

WHP/MKR/20.018

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Listed Building Consent Application

**The Arthouse, 43 George Street,
Manchester, M1 4AB**

Roof Condition Report

Description

The property comprises 39 and 41 George Street (List Entry 1218183) and 83 Princess Street (List Entry 1270913) and is a five-storey residential development in the heart of Manchester, located on the junction of Princes Street and George Street, which were converted from their original use as cotton manufacturers warehouses to residential use, with retail at ground floor, in 2003.

The roof to 83 Princess Street comprises a Welsh slate covered hipped roof to the full length of the elevation facing onto Princess Street. The roof structure is of timber construction, generally dating to the original construction however, the covering appears to have been stripped and recovered in the past, suggested by the presence of roof felt beneath the slate battens in the areas inspected.

The roofs to 39 and 41 George Street comprise a large central flat roof, generally rectangular in shape with two projecting sections extending out to cover the sides of the block around the lightwell, facing St James Street. To the perimeter of the flat roof on three sides are Welsh slate covered mono-pitch slopes. The flat roof is supported by a steelwork structural frame, with a metal roof deck supporting insulation beneath the waterproofing covering. The mono-pitched roofs around the flat roof have a Welsh slate finish over a metal structural frame, underdrawn by profiled metal roof sheeting. Tiles are affixed to timber slate battens.

There are balconies that extend around the lightwell on three sides, with timber vaned brise-soleil solar shading over the top balconies.

There is a timber clad glazed atrium over the internal full height staircase, with a stain finish to the timber tongued and grooved cladding and glazing bars.

Between the pitched roof over 83 Princess Street and the South-West facing mono-pitch slate covered roof over 39 & 41 George Street are two valley gutters with a low-level masonry wall between, which appears to be located over the party wall between the two buildings, forming two valleys, through which rainwater is discharged to the external cast iron rainwater goods.

A selection of annotated photographs are included in Appendix A to aid your understanding of the roof form and condition.

Condition and Defects

The general condition of the roof is poor, with a number of issues resulting in rainwater penetration to the internal apartments, which will continue and worsen as the roof elements fall into greater disrepair. We have inspected the roof and apartments at top floor level in detail, in order to accurately identify the repair requirements.

In response to your request, we have considered each of the roof sections and elements and report upon them separately as follows:

Slate covered hipped roof (over 83 Princess Street)

The slate covered roof, running the length of the Princess Street elevation comprises regularly sized Welsh slates laid onto the original timber roof structure in a hipped format, over a roofing felt and secured to softwood timber slate battens. The roof covering is in fair condition however, we noted a number of slipped/damaged slates and historic slate repairs using metal tingles, which are now beginning to fail. Upon removal of several sections of deteriorating slates we identified delamination and failure of the slates.

Further intrusive investigation identified that the breathable underfelt has been pulled tight beneath the battens, causing any penetrating water to pond against the battens and promote timber decay. We also noted that the timber battens are untreated softwood and therefore are more susceptible to failure in the medium term.

Access scaffolding is required to the full perimeter of the building to undertake the roof repair works. Considering that lower slate courses will need to be removed to allow the lead gutter lining repairs (noted later) and the replacement valley gutter linings to be dressed beneath the slates, we propose to fully strip and recover the slate covered roof. The existing slates will be set-aside and re-used where suitable, with any additional slates to be sourced to provide a match in colour and size.

We were only able to undertake a limited inspection of the perimeter parapet gutter to the front and side elevations of 83 Princess Street without an access scaffold however, our internal inspection revealed leaks to the apartments on the front elevation in positions which indicate a failure of the lead gutter lining. We propose that the gutter is inspected when the full height scaffold is in place and the lead gutter lining is replaced in its entirety with new lead sections, forming joints as directed in the Lead Association guidance.

We noted loose and friable pointing to 6 No redundant chimney stacks to the front elevation and consider that the chimney cappings are also likely to be loose. We propose to rake out and re-point the chimney stack stubs with a lime-based mortar, replace the lead flashings in conjunction with the slate roof replacement and propose to lift and re-bed the chimney caps.

The valley between the pitched front roof and the adjacent mono-pitched roof is formed with an asphalt coating, dressed to either side of the parapet wall that forms the party wall between the two structures. The asphalt finish is cracking and blistered in numerous areas and has received repairs in numerous areas with a liquid applied coating. It is intended to remove any loose and damaged material and prepare the valley to receive a fully bonded EPDM valley lining, to be dressed up beneath the bottom 3 slate rows, to provide a seamless waterproof surface to allow the roof to correctly discharge to the rainwater hoppers.

Work items include:

- Provide full height access scaffolding.
- Rake out and re-point chimneys with lime mortar, re-bed chimney cappings and replace lead flashings.
- Strip all existing roof slates and set-aside for re-use. Replace any damaged or defective slates, to match the existing slates.
- Lift and re-bed all hip and ridge tiles.
- Supply and install all new lead flashings
- Strip the existing lead gutter linings and renew, to be in accordance with details approved by the Lead Association.
- Clean and remove damaged sections of the existing asphalt valley linings between the pitched roofs and renew with a new fully bonded EPDM lining, dressed beneath the lower slate courses.

Slate covered mono-pitched roof slopes (over 39 and 41 George Street).

The slate covered mono-pitched mansard roofs are in a poor condition numerous displaced slates, historic slate repairs with tingles that are now failing, flashband repairs to rooflight flashings, flashband and liquid repairs at the junction of the flat roof with the pitched roofs and displaced sections of lead flashing.

The detailing between the slate roof slopes and the flat roof covering is particularly poor, where numerous patch repairs are evident. Sections of slates have been replaced with lead flashings and other areas have temporary repairs undertaken with flashband and acrypol (or similar liquid applied patch repair solution). The recovering of the flat roof will include the provision of a suitable detail at the interface of the slate roofs with the flat roof covering, to allow construction of a robust waterproofing detail at this junction.

The perimeter parapet gutters are lead lined and we are aware have caused issues of water ingress where they have failed, affecting a number of apartments. It is proposed that the lead lined valley gutters are stripped of their existing lead linings and new lead gutter linings are installed, dressed under the slate covered pitched roofs and dressed beneath a lead cover flashing, installed beneath the parapet wall coping.

The mortar joints of the parapet walls are failing, allowing a possible route for water ingress into the building. The coping joints will be raked out and re-pointed with lime mortar, to match the existing.

The timber cladding and glazing bars to the stair lightwell are in a deteriorating decorative condition and there is evidence of localised timber decay. Repair works are to include replacement of any decayed sections and re-coating with a waterproof stain.

The timber brise-soleil vanes will be decorated with a timber stain to match the existing, to prevent the onset of timber decay.

Work items include:

- Strip and re-cover the slate covered mono-pitched roofs, re-using the existing slates where suitable and matching slates where replacements are required.
- Strip the existing lead lined gutters, lay new gutter linings to their full length, in accordance with the Lead Association details and methods of workmanship.
- Rake out and re-point all parapet wall stone coping joints.
- Inspect and repair/decorate framed glazing to the lightwell.
- Decorate timber boarding to exterior of stair lightwell.
- Inspect and repair/decorate timber brise-soleil vanes.
- Ensure edge protection railings are secure.

Flat roofs.

From historic core test results, the flat roof comprises a metal structural deck covered with loose laid polythene vapour control layer, laid to falls PIR insulation with a bitumen based EPDM carrier layer and a reinforced liquid waterproofing top layer. The liquid waterproofing layer has failed across the whole of the roof and is generally loose and peeling where it remains. There is evidence of damage to the EPDM layer and localised patch repairs have been undertaken as a short-term fix. The insulation currently remains in good condition and the roof is suitable for refurbishment with it remaining in-situ, rather than requiring wholesale replacement if works are undertaken in the short-term. Without further testing we are unable to confirm whether the levels of insulation on the roof meet the requirements of the Building Regulations however, we are aware that the building has a Grade II listing and increasing the levels of insulation would materially change the form of the building, so it is not proposed to change the roof insulation.

There is a mansafe system on the roof and this will need to be maintained during the works.

There are sections of pitched roof valley gutters which currently discharge onto the balconies serving the 4th floor apartments. Rainwater flows beneath timber decking and through outlets in the brickwork parapet wall and into rainwater hoppers, where it is channelled to ground through rainwater pipes. There are areas of dampness where the water discharged from the pitched roof gullies and we are concerned that the waterproofing beneath the decking is in suitable condition. Our scope of works

includes to lift the timber decking to allow inspection of the waterproof layer and consider the route of water discharge, to see if it can be improved, prior to reinstatement of the decking.

There are timber access ladders providing access across the roof areas, which are damaged and not fit for ongoing use. The works scope includes provision for a permanent roof access ladder solution.

Work items include:

- Clean, prepare and prime the flat roof areas and details
- Supply and install new EPDM waterproofing to the roof area
- All details to be installed to manufacturers recommendations and guidelines
- Replace timber roof access ladders with a safe, permanent solution – to be discussed.
- Investigate the balcony waterproofing and address damp ingress where water discharges from pitched roof gullies.

I have split the roof works into three main areas however, it is considered that all of the works are essential and therefore it is proposed that all are undertaken as a matter of urgency, to be completed before winter 2021, as exposure to wet weather will lead to further water ingress and possible internal damage.

Report prepared by



Mark Rugg BSc (Hons) MRICS
Director

For and on behalf of
White Hindle and Partners

Enc: Appendix A – Photographs
Appendix B – Technical Details of Roofing Products
Appendix C – Location Plan
Appendix D – Copies of Building Listings
Appendix E – Extent of Survey Limitations
Appendix F – Terms and Conditions of Business



BUILDING & PROJECT
CONSULTANTS

APPENDIX A

PHOTOGRAPHS



Roof arrangement at The Arthouse



1. Typical condition of slated roofs, note tingle repairs, uneven slates and patch repairs at the junction with the flat roof.



2. Damaged timber roof access ladder. Similar slate defects to above



3. General condition of the flat roof covering, peeling and evidence of localised patch repairs.



4. Poor detailing of the junction between the flat roof and the slate covered mansard. Note lead patch repairs to gutter.



5. Timber access ladder to valley. Timber cladding to stairwell atrium is heavily aging.



6. Flat roof extending out to side of lightwell.



7. Flat roofs and brise-soleil around lightwell



8. Liquid applied patch repair at junction of slate and flat roof.



9. Inner slope of hipped roof, note uneven slate courses.



10. Patch repair adjacent to stair atrium.



11. Blistering to bitumen coated valley gutter.



12. Poor condition of mortar joints to stone copings.



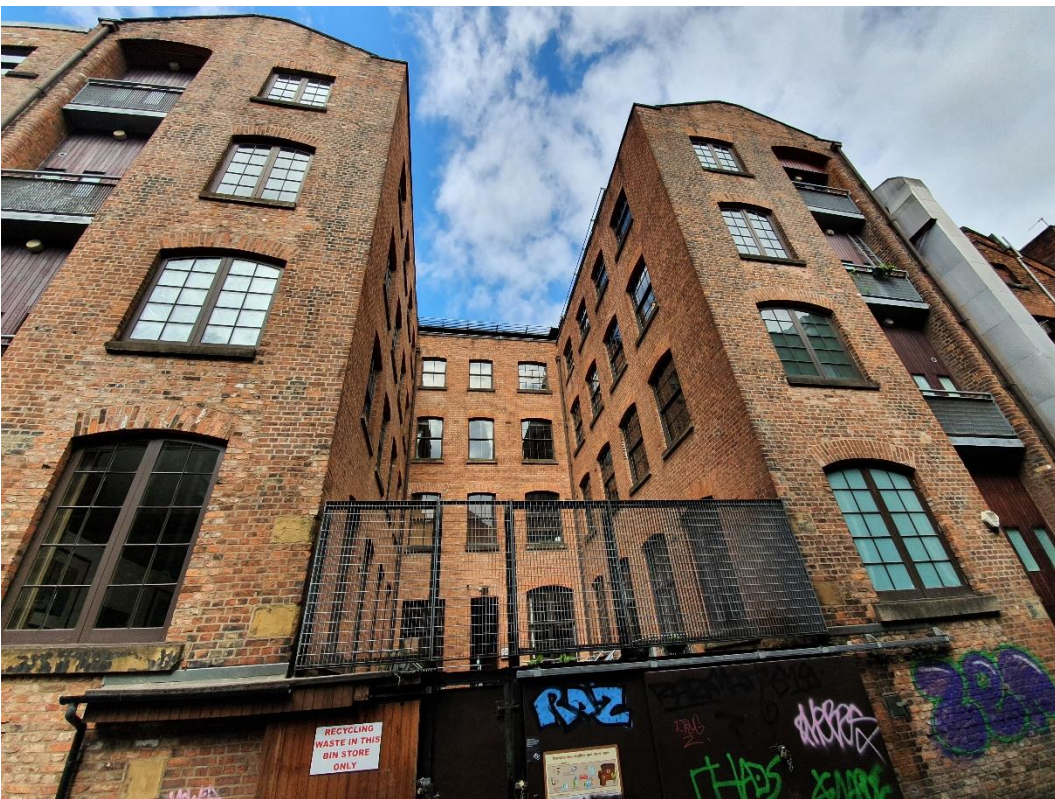
13. Uneven and poorly repaired slates.



14. Poorly matched and fitted slate repairs.



15. General view of the front elevation.



16. Side elevation into lightwell.



17. Displaced lead flashing beneath rooflight window.



18. Slate covered hipped roof to front section and view of valley.



19. Asphalt lined valley between the front pitched roof and mono-pitch roof to the rear section.



20. Investigation of pitched roof, showing “tight” roof felt and untreated timber battens.

APPENDIX B

TECHNICAL DETAILS OF ROOFING PRODUCTS

APPENDIX C

LOCATION PLAN

APPENDIX D

COPIES OF BUILDING LISTINGS

APPENDIX E

EXTENT OF SURVEY LIMITATIONS

Extent of Survey and Limitations

GENERAL LIMITATIONS

Inspection & Concealed Parts: Our report will cover all parts of the site made available to us during our visual inspection of the property, which is normally and safely accessible without the use of ladders, unless stated within the report. Where inspection of roof areas by use of access hoists is required this will be agreed with you prior to inspection. The structure and fabric will not be opened up for further investigation. Those parts of the building and engineering services that are concealed, inaccessible or covered will not be inspected and confirmation that such parts are free from defects cannot be provided. Where we feel further investigation is merited, reference will be made in our report. Our services survey is based on a visual inspection and comment on the condition and the quality of the installation relating to normal good standards. Internal inspection of plant will only be carried out where access is readily available and not where plant strip-down is required. We will specifically exclude tests relating to the performance of any heating, air conditioning or ventilation systems, pipe pressure tests, electrical or drainage tests. The omission of such tests might give rise to the fact that certain problems could exist which are not reflected in our report. No inspection or comment is made on the below ground drainage installations unless instructed otherwise.

Occupied Buildings: Where buildings are occupied at the time of our inspection access to some areas may be restricted or denied although these areas will be noted in our report. Regardless of occupation, we will not lift fitted carpets, nor disturb any part of the fabric or fittings, which are fixed or would cause damage.

Budget Costs: Where approximate budget costs are included in our report, these costs are for guidance purposes only and will not be calculated from measured quantities but will be based on knowledge and experience of similar repair or replacement situations. Costs are exclusive of contractor's preliminaries, contingencies, builders work associated with services, professional fees and VAT. They will be based on current prices and no allowances will be made for inflation. Access costs for high level works will be included.

Liability and Confidentiality: Our report will be for the attention and purposes of the Addressee only and consequently we cannot accept any third party liability for the whole or any part thereof. Neither may the whole nor any part of our report, nor any reference thereto, be published in any way nor included in any published document, circular or statement without our prior written approval of the form and context in which it may appear.

PRE ACQUISITION SURVEY

Compliance with Legislation: Our inspection will involve a general review of the state of compliance with Statutory Requirements such as the Building Regulations, Workplace Regulations, Fire Regulations, Disability Discrimination Act and other relevant matters. Please note that compliance with these Regulations often requires a more detailed study and/or the preparation of a detailed risk assessment. Such studies and risk assessments are beyond the scope of our report. It should be noted that the requirements under the Disability Discrimination Act are based on reasonableness, the meaning of 'reasonable adjustment' has yet to be determined by the Courts and our advice represents our interpretation of the Act at this time.

BUILDING SERVICES

Design Analysis: No definitive calculations will be undertaken to determine the capacity of the plant, nor will performance tests be carried out on any of the systems or plant items. Design analysis of the systems will be undertaken using generally accepted design criteria.

White Goods & Data: Our report will not include an inspection of the white goods, catering and vending equipment, telecommunication or data systems found within the property. We are unable to comment, advise or identify items that are reliant on day/date dependent embedded chips.

ENVIRONMENTAL

Content of Report: Our Phase I Environmental Audit will be based on a visual inspection of the site, a review of available historical and environmental setting records, consultations with site representatives, pertinent information provided from the client and regulatory consultations.

Risk Assessment: The risk assessment is dictated by the finite data on which it is based and is relevant only for the purpose of which the report is commissioned. If additional information or data becomes available which may affect the opinions expressed in our report, we reserve the right to review such information and, if warranted, to modify the risk assessment accordingly. We reserve the right to charge an additional fee for un-anticipated second opinion reviewing of previous reports.

Extent of Survey and Limitations Cont'd

Compliance with Legislation: The risk assessment will be undertaken with due regard to Contaminated Land Guidance documents issued by the Department for Environment, Food and Rural Affairs (DEFRA) and its predecessors, British Standards Institute (BSi), the Royal Institution of Chartered Surveyors (RICS) and the American Society for Testing and Materials (ASTM) Standard E 1527-00. Specific comment will be made regarding the site status under the Contaminated Land Regime implemented on the 1 April 2000 as Part IIA of the Environmental Protection Act 1990, and the actual or potential designation of the site as 'Contaminated Land' as defined in Section 78A(2). Unless specifically stated as relating to this definition, references to 'contamination' and 'contaminants' relate in general terms to the presence of potentially hazardous substances in, on or under the site.

Audit Limitations: We will identify perceived risks based on the information reviewed and made available. No intrusive ground investigation work will be carried out and as such, actual risks will not be established.

DELETERIOUS & HAZARDOUS MATERIALS

Generally: Our report and survey excludes any investigation into the unsuitable use of deleterious or hazardous materials except insofar as such matters may come to our knowledge in the normal course of inspecting the property and state of repair. We will advise you if we consider there is a significant possibility that deleterious or hazardous materials exist at the property, although we will not undertake or commission specific inspections, laboratory testing or reports unless this possibility has been raised by us as a concern and further instructions received. Similarly, where composite cladding panels maybe noted in our report we confirm that no intrusive testing will be undertaken to determine the type of insulant or whether this is approved by the Loss Prevention Certification Board unless instructed otherwise.

Asbestos: Where instructed to undertake a specialist asbestos survey, we cannot guarantee that all asbestos containing materials will be identified, despite the best endeavors of our asbestos surveyors. Where instructed, every effort will be made to remove representative samples however it is possible that indiscriminate uses of asbestos may be present between sample locations of otherwise visually similar materials. A Type 2 asbestos survey is nondestructive and includes an inspection within accessible ceiling voids, above loose laid removable tiles, inside openable risers and cupboards, within accessible risers and behind removable casings. The survey excludes intrusive opening up of the building fabric. Accordingly an inspection is not undertaken behind built-in ducts, voids or similar enclosed or concealed areas within the structure and fabric. Similarly access within lift shafts, live electrical equipment and mechanical plant may be restricted. A Type 3 asbestos survey is destructive and includes an inspection within accessible ceiling voids, above loose laid removable tiles, inside openable risers and cupboards, within accessible risers and behind removable casings. Representative areas of each element of building fabric will be intrusively opened up to inspect for the presence of ACM's behind built-in ducts, voids or similar enclosed or concealed areas within the building fabric. No intrusive work will be undertaken within the structural framework, concrete floors and masonry walls.

Concrete: Where instructed to undertake a concrete investigation, our specialist report will be based on a visual examination of the concrete structure in sample test locations only. Whilst such test locations are chosen to be representative of the structure as whole, we are not able to confirm that the structure is free from structural defects other than the deleterious effect of HAC, chlorides and reinforcement corrosion durability.

APPENDIX F

TERMS AND CONDITIONS OF APPOINTMENT

Terms and Conditions of Appointment

Our Services & Appointment

1. We undertake to provide you with Building Surveying, Project Coordination and/or associated Technical Services including deleterious materials inspection & testing, environmental advice, mechanical & electrical consultancy advice or other such services agreed between the parties ("the Services").
2. We shall exercise reasonable skill, care and diligence in the performance of the Services.
3. We shall carry out the Services in a reasonable time until a programme has been agreed between us. We shall use reasonable endeavours to comply with any agreed programme. You shall supply us free of charge all relevant data and information available to you and shall give such assistance, decisions and access as may be reasonably required by us in performing the Services in sufficient time such that we are able to perform the Services in accordance with any agreed programme.
4. None of the provisions of this Appointment are intended to or will operate to confer any benefit pursuant to the Contracts (Rights of Third Parties) Act 1999 on a person who is not named as a party to this Appointment.
5. This Appointment is personal to you and non-assignable and we do not accept liability to any third party in contract, tort or otherwise.
6. These terms and conditions represent the total agreement between us in relation to the Services, fee basis and other costs.
7. The basis of our fees for individual instructions will be agreed between the parties. Fees will normally be quoted on a fixed fee basis expressed as a lump sum or as a percentage of final construction costs on building projects. Where work cannot be precisely defined fees will be calculated on a time charge basis at rates agreed between the parties. Fees for work undertaken on a time charge basis will be calculated on all time spent on a project namely inspections, traveling time and office time.
8. Fees are quoted exclusive of Value Added Tax, which will be added to our fees at the rate in force at the date the fees are rendered.
9. Unless stated otherwise our quoted fees shall normally include disbursements incurred in discharging the instruction such as travel, subsistence, photography, printing, copying, binding and postage. Where disbursements will be charged in addition to the fee, including but not limited to equipment hire, specialist testing, bulk printing, this will be confirmed in writing and the expenses charged at cost as disbursements.
10. Unless agreed otherwise we expect the costs of any specialist consultant we appoint on your behalf to be met directly by you. Similarly we expect the costs associated with planning and Building Regulation applications to be met directly by you.

Payment Terms

11. Our fee invoices are due for payment in full upon presentation, in sterling and without deduction, set off abatement or counterclaim.
12. In accordance with the Late Payment of Commercial Debts (Interest) Act 1998, we reserve the right to charge interest at 3% above the Bank of England's prevailing Base Rate on any fee invoice that is not paid within 28 days from the date of issue of the invoice.

Limit of Liability & Exclusions

13. We undertake to maintain Professional Indemnity and Public Liability Insurance in respect of the Services, provided that such insurance remains available from reputable companies based in the UK at commercially reasonable rates and terms.
14. Unless otherwise agreed our maximum aggregate liability to you whether in contract, tort, negligence, for breach of statutory duty or otherwise for any claim or series of claims arising out of the same occurrence or series of occurrences shall be as stated in our service and fee proposal except that nothing in these terms and conditions shall exclude or limit our liability in respect of personal injury or death caused by us.
15. Subject to paragraph 14 but notwithstanding anything to the contrary in this Appointment our liability for any claim or claims shall be further limited to such sum as we ought reasonably to pay having regard to our responsibility for the loss and damage suffered as a result of the occurrence or series of occurrences in question on the basis that all other parties providing services or labour or materials or plant in connection with the project shall be deemed to have provided to you contractual undertakings on terms no less onerous than that set out in paragraph 2 (whether or not they shall have been so provided to you in respect of the carrying out of their obligations) and shall be deemed to have paid you such proportion which it would be just and equitable for them to pay having regard to the extent of their responsibility.
16. We shall be indemnified by you against all claims, demands, proceedings, damages, costs, charges and expenses arising under or in connection with this Appointment in excess of our liability defined in paragraph 14 of this Appointment or which may be in respect of events occurring after the period of liability as defined in paragraph 17.
17. No action or proceedings under or in respect of this Appointment whether in contract, tort, negligence, breach of statutory duty or otherwise shall be commenced against us after the period of six years from completion of the Services or such earlier date as may be prescribed by law.

Terms and Conditions of Appointment Cont'd

18. Save in respect of death or personal injury you shall only look to us (and not to any Individual) for redress if you consider that there has been any breach of this Appointment. You agree not to pursue any claims in contract, tort or statute (including negligence) against any Individual as a result of them carrying out their obligations under or in connection with this Appointment at any time and whether named expressly in this Appointment or not.

19. If we undertake any Services in relation to a building or structure containing asbestos or asbestos containing materials in addition to the limitations on our liability set out above, our liability is limited to the direct result of our negligence or breach of contract and to the cost of re-performance of our Services and/or rectification or remediation (as appropriate) or the diminution in value of any buildings or structures we survey.

Termination

20. You may terminate or suspend our Services at any time by giving 7 days written notice. All monies due for completed works prior to receipt of such notice shall be invoiced and paid in accordance with our Payment Terms noted herein.

21. If either party becomes insolvent the other may terminate the Appointment forthwith by giving written notice to the other.

22. Any notice under this Appointment shall be in writing and given by sending the same by registered post to the other party. Notices shall take effect when they have been received by the other party (subject to proof of delivery).

23. In the event that you default in payment and you fail to remedy such breach within 7 days notice thereof then we reserve the right to give you written notice to suspend performance of our Services until such time as payment is made or indeed to terminate performance of such Services.

24. Any termination by us shall discharge us from any liability or further performance of this Appointment but shall not affect any rights and shall be without prejudice to liabilities or obligations which have accrued or become due prior to the date of termination.

Copyright

25. Copyright in all drawings and documents prepared by us for delivery to you shall remain vested in us but you shall have a licence to use the drawings and documents for any purposes for which they were produced by us, subject always to us having received full payment for the Services in accordance with the provisions of this Appointment. We shall not be liable for the use of any such drawings or documents for any purpose other than that for which the same were prepared by us.

Jurisdiction & Disputes

26. Either party may refer any dispute arising under this Appointment for determination by an arbitrator to be agreed between the parties, or in default of agreement, shall be appointed upon the application of either party by or on behalf of the President for the time being of the Royal Institution of Chartered Surveyors.

27. These Terms and Conditions and our appointments are governed by English Law.