

Paul Grinyer Associates Ltd

Structural Engineers

& Party Wall Surveyors

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7th May 2021

Dear Mr Dunne & Mr Greenfield

STRUCTURAL INSPECTION OF GARAGE BUILDING (UNIT 3) – CONVERSION OF 23 MEAD LANE, BOGNOR REGIS TO THREE RESIDENTIAL DWELLINGS

With respect to our previous meeting of 30th November 2020 and recent meeting of 7th May 2021 at the property and our inspection of the existing structure of the garage, we write further regarding our findings and recommendations.

Having inspected the east and north elevations of the existing garage, we noted the brick quoin, to the north east corner of the garage structure was out of plumb and bowed vertically over the height of the building with cracking between it and the adjacent small sections of unbonded flint masonry and brickwork. In addition the 215mm solid brick wall over the existing garage doors was noted to have deflected and a vertical separation crack present to the east end at the abutment with the north east corner quoin.

The brick quoin was bonded to the flint masonry east external wall and poorly bonded to infill masonry and flintwork on the north elevation, around the garage door frame. The infill flintwork and brickwork was not original to the structure and a later addition.

The works proposed to the north elevation will require installation of two new windows, with brick surrounds and a central pier between them. The brickwork to the sides of the windows will need to be bonded to the existing masonry to ensure adequate stability. This cannot be achieved by bonding to the poorly formed flintwork, which is in a deteriorated condition.

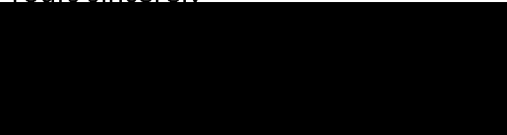
The pre-existing movement to the existing brick quoin to the north east corner is such that it will not be possible to bond new brickwork to it whilst maintaining the correct lines and levels for the north elevation masonry. In addition, from our recent inspection, it is not considered possible to bond any new brickwork to the already deformed existing masonry on the north elevation and which includes the infill brick and flintwork. Any attempt at doing so will destabilise the wall and corner of the building further. In addition the masonry over the garage door has moved and is unlikely to be able to be safely supported in the temporary condition without risk of partial or total collapse.

In order to safeguard the longer term stability of the garage structure and to extend its longevity for the foreseeable future we strongly recommend that the existing brick quoin to the north east corner of the garage structure is rebuilt in its entirety, returning this along the north elevation and replacing poorly formed and structurally unsound flint and brick infill. The masonry over the garage doors should also be rebuilt in order to provide a robust and stable structural arrangement. The existing flint and brick elements cannot be retained as to do so will leave the structure in an inadequate structural condition and at risk of potential further movement or collapse. The rebuilding and remedial work could be achieved by reusing some existing materials or similar reclaimed materials.

Without undertaking the works recommended above the stability of the north and east elevations of the structure will be compromised possibly resulting in further movement and even partial collapse. Undertaking the recommended works as part of the proposed conversion work will, in our considered opinion, provide a robust structural form which should not require further repair in the medium term future, thus securing that part of the building for the future and maintain the built heritage of the rest of the structure without need for more significant remedial work.

We trust the above is clear and sufficient for your present purposes, however should you have any queries, please do not hesitate to contact us.

Yours sincerely



PAUL GRINYER

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