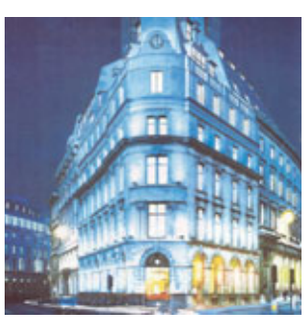
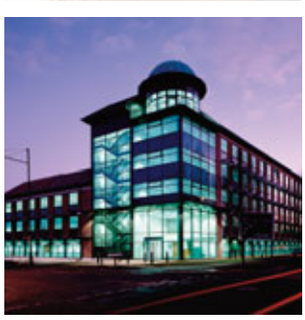
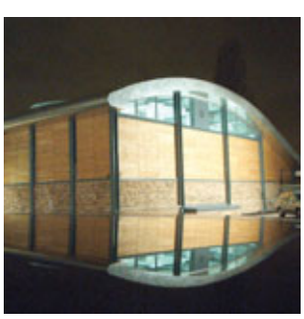
SINCLAIRJOHNSTON

CONSULTING CIVIL AND STRUCTURAL ENGINEERS







STRUCTURAL ENGINEER'S REPORT IN SUPPORRT OF PLANNING APPLICATION AND LISTED BUILDING CONSENT

FOR:

8 GREAT ORMOND STREET, LONDON, WC1

J.S. JOHNSTON BSc CEng FICE FIStructE FCONSE
An Engineer Accredited in Conservation
Sinclair Johnston & Partners Limited
93 Great Suffolk Street
London
SE1 0BX

Tel: **020 7593 1900**
E-mail: **sjohnston@sinclairjohnston.co.uk**

8256/JSJ/VME **MAY 2014**

I N D E X

APPENDICES

8 GREAT ORMOND STREET, LONDON, WC1

1.0 INTRODUCTION AND BRIEF

1.1 We were asked by the project Architects Pitman Tozer on behalf of the owners, Richard Meade and Sarah Payne to examine this property, and provide conservation engineering advice, in the first instance, in support of an application for listed building consent for certain alterations, and subsequently to prepare structural details for those consented alterations that had any structural implications.

1.2 We were provided with a full set of all the existing and proposed drawings, Design and Access Statement, and Heritage and Planning Statement by Pitman Tozer.

1.3 We have made reference to the extract from "List of Buildings of Architectural or Historic Interest" 8 Great Ormond Street is included as grade II* and to classic books on the subject all of which refer to these houses in Great Ormond Street. In particular "London The Art of Georgian Building" by Dan Cruickshank and "London's Georgian Houses" by Andrew Byrne. Drawings from the 2003 planning permission, recovered from London Borough of Camden, provided helpful information on previous works.

1.4 The property was inspected on 16th April, 2014 as a general view of the building as existing, and to record a certain amount of opening up that had been carried out, and again on 12th May 2014 to check further opening up which had been carried out to investigate certain detailed aspects, as a follow up to the first visit.

1.5 This report and advice is based on the documents mentioned above, these inspections on the Architects drawings, and on the opening up that was carried out, but without any other physical investigations or testing on site. It is, also based on more than 40 years first-hand experience of buildings of this age, type and location. A CV for the Author is attached at Appendix B.

1.6 These inspections and this report are not a building survey or structural survey. While the property certainly appears to be in excellent structural condition in relation to its age and historic significance, no assurance is given that areas that are covered or inaccessible are free from rot, decay, cracks or other defects.

1.7 All directions are given standing in the Great Ormond Street facing the building.

2.0 SUMMARY DESCRIPTION OF STRUCTURE

2.1 The property is a substantial terraced house constructed in 1720/21 with accommodation on lower ground, ground, first, second and third floors. External and party walls are solid London stock bricks. The front elevation is finely detailed, and while at a glance is similar to other houses nearby in the terrace; was rebuilt in 1860.

2.2 It is a characteristic of these houses that the front elevations are not very well bonded to the party walls, hence leading to some of them coming adrift, which is presumably why this front elevation was re-built, but now seems secure.

2.3 The interior is of traditional construction for the period, timber floors and timber frame partitions.

2.4 All of the partitions that have been checked by opening up are modern plaster, mostly on modern timber framing. This will be dealt with in detail later.

2.5 It is commonplace in Georgian houses for the floors to be of complex construction, typically substantial beams running front to back with a separate floor and ceiling joists spanning sideways between this primary beam or beams and the party walls.

2.6 In this case, however, as far as can be seen the floor is generally floor joists spanning sideways. Previous drawings indicate primary beams in the floor, but the opening up was focused on the proposed alterations, and did not uncover these.

2.7 Since none of the proposed alterations affect the external walls or party walls so these have not been examined in detail.

2.8 It is clear by inspection that the house has been substantially refurbished at some time, perhaps in the late 20th Century, since not only is there considerable areas of plasterboard sheeting in place of the original lathe and plaster, but also modern timber framing and levelling of floors that would, by their nature in a house of this age and character have been deflected out of level, and also it would seem many of the floorboards are replacements.

2.9 The original roof would have been a double pitched behind a front parapet, but this has long since been removed and replaced by a modern flat roof. This is indicated on the 2003 planning drawings as three spans of 225mm x 50mm softwood joists at 400mm centres supported on two 250mm x 125mm steel beams which span between the party walls. These steel beams also trim the roof around the stair opening.

2.10 There is no sign of any gross defects in the building by way of subsidence, damage, timber decay or the like, though a full comprehensive structural survey and examination has not been part of this brief.

2.11 A fully detailed layout of the building, “as existing” and “as proposed” on plans and cross sections are shown on the Architects drawings which form part of this application which should be read with this report, but are not included here.

3.0 COMMENTARY ON PROPOSED ALTERATIONS

3.1 **Lower Ground Floor.** The existing staircase from lower ground floor to first floor is to be repositioned against the party wall. (Instead of against the parallel partition as at present). (P1). This staircase is modern, probably 20th century as may be seen from its glued, wedged and framed construction. The carriage beams appear to be the same age and are sheeted only with plasterboard, and show no signs of any previous lathe and plaster lining or similar. (P2).

3.2 The strip of floor at ground floor between the staircase and the party wall would appear to be original. The joists are original or at least not modern alterations. This strip of floor is of 200mm x 60mm joists spanning sideways from the left-hand party wall and morticed and tenoned into a trimmer joist parallel to the staircase. (P3). The joist shows signs of lathe and plaster having been attached to their underside, though the ceiling is now plasterboard sheeting.

3.3 The varied colouring and surface texture of the floor boarding indicates that many of these are modern replacements, but perhaps re-used boarding from a Victorian house elsewhere but not original. (P3).

3.4 This strip of floor against the party wall would have to be removed to allow for the re-arrangement of the staircase from lower ground floor to ground. (P4). A new strip of floor would be installed against the parallel wall, and this could be done in the same manner as the existing just removed, so that the same pattern of floor boarding running front to back could be maintained.

3.5 It is proposed to open new double doors between the rear stairwell and the new full width playroom at the front of the house. In the original layout this would have been an open corridor in any case. Careful stripping of plaster from the existing partition between the rear part and the front rooms shows that this is built of lightweight blockwork. (P5). Since this is modern material, and as far as can be ascertained the floor joists span parallel to it, this partition can be removed, and a new double door opening formed in its place as the proposal drawings.

3.6 The soffit of the lower ground floor in the main front and rear rooms has a modern dropped ceiling fixed about 150mm below the original. This modern dropped ceiling will be removed in total. It may be that above this there are some services or quite possibly some strengthening structure to the floor above, and this will have to be re-examined the modern ceiling is removed.

3.7 No proposals affecting the ground floor over in the main rear room are proposed.

3.8 In the lower ground front room the modern partitions forming a large room and three smaller rooms will be removed. The 1935 drawing shows this as one room full width between party walls. The 2003 drawings show new lightweight partitions installed, as found at present.

3.9 **Ground Floor.** On the ground floor the single door opening between the front and rear room (P6) will be opened out and framed in structural timbers to form a double door opening.

3.10 Stripping of the finishes at this location as visible in P7 shows the partition or at least a portion of it where the doorway is to be widened is modern timber framing. This is simply formed out of structural timbers 100mm x 50mm at 400mm centres and without any signs of the original lathe and plaster or the like. (P7). Thus this opening can be readily formed without disturbance of the historic fabric.

3.11 **First Floor Plan.** No structural alterations proposed, simply re-modelling of modern non-load bearing partition in the rear addition.

3.12 **Second Floor Plan.** No structural alterations are proposed.

3.13 **Third Floor Plan.** A new doorway is proposed between the landing and the front left bedroom (bedroom 3) (P8). There would almost certainly have been a doorway here in the original arrangement. Presumably this was closed-up when the third floor was converted to a self-contained flat prior to 1935.

3.14 It is proposed to form a new doorway in a concealed fashion as a jib door, but structural alterations, if they could be called that, would simply be framing to a single door frame in structural timbers.

3.15 The non-load bearing partitions forming the lobby for doors placed diagonally in the front and rear right hand room are non-load bearing and may simply be removed, and a door frame placed in the location of the existing opening.

3.16 The third floor rear room has at present a heavy modern steel framed staircase leading up through a hatch to give access to the roof. (P9).

3.17 This third floor is structured with original 200mm x 50mm softwood joists at about 350mm centres spanning sideways between the right hand party wall, or primary beam and the stair partition. The floor is covered in square edge and probably re-cycled boarding. (P10).

3.18 This floor has been updated in the past, probably the latter part of the 20th century. The floor joists have been levelled by the addition of firring pieces, strips of softwood timber of varying thickness nailed to the top of the joists. The original lathe and plaster ceiling has been removed and modern plasterboard nailed to 60mm x 50mm joists set level and nailed to the side of the floor joists. A clear gap between the plasterboard ceiling and the underside of the original joists sufficient to insert a pen. (P11).

3.19 **Roof.** The existing roof is flat with a large opening hatch with sliding cover adjacent to the right hand party wall with No. 6. This opening through the roof structure will be maintained as existing, and a new access arranged as the Architect's drawings.

3.20 A small rooflight will be formed over the new internal bathroom. There are no structural implications in this work. The roof is modern joists between steel beams.

3.21 As far as can be seen the modern heavy steel framed staircase is carried only on the existing floor joists, there has been no appearance of any inserted steelwork or steel framing to provide additional support.

3.22 This heavy staircase will be removed and replaced by a timber staircase, fixed between the party wall and the new bathroom enclosure. This new enclosure is simply lightweight timber framing and plasterboard built off the floor.

4.0 CONCLUSIONS

4.1 The house is generally in good order and the structural alterations proposed are minimal.

4.2 The house is fully furnished and occupied as a family home, and not available for stripping out until work commences, but carefully targeted opening up, in two phases has been carried out as described in the preceding paragraphs, and illustrated in the photographs attached as Appendix A to inform the proposed designs.

4.3 In fact almost all the proposed alterations are in modern timber framing or blockwork partitions generally covered in modern plasterboard sheeting. No original lathe and plaster or the like were disturbed by this opening up, or would seem likely to be by the proposed work.

4.4 As illustrated on the Architect's proposal drawings and in the preceding notes the alterations are minimal and certainly have no overall effect on the structural fabric or structural integrity of the building.

4.5 Other work will be carried out in best conservation practice, with minimal loss of any historic materials.

4.6 The building has suffered various alterations over its life. As with all historic buildings the best insurance for continued conservation and maintenance is a worthwhile and appropriate use. These minor alterations will enable this valuable heritage asset to be maintained as it was originally intended; a family home.

J.S. JOHNSTON BSc CEng FICE FIStructE FCONSE
An Engineer Accredited in Conservation

8 GREAT ORMOND STREET, LONDON, WC1

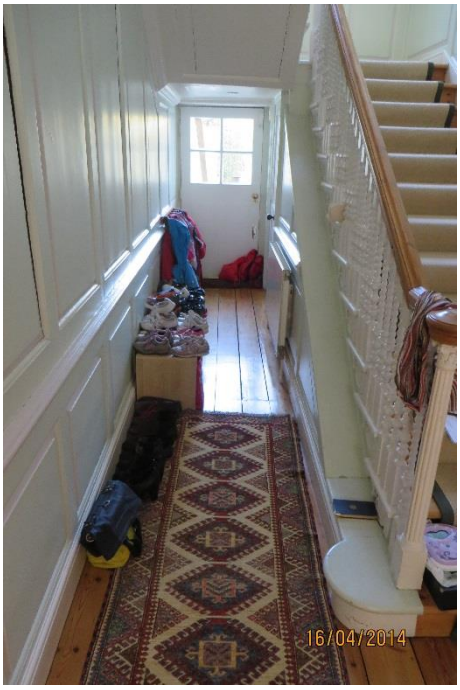
APPENDIX A

PHOTOGRAPHS

P1 – LG staircase.

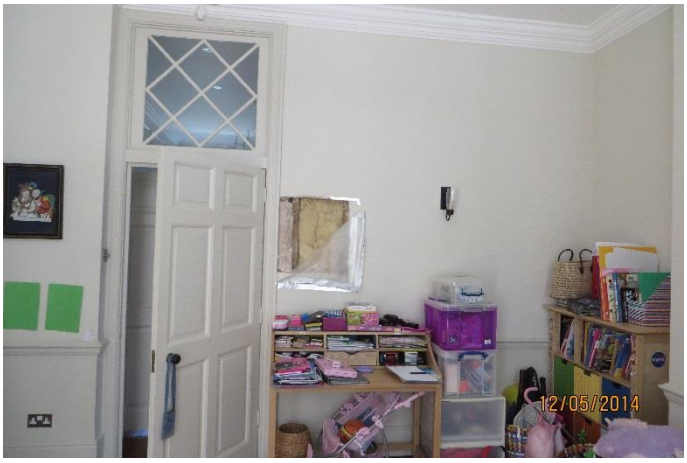
P2 – LG staircase – modern manufacture.

P3 – Underside of ground floor in rear hall.



P4 – Stair – ground to first floor unaltered Stair – LG to ground installed adjacent party wall on the left.

P5 – LG. Blockwork partition between front and back.

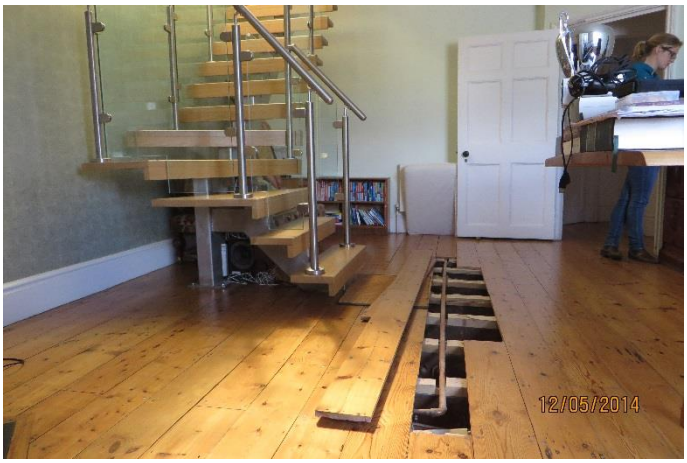


P6 – G Floor existing single style door between front and back rooms.

P7 – G Floor. Modern construction between front and back rooms.

P8 – Third floor landing.

P9 – The floor existing steel framed staircase.



P10 – Third floor rear room.

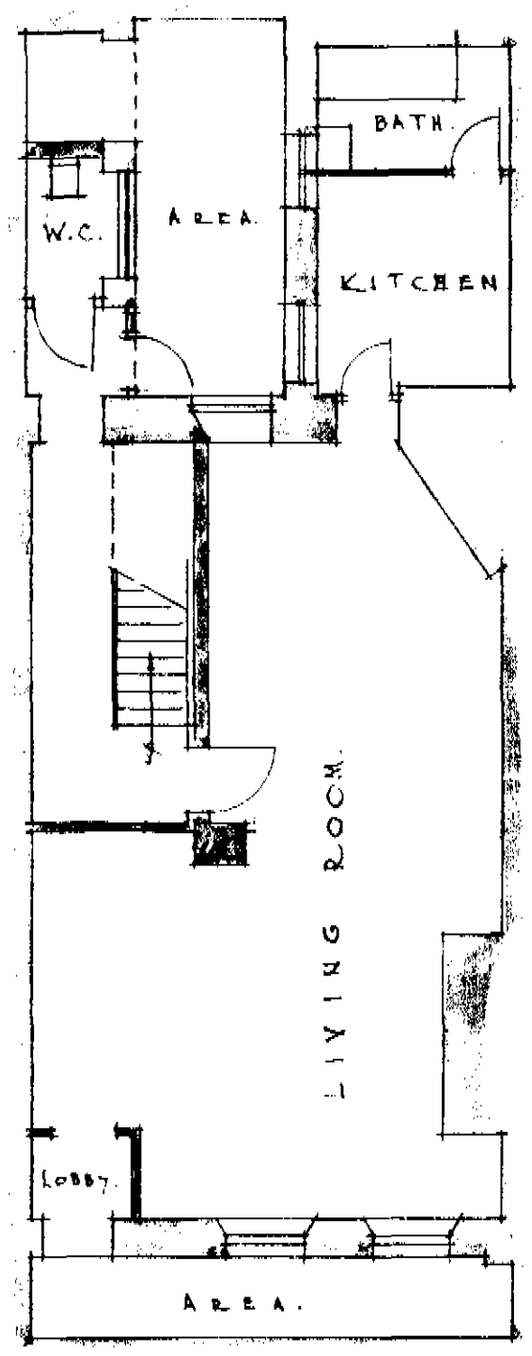
P11 – Third floor original joists and modern firring pieces.

P12 – Sliding roof hatch.

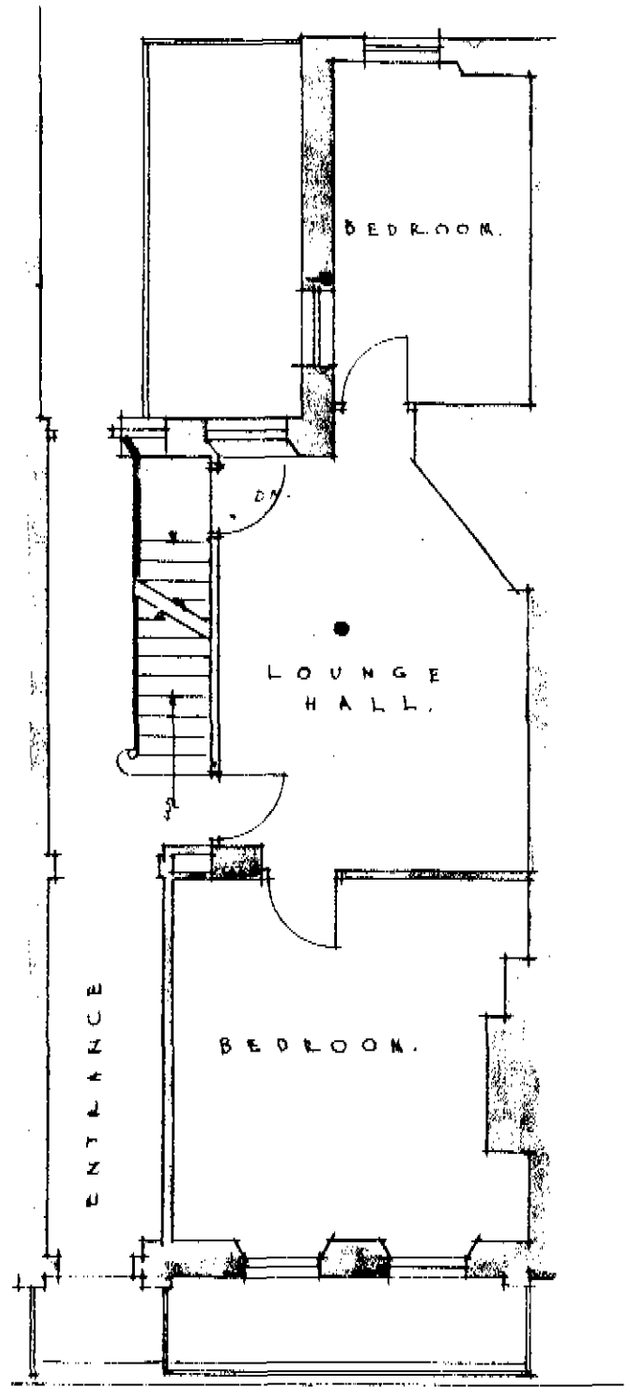
8 GREAT ORMOND STREET, LONDON, WC1

APPENDIX B

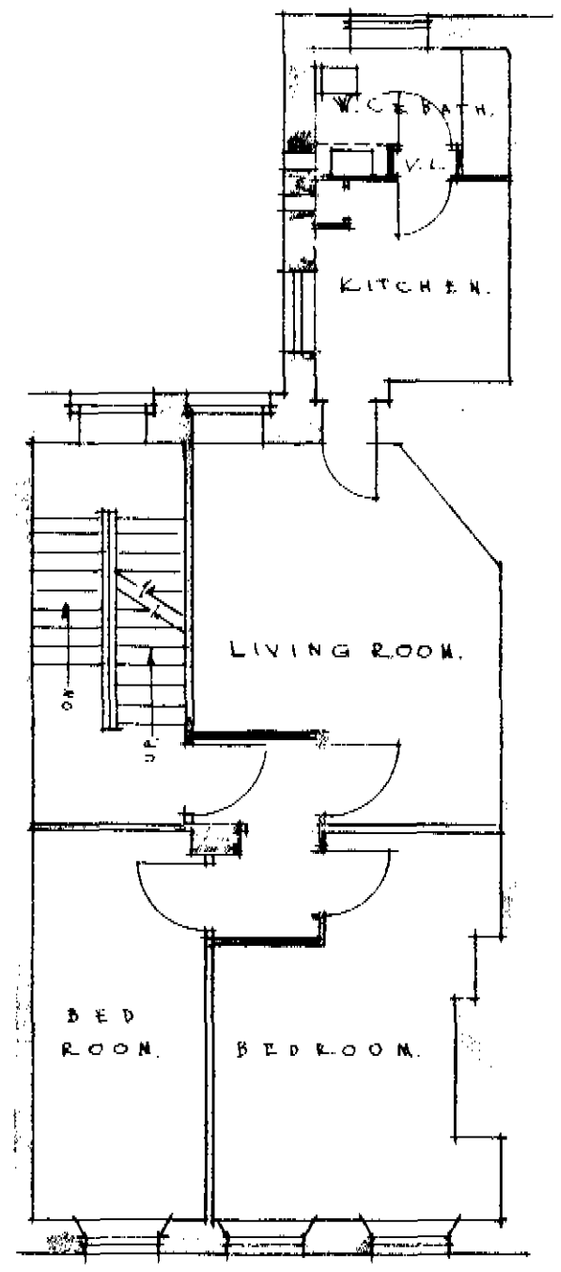
FLOOR PLANS FROM 1935



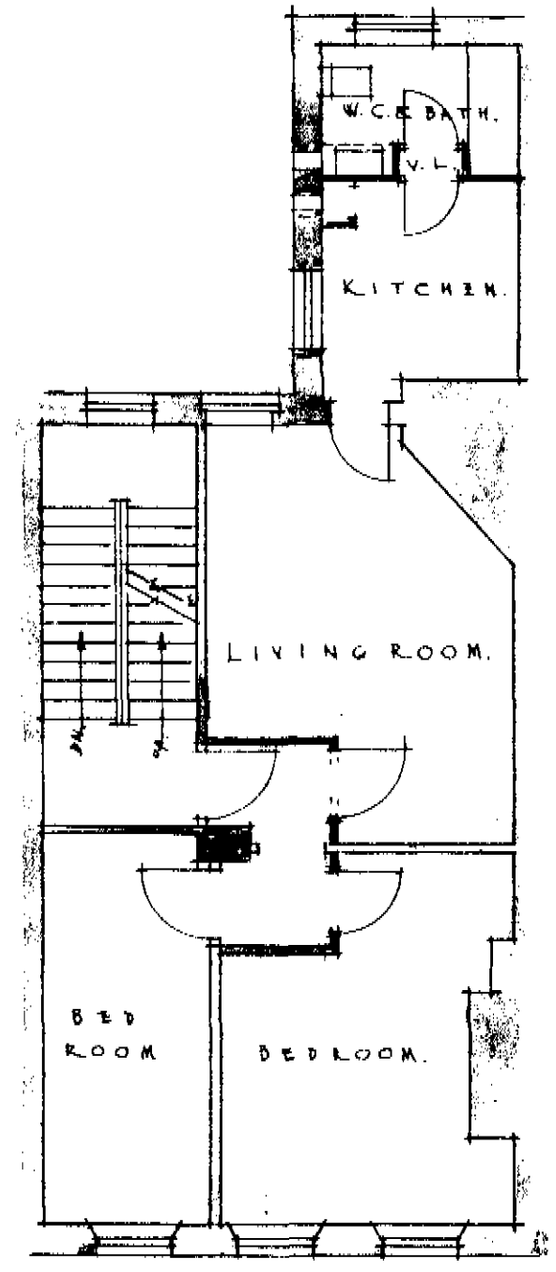
BASEMENT.



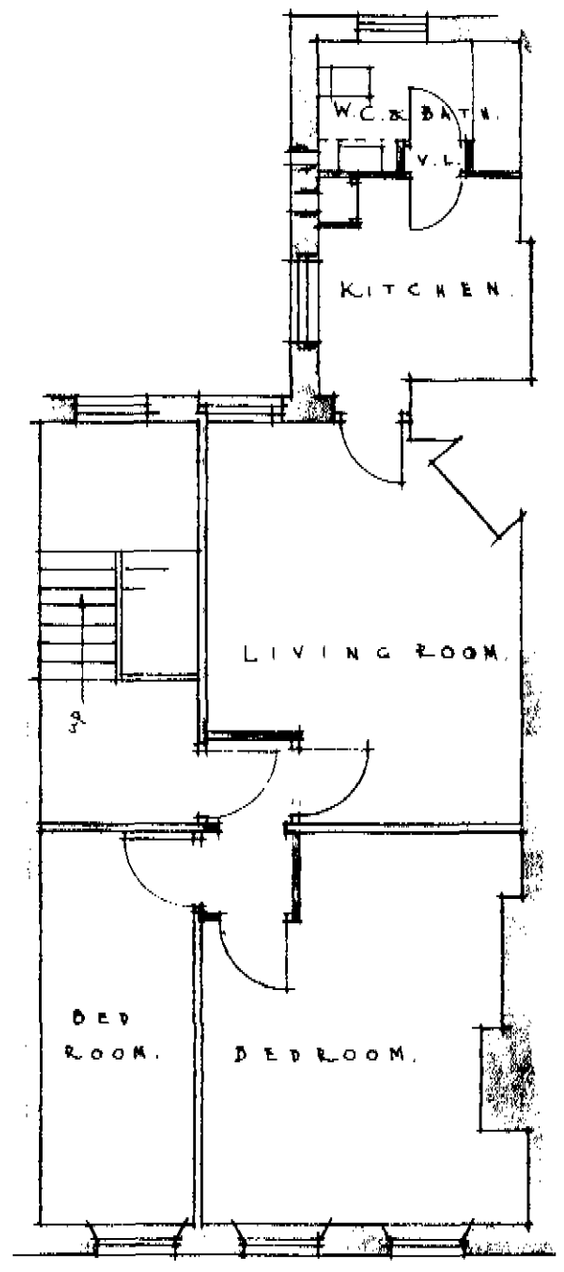
GROUND FLOOR



FIRST FLOOR.



SECOND FLOOR.



THIRD FLOOR.

Nº 8 GREAT ORMOND STREET · W·C·1·

DRAWING Nº 6.

7TH. NOV. 1935.

SCALE EIGHT FEET TO ONE INCH.

LANDER BEDELLS & CROMPTON
·ARCHITECTS & SURVEYORS·
·6 JOHN ST·BEDFORD ROW. W.C.1.

8 GREAT ORMOND STREET, LONDON, WC1

APPENDIX C

C.V. FOR J.S. JOHNSTON

JAMES SINCLAIR JOHNSTON BSc CEng FICE FIStructE FCONSE

Position Director

Qualifications

1970	BSc (Hons) Civil Engineering, Queens University, Belfast	
1983	Fellow	- Institution of Structural Engineers
1999	Fellow	- Association of Consulting Engineers
1992	Fellow	- Institution of Civil Engineers
1996	Member	- Pyramus & Thisbe Club for Party Wall Surveyors
2004	Engineer	- Accredited in Conservation (ICE/IStructE)
2008	Associate Member	- Ecclesiastical Architects and Surveyors Association

Experience

1983-present	Founding Partner/Director of Sinclair Johnston & Partners Consulting Engineers. 40 years' experience of Structural design new and existing buildings including historic buildings and ancient monuments and conservation work. Preparation of expert evidence for litigation. Assessment of listed buildings for planning departments. Clients include, City of Westminster, Bedford Estates, Diocese of London, Lord Chancellor's Department, Royal Borough of Kensington & Chelsea, Barts & London NHS Trust, The Crown Estates, The Portman Estates, The Church Commissioners and numerous commercial organisations and private owners.
2005	Appointed Engineer, Cathedral Church of St. Nicholas, Newcastle Upon Tyne
2007	Appointed Specialist Consultant, Structures, London Diocesan Advisory Committee
2009	Appointed Specialist Consultant, Structures, Gloucestershire Diocesan Advisory Committee

Professional

1983	Lecture Use of Cast Iron in Building to Ironbridge Gorge Museum Trust.
1983-84	Structural Advisor to Care of Buildings Exhibition at Hampton Court Palace.
1982-86	Initiate the CIRA Project Structural Renovation of Traditional Buildings.
1987-89	Seminars Latent Defects on the assessment of structural defects.
1987-97	Convenor, Clapham Society Planning Committee.
1991	The London Programme Thames Television. Subsidence problems.
1992	Bonding Timbers in Old Brickwork Structural Survey Magazine.
1994	26 & 27 Bedford Square Construction Repair Magazine, July/August.
1994	Autumn Lecture - Society for the Protection of Ancient Buildings.
1998	Structural Repair Course; Society for the Protection of Ancient Buildings.
2001-10	Committee Member, Society for the Protection of Ancient Buildings
2002	Lecture "Conservation and the Structural Engineer" to Gloucestershire DAC.
2003	Lecture "James Gibbs and the Eighteenth Century Hospital".
2005-14	RICS/SPAB – Training Seminars for student surveyors.
2008	Lecture "Structural Assessment of Historic Churches" - Chichester DAC.
2011	Member – Georgian Group Casework Panel.
2013	RICS "Building Defects" CPD seminars.
2013	Sky News – Opinion on collapse of plaster ceiling, Apollo Theatre.

Sinclair Johnston
and Partners Limited

93 Great Suffolk Street
London
SE1 0BX

t. 020 7593 1900
f. 020 7593 1910
email@sinclairjohnston.co.uk
www.sinclairjohnston.co.uk