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Structural Solutions

30 Church Street,
Royston

Structural Evaluation Report

Dit/12/026 – March 2012

1.0 Introduction

As part of the planning application, ref 2012/0268 to demolish the existing property at 30 Church Street, Royston, Barnsley and erect a new detached dwelling on the site, a structural Engineers report was requested to evaluate what effects the proposed works would have on the neighbouring / adjoining properties and the economics of structural works to the existing property.

In this regard an inspection of the site was carried out on the 26th March 2012. At the time of the visit the property was occupied by the vendor and was fully furnished. The visit did not include inspection of any internal rooms to the property.

A previous structural report was carried out by Messrs Thomas C Henry, (TCH), in November 1996, at the time the current vendor was purchasing the property. Reference will be made to the TCH report when discussing the structural implications of demolishing the existing property on the adjoining properties and the structural issues and economics of previously recommended foundation remedial works in this report.

2.0 Existing Property Details

The existing property is a brick built 2 storey house which has been fully rendered to all elevations. The property abuts a row of 4 No. terraced house's to the right hand side, looking from Church Street. Records show that No. 30 Church Street was in the past a detached house with the row of terrace house's built adjoining the property at a later date. The house sits to the front of the site approx 2-3m off Church Street. A block paved side access driveway runs up the left hand side of the property and continues round to the rear. There is evidence on the left hand gable of 2No. patress plate tie bars, 1 at 1st floor level the other at eaves level. These are located to the front left corner of the building and appear to be an attempt to tie the gable to the front wall. Due to the adjoining properties it cannot be established if these run through to the right hand gable or establish the condition of end any plates.

There is evidence of past trees within the rear garden which have been cut down, the previous report makes reference to these. There is a brick built detached garage with pitched roof in the right hand corner of the site. This appears to be in an unstable condition.

3.0 Structural Stability of Adjoining Properties

The proposal is to demolish the property occupying 30 Church Street. This property abuts a row of 4 terraced properties on the right hand side. Following demolition the gable to property directly adjacent will be exposed and must be independently structurally stable.

Inspection of the adjoining properties, viewed from the back of 30 Church Street, shows that the rear elevation of the property is stepped back from the row of terraced properties. Approx half of the gable elevation to the terraced properties is exposed at high level, but reduced at ground floor due to the single storey extension. It would appear that there is a physical gap between the buildings that has been filled with mortar, suggesting that there is likely to be no structural tie between the 2 main gables. This will facilitate demolition of the property without impact on the stability of the terraced properties. This can be investigated further during demolition works. The right hand side gable wall to the property should be removed in a steady manner during which time the operation and works should be monitored. Any issues uncovered should be consulted with the Engineer. The past structural report noted that there was no evidence of differential movement on the intersection between the 2 properties.

Inspection of the exposed brickwork to the terraced gable suggests that repointing work would be beneficial to improve the weathering of the brick face. Once the full face has been exposed all roof verges should be made good and weather tight.

A cellar to 30 Church Street exists along the right hand side. If demolition works are to proceed we suggest that the structure is taken down to the external ground level and the cellar area filled in. This can be done using suitable crushed demolition material and compacted in layers to sustain proposed parking and landscaping. No excavation should be

carried out at the boundary line which may undermine the foundations of the adjacent properties.

4.0 Structural Evaluation of Foundation Remedial Works

The structural report carried out in 1996, suggested that a number of issues had combined to cause movement and disturbance of the existing property. These comprise major mining subsidence and shrinkage of the founding strata due to local mature trees causing differential foundation movement. The issue relating to the mining subsidence was resolved by the installation of the 2 tie bars. The differential movement caused by the trees was reported to have caused a number of large open cracks to the elevations on the left corner of the property. The recommendation was to under pin the property to stabilise ground movement. It was viewed to fully remove the elm and willow trees to the front of the property to minimise the impact of moisture changes in the ground on the property. The movement was monitored over 12 months and this action would appear to have prevented further settlement changes. In addition significant works were carried out to the internal areas of the property to re level sloping floors and fixtures.

There are a number of key issues relating to economics for undertaking under pinning works to address future settlement issues. The 1996 report carried out by TCH recommended to under pin to the left half of the front elevation and the full length of the left gable. The costs associated with this will obviously depend on the depth of the existing foundations and the further dig required to get to suitable bearing strata. In addition there will be costs for reinstatement to the block paved driveway along the full left hand gable as well as allowances for impact of excavation on the existing drainage which runs down the side of the property.

Consideration should also be given to the necessary access required to the front of the property in order to safely excavate down to suitable strata, as the front elevation is in such close proximity to the road and footpath. This is particularly the case as any necessary under pinning nears the deeper footings in the area of the existing cellar, located towards the right

side of the property. Thus temporary supporting to the excavation may be required, and again there will also be reinstatement costs.

The issue of the past mining subsidence, including the instalment of remedial ties, and any under pinning works, in our opinion, could greatly affect the saleable value of the property. There are also issues relating to obtaining house insurance for any new occupier. The choices of insurance providers can be restricted when there are known settlement issues, particularly when under pinning has been carried out. Therefore any potential new purchasers could be deterred from buying the property, and although under pinning would strengthen the property and remove any settlement issues, the costs of carrying out the works are, in our opinion, not going to increase the value of the property, and in this regard do not appear to make economic sense.

The current vendor requires additional space, which the proposed dwelling would provide. Therefore the remaining alternative would be to look at extending the existing property. To achieve the vendors requirements an extension would be of 2 storey construction and encompass internal amendments to the existing layout. This will increase the aspect of the property but the cost of construction will not be seen in any potential increase in value of the property, and thus would not make economic sense. In addition the historic structural issues would still remain affect the saleable aspect of the house.

Conclusion

Visual inspections carried out on the property on the 26th March 2012 suggest that the current property at 30 Church Street, Royston could be demolished without affecting the structural stability of the adjoining properties. Works to improve and maintain any exposed areas of the gable to the remaining terrace property from weathering would be carried out.

The current structure would appear not to be suffering from significant ground movement at this moment, although previous works are masked by new external render. Any remedial under pinning would not make economic sense on the grounds of realisation of construction costs on the value of the property, which has historic structural and settlement issues.

In this regard the cost of a new build detached property on the site would be structurally sound and be of improved quality and benefit and appears to make more economic sense than undertaking costly remedial works to the existing property.

Signed : .....

Date : .....

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