ref: 1634

Prepared by: T4C

Checked by: T4C

July 2016

E: Correspondence to be sent to Chris Jarman at: cj@team4consulting.com

COPYRIGHT

*The contents of this document shall not be copied
or reproduced in whole or in part without the written
consent of Team 4 Consulting Ltd.*

© Team 4 Consulting Ltd 2016

Report Ref: 1634
Report Issue: 08/07/2016
Rev: A

Contents

1.0 Introduction

2.0 Structural Frame

3.0 Conclusion

Appendix A - Sketch Plan

Appendix B - Photos

1.0 Introduction

T4C were commissioned by ARJ Construction Ltd to produce a structural report related to the proposed demolition of the existing caretakers house at St Marks Primary School in Hanwell.

The primary requirement of the structural report is to ascertain if the demolition of this building will have a detrimental effect on the stability of the adjacent school buildings.

The structural assessment and investigation is of a non-intrusive nature, which means no opening up or excavation was carried out.

The survey is limited to assessing the structural stability as noted above. The survey does not represent a detailed and dimensional survey of the house or school, nor ascertain the condition of any structural elements not visible to the naked eye without the need for any opening up. The survey cannot comment on the structural ability of the existing school buildings to withstand applied loadings by carrying out design checks, as no detailed information is available of the wall construction nor the size and depth of the foundations and the bearing strata.

The report represents the opinions of Team 4 Consulting Ltd and is for the sole use of our Client, ARJ Construction Ltd, Ealing Council and Project Stakeholders. It is intended to provide advice prior to the demolition and for discussions and agreement thereafter. The report should not be issued to any third parties, except as noted, or used by or relied on by third parties without the express consent and agreement of Team 4 Consulting Ltd for works other than intended.

The building appears to be constructed in cavity wall masonry with timber ground and first floors and a timber truss roof supporting slate tiles. There is some evidence of steel beams added in the basement to support areas of the ground floor. The basement is on two levels and is also constructed in masonry. There are 2No. masonry chimneys projecting through the roof. The building is assumed to have been built about 80 years ago (1920-30's).

2.0 Structural Frame

Roof

The roof to the caretakers house extends over the adjacent main access corridor and ties into the side of the pitched roof of the main school building (Photo 1). It appears that the timber trusses span side to side across the house and bear onto structural walls either side (Photo 2). To the right hand side (RHS) the roof stops at 1st floor eaves, however, on the left hand side (LHS) the roof continues down to ground floor eaves level – it is assumed that this is achieved with loose timber rafters.

Walls

The main loadbearing sidewalls of the house also extend across the school corridor and are supported on beams spanning across the corridor to the inner classroom wall (Photo 3). On the RHS the house appears to wrap around the corner of the main two storey school building (Photo 4), following the line of the wall across the corridor below.

Basement

The basement extends under the centre of the house and the remaining foundations are unknown.

The basement is approximately 1.7m high to the front of the house reducing to approximately 1.4m adjacent to the existing school corridor (Photo 5). The walls appear to be constructed in solid masonry and there is no evidence of water ingress or significant damp. There are a number of masonry piers constructed to support the ground floor above.

3.0 Conclusion

The proposed works at St Marks Primary School include the demolition of the existing caretakers house to replace with the construction of a new steel framed building housing a ground floor hall and 1st floor classrooms.

Although of a similar age and construction, the caretakers house appears from this initial investigation to have been constructed as an extension to the main school and we, therefore, believe that the structural stability of the existing school buildings is not dependant on any support from the caretakers house.

The roof to the existing school buildings appears to have been altered to allow for the connection of the caretakers house roof and this will probably require some structural works to maintain its integrity once the demolition is complete.

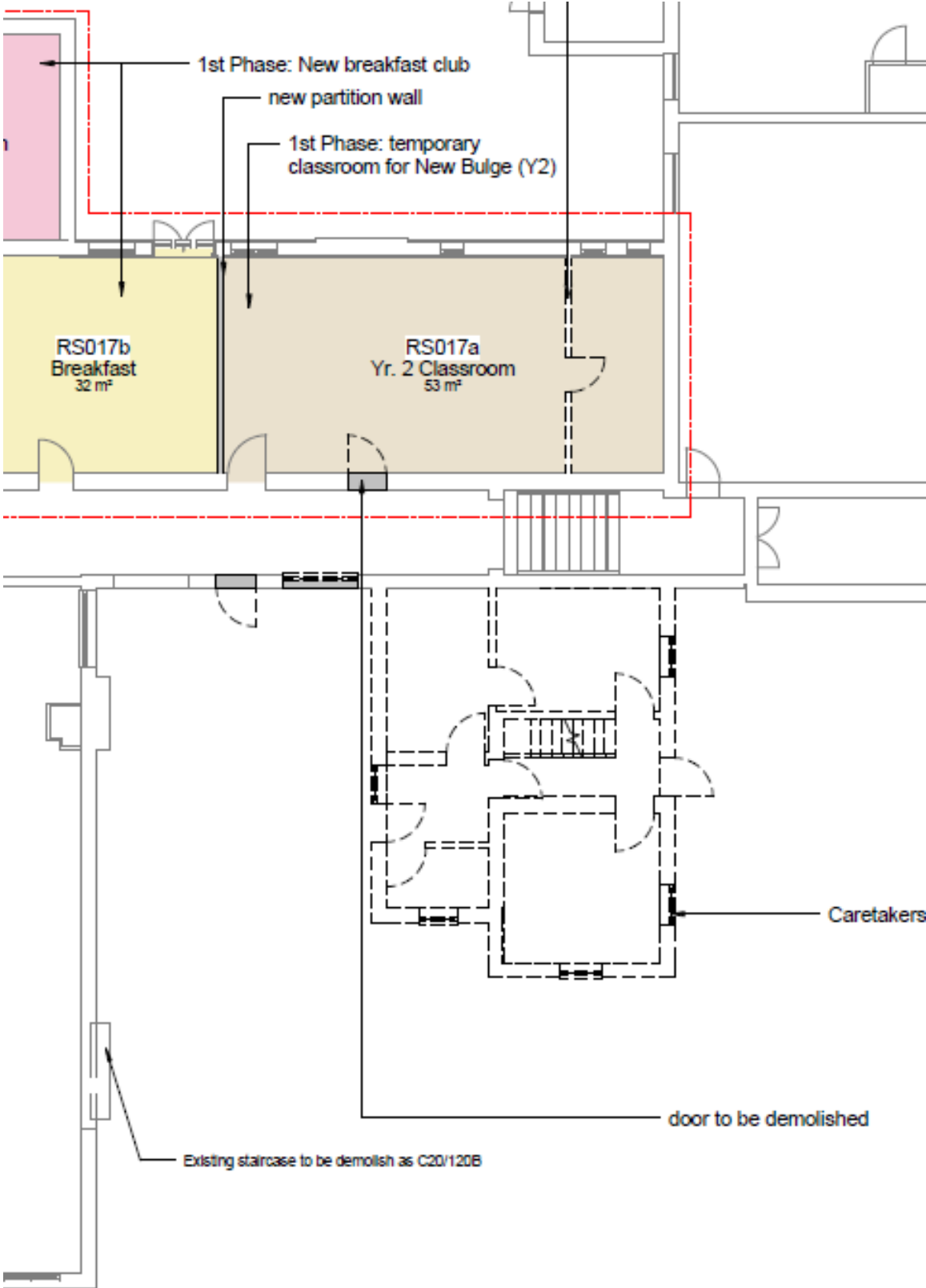
Once the caretakers house has been demolished a new tiled roof covering will have to be applied to the hole remaining in the roof of the existing school building. The final applied loads on the roof will, however, be reduced as the load added to the roof from the tiles will be less than the load that was being applied by the roof of the caretakers house

The existing basement in the caretakers house is proposed to be filled with compacted hardcore material, however, the section of the basement immediately adjacent to the school may be left open to avoid any lateral loads being transferred to the foundations of the school buildings.

It is our opinion that, apart from a localised assessment of the existing roof structure of the school during demolition, no further trial pits or local opening up will be necessary prior to construction.

The process of demolition is to be undertaken with care by a competent demolition contractor, ensuring that any anomalies are highlighted and discussed with the Structural Engineers prior to continuing. The Demolition Contractor should issue a method statement prior to the commencement of the works. An inspection of the roof structure is recommended when roof coverings have been removed to advise on any stabilisation that may be required between roof to existing building and Caretakers building roof.

Appendix A – Sketch Plan



Appendix B - Photos

Photo 1 – roof of caretakers house passing over the corridor



Photo 2 – inside roof space to caretakers house



Photo 3 – school corridor with caretakers house to RHS



Photo 4 – rendered caretakers house wrapping around school building



Photo 5 – basement to caretakers house

