atlas

SURVEY & BUILDING SERVICES LTD

Survey - Preservation - Maintenance - Improvement

Instructed by: (owner)
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Report Produce : 1 July 2021

Subject Property: Sommerville, Hargate Drive, WA15 0NL **Ref No:** 24300

Clients Instructions as per email dated: 18/06/2021

- Inspect Ground floor & Upper floors for Damp & Associated Timber defect.

I hope we have interpreted your instructions here & within the report correctly but if it would appear that we have not then please contact Atlas office immediately for any clarification

Surveyor: Brandon Wagstaffe

Any enquiries regarding the content of your report. brandonw@atlasbuild.co.uk

Lectros International Ltd | PCA Property Care Association | FMB The sign of building quality | Wall Tie Installers Federation | TrustMark Government Endorsed Standards | ThorHelical Remedial APPROVED INSTALLER | As recommended on thebestofmanchester

Description of property:

A traditional three-storey detached property of brick construction with pitched tile roof covering.

Orientation of property:

All left, right, front & rear references are taken from standing outside the property in the road facing the main front entrance.

Weather Conditions:

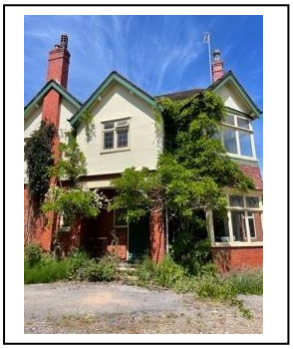
Sunny & Dry.

Occupancy:

The property owner was not in attendance at this time of inspection and therefore our normal pre-inspection enquires could not be completed. Any assumptions made within our report should be verified.

Condition of property:

At the time of inspection the general maintenance of the property in our opinion was found to be in poor condition and heating was not in operation at this time.



Limitations & Restrictions:

The property was occupied with furnishings, fittings & floor coverings which obviously restricts our inspection in most areas. Our inspection and subsequent opinions are based upon the accessible parts of the structure that were readily available and examined by us at the time/day of survey and from this single non-disruptive visit. Our inspection did not include non-structural joinery timbers, however where decay & infestation is observed in these items they will be mentioned within the report as areas of concern. No inspection was carried out of any built in or concealed timbers. Areas where a full inspection could not be carried out will be defined in the report a “limited” or “no access” and the opportunity is available upon request for a further inspection once these areas are made accessible in the future.

Our inspection excludes out buildings such as garages, sheds, stores & conservatories unless specifically requested for inclusion in your instructions. We may comment on other aspects of the building which may have a direct influence upon damp &/or decay, and are within the capabilities of our surveyor. These will only be mentioned in brief without disruptive investigation.

Scope of survey:

A ground and upper floor level visual inspection was undertaken to identify areas of potential damp ingress and surface failure. Internally, tests to various accessible ground floor wall and skirting board surfaces were made with the aid of an electronic moisture meter (Protimeter) which is non-disruptive to wall coverings. A Protimeter is calibrated to test moisture content of timber but is also useful to give indicate elevated readings in wall plaster which may be consistent with damp. This may help form a moisture profile. A Hygrometer was used to help with readings of air moisture content (condensation).

Observations:

EXTERNAL

- Roofline guttering showed signs of rainwater staining & blockage. Principal roof ridge caps are out of alignment with missing pointing to most areas.
- Poor cement mortar pointing and porous brickwork was evident together with mould/moss growths suggesting mortar or brickwork to be holding moisture. Evidence of settlement in brick coursing to all elevations.
- Render upper elevations significantly deteriorated. Wide scale cracking across the building's surface. Sections of render missing, evidence of patch repairs suggests historic failure associated with damp ingress. Large areas of mould visible to East Elevation over single storey lean to.
- Window casements – Widespread failure of timber casements. Delamination of cills and surrounds. Signs of significant historic damp ingress and lack of ongoing maintenance.
- Drips or throating's beneath the masonry window sills were seen to be eroded and are likely to be a source of moisture ingress (through capillarity) beneath their seating.
- The original Damp Proof Course (DPC) to various areas was found to be (to the most part) visibly missing or defective. Evidence of rising damp to all elevations.

Observations:

INTERNAL

- A visual inspection of the internal walls revealed bubbled or peeled wall coverings to most areas.
- A 'Black-Spot' mould (Aspergillus niger) was evident throughout the property.
- Poor room ventilation was noted to various areas throughout the property. Hygrometer readings taken showed an air moisture content / relative humidity of (67%) which is considered high. Protimeter readings taken from skirting board level then progressing up the timber skirt & wall surfaces to many areas revealed high readings of damp. Wall plaster appeared hollow when knocked throughout the building. Internal timbers at floor level in most areas distorted suggesting damp penetration.

Discussion & Conclusion:

The survey works carried out show that relative patterns of moisture gained from timber skirt & wall plaster appear to be as direct result of long term deterioration in the building's fabric allowing moisture to penetrate.

- Widespread failure in the building's rainwater goods has led to water streaming down the face of the building causing its mortar joints to erode. The level of erosion would suggest long-term neglect,
- Open jointed and porous brickwork noted will allow dampness to hold and so either create an internal 'cold spot' or allow rainwater to penetrate.
- The eroded masonry sills are allowing rainwater to run down the porous masonry face and ingress into the building. Widespread damp is visible at window edges.
- The constant elevated patterns obtained from skirt & wall surfaces are indicate rising damp. The original damp proof course was not visible to many areas likely having eroded away. The timbers at floor level are distorted.
- Wall plaster condition is consistent with rising damp. Ground salts are known to be highly hygroscopic which means they can attract natural & excessive moisture (condensation) from the air and plasterwork will delaminate from the substrate as a result. The plaster in the property is hollow to a level of 1.5m – 2.0m which would indicate significant failure.
- High relative humidity (RH) recorded within the property would indicate heavy condensation levels consistent with above and below ground damp ingress. Black spot mould growth visible throughout the property supports this assertion.

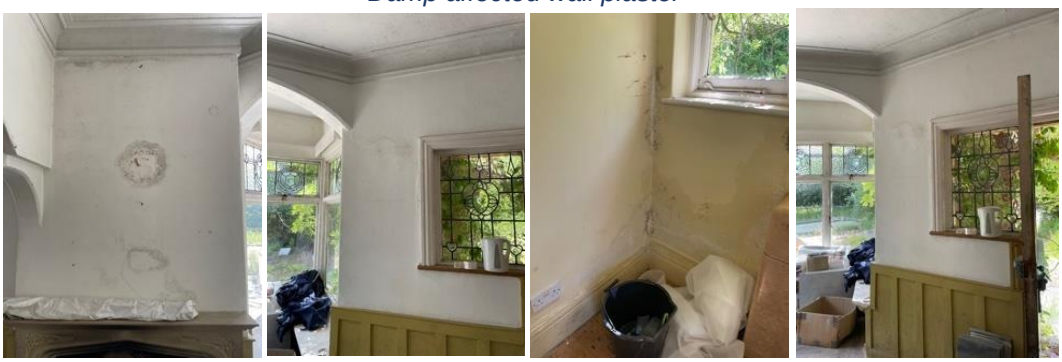
Our Recommendations:

- Replace rainwater goods to roof perimeter. Replace vertical downpipes serving same. Ensure gulleys at building perimeter are clear of debris and free flowing.
- This report was limited to a ground level visual survey of the principal roof, appropriate access will be required for more intrusive investigative work. Pending a more thorough investigation we would recommend the roofs ridge is inspected for signs of erosion and replaced where necessary.
- External brickwork is in poor condition. We would recommend the building is repointed in its entirety. We would caveat that there do appear to be areas of settlement which would require further investigation by a structural engineer prior to reparatory works being carried out.
- The eroded sill(s) are natural stone and repair is likely to be unfeasible. We would recommend their replacement.
- Installation of a chemical damp proof course to affected areas to give 20-year manufacturer product guarantee & 10-year GPI Insured Guarantee.

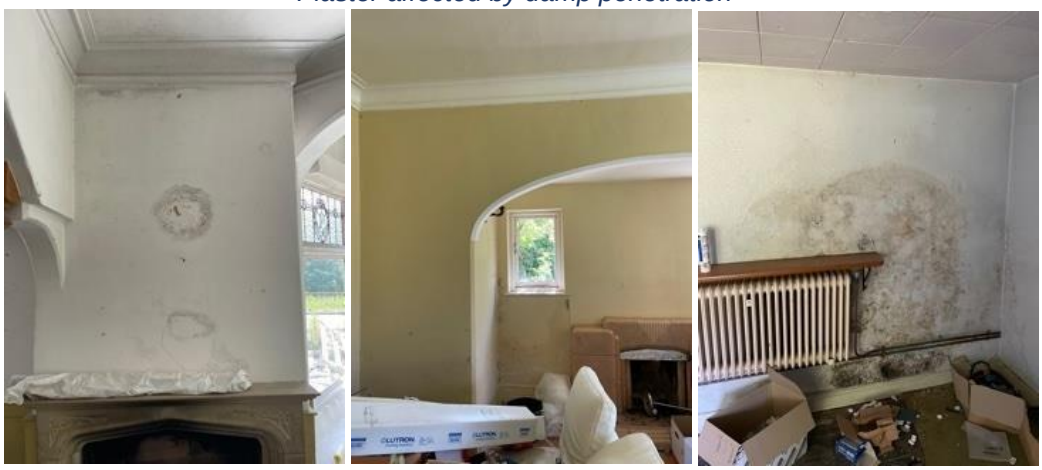
- Internal plaster and timbers should be removed as a matter of course to prevent further damp transmission. Given the condition of the plaster/ level of mould growth within the property we would recommend plaster to all internal / external walls be removed. Replacement of affected wall plaster should be carried out using a Cavity Membrane Tanking with a dry-line plaster skim finish. This will fully prevent the transmission of ground salts or damp penetration and will also create a better surface temperature helping with potential condensation related problems.

- Poor room ventilation & adequate back ground heating as mentioned should be improved throughout the property. Replacement windows should be fitted with trickle ventilation and air bricks in the property replaced where appropriate.

Damp affected wall plaster



Plaster affected by damp penetration



GROUND FLOOR TIMBERS

Scope of survey:
To inspect ground floor timbers and windows for possible decay from fungal attack or wood-boring insect.

Limitations of inspection:
Inspections are restricted to those timbers accessible at the time of or surveyors visit within the areas covered by the instructions received from the client. It is inevitable that there are concealed timbers which cannot be inspected without fully opening up, and in occupied properties, furniture, floor coverings and effects further restricting the inspection of timbers. Restricted areas will be mentioned and upon request, we will arrange for the re-inspection of any timbers not accessible at the time of original visit provided these timbers are exposed to us. If we are to carry out any works to the property, then you must request this re-inspection in writing before we attend.

Areas of access: An endoscope camera was inserted through airbricks where possible although obviously restricted to timbers local to airbricks only. Additional access was provided by the contractor through the removal of a section of floor at the junction with the bay window to the South West Elevation. It is not possible therefore to make absolute comments on the general condition of all other embedded timbers in the property.

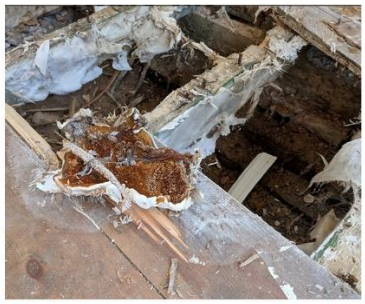
Findings:

- The timbers exposed and inspected on the ground floor were found to be severely decayed and affected by Serpula lacrymans (dry rot). **See photo**
- 4no. Endoscopic images taken reveal presence of extensive dry rot in floor timbers at floor/external wall junction. **See photo**
- Substantial ‘spring’ in the ground floor consistent with deterioration in wall plate and floor timbers.
- Extent of fungal infection and long term exposure to damp through the absence of a DPC to the building’s perimeter would suggest more widespread failure.
- Sub floor ventilation around the perimeter of the building was found to be inadequate, air bricks few in number and blocked with debris to all areas.

Discussion & Recommendations:

- Pending more detailed investigation, provisional allowance will need to be made for the replacement of all supporting timber beams and floor joists to ground floor suspended floors.
- Internal wall plaster will need to be removed to assess the extent of fungal spread. Treatment of non-affected areas will be necessary to prevent further infestation.
- Sub floor ventilation will require improvement with the installation of 10 No. 9x3” high flow bricks to allow a complete change of air per hour to under floor areas.
- Ventilation ports/bricks should be cleared on a regular routine basis to maintain sub floor airflow. It is also advisable to have sub floor timbers checked on a routine basis

Dry rot in floor Joists

UPPER FLOOR INSPECTIONS

- Timber suspended floors appeared stable and shoed no significant signs of ‘spring’.
- Area of floor joisting exposed to principal bay (over affected area to ground floor) showed no signs of fungal growth or wood boring insect
- Patchy damp staining & sporadic moisture readings to upper chimney breasts in the bedrooms suggests soot (sulphate salt) contamination from the inner chimney breast flue. These soot / salts are highly hygroscopic (draws moisture from the air) have likely migrated into plaster due to past/present leak from chimney above.

Recommend the following:-

- Roofing contractor to confirm condition of chimney to ensure water tight (by others)
- Soot/salt affected plaster to chimney breasts to be hacked off and replaced with Cavity Membrane Tanking with a dry-line plaster skim finish. This will fully prevent the migration of soot/salts and will also create a better surface temperature helping with potential condensation related problems.

Internal examination of rooms showed:-

- Damp was detected to many of the bedroom walls below the windows. External walls showed elevated readings & were cold when touched.
- Ventilation throughout the upper floor rooms was seen to be inadequate which can invariably lead to heavy condensation & mould.

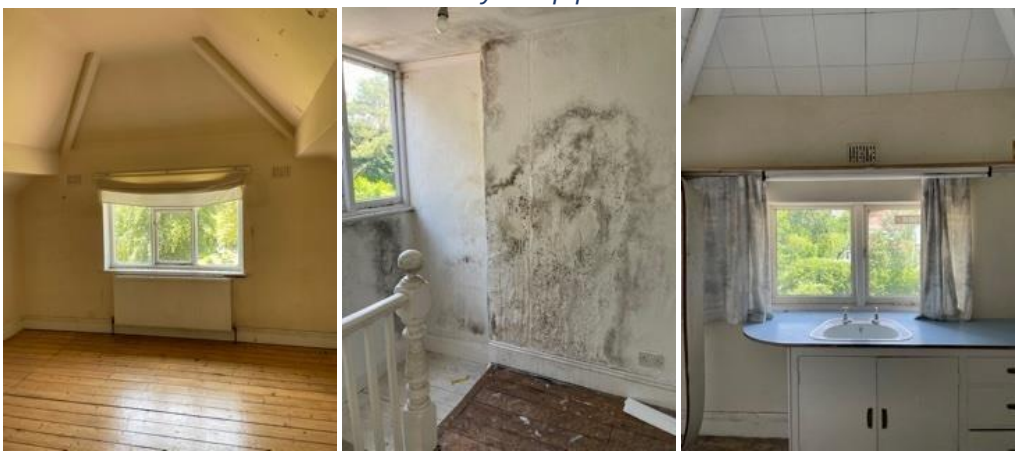
External examination of the property showed:-

- Rainwater staining local to gutters/downpipes suggests leaks (mentioned earlier).
- Porous & frost bitten brickwork & cement render to upper walls have allowed damp to penetrate or create ‘cold-spot’ internally.
- Staining below the front middle rear bedroom window suggests erosion of the rainwater drip beneath the stone sill – this can contribute to internal damp penetration.
- Significant deterioration to property’s render coat suggests removal will be necessary.

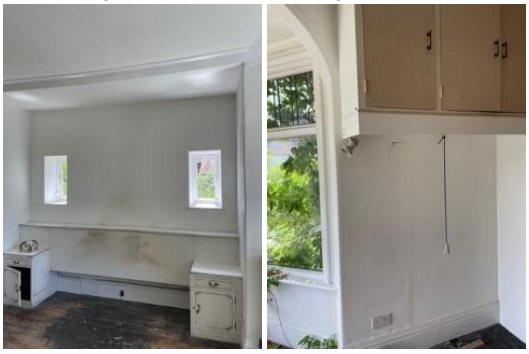
Recommend the following:-

1. Roofing contractor to assess condition of main roof & rainwater goods – a low-level visual assessment suggested renewal of both.
2. Render was seen to be in poor condition and allowing rainwater to hold against porous brickwork – render contractor to assess & quote for full re-render.
3. Install replacement stone cills.
4. Replace damp affected wall plaster to affected bedroom walls & chimney breasts using ‘tanking’ membrane with dry-line plaster finishes.

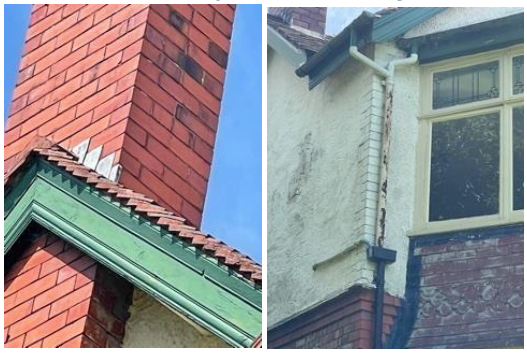
External walls affected by damp penetration



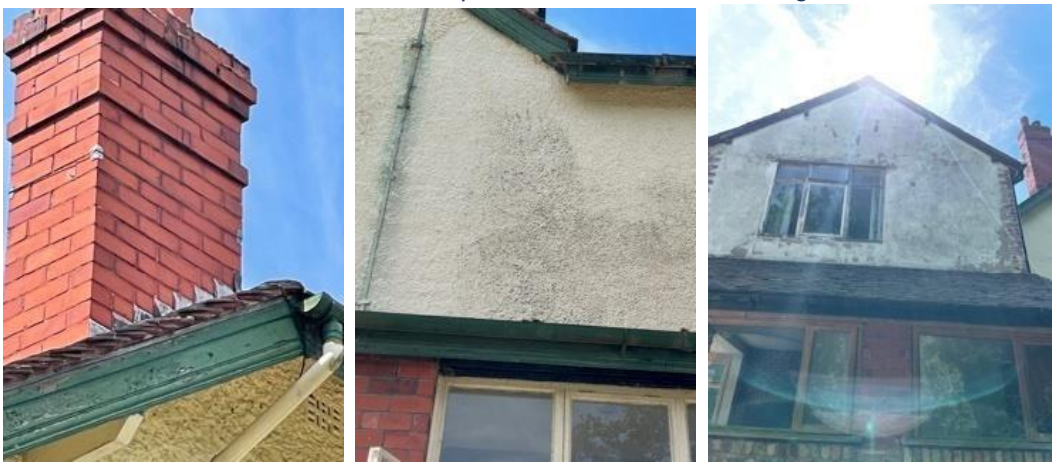
Chimney breasts affected by soot/salt



Defective chimneys & rainwater goods



Weathered stacks & poor external render coverings



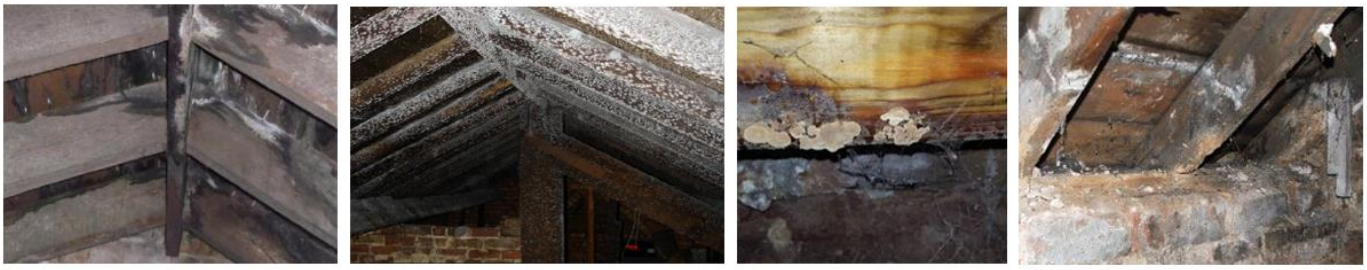
ROOF TIMBERS INSPECTIONS

Scope of survey:
To inspect roof timbers for possible decay from fungal attack or wood-boring insect. Access was limited to the principal (upper) roof only. Restricted access to lower roof areas. The roof structure was of a typical cut timber construction.

Findings

- Daylight visible through sections of the roof with significant moisture ingress to chimney stack and ridge line at junction with primary hip rafters on the Southern elevation.
- Elevated moisture levels recorded to all inspected timbers
- Absence of ventilation
- Absence of rolled or other insulation.
- The timber elements – purlins and wallplates - supporting the roof structures in contact with the brickwork at the head of the external walls contained significantly elevated levels of moisture together with widespread fungal infestation.
- The rafter feet in contact with the effected wall plate showed signs of early fungal decay, although the level of infestation was not as extensive as that to the supporting elements.
- Evidence of 'shaling' to the underside of the rosemary tile roof covering and an absence of roofing felt.

Wet rot in roof timbers



Discussion & Recommendations:

- Removal of roof coverings to assess full extent of roofing timbers – this will need to be conducted under a dry awning to mitigate further damp ingress
- Removal or treatment of affected timbers based in structural engineer's comments.
- Reinstatement of roof coverings together with suitable substrate
- Installation of vent slates to provide adequate ventilation to roof void.

Conclusion

The property has suffered extensively in the absence of a schedule of on-going maintenance. Further investigate work together with a full structural report will be necessary to ascertain the extent of damage to the building's fabric. Based on our – relatively limited – survey there appears to be widespread failure to the building's structural and non-structural timbers and outer fabric as direct result of uncontrolled damp penetration. It is highly unlikely a mortgage provider will be willing to lend against the building in its current condition and the cost of carrying out the necessary repairs may prove to be economically prohibitive.

We hope these reports and estimations are to your satisfaction and carry out an on-site meeting prior to commencement to discuss details of works.

Should you require any of the above works to be carried out or if you require any further information, please don't hesitate to contact us, as we will help in any way we can.

VAT No: 807 969 285

Individual estimations given are on the assumption that all works are to be carried out by ATLAS and subject to 3-month review. If partial works are to be carried out, total cost may be increased. All costings are plus VAT@20% where applicable.

Should you require ATLAS to carry out any of the recommended works then here are some of the services you will expect from us.

PRE-SCHEDULE:
Once you have instructed ATLAS to carry out works, we will arrange an on-site meeting with yourself to discuss **schedule, timescale, disruption** or any other queries you may have prior to commencement of works.

JOB DONE:
Once works are completed you again will be given the opportunity to inspect the completed works and sign a **satisfaction certificate**.

SIX MONTHS:
On request we will re-visit the property within 6 months to ensure that all work carried out is **still satisfactory.**