Our ref: CAL/NB/61393

2nd September 2015

Simon Khalil Khalil & Kane 1st Floor 250 Kings Road Chelsea London SW3 5UE



PRP Northampton Catherine House Old Harborough Road Brixworth Northampton NN6 9BX

> Telephone: 01604 889870 Facsimile: 01604 882834

northampton@prp.uk.com www.prp.uk.com

11 Provost Road, London

Report on a Structural Inspection

1. Introduction

- 1.1 In accordance with your instructions we have visited the above property and inspected the building with regard to its stability in its current condition, the adequacy of the new partitions to support the applied loads, and requirements for the reinstatement of the roof.
- 1.2 Only these aspects of the property were inspected in detail and this report is limited accordingly.
- 1.3 The inspection was carried out on Wednesday 22nd July 2015.
- 1.4 References to left and right are given as viewing the property from the front.

2. The Property

- 2.1 The property was a Grade II Listed semi-detached three storey dwelling house with additional accommodation provided within the roof space.
- 2.2 The form of construction comprised solid brickwork walls supporting suspended timber floors.

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Directors: J. M. Norris B.Sc. C.Eng. M.I.Struct.E. M.a.P.S. C. A. Lambert B.Sc. C.Eng. M.I.C.E. M.I.Struct.E. B. M. Smith B.Eng. C.Eng. M.I.Struct.E. F.G.S. Associates: A. Walton B.Eng. C.Eng. M.I.Struct.E. F.G.S. M. L. Sharlott B.Sc. (Hons) Tech. IOSH. RMaPS. RICS. S. L. Maunder AAT.

3. Observations and Discussion

- 3.1 The roof structure had been completely removed from the property at the time of the inspection; the property was fully protected from the weather by the provision of a sheeted scaffold which had been designed and constructed to span over the property.
- 3.2 The highest sections of unrestrained walls at the front and rear of the property had been constructed in 330mm thick solid brickwork. The left hand end of the front and rear walls and left hand side wall of the property comprised 215mm thick solid brickwork.
- 3.3 The upper sections of the front, rear and left hand side wall of the property were considered to be structurally satisfactory in their temporary condition with due regard to their height and overall thickness of construction.
- 3.4 A new internal timber frame partition had been constructed at second floor level approximately 2m from the left hand side wall, extending from front to back. The framing generally comprised 42x145mm timber studs located at approximately 325mm centres, with lintels provided at door and hallway openings. This wall supported new 75x200mm deep C24 floor joists which spanned from side to side to form the floor within the roof space; the installation of these joists had not been completed at the time of the inspection. These joists were adequate for the span provided.
- 3.5 The new studwork construction at second floor level was structurally adequate to support the applied floor and roof loads but will require some minor additional works to complete construction. In particular, additional fixings should be installed to secure the framing to the front and rear wall. It is possible that sufficient fixings had been provided, particularly adjacent to the rear wall, however multiple layers of studs prevented access to check that adequate fixings had been provided.
- 3.6 The lintel over the door into the en-suite bathroom from the front bedroom was inadequately supported and will require the introduction of cripple studs to support the lintel effectively. The timber sections forming the lintels should be rotated through 90 degrees to provide adequate strength to support the first floor joists and roof load from above.
- 3.7 The new third floor joists were supported on timber plates bolted to the party wall and trimmers spanning across the chimney breast. Additional fixings will be required to provide sufficient capacity to transfer loads from the wall plates into the party wall.

- 3.8 New 42x145mm studs had been installed at first floor level on the line of the new second floor partition. These were reported to have been installed on the line of an original partition which was rotten and defective. The partition construction was structurally satisfactory apart from the lintel arrangement over the door into the front room, which will require modification.
- 3.9 The studwork at ground floor level was exposed where original finishes had been removed. These studs did not appear to be original to the property but were structurally satisfactory.
- 3.10 The reinstatement of the roof can be achieved by the introduction of new rafters designed to span from the party wall to the line of the new internal partition and across to the left hand side wall. The roof should be strapped to the front and rear walls to maintain restraint to the walls at this level.

4. <u>Conclusions and Recommendations</u>

- 4.1 The building is considered to be structurally stable in its current temporary condition.
- 4.2 The new internal partitions provided are generally satisfactory but require additional fixings to secure studs to the front and rear walls and modifications to lintels where timbers have been incorrectly installed for the loadbearing condition. This work can be easily accommodated as no linings had been installed at the time of the inspection.
- 4.3 The number of fixing bolts for plates fixed to the party wall to support the new second floor needs further checks and additional fixings installed as necessary.
- 4.4 The roof structure should be reinstated as soon as possible to reinstate the integrity and long term stability for the building. New 75x175mm C24 rafters should be provided at not more than 600mm centres.
- 4.5 Timber blocking should be installed between the floor joists at the supports on the stud walls.

Si hember.

Colin Lambert B.Sc. C.Eng. M.I.C.E. M.I.Struct.E. Director PRP

The notes overleaf form an integral part of this report.

Please note that:-

- 1. We did not inspect woodwork or other parts of the structure which were covered, unexposed or inaccessible, and we are therefore unable to report that any such part of the property is free from defect.
- 2. No attempt has been to establish and no liability whatsoever is accepted for the possible presence of heavy metals, chemical, biological, electromagnetic or radioactive contamination or pollution, or asbestos or mould of any kind, or radon, methane or other gases, or springs, water courses, sink holes or the like, or noise or vibratory pollution.
- 3. This report was prepared on the instructions of the client(s) at the address shown at the beginning of this report and is exclusively for his/her/their benefit. Complete copies of this report may, however, be made available to parties having a direct interest with or on behalf of the client(s) in matters related to the contents of this report.
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- 5. For the avoidance of doubt, the parties confirm that this report shall not and the parties do not intend that this report shall be construed as confering on any party any rights to enforce any term of this Agreement pursuant to the Contracts (Rights of Third Parties) Act 1999.