

29 SEP 2013

REPORT ON VISUAL INSPECTION OF OUTBUILDINGS AT TROUTSDALE MILL.
CONVERSION OF OUTBUILDINGS INTO DOMESTIC RESIDENTIAL ANNEX

INTRODUCTION

At the request of William J Stockdale--Building Surveyor acting on behalf of Mr & Mrs Milner owners of the above property we carried out a visual inspection of the outbuildings adjoining Troutsdale Mill a two storey domestic dwelling occupied by the owners. The owners wish to convert the outbuildings into habitable accommodation for a relative. The purpose of our inspection is to advise upon the general condition of the existing construction and the feasibility of conversion to habitable accommodation. The various outbuildings/stores to which this report relates are indicated on the Building Surveyors Plan No. MM/1/7/16-01 showing the Plan & Elevations as Existing. The report is required to assist the Planning and Listed Building Consent Application.

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CONSTRUCTION

The single storey outbuildings are predominantly solid stone construction with double pitched roofs clad with clay pantiles carried on timber jack rafters off undressed tree trunk purlins. The roof to the North East corner is hipped with the hip rafter carried by a poorly constructed truss. A number of photographs are appended to this report to highlight comments made below.

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EXTERNAL OBSERVATIONS

ROOF STRUCTURE

The roofs shows signs of deflection although the ridge line to the roof over Stores 1,2 & 3 is relatively straight. There is however considerable distortion to the ridge over Stores 4 & 5.

NORTH WALL - STORE 1, 2 & 3

This wall appears to be reasonably sound & straight with little evidence of any significant foundation settlement or lateral movement.

EAST WALL – STORE 3, 4 & 5

The wall to store 4 exhibits considerable lateral movement. There are four animal feeding troughs built into the wall just above ground level with the wall over propped from thin narrow stone pillars. It would appear that the wall is being pushed out by the roof structure although there may have been some foundation movement caused by softening of the ground from animals feeding in close proximity to the wall. The section of wall to Store 3 from the north corner appears to be reasonably sound although some rebuilding to the jamb of the door opening may be required.

SOUTH WALL – STORE 5

The gable wall generally appears sound & true apart from some severe erosion of stone work just above ground level. There is also some cracking of the wall close to the East end of the wall.

COURT YARD WALL TO STORES 4 & 5

A vertical crack to the right hand side of the wall extending from eaves level down to the top of the low level external court yard wall was noted. The upper section of this wall to Store 5 also exhibits a lean outwards at the top. The lower section of the wall does however appear to be reasonably sound. The pier between the two door openings to store 4 is poorly supported. A floor drain has been formed directly below the pier with the bottom stones of the pier having minimal bearing both sides of the drain.

COURT YARD WALL TO STORES 1 & 2

The elevation to Store 1 is completely open whilst the stonework to Store 2 appears to be reasonably sound.

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INTERNAL OBSERVATIONS

STORE 1

The roof structure comprises 4 No. undressed small diameter tree trunk purlins carrying rafters of various ages. Many of the original rafters remain but have been supplemented by the addition of more recent timbers due to deterioration of the original members. The roof is felted indicating that the roof cladding has been replaced in more recent times. Some cracking to the stonework local to the purlin ends was observed due to lack of eaves restraint to the roof structure.

STORE 2

Similar comments to that for Store 1.

STORE 3

The hipped roof over is supported from a poorly formed full truss & a half truss carrying the hipped rafter. Purlins are as for Store 1 with similar cracking of stonework local to purlin ends. The roof is also felted. A strange timber lintel exists over the door opening to the East wall. A vertical crack exists where the division wall to Store wall abuts the East wall.

STORE 4

Severe vertical cracking where the division walls to stores 3 & 5 abuts the East wall & a similar crack where the division wall to Store 5 abuts the west wall to the courtyard. The roof is unfelted the purlins & rafters all being original. Local cracking to the purlin ends is also evident.

STORE 5

This store is completely open to the elements there being no wall to the East elevation. The roof is unfelted as for Store 4, The severe vertical cracking observed in Store 4 where the division wall abuts the East wall was particularly bad on this side of the wall.

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CONCLUSIONS & RECOMMENDATIONS

We consider that it is feasible for the outbuilding to be converted into habitable accommodation. Some rebuilding work will be required but the majority of the walls can be retained subject to repair. It would be safer & simpler to replace the whole of the timber roof structure although subject to a thorough examination & inspection it may be possible to retain parts of the structure. Following removal of the roof covering it will be necessary to expose the ends of all rafters & purlin where built into masonry to check for any rot or fungal attack. This would require replacement or repair as necessary before making good the masonry around the purlin ends & solidly building in. Should any of the roof structures be retained then it is recommended that ridge purlins or horizontal ties be provided to eliminate the lateral load at eaves level & purlin ends.

The East wall to Store 4 has suffered considerable lateral movement & needs to be taken down to foundation level & rebuilt off a new foundation on firm natural ground. The upper section of wall to Store 5 also needs to be taken down to approximately the top of the low external wall & rebuilt ensuring full & adequate bond into the remaining walls. The top of the walls will need to be suitably tied into the roof structure.

The base of the stone pillar between the door openings to Store 4 where the floor drain extend below the pillar needs to be made good. Underpin if necessary.

Any cracking of the stonework or erosion of stone needs to be locally cut out & made good to provide sound fully bonded Masonry.

It is recommended that all timber lintels be removed & replaced with concrete or stone lintels. Any timbers built into walls should also be removed & the masonry made good.

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W.R.S. TURNBULL,C.Eng.,M.I.Struct.E



Figure 1 - NORTH WALL



Figure 2 - NORTH WALL

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Figure 3 - EAST WALL



Figure 4 - EAST WALL

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Figure 5 - VIEW ALONG EAST WALL



Figure 6 - SOUTH GABLE

2023



Figure 7 - COURT YARD LOOKING EAST



Figure 8 - COURT YARD LOOKING EAST

2002



Figure 9 - COURT YARD LOOKING NORTH EAST



Figure 10 - COURT YARD LOOKING NORTH

2023



Figure 11 – ROOF-STORE 1 - NORTH SLOPE



Figure 12 – ROOF-STORE 1-SOUTH SLOPE

29 SEP 2003



Figure 13 - ROOF-STORE 2



Figure 14 - ROOF-STORE 3-TRUSS

29 SEP 2011



Figure 15 - ROOF-STORE 3-HIP CORNER



Figure 16 - ROOF STORE 4

29 SEP 2016



Figure 17 - STORE 5-NORTH WALL



Figure 18 - STORE 5 ROOF

29 SEP 2015



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