

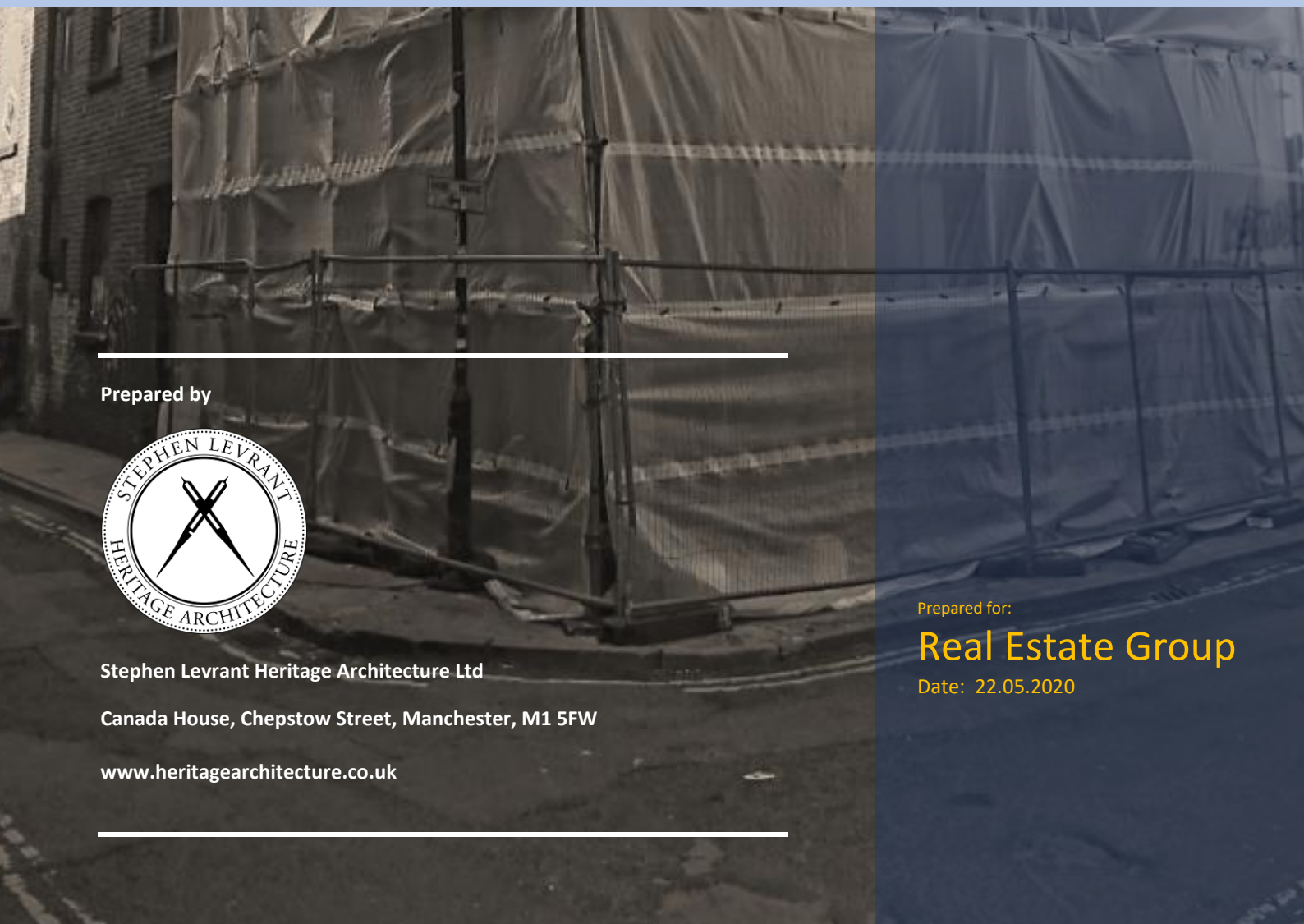
42-50 Thomas Street.
&
7 Kelvin Street,
Manchester.

Conservation Implementation Strategy.

(required conservation-led standards).

Application no.s : 113476/LO/2016 & 113475/FO/2016.

LBC & Planning Condition: 3a (framework for 3b & 4a - 4k).



Prepared by

Stephen Levrant Heritage Architecture Ltd

Canada House, Chepstow Street, Manchester, M1 5FW

www.heritagearchitecture.co.uk

Prepared for:

Real Estate Group

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42-50 Thomas Street & 7 Kelvin Street, Manchester. Conservation Implementation Strategy. 2020

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Heritage Architecture Ltd is Registered in England No. 3053944 • VAT GB656883581.

Registered office: 5 Technology Park, Colindeep Lane, Colindale, NW9 6BX

Correspondence to: Suite 1.06. Canada House, Chepstow Street, Manchester. M1 5FW.

Contents

1. INTRODUCTION 5

1.1 Context of the Conservation Implementation Strategy (CIS) 5

1.2 Purpose of the Conservation Implementation Strategy (CIS) 7

1.3 Reference to other documentation. 9

1.4 Authorship 9

1.5 Limitations 10

2. CONSERVATION OF 7 KELVIN STREET 11

2.1 Location and summary description of 7 Kelvin Street 11

2.2 Listed building status 7 Kelvin Street 12

3. CONSERVATION OBJECTIVES AND PRINCIPLES 15

3.1 Conservation objectives & principles of implementation. 15

3.2 Definitions of terms used in the Conservation Implementation Strategy 18

3.3 Necessary approvals 19

4. GUIDELINES FOR CONSERVATION-LED REPAIRS 20

4.1 Limitations 20

4.2 Survey prior to commencement 20

4.3 Workmanship generally 21

4.4 Task Method Statement – typical content and example format. 24

5. IMPLEMENTATION OF CONSERVATION-LED REPAIR STRATEGY .. 30

5.1 Protection of historic fabric *(refers to Conditions 3a, 3b, 4a and Condition 26).* 30

5.2 Samples of material and workmanship *(refers to Conditions: 3a, 4 and 5).* 32

5.3 Access scaffolding *(refers to Conditions 3b and 26).* 34

5.4 Raking out and mortars *(refers to Conditions: 3a, and 4a).* 35

5.5 Cleaning of masonry / brickwork: general *(refers to Conditions: 3a and 4a).* 37

5.6 Brick repairs *(refers to Conditions: 3a and 4a).* 40

5.7 Stone masonry repairs *(refers to Conditions: 3a and 4a).* 42

5.8 Window repairs *(refers to Conditions: 3a, 4a and 4d).* 44

5.9 Doors repairs *(refers to Conditions: 3a and 4a).* 46

5.10 Floorboards and ceilings *(refers to Conditions: 3a, 4a, 4b).* 47

5.11 Internal wall surfaces *(refers to Conditions: 3a and 4a).* 49

5.12 Roof coverings, roof lights and rainwater goods*(refers to conditions 3a, 4a and 4f).* 51

5.13 Structural timber repairs *(refers to condition 3a and 4b).* 53

5.14 Timber linings to roof *(refers to condition 3a and 4i).* 54

5.15 M&E and Building services *(refers to conditions 3a and 4j and 4k).* 55

6 SUMMARY & CONCLUSION 56

6.1 A framework to meet the required conservation-led standards. 56

REFERENCES. 57

APPENDICES. 58

1. Planning and Listed Building Consents. 58
2. Structural Plan 7 Kelvin Street – Renaissance Ltd. 59
3. Roof light detail. JMA Drg. 05013-B1-086313. 60
4. Use of the DOFF cleaning system. 61

1. INTRODUCTION

1.1 Context of the Conservation Implementation Strategy (CIS)

i) This **Conservation Implementation Strategy** (CIS) was commissioned by Real Estate Investment Partnerships to inform the required ***conservation-led standards*** for the consented development at 42-50 Thomas Street and 7 Kelvin Street, Manchester.

ii) The development scheme received conditional Planning and Listed Building Consent and was consented on 29 August 2017, respectively as follows:

Planning permission: 113475/FO/2016. Approved 29 August 2017

External alterations and repair and change of use of the upper floors of grade-II listed 7 Kelvin Street and the erection of a linked 4/5 storey building following the demolition of numbers 42 to 48 Thomas Street to provide 20 no dwellings (Class C3) (8 x 1 bed and 12 x 2 bed) with ground floor and basement shop / restaurant (Class A1 or A3) use; and storage space for 20 cycles.

Listed Building Consent: 113476/LO/2016. Approved 29 August 2017.

LISTED BUILDING CONSENT External and alterations and repair and change of use of Grade II listed 7 Kelvin Street to 3 no residential apartments (linked to an adjacent 4/5 storey building following the demolition of numbers 42 to 48 Thomas Street) above ground floor and basement shop / restaurant (Class A1 or A3) use;

iii) The extant consents enable the development scheme to secure the refurbishment and reuse of the grade-II listed building at **7 Kelvin Street** and the retained parts of nos. **48-50 Thomas Street**, Manchester. These components are referred to in this document as the ***retained historic fabric***.

iv) The consented development scheme also includes the redevelopment of nos. 42-46 Thomas Street, referred to as the ***new-build*** component of the consented scheme in this document.

v) This **Conservation Implementation Strategy** (CIS) will act as the over-arching specification for the implementation of repair and restoration works for the retained historic fabric and directly supports the application for discharge of **Condition 3a** as applied to both the above Planning Permission and Listed Building Consent. The CIS will thus frame the appointed Contractors' priced specifications and schedules of work for the specific work areas which will be detailed in 'Task Method Statements' as defined in Sections 4.4 and 4.5 below.

vi) The required 'conservation-led standards' which it sets out are informed by the Structural Engineer's reports, prepared by Renaissance Associates Ltd. dating from 2016 and 2018 (see the list of References below). The **Conservation Implementation Strategy** (CIS) refers to the Structural plan of 7 Kelvin Street included as **Appendix 2** below.

vii) The conservation-led standards are intended to be applicable to the restoration of 7 Kelvin Street which is currently supported by scaffolding which has restricted access for further surveys. Consequently, all works will be proceeded by further survey work to confirm the current condition of the building fabric and confirm the extent of repair works required, in accord with the standards set out in this document.

viii) **Condition 3** of both Planning Permission and Listed Building Consent states the following:

> **Condition 3. 113475/FO/2016 and 113476/LO/2016.**
>
> Notwithstanding the details as set out in **condition 2** [of the] above no development shall commence unless and until final details (including where appropriate specification and method statement) of the following have been submitted to and approved in writing by the City Council as Local Planning Authority:
> (a) Method statements for implementing the approved development to ensure careful **conservation led standards** and to ensure that no further damage or collapse of the listed building occurs;
> (b) Following the carrying out of further condition reports details of proposed structural works including any works to the facade to Back Turner Street (with the assumption that there will be minimal intervention, that as much fabric as possible is retained and that means of repair and stabilisation that do not require demolition are adopted (as far as possible);
> All of the above shall be implemented in accordance with the approved details.
> **Reason** - In the interests of visual amenity and because the proposed works affect a building which is included in the Statutory List of Buildings of Special Architectural or Historic Interest and careful attention to building work is required to protect the character and appearance of this building and to ensure consistency in accordance with policies CC9 and EN3 of the Core Strategy and saved policy DC19.1 of the Unitary Development Plan for the City of Manchester.

ix) The ***conservation-led standards*** in this document (the Conservation Implementation Strategy) primarily concern the fabric of 7 Kelvin Street and the retained parts of nos. 48-50 Thomas Street, in light of their heritage status.

1.2 Purpose of the Conservation Implementation Strategy (CIS)

i) The purpose of the following baseline specifications is to simply provide detachable guidance to enable future building interventions to be based on a standardised approach to basic fabric repairs. The following outlines the minimum conservation expectations and standards required by Manchester City Council which are specific to 7 Kelvin Street.

ii) The baseline specifications conform to Historic England's Advice Note 2, *"Making Changes to Historic Assets"* (2016) and should inform the preparation of detailed specifications to be tailored to the requirements of the individual intervention tasks

iii) The over-arching conservation policy requirement guiding the repair of the significant historic fabric is defined as one of minimum intervention, limiting in the repair and/or replacement of the significant components of the historic building. This principle applies with the important caveat of achieving long-term, sustainable preservation of the individual components and the building as a whole.

iv) This report has been prepared for submission as part of the application documentation and to facilitate the discharge of **Condition 3a**.

v) The primary purpose of the **Conservation Implementation Strategy** (CIS) is to guide the design team and confirm to the local authority that the development will be implemented using careful ***conservation-led standards*** and to act as the baseline for the detailed Schedule of repairs and specification required by **Condition 4 (a-k)** of the above consents.

vi) This document consequently sets the framework in which (following detailed fabric investigations) relevant Specifications and Schedules of Works will be drafted and implemented. The delivery method and proposed programme is set out below in **Section 3.4**.

vii) This **Conservation Implementation Strategy** thus outlines the generic conservation specifications so that all relevant parties are fully informed of the constraints and expectations for the implementation of the approved development. The purpose is to ensure works will be carried out to an appropriate conservation-led standard and confirm that appropriate resources are in place to monitor and maintain such conservation standards.

viii) The audience for the **Conservation Implementation Strategy** (CIS) is the: client, Project Architect, project team, appointed contractors and Manchester City Council. The CIS will therefore:

- frame the scope and required standard of necessary conservation repairs,
- act as the preamble to the more detailed Specifications,
- assist in identifying suitable resources, such as specialist conservation skills and materials.

ix) This Conservation Implementation Strategy (CIS) has been informed by initial conservation building surveying fieldwork undertaken in May 2016 and June 2018.

x) The information and Specifications will be enhanced by more detailed fabric surveys, following the provision of safe access and removal of debris which results from the 2017 partial building collapse and taking down (see **Fig.1** below). Data was collected using field surveying, note taking and digital photography. Where appropriate, measurements were taken by hand or by using a laser measurer.

xi) The Conservation Implementation Strategy also has been informed by: Historic England's technical guidance series, other technical literary sources, site surveys and professional judgement.

xii) The specification notes and advice included in the CIS should inform the adopted NBS Specification prepared by the Project Architect, and all other appointed specification consultants.

xiii) The information contained within the conservation implementation strategy is provided solely for use in respect of the building group at 42- 50 Thomas Street and 7 Kelvin Street, Manchester (which includes a grade-II listed building) and should not be re-used or adopted elsewhere.

1.3 Reference to other documentation.

i) Throughout the planning process and any consented building work, the Conservation Implementation Strategy should be read in conjunction with the Project Architect's drawings, the General Specification and with the design materials of other consultants, such as M&E and structural engineering.

ii) The specific remit of this Conservation Implementation Strategy is the conservation of the limited areas of retained historic fabric within the building which is subject to the above Planning Permission and Listed Building Consent (see **Appendix 2**).

iii) Therefore, this **Conservation Implementation Strategy** (CIS) document should be read in conjunction with the following documentation and drawings. The document will be supplemented with detailed specifications issued by Stephen Levrant Heritage Architecture Ltd, following completion of site surveys (subject to provision of safe access).

- 5-Plus Architects Drawings:
  a. Site plans 05013 B1 00 0000 and 00 2200 Rev A;
  b. 05013 B1 02 2199 Rev A, 2200 Rev A, 2201 Rev A, 2203 Rev A, 2204 Rev A, 2205 Rev A and 2206 Rev A;
  c. 05013 B1 04 2200 Rev A and 2201 Rev A;
  d. 05013 B1 05 2201 Rev A, 2202 Rev A, 2203 Rev A and 2204 Rev A;
  e. 05013 B1 10 4200 Rev A, 42001 Rev A, 4210 Rev A, 4300 Rev A, 4301 Rev A, 4310 Rev A, 4401 Rev A, 4400 Rev A and 4401 Rev A
  f. 05013 B1 03 2200 , 05013 B1 12 3204, 3205, 3207, 3206, 3208 and 3209;
- Heritage Statement. 2016.
- Building survey and tabulated schedules of work.

1.4 Authorship.

i) This report has been prepared by Stephen Levrant Heritage Architecture Ltd., an architectural practice which specialises in the historic cultural environment. The authors were:

ii) Authors:

- Stephen Levrant [RIBA, AA Dip, IHBC, Dip Cons (AA), FRSA] - Principal Architect
- Declan Cahill [BSc (Hons); SPAB Lethaby Scholar] Historic Building Surveyor
- Nick Grimshaw [MA, BA(Hons); BPL; RICS.PgDipBldgCons; MRTPI; IHBC] Senior Associate

1.5 Limitations

i) This Conservation Implementation Strategy should not be understood as a construction stage specification, and, no design liability is accepted in the production of this document.

2. CONSERVATION OF 7 KELVIN STREET

2.1 Location and summary description of 7 Kelvin Street

i) No. 7 Kelvin Street occupies a corner site bounded by Thomas Street to the north-east, Kelvin Street to the south-east, and Back Turner Street to the south-west.

ii) The building adjoins the cleared site of 48-50 Thomas Street which was taken down as required by Manchester Council as a dangerous building.

iii) Nos. 42-46 Thomas Street to the north-west (which previously formed a terrace with No. 48-50 Thomas Street) is of two storeys and traditional solid masonry/brickwork construction.

iv) Historical information is provided in the submitted Heritage Statement prepared by Heritage Architecture Ltd (see **References** below) and will be enhanced by the Historic Building Record (level 3).



Fig.1 View of the site as existing June 2018. The partially vacant site is 48-50 Thomas Street.

2.2 Listed building status 7 Kelvin Street

i) The site includes a building which was grade-II listed on 6th June 1994. This gives that part of the development site statutory protection under the Planning (Listed Buildings and Conservation Areas) Act 1990 as amended, due to its special architectural or historic interest.

ii) The statutory status under the 1990 act extends to Planning controls for the attached buildings and its setting. This would primarily impact on 48-50 Thomas Street which had been latterly opened internally into the listed warehouse, contributing to the structural issues which precipitated the partial taking-down of this part of the site to make it safe.



Fig 2. The two main components of the redevelopment site.

iii) Consequently, for the avoidance of doubt, it is important that confirmation by the appointed contractor is sought from the Project Architect for instruction to implement any work on the development site, particularly on the site of 48-50 Thomas Street and 7 Kelvin Street, as marked in red above.

iv) Instruction to proceed will follow written confirmation from the Local Planning Authority of the discharge of the relevant Planning and Listed Building conditions.

v) The following is a summary of the description of the building as it appears on the Statutory List which should be referred to when preparing specifications and schedules of work.

Name: **7, KELVIN STREET, Manchester**. List entry Number: **1291627** Grade: **II**
Date first listed: 06-Jun-1994 **UID**: 388220 This list entry does not comprise part of an Asset Grouping. Asset Groupings are not part of the official record but are added later for information. SJ8498 KELVIN STREET 698-1/17/171 (North West side) No.7. Small warehouse. Late-C18 or early-C19. Hand-made brown brick in English garden wall bond, slate roof. Rectangular plan on corner site, gable to street. Three storeys; square-headed loading slot to left, bricked up at ground floor but with recessed wooden doorways at 1st and 2nd floor; doorway to right (altered), and segmental-headed window in centre with upper leaf of 16-pane sash; 2 segmental-headed windows at 1st floor with raised sills and arched heads, now furnished with 4-pane sashes; two 3-light windows at 2nd floor with raised sills and flat-arched heads. Four-window left return wall with similar windows (doorway in 3rd opening at ground floor apparently replacing window). Interior not inspected. Included as little-altered example of early small-scale warehouse.
Listing NGR: **SJ8438498597**
National Grid Reference: SJ 84384 98597



Figure 3. 7 Kelvin Street (May 2016) showing the external materials to be repaired/restored, comprising: common brick elevations, sandstone cills, timber-framed sash-windows, boarded-timber doors, slate roof, rainwater goods, facias and stone steps.

3. CONSERVATION OBJECTIVES AND PRINCIPLES

3.1 Conservation objectives & principles of implementation.

i) The approach taken in the Conservation Implementation Strategy is one of **minimum intervention** in repair and this accords with conservation best practice as set out by the Society for the Protection of Ancient Buildings, Historic England and others. This principle applies across all the individual items of historic fabric, with the important caveat that the conservation objective is to achieve a long-term, sustainable preservation of the retained site components, where feasible.

ii) Accordingly, the adopted philosophical approach to the necessary conservation-led interventions at 42-50 Thomas Street & 7 Kelvin Street is essentially one of minimum intervention and maximum retention of significant historic fabric. This philosophy essentially follows an ethos of prioritising conservation over replacement where feasible as defined by the below British Standard.

iii) The conservation principles used to guide the consented are encapsulated in British Standard, BS7913, *"Guide to the conservation of heritage assets"*, and relate to the following principles:

Basic principle in BS7913	Explanation
Minimum Intervention	'Each intervention should be in proportion to the safety objectives set, thus keeping intervention to the minimum to guarantee safety and durability with the least harm to heritage values.'
Maximum retention of fabric	'Conservation should involve the greatest respect for, and involve the least possible loss of, material of cultural heritage value'.
Reversibility	Where possible, any measures adopted should be "reversible" so that they can be removed and replaced with more suitable measures when new knowledge is acquired. Where they are not completely reversible, interventions should not limit further interventions.'
Legibility	'Replacements of missing parts must…be distinguishable from the original so that restoration does not falsify the artistic or historic evidence.' This does not mean that new work has to be radically different from that existing, which is elaborated in paragraph 7.4.4 of BS 7913.

iv) The intention is not to restore 7 Kelvin Street to an 'as new' condition, rather it is to retain the patina of age whilst cleaning, removing damaging interventions, and repairing damaged components of the structure. Therefore, while sufficient work should be undertaken to achieve a **lasting repair**, the extent of the interventions should normally be limited to that necessary to make failing, significant elements sound and capable of continuing to fulfil their intended functions.

v) When assessing individual components, it is important to look beyond the immediate need for action, to understand the reasons for the need for repair. The objective to make safe and useable (where appropriate) needs to be considered as the basis for all interventions. Therefore, it is necessary to plan for the long-term consequences of inevitable change and decay. While sufficient work should be undertaken to achieve a lasting repair, the extent of the repair should normally be limited to that necessary to make failing elements sound and capable of continuing to fulfil their intended functions.

vi) Therefore, selective replacement of severely deteriorated or eroded elements will be prescribed only if/when it is deemed important either to reinstate the original architectural function (e.g. rainwater goods) or the aesthetic merit and appreciation of listed building (7 Kelvin Street) is diminished by the condition of the particular component. However, the requirement for long-term repair means that severely damaged or decayed components should be subject to authentic and faithful replacement rather than consolidation and repair.

vii) The significance of the components within the building group are defined by the following definitions, which are established in the consented drawings and documents relating to the Planning and Listed Building Consent. Reference should be made to the Heritage Statement which defines the fabric components.

Fabric Significance status	Description of component significance.
High	Original fabric - largely intact / authentic.
Considerable	Original fabric - altered but appears authentic.
Low	Original fabric - but significantly altered.
No-significance.	Non-original fabric, or extensively altered.
Detrimental	Non-original, poor-quality, or fundamentally altered.

viii) However, where the retained historic fabric or its individual components have been damaged beyond repair, replacement will be undertaken on a **like-for-like** basis, using the closest available match to the original materials.

ix) It is also accepted that certain traditional building components (for instance slate roof coverings) have a natural lifespan and require periodic replacement. In other cases (such as masonry pointing in lime mortar) a component may have a sacrificial function, to protect surrounding features which are of greater importance, and again in this instance periodic replacement on a like-for-like basis is required.

x) All necessary conservation repair work will be preceded by **trials/tests** prior to full implementation. For example, it will be noted that the rear elevation of the grade-II listed warehouse has been comprehensively repointed with a hard, cement-based mortar. This is damaging to both the aesthetics and potentially the performance of the building and may be removed during the development, with the joints repointed in lime-based mortar. Allowance should, therefore, be made for trial test-panels to determine the viability of such an intervention.

xi) Notwithstanding the above, there may be opportunities for carefully specified thermal and fabric enhancement of the retained historic buildings on the site. This may be proposed to improve environmental performance, or to address problems of occupier comfort in buildings, the latter more commonly in later listed buildings where experimental systems may have been used and subsequently failed. The proposed interventions must be detailed in the **Task Method Statements** (see section 4.2 below).

xii) Acceptable examples of thermal and fabric enhancements might include the addition of functionally compatible insulation to the roof-spaces, and/or roof build-ups to accommodate insulation. The option to replace the non-original glazing with the installation of slimline double-glazed units shall be considered, where it is feasible to redefine the historic window-frame patterns. Alternatively, secondary glazing may be considered where it possible to retain the original, sound windows. Where such approaches are proposed, the minimum possible intervention will be proposed to achieve the improvement required.

xiii) Throughout any programme of consented conservation works, the work undertaken should be informed by an understanding of the significance of the building fabric concerned. This understanding should reach both the Project Architect and design-team and the contractors carrying out the work, in the form of access to the Conservation Implementation Strategy and attendance at heritage inductions on site.

xiv) However, the requirement for long-term repair means that severely damaged or decayed components should be subject to authentic and faithful replacement rather than consolidation and repair. This principle will be applied in respect of significantly damaged sections of stone, brick where these have been significantly compromised by redundant fixings or mechanical impact damage, and in relation to severely decayed timber sections affected by water ingress.

xv) The below outline specifications have been adopted by Stephen Levrant Heritage Architecture Ltd for use only in this project. This Conservation Implementation Strategy (CIS) should be read as the framework for Specification and Schedule of repair works prepared by the main contractor/individual contractors which will act as the construction specification document.

3.2 Definitions of terms used in the Conservation Implementation Strategy

i) For the avoidance of doubt, the following definitions are used in this overall Conservation Implementation Strategy, and the individual specifications and schedules.

ii) **REMOVE** means disconnect, dismantle as necessary and remove the stated element, work or component and all associated accessories, fastenings, supports, linings and bedding materials, and dispose of unwanted materials via a licenced commercial waste disposal provider. It does not include removing associated pipework, wiring, ductwork or other services.

iii) **KEEP FOR REUSE** means that, during removal, prevent damage to the stated components or materials, and clean off bedding and jointing materials. Then stack neatly, adequately protect and store until required by the Employer or for use in the Works as instructed.

iv) **REPLACE** means carefully remove the stated existing components, features and finishes, and hand to the Employer for their records. Provide and fit in lieu new components, features or finishes which, unless specified otherwise, must match those which have been removed. Make good as necessary.

v) **REPAIR** means carry out local remedial work to components, features and finishes as found in the existing building. Re-secure or re-fix as necessary and leave in a sound and neat condition. It does not include the replacement of components or parts of components or redecoration

vi) **MAKE GOOD** means carry out local remedial work to components, features and finishes which have been disturbed by other, previous work under the Contract and leave in a sound and neat condition. It does not include replacement of components or parts of components or redecoration. The meaning of the term shall not be limited by this definition where used in connection with the defect's liability provisions of the Contract.

vii) **TO MATCH EXISTING** means, use products, materials and methods to match on a like-for-like basis, in order to closely match the characteristics and features of the existing fabric or work. This will include ensuring that joints between existing and new work is as inconspicuous as possible. All products, materials and methods will require approval of appearance and characteristics from the Project Architect.

3.3 Necessary approvals

i) It is a criminal offence, under Section 7 of the Planning (Listed Buildings & Conservation Areas) Act 1990, if any person executes: *"any work for the demolition of a listed building or for its alteration or extension in any manner which would affect its character as a building of special architectural or historic interest unless the works are authorised."* This relates to 7 Kelvin Street.

ii) The contractor will be aware that Listed Building Consent has been granted for the development works impacting on **7 Kelvin Street** (LPA reference: 113476/LO/2016), although this consent is heavily caveated and subject to a number of conditions. Consequently, as any works to a listed building which are considered to fall within the above legal definition will require **Listed Building Consent** from the local planning authority, it is important to establish with the Project Architect that the proposed works are appropriately authorised. This will require submission of **Task Method Statements** by the appointed contractor to detail the implementation of each task (see section 4.2 below).

iii) This Conservation Implementation Strategy (CIS) provides the necessary parameters for specifying and implementing repair to 7 Kelvin Street, it is not a construction Task Method Statement. The CIS will, therefore, be used initially to review the Contractors' repair schedules, and then utilised once access has been constructed to finalise the repairs to be undertaken to the retained historic fabric.

iv) When the specification and schedule of works has been defined (in accordance with the consented works) it may be appropriate to submit the specific **Task Method Statement** to the local authority for additional information to support the discharge of the relevant conditions attached to the consent, in particular LBC and Planning Conditions 3b and 4a to 4k).

v) It is, therefore, necessary to detail the specific aspects of all the implemented works, and/or to provide more detail, at the written request of the Local Planning Authority, to specify the proposed approach to implementing all aspects of the consented works.

vi) Written confirmation of consent to proceed with the specific tasks, on the basis of the 'Task Method Statements', will be confirmed by the Project Architect and/or Project Manager before starting on site.

vii) The individual **Task Method Statements** shall be of sufficient clarity to fully inform the Project Architect, Project Manager, and Conservation Consultant, as well as other relevant parties of the extent of the required works. Once authorised the collection of repair specifications, schedule of works and task method statements will be appended to the project documentation (specifically the Health and Safety File provided to the client at completion) to provide a detailed, accessible record of the works undertaken during this development project.

4. GUIDELINES FOR CONSERVATION-LED REPAIRS

4.1 Limitations

i) The following applies to the repair and cleaning of the retained building elements within the grade-II listed building at 7 Kelvin Street, Manchester.

ii) Products or services referred to within the specification advice are included for information and it is the intention that either these products or services or an equal approved product or service should be used in the actual works, subject to the approval of the project architect and conservation consultant.

iii) Reference should be made to the relevant planning stage drawings prepared by the Project Architect.

4.2 Survey prior to commencement

i) Before starting work, examine all available information, all contractors will carry out a detailed site **Survey** of the affected areas of the site, and submit a Survey report describing the existing fabric conditions relating to the area of work to be addressed by individual contractors.

ii) All appointed contractors must be fully acquainted with the building condition and status before commencement of any Works and take all reasonable steps to ensure a safe working environment for their operatives.

iii) It is important to ensure that the workforce is aware of the historic value of the building and its fabric. If necessary, this should include a specific ***heritage briefing*** to include a 'guided tour' of the building provided to the Trades and Craftsmen who will perform work on the building, so that they have a good understanding of the special interest and potential physical fragility of the site components prior to commencement of works.

iv) Therefore, before starting any works, the contractor should examine all available information and carry out a survey of the structure(s), site and surrounding area, to prepare a brief survey report to inform the Task Method Statement. This must be submitted to the Project Architect and cover all relevant Risk Items and the Health and Safety Executive Guidance Note.

v) The site **Survey** shall be used to inform the **Task Method Statement,** detailed below (see **4.3**).

4.3 Workmanship generally

i) All investigative survey and subsequent implementation of the conservation-led repair works should be performed by a skilled contractor with proven experience of working on the affected building components and/or materials.

ii) All repair and/or replacement works shall be completed in the most-careful manner by a conservation sub-contractor, preventing unnecessary damage or destruction of adjacent surfaces and materials.

iii) All destructive works, or works necessary for investigations, and/or authorised conservation-repair works impacting the retained historic fabric should be carried out using light, hand-held tools only. The works should not cause any physical harm to the retained historic fabric of the building, which should be protected as necessary.

iv) The site staff responsible for supervision and control of the repair and replacement works are to be experienced conservation craftspeople. They must be able to demonstrate competence in the assessment of the risks involved and in the methods of repair and replacement to be used.

v) All site staff should, in addition, have access to this Conservation Implementation Strategy and be provided with a heritage induction before commencing work. All operatives working on site will be inducted and trained in regard to the need to strictly comply with the approved documents and understand the consequences of undertaking unauthorized works.

vi) The execution and performance of the conservation repair works (including any investigative works) shall be the responsibility of the Appointed Contractor. The contractor shall, nonetheless, satisfy the Project Architect that the implemented works have attained the required degree of information to demonstrate the following.

a) **Suitable test methods** have been implemented (and recorded in the survey) to cover the determination of the strength of retained timber components and related mechanical and physical properties, controlling factors such as specimen size and moisture content together with direction of loading relative to the timber plane.

b) Where decay or infestation (fungal or insect) has been recorded this must be clearly identified and a **method of treatment proposed for written agreement** with the Project Architect. This should be described in the relevant Task Method Statement.

c) The **Contractor's survey** shall, where necessary, supply detailed and dimensioned layouts clearly recording: vertical irregularity, member size, thickness, depth, material type and grade, to enable the retained historic components to be authentically repaired or replaced on a like-for-like basis.

d) All work to be performed in the building should be executed in a manner to cause minimum disturbance to identified historic features and building materials which are to be retained as part of the development.

e) Fragile historic features, such as brickwork or historic timbers, particularly adjoining those site components which are to be demolished (i.e. 42-46 Thomas Street) must be protected during construction.

f) Opening up of areas for investigation works shall be carried out by hand, to determine details of the structural member together with its location relative to the finishes (including depth from internal floor level wall face etc.) without causing any irreversible damage or loss of historic fabric.

g) The general condition of the retained structural members, their connections and/or anchorage to the wall or foundation must be recorded, together with any reinforcement situated between or around the member and adjacent structure and finishes.

vii) With specific regard to any necessary **Opening-up works the** following requirements will also apply.

a. Materials should be carefully removed in such a manner as to allow for the potential salvage and reinstallation of components in their original locations, where necessary. Such investigative works shall cause the minimum disturbance to those historic building materials which are to be retained.

b. Necessary openings shall be undertaken using small power-tools, or hand tools designed for sawing or grinding, not hammering nor chopping, to minimise the disturbance of adjacent surfaces.

c. Openings shall be located at areas to yield most information and, to the extent possible, through already damaged areas.

d. The investigative works should be executed by a conservation specialist contractor/worker particularly in areas where historic decorative finishes are expected to be affected.

viii) Removal of significant, decorative **fixtures, fittings and finishes** should be avoided. Reference should be made to the Project Architect and the Historic Building Record and Heritage Statement to identify significant fabric. However, where necessary to facilitate the proposed works, the general procedure should follow that outlined above, and as follows:

a. **Floorboards and Skirtings**: should be removed in whole pieces whenever possible, for recording, salvage and potential reinstatement.

b. Floorboards should be lifted by use of multiple fine-bladed, floorboards bolsters. Edges of boards are to be protected from leverage by use of “L” shaped metal slips. Ease up and spring out the boards; nails to be removed by hammering through reverse side. If clawed out, the leverage surface must be protected by metal slips.

c. Preserve all nails for inspection, labelled and stored adjacent to the removed boards.

d. Significant, historic Floorboards and skirtings should be numbered and identified by room/place, with the objective of being replaced in same position. Nails to be re-used only if so directed by the Project Architect.

e. Any identified **Tiles (floor and wall)** or **stone-floor slabs** should be recorded, and removed whole, salvaged and stored for potential re-use. The re-used materials should be set in a specified bedding mortar to match the original location and installation.

f. **Plaster ceilings/Plaster walls**. Non-decorative plaster ceilings and plaster walls should be carefully investigated to expose the substrate beneath with the aid of hand tools only. If affected, decorative plaster cornices should be carefully cut in a manner that follows their design and salvaged and stored for future re-installation.

vi) In advance of commencing all investigative and repair work on site the appointed contractor must prepare a brief, but focused, **Task Method Statement** to the Project Architect to provide details of the implementation of the appointed task. The Task Method Statement should define the extent of any repair interventions and give a clear description of how the works are to be carried out, including details of the tools, personnel and the proposed implementation methodology. See sections 4.4 and 4.5 below for the typical format and content of the required Task Method Statement.

vii) Therefore, the necessary site **Surveys** and individual **Task Method Statements** should detail the following, as a minimum.

a) The existing form, condition and any repair and or replacement methods to be used on the retained brickwork and masonry elements of 7 Kelvin Street and 48-50 Thomas Street.

b) The form, location and removal methods of any toxic or hazardous materials.

c) The identification and location of services.

d) Marked up drawings showing the exact extent of repair proposed for all fabric components, based upon the strategy approaches set out in this document and the wider project requirements.

4.4 Task Method Statement – typical content and example format.

i) The following provides further guidance on the *minimum* Level of detail which may be necessary to describe the appointed Contractor's initial investigations (i.e. Survey material) and the implemented conservation repair works. The Contractor must make suitable allowance in the required T**ask Method Statements** and programme for appropriate presentation of any survey results and agreement of proposed methodologies with the Project Architect.

ii) Confirmation should be sought from the Project Architect that any survey material presented is suitable to inform the proposed implementation prior to programming the implementation of the works. Any photographs, sketches and drawings should be appropriately annotated to describe, in easily-understood (non-technical) terms, the results of the investigations and catalogued to retain a record for the implementation of the conservation repairs.

iii) Each **Task Method Statement** should include a comprehensive description of any investigation works, and where appropriate sample photographs of the implementation of similar works, to enable the client team to fully understand the extent and impact of the conservation-repair works to be undertaken.

iv) The **Task Method Statements** will subsequently form the briefing component of the contractor's report, enabling the results to be simply understood and recorded by the client team, the Local Planning Authority and any other third parties. The **Task Method Statements** should include, as a minimum (this is not a comprehensive list):

a. The specific location of the conservation-repair works. These will be identified using marked-up drawings of the work locations. Where possible annotated photos of the actual work area, suitably marked up should also be provided.

b. A description of the conservation-repair works to be undertaken, including a statement of whether materials/components need to be removed as part of either investigations or repairs. This should identify how the materials are to be: recorded, the method of removal and transportation from the work area (if required), and the area reinstated.

c. The equipment to be used during the conservation-repairs, identifying power and safe-working requirements, as well as relevant access required to undertake necessary survey works (identifying any testing equipment).

d. The site attendances required to undertake both site investigations and conservation-repairs, to include lighting, power, ventilation and access requirements.

v) The following outlines an **EXAMPLE FORMAT**, which is intended to standardise the required **Task Method Statement**s. The text in **BLUE** simply indicates the type/level of information that may be required for individual methodologies. The Task Method Statements will be issued to the client team for approval and to the Planning Authority for information in support of the discharge of relevant Planning Conditions. The example is not comprehensive and should be adapted as required, to the conservation-repair task.

Example format for Task Method Statement – 7 Kelvin Street, Manchester.

i) **Introduction/context**

a. [**Name of lead contractor**] has been commissioned by Real Estate Investment (Thomas St) Ltd to undertake a series of conservation-led repairs, which may be informed by intrusive investigations/survey works, within the 42-50 Thomas St. & 7 Kelvin St., Manchester. The extant building group includes a grade-II listed structure, which is in a dilapidated state, at 7 Kelvin Street.

b. The investigations and subsequent conservation-led repairs will enable the future use of the building group in accord with the approved Planning Permission and Listed Building Consent. The detailed Specifications and implemented works will secure the future performance and lasting repair of the structural components of the building to facilitate its sustainable use.

c. The works may require some intrusive investigations to better understand the condition and the physical dimensions of some of the building components which are to be repaired. Where possible non-destructive means will be used to gain a full understanding of the building's structure, to confirm the proposed conservation repairs.

d. Prior to works being carried out on site, Methodologies will be prepared in consultation with the appointed specialists to provide full details of the extent of works and the working methods to be utilised.

ii) **Overview.**

a. A general, descriptive overview of the required conservation-led repair works shall be provided, specifying their location within the building group.

b. The name of the Contractor that will be undertaking the works should be provided.

iii) **Design Team Information**

a. The investigation works shall reference the Project Architect's drawings and relevant structural reports, which notes the survey locations for each proposed investigation and survey

b. The extent of works being carried out within the above document should be noted within this section together with any agreed changes.

iv) **Implementation Methodology.**

a. Prior to any works commencing the client team will brief all operatives on the approved Task Method Statements. All site operatives will be made aware of the Heritage significance of the building group and specifically those elements affected by their planned works. This aspect will also be covered in the pre-start induction and relevant activity briefings

b. Individual Task Method Statements should include a detailed description (if necessary, including sample photographs of typical / similar works) to enable the client team to fully understand the extent of works to be undertaken.

This should include:

- Location of the works – marked up drawings to be provided of the work locations. Where possible photos of the actual work area suitably marked up should be provided as part of the Contractor's Methodology.
- Description of the works to be undertaken, including whether material is to be removed as part of the investigations and how this will be recorded and transported from the work area.
- The materials and specification of the repair/reinstatement works.
- Equipment – details of the equipment required to undertake the survey works included where necessary proof of calibration of testing equipment.
- Attendances required – to include lighting power, ventilation, communications and access.

vi) **Recording**

a. The Task Method Statement should allow for all works undertaken on **7 Kelvin Street** to be fully documented by the appointed Contractor, to show the condition of the area **before and after** works are completed.

b. In addition, during the execution of the works the contractors will undertake additional recording including photographs of the works being carried out and any findings discovered during the preliminary survey works.

vii) **Protection**

a. The Task Method Statement should record the method for fabric protection in the areas of the building where significant fabric is required, to be avoid any damage to original, retained features.

b. The Task Method Statement shall identify potential risks/concerns relating to potential damage to adjacent finishes and fabric and provide proposals for the effective management of the protection system.

viii) **Re-instatement Proposals**

a. The Task Method Statement should (where necessary) provide details of fabric re-instatement proposals, following either intrusive investigations or temporary removal. These details will be in line with one of the following options:

- ***No re-instatement*** where it is considered detrimental to the original fabric to undertake this.
- ***Full re-instatement*** with a like-for-like material to match the original.
- ***Partial re-instatement*** in a new material with enhanced properties appropriate to the location.

b. It should be assumed that ***No-re-instatement*** will only be undertaken where such re-instatement works would be detrimental to the significant, retained fabric of the listed building (i.e.7 Kelvin Street). Full proposals including materials and application techniques should be provided.

ix) **Programme**

The programme of implemented conservation-repair works should be recorded, including dates of initial surveys and site attendance etc.

x) **Competency of those involved**

a. All operatives working on the project will be required to attend a site induction led by the lead contractor before starting work. All operatives will be required to hold a valid current CSCS card and competence cards suitable to their trade and the equipment they are using.

b. Where additional competence is required this should be noted accordingly.

xi) **Technical Compliance**

a. The Task Method Statement should refer to the relevant Technical Compliance required by, for example, the following.

b. **Scaffolding erection** as per the lead contractor's temporary works design and sign-off procedure. The temporary works procedures and the temporary works design for this element will be made available on request.

c. The [insert name of lead contractor] **Health and Safety Document**.

d. Preparation and re-instatement of material to be undertaken to comply with **Manufacturers Specifications**.

e. **Plant & Equipment, for example:**

- Access scaffold, mobile tower – to comply with [lead contractor] works procedures.
- Power tools – to [lead contractor] works procedures.

xii) **Management of Heritage Risks**

a. The Task Method Statement should note identified heritage risks associated with the specific task and how they shall be managed throughout the duration of the works.

b. This section of the Task Method Statement should be focused on the retained significant fabric and refer to the general Risk Management of the site.

xiii) **Supervision and monitoring of work.**

a. The **Task Method Statement** should specify the site supervision to be provided by [insert Lead contractor] under the direction of Project Architect.

b. All specialist contractors will also provide supervisors for each of their teams.

c. Specify the inspection and Test Plan to ensure the required quality standards are met.

xiv) **Environmental**

a. Detail the environmental protection for all operatives, noting the potential hazards. This will include a minimum of 5-point Personnel Protective Equipment (PPE): Hard Hat, Hi-Viz, Gloves, Safety boots and Glasses.

b. Any additional PPE specific to the specific tasks (e.g. harnesses) should be also highlighted in the **Task Method Statements**.

c. In addition, contractors must wear disposable coveralls and Part 3 dust masks at all times within the building.

xv) **Dust**

a. Specify where operations will create airborne dust and the requirement for localised extract

b. Any requirements for extract ventilation should be fully noted.

xvi) **Temperature & Humidity**

a. The environmental conditions within the building are not known at this time. However, upon inspection localised measures may be taken to provide ventilation if these are required.

xvii) **Approval, Review & Briefing**

a. Activity specific Health & Safety method statements for each works operation will be prepared by the sub-contractor appointed to carry out the works. These will be reviewed for approval by the lead contractor. Only once approved will the sub-contractor be permitted to commence works operations.

b. Where relevant and applicable to a Planning Condition or Listed Building Condition the sub- contractor's Task Method Statements will be submitted to Manchester City Council for approval. This could result in some delay in sign-off for commencement of particular tasks.

c. All operatives working with the Task Method Statement will be fully briefed on the document and will sign a briefing sheet to confirm their understanding.

d. Regular activity briefings will be issued to the operatives by the Specialist Contractors Supervisors and [insert lead contractor's name] Managers to identify any changes from the previous day and health and safety issues or any changes to the heritage considerations.

5. IMPLEMENTATION OF CONSERVATION-LED REPAIR STRATEGY

5.1 Protection of historic fabric *(refers to Conditions 3a, 3b, 4a and Condition 26).*

i) The conservation strategy for 7 Kelvin Street is to avoid any further loss of significant historic fabric. Therefore, before commencement of any repair works all fixed architectural features identified as being of heritage significance will be protected by the contractor to the satisfaction of the Project Architect and/or conservation advisor.

ii) The individual components will be photographed and recorded prior to installing protection and protected prior to commencement of works with effective casings/protection to be agreed before their erection with the Project Architect and/or conservation advisor. The protective casings will be labelled to describe what they are shielding.

iii) The contractor must also ensure the provision and maintenance of special protective measures throughout the implementation of the contract (such as boarding, screens and barriers) to keep the site location and building secure, and to prevent damage to, or theft of, significant component items. The adopted means of protection shall be self-supporting and avoid fixtures directly into the building's fabric. In particular, the protection fixtures should avoid mortar joints, facing stone or window frames, joinery, cornices, skirting, tiled or other defined architectural features where possible.

iv) The contractor shall provide and maintain during the execution of the investigations incidental shoring, strutting, needling and other supports as may be necessary to preserve the stability of existing structures.

v) Ensure that any areas to be opened up to implement the required repairs (i.e. window openings or roof voids) are protected from wind and weatherproofed to prevent further degrading of existing fabric prior to remedial repairs.

vi) Any openings required in the elevations, or any part of the roof which may be exposed to the elements should be provided with effective temporary weather-protection during the course of works to the satisfaction of the Project Architect and/or conservation advisor. This should include purpose-designed, temporary, protective roof-structures where required for the duration of the works.

vii) Temporary roof structures should include polythene / DPM type sheeting as a minimum. Any sheeting and temporary roof structures should be secured with care to avoid damage to other materials, windows, and the elevations of the building.

viii) Works to the roof should be undertaken with a purpose-designed, temporary, protective roof structure, covering all roof areas, for the duration of the repair works to the main roof. The protection of individual architectural features should be in addition to the requirement to provide protection for individual, architecturally significant features.

ix) A temporary support scaffold was erected in 2017 at 7 Kelvin Street to safeguard the listed building following the necessary taking down of 48-50 Thomas Street (see **Appendix 1**). This support scaffold has impeded access for surveys and will need to be adjusted to implement the conservation-led repairs to the interior.

x) The adjustment to the scaffold will also enable protective measures to be implemented to avoid damage to the fabric of the building during the implementation of conservation works, resulting from the erection of and to be maintained throughout the construction phase.

xi) The existing scaffolding is threaded through the windows and is not fixed to the brickwork. The proposed protection measures shall be similarly strapped to the building without utilising any fixings. Adhesives should in no circumstances be used. If fixings are required, these should only fixing into mortar joints and should be no larger than 50% of the size of the mortar joint.

xii) The scaffolding contractor should define the proposed protection measures in accordance with ensuring that protection is non-abrasive, malleable to mould around the building, and should not place any pressure on the building fabric or trap moisture / debris.

xiii) Protection of all identified features shall also be maintained throughout the construction phase or until it is safe to remove.

xiv) Protection that encloses significant elements shall be labelled to identify what is behind the protective materials.

5.2 Samples of material and workmanship *(refers to Conditions: 3a, 4 and 5).*

i) In accord with the general development Specification the Project Architect will require submission and approval of both material and workmanship samples prior to authorising commencement of site works in particular relating to the flowing. The Project Architect will confirm that the relevant sample meets best practice and thus the requirements of the 'consented development' prior to implementation of the particular task.

ii) **Masonry indent repair samples.** The appointed Contractor will provide a sample of new / replacement stone where required for any indents, and undertake an in-situ sample of fixing an indent for inspection by the Project Architect and / or conservation consultant for confirmation that the proposed sample meets the requirements of the 'consented development'.

iii) **Masonry replacement stone samples.** The appointed Contractor will provide samples of replacement masonry blocks prior to placing any orders for purchasing replacement stone for inspection by the Project Architect and / or conservation consultant for confirmation that the proposed sample meets the requirements of the 'consented development'.

iv) **Masonry shelter coat samples.** The appointed Contractor will provide details of stone dust, binder and ratios (including water content) before preparing **5no. samples** on cleaned sandstone cills (taken from Back Turner Street cills) for by the Project Architect and/or conservation consultant. for confirmation that the proposed sample meets the requirements of the 'consented development'.

v) **Brick replacement samples.** The appointed Contractor will provide samples of replacement brick units (new and reclaimed) prior to placing any orders for purchasing replacement bricks for inspection by the Project Architect and / or conservation consultant for confirmation that the proposed sample meets the requirements of the 'consented development'.

vi) **Mortar samples for masonry.** On receipt of the mortar analysis results, the appointed Contractor will prepare 5no. pointing sample mortar biscuits based on the original mortar (and appropriate for the use of on the masonry) for inspection by the Project Architect and / or conservation consultant. The Contractor will then prepare a re-pointing sample of up to 1 linear metre of masonry for inspection by the Project Architect and / or conservation consultant for confirmation that the proposed sample meets the requirements of the 'consented development'.

vii) **Mortar samples for brickwork**: The appointed Contractor will prepare 5no. pointing sample mortar biscuits, on receipt of the mortar analysis results, based on the original mortar and/or any justified requirements to meet the functional needs of the brickwork. The samples will be presented for inspection to the by the Project Architect and / or conservation consultant. Once inspected, allow for re-pointing 1m^2 of brickwork for inspection by the project architect and / or conservation consultant and / or conservation officer for confirmation that the proposed sample meets best practice and thus the

requirements of the 'consented development'.

viii) **Paint removal sample (external)**. The graffiti and externally applied paint is to be removed following necessary removal trials. Tests will be undertaken prior to the removal of the paint to brickwork and masonry along Kelvin Street and Back Turner Street for the information and inspection of the Project Architect and / or conservation consultant for confirmation that the proposed sample meets best practice.

ix) **Sample cleaning:** Prior to commencing of any cleaning the contractor will undertake sample cleaning to establish the appropriate and effective method. This will include testing the pressure and distance to be applied for steam-cleaning to successfully remove soiling but not cause saturation. The sample cleaning will be undertaken to an inconspicuous area of masonry and begin using the least amount of pressure starting from a distance of 1m for inspection by the Project Architect and/or conservation consultant for confirmation that the proposed sample meets best practice and thus the requirements of the 'consented development'.

x) **Window joinery splice repairs sample.** Where salvageable the sash windows are to be retained. If required, an example of a splice repair to the window frame / sashes as required for inspection by the project architect and/or conservation consultant for confirmation that the proposed sample meets best practice and thus the requirements of the 'consented development'.

xi) **Window joinery fill sample:** Where damage/fixings have left holes within the retained windows the contractor will undertake a sample repair to fill, finish and re-decorate the area to make good to match the surrounding timber for inspection by the Project Architect and/or conservation consultant for confirmation that the proposed sample meets best practice and thus the requirements of the 'consented development'.

xii) **Ventilation grills.** Where ventilation grills penetrate the façade and/ or the basement and are to be replaced, there are to be of clay or cast-iron depending on the size of the opening. The contractor is to source and supply samples of new ventilation grills for consideration by the conservation consultant.

xiii) **Removal sample of internal wall finishes.** The contractor will carry out a workmanship sample to demonstrate how areas of defective internal plaster wall finishes will be removed without causing damage to the underlying brick/stone substrate. The method will be inspected by the Project Architect and/or conservation consultant for confirmation that the proposed sample meets best practice.

5.3 Access scaffolding *(refers to Conditions 3b and 26).*

i) To avoid any damage to the retained brick structure the erection and support of necessary scaffolding to enable the implementation of the repair works must be carefully detailed.

ii) The design of all scaffolding will be the responsibility of the Scaffolding Contractor, subject to the below Conservation Strategy requirements and in accordance with the recommendations of BS 5973: 1990 *"Code of Practice for access and Working Scaffold and special scaffold staircases in Steel"* or as updated. Compliance with the various Acts and regulations listed in BS 5973 is the responsibility of the Contractor. The following minimum requirements will be met. Compliance with all aspects of Health and Safety during erection, using and dismantling is the responsibility of the Contractor.

iii) The Scaffolding Contractor's **Task Method Statement** will include proposals which include clear drawings and structural calculations in duplicate sufficient to prove the stability of the proposed temporary structures in accordance with BS 5973: 1990. Drawings will be provided to the Project Architect, structural Engineer, Conservation Adviser.

iv) These drawings will clearly indicate positions and methodology where any scaffold is to be tied back to the fabric of the building. No fixings should be made directly into the brickwork. Where it is necessary to brace the scaffold from the building's structural frame then timber packing of a minimum thickness of 25mm is to be placed between the scaffolding and the masonry.

v) The ends of ALL scaffold tubes are to be protected with plastic caps which are to be fitted prior to delivery to site. Where it is necessary to cut scaffold tubes during erection the end is to be re- capped.

vi) Where it is necessary to brace scaffold through window or door openings the existing finishes are to be protected with 25mm thick timber packers both internally and externally. The opening is to be boarded up with access only for the scaffold tubes.

vii) **Protection.** All vulnerable historic surfaces at are to be suitably protected to prevent the scaffold damaging existing external and internal finishes. Where internal scaffold is to be erected full protection will be required under all scaffolding except with prior written consent

viii) Ensure any architectural features or areas prone to damage are suitably protected. Where protection measures are considered inadequate the Contractor will at his own expense provide additional protection as directed by the Architect at the Contractors own expense.

5.4 Raking out and mortars *(refers to Conditions: 3a, and 4a).*

i) Generally, where cement mortars have been used, an attempt to remove them should only be made if they have de-bonded from the stone or brick. Attempting to remove well adhered cement mortar can result in damage to the arisses of the surround masonry and brick. In the circumstance that the cement mortar is causing an increased rate of erosion shall its removal be permitted when well adhered.

ii) To protect the retained C19th century brickwork at 7 Kelvin Street raking out shall be undertaken with hand tools only. The use of mechanical methods to remove mortar (air chisels, angle grinders etc.) is not appropriate as they risk irreversible damage to the masonry and bricks.

iii) Chisels should be no more than 50% of the width of the mortar joint in thickness to prevent accidental damage to the arisses of the brick and stone.

iv) Pointing mortar is intended to be a sacrificial element of the building that act to preserve the masonry and brickwork from premature decay.

v) All new mortars to be used on 7 Kelvin Street should be lime based and replicate the ingredient of the original materials. Where this is not possible, an authentic replication of the original mortar shall be acceptable where it can be demonstrated that the new material is functionally appropriate.

vi) Mortar analysis should be undertaken across the three facades to include pointing mortars for both stone and brickwork. The number of samples required should be agreed with the Project Architect and/or conservation consultant and the information required to accurately understand the mortars used.

vii) Mortar analysis should be undertaken in a laboratory that is UKAS accredited and meets the internationally recognized standard of ISO/IEC 17025 to the approval of the Project Architect / conservation consultant. Each mortar sample analysed should provide the following details:

a) Visual observations of the mortar received (Macroscopic and Microscopic)

b) Carbonation of received sample

c) Breaking Strength

d) Friability

e) Colour (Using Munsell Soil Colour Chart or similar)

f) Water droplet test for indication of permeability / absorption rate

g) Weight ratios of binder to aggregate

h) Observations during acid digestion

i) Aggregate size distribution by weight

j) Hydraulicity and inclusions (tested by X-ray Diffraction (XRD))

k) Indication of source of a matching aggregate and Mix proportions by weight and quantity.

viii) The adopted specifications for new mortars should demonstrate appropriate compatibility with the existing mortar, including the appropriateness of the original mortar and its apparent success. It should also meet the new function of the retained building as imposed by the requirements of the surrounding masonry/brickwork. Account should also be given to the changes imposed by the new use which may impose a change on the function/behaviour of the mortar, as well as change in environmental conditions and any requirements of the project which may impact on the function of the mortars.

ix) Pre-1918 mortars were predominantly based on non-hydraulic quicklime-based binders. Where necessary, the contractor and operatives should be adequately trained in mixing, using and protecting this type of mortar, otherwise known as hot-mixed mortars. Details of previously undertaken works should be provided and/or adequate training undertaken.

x) Quicklime and other lime binders are volatile, reactive materials that can have serious health and safety implications if not handled and used with due care. The contractor will present method statements for: the handling, storage, mixing, and application of these mortars to protect all operatives against avoidable harm to the Project Architect / conservation consultant prior to commencing on site.

xi) Aggregates should be as close a match to the original mortar as possible and sourced from a local sustainable source. The contractor shall ensure that the aggregate is suitable for purpose and is not contaminated with anything that would adversely impact the mortar's performance or durability. The aggregate should be well-graded and generally the largest aggregate should be no larger than 2/3 the width of the mortar joint.

xii) Cement for mortar is not acceptable for use on any part of 7 Kelvin Street's retained elevations.

xiii) Admixtures / Pozzolans should not be used in the mortar unless specified or approved by the Project Architect. Pozzolans should be based on any inclusions identified in the mortar analysis, or justified to the needs of the new mortar being placed. Pozzolans should be used sparingly and not impede the function of the mortar as a sacrificial element. Do not use calcium chloride or any admixtures containing calcium chloride. Admixtures, if specified, to be to BSEN 934-3:2003

5.5 Cleaning of masonry / brickwork: general *(refers to Conditions: 3a and 4a).*

i) Weathering and soiling provides a patina of age to a building, adding character to the façades of buildings that can only be achieved with time. Therefore, to avoid diminishing the historic character of the retained building elevations, cleaning should only be undertaken where highly unsightly or where soiling/staining is present and damaging the substrate.

ii) It is essential to ensure that no irreversible damage results from the chosen cleaning method. The limitations of the masonry/brickwork cleaning will therefore be accepted by the project client and that not all soiling / staining will be able to be removed.



Figure 4. 7 Kelvin Street (2016) showing the brick gable to cleaned and restored.

iii) The method of cleaning masonry depends upon the degree and cause of the soiling. Cleaning should only be undertaken having determined the cause and implementation of a method appropriate to the material on 7 Kelvin Street. In addition:

a. Contractors must be experienced in cleaning historic buildings.

b. Present details of soiling and proposals for cleaning to the project architect and conservation consultant for approval before commencing any work.

c. Proposals must include details of collection of run-off and disposal/recycling of dirty water.

d. All cleaning methods should comply with BS 8221:2000 Parts 1 and 2 in respect of:

- Protection of operatives, building users and public;
- Means of access;
- Protection of building fabric, external and decorative fixtures.

e. Algae and Lichens: Following cleaning of algae or lichens treat worst affected areas using an approved biocide following the manufacturer's recommendations.

f. Plant growth: Following removal of plant growth treat former root locations using an approved biocide following the manufacturer's recommendations.

g. Inspect the underlaying masonry / brickwork core for any requirement to deep pack point or grout voids.

h. Biocide for Algae and Lichen and for plant growth: apply a biocide as approved by the Advisory Committee on Pesticides following Health and Safety Executive guidelines and COSHH Regulations.

iv) All cleaning shall avoid saturation of the masonry or brickwork, and if necessary multiple passes of cleaning will be undertaken to carefully remove soiling.

v) No cleaning will be undertaken where temperatures (daytime and night-time) within seven days following cleaning are at 5°C or below. This is to ensure that the masonry/brickwork is not at risk from frost damage.

vi) The DOFF cleaning system (or similar) may be used if confirmed by the Project Architect is a non-abrasive high-pressure steam cleaning system developed for conservation applications. A data sheet for the system is provided at **Appendix 2** below.

vii) Contractors and sub-contractors should provide details of their previous successful use of DOFF on comparable projects involving listed buildings and similar surface types, providing evidence of training in the use of the system.

viii) The system is adjustable in respect of both pressure and temperature. Operators should begin using the system at the lowest available settings and increase the pressure and temperature only if this is required to achieve an acceptable clean that does not cause damage to the building fabric. In all cases, cleaning is to be subject to agreement of a sample area in an inconspicuous location in the first instance. The conservation officer,

architect and conservation consultant must agree a sample for each new material / condition to be cleaned.

i) Use of **TORC** (the equivalent mildly abrasive cleaning system) is not anticipated to be required in this instance and there is a risk that this system could damage the soft sandstone and brick finishes of the exterior of the building.

ii) Proprietary alternatives to the DOFF system (e.g. Thermatech) are available and may be used with the agreement of the architect and conservation consultant. Any proposal to use an alternative system should be justified and the same protocol as the items above followed.

iii) DOFF can be obtained from, and technical queries directed to, the following:

Stonehealth Limited. G4/5, Draycott Business Park, Cam, Dursley, GL11 5DQ

info@stonehealth.com
www.stonehealth.com
01453 540 600

5.6 Brick repairs *(refers to Conditions: 3a and 4a).*

i) The aim of the conservation project at 7 Kelvin Street is to conserve as found, and therefore interventions to stabilise the external facing elevations (Kelvin Street and back Turner Street should ensure that dismantling and reconstruction is a final resort.

ii) The existing building elevations comprise solid circa 360mm brickwork walls with header coursing every 7th brick course typically. Extensive re-pointing has taken place using a hard sand-cement mortar. Localised instances of brick spalling are evident throughout the elevations generally. The brickwork elevations (see **Figure 5** and **6** below) will require detailed investigation to check on movement prior to implementation. Details of structural repair should be submitted to the Project Architect and structural engineer for their consideration. The Back Turner Street elevation (South-West) contains window openings serving ground and first floor levels and a bricked up door opening at ground floor level. Lintels are of a soldier coursed brick arch construction with painted stone cills to the windows externally. Some cracking is evident to the ground floor lintel which extends vertically up through the 1st floor window cill & beyond up to approximately eaves level.

iii) The now exposed, former inner-walls will require considerable repair and re-construction, having been subject to extensive alteration during the life of the building and damaged when 48-50 Thomas street was taken down (see **Figure 4** below).





Figure 5 Back Turner Street elevation (May 2016). **Figure 6** exposed former inner wall (2019).

iv) On adjustment and erection of the scaffolding, the brickwork will be surveyed for defects and a detailed schedule of repair will be finalised for submission to MCC for confirmation.

v) The strategy for repair for the brickwork is focused on addressing brick that is decaying but may not necessarily require repair or treatment. Only where brick is at risk of an increased rate of decay that intervention may be required.

vi) Redundant fixtures and fittings should be carefully removed but only when further damage to the brick can be avoided. Bricks which have been drilled for fixings and are still structurally stable, will have the holes filled using a lime putty or quicklime-based mortar with a brick dust to colour match the brick. Material and workmanship samples will be required as per section 5.2 above.

vii) Brickwork with light soiling staining does not require any cleaning or treatment.

viii) Brickwork that has suffered soiling/staining will be primarily cleaned using fresh clean water and a non-abrasive sponge, ensuring that the brick is not saturated in softly cleaning the surface.

ix) Where manual cleaning is unsuccessful in removing soiling / staining, the contractor will utilise steam cleaning as outlined in sections 5.5 above.

x) Bricks that are only slightly damaged at the arrisses do not require treatment.

xi) Bricks which are cracked but retain a sound face are to be pointed as per the mortar joint.

xii) Bricks which have been mechanically damaged but retain their integrity are to be retained.

xiii) Bricks that have an eroded surface are to be replaced as generally the loss of the fire skin will result in an increased rate of decay. Sample replacement bricks are to be presented as per section 5.2 above.

xiv) All new replacement bricks shall match the dimensions, colour and texture of the existing brickwork as closely as possible. Sound, matching bricks salvaged from another part of the project demolished area of the building, may be utilised as replacements where functionally practical, subject to approval of the Project Architect and/or conservation advisor.

xv) All new bricks are to be dated on one of their faces that is to be bedded into the wall.

xvi) The contractor will provide a record of all new bricks inserted into the façade during the project and will be included in the health and safety file. Details of successful cleaning methods, repair mortars and pointing mortars are also to be included.

xvii) Where movement has occurred, it should be established whether this movement is at risk of continuing, or it has ceased before any intervention is designed. Cracks and / or larger than normal mortar joints may simply require re-pointing.

5.7 Stone masonry repairs *(refers to Conditions: 3a and 4a).*

i) Stone masonry used in 7 Kelvin Street is largely confined to the sandstone cills, lintels and steps. Masonry that is decaying does not necessarily require repair or treatment. Only where a masonry unit is at risk of an increased rate of decay that intervention may be required.

ii) Redundant fixtures and fittings should be carefully removed but only when further damage to the stone can be avoided.

iii) Stone with light soiling staining does not require any cleaning or treatment.

iv) Masonry that has suffered soiling / staining will be primarily cleaned using fresh clean water and a non-abrasive sponge, ensuring that the masonry is not saturated in softly cleaning the surface.

v) Where manual cleaning is unsuccessful in removing soiling / staining, the contractor will utilise steam cleaning as outlined in sections 5.5 above.

vi) Masonry cills and lintels that have a friable surface are to be 'shelter coated' to consolidate the surface of the stone. A shelter coat should be a microfilm coat that does not alter the colour or appearance of the underlying stone. The aim is to consolidate the surface of the masonry unit without altering the appearance. Multiple thin coats are preferred over a single thick layer. An appropriate sample shall be produced for confirmation as per the general requirements in section 5.2 above.

vii) Masonry that has slightly eroded or has been damaged (including drill and fixing holes) that causes issues with the weathering or making the stone increasingly vulnerable to decay may be treated with a mortar / plastic repair. A mortar repair can be utilised to areas where water traps are present. The aim of this repair is to be a sacrificial element that prolongs the life of the stone unit. Therefore, the mortar has to be softer (have greater functional porosity) than the stone which it is repairing. The sandstone of 7 Kelvin Street requires a lime putty or quicklime-based mortar repair to be utilised. Mortar samples and workmanship samples should be undertaken as per section 5.2 above. The minimum amount of tooling should be undertaken to provide a good key and armatures should be using sparingly and be of stainless steel.

viii) Where heavy erosion or damage has occurred (30-60% of the stone eroded) a stone indent may be required to provide structural integrity of the area is maintained and to efficiently repair the area of masonry. New stone and workmanship samples shall be undertaken as per section 5.2 above. Stone indents are to be formed to fit into the area of erosion, minor tooling may be required to ensure a good key between the existing and new stone. Mortar to be as per section 5.8 below and subject to the approval of the Project Architect and/or conservation consultant.

ix) Where a masonry unit is beyond 60% eroded or damaged, replacement of the stone may be considered where this erosion impacts the structural integrity or weathering capability. Where the stone cill has lost its functional purpose it may be replace or altered to include a flashing strip. New stone and workmanship samples shall be undertaken as per section 5.2 above. New

stone should match the existing stone in regard to form and should be tooled to provide a key to the bedding mortar and to ensure that the stone naturally sheds water.

x) New stone is to be dated on one of the faces bedded into the wall.

xi) The contractor will provide a record of all new masonry and indent repairs inserted into the façade during the project and will be included in the health and safety file. Details of successful cleaning methods, repair mortars and pointing mortars are also to be included.

xii) Where movement has occurred, it should be established whether this movement is at risk of continuing or it has ceased before any intervention is designed. Cracks and / or larger than normal mortar joints may simply require re-pointing.

5.8 Window repairs *(refers to Conditions: 3a, 4a and 4d).*

i) The windows in 7 Kelvin Street are to be subject to a detailed survey to record the authenticity and condition of the surviving units. The authentic and re-useable sash and casement windows are to be repaired and re-instated on completion of the elevation repair works, as the window openings will be utilised to enable the support structure to be installed, avoiding damage to the brickwork. The restored windows will need to comply with the requirements of the Crime Impact Statement (section 4.2. and 4.3).

ii) The contractor is to clarify whether the whole window units or whether just the sashes are to be removed to enable the scaffolding and support structure to be installed.

iii) All salvaged windows and/or sashes are to be recorded and tagged prior to removal. The contractor will clarify where the windows are to be repaired and stored throughout the construction phase.

iv) Removal of the whole window unit or just the sashes should be undertaken carefully as not to cause damage to the timber or glazing. The contractor is to provide a written **Task Method Statement** for review by the Project Architect and/or conservation consultant to define the method of removal, where necessary to facilitate repairs.

v) Sample materials and repairs are to be provided as per section 5.2 above.

vi) The approach is to retain as much of the identified original timber and glazing as possible in repairing the windows and frames.

vii) All windows will generally require cleaning, overhauling and re-decoration. Cleaning should be with fresh clean water and a non-abrasive cloth. Where paint is flaking this is to be removed (heat guns are not to be utilised unless previously agreed) and the timber prepared prior to re-decoration. Re-decoration will be with an appropriate linseed oil based paint, or similar alternative approved by the Project Architect and/or conservation consultant.

viii) Where fixing holes are present these should be filled with an appropriate timber filler and re-decorated. Decayed timber should be removed back to sound timber and new spliced-section introduced to match the existing in species, form and moisture content. Generally new timber will be seasoned to prevent shrinkage.

ix) In the circumstance that a full section of timber window requires replacement, a section of the existing timber shall be taken to provide the basis of the form of the new timber unit.

x) New timber is to be well seasoned, cut to fit the form of the existing window and frame and finished to match the existing windows.

xi) New glazing in the elevations to 7 Kelvin Street will be single glazed and be of plate glass to match the existing and surviving glazing. Samples of new glazing will be presented as per section 5.2 above.

xii) Where possible repairs should be undertaken in situ to timber framed sash and casement window repairs where the windows can be salvaged (splicing in new mouldings where necessary) as well as repairing opening mechanisms to reinstate the windows to a fully operational standard and install draught-proofing in the form of brush-system to the inner-frame.

xiii) Great care should be taken to ensure that any new mouldings match the originals in every respect, to ensure a consistent external and internal appearance. Further treatment should include:

- Preservative treatment: Organic solvent as section Z12 and British Wood.
- Preserving and Damp-proofing Association Commodity Specification C5.
- Desired service life: 60 years.
- Moisture content on delivery: 16% +/- 3.
- Ironmongery/accessories: original repaired if possible, or to match.
- Fixing: as original.

xiv) All surviving, authentic panes of historic glass are to be retained, subject to the confirmation of the Project Architect and should be protected during the implementation of the works.

5.9 Doors repairs *(refers to Conditions: 3a and 4a).*

i) The surviving, authentic external doors (including the loading bay doors) are to be retained, subject to repairs where required and re-hung as fully operational. The external doors will be upgraded to comply with the Crime Impact Statement (section 4.1).

ii) Where the doors have been damaged, they will be repaired using timber splice repairs. The timber splice repair will utilise the same species of timber, carved to align and take the form of the rest of the door and finished to match the rest of the door.

iii) The hierarchy and function of the original spaces in 7 Kelvin Street was reflected in the style of the doors, panelled and moulded at the entrance with simple, plainer panelled examples on the loading bay floors and in the basement. Any replacement doors are to maintain this hierarchy.

iv) Doors, architraves, skirtings, dados and other timber trims that have been removed or replaced with inappropriate mouldings are to be replaced to match the original.

v) Fire Protection and separation. Because of the new use of the building, the Building Regulations will require that some doors will need to be fire-resisting where they are to be retained. The method used will need to adapt to the significant historic fabric where possible.

vi) Repairs to the existing doors should be undertaken having carefully removed the door, along with all ironmongery (including hinges) which are to be re-used. Refurbish ironmongery and re-fix to repaired door using slotted-head screws for re-fixing historic ironmongery.

vii) All plugging and piecing to be carried out with timber, matching species, direction of grain and profile.

viii) Nail and Screw Holes should be drilled out and plugged.

ix) Cut out damaged timber to a sound surface piece in a matching profile with splayed joints and matching grain. Where the damage is severe, cut back to a sound surface and fit a matching edging strip, tongued, glued and pinned.

x) Where it is necessary to upgrade doors to meet fire resistance requirements, follow the recommendations given by English Heritage in *"Timber panelled doors and fire"* and *"The use of intumescent products in historic buildings"* available from Historic England, 23 Savile Row, London W1X 1AB. The fire protection methods should be agreed with the Project Architect before starting any repair work on the doors.

5.10 Floorboards and ceilings *(refers to Conditions: 3a, 4a, 4b).*

i) The existing warehouse largely comprised open-boarded floors with some areas of boarded ceilings hung beneath (see **Figure 7** below). The consented development will require separation of the floors and a practical, but sympathetic, solution to implementing fire safety and sound insulation strategies which minimises the loss of historic fabric. The building is required to have adequate fire protection for occupant safety, as well as enabling the new use to be sustainably implemented.

ii) The timbers will be subject to detailed survey to determine the extent of potential salvage and reuse. The conservation implementation strategy will focus on the reuse of sound materials, following investigation works (which will be undertaken without causing adverse damage to the floorboards) providing a practical solution to ensure future loss and damage of the floorboards is avoided.



Figure 7. The underside of the first-floor on the Back Turner Street elevation (May 2016)

iii) The implementation design details will address the following.

Fire Safety:

- Provide 60 minutes fire protection for floor-to-floor compartmentation.
- Provide 60 minute fire protection for structural integrity of the building.
- Ensure any routes for passage of smoke are sealed.

- Comply with the building regulations and associated British standards for the buildings change of use to residential use.

Acoustics:

- Comply with the acoustic requirements under the current building regulations and British standards for change of use to residential use.

Heritage:

- Retaining original, significant boarded ceilings exposed so that they can be appreciated.
- Retaining as much of the significant historic structure and floorboards of the building as possible.
- Retaining significant historic decorative joinery.

iv) It is likely that lifting the floor-boards for inspection may cause some boards to split. A sample area of floorboards will be lifted to determine the potential for reuse, prior to lifting and relaying. The purpose will be to determine the proportion of new floorboards required.

v) All existing floorboards will be carefully recorded, before removing carefully and storing for re-use. Any damaged floorboards unsuitable for re-use will be disposed of off-site.

vi) The salvaged boards will be patch repaired and made good before being painted with a fire retardant paint to the specification of the Project Architect, such as an Envirograf product to give a 60min fire rating while providing an architectural finish where required to ceiling.

vii) All joists and beams (floor structure) will be painted with Envirograf products to give 60min fire rating.

viii) Joist hangers will be installed over timber joists to install acoustic board between joists before sealing and making good all penetrations between floors and reinstating the existing floorboards to areas of the least expected access requirements in the future. All boards to be fixed with new screw fixings to enable them to be easily lifted in the future.

ix) The objective is to retain the expression of the exposed beams and timber-panelled ceilings to be exposed and appreciated while upgrading for acoustic and fire protection. Lifting of floorboards enables the contractor to clear debris, seal holes and apply a fire protection coating to the building's structure. The installation of acoustic boards between floor joists enables the sound insulation to be installed without impacting floor levels. The methodology retains sound floor-boards and relays them to areas where they would least expect to be lifted again in the future. By fixing the floorboards with screw fixings this will enable them to be lifted in the future if required minimising the risk of damage.

5.11 Internal wall surfaces *(refers to Conditions: 3a and 4a).*

i) The internal walls of 7 Kelvin Street are mainly painted and lime-washed brick on the outward facing walls (see **Figure 8** below) and plastered on the interior. The conservation strategy for the refurbished building is to broadly retain this interior characteristic. However, the spaces will need to be made habitable with re-plastered, insulated and breathable walls which maintain the character of the interior (former warehouse) spaces and retain any sound, surviving lime-plaster, where possible.

ii) Particular attention will be given to ensure that the bull-nose bricks continue to be expressed around the loading bay. Modern masonry paints and/or flaking paint/limewash are to be removed.



Figure 8. The lime-washed interior walls of the Back Turner Street elevation (May 2016).

iii) Following necessary repairs to the cracks and movement joints on the brickwork elevations, the interior walls will be limewashed and lined for acoustic and thermal insulation in accordance with the Project Architect's details. The repairs will remove all loose, flaking finishes. Where paint/plaster residue is well adhered to the brick / masonry, this can be left in situ.

iv) The mortar joints of the internal side of the wall may require re-pointing which shall be undertaken in accordance with item 5.6. The aim of this exercise will be to consolidate the internal wall surface.

v) The internal wall surface will be left consolidated ready to take the new internal surface finish.

vi) The surviving plasterwork will require extensive patch repairs throughout, in particular to the inward facing walls. Plastered areas which are loose, soft, friable, badly cracked or affected by efflorescence are to be replaced, removing all hollow sounding areas of plaster.

vii) Lime plaster will be used for the interior using sharp, well-graded sand for lime:sand repairs. Allowing for sampling, testing of plaster to BS EN 13139. The Plaster mix will be determined to match the existing. Typically, it will comprise:

- Render Coat: 1:3 lime: sand (with hair if appropriate), 8-10 mm thick
- Floating Coat: 1:3 lime: sand (with less hair than render coat), 8-10 mm thick
- Setting Coat: 3:2 lime: sand (with no hair), 3mm thick

viii) Small patches and cracks in lime-plaster will be repaired to a firm edge, undercutting the edges to form a dovetail key, taking care not to cut through any lathing.

ix) The paint finish to the restored interiors is to be agreed with the Project Architect and will avoid the use of modern acrylic based paints. All paints will be vapour permeable, such as distempers and true lime paint products, where practical.

5.12 Roof coverings, roof lights and rainwater goods*(refers to conditions 3a, 4a and 4f).*

i) The conservation strategy is to restore as far as possible the original, simple form of the original welsh slate roof to the former warehouse at 7 Kevin Street. The inner slopes of the building have been re-clad using a concrete tile (see **Figure 9** below). The repair works will reinstate the natural slate roof covering across the building, with original, salvaged slates reused, following repair and insulation of roof to improve the thermal performance of the building.

ii) The surviving slate tiles will be carefully lifted and set aside for re-use and to allow for inspection and repair of roof timers (rotted ends). The concrete tiles will be removed and disposed of off-site. Allowance will be made for replacement of at least 25% of the original slates, using a careful match to the existing slates.



Figure 9. Aerial view of roof coverings 2018,

iii) The extent of defective timber will be carefully determined to avoid cutting away more historic timber than strictly necessary. The repairs strategy will generally follow the guidance in the SPAB publication, "*The Repair of Timber Frames and Roofs"* Technical Pamphlet 12 for the repair of structural timbers, obtainable from Society for the Protection of Ancient Buildings (SPAB) 37 Spital Square London E1 6DY Tel: 0171 377 1644

iv) The simple form of the roof means that slates will be laid without having to be cut. However, where this is necessary an appropriate tool must be used to give neat, close fitting joints and straight, clean edges. The re-laid slates will fixed securely to neat, true lines. New lead flashings will be installed and neatly dressed down to meet the Lead Sheet Association guidance.

v) Following the lifting of the slates the condition of the concealed timbers, including lintels, wall plates, bressummers and bonding timbers will be investigated for damage and rot to determine the extent of any repairs.

vi) The minimum amount of historic timber must be cut away in making repairs. All replacement timbers will be subject to the Project Architect and Structural Engineer's approval. The specific repair method for the principal structural timbers will be agreed with the Project Architect following the timber survey, before commencing any cutting away of timber.

vii) Epoxy resin will not be used in timber repairs except with the written agreement of the Project Architect and/or conservation advisor.

viii) The roof lights will be **conservation roof lights**, fitted flush into the roof-slopes a per the JMA drawing no: 05013_B1_08_6313, dated 23.04.2020 (see also **Appendix 3** below).

ix) The **rainwater goods** have all been replaced with plastic and so will be entirely replaced with purpose designed cast-iron hopper-heads, gutters and down-pipes. Details of the new cast iron pipework and fixing methods are to be submitted to the project architect and conservation consultant for their consideration and approval.

5.13 Structural timber repairs *(refers to condition 3a and 4b).*

i) The existing structural timbers, including roof beams, purlins and trusses are built into the solid external walls with timber spreaders provided in the walls at the truss bearing points (see images in **Figure 10** below). The conservation strategy is to retain these key structural features and express them within the residential spaces as far as practical.

ii) The majority of the roof timbers have been affected by water ingress (see **Figure 10** below) and exhibit signs of severe decay in places. Further specialist timber & damp surveys will be undertaken by a CARE registered surveyor in order to define the extent of decay, including at timber bearing points into the external walls in particular which may be obscured.



Figure 10 Details of the exposed roof timbers (May 2016). Further detailed surveys are now required.

iii) Following the detailed timber survey, the extent of defective timber will be carefully determined to avoid cutting away more historic timber than strictly necessary. The repair strategy will generally follow the guidance in the SPAB publication, *"The Repair of Timber Frames and Roofs"* Technical Pamphlet 12 for the repair of structural timbers, obtainable from Society for the Protection of Ancient Buildings (SPAB) 37 Spital Square London E1 6DY Tel: 0171 377 1644.

iv) The adopted structural repair strategy will be based on the requirement that the complete removal and replacement of a failed timber member should be a last resort. Where the structure is concealed (as in a wall or roof space), the aim will be insert a new member beside the old one, or to patch the old member with timber or strengthened by attaching steel bracing.

v) Where members are required to be patched with timber, testing and confirmation of the strength of the joint will be critical. A traditional scarf joint will resist most stresses in rafters, posts or beams, while a simpler halved joint can be used in wall plates. Where necessary the bolts in the joints will be concealed from view behind timber plugs. Steel reinforcements will also be used where required to repair the timber members, subject to the details of the timber survey by a CARE registered engineer. These will consist simply of steel plates either side of the member (or top and bottom), bolted through the timber. Details will be submitted to the Project Architect and/or conservation advisor

5.14 Timber linings to roof *(refers to condition 3a and 4i).*

i) The existing 'timber linings' comprise the boarded internal soffit boards which form the underside of part of the ceiling. The conservation strategy is to retain this industrial characteristic.

ii) This will require a detailed survey of the condition and form of the surviving linings to determine the extent of potential salvage and reuse. Each board will be numbered and removed for inspection and necessary repair prior to reinstatement in accordance with the roof insulation and ventilation strategy. Sound boards will be stripped of paint, painted with an agreed intumescent paint and replaced to form part of the ceiling. Rotted or severely damaged boards will be disposed of off-site with new boards to match..

5.15 M&E and Building services *(refers to conditions 3a and 4j and 4k).*

i) The dilapidated and industrial character of 7 Kelvin Street will enable the details of the mechanical and electrical services to be integrated into the interior without compromising the character of the interior spaces. The existing services are limited/negligible and so the new services will be adapted to the new partition walls in accordance with the detailed plans prepared by the M&E Engineer.

ii) The conservation strategy is to ensure that the internal and external walls remain visually uncluttered and therefore the necessary ducting within rooms and conduits will be located discreetly and contained by the new structures where possible.

iii) The M&E details will locate all necessary building services as defined by condition 4k to minimise the loss of damage of any historic fabric and ensuring that penetrations and accretions to the elevations (including for electrics, plumbing, telecommunications, alarms, door controls etc) are minimised. Details of all routes are to be agreed prior to commencement.

6 SUMMARY & CONCLUSION

6.1 A framework to meet the required conservation-led standards.

i) This Conservation Implementation Strategy (CIS) is submitted to secure discharge of Condition 3(a) of the consented scheme referenced: 113475/FO/2016 and 113476/LO/2016 and frame the parameters for the detailed designs and Contractors' specifications and schedules of work to deliver the consented scheme (see Appendices 2 and 3 below).

ii) Reference should be made to the Project Architects' detailed drawings and the programme for the submission of samples and specifications which describes the responsibility and programme for delivery of the information necessary to discharge Condition 5 of the Planning and Listed Building Consent.

iii) The stability of grade-II listed 7 Kelvin Street has been secured by the erection of support scaffolding, although this will need to be altered to improve access to undertake further condition surveys, prior to submission of final details in accordance with this Conservation Implementation Strategy.

iv) Approval to clear debris resulting from the partial taking down of 48-50 Thomas Street was confirmed by Manchester City Council in May 2018. The implementation of these **essential enabling works** are part of the commencement of the development which aims to secure safe access to take the necessary investigation works and prepare the Contractors' Specification and Schedules of work.

v) This **Conservation Implementation Strategy** (CIS) is intended to guide the delivery of the retained façade as a 'best practice' conservation project focused in 7 Kelvin Street. It is designed to directly address Condition 3 of the consented scheme, within the limitations resulting from the difficulties of access, but is intended to further progress the site works.

vi) The CIS, therefore, outlines robust conservation strategies for the treatment of each key element of the surviving building fabric, identifying the key conservation concerns in each instance and providing the parameters for implementation. It also confirms that the conservation-led repairs to the external and internal fabric of the building will be carried out with suitable sensitivity and in accordance with the consented development and best practice.

vii) The CIS outlines conservation methods as guidance for the architect / contractor to enable them to provide detailed repair schedules, specifications and **Task Method Statements**, ensuring that the surviving fabric of the building will retain its authenticity as the key historic fabric component. It thus provides a quality control framework for the repairs for both Planning authorisation and contract stage design purposes in order to facilitate its future maintenance, cleaning and repair.

REFERENCES.

The following documents are referred to in the Conservation Implementation Strategy and should be referred to when preparing detailed surveys and Task Method Statements in addition to the drawing and documents listed in the Planning and Listed Building Consents (see **Appendix 1** below).

1. Renaissance Ltd. (03.06.2016). *7 Kelvin St & 48-50 Thomas St, Manchester Structural Report*
2. Renaissance Ltd. (July 2018). *7 Kelvin Street. EXTERNAL ELEVATIONS VISUAL SURVEY PHOTO REPORT. Ref: 1601-09.*
3. BS 5973: 1990 *"Code of Practice for access and Working Scaffold and special scaffold staircases in Steel"*
4. Society for the Protection of Ancient Buildings (SPAB). *"The Repair of Timber Frames and Roofs"* Technical Pamphlet 12 for the repair of structural timbers, obtainable from SPAB 37 Spital Square London E1 6DY Tel: 0171 377 1644.
5. Historic England. (2013). *Practical Building Conservation*.
6. Historic England (2012). *Practical Building Conservation: Mortars, Renders and Plasters*
7. Historic England (2012). *Practical Building Conservation: Timber.*
8. Historic England (2015). *Practical Building Conservation: Earth, Brick and Terracotta.*

APPENDICES.

1. Planning and Listed Building Consents.

The following are the current Planning and Listed Building Consent which are referred to in this Conservation Implementation Strategy.

MANCHESTER CITY COUNCIL

Planning (Listed Building & Conservation Area) Act 1990 (as amended)

Listed Building Consent

Applicant	Agent (if used)
Real Estate Development Partnership Ltd C/o Agent	Mr Nick Fillingham Indigo Planning St James Tower 7 Charlotte Street Manchester M1 4DZ

Part 1 – Particulars of the application/development

Proposal: LISTED BUILDING CONSENT External and alterations and repair and change of use of Grade II listed 7 Kelvin Street to 3 no residential apartments (linked to an adjacent 4/5 storey building following the demolition of numbers 42 to 48 Thomas Street) above ground floor and basement shop / restaurant (Class A1 or A3) use;

Location: 42-50 Thomas Street And 7 Kelvin Street, Manchester, M4 1ER

Date of application: 18 May 2017

Application number: 113476/LO/2016

Part 2 – Particulars of decision

Manchester City Council gives notice that the development referred to in Part 1 has been **granted** in accordance with the application and plans submitted subject to the condition(s) listed below (if any).

Article 35 Declaration

Officers have worked with the applicant in a positive and pro-active manner to seek solutions to problems arising in relation to dealing with the planning application. This has included on going discussions about the form and design of the developments and pre application advice about the information required to be submitted to support the application.

Condition(s) attached to this decision

1) The development must be begun not later than the expiration of three years beginning with the date of this permission.

Reason - Required to be imposed pursuant to Section 18 of the Planning (Listed Buildings and Conservation Areas) Act 1990.

2) The development hereby approved shall be carried out in accordance with the following drawings and documents:

(a) Site plans 05013 B1 00 0000 and 00 2200 Rev A;

(b) Dwgs 05013 B1 02 2199 Rev A, 2200 Rev A, 2201 Rev A, 2203 Rev A, 2204 Rev A, 2205 Rev A and 2206 Rev A;

(c) Dwgs 05013 B1 04 2200 Rev A and 2201 Rev A;

(d) Dwgs 05013 B1 05 2201 Rev A, 2202 Rev A, 2203 Rev A and 2204 Rev A;

(e) Dwgs 05013 B1 10 4200 Rev A, 42001 Rev A, 4210 Rev A, 4300 Rev A, 4301 Rev A, 4310 Rev A, 4401 Rev A, 4400 Rev A and 4401 Rev A

(f) Dwgs 05013 B1 03 2200 , 05013 B1 12 3204, 3205, 3207, 3206, 3208 and 3209;

(g) Waste Management Strategy as detailed in Section 8.1 of 5 Plus's Design and Access Statement May 2017 and Indigo Planning's Statement Appendix 3 May 2017 ;

(h)) Indigo Planning's Statement Appendix 2 May 2017 details of how the retail / restaurant use would be serviced (Dwg 5013_B1_02_8001);

(i) Sections 3, 4 and 5 of the Crime Impact Assessment Version B dated 27-07-16;

(j) Recommendations in section 8 and 9 of Hann Tucker Associates Noise Impact Assessment 23169/NIA1 dated 09-08-17 subject prior to occupation of any of the ground floor and basement units of a post completion report to verify that all of the recommended mitigation measures have been installed being submitted and agreed in writing by the City Council as local planning authority and any non compliance suitably mitigated in accordance with an agreed scheme prior to occupation: and

(k) Recommendations in Appendix 8 Indigo Planning's Statement Appendix 3 May 2017 - Response from Stephen Levrant Heritage Architecture.

Reason - To ensure that the development is carried out in accordance with the approved plans and pursuant to Core Strategy SP 1, CC3, H1, H8, CC5 , CC6 , CC7, CC9 , CC10, T1, T2 , EN1, EN2 , EN3 , EN6 , EN 8, EN9, EN11, EN14, EN15, EN 16 , EN17, EN18, EN19, DM 1 and PA1 saved Unitary Development Plan polices DC19.1 , DC20 and DC26.1.

3) Notwithstanding the details as set out in condition 2 above no development shall commence unless and until final details (including where appropriate specification and method statement) of the following have been submitted to and approved in writing by the City Council as Local Planning Authority:

(a) Method statements for implementing the approved development to ensure careful conservation led standards and to ensure that no further damage or collapse of the listed building occurs;

(b) Following the carrying out of further condition reports details of proposed structural works including any works to the facade to Back Turner Street (with the assumption that there will be minimal intervention, that as much fabric as possible is retained and that

means of repair and stabilisation that do not require demolition are adopted (as far as possible);

All of the above shall be implemented in accordance with the approved details

Reason - In the interests of visual amenity and because the proposed works affect a building which is included in the Statutory List of Buildings of Special Architectural or Historic Interest and careful attention to building work is required to protect the character and appearance of this building and to ensure consistency in accordance with policies CC9 and EN3 of the Core Strategy and saved policy DC19.1 of the Unitary Development Plan for the City of Manchester.

4) Notwithstanding the details as set out in condition 2 above no development shall commence in relation to the following items within the listed building unless and until final details (including where appropriate specification and method statement) of the following have been submitted to and approved in writing by the City Council as Local Planning Authority:

(a) Detailed schedule of repairs and specification for all of the repair works to the internal and external fabric (including repointing, works to brickwork and works to roof) to include and a method statement for those works;

(b) Following further survey work, details of repair works to timbers and damproofing (with the assumption that there will be minimal intervention and as much original timber as possible is retained);

(c) A detailed audit of all internal and external features of historic and industrial interest that and details of how these will be reused, refurbished or reinstated;

(d) Works to the existing windows (with the assumption that all existing timber windows are retained as far as possible);

(e) Details of works required to acoustically insulate the apartments to include retention of exposed timbers to underside of floors;

(f) Details of new rooflights;

(g) Detailed method statement for brick cleaning (internally and externally);

(h)Details of the proposed roof insulation;

(i) Detailed proposals of works to retain timber linings;

(j) Details of M&E including a Strategy setting out design parameters detailing locations for ducting within rooms and details of conduits on exposed walls;

(k)A Strategy for the location and detailing of all building services including electrics and plumbing, telecommunications, fire/security alarms, door intercom from the main entrance to each apartment, communal tv/satellite connections and aerials CCTV cameras (and associated cabling and equipment) and internal mail boxes; and

(l) A shadow gap detail which would provide a clear expression of new and original building fabric;

All of the above shall be implemented in accordance with the approved details before the development is first occupied

Reason - In the interests of visual amenity and because the proposed works affect a building which is included in the Statutory List of Buildings of Special Architectural or Historic Interest and careful attention to building work is required to protect the character and appearance of this building and to ensure consistency in accordance with policies CC9 and EN3 of the Core Strategy and saved policy DC19.1 of the Unitary Development Plan for the City of Manchester.

5) Notwithstanding the details submitted with the application, prior to the commencement of development the following shall be submitted for approval in writing by the City Council, as Local Planning Authority:

A programme for the issue of samples and specifications of all material to be used on all external elevations of the development and the adjacent pavement. The programme shall include timings for the submission of samples and specifications of all materials to be used on all external elevations of the development to include jointing and fixing details, details of the drips to be used to prevent staining and details of the glazing and a strategy for quality control management; and

All samples and specifications shall then be submitted and approved in writing by the City Council as local planning authority in accordance with the programme as agreed above.

Reason - To ensure that the appearance of the development is acceptable to the City Council as local planning authority in the interests of the visual amenity of the area within which the site is located, as specified in policies SP1 and DM1 of the Core Strategy.

6) No development shall take place until the applicant or their agents or successors in title has secured the implementation of a programme of historic building survey. The survey is to be undertaken in accordance with a Written Scheme of Investigation (WSI) submitted to and approved in writing by Manchester Planning Authority. The WSI shall cover the following:

1. A phased programme and methodology of investigation and recording to include:
- historic building survey (Level 3)
- a watching brief on the soft-strip (where necessary)
2. A programme for post investigation assessment to include:
- analysis of the site investigation records and finds
- production of a final report on the significance of the heritage interest represented.
3. Dissemination of the results commensurate with their significance.
4. Provision for archive deposition of the report and records of the site investigation.
5. Nomination of a competent person or persons/ organisation to undertake the works set out within the approved WSI.

Reason: In accordance with NPPF Section 12, Paragraph 141 - To record and advance understanding of the heritage interest impacted on by the development and to make information about the archaeological heritage interest publicly accessible.GMAAS will monitor the implementation of the archaeological works on behalf of Manchester Planning Authority

7) Before development commences, a full photographic record of the site and the building (internally and externally) including all areas where physical changes are proposed, shall be submitted to and approved in writing by the City Council as local planning authority.

Reason - To provide a record of any archaeological remains and of the listed building's appearance and condition before works commence, in accordance with saved policy DC20 of the Unitary Development Plan for the City of Manchester and policies SP1, EN3 and DM1 of the Core Strategy.

8) Before erection of any external scaffolding to the listed building commences a methodology and specification for that scaffolding including its location, means of affixing to the building, location of any associated fixings to the building, details of how the building fabric would be protected from potential damage as a result of the erection of the scaffolding and details of making good to the building fabric following removal shall be submitted to and approved in writing by the City Council as local planning authority. No development shall commence unless an until the above details have been agreed.

Reason - In the interests of visual amenity and because the proposed works affect a building which is included in the Statutory List of Buildings of Special Architectural or Historic Interest and careful attention to building work is required to protect the character and appearance of this building and to ensure consistency in accordance with policies CC9 and EN3 of the Core Strategy and saved policy DC19.1 of the Unitary Development Plan for the City of Manch

Informatives

Building Regulations 2010
This permission does not grant approval under Building Regulations.

Street Naming & Numbering Requirements
Manchester City Council is responsible for allocating street naming and numbering within Manchester for new developments or property conversions. Individuals or businesses are not permitted to allocate their own property numbers, building or street names.

If your development includes the creation of new dwellings (either new build or conversion of existing buildings), creation of new commercial properties or the subdivision of existing properties you must ensure that you request new or changes to addresses through us so they can be officially allocated and registered in accordance with the Public Health Act 1925 Sections 17-19 & Greater Manchester Act 1981 Section 22.

Failure to do this may result in difficulties for the developer/occupier when requiring services such as connections to utilities, phone lines and postal services and may delay your development.

You can apply online at the following address:
http://www.manchester.gov.uk/info/100011/roads_parking_and_transport/1988/naming_and_numbering_of_houses_buildings_streets_and_roads/2

Mining Information

The proposed development lies within an area which could be subject to current coal mining or hazards resulting from past coal mining. Please read the Standing Advice from the Coal Authority in Appendix A.

Date: 29 August 2017

Signed: 

Julie Roscoe
Head of Planning, Building Control & Licensing

Manchester City Council, P O Box 532, Town Hall, Manchester M60 2LA

MANCHESTER CITY COUNCIL

Town & Country Planning Act 1990 (as amended)

Planning Permission

Applicant	Agent (if used)
Real Estate Development Partnership Ltd C/o Agent	Mr Nick Fillingham Indigo Planning St James Tower 7 Charlotte Street Manchester M1 4DZ

Part 1 – Particulars of the application/development

Proposal: External alterations and repair and change of use of the upper floors of Grade II listed 7 Kelvin Street and the erection of a linked 4/5 storey building following the demolition of numbers 42 to 48 Thomas Street to provide 20 no dwellings (Class C3) (8 x 1 bed and 12 x 2 bed) with ground floor and basement shop / restaurant (Class A1 or A3) use; and storage space for 20 cycles.

Location: 42-50 Thomas Street And 7 Kelvin Street, Manchester, M4 1ER

Date of application: 18 May 2017

Application number: 113475/FO/2016

Part 2 – Particulars of decision

Manchester City Council gives notice that the development referred to in Part 1 has been **Approved** in accordance with the application and plans submitted subject to the condition(s) listed below (if any).

Article 35 Declaration

Officers have worked with the applicant in a positive and pro-active manner to seek solutions to problems arising in relation to dealing with the planning application. This has included on going discussions about the form and design of the developments and pre application advice about the information required to be submitted to support the application.

Condition(s) attached to this decision

1) The development must be begun not later than the expiration of three years beginning with the date of this permission.

Reason - Required to be imposed pursuant to Section 91 of the Town and Country Planning Act 1990.

2) The development hereby approved shall be carried out in accordance with the following drawings and documents:

(a) Site plans 05013 B1 00 0000 and 00 2200 Rev A;

(b) Dwgs 05013 B1 02 2199 Rev A, 2200 Rev A, 2201 Rev A, 2203 Rev A, 2204 Rev A, 2205 Rev A and 2206 Rev A;

(c) Dwgs 05013 B1 04 2200 Rev A and 2201 Rev A;

(d) Dwgs 05013 B1 05 2201 Rev A, 2202 Rev A, 2203 Rev A and 2204 Rev A;

(e) Dwgs 05013 B1 10 4200 Rev A, 42001 Rev A, 4210 Rev A, 4300 Rev A, 4301 Rev A, 4310 Rev A, 4401 Rev A, 4400 Rev A and 4401 Rev A

(f) Dwgs 05013 B1 03 2200 , 05013 B1 12 3204, 3205, 3207, 3206, 3208 and 3209;

(g) Waste Management Strategy as detailed in Section 8.1 of 5 Plus's Design and Access Statement May 2017 and Indigo Planning's Statement Appendix 3 May 2017 ;

(h)) Indigo Planning's Statement Appendix 2 May 2017 details of how the retail / restaurant use would be serviced (Dwg 5013_B1_02_8001);

(i) Sections 3, 4 and 5 of the Crime Impact Assessment Version B dated 27-07-16;

(j) Recommendations in section 8 and 9 of Hann Tucker Associates Noise Impact Assessment 23169/NIA1 dated 09-08-17 subject prior to occupation of any of the ground floor and basement units of a post completion report to verify that all of the recommended mitigation measures have been installed being submitted and agreed in writing by the City Council as local planning authority and any non compliance suitably mitigated in accordance with an agreed scheme prior to occupation: and

(k) Recommendations in Appendix 8 Indigo Planning's Statement Appendix 3 May 2017 - Response from Stephen Levrant Heritage Architecture.

Reason - To ensure that the development is carried out in accordance with the approved plans and pursuant to Core Strategy SP 1, CC3, H1, H8, CC5 , CC6 , CC7, CC9 , CC10, T1, T2 , EN1, EN2 , EN3 , EN6 , EN 8, EN9, EN11, EN14, EN15, EN 16 , EN17, EN18, EN19, DM 1 and PA1 saved Unitary Development Plan polices DC19.1 , DC20 and DC26.1.

3) Notwithstanding the details as set out in condition 2 above no development shall commence unless and until final details (including where appropriate specification and method statement) of the following have been submitted to and approved in writing by the City Council as Local Planning Authority:

(a) Method statements for implementing the approved development to ensure careful conservation led standards and to ensure that no further damage or collapse of the listed building occurs;

(b) Following the carrying out of further condition reports details of proposed structural works including any works to the facade to Back Turner Street (with the assumption that there will be minimal intervention, that as much fabric as possible is retained and that

means of repair and stabilisation that do not require demolition are adopted (as far as possible);

All of the above shall be implemented in accordance with the approved details

Reason - In the interests of visual amenity and because the proposed works affect a building which is included in the Statutory List of Buildings of Special Architectural or Historic Interest and careful attention to building work is required to protect the character and appearance of this building and to ensure consistency in accordance with policies CC9 and EN3 of the Core Strategy and saved policy DC19.1 of the Unitary Development Plan for the City of Manchester.

4) Notwithstanding the details as set out in condition 2 above no development shall commence in relation to the following items within the listed building unless and until final details (including where appropriate specification and method statement) of the following have been submitted to and approved in writing by the City Council as Local Planning Authority:

(a) Detailed schedule of repairs and specification for all of the repair works to the internal and external fabric (including repointing, works to brickwork and works to roof) to include and a method statement for those works;

(b) Following further survey work, details of repair works to timbers and damproofing (with the assumption that there will be minimal intervention and as much original timber as possible is retained);

(c) A detailed audit of all internal and external features of historic and industrial interest that and details of how these will be reused, refurbished or reinstated;

(d) Works to the existing windows (with the assumption that all existing timber windows are retained as far as possible);

(e) Details of works required to acoustically insulate the apartments to include retention of exposed timbers to underside of floors;

(f) Details of new rooflights;

(g) Detailed method statement for brick cleaning (internally and externally);

(h)Details of the proposed roof insulation;

(i) Detailed proposals of works to retain timber linings;

(j) Details of M&E including a Strategy setting out design parameters detailing locations for ducting within rooms and details of conduits on exposed walls;

(k)A Strategy for the location and detailing of all building services including electrics and plumbing, telecommunications, fire/security alarms, door intercom from the main entrance to each apartment, communal tv/satellite connections and aerials CCTV cameras (and associated cabling and equipment) and internal mail boxes; and

(l) A shadow gap detail which would provide a clear expression of new and original building fabric;

All of the above shall be implemented in accordance with the approved details before the development is first occupied

Reason - In the interests of visual amenity and because the proposed works affect a building which is included in the Statutory List of Buildings of Special Architectural or Historic Interest and careful attention to building work is required to protect the character and appearance of this building and to ensure consistency in accordance with policies CC9 and EN3 of the Core Strategy and saved policy DC19.1 of the Unitary Development Plan for the City of Manchester.

5) Notwithstanding the details submitted with the application, prior to the commencement of development the following shall be submitted for approval in writing by the City Council, as Local Planning Authority:

A programme for the issue of samples and specifications of all material to be used on all external elevations of the development and the adjacent pavement. The programme shall include timings for the submission of samples and specifications of all materials to be used on all external elevations of the development to include jointing and fixing details, details of the drips to be used to prevent staining and details of the glazing and a strategy for quality control management; and

All samples and specifications shall then be submitted and approved in writing by the City Council as local planning authority in accordance with the programme as agreed above.

Reason - To ensure that the appearance of the development is acceptable to the City Council as local planning authority in the interests of the visual amenity of the area within which the site is located, as specified in policies SP1 and DM1 of the Core Strategy.

6) Prior to the commencement of the development a detailed construction management plan outlining working practices during development shall be submitted to and approved in writing by the local planning authority, which for the avoidance of doubt should include;

*Display of an emergency contact number;
*Details of Wheel Washing;
*Dust suppression measures;
*Compound locations where relevant;
*Location, removal and recycling of waste;
*Routing strategy and swept path analysis;
*Parking of construction vehicles and staff;
*Sheeting over of construction vehicles;

Development shall be carried out in accordance with the approved construction management plan.

Reason - To safeguard the amenities of nearby residents and highway safety, pursuant to policies SP1, EN9, EN19 and DM1 of the Manchester Core Strategy (July 2012).

7) Prior to commencement of development a scheme for dealing with the discharge of surface water and which demonstrates that foul and surface water will be drained on a

separate system, shall be submitted to and approved in writing by the City Council as Local Planning Authority.

Reason - Pursuant to National Planning Policy Framework policies (PPS 1 (22) and PPS 25 (F8))

8) No development shall take place until the applicant or their agents or successors in title has secured the implementation of a programme of historic building survey. The survey is to be undertaken in accordance with a Written Scheme of Investigation (WSI) submitted to and approved in writing by Manchester Planning Authority. The WSI shall cover the following:

1. A phased programme and methodology of investigation and recording to include:
- historic building survey (Level 3)
- a watching brief on the soft-strip (where necessary)
2. A programme for post investigation assessment to include:
- analysis of the site investigation records and finds
- production of a final report on the significance of the heritage interest represented.
3. Dissemination of the results commensurate with their significance.
4. Provision for archive deposition of the report and records of the site investigation.
5. Nomination of a competent person or persons/ organisation to undertake the works set out within the approved WSI.

Reason: In accordance with NPPF Section 12, Paragraph 141 - To record and advance understanding of the heritage interest impacted on by the development and to make information about the archaeological heritage interest publicly accessible.GMAAS will monitor the implementation of the archaeological works on behalf of Manchester Planning Authority

9) Prior to development commencing a local labour agreement, relating to the construction phase of development, shall be submitted to and agreed in writing with the City Council as local planning authority. The approved scheme shall be in place prior to the commencement of the development, and shall be kept in place thereafter.

Reason - To safeguard local employment opportunities, pursuant to pursuant to policies EC1 of the Core Strategy for Manchester.

10) a) Before the development hereby approved commences, a report (the Preliminary Risk Assessment) to identify and evaluate all potential sources and impacts of any ground contamination, groundwater contamination and/or ground gas relevant to the site shall be submitted to and approved in writing by the City Council as local planning authority. The Preliminary Risk Assessment shall conform to City Council's current guidance document (Planning Guidance in Relation to Ground Contamination).

(b) In the event of the Preliminary Risk Assessment identifying risks which in the written opinion of the Local Planning Authority require further investigation, the development shall not commence until a scheme for the investigation of the site and the identification of remediation measures (the Site Investigation Proposal) has been submitted to and approved in writing by the City Council as local planning authority. The measures for investigating the site identified in the Site Investigation Proposal shall be carried out, before the development commences and a report prepared outlining what measures, if any, are required to remediate the land (the Site Investigation Report and/or Remediation Strategy) which shall be submitted to and approved in writing by the City Council as local planning authority.

c) When the development commences, the development shall be carried out in accordance with the previously agreed Remediation Strategy and a Completion/Verification Report shall be submitted to and approved in writing by the City Council as local planning authority.

d) In the event that ground contamination, groundwater contamination and/or ground gas, not previously identified, are found to be present on the site at any time before the development is occupied, then development shall cease and/or the development shall not be occupied until, a report outlining what measures, if any, are required to remediate the land (the Revised Remediation Strategy) is submitted to and approved in writing by the City Council as local planning authority and the development shall be carried out in accordance with the Revised Remediation Strategy, which shall take precedence over any Remediation Strategy or earlier Revised Remediation Strategy.

Reason - To ensure that the presence of or the potential for any contaminated land and/or groundwater is detected and appropriate remedial action is taken in the interests of public safety, pursuant to Section 11 of the National Planning Policy Framework and policy EN18 of the Core Strategy.

11) Prior to occupation of (a) the residential accommodation and (b) each ground floor / basement unit, a scheme for the acoustic insulation of any externally mounted ancillary equipment to ensure that it achieves a background noise level of 5dB below the existing background (La90) in each octave band at the nearest noise sensitive location shall be submitted to and approved in writing by the City Council as local planning authority in order to secure a reduction in the level of noise emanating from the equipment. The approved scheme shall be implemented prior to occupancy and shall remain operational thereafter.

Reason - To safeguard the amenities of the occupiers of nearby residential accommodation, pursuant to policies SP1 and DM1 of the Core Strategy

12) Before the development commences a scheme for acoustically insulating and mechanically ventilating the residential accommodation against noise from surrounding roads shall be submitted to and approved in writing by the City Council as local planning authority.

The approved noise insulation scheme shall be completed before any of the dwelling units are occupied. Prior to occupation a post completion report to verify that all of the recommended mitigation measures have been installed in the residential accommodation shall be submitted and agreed in writing by the City Council as local planning authority and any non compliance suitably mitigated in accordance with an agreed scheme prior to occupation.

Reason - To secure a reduction in noise in order to protect future residents from noise nuisance, pursuant to policies SP1, H1 and DM1 of the Core Strategy.

13) No development shall commence until details of the measures to be incorporated into the development (or phase thereof) to demonstrate how secure by design accreditation will be achieved have been submitted to and approved in writing by the City Council as local planning authority. The development shall only be carried out in accordance with these approved details. The development hereby approved shall not be occupied or used until the Council as local planning authority has acknowledged in writing that it has received written confirmation of a secured by design accreditation.

Reason - To reduce the risk of crime pursuant to policies SP1 and DM1 of the Core Strategy and to reflect the guidance contained in the National Planning Policy Framework.

14) Following commencement of construction of the hereby approved development, any interference complaint received by the Local Planning Authority shall be investigated to identify whether the reported television interference is caused by the Development hereby permitted. The Local Planning Authority will inform the developer of the television interference complaint received. Once notified, the developer shall instruct a suitably qualified person to investigate the interference complaint within 6 weeks and notify the Local Planning Authority of the results and the proposed mitigation solution. If the interference is deemed to have been caused by the Development, hereby permitted mitigation will be installed as soon as reasonably practicable but no later than 3 months from submission of the initial investigation to the Local Planning Authority. Television interference complaints are limited to 12 months from the completion of the Development hereby permitted.

Reason - To ensure terrestrial television services are maintained In the interest of residential amenity, as specified in Core Strategy Polices DM1 and SP1

15) The apartments hereby approved shall be used only as private dwellings (which description shall not include serviced apartments/apart hotels or similar uses where sleeping accommodation (with or without other services) is provided by way of trade for money or money's worth and occupied by the same person for less than ninety consecutive nights) and for no other purpose (including any other purpose in Class C3 of the Schedule to the Town and Country Planning (Use Classes) Order 1995, or any provision equivalent to that Class in any statutory instrument revoking and re-enacting that Order with or without modification).

Reason: To safeguard the amenities of the neighbourhood by ensuring that other uses which could cause a loss of amenity such as serviced apartments/apart hotels do not commence without prior approval pursuant to Core Strategy policies SP1 and DM1 and to ensure the permanent retention of the accommodation for normal residential purposes.

16) Before the development hereby approved is first occupied a Travel Plan shall be submitted to and agreed in writing by the City Council as Local Planning Authority. In this condition a Travel Plan means a document which includes:

i) the measures proposed to be taken to reduce dependency on the private car by those [attending or] employed in the development
ii) a commitment to surveying the travel patterns of staff during the first three months of use of the development and thereafter from time to time
iii) mechanisms for the implementation of the measures to reduce dependency on the private car
iv) measures for the delivery of specified travel plan services
v) measures to monitor and review the effectiveness of the Travel Plan in achieving the objective of reducing dependency on the private car

Within six months of the first use of the development, a revised Travel Plan which takes into account the information about travel patterns gathered pursuant to item (ii) above shall be submitted to and approved in writing by the City Council as local planning authority. Any Travel Plan which has been approved by the City Council as local

planning authority shall be implemented in full at all times when the development hereby approved is in use.

Reason - To assist promoting the use of sustainable forms of travel to the school, pursuant to policies SP1, T2 and DM1 of the Core Strategy and the Guide to Development in Manchester SPD (2007).

17) The development hereby approved shall be carried out in accordance with Recommendations in Watt Energy & Consulting Engineers Ltd's RED PARTNERSHIP Energy & Sustainability Assessment Residential Development, 42-50 Thomas Street dated 20-06-16 . A post construction review certificate/statement shall be submitted for approval, within a timeframe that has been previously agreed in writing by the City Council as local planning authority.

Reason - In order to minimise the environmental impact of the development, pursuant to policies SP1, DM1, EN4 and EN8 of Manchester's Core Strategy, and the principles contained within The Guide to Development in Manchester SPD (2007) and the National Planning Policy Framework.

18) If during works to convert the building to the use hereby permitted any sign of the presence of bats if found, then all such works shall cease until a survey of the site has been undertaken by a suitably qualified ecologist and the results have been submitted to and approved by the Council in writing as local planning authority. Any recommendations for the protection of bats in the submitted document shall be implemented in full and maintained at all time when the building is in use as hereby permitted.

Reason - for the protection of bats and in order to comply with the Habitats Directive and pursuant to Core Strategy Policy EN15

19) Before development commences, a full photographic record of the site and the building (internally and externally) including all areas where physical changes are proposed, shall be submitted to and approved in writing by the City Council as local planning authority.

Reason - To provide a record of any archaeological remains and of the listed building's appearance and condition before works commence, in accordance with saved policy DC20 of the Unitary Development Plan for the City of Manchester and policies SP1, EN3 and DM1 of the Core Strategy.

20) No part of the development shall be occupied unless and until details of a parking management strategy for residents including identification of the location of the 24 contract spaces has been submitted to and approved in writing by the City Council as Local Planning Authority. All works approved in discharge of this condition shall be fully completed before the development hereby approved is first occupied.

Reason - The development does not provide sufficient car parking facilities and in order to provide alternative arrangements (e.g. parking leases with car parking companies; car sharing; or car pool arrangement) for the needs of future residents whom may need to use a motorcar and Policies DM1 and T1.

21) Deliveries, servicing and collections, including waste collections shall not take place outside the following hours:

07:30 to 20:00 Monday to Saturday
10:00 to 18:00 Sundays and Bank Holidays

Reason - In interests of residential amenity in order to reduce noise and general disturbance in accordance with saved policy DC26 of the Unitary Development Plan for the City of Manchester and policies SP1 and DM1 of the Core Strategy.

22) Final details of the method of extraction of any fumes, vapours and odours from (a) the apartments ; and (b) the ground floor / basement units shall be submitted to and approved in writing by the City Council as local planning authority prior to occupation of each any unit be used for Class A3 use. The details of the approved scheme shall be implemented prior to occupancy and shall remain in situ whilst the use or development is in operation.

Reason - To safeguard the amenities of the occupiers of nearby residential accommodation, pursuant to policies SP1 and DM1 of the Core Strategy

23) The ground floor commercial units shall not be occupied until a scheme for the storage (including segregated waste recycling) and disposal of refuse for each unit ; has been submitted to and approved in writing by the City Council as local planning authority. The details of the approved scheme shall be implemented as part of the development and shall remain in situ whilst the use or development is in operation.

Reason - In order to ensure that adequate provision is made within the development for the storage and recycling of waste in accordance with policies DM1 and EN19 of the Core Strategy for the City of Manchester.

23) The development hereby approved shall include for full disabled access to be provided to all parts of the building via the main entrances and to the floors above and below (to include platform lifts as detailed in section 8.1 of 5 Plus's Design and Access Statement dated May
2017).

Reason - To ensure that satisfactory disabled access is provided by reference to the provisions Core Strategy policy DM1

24) Piling or any other foundation designs using penetrative methods shall not be permitted other than with the express written consent of the Local Planning Authority, which may be given for those parts of the site where it has been demonstrated that there is no resultant unacceptable risk to groundwater. The development shall be carried out in accordance with the approved details.

Reason
To ensure a safe form of development that poses no unacceptable risk of contamination to controlled waters pursuant to section 10 of the National Planning Policy Framework Core Strategy policy EN14 and EN17.

24) Before any use hereby approved commences, within each of the ground floor / basement units details of the proposed opening hours shall be submitted to and approved in writing by the City Council as local planning authority. The units shall be not be operated outside the hours approved in discharge of this condition.

Reason - In interests of residential amenity in order to reduce noise and general disturbance in accordance with saved policy DC26 of the Unitary Development Plan for the City of Manchester and policies SP1 and DM1 of the Core Strategy.

25) Prior to the first use of the development hereby approved, a detailed Residential Management Strategy including:

Details of how 24 hour management of the site in particular in relation to servicing and refuse (storage and removal) and noise management of communal areas shall be submitted to and agreed in writing by the City Council as Local Planning Authority.

shall be submitted to an approved in writing by the City Council as Local Planning Authority.

The approved management plan shall be implemented from the first occupation of the residential element and be retained in place for as long as the development remains in use.

Reason - In the interests of residential amenity, to safeguard the character of the area and to maintain the sustainability of the local community through provision of accommodation that is suitable for people living as families pursuant to policies DM1 and H11 of the Core Strategy for Manchester and the guidance contained within the National Planning Policy Framework.

26) Before erection of any external scaffolding to the listed building commences a methodology and specification for that scaffolding including its location, means of affixing to the building, location of any associated fixings to the building, details of how the building fabric would be protected from potential damage as a result of the erection of the scaffolding and details of making good to the building fabric following removal shall be submitted to and approved in writing by the City Council as local planning authority. No development shall commence unless an until the above details have been agreed.

Reason - In the interests of visual amenity and because the proposed works affect a building which is included in the Statutory List of Buildings of Special Architectural or Historic Interest and careful attention to building work is required to protect the character and appearance of this building and to ensure consistency in accordance with policies CC9 and EN3 of the Core Strategy and saved policy DC19.1 of the Unitary Development Plan for the City of Manchester.

27) Prior to the first occupation details of measures to create potential opportunities to enhance and create new biodiversity within the development to include bat boxes and brick, bird boxes shall be submitted and approved in writing by the City Council as local planning authority. The approved details shall be fully implemented prior to first occupation.

Reason - To ensure that a satisfactory landscaping scheme for the development is carried out that respects the character and visual amenities of the area, in accordance with policies SP1, DM1, EN1, EN9 EN14 and EN15 of the Core Strategy.

Informatives

Building Regulations 2010
This permission does not grant approval under Building Regulations.

Street Naming & Numbering Requirements
Manchester City Council is responsible for allocating street naming and numbering within Manchester for new developments or property conversions. Individuals or businesses are not permitted to allocate their own property numbers, building or street names.

If your development includes the creation of new dwellings (either new build or conversion of existing buildings), creation of new commercial properties or the subdivision of existing properties you must ensure that you request new or changes to addresses through us so they can be officially allocated and registered in accordance with the Public Health Act 1925 Sections 17-19 & Greater Manchester Act 1981 Section 22.

Failure to do this may result in difficulties for the developer/occupier when requiring services such as connections to utilities, phone lines and postal services and may delay your development.

You can apply online at the following address:
http://www.manchester.gov.uk/info/100011/roads_parking_and_transport/1988/naming_and_numbering_of_houses_buildings_streets_and_roads/2

Mining Information
The proposed development lies within an area which could be subject to current coal mining or hazards resulting from past coal mining. Please read the Standing Advice from the Coal Authority in Appendix A.

Construction/demolition works shall be confined to the following hours unless otherwise agreed in writing by the City Council as local planning authority:
Monday - Friday: 7.30am - 6pm
Saturday: 8.30am - 2pm
Sunday / Bank holidays: No work

Workforce may arrive on site 30 minutes prior but no working outside these times, unless changed by prior agreement. Noise to be kept to a minimum in the first hour. Reason - To safeguard the amenities of the occupiers of nearby residential accommodation during the construction phase.

Any materials approved for planning purposes should be discussed in full with Building Control. This is to ensure they meet the guidance contained in the Building Regulations for fire safety. Should it be necessary to change the external facade treatment due to conflicts with the Building Regulations you should discuss these with the Planning Service as soon as possible as this could materially effect your permission.

All birds (except pest species) are protected whilst nesting (W&CA 1981)

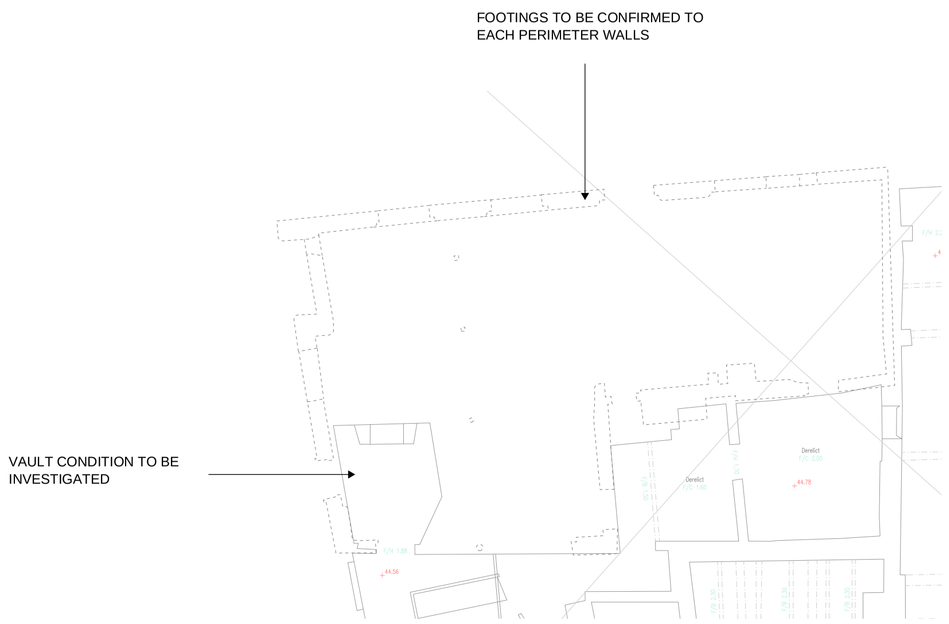
Date: 29 August 2017

Signed: 

Julie Roscoe

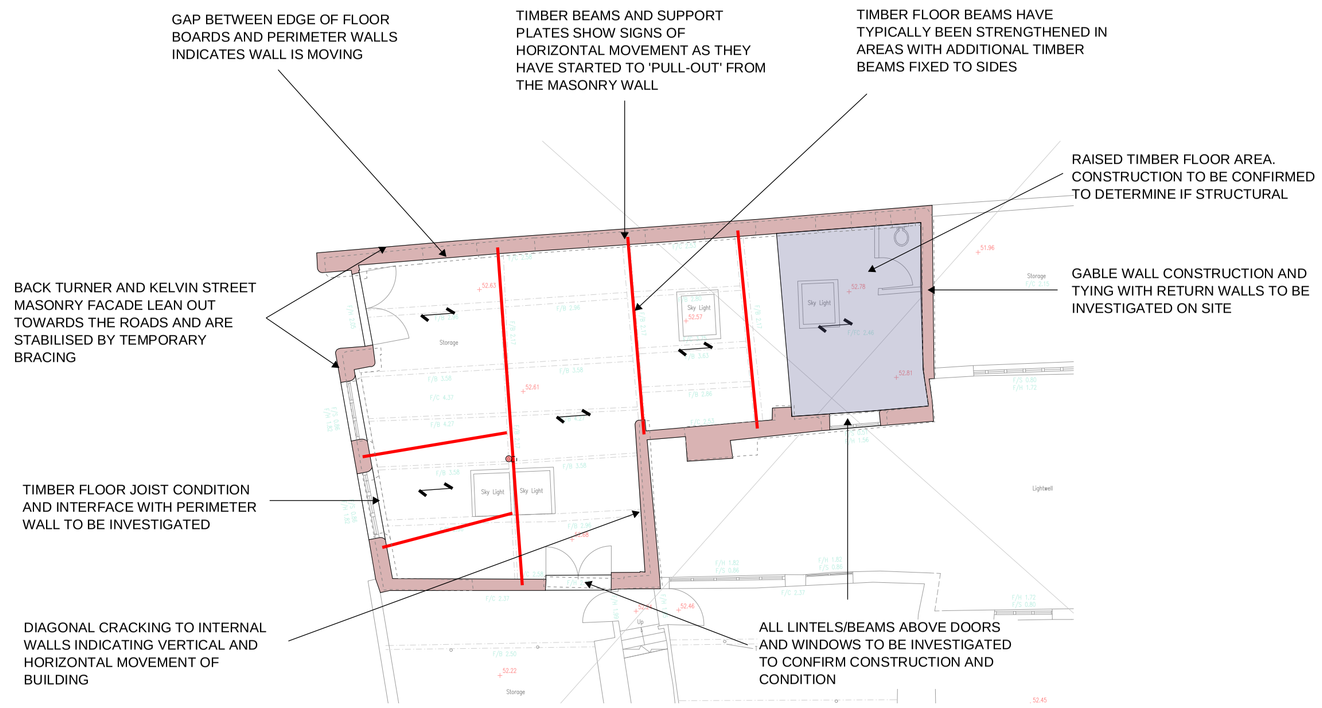
2. Structural Plan 7 Kelvin Street – Renaissance Ltd.

The following plan details the fabric structure and layout of 7 Kelvin Street which is the subject of this Conservation Implementation Strategy.



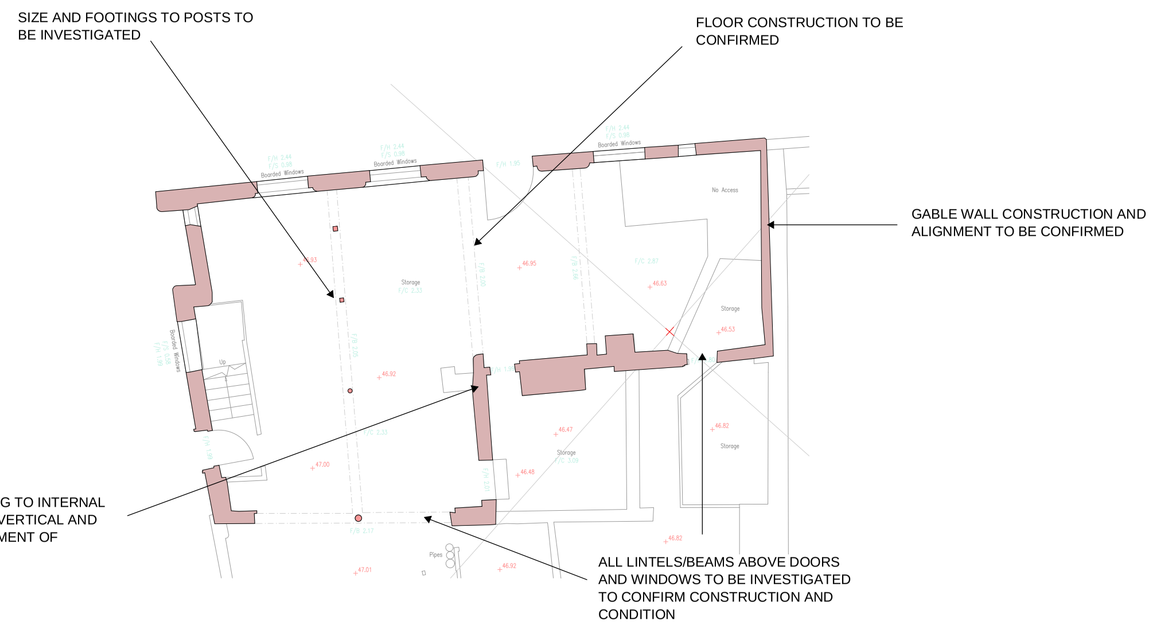
BASEMENT PLAN

FFL: 44.56



SECOND FLOOR PLAN

FFL: 52.57 - 52.68

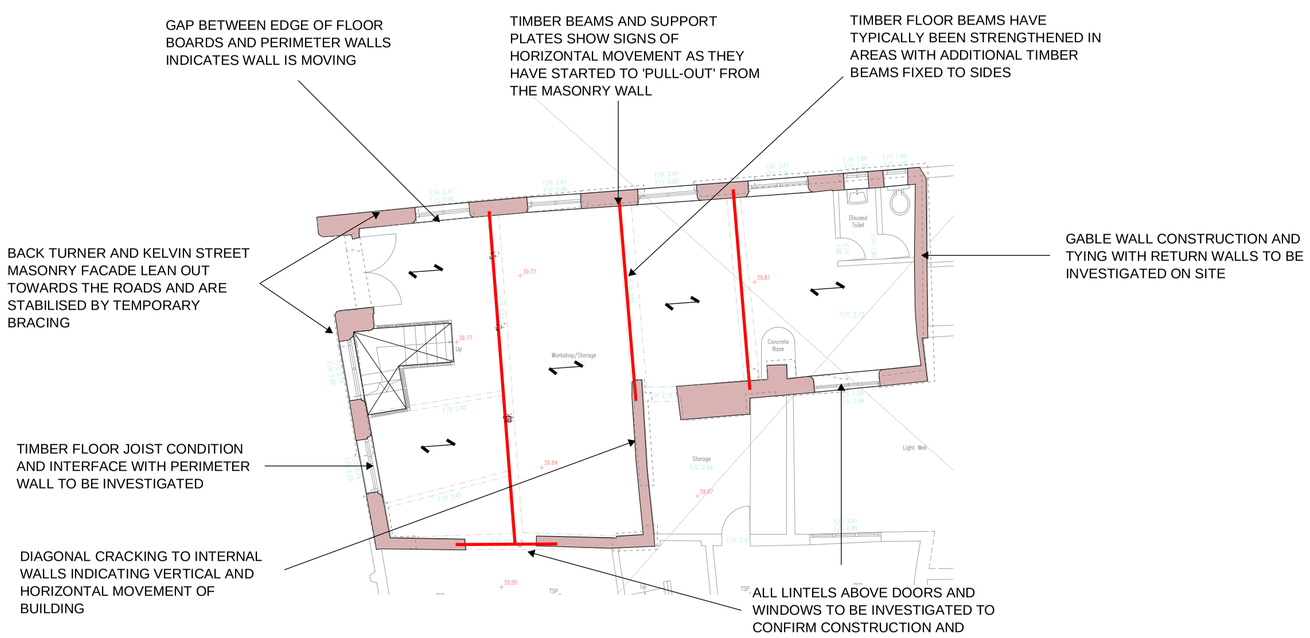


GROUND FLOOR PLAN

FFL: 46.53 - 47.00



ROOF



FIRST FLOOR PLAN

FFL: 49.77 - 49.84

STRUCTURAL SIZES & INVESTIGATION WORKS

SIZES OF THE FOLLOWING ELEMENTS TO BE CONFIRMED WHEN SAFE ACCESS IS AVAILABLE AND OPENING UP WORKS ARE UNDERTAKEN:

- TRIALPITS TO VERIFY EXISTING WALL AND FOOTING DEPTHS TO ALL PERIMETER WALLS AND PAD FOOTINGS TO INTERNAL POSTS.
- TIMBER FLOOR JOISTS SIZES, SPACINGS AND INTERFACE WITH SUPPORT BEAM AND WALLS.
- TIMBER MAIN SUPPORT BEAM SIZES AND INTERFACE WITH PERIMETER WALLS.
- SIZE AND WALL THICKNESS OF SUPPORTING CAST IRON AND STEEL POSTS
- TIMBER ROOF RAFTERS SIZE SPACING AND INTERFACE WITH PURLINS AND PERIMETER WALLS.
- TIMBER ROOF PURLIN SIZES AND INTERFACE WITH TRUSSES AND PERIMETER WALLS.
- TIMBER SIZES OF ROOF TRUSSES AND INTERFACE WITH PERIMETER WALLS.

THE ABOVE INFORMATION WILL ALLOW A DETAILED LOADING ASSESSMENT OF THE EXISTING STRUCTURE AND RESOLUTION OF REMEDIAL DETAILS.

GENERAL STRUCTURAL DEFECTS

1. WATER INGRESS AT ROOF, AND AROUND WINDOWS, WITH ASSOCIATED SATURATION OF ROOF AND FLOOR TIMBERS
2. FLOOR LEVELS ARE UNEVEN BY CIRCA 70mm AT GROUND AND FIRST FLOOR, INCREASING TO 110mm AT SECOND FLOOR. LEVEL VARIATION NOT CONSITANT BETWEEN FLOORS SUGGESTING POTENTIALLY A MIX OF ORIGINAL CONSTRUCTION AND FOUNDATION SETTLEMENT.
3. MAIN FLOOR BEAMS HAVE BEEN HISTORICALLY STRENGTHENED. THIS MAY HAVE BEEN DUE TO CHANGE IN LOADINGS, DETERIORATION, OR HISTORIC MOVEMENT.
4. VARIOUS LOCALISED STRENGTHENING MEASURES ARE EVIDENT, PRIMARY TO ENDS OF BEAM AND TRUSSED WHERE TIMBER POSTS HAVE BEEN INSERTED ADJACENT TO WALL BEARING POINTS. THIS INDICATES POTENTIAL LOSS OF BEARING CAPACITY AT SUPPORTS.
5. FACADE ALONG BACK TURNER STREET LEANS TOWARDS THE ROAD FROM GROUND FLOOR AND INTERNAL BEAMS AND ROOF TRUSSES HAVE DISPLACED AT BEARING POINTS, WITH NO POSITIVE TYING. FACADE ALSO SHOWS SIGN OF CRACKING TO THE MASONRY WALLS INTERNALLY.
6. FACADE GABLE WALL TO KELVIN STREET LEANS TOWARDS THE ROAD ABOVE 2ND FLOOR AND INTERNAL ROOF PURLINS HAVE DISPLACED AT BEARING POINTS, WITH NO POSITIVE TYING. FACADE ALSO SHOWS SIGN OF CRACKING TO THE MASONRY WALLS INTERNALLY.
7. ORIGINAL INTERNAL WALLS ABUTTING LATER ADDITIONS ON THE OTHER TWO SIDE OF THE BUILDING SHOW SIGNS OF EXTENSIVE CRACKING TO THE MASONRY.
8. SCAFFOLD HAS BEEN INSTALLED AS EMERGENCY MEASURE TO RESTRIAN THE WALLS. ALONG BACK TURNER STREET THIS HAS RESULTED IN PART OF THE WALL BEING PULLED BACK TOWARDS VERTICAL, INDICATING THAT THE WALL IS 'LIVE' WITH LIMITED LATERAL RESISTANCE OVER THE BUILDING HEIGHT.

STRUCTURAL REMEDIAL PROPOSALS

BASED ON THE GENERAL STRUCTURAL DEFECTS HE FOLLOWING REMEDIAL WORKS ARE PROPOSED, AND TO BE INCORPORATED INTO THE MAIN WORKS, TO ADDRESS THE MAIN STRUCTURAL ISSUES.

A. UNDERTAKE GENERAL REPAIRS AND MAINTANCE OF ROOF FINSIHES, RAINWATER GOOD, WINDOWS AND POINTING AS OUTLINED BY THE HERITAGE ARCHITECT, TO PREVENT FURTHER WATER INGRESS.

B. REBUILT WALLS WHERE EXTENT OF LIST MAKES THEM UNSTABLE.

C. CRACK STICH REPAIR EXTENSIVE CRACKING TO RETAINED WALLS TO ALLOW RETENTION.

D. INFILL HISTORIC OPENINGS ON GABLE WALL WITH MASONRY TO IMPROVE OVERALL STABILITY OF WALLS AND ROBUSTNESS.

E. FACADE BRICKWORK THAT HAS SPALLED MORE THAN 25-30mm TO BE LOCALLY REPLACED AND WALL POINTED INSIDE AND OUT WITH SUITABLE LIME BASED MORTAR.

F. TIMBER ELEMENTS TO BE SURVEYED BY TIMBER AND DAMP SPECIALIST AND APPROPRIATE TREATMENT TIMBER TREATMENT PROPOSED AND ADOPTED.

G. CONDITION AND RESIDUAL SECTIONS OF ALL FLOOR, ROOF, AND LINTEL TIMBERS THAT HAVE BEEN AFFECTED BY INFESTATION TO BE ADVISED BY TIMBER AND DAMP SPECIALIST. WHERE TIMER IS ADEQUATE TREAT, REPAIR AND RETAIN. WHERE TIMBER HAS PERISHED EXCESSIVELY, REPLACE TO AGREED DETAILS.

H. INTRODUCE REMEDIAL HORIZONTAL TYING BETWEEN PERIMETER WALLS AND EXISTING TIMBER FLOORS TO STABILISE WALLS BY REDUCING THE RISK OF FURTHER SEPERATION OF THE WALLS FROM THE FLOORS.

J. PROVIDE REMEDIAL HORIZONTAL TYING BETWEEN PERIMETER WALLS AND EXISTING ROOF TIMBERS TO TO STABILISE WALLS BY REDUCING THE RISK OF FURTHER SEPERATION OF THE WALLS FROM THE FLOORS.

NOTE: REFER TO DRAWINGS S-B-100 FOR STRUCTURAL PROPOSALS ASSOCIATED WITH THE ABOVE REMEDIAL PROPOSALS AND ALTERATIONS TO SUIT CHANGE OF USE.

NOTES:

1. FOR GENERAL NOTES REFER TO DRAWING S-00-010
2. THIS DRAWING IS INTENDED TO COMMUNICATE THE GENERAL STRUCTURAL CONDITION AND ASSOCIATED ISSUES FOR THE GRADE II LISTED 7 KELVIN STREET BUILDING.
3. THE DRAWINGS ARE BASED ON ND OLVIER SURVEY DRAWINGS SERIES 8907/002A
4. THE STRUCTURAL OBSERVATIONS ARE BASED ON A VISUAL INSPECTION FROM GROUND AND INTERNAL FLOOR LEVELS ONLY AND ARE SUBJECT TO REVIEW FOLLOWING FURTHER SURVEYS BY SPECIALISTS.
5. THE OBSERVATIONS AND PROPOSAL ARE LIMITED TO STRUCTURAL MATTERS ONLY. GENERAL BUILDING CONDITION ITEMS, THAT CAN AFFECT THE STRUCTURE, SUCH AS; POINTING, GUTTER AND RAINWATER GOODS, WINDOWS ETC. ARE TO BE ADDRESSED BY THE HERITAGE ARCHITECT OR OTHERS.
6. ALL REMEDIAL WORKS ARE SUBJECT TO REVIEW AND AGREEMENT WITH THE HERITAGE ARCHITECT AND CONSERVATION OFFICER.
7. TO INFORM THE STRUCTURAL REMEDIAL PROPOSALS THE FOLLOWING SPECIALISTS SHOULD BE COMMISSIONED TO UNDERTAKE FUTHER SURVEYS:
   - TIMBER AND DAMP SPECIALISTS (E.G. TRACE)
   - CRACK REPAIR SPECIALIST (E.G. HELIFIX)
   - LOCALISED OPENING UP WORKS

REV	DATE	PURPOSE	DRN	CHK
P01	29.06.18	STAGE 3 ISSUE	EM	KG

renaissance
Renaissance Associates Ltd
Carvers Warehouse
77 Dale Street
Manchester
M1 2HG

PROJECT
THOMAS STREET
MANCHESTER

TITLE
No 7 KELVIN STREET
STRUCTUAL PLANS
EXISTING

PROJECT NO. 1601-09

DRAWING	REV	SCALE@A1
S-B-050	P01	1:100

STATUS
STAGE 3

3. Roof light detail. JMA Drg. 05013-B1-086313.

The following drawing refers to the requirements to replace the roof lights in Condition 4 (f) 'Details of New rooflights and Section 5.12. paragraph viii above

Copyright of this drawing is vested in Jon Matthews Architects and it must not be copied or reproduced without written consent, figured dimensions only are to be taken from this drawing. Do not scale from this drawing.

All Contractors must visit the site and are responsible for taking and checking all dimensions relative to their work, Jon Matthews Architects are to be advised of any variation between drawings and site conditions.

Electronic data/ drawings issued as 'read only' and should not be interrogated for measurement, All dimensions and levels should be 'read only' from those values stated ie text, on the drawings

CONSTRUCTION - It is considered that the proposed works are within the scope of a competent Contractor and as such no unusual hazards have been identified, refer to relevant Kayr Scheduler Designers Risk Assessment

KEY PLAN:

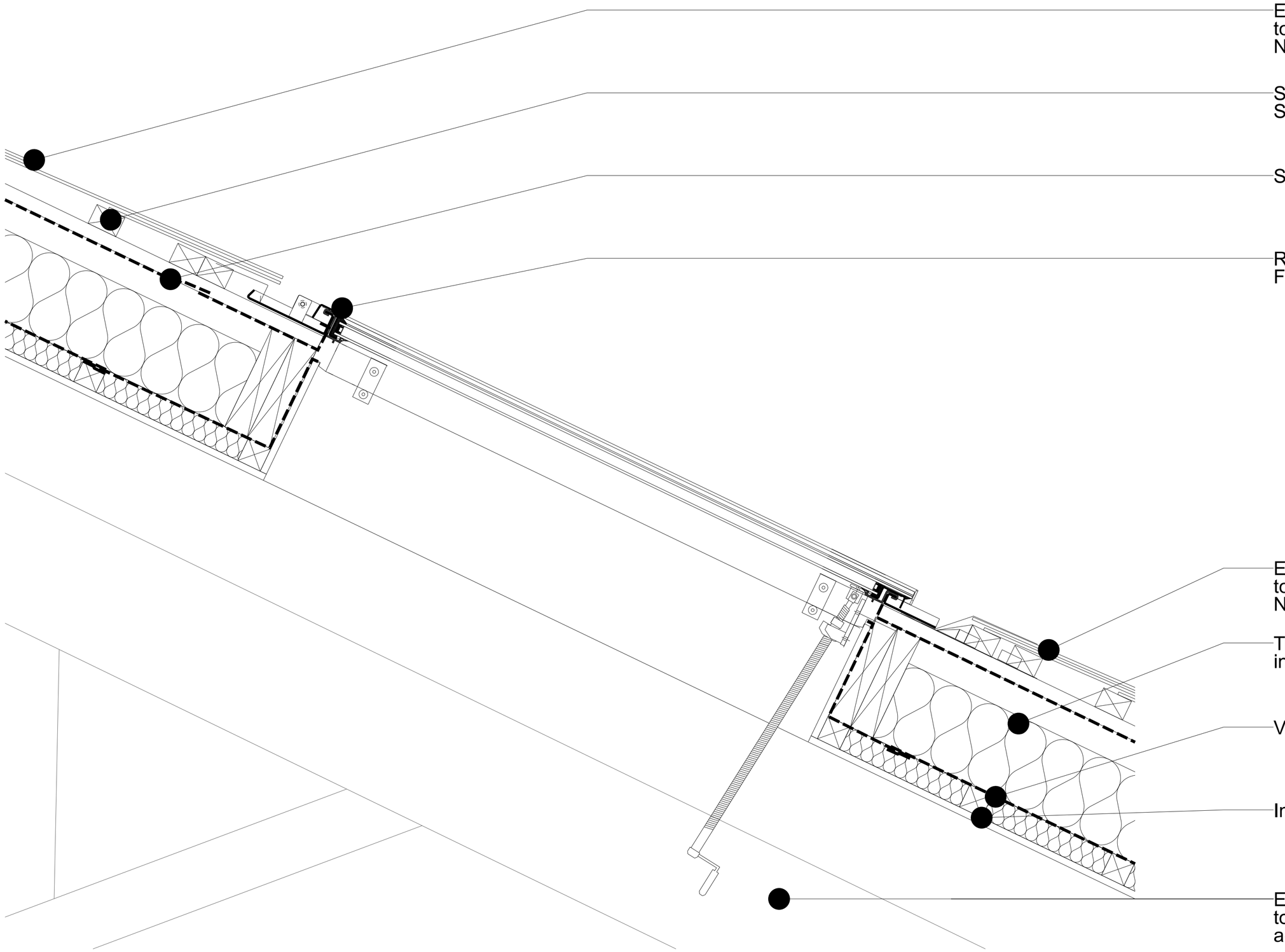
NOTE:

This detail is subject to further development during next Work Stage.

Roof build up is illustrative but includes requisite performance material. To be developed though detailed design.

Detail to be developed with Structural Engineer, Heritage Consultat and preferred suppliers.

All external finishes will be subject to the approved material sampleas as per Planning Condition 05.



REV:	DATE:	DETAILS:
-	23/04/20	Issued for Planning

22A City Tower
Piccadilly Plaza
New York St
Manchester
M1 4BT

Jon Matthews Architects

PROJECT:
42 - 46 Thomas Street
Demolition of Listed Structures

TITLE:
Listed Building Roof Light Detail

SCALE:	ORIGIN DATE:	DRAWN:	CHECKED:
1:5 @A1	23/04/20	MC	RS

STATUS:
Planning

PROJECT	DRAWING NO:	REV:
05013	_B1_08_6313	-

4. Use of the DOFF cleaning system.

The following details refer specifically to Section 5.5 above and are intended for guidance only. Use of the system will be at the discretion of the Project Architect.

STONEHEALTH LTD
01453 540 600
info@stonehealth.com
stonehealth.com
Bowers Court • The Broadwell
Dursley • Gloucestershire
GL11 4JE

DOFF
INTEGRA

The method of cleaning using superheated water/steam in a unique way - chemical free

Will Remove:

Most types of paint
Algae, Moss & Lichens
Moulds & Fungi etc
Bitumen, Oil & Grease
Chewing Gum
Grime
Asbestos Preparation
And many other problems solved
… without damage

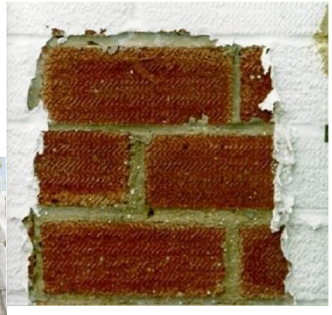


Use DOFF on:-
Most surfaces e.g. brick, stone, concrete, tiles (glazed, encaustic etc), faience, roof tiles, slates, terracotta, wood, stucco, cast stone, and render etc. Removal of soiling from floors, walls, machinery, appliances etc. Removal of barnacles from boat hulls. Cleaning and sterilising kitchens, toilets, wash-rooms, swimming pools, abattoirs, factories, asbestos and roofing, pigeon lofts, farm buildings, drains etc.

For use in:- Building restoration, Industry, Food production, Hygiene control, Hospitals, Factories, Transport & vehicle depots, Workshops etc.

How the DOFF works: A normal water supply is taken through the pump into the Hotbox, where a range of temperatures of up to 150º C can be achieved. The low volume of super heated water and steam (5 litres per minute) is then fed through heat resistant hoses to special nozzles where a genuine 150º C is delivered. The surface being cleaned does not suffer any damaging pressure, thermal shock or deep saturation and dries within minutes. A range of different lances and nozzles are available. Please ask for advice on specific applications.

Technical Specification	**DOFF Integra**
Power supply consumption	230 volt 50 hz 13 amp or 6.0 Kva (generator) 50 hz 30 amp or 6.0 Kva (generator) 115 volt 60 hz 30 amp or 6.0 Kva (generator)
Water Consumption	Min 3, max 5 litres per minute Use only clean water supply – if bowser or other, consult our technical team for advice
Maximum operating pressure	100 bar 1450 psi
Temperature range	30ºC to 150 ºC
Maximum water input temp.	30 ºC
Dry Weight Kg.	89 (hotbox) + 34.5 (pump) = when loaded 123.5
Measurement mm	length width height
Pump	500 282 310
Hotbox	680 630 1030
	When pump loaded length = 960
Export packing:	1020 820 1150







Stephen Levrant Heritage Architecture Ltd

CONSERVATION ARCHITECTS & HERITAGE CONSULTANTS

62 British Grove, Chiswick, London

020 8748 5501 (Tel)

Canada House, 3 Chepstow Street Manchester M1 5FW

0161 806 0410 (Tel)