APPENDIX A

INSPECTION AND CONDITION REPORT

Part of The Courtyard Buildings
Lound Hall Estate
Bothamsall, Retford, DN22 8DF

Bloom Developments Ltd

Derek Kitson Architectural Technologist Ltd
Trinity College Farm
Great North Road
Barnby Moor
Retford, Notts
DN22 8QQ
Tel. 01777 816686
Email: derek.kitson@hotmail.co.uk

Ref: 20/1944/DK/EM
April 2021

1.0 PROPERTY DESCRIPTION

1.1 The properties inspected form part of the courtyard group and comprise some 2 storey and single storey structures.

1.2 They are located on the south east and south west sides to the courtyard.

1.3 The main run of buildings has been converted previously and has an established residential use.

1.4 Enquiries with the LPA has confirmed their status as being residential/domestic.

1.5 The main structures are built using methods normally associated with commercial/industrial premises rather than domestic with the use of steel framework and concrete first floors.

1.6 Before their conversion to domestic it appears the buildings were associated with the Mining Training Centre and Bevercotes Colliery.

1.7 This could well explain their industrial construction methods.

1.8 The properties have pantile roof coverings and solid brick walls.

1.9 Windows are generally steel casement frames with single glazing.

1.10 There are both exposed concrete and steel lintels over external openings and much of the steel framework is exposed on the inside of the structures.

1.11 External walls are 225mm thick solidwork, no cavities.

2.0 CONDITION

2.1 The buildings have been uninhabited for approximately 7 years and have deteriorated considerably.

2.2 They are all suffering from penetrating and rising damp. The solid walls do not help this aspect.

2.3 The walls themselves are built in English bond and have several major cracks, all shown on the attached photographs. These cracks do not follow joints but rather break bricks indicating major foundation problems and movement.

2.4 The worst crack is on the south west end wall of the single storey element. It is wider at the bottom than the top suggesting considerable movement of foundations specifically at the middle length of the wall.

2.5 Throughout the whole range of the buildings there are cracks in many locations including around wall/roof junctions, at lintel/steel beam bearing points, at mid-span over some concrete lintels, at low level on internal faces of walls and internal walls and along some floors.

2.6 Numerous holes and doorways have been knocked into walls, many structural, and left without any form of lintel provision or support. These in themselves have contributed to elements of structural cracking and fatigue throughout the buildings.

2.7 There are numerous cracks in the concrete ground floors and also the concrete first floors suggesting once again movement at foundation level has taken place.

2.8 Given the buildings original use and the proximity of the colliery, it would appear that mining subsidence could be a major factor in the movement associated with these buildings.

2.9 This range of buildings is relatively new (20th century) and, as such, would have been built on rigid concrete foundations and utilising strong cement based mortars. These are not flexible materials whereas the much older buildings on the north west side of the courtyard were built on brick spread footings and the brickwork utilised lime mortar. This produced a much more flexible structure and one more tolerant to foundation movement.

2.10 A further contributing factor to the movement issue is the first floor imposed loads from the concrete first floors and the point loads from the steel framework that supports the first floor.

2.11 As described earlier, the range consists of a central 2 storey section which was originally full height open to the underside of the rafters and this was a small sports hall for the mining training centre.

2.12 There are dormer structures at either end of this taller element and these end structures have suffered greatly with damp and mould growth.

2.13 None of these structures have any form of insulation, this can be evidenced by the rafter marks etc on the ceilings.

2.14 The use of concrete first floors and exposed steelwork built into external walls certainly has contributed to the excessive amount of mould present in these buildings.

3.0 GROUND FLOORS

3.1 These are generally solid concrete but most show signs of cracking and settlement.

3.2 None of these floors are insulated.

3.3 Some still have damp floor coverings in place.

4.0 FIRST FLOORS

4.1 The first floors within the 2 end sections are generally cast in-situ concrete supported by exposed steel framework.

4.2 All have floor coverings in place and there are instances of cracking when viewed from beneath.

4.3 These cracks are not, on their own, a major problem as it is assumed these floors will have some form of bar or mesh reinforcement.

4.4 If no reinforcement is present and the floors are simple mass concrete then their life expectancy is very limited and further foundation movement could increase cracking and the risk of collapse.

4.5 The central taller portion has had a first floor installed together with a partial floor within the roof trusses. These floors have been a recent addition and have been installed by unskilled craftsmen and should be removed.

5.0 WINDOWS AND DOORS

5.1 The doors are mostly timber in timber frames. All require replacing.

5.2 The windows are a mix of timber and metal casement, all are single glazed and all are very poor and require replacement.

5.3 The dormer windows are metal and located within a timber framework. The cheeks of these dormers are very thin indicating that there is little by way of

structural framing and certainly no insulation. The roof over these has little overhang and would require total removal and rebuilding.

6.0 ROOFS

6.1 All roofs are constructed using timber rafters and purlins supported by steel beams and framework and angle iron trusses.

6.2 All are in reasonable condition but all ceilings and timbers have been affected by water ingress, condensation production and mould growth.

6.3 The taller central section has fixed glazed rooflights to both faces. Both of these are single glazed, toughened glass and have over the years produced large amounts of condensation which has run down the roof and caused issues with ceilings and timbers.

6.4 The underside of the roof structure is finished with timber boarding which shows signs of deterioration due to the presence of water.

6.5 From an external inspection the lead flashings around these rooflights appear to have been dislodged or simply failed with movement. Water ingress has therefore occurred evidenced by the photographs that accompany this report.

6.6 There are 2 large metal vent stacks on this central roof, both of which appear in poor condition and require removal.

7.0 EXTERNAL METAL ACCESS STAIRS

7.1 These stairs give access to a first floor flat and are painted mild steel.

7.2 They show various degrees of rust and decay and the top surface in places is exceedingly slippery.

7.3 The whole staircase and landing requires removal and renovation if it is to be refixed and reused.

7.4 The handrail does not conform to current requirements.

8.0 ALTERATIONS TO STRUCTURES

8.1 The previous owners carried out numerous alterations and building works to these structures.

8.2 On careful inspection it is agreed that none of these alteration works should be retained as most, if not all, do not conform to current regulations.

8.3 All fittings including the heating installations are substandard and installed incorrectly and, as such, should be removed.

8.4 Some areas of the existing ground floor have been cut and chopped up to provide a channel/duct for service pipework. This practice is unacceptable and has resulted in the loss of integrity of that particular floor section resulting in its full removal and replacement.

8.5 Generally the poor standard of the alteration works has contributed to the overall decline in the buildings quality and condition.

8.6 All these works require removing and their effects reversing if the buildings are to be retained.

9.0 SERVICES

9.1 External service provision, other than electricity mains entry have not been inspected.

9.2 However, the main electrical mains entry position in the eastern end structure has been tampered with in the past and there is evidence of burning which strongly suggests an overload has taken place.

9.3 Further investigation will be required but it is highly likely that much of the wiring has suffered due to this overloading taking place.

10.0 CONCLUSION

10.1 The buildings are no longer in a habitable condition and require considerable investment and further investigation to make safe and reusable.

10.2 At present the layout provides 6 flats which are not required by this applicant and therefore the layout will need considerable work to make the premises usable and lettable.

10.3 None of the buildings originally had a domestic/residential use and, as such, were not designed for this purpose, they were associated with the mining training centre.

10.4 Little or none of the main structural elements have fire protection, none of the first floors have fire protection or sound insulation and none of the division walls have fire stopping nor sound attenuating provision, all of which are required for either semi-detached structures or flat accommodation.

11.0 RECOMMENDATION

11.1 Before making the decision to renovate, it is strongly advised that a cost appraisal of renovation against new build should be carried out as in this particular instance many of the movement cracks will result in large areas of demolition and rebuilding.

11.2 If the whole were to be removed then some of the current materials could be saved and reused.

11.3 The benefits of new build over renovation in this case could be considerable not only in cost savings but in terms of layout provision, structural integrity and much improved sustainability.

11.4 Modern construction methods and materials could be used and more specific design elements incorporated to provide accommodation that reflects this accommodation being provided already on this site.

11.5 Rebuilding would provide a lifespan for these buildings considerably longer than any renovation scheme could and coupled with the fact that new build will be so much easier to mortgage and raise funds for makes rebuilding a very attractive alternative.