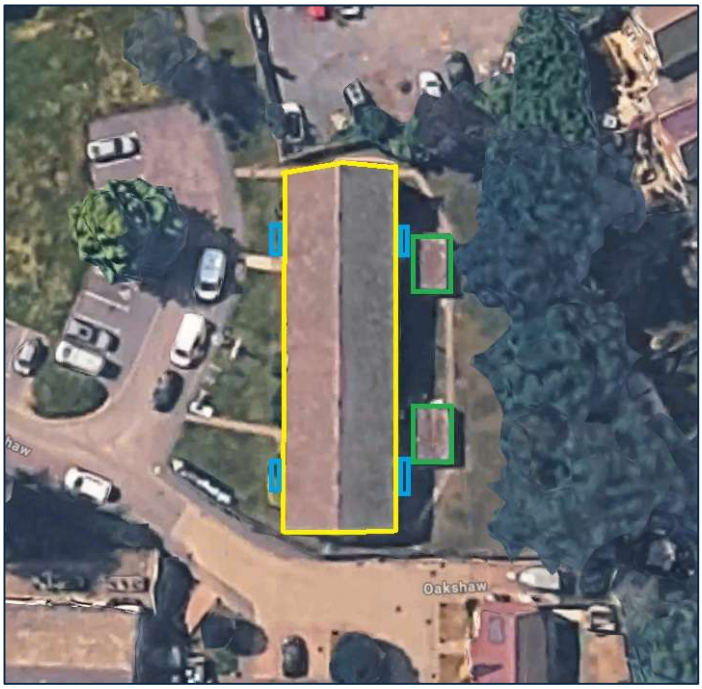
Project	Sample Report
Client Name	Sample Consultants
Site Address	137 Sample Rd, London W14
Date of Survey	14.03.26
Surveyor	Paul Connolly
Equipment	Drone 249g, Camera, Protimeter,
Scope of Work	Non-Intrusive survey of main roof, visual survey internally Roof
Weather	Dry, sunny

Aerial View



KEY

Gable to Gable Pitched Roof
Canopy Flat Roofs
Bin Shed Flat Roofs

1.0 Overview

This report has been prepared exclusively for Sample District Council to support the refurbishment of the specified roof areas at the aforementioned property. It is based on our site inspection of 17-24 Sample conducted on 9th December 2025, and should be read in conjunction with the enclosed photographs.

2.0 Survey Scope & Constraints

This assessment utilised imagery captured from a mixture of ground level, roof level, and a drone. The report notes that roof tiles were examined from the underside of the roof.

This document is not a structural report and must not be used for structural purposes. It is premised on the assumption that the existing structure is suitable for the intended refurbishment, pending further advice and confirmation from a qualified structural engineer.

3.0 Thermal Performance

3.1 Pitched Roof

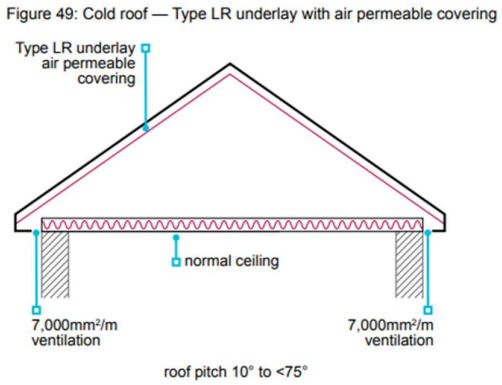
The original rafters are visible with only approximately 40mm of aged mineral wool insulation loosely laid between them. There is no insulation above the rafters or at rafter level. Directly below the rafters is the original bituminous roofing felt (sarking felt), which is now brittle. Above the sarking felt are traditional tiling battens supporting the Marley concrete interlocking tiles.

Because the total depth of insulation is only circa 40mm and there are significant air gaps and thermal bridging around the rafters, the current U-value of the roof is estimated to be in the region of 2.0–3.0 W/m^{2}K. Therefore the existing required U-Value in accordance with Building Regulations Part L2 0.35W/m2K is not being met. In accordance with Building Regulations Part L1B, the roof must be upgraded to achieve a maximum U-Value of 0.16 W/m^{2}K, and supplementary insulation will therefore be required to bring the roof into compliance.

Photo 1. Underside of interlocking tiles

Photo.2 Existing mineral wool between joists

Fig.1 Cold Roof Example



Ref: NHBC Standards

3.2 Bin Shed Roofs

The bin shed roofs cover an unheated space and are therefore exempt from the thermal insulation requirements of Building Regulations Part L.

The existing roofing system appears to consist of traditional woodwool slabs, over which two layers of bituminous roofing felt have been laid (visual survey only). This construction is visible from below and remains appropriate for an unheated outbuilding. No insulation upgrade is required.

Photo 3. Underside of woodwool slab

3.3 Canopy Roofs

The canopy roofs cover an unheated space and are therefore exempt from the thermal insulation requirements of Building Regulations Part L.

The canopy roofs are likely to be a two layer bituminous membrane system on a plywood/OSB deck.

Photo 4. Typical Canopy Roof

4.0 Condition of Roof Coverings

4.1 Pitched Roofs

The pitched roof are covered with a Marley concrete interlocking system.

The coverings are showing signs of fatigue, with chips at the end of tiles visible. There have been numerous repairs carried out across the roof area, with replacement of tiles evident. There has been reports of leaks to the properties below.

The ridge vents appear to be in a deteriorated condition and likely needs attention. The upstand and surrounding area are heavily mossed, indicating prolonged moisture exposure, and the lead flashing looks lifted or poorly sealed, which increases the risk of wind-driven rain getting underneath the tiles.

The asbestos-containing cowl vent pipe housing is showing significant signs of deterioration, with apparent weathering. There is a clear risk of water ingress into the building due to the lead around the pipe penetrations appearing to be compromised or inadequate. This condition increases the likelihood of water damage into the building.

Photo 5. Defective Ridge Vent

Photo 6. Example of replacement tiles across the roof area

Photo 7. Example of inadequate lead detailing around (asbestos containing) cowls

There are defects noted to the under cloaking of the tiles at eave level, with missing mortar between under cloaking and tiles.

Photo 8: Deficient under cloaking and deteriorated mortar joints.

The fascia soffits and PVC gutter system are relatively new, however there was evidence of dripping water at bracket joints of gutter system, and splits evident at joint between fascia boards.

Photo 9: Split visible on join between fascia boards.

Observations made from the ground floor revealed significant visible deflection in the roof structure; consequently, an internal investigation was initiated.

Photo 10: Straight lines drawn to demonstrate the deflection of the roof tiles.

The bottom course of tiles exhibited inconsistent alignment along certain sections of the roofline, resulting in a visually irregular or uneven appearance.

Photo 11:Bottom course of tiles with inconsistent alignment.

An inspection of the loft space revealed trussed rafters situated between masonry walls, extending to the underside of the sarking felt. The visible sections of the rafters did not exhibit signs of damage at the time of the survey. However, significant irregularities were noted in the rafter spacing (centre-to-centre). Approximately 900mm was measured between rafters above the loft hatch, while narrower spacings of circa 580mm were measured adjacent to the masonry walls. The installed roof battens measured approximately 40mm x 40mm. Of immediate concern, light was visible between the tiles when viewed from the underside, indicating potential water ingress, which was confirmed by the presence of moisture detected on the surface of the timber battens.

The structural adequacy of the existing rafter configuration must be evaluated against Eurocode 5 (BS EN 1995-1-1) standards. Standard prescriptive span tables, such as those published by the Timber Development UK (TDUK), are designed for typical domestic construction using regular spacings of 400mm, 450mm, or 600mm. The measured 900mm spacing significantly exceeds these standard parameters. This wider, non-standard spacing dramatically increases the required load-bearing capacity and necessitates a site-specific assessment.

Therefore, the current configuration requires verification by a qualified structural engineer. The engineer's assessment will determine the necessary remedial action, which may include several options: the introduction of additional rafters to regularise the spacing to standard 400mm or 600mm centres; the use of larger battens to increase localised strength; the installation of a structural layer such as plywood sheeting on top the rafters; or specifying a lighter weight tile system to reduce the overall dead load on the existing timber frame, or a combination of the above.

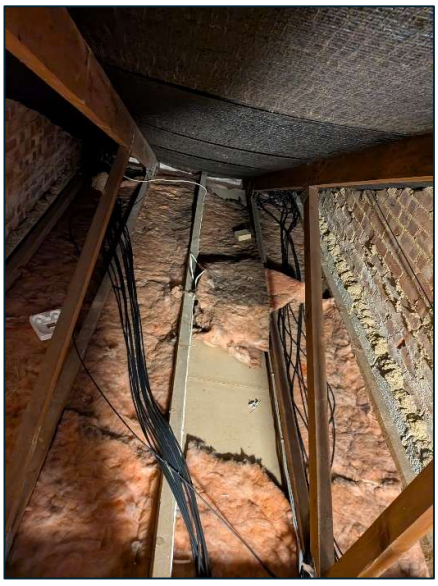


Photo 12: Example of rafter spacings

Photo 13: Distance between masonry wall and rafter

Photo 14: Example of moisture on battens

Photo 15: Example of light shining through tile joint

4.2 Bin Shed Roofs

The bin shed roofs were covered in moss and silt so a full survey was not carried out. In accordance with British Standard BS 6229:2018 for flat roofs, the recommended practice, is to perform inspections at least twice a year, ideally in autumn and spring, and after any extreme weather events.

Photo 16: Aerial View of Bin Shed

4.3 Canopy Roofs

The existing canopy roof coverings are in a dilapidated state and require complete replacement. Furthermore, the fascia exhibits areas of flaking paint, indicating a need for redecoration and maintenance.

Photos 17: Canopy Roof – Typical Example

6.0 Summary

The pitched roof at 17-24 Oakshaw exhibits multiple significant material and structural defects. Thermally, the roof is severely under-insulated, possessing an estimated U-value of 2.0–3.0 W/m^{2}K, Therefore the existing required U-Value in accordance with Building Regulations Part L2 of 0.35W/m2K is not being met. In accordance with Building Regulations Part L1B, the roof must be upgraded to achieve a maximum U-Value of 0.16W/m^{2}K, and supplementary insulation will therefore be required to bring the roof into compliance.

The existing Marley concrete interlocking tiles show signs of fatigue, chipping, and numerous past repairs, with active reports of leaks into the properties below. Specific issues were identified with deteriorated vents, which are heavily mossed and feature poorly sealed lead flashings, increasing the risk of water ingress during wet and windy weather. Furthermore, defects were noted in the eaves' under cloaking where mortar is missing, and the relatively new gutter system has leaking joints.

Structurally, the pitched roof is a major concern. A clear visual deflection in the roofline was observed. Inspection from the loft revealed highly irregular rafter spacing, measuring up to 900mm in some areas, which exceeds standard building parameters defined in Eurocode 5 (BS EN 1995-1-1). The most immediate concern for weathertightness is that light is visible through the tiles from the underside, and moisture was detected on the timber battens. Due to these significant structural irregularities, the report mandates verification by a qualified structural engineer to determine necessary remedial actions before any refurbishment can proceed.

The bin shed and canopy flat roofs are also in poor condition. The bin shed roofs, which cover unheated spaces and are exempt from thermal regulations, had limited survey scope due to extensive moss and silt accumulation preventing a full surface inspection. The canopy roofs are described as being in a "dilapidated state" requiring complete replacement. They show signs of insufficient detailing, silt buildup, and delamination of the membrane from the substrate. The associated fascia boards also require redecoration and maintenance due to flaking paint.

7.0 Recommendations

7.1.1 Pitched Roof

Proposed Works

We recommend replacing the existing pitched roof including battens, membrane and insulation back to the rafters, then insulation is to be installed between and above the joists to achieve a u-value of 0.16W/m2k. Then install membrane, battens and concrete tiles to match the existing appearance. We recommend liaising with a manufacturer who will be able to specify and design a system that will achieve a warranty for at least 20 years. Redlands (BMI) or similar. The local representative is Joseph Musungo / joseph.musungo@bmigroup.com / 07394 031 304.

A structural engineer will also need to be consulted with to advise on the structural integrity of the existing rafters and whether additional rafters, plywood/OSB, or thicker battens (or a combination) will be required prior to installing the new system.

Intermediate Actions

Erect a tower scaffold to the area highlighted below, and temporarily remove two courses of tiles to expose the wall place and investigate the area where the bottom course of tiles have exhibited inconsistent alignment.

7.1.2 Bin Shed Roofs & Canopy Roofs

We recommend contacting a supplier such as Langley waterproofing, who will be able to core sample the existing waterproofing and who will be able to specify and design a system that will achieve a warranty for at least 20 years. The local representative is Ben Timewell / b.timewell@langley.co.uk / 07761 054426.