By Email only - 6 February 2025

Koha Architects - Antony Morvan

Property Inspection Report (Damp & Timber)

Our ref: 0024/25

Client: Mr T Boulton - Music-Ability CIC

Property Inspected: 10 Parade Street, Penzance TR18 4BU

Date of Inspection: 5th February 2025

Surveyor: David Reynolds CSRT CSSW

Instructions from client : Carry out an inspection at the above property with regard to **damp problems and / or timber infestation and decay**, and also to provide cost indications for any specialist treatments which may be necessary or prudent. Detailed below is a summary of my initial observations and any remedial works proposed on the basis of this initial inspection.

Please let me know immediately if there are any omissions or if you feel I have misunderstood your instructions or requirements in any way. If you require a more detailed inspection to be undertaken or if you require fuller written details of this initial inspection I will be pleased to provide an estimate or quotation for the service you require.

Any reference to Left or Right are given as if facing the front of the property, from outside.

Survey conditions.
At the time of inspection the property was in use but unoccupied at the time.

The weather was cool and dry following 3-4 weeks of generally wet and unsettled weather.

The Relative Humidity (RH) within the building (main hallway) was measured at 78.7% at an ambient temperature of approximately 12.5 Degrees C.

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Section 1. - Inspection, Observations and Comments.

The property is a large detached building of local historic interest, assumed to date from the mid-1800's with main walls constructed traditionally of local granite.

The rooms internally are used variously as offices and music studios etc.

I understand that the building is to extensively refurbished in 2 or more phases over the next few years.

Damp Problems.

The following observations and comments are based on my inspection on the date stated above. It should be noted that some forms of dampness may be undetectable during or after dry weather conditions or may be suppressed by heating within the property. Conversely, exaggerated damp readings might be obtained during a survey after particularly damp weather or when a property has not been adequately heated or ventilated for some time. These variable factors mean that a change in conditions after this survey may possibly result in changes in the degree of visible or detectable damp problems, for better or worse, in any given set of weather or humidity conditions.

Use and limitations of an electronic damp meter.
Inspection and testing is undertaken internally in a non-invasive and non-destructive manner. Damp testing was undertaken using a **Protimeter Surveymaster** electronic conductivity / resistance meter to test surfaces such as plaster or masonry. This type of damp meter is a standard and very important diagnostic tool for surveyors, measuring the resistance or conductivity of a particular material but are specifically calibrated to provide an **accurate reading in timber only**. When used to test masonry and plaster they **do not** provide a reading of the actual moisture content but simply provide an indication of the resistance or conductivity. In the hands of a suitably experienced damp surveyor and in conjunction with other visual clues these damp-meter readings provide very important information including dampness patterns and anomalies which form the basis of an initial non-invasive diagnostic process. Very often these damp-meter findings provide evidence of a previous damp history rather than to the existence of dampness at the time of survey. Any reference to "detectable dampness" is simply an experience-based assumption that the meter-readings suggest dampness to be present, or that salts are present as a result of dampness past or present

Other physical tests can be used additionally to aid or confirm a diagnosis, including chemical salts-analysis testing, Calcium-Carbide testing of samples to establish a true moisture content of masonry, and laboratory-based Gravimetric analysis to identify various things including the exact proportion of free moisture and natural hygroscopic moisture present. These physical tests are not generally considered necessary unless my interpretations from this non-invasive survey are inconclusive or are contested. These tests have **NOT** been allowed for in the quoted survey fee and would be chargeable additionally if requested.

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RICS, Historic England and PCA Joint Statement Document (September 2022)

“Investigation of Moisture and its Effects on Traditional Buildings” - I endeavour to comply with the guidance and principals within this document, which promotes best practice for surveyors, specifiers and Contractors involved with buildings of traditional construction particularly those with any historical significance. It has a strong focus towards correct diagnosis, ethical and unbiased reporting, and a proportionate and measured response to the presence and effect of dampness.

Basement

There is a basement area beneath much of the property, which were used as office space until relatively recently, however the walls are extensively damp as a result of ground moisture and associated salt accumulations, and also due to generally poor heating and ventilation. There is no obvious evidence of active water ingress or puddling, however the risk of ground saturation and hydrostatic pressure exists.

I understand that renovation of the basement area is not part of the first phase of refurbishment, however in due course there will be a requirement for general damp-proofing or for a full waterproofing system depending on the proposed use and the general expectations.

Rising Damp.

Rising Damp can be briefly described as the absorption or upward movement of moisture from the ground caused by capillary action. Very often, the amount of moisture is relatively slight, or an occasional occurrence only during wet ground conditions, however over a long period of time the continuous rising damp process typically results in accumulations of soluble minerals (particularly chloride and nitrate salts) within the wall and the plasterwork.

Where inspection and testing of plaster was possible evidence of dampness was noted to the lower parts of the internal wall surface within ground floor rooms, consistent with contamination of the masonry by hygroscopic salts as a result of rising damp during the history of the building, apparently due to the absence or bridging of a damp-proof course. These salts have migrated into the internal plaster to varying heights and degrees.

Remedial work in this particular case would typically involve the removal and appropriate replacement of all damp and contaminated internal plaster, possibly in conjunction with additional measures to prevent or reduce active rising damp.

Dry-Linings.

In many areas the internal wall surfaces appear to be lined with boarding or other finishes rather than a conventional plaster finish. Intentionally or otherwise, these linings may to be concealing damp or defective walls or defective plaster. Linings concealing dampness can potentially create damp and humid conditions ideal for the growth of various wood-rotting fungi which can sometimes cause problems to buildings.

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As part of refurbishments, further inspection is recommended in order to assess the conditions behind all wall linings, and unless it can be shown that there is no risk of dampness or decay then the linings should be removed, and the walls re-lined with a suitable system or replastered appropriately.

Penetrating damp (rainwater penetration)

External Observations

Inspection was limited to visual observations from ground level. The stonework appears generally good and has been repointed in relatively recent decades using a hard cement pointing in a typical local style. This pointing appears to have been carried out expertly and with close attention to detail, and should be largely weatherproof although should rainwater penetrate the walls the cement will restrict the rate of evaporation which can potentially lead to accumulative damp issues.

There are some external masonry features including a granite ledge around first floor level which could potentially trap rainwater, and there is at least one area internally showing evidence of damp consistent with this.

I understand that the exterior was historically rendered rather the exposed stone. I understand that decisions are to be made whether to repoint the exterior using lime, or whether to render one or more walls as a gesture to its historic appearance and status.

Internally

There are a number of areas internally where there is detectable dampness and some areas of visual spoilage. This spoilage and the damp-meter readings I obtained will be due primarily to the presence of hygroscopic salts which have migrated from the walls, most likely from historic causes however I cannot eliminate the possibility of some active on-going rainwater ingress being part of the cause.

Internal Plasterwork.

Internal plaster appears to be of various types and ages throughout including some old or original lime plaster and more modern 20th Century cement render and gypsum, plus areas where walls have been dry-lined.

Most areas of plaster appear sound and satisfactory however as described above there are areas of internal plaster which have a history of damp issues and will typically have become salt contaminated as a result.

Where salt contamination exists as a result of rising damp, rainwater ingress or migration of salts naturally present in the masonry, this contamination will be permanent. It is important to appreciate that the *hygroscopic* nature of these salts means that contaminated plaster or masonry may remain permanently or potentially damp to some degree, particularly during wet weather or high humidity within the building. This means that contaminated areas may still exhibit damp symptoms similar to the original problem even after effective damp-proofing work has been carried out and all 'free' moisture has dried out. This is why correct remedial replastering is often a very important element of successful renovation work.

In an old building, particularly one of historic significance, there is often a desire or requirement to use traditional lime plaster similar to the original material during renovation / restoration work. However where dampness has been a problem and residual salts may be present, I would recommend a careful assessment prior to the application of a lime plaster directly to potentially contaminated surfaces, as premature failure from salt migration can result.

Woodworm infestation and fungal decay.

Roof timbers.

I inspected timbers which were readily exposed and accessible within the main roof void.

These timbers appear in very good condition for their age. I noted some evidence of very slight and scattered woodworm infestation however this does not appear obviously active and has probably been treated at some time.

There is some localised damp staining in several areas which all appears to be historic as far as I can tell, probably pre-dating the existing modern roof coverings.

Inspection was restricted by a thick layer of fibreglass insulation, and no comment can be made regarding the condition of timbers not readily exposed and visible.

Upper floors.

No inspection was carried out to these floors due to the presence of fitted floor coverings, furniture and stored items throughout.

In a property of this type and age we might typically expect some evidence of woodworm infestation however this is usually minor and generally restricted to the sapwood edges of floorboards and joists and is rarely a serious problem or threat, although it would be sensible to budget for possible timber treatment as part of refurbishment work.

The bearing ends of floor joists can potentially be affected by decay in areas where damp problems may be present or existed historically. Internally there is no obvious evidence to suggest damp problems of a significance likely to have caused serious decay issues, however we cannot know for sure without full exposure work and therefore a contingency is recommended.

Timber ground floors.

Comments and restrictions are generally as per upper floors, however there is a much greater likelihood of dampness and associated decay, and I would expect a requirement for some repairs and treatments around the main perimeter of the ground floor particularly.

Timber-framed walls.

Some walls within the property are believed to be timber framed (studwork). No inspection was carried out to timbers within these walls. Where timber-framed walls are constructed directly off old solid floors, or sub-ground floor, or in contact with external walls affected by dampness, then there is a possibility or risk of decay. Wood-boring beetle infestation may also exist within timber-framed walls.

Internal joinery (skirtings, door frames, staircases etc).

Where walls and / or floors have a history of damp problems (including condensation) this may have resulted in some degree of decay to any timbers in direct contact. The condition of all internal joinery timbers should ideally be fully investigated, and treatment, repairs or replacement carried out if found to be necessary.

Section 2. - PROPOSED SCHEDULE OF WORKS

I will assume that a Main Contractor will be appointed in due course to undertake the refurbishment.

If required I would be pleased to offer my services on a consultancy basis to assist in identifying particular damp areas / risks more specifically, and provide input which may facilitate the selection of the most appropriate remedial works for specific areas.

Once necessary exposure work has been completed I would be pleased to advise further on the cause/s and extent of timber decay or infestation, and any remedial treatments or repairs required.

I would also be pleased to assist in the specification of the basement renovation with regard to protection from dampness or water from the ground.

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Scope of inspection (Please read carefully)

Timbers. Inspection was carried out in a non-disruptive manner to readily visible and accessible areas of the property only, and restricted to visible structural timbers within the roof, floors and staircase unless indicated otherwise in the report. Depending on construction and site conditions inspection of some timbers may be of a remote or cursory nature only. Unless otherwise stated, inspection excludes external or internal joinery. Where inspection is restricted by furniture, floor coverings or other factors it may not be possible to lift floorboards to inspect sub-floor conditions, and unless otherwise stated inspection of floors may be limited to turning back any loose floor coverings to inspect the top surface of floors in localised representative areas.

Dampness. Inspection for dampness, where requested, is based on a visual inspection internally, and externally from ground level, supplemented by tests to the internal surface in any accessible random representative areas using a conductivity (Protimeter type) moisture meter as an aid to diagnosis, and only to the areas considered to be at risk of rising damp or where visual evidence indicates penetrating damp or other damp problems. Full confirmatory testing was not carried out. Should full confirmatory testing be required this would typically involve removal and laboratory testing of samples of plaster and masonry, for which written permission would be required together with an appropriate fee.

Where inspection was restricted for any reason a further exploratory or precautionary inspection is recommended at the earliest opportunity, and any delay may possibly lead to more extensive remedial works should unseen active problems have been present. In particular, timbers which may have been affected by dampness at any time, past or present, should be considered at risk of decay and further investigation is most especially recommended.

Unless otherwise stated, the term 'woodworm' refers in this case to infestation by Common Furniture Beetle - *Anobium punctatum* which is the most common wood-boring beetle to affect houses in this country. 'Wood-boring weevil' refers to *Euophryum confine*, or *Pentarthrum huttoni*, which usually only infests timber affected by fungal decay. The term 'wet-rot' usually applies to the wood-rotting fungi *Coneophora puteana* and / or *Asterostroma*, which are the most common species although there are many others, but all require the same treatment measures. 'Dry-Rot' refers only to the true dry-rot fungus *Serpula lacrymans,* which can be a more significant problem and may require more extensive remedial treatment than wet-rots.

I trust that the information in this report is sufficient for your present requirements, and also that you will find these proposals and any quotations satisfactory and highly competitive. If you have any queries or concerns at all, or indeed if you would like us to proceed with any works proposed on the present basis, then please don't hesitate to contact me.

D. Reynolds

David Reynolds **CSRT CSSW –** Surveyor & Director

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