Acoustic Enclosure

The acoustic enclosure will contain ventilation units on the existing flat roof highlighted in the photos, right.

The first proposal was to site the units on the eastern Bentham House stair ‘tower’ in order to part-hide them behind Bentham House parapets. The larger of the units were placed next to the hotel’s chimneys for the same reason. (1)

This proposal was seen and reviewed in the first site meeting, and received positively, but it subsequently became clear that additional measures would be required, to meet maximum noise levels adjacent to the hotel. The problem could not be resolved by omitting the acoustic screen and moving the plant equipment further from the hotel, and so the location was not changed. Other options, of running the equipment at less than full power, or only during the day, were also considered but discounted as insufficient.

An acoustic enclosure was therefore proposed, grouping the units together. To maintain access to the roof, this was located adjacent to the rear parapet (2). It was this proposal that was seen and commented on in the second meeting, with the Conservation Officer raising concerns about the height of the unit – estimated at 2.5-3m – and its proximity to the parapet. The Conservation Officer suggested that a more central location would be preferred, perhaps over the existing lift overrun, so that the enclosure would obstruct sightlines over the parapets as little as possible.

This option, of using the lift overrun, was examined (3), but was found to work spatially, but to have technical problems regarding access around the plant.

An alternative was therefore progressed, whereby the plant was grouped as before, but pulled as close to the lift overrun as possible (4). Doors in either side of the enclosure allow the parapets and roof edge to be accessed. Simultaneously, acoustic analysis was used to lower height of the enclosure as much as possible, to a target height of 2.2m.