

Bruce Edgar, IHBC

Conservation and Urban Design officer
Reading Borough Council
Civic Offices
Bridge Street Plaza West
Bridge Street
Reading RG1 2LU

Dear Mr Edgar,

I write with regards conditions 10 & 11 of planning permission 180758 for Addington House, 73, London Street, Reading, RG1 4QA. I am the project manager and architect, taken on by the building owner, David Hasler. Part of my role is to liaise with the BREEAM Assessor (Ian Bacon of Blewburton Limited), to assist with the preparation of evidence for submission to the BRE for both the Design Stage and Post Construction Stage BREEAM assessments.

Ian Bacon has undertaken a thorough pre-assessment of the project, which has also involved Part L1B of the Building Regulation SAP calculations. This has seen two key issues come to the fore as detailed below:

1. The Ene03 category of BREEAM Domestic refurbishment (Energy Efficiency Rating Post Refurbishment) has a mandatory requirement for a dwelling to gain at least two credits for a 'Very Good' rating, however, due to the restrictions placed on the development through its listed nature, this target is not being reached (1.5 credits are being gained). In Ian Bacon's opinion as a Part L SAP assessor and BREEAM professional, it will not be possible to take the dwellings to the level required.
2. Early stage advice has been offered and a Heritage Impact Assessment produced, which has been approved by RBC. The proposals within this document have been incorporated into the proposed scheme to ensure the adequate ventilation of the building fabric, to ensure there are no future issues of damp in the building. This is part and parcel of a BREEAM assessment and therefore to be welcomed. Again, there are additional actions that BREEAM requires as mandatory to prove that these issues have been taken into account, but these are, in our opinion, overkill in a situation such as this and we would like propose a way round this that would involve the LPA confirming their acceptance of the approach. Full details of the requirements are covered in Appendix 1.0, below.

The BREEAM Domestic Refurbishment Guidance document states the following:

'Recognising the limitations subject to buildings within a conservation area or with a listed status, where building control set limitations on the scope of works due to this status, the project team should work with their Local Authority conservation officer to deliver the minimum standards as far as practically possible. This can be demonstrated by producing a report with confirmation from the Local Authority conservation officer that the work carried out goes as far as is practically possible within the restrictions of any statutory obligations.'

With this flexibility in mind, we would like to detail the approach we are proposing to the two issues above and invite your comments as to whether you are happy with this, or require additional actions to be undertaken. We would be happy to receive your feedback in either letter or e-mail format.

1. Ene03 Energy Efficiency

We believe we have taken the most appropriate route to not only show compliance with Part L1B of the Building Regulations, but to also maximise the energy efficiency of each of the proposed apartments, within the confines of the listed status of the building. A summary of our proposed approach is presented below and follows the advice supplied in Historic England's, 'Energy Efficiency and Historic Buildings - Application of Part L of the Building Regulations to Historic and Traditionally Constructed Buildings (2017)':

1. G/F element – it is not possible to adequately add any insulation here due to the construction of the building;
2. External walls – these are solid brick and the Heritage Impact Assessment has advised against insulation to prevent issues of damp arising;
3. Roofs – upgraded insulation to be added into appropriate loft spaces;
4. Windows – All to be retained as part of the listed nature of the building (potential to replace some of the rear units still to be confirmed);
5. Electric heating for space and hot water as opposed to mains gas due to the continued greening of the national grid (even though this does not show a benefit in current Part L1B analysis software, but will do from 2022);
6. Mechanical Heat Recovery Ventilation (MVHR) to be installed in all apartments;
7. No installation of solar PV as not appropriate on a listed building.

The most efficient form of electric based heating has been proposed and we feel there are no further options to improve the energy efficiency of the apartments available given the constraints of the building.

As previously detailed, this does not quite yield the required credits for a BREEAM 'Very Good' rating, but if you are happy to accept the best endeavours, we BREEAM will allow this approach and not apply the mandatory requirement.

2. Hea05 Ventilation

Under this category, BREEAM has a mandatory requirement to gain a single credit and for this, in a historic or listed building, BREEAM guidance states the need for the following:

Where an assessment is carried out to establish the current levels of air tightness and structural moisture prior to the specification of fabric measures and heating systems. The assessment should establish the appropriate level of ventilation for the building, based upon:

- a) *the minimum ventilation requirement to meet that set out in Building Regulations Approved Document Part F*

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b) ventilation rates in all habitable and inhabitable spaces are sufficient to allow moisture are sufficient to allow structural moisture to be dealt with effectively. This may be required by Building Regulations Approved Document Part F where the structure or fixtures needs higher levels of ventilation in order to deal with moisture levels.

We feel that this is overkill in this situation and that given the approach to insulation, glazing and MVHR detailed above, it will be sufficient to comply with Part F of the Building Regulations in this situation without the recourse to air testing and measuring the structural moisture of the building elements.

If you are in agreement with us, then we could proceed without the expensive and time consuming testing regime detailed above, or perhaps you could suggest other options that would satisfy RBC that ventilation will be properly designed and installed in the apartments in this building?

In short, our client is keen to do the right thing and to deliver a credible BREEAM assessment, so we would welcome any feedback and confirmation you are able to offer and both Ian Bacon and myself are more than happy to further discuss over the phone or via a Teams/Zoom meeting if/as required.

Yours sincerely,



Inigo Aranguena

K2 Consultancy

Ref	Terms	Description
CN4	Requirements for Historic Buildings	The majority of historical buildings are constructed of porous materials that both absorb moisture and allow it to escape. Ventilation stops this moisture building up in any one place and causing damage and problems with condensation and mould. However, historical buildings typically have high levels of air infiltration leading to discomfort and heat loss. Historic buildings however also typically require a higher level of infiltration to remove structural moisture in the absence of impermeable damp proofing. The refurbishment should be designed to meet the requirements of Building Regulations Part F section 3.1.1 – 3.1.6 and reference is made to the guidance provided in: – The guide to building services in historic buildings, CIBSE, 2002 – BS 7913: Guide to the principles of conservation in historic buildings – Building Regulations and Historic Buildings, English Heritage 2004 – Guide for Practitioners, conversion of traditional Buildings, application of the Scottish Building standards, Historic Scotland, 2007 One credit is awarded: Where an assessment is carried out to establish the current levels of air tightness and structural moisture prior to the specification of fabric measures and heating systems. The assessment should establish the appropriate level of ventilation for the building, based upon: – the minimum ventilation requirement to meet that set out in Building Regulations Approved Document Part F – ventilation rates in all habitable and inhabitable spaces are sufficient to allow moisture are sufficient to allow structural moisture to be dealt with effectively. This may be required by Building Regulations Approved Document Part F where the structure or fixtures needs higher levels of ventilation in order to deal with moisture levels. Two credits are awarded where: The first credit is achieved and where the following testing was also carried out in order to develop the ventilation and air tightness strategy for the building: – pressure testing was carried out before and after refurbishment in accordance with the appropriate standard – temperature and humidity is monitored before and after refurbishment
CN5	Appropriate standards (where applicable)	Pressure testing standards: – ATTMA (the Air Tightness Testing and Measurement Association) Technical Standard 1
CN6	Scotland and Northern Ireland	The assessment of dwellings in Scotland and Northern Ireland are expected to meet the requirements of Building Regulations Approved Document F, England and Wales.
CN7	Air permeability	Natural air permeability rates vary between buildings. Building regulations encourage lower permeability as does the BREEAM Domestic Refurbishment scheme where combined with adequate ventilation, with higher ventilation requirements for more air tight buildings (following the principle of 'air tight, ventilate right') in accordance with Approved Document Part F 2010.



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