

16 Prince of Wales Road, NW5
Design & Access Statement for proposed main roof cupola repairs
8th June 2016
5148666/GS

This statement should be read in conjunction with the schedule of photographs submitted separately.

Background

The flats within 14-16 Prince of Wales Road, NW5 were created from accommodation at the front (south) of what was originally “St Pancras Public Baths”, built around 1900. They were constructed when the sports centre behind was refurbished in 2010. It is understood to be listed grade II.

The high level cupola to the main roof leaked historically because the leadwork was time expired. The majority was replaced like for like in 2014. Leakage continued into flat 5 but to a lesser extent. Following erection of access scaffolding, the cupola was inspected closely & water tested to locate the water entry points. Access internally during the testing showed that the lead covered corner plinth details which support paired timber scrolls were the source due to localised adhesion failure of the sealant; mostly to awkward internal corners. As the timber plinths are of built up construction, any water penetrating beneath the leadwork has an easy route into the cupola void below.

The current leadwork to the cappings is not original & was replaced probably during the last 30 years. Investigation has shown that the cappings have been cut to the perimeter footprint of the scrolls & now relies for watertightness on the use of sealant. As space between the scrolls is restricted, it is very difficult to obtain an effective seal in this way.

It seems highly likely that as built, the lead extended beneath the scrolls, which were then installed on top. Replacement of the leadwork in the same manner is not possible without removing the double scroll detail which is considered to be high risk as there are no visible fixings internally or externally. The scrolls also appear to be hollow & may not therefore be robust.

Other forms of lead replacement are all reliant on the use of sealant to perimeter abutments. This is unlikely to be long lived & is not desirable due to the expense of installing scaffolding for maintenance access.

Kemperol (a reinforced liquid product) has been installed over the cornice flashings immediately below the plinths, although it is not known when this was installed. It was not carried out in 2014 when the upper cupola leadwork was replaced.

The leakage is currently the subject of legal action by the occupant of Flat 5 against Camden Council & for this reason the chosen repair must be robust & effective.

Investigation & Repair Options

We considered the following repair options;

- 1) Sheathe the lead in Kemperol or similar. There is a precedent in that it has already been used on the cornice & wouldn't be visible from street level. It is an awkward detail to form & will be completely workmanship dependant. It could be extended say 100mm up the scrolls

& then down over the plinth to meet the cornice. Kemper Systems offer a warranty of 15 or 20 years but have systems still in use after 40 years.

- 2) Renew the weathering like for like in lead but extended down to meet the cornice. Form a designed mastic seal to the scrolls using 2 pack sealant applied to the perimeter. The risk with this approach is the difficulty of working between the scrolls.
- 3) Sheathing the scrolls completely in lead. A specialist leadworker advised that this is would be too difficult to achieve satisfactorily due to the lack of space between the scrolls & also deciding how/where to finish vertically & horizontally.
- 4) Renewing the lead as built by removing the scrolls, forming an upstand to the rear & turning the lead into a chase cut in the timber. As with option (2) the lead would be extended down to meet the cornice. The scrolls would then need notching out at the back before refixing. There is no sign of any fixings for the scrolls within the cupola void. On close inspection the scrolls appear to be made up from sections & sound hollow when tapped, although there is no apparent joint cracking.

We then reviewed the pros/cons of the options using the numbers as above;

- 1) Kemperol – this wouldn't ordinarily have been suggested but options for a reliable alternative are limited. Listed building consent would apply. It is quick & comparatively straightforward & has a reasonable life. It is highly workmanship dependent for success however. It can also be easily extended along the bottom of the large timber panels to seal the full cornice abutment.
- 2) Like for like lead replacement – again highly workmanship dependant & considered too risky due to lack of space to achieve a reliable seal.
- 3) Lead sheathing – rejected as too difficult.
- 4) Renewing lead by removing & replacing scrolls - this is desirable as it reproduces the original form of construction. It is considered to be too risky however as the way the scrolls are fixed is unknown & removal would be highly intrusive & likely to cause damage. As existing they are tightly installed with little sign of any join between the scroll & the backing panel.

Conclusion

The above information was discussed with Antonia Powell, Conservation officer for Camden Council, with our recommendation that Kemperol be used for the repair.

Antonia said that she would support the use of Kemperol, but formal consent would be required.