

SPECIFIC DEFECTS REPORT

Of a Property in Lincolnshire



FOR

Mr M

Prepared by:

INDEPENDENT CHARTERED SURVEYORS

Marketing by:

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0800 298 5424

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INTRODUCTION AND INSTRUCTION

We have been instructed by Mr M to advise on the need or otherwise for an Expansion Joint to the Brickwork of a property in Lincolnshire.

We have carried out a visual inspection of the property.

We are independent Chartered Surveyors, regulated by the Royal Institution of Chartered Surveyors and also members of the Independent Surveyors Association.

This report has been carried out under our standard terms and conditions. These are automatically forwarded to you by email upon confirmation of our instruction and are also available to view on our website. If you have any queries with regard to these please do not hesitate in contacting us as soon as possible.

SYNOPSIS

As part of the redevelopment of a Brewery site the Building has been rebuilt with a fascia retention to the front, the remainder of the property being newly constructed.

We are advised that this has been passed as meeting Planning Permission by the Local Authority and Building Regulations by Independent Building Control Inspectors however your Insurers requested an expansion joint in the outer brickwork be added. Our investigations have included speaking to the original architects and structural engineers and brick manufacturers. We have been unable to speak to the main contractor but were advised by Mr M that there have been various complications and bankruptcies throughout the project and therefore there had been no single main contractor.

The Insurers representative has advised that they require a Vertical Expansion Joint to be added to the brickwork which they believe to be in excess of the British Standards requirement.

EXECUTIVE SUMMARY

Executive summaries are always “dangerous” as they try and encapsulate relatively complex problems in a few precise and succinct words. Having said that here is our executive summary and recommendations:

Brickwork and blockwork expand and contract in relation to temperature changes and their moisture content although the changes in size are small, cumulative effect can cause stresses on brickwork and blockwork. The modern practice of using hard cement mortar allows minimum movement, unlike the older lime based mortars which could absorb some movement. Today we therefore use expansions joints to cope with the expansion and contraction movement.

There are various best practices and guidance notices and British Standards on brickwork and expansion joints.

We believe that the reference document for this with British Standards is BS5628 which in our understanding advises that buildings of a normal storey height or greater should not exceed 15 meters in length and more typically recommend 12 meters. Unfortunately your property measures 15.350.

We feel that over and above this the brick manufacturer's; recommendations must be taken into consideration. We have been verbally advised that 10 meters is their recommended span without an expansion joint.

From our investigations we would conclude and recommend that the best practice would be to put two expansion joints on each side of the longest length of the property, making four expansion joints in total. There appears to be one expansion joint at present to the front right hand side (all directions given as you face the property). This would need to be opened up to establish that it is a true expansion joint. If it is then the three additional expansion joints be added.

CONSTRUCTION SUMMARY

External

Main Roof:	Pitched roof clad with slates supported on steel framework.
Gutters and Downpipes and Soil and Vent Pipe:	Plastic
Walls:	Front fascia retention which is in an English Bond style of brickwork with Stretcher Bond brickwork to the sides and rear (assumed)
External Detailing:	Windows – double glazed within timber frames. There is also a metal balcony to the rear.
Foundations:	We have been advised (PM) that deep piling has been utilised to approximately ten meters.

Internal

Ceilings:	Plasterboard (assumed)
Walls	Dry Lined (assumed)
Floors: Ground Floor:	In situ concrete (assumed)
First and Second Floor:	Concrete Section (assumed)

Services:	Individual Boiler Central Heating System
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We have used the term 'assumed' as we have not opened up the structure.

INSPECTION AND INVESTIGATION

Our inspection has been specifically related to need or otherwise for Expansion Joints to the Brickwork of the Development Main Building as detailed below.

We have carried out a visual inspection which you accompanied us on (we viewed the external of the property and inspected a sample of the rooms). We have also carried out desktop investigations by discussions with:

Building Control
East Yorkshire

Architects

Brick Company
Co Tyrone

Structural Engineer
Brick Company

Master Brick Layer and Brickwork Consultant

Building Research Establishment (who produce the BRE Digest 164 on Movement Joints)
Herts

Brick Company
London

Anglia Ruskin University
Essex

Photographic record of the property at the time of our inspection



Front View



Rear View



Right Hand View



Left hand side (photograph from the rear)

SURVEY FINDINGS

Bricks, Blockwork and Movement

There are a variety of opinions on expansion joints. Whilst many may voice the opinion that an expansion joint is not necessary, we have not been able to find anyone who is prepared to put in writing that they were happier to see larger joints and longer spans of brickwork without an expansion joint over and above that stated within the British Standard. The underlying factor is that bricks expand and contract subject to external factors, such as time of year / temperature and their moisture content.

We believe that the belief that bricks runs can be greater than the standard 12 or 15 meters comes from years gone by when a softer red brick was generally used and a lime mortar both of which had a greater capacity to absorb movement and contraction within the brickwork, which is probably what the original construction consisted of.

The amount of brickwork movement and the way it is calculated seems to vary depending upon the reference source however, the general consensus of opinion is that expansion joints are required with a suitable mastic and flexible filler. Reference should be made to British Standard 6213 and the Building Research Establishment Digest 164 for the selection of sealants and mastics is generally considered the best approach to use due to its elasticity and longevity and the thickness of the joints.

The rule of thumb on the width of the expansion joint is approximately 30% more than the distance between the joints i.e. a 12 metre run of brickwork will require an expansion joint of 16mm. An additional rule of thumb is that expansion joints should be no further than 6 meters from the corner or the end of a wall and no further than 12 meters apart. This of course is subject to type of brick, type of mortar and location.

Problems we have come across due to lack of Expansion Joints

We have found, and the research we have carried out confirms that problems tend to occur at the corner point. Movement strains appear in the form of vertical cracks at the corner. Also there can be some sliding on Damp Proof Courses

SUMMARY UPON REFLECTION

The Summary Upon Reflection is a second summary so to speak, which is carried out when we are doing the second or third draft a few days after the initial survey when we have had time to reflect upon our thoughts on the property. We would add the following in this instance:

Unfortunately the property has a length greater than that recommended by the British Standards and also by the Brick Manufacturers. We believe from our discussions that you are likely to require four expansion joints. We would refer you to the Brick Development Association Limited, who has been very helpful in this matter.

If you would like any further advice on any of the issues discussed or indeed any that have not been discussed! Please do not hesitate to contact us on 0800 298 5424.

LIMITATIONS

Specific Defects Report

1. Conditions of Engagement

Please note: references to the masculine include, where appropriate, the feminine.

Subject to express agreement to the contrary (which in this particular case has been none) and any agreed amendments/additions (of which in this particular case there have been none), the terms on which the Surveyor will undertake the Specific Defects Report are set out below.

Based upon a visual inspection as defined below the Surveyor will advise the Client by means of a written report as to his opinion of the visible condition and state of repair of the specific problem or problems only. In this instance we have only looked at the brickwork.

2. The Inspection

a) Accessibility and Voids

The Surveyor will base this report on a visual inspection and accordingly its scope is limited. It does not include an inspection of those areas, which are covered, unexposed or inaccessible. Our visual inspection will relate to the specific defects shown to us only.

b) Floors

We have not opened up the floor structure. We have only carried out a visual inspection and any conclusions will be based upon our best assumptions. We can open up the floor if so required at an extra fee.

c) Roofs

The Surveyor will not inspect the roofs in this instance.

d) Boundaries, Grounds and Outbuildings

The inspection will not include boundaries, grounds and outbuildings unless specifically stated (none stated).

e) Services

No services inspected.

f) Areas not inspected

The Surveyor will have only inspected those areas identified within the report. His report will be based upon possible or probable defects based upon what he has seen together with his knowledge of that type of structure. If you feel that any further areas need inspection then please advise us immediately.

g) Specific Defects Report

As this is a report upon a Specific Defect we do not offer any comment or guidance upon reactive maintenance and/or planned or routine maintenance items.

h) Whilst we have used reasonable skill and care in preparing this report, it should be appreciated that the Chartered Surveyors cannot offer any guarantee that the property will be free from future defects or that existing defects will not suffer from further deterioration;

3. Deleterious and Hazardous materials

a) Unless otherwise expressly stated in the Report, the Surveyor will assume that no deleterious or hazardous materials or techniques have been used in the construction of the property. However the Surveyor will advise in the report if in his view there is a likelihood that high alumina cement (HAC) concrete has been used in the construction and that in such cases specific enquiries should be made or tests carried out by a specialist.

4. Contamination

The Surveyor will not comment upon the existence of contamination as this can only be established by appropriate specialists. Where, from his local knowledge or the inspection he considers that contamination might be a problem he should advise as to the importance of obtaining a report from an appropriate specialist.

5. Consents, Approvals and Searches

a) The Surveyor will assume that the property is not subject to any unusual or especially onerous restrictions or covenants which apply to the structure or affect the reasonable enjoyment of the property.

b) The Surveyor will assume that all bye-laws, Building Regulations and other consents required have been obtained. In the case of new buildings and alterations and extensions, which require statutory consents or approval the Surveyor will not verify whether, such consents have been obtained. Any enquiries should be made by the Client or his legal advisers.

Drawings and specifications will not be inspected by the Surveyor. It is the Clients responsibility to forward any drawings and specifications that he has or knows the whereabouts of to us to include information in our report. If these are not

forthcoming we will make our best assumptions based upon the information available.

- c) The Surveyor will assume that the property is unaffected by any matters which would be revealed by a Local Search and replies to the usual enquiries or by a Statutory Notice and that neither the property nor its condition its use or intended use is or will be unlawful.

6. Fees and Expenses

The Client will pay the Surveyor the agreed fee for the Report and any expressly agreed disbursements in addition.

7. Restrictions on Disclosures

- a) This report is for the sole use of the Client in connection with the property and is limited to the current brief. No responsibility is accepted by the Chartered Surveyors if used outside these terms.
- b) Should any disputes arise they will be dealt with and settled under English law;
- c) This report does not fall under the Third Parties Rights Act.

8. Safe Working Practices

The Surveyor will follow the guidance given in Surveying Safely issued by the Royal Institution of Chartered Surveyors (RICS).

9. Weather

It was a cold winter's day at the time of our visit, which limited our inspection.