ROOF CONDITION SURVEY

28494 14 Templewood Avenue



BUILDING PATHOLOGY | PROJECT MANAGEMENT | TESTING DIAGNOSTICS

Form: 018g | Date: Jan 2024

RAM Ref:	28494
Survey Date:	20/03/2025
Project:	Coach House
Address:	14 Templewood Avenue, Hampstead
Client:	Livin Construction Ltd

ISSUE	STATUS	AUTHOR	DATE	СНЕСК	DATE
0	Final	GM	01/04/2025	SL	01/04/2025



SITE CONDITION

PROPERTY DESCRIPTION					
AGE	Circa 100 years				
ТҮРЕ	Pitched roof				
FEATURES	N/A				

SCOPE

The purpose of this report is to outline the assessed condition of the roof indicated to RAM Building Consultancy and to provide a guide as to the estimated life expectancies of the roof and outline any recommendations for the future.

This 'Snapshot' of the condition of roof area will provide data to indicate remedial works required at this time, longerterm replacements or refurbishments, and an overall maintenance program.

We have carefully considered the material build-ups, the observed external condition and the core sample results (where applicable), combined with our experience, to arrive at a realistic system of urgency / importance.

The main body (Data Section) of this Report covers the Roof in detail, and includes the survey findings, a location key, selected photographs and a brief indication of the repairs and refurbishment options, based on our conclusions.



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ROOF NO.		BUILDING / ROOF TITLE			PAGE NO.	CONDITION GRADE	PRIORITY GRADE	
	1	Roof 1			6	c	1	
	KEY							
CONDITION GRADE			PRIORITY GRADE					
A	Good. Performing as intended and operating efficiently.		4	Preventative work required, not necessarily within the 5-year planning period, * in order to minimise further deterioration and maximise the longevity of the Roofing asset.				
в	Satisfactor as intended minor dete	r y - Performing d but exhibiting rioration.	3	Desirable work required within three to five years that will prevent deteriorat of the fabric or services and/or address a low risk to the health and safety of occupants and/or remedy a minor breach of legislation.			prevent deterioration alth and safety of	
с	Poor - Exhi defects and operating a	biting major d/or not is intended.	2	Essential work r the fabric or ser occupants and/o	equired within t vices and/or ad or remedy a les:	two years that will prevent s dress a medium risk to the s serious breach of legislatic	erious deterioration of health and safety of on.	
D	Bad - Life expired and/or serious risk of imminent failure.		1	Urgent work that will prevent immediate closure of premises and/or address an immediate high risk to the health and safety of occupants and/or remedy a serious breach of legislation.				
x	Supplementary grading to 'B' and 'C' indicating where repair is impossible or unlikely, uneconomical and complete replacement will be required		ed according to the seriousness of the condition revealed and the gency associated with any breaches of legislation.					





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Inspection

Project Name	14 Templewood Avenue	Roof access	Internal
Building	Roof 1	Roof Area	600m2 approx.
Building Use	Residential	Height approx.	3 Storey
Condition Rating	D	Priority Rating	1



Core Samples

Core 1

Continuous nibbed machine-made clay plain tiles Hardwood feather edged board







White mould on timber



Damage to continuous nib.



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Core 2

Continuous nibbed machine-made clay plain tiles Hardwood feather edged board













White mould

Spalling to head of tile

High moisture readding to timber

Core 3

Continuous nibbed machine-made clay plain tiles Hardwood feather edged board



Core 4

Continuous nibbed machine-made clay plain tiles Hardwood feather edged board





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Nail snapped due to nail fatigue

RICS

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Core 5

Continuous nibbed machine-made clay plain tiles Hardwood feather edged board



Core 6

Continuous nibbed machine-made clay plain tiles Hardwood feather edged board



Existing Waterproofing

RAM Building Consultancy were instructed to review the suitability of the existing tile stock for reuse during the proposed roof refurbishment project.

The existing tiles consist of a ten inch by six-inch machine-made clay plain tiles which include a single full width nib to the rear of each tile.

The tiles have been laid or hung on the hardwood feather edge boarding which is nailed to timber rafters.

The majority of the tiles are loose laid, with perimeter tiles and occasional courses fixed with single or double galvanized clout nails, therefore mainly relying on the weight of the tiles and the nibs to keep them in place.

We would estimate the tiles have been in situ in the region of 40 to 50 years.

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More than 50% of the tiles that we removed that were nailed had a high degree of nail fatigue, resulting in many nails breaking when we tried to remove them.

Where tiles have been subjected to the elements they appeared mainly in reasonable condition for their age and type. However, the reverse face of the tiles all showed a degree of age-related degradation as a result of spalling.

Spalling is a form of covering where the surface of a material cracks, peels, or flakes off, thinning and weaking it and making it more absorbent which can then accelerate further decay.

It's often associated with freeze-thaw cycles, where water seeps into the material, freezes, and expands, causing internal pressure that leads to the surface breaking down.

This has also resulted in varying degrees of damage to the nibs on all of the tiles. This will compromise their ability to be held in position.

The underlying feather edge timber boarding had varying degrees of white mold present. White mold is a type of fungus that thrives in moist environments and can cause damage to the wood and can cause health problems if left untreated.

Moisture meter readings were taken at all locations where tiles were removed, and the roof exposed. In all locations the readings were found to be high despite the fact that a temporary roof has been in place over the property for two or three months.

For timber roofing battens, BS 5534 dictates that the moisture content should not exceed 22% at the time of fixing, and if it exceeds this level, the battens should not be used. High moisture content can lead to degradation of the battens themselves over time.

Moisture content readings were taken in all core locations. All bar core 4 registered as high, above the numerical reading, showing a moisture content in excess of 40%. Core 4, to the rear of the property, showed a reading of 33.9%. This is still relatively high considering this is the southeast elevation and in sunshine for most of the day.

Several areas of the roof had evidence of historic repairs using alternative machine-made clay tiles that differed slightly in colour from the original.

Flashings and valleys within the roof areas were covered in lead sheets. In some of these there was evidence of cracks and others had signs of historic repairs using flashing tapes and other alternative materials.

The roof has multiple dormers, mainly covered in reinforced bituminous membranes that seem poorly installed and in poor condition. These would almost certainly have been clad in lead originally and judging from their appearance and condition we would suggest that many were recovered when the property was reroofed with the existing tiles., (40-50 years)

The existing exterior mounted guttering is the half round uPVC variety and in poor condition. It is highly likely the original would have been the profiled cast iron variety.

Internally we examined the timbers and found multiple areas where serious damage to timber had occurred as a result of water ingress.

There were also indications of woodworm. We are not able to assess whether this is historic or is currently active and specialist advice should be sought to establish the current position of this element.

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Clay plain tiles



Hung on timber boarding



Tiles damp under laps



Nail fatigue



Spalling residue



White mould on timbers



Typical surface degradation



Spalling to tiles



Typical damage to nibs



Typical mould on timbers



Spalling to tiles



Typical damage to nibs



Widespread high moisture



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Split to lead detail

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Flashband repair to lead valley



Typical rotten timber





Collapsed timber on dormer



Typical rotten timber



Poor condition dormer felt



Typical rotten timber



Typical rotten timber



Typical rotten timber



Typical rotten timber

Conclusions and Recommendations

The current condition of the roof is such that we would consider it to be end of life.

In terms of the suitability of the existing tiles for reclaim and reuse purposes we would comment as follows.

The spalling of the tiles shows that they are starting to break down. This results in them becoming more absorbent and therefore more susceptible to damage from the freeze-thaw process. This will lead to further tile failure going forward.

Access to carry out any repairs going forward would be both expensive and logistically problematic. The process of repairs is therefore likely to create added defects and because of the age and condition of any reclaimed tiles used, the frequency for further ongoing repairs is likely to accelerate. For that reason, it is highly unlikely that any contractor would provide a warranty on reclaimed tiles for this project.

Our recommendation for re-roofing would be to strip the existing roof back to rafter to enable the installation to follow current building regulations and incorporate a moisture permeable under tiling membrane and new tanalised treated battens and new clay plain tiles.









