

STRUCTURAL REPORT

ON

**THE BREWERY HOUSE
NETHERLEY ROAD
TARBOCK GREEN
MERSEYSIDE
L35 1QE**

FOR

**NEW START HOMES
THE JOB BANK
4 TUNNEL ROAD
WAVERTREE
LIVERPOOL
L7 6QD**

BY

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L1724/R01/revA

THE BREWERY HOUSE

Report On

**The Brewery House, Merseyside
Netherley Road
Tarbock Green
Merseyside
L35 1QE**

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Introduction

The purpose of this report is to record on the present structural condition of two outbuildings and the link to the rear of the dwelling house.

The report does not include inspection and recommendations for the main dwelling house.

The outbuildings are denoted on the enclosed plan as follows:

Stable Block – A

Large Barn – B

Link Building – C

Advice is given on the extent of reconstruction required to bring these buildings back into use.

Survey

A visual inspection was made of the structural condition of the external walls, roofs, internal floors and internal wall between buildings B & C.

Record photographs were taken on 27th July 2011 and are included in Appendix 1 of this report.

A description of each structural element is as follows.

Building A – Stable Block

East Elevation Gable End

This is constructed in English Garden Wall Bond loadbearing brickwork (*Photograph 01*). There is a header course every sixth course. The brickwork is badly weathered and the mortar joints deeply recessed. The wall is plumb up to eaves level but the triangular pike above the eaves leans inwards towards the building (*Photograph 02*). The top courses of brickwork along the verge are loose.

South Elevation Facing Courtyard

This elevation is also constructed of English Garden Wall Bond (*Photograph 03*). All the brickwork is badly weathered and the joints deeply recessed. About 15% of the bricks are perished. There are two window openings to the loft level and two window openings to the ground level with a full height central door opening. There is a continuous timber wallplate at eaves level which acts as a lintel over the window and door openings (*Photograph 04*). There are two steel beams at loft floor level across the door opening (*Photographs 05 & 12*). These beams are exposed and rusted. The entire elevation leans outwards by 150mm above the ground floor window cill level (*Photograph 09*).

West Elevation Gable End

This elevation is constructed in English Garden Wall Bond but approximately 50% of the wall has been 'patched in' with replacement brickwork (*Photograph 06*). Much of the original brickwork is perished and the mortar joints are deeply recessed. The wall is generally plumb up to eaves level although it does 'undulate' due to having been 'patched' several times. The brickwork pike above eaves level leans outwards by 75mm and the bricks are loose along the verge (*Photograph 07*).

North Elevation Facing Garden

This elevation is of similar construction to the other elevations (*Photograph 08*). Approximately 15% of the bricks are perished and the mortar joints are deeply recessed. The top half of the wall above loft floor level leans out by 75mm at the eaves.

Roof

The roof was formerly of timber rafters and purlin construction with a slate covering. The entire roof structure has collapsed

Loft Floor

This floor was constructed of timber joists spanning from the North to South elevations. Timber boarding formed the top surface of the floor. As viewed from the South through the window and door openings it was evident that the right hand half of the floor had collapsed, presumably unable to support the weight of the

collapsed roof (*Photograph 11*). The left hand half of the floor was still in place and supporting the dead load of the collapsed roof (*Photograph 10*).

I am of the opinion that any further collapse of the floor could result in collapse of much of the South elevation and is potentially dangerous.

Building B – Large Barn

East Elevation Gable End

This elevation has two large door openings with a brick pier between (*Photograph 13*). There are clerestory windows above the timber doors in each opening and there is a timber lintel above each of the door and window openings. These two lintels have deflected and this has caused diagonal cracking in the triangular panel of brickwork above (*Photographs 14 & 15*). This brickwork is laid in stretcher bond.

The timber roof purlins ends are exposed where they sit on the gable brickwork and the timbers along each verge are in poor condition. The top twelve courses of the pike lean outwards.

South Elevation Facing Netherley Road

This elevation was constructed in stretcher bond and has three window openings (*Photograph 16*). It was in a generally sound condition with the exception of a crack affecting the top four courses at the right hand end.

North Elevation Facing Courtyard

This elevation is constructed in stretcher bond brickwork. It is generally sound and plumb but the mortar joints are deeply recessed due to weathering from leaking gutters. There is a personnel door opening at the right hand end giving access to the inside.

Internal Inspection

There are stone slabs at the door entrances but elsewhere the floor appears to have an earth surface. The building contains a considerable amount of old belongings, furniture, toys, electrical appliances and general junk and rubbish (*Photograph 20*). There is no first floor and the underside of the roof can be seen (*Photograph 21*). There is a central roof truss spanning between the North and South elevations. There are two purlins, rafters and old slates on the Netherley Road elevation and this appears to be original. The Courtyard roof slope has been renewed with a single purlin and more widely spaced rafters supporting modern roof slates. The upper slope between the purlin and ridge has had additional rafters inserted to halve the spacing but these have not been inserted in the lower section between the purlin and the eaves (*Photograph 22*).

The rear internal wall of the barn has had many former openings in it which have been infilled with brickwork and in some instances the old rotted timber lintels remain in place (*Photograph 23*). There are many vertical cracks in this wall which forms the division between the large barn and the small link building between the barn and the house.

Building C – Link Building

This has only a South Elevation Facing Netherley Road

There is a ground floor door opening which appeared to give access to the eastern wing of the house (*Photograph 17*). It has a small canopy over the door supported on brick piers. This construction is an 'add on' and not similar in style to the original. There are two window openings to the right of the door one to the ground floor and one to the first floor. The brickwork of this elevation is badly weathered and the mortar joints are deeply recessed. The brickwork between the link and the barn is block bonded and projects forward by 50mm (*Photograph 18*). The link wall extends above the barn roof and the purlin ends are exposed (*Photograph 19*).

Internally the link building was accessed through a door opening in the rear internal wall of the large barn (*Photograph 24*). An internal wall within the link appears to have collapsed and a partial concrete first floor is visible (*Photographs 25, 26, 27, 30, 31 & 32*). All of this was in a poor structural condition.

Recommendations

These recommendations are based on restoring the structural fabric of the buildings to a safe and serviceable condition. They do not advise on the conversion of the buildings.

Building A – Stable Block

The North, East and West elevations should be demolished down to loft floor level and rebuilt. Approximately 50% of the existing brickwork will remain.

The South elevation which is presently unsafe should be demolished down to ground floor window cill level and rebuilt. Approximately 25% of the existing brickwork will remain.

The remaining sections of wall will require raking out and repointing and the perished bricks replacing.

The roof will require removal from its collapsed position within the building and replacing with a new structure.

Similarly the loft floor will require removal and replacing with a new suspended floor. New steel beams to support the loft floor will be required together with new lintels across the door and window openings.

Building B – Large Barn

The North and South elevations may be left in place but should be raked out and repointed. The East elevation should be demolished down to the timber beam level above the two large openings. The beams should be replaced with steel beams or lintels and the pike of brickwork rebuilt including the top corner around the South elevation where it is cracked.

The rotted timber lintels in the rear internal wall should be removed in small sections and brickwork bonded in. The method of repair of the cracks will depend on the final use but if left as it is steel crack tie rods should be bonded into raked out bed joints with epoxy resin mortar every sixth course across the cracks.

This is a common method of repair used in listed buildings and buildings in conservation areas. The epoxy resin mortar is restricted to every sixth bed joint for a length of 900mm central about the crack. It is recessed by 10mm brick from the face of the wall and is invisible when the wall is repointed.

These measures will restore the barn to a sound structural condition. If it is required to change its use to a habitable building additional measures will be required to strengthen the walls and the roof. This is usually achieved by tying the new walls and floors to the existing masonry.

Building C – Link Building

Internally this is substantially derelict and should be cleared of all collapsed walls etc. If it is intended to have a first floor the existing floor should be removed and replaced. The existing South elevation should be raked out and repointed and the block bonding to the rear of the barn should be improved and possibly concealed by the addition of a bonded in brick pier.

Roger Hetherington C. Eng., M.I.Struct.E.

Appendix 1 – Photographs



Photograph 01



Photograph 04



Photograph 02



Photograph 05



Photograph 03



Photograph 06



Photograph 07



Photograph 10



Photograph 08



Photograph 11



Photograph 09



Photograph 12



Photograph 13



Photograph 16



Photograph 14



Photograph 17



Photograph 15



Photograph 18



Photograph 19



Photograph 22



Photograph 20



Photograph 23



Photograph 21



Photograph 24



Photograph 25



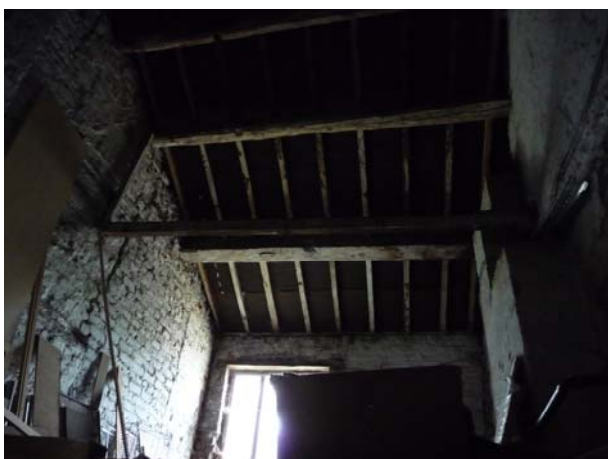
Photograph 28



Photograph 26



Photograph 29



Photograph 27



Photograph 30



Photograph 31



Photograph 32