MANCHESTER CITY COUNCIL

Capital Programmes & Procurement
Corporate Services Directorate

Telephone: +44 (0)161 219 6207
a.briggs@manchester.gov.uk

Andrew Brigg, Capital Programmes & Procurement, Corporate Services Directorate, Manchester City Council, PO Box 532, Town Hall, Manchester, M60 2LA

Mr E Simm
Northwards Housing
Unit 11
Hendham Vale Industrial Park
Vale Park Way
Manchester
M8 0AD

04 October 2018

OT/44441/AB

Dear Sirs,

Re: Victoria Square, Manchester M4 5DX .

Further to your recent request, we write to confirm our attendance at the above referenced property on Wednesday 26 September 2018.

The purpose of our visit was to undertake a visual structural assessment of the independent lift shaft structures located within the north east and south west corners of the central landscaped courtyard. The lift shafts offer access to the property's circumferential balcony areas via means of steel bridge structures at each level.

Prior to our attendance, email correspondence from Elliot Simm of Northwards Housing dated 14 September 2017 raised concerns regarding "*cracking to the blockwork on the shaft".*

Appended to this correspondence for reference purposes, pertinent photographs taken during our assessment.

The existing lift shafts comprise of an independent five storey high steel framed structure clad in blockwork and glazing (Plate Ref. 01). The 215mm thick blockwork cladding, of stretcher bond pattern, comprises a *polished* outer leaf dense block and a dense standard format concrete block inner leaf forming the side and lift door opening elevations (Plate Ref. 02). An aesthetic recessed panel is formed within the side elevation at each storey height (Plate Ref. 03). It is noted that the concrete blockwork elevations directly face the property elevations and are more *sheltered* than those of the courtyard facing glazed curtain walling facades.

Visual inspection and desk based Manchester City Council Building Control document review has not provided definitive construction details. However, it is postulated based upon appearance that the individual blockwork leaves are bonded via standard application wall ties, mechanically restrained at corner and storey height location by the structural steel frame.

Generally, blockwork stepped cracking of uniform width is noted within both lift shaft structures emanating at the junction of side and front elevations at second, third and fourth storey levels, extending to door head opening, however predominantly within the north easterly located shaft (Plate Ref's 04-06 incl).

It is noted that visual evidence suggests more formative repointing of all recessed panel perpend joints closest to the front elevation junction (Plate Ref. 03).

Based upon these observations, we are of the considered opinion that the cracking manifested within the blockwork elevations evidenced is attributable to differential movement of the structural steel frame, masonry and glazed elevations. The perceived lack of flexibility of the masonry elevations due to the omission of movement jointing and the masonry restraint details postulated have exacerbated this phenomena.

Presently, whilst it is accepted that the existing blockwork cracking is unsightly, it does not in our opinion compromise the structural integrity of the lift shaft structure, nor does it affect the lift functionality and the opening and closing of lift doors at each level.

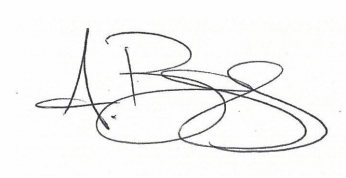
In order to remedially address the present situation to arrest any further masonry cracking, we would recommend the introduction of a full height movement joint, located at the recessed panel junction adjacent to the front shaft masonry elevation. The perpend joint should be *chased out* for full shaft height and a proprietary wall tie with de-bonding sleeve be introduced across the joint at 450mm vertical centres, with wall ties tying inner and outer leaves within 225mm of either side of the joint and maximum 225mm centres.

Should you wish to proceed with the remedial recommendations, we would be happy to develop a detail for your utilisation.

We shall await further instruction.

Trusting this is sufficient for your present needs, however should you require any further information please do not hastate to contact the undersigned.

Yours faithfully,



Andrew Brigg
Senior Structural Engineer
For and on behalf of The Head of Minor Works



Plate Ref. 01 Lift Shaft configuration.



Plate Ref. 02 Front and side elevation (typical).

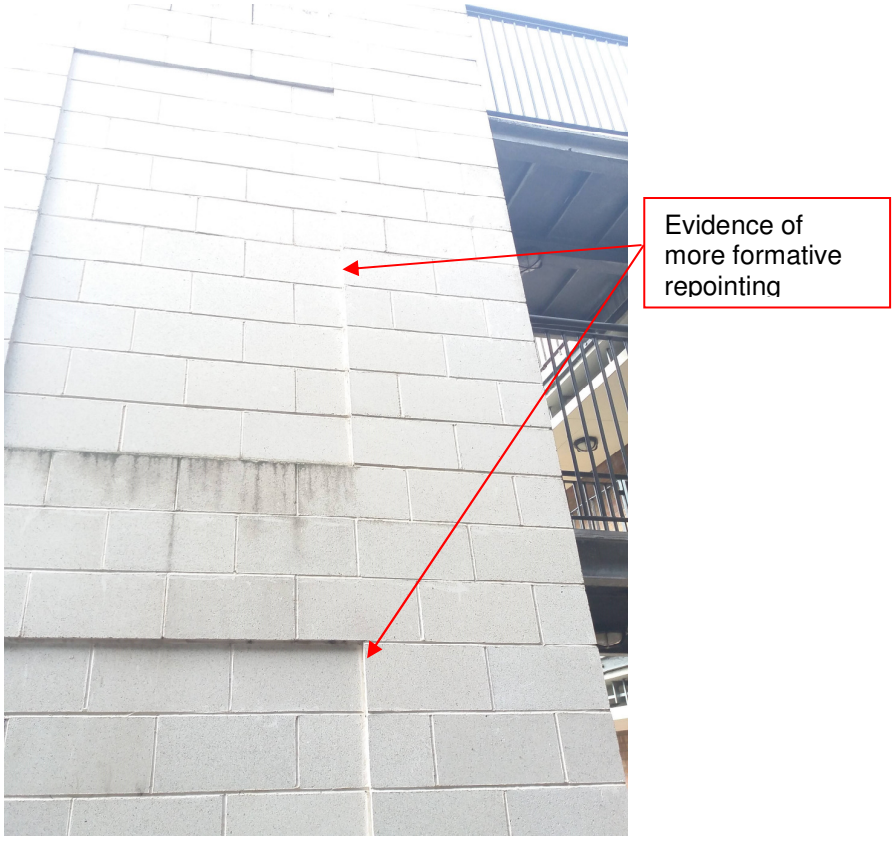


Plate Ref. 03 Side elevation recessed masonry panel.



Plate Ref. 04 North east lift shaft Level 2.



Plate Ref. 05 North east lift shaft Level 1.



Plate Ref. 06 South west lift shaft Level 3.