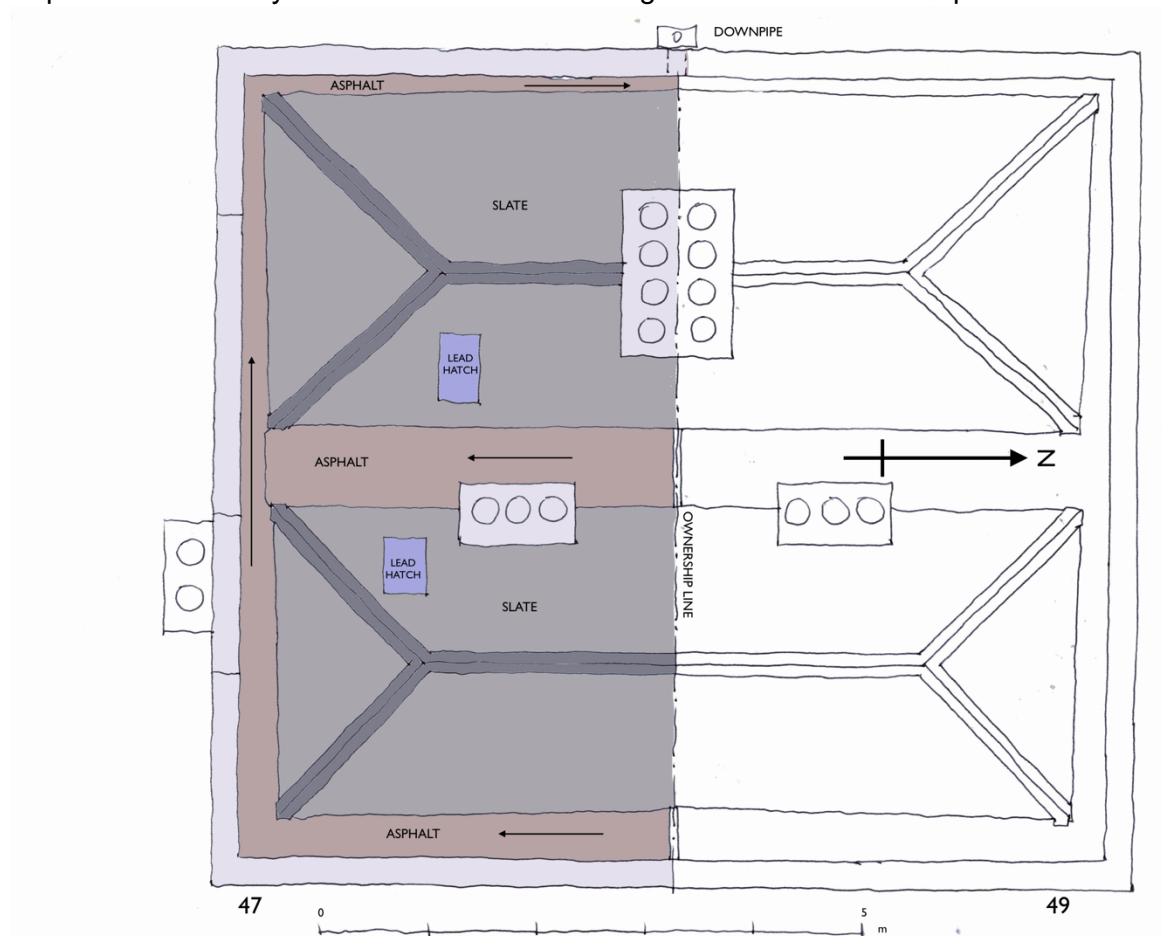


47 NORTH ROAD, LONDON N6 4BE
SUPPLEMENTARY DESIGN AND ACCESS STATEMENT IN CONNECTION WITH
LISTED BUILDING CONSENT APPLICATION HGY 2022/4382

This statement was prepared by Jon Bolter BA Arch AA Dip Cons AABC following a site inspection on 11 May 2023. The weather was bright at the time of the inspection.



Existing roof layout.



The hipped ends of the front and rear roofs, looking west.



The hipped end of the front roof looking east. Note the Portland stone coping to the front parapet and disturbance to the slating.



Southern hip to the rear roof looking west. Note York stone parapet copings, mortar infill to the hip tiles and slates held on clips.



Rear parapet gutter.



Damp staining on second floor ceilings.



Damp staining extending onto second floor walls.



Deep cracks in the asphalt linings



Failure of the recent overcoating of the asphalt to the front gutter



Centre valley looking north. Note the extensive disturbance to slating.



The large chimney stack to the rear roof.



Interior of the front roof looking to the south east.



Some of the roof timbers appear to be of oak.

Condition of the fabric

The colour of the slates suggests that they are from the Penrhyn quarry. Although there is little decay evident in the slates, a considerable number have been damaged and replacements are now held on clips. The damage appears to have been mechanical damage and is particularly evident in the bottom three courses of the slating suggesting that they were taken up and poorly refixed during repair works to the gutter linings. The limited extent of weathering suggests that the slates were new when installed, probably in the mid to late 20th century.

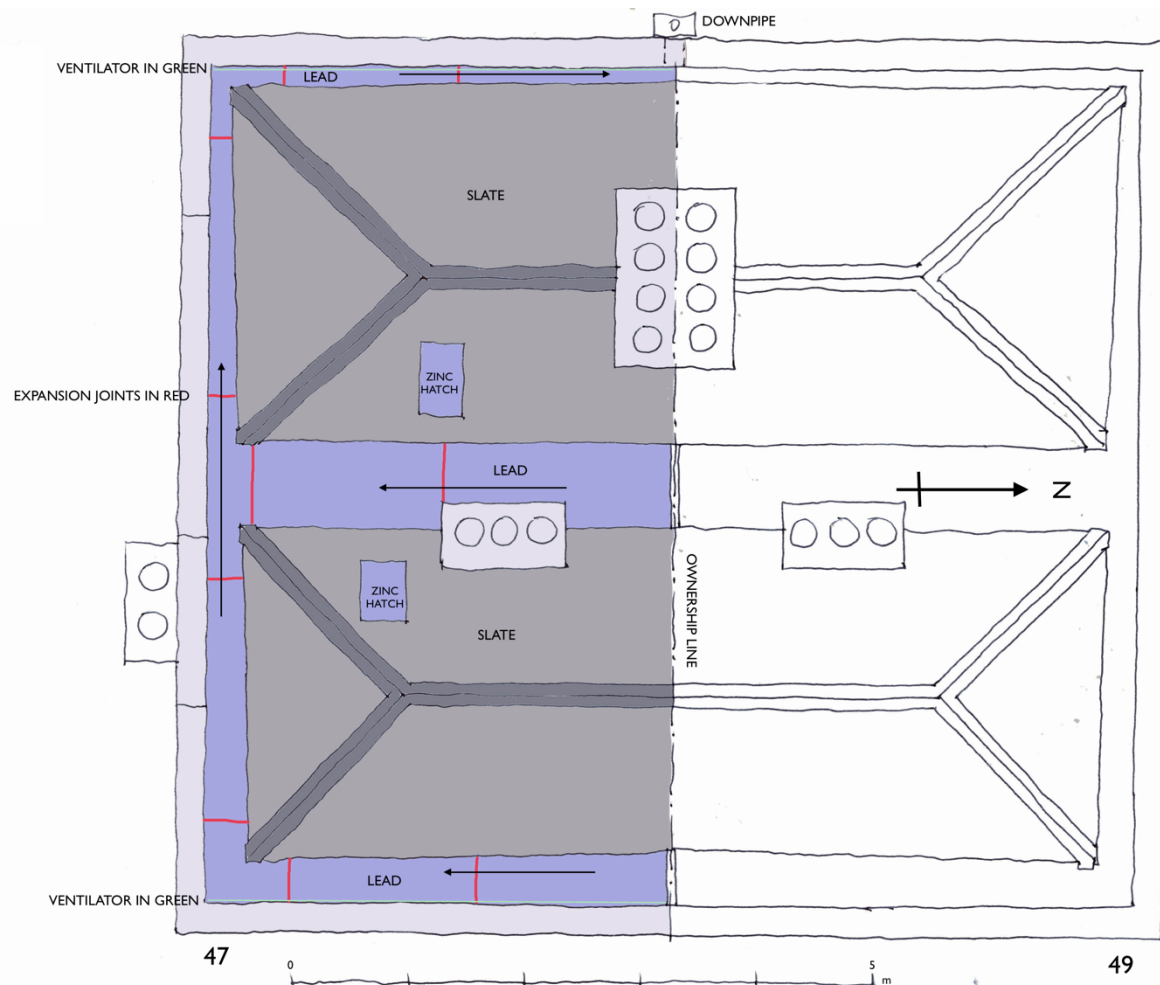
The asphalt has deep cracking. A recent overcoating in bituminous material has proved unsuccessful. Damp staining to the top floor ceilings is generally located below the asphalt linings.

The clay hip and ridge tiles are in fair condition but there are a number of areas where missing or damaged parts have been made up in mortar and the junction of the hips with the ridge is poorly formed.

The roof access hatches are covered in lead, which makes them difficult to handle and may have contributed to the mechanical damage of the slating. The lead claddings are bulging.

On the limited inspection possible, the roof structure appears sound but does show some signs of mould, likely to be related to condensation within the roof void, exacerbated by high humidity levels because of water penetration through the gutter linings. The condensation results from the lack of ventilation and the use of a vapour resistant underslating membrane. The underside of the sarking boards appears otherwise fair. It was not possible to view the lay boards below the gutters but these are likely to have suffered some damage and are also likely to have to be adjusted to suit the asphalt coverings. At least some parts of the roof structure and boarding appear to be in oak.

Proposed works



It is clear that the asphalt linings require replacement. There is water damage evident on the ceilings below. Asphalt is not a good material for use on a flexible timber roof such as this and cracking is almost inevitable. The proposal is, therefore, to replace the asphalt coverings with lead. This will require replacement or repositioning of the layboards below the asphalt, which are likely to have been damaged by water penetration through the asphalt, in order to provide the falls and levels required by current guidance on the installation of lead to roofs.

Installation of the lead gutter lining will require the lowest three courses of slates to each roof slope to be removed and refixed. The roof slopes are only seven courses high and so we strongly recommend that all of the slates should be removed, sound slates set aside for reuse and that the roof then be recovered with the set aside slates and new natural slates of similar colour and size. Removing and relaying all of the slates makes it possible to fix all of the slates with two fixings to each slate, which is not possible with partial replacement.

The existing parapets and the geometry of the roof limit the extent to which the gutters can be raised to create suitable falls and to allow traditional drips between bays of lead. In this case it will be necessary to lay the lead to a minimum fall of 1 in 80 with the sheets joined using proprietary metal/ neoprene (often referred to as T-Pren) expansion joints.

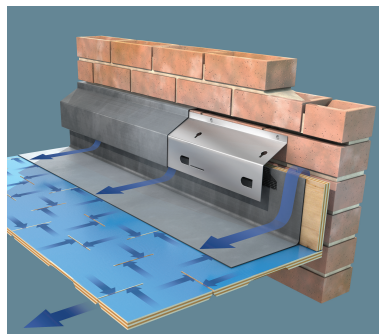
The new slating should be fixed on battens and counterbattens, retaining the existing roof boarding. It is not clear whether the existing roof has counterbattens. In the event that the new roof ends up slightly higher than existing, the abutment with the slating of the adjoining

property will have a lead weathering. This can be removed or converted to a secret gutter whenever the adjoining property is reslated. A bituminous underslating felt can be seen though the gaps between roof boarding. We suggest that a vapour permeable underslating felt should be used to assist in the mitigation of the risk of condensation.

The clay hip and ridge tiles should be removed and reset. It is likely that some will require replacement which should be done with matching tiles.

The access hatches should be reclad in zinc or stainless steel to make it easier to handle them without causing damage to the slating.

Building regulations and good practice will require that reasonable steps are taken to improve thermal insulation through the roof, and the associated need for ventilation.



Proprietary perimeter ventilator, clad in lead (Nicholson Airtrak system)

The most suitable way of increasing insulation will be to increase the insulation at ceiling level. The addition of insulation above the sarking boarding would create issues at the division of ownership and the detailing below the lead gutter lining would be difficult. The proposed approach will require the provision of ventilation to the roof void, which we suggest should be provided within the upstand of the lead gutter against the front and rear parapets, as the illustration above. Locations are marked with a green line on the proposed plan above.

We would also suggest that consideration be given to providing separation between the roof voids of nos 47 and 49. This could be done, with the cooperation of the adjoining owner, by the construction of a stud framing within the roof voids clad on both sides with fire resisting material. This should be of removeable construction and would not affect the architectural and historic interest of the buildings but could significantly reduce the impact of a building fire.

In addition, given the scope of works required, consideration should be given to the use of a temporary roof to protect the interior of the building during this work.

Outline schedule of works

Based on the discussion above, the works should comprise

- Provide protection to the work area.
- Carefully remove existing ridge tiles, hip tiles and slates, setting aside sound materials for reuse.
- Strip out underslating felt and asphalt gutter linings.
- Carefully take up layboards to the asphalt gutters and their bearers setting aside sound material for reuse. The proportion of sound material is not expected to be high.
- Fix new treated softwood bearers, set to give appropriate falls.
- New 25mm WBP ply bases for lead work.
- Form ventilation slots to front and rear parapets using Nicholson Airtrak or similar supports.
- Code 6 milled sheet lead with proprietary expansion joints and Code 5 cover flashings and ventilator cappings all set out and fixed in accordance with Lead Sheet Association recommendations.

Re-cover roof access hatches in 0.8mm zinc sheet.

- Vapour permeable non woven underslating felt min 160g/m² dressed over the leadwork.
- Treated softwood battens and counterbattens.
- New and set aside natural slates fixed with copper nails. New slate to be Welsh, Spanish or North American to comply with BS EN 12326 at grade W1, T1 & S1.
- Rebed new and set aside clay hip and ridge tiles, with galvanised steel hip irons to hips.
- New or additional roof insulation at ceiling joist level.

The Heritage Impact Assessment for these works is included on the Supplementary Heritage Statement.

Jon Bolter
REES BOLTER ARCHITECTS
24 May 2023