

Underfloor Heating Working Party RCC June 2023 Report

Current work

The UHWP is working, with financial support from the City's Climate Action Team (CAT) on the following **building interventions**.

- **Individual Controls**

The UHWP has been working on providing individual controls for our heating for some time. It now seems likely that with potential funding from the City we will be able to carry out an experiment into its technical and economic feasibility. Our resident engineers are working with Schneider, a large firm of electrical engineers to design a control and metering system. We have identified a small group of flats that can be separated from the rest of the estate both technically and commercially, with a willing group of residents. The major problem yet to be overcome relates to the commercial implementation, which frustrates this project.

- **Soffit insulation**

We hope to carry out some trials to determine the effectiveness of insulating the soffits. The Barbican's resident engineers are working with CAT on designs and pricing. We have already had promising meetings with members of the heritage team within City Planners, and the building control officer. Subject to costings we will trial two flats together two control flats during the next heating season to determine the viability of this intervention.

- **Barrel Vaulted Flat insulation**

Interventions here are less technically simple. Again, Barbican's resident engineers are working with CAT to devise solutions.

- **Draughts**

We are looking at eliminating draughts in the common parts of the staircase blocks.

- **Internal wall insulation**

We are hoping to be able to provide designs for unobtrusive internal wall insulation that residents or their contractors can install themselves.

- **Double glazing**

Similarly, we are looking at a double-glazing system that can be fitted by residents to our existing window frames.

Smart interventions

In addition to the building interventions identified above we are working on the following smart Interventions. These are interventions that require no changes to our buildings. We are working on these with CAT's consultants Ramboll. This work is being funded by the GLA.

- **Use of weather forecasts**

Our heating is essentially controlled by night-time temperatures, with no thought for next day's weather. A smarter system might increase the heating load when colder weather is forecast and reduce the load for warmer weather. It could also avoid switch-ons for short periods, which are costly and ineffective.

- **Better distribution of load over the day**

Most of our heating comes on in the night, reflecting the fact that the Barbican is just one enormous storage heater and that electricity costs less at night than during the day. The day/night rate differential appears to be small, but these rates are based on historic use, and a move to more daytime power would significantly shift this differential. There's a balance to be found here.

- **Modelling**

To assist in all the above interventions both building and smart Ramboll are building a thermal model of a typical terrace block.

Seasonal Turn Off

The Underfloor Heating Working Party (UHWP) worked with BEO officers to implement the seasonal switch-off protocol at the end of April. This protocol was introduced to ensure that the timing of the switch off was objective and ensured that unnecessary heating at £5,100 per hour was avoided.

The widespread publication of this protocol, including the weekly bulletin, has reduced the number of pressure calls from residents.