

## DESIGN AND ACCESS STATEMENT

22<sup>ND</sup> June 2021*1. Introduction – Addition of Plant Equipment to the Roof of Threeways House, 40-44, Clipstone Street*

6a architects are working for Sellar Design and Development Ltd to refurbish of a portion of the ground floor and the entire first floor of Threeways House, 40-44 Clipstone street. Alongside an internal fit-out, building services are being improved to increase energy performance and eliminate gas heating in line with a low-carbon strategy. To facilitate this upgrade, new plant is to be installed at roof level.

*2. Team*

The mechanical heating and cooling design has been developed by ChapmanBDSP. Anderson Acoustics have been appointed as acoustic consultant. Through a collaborative design approach, a light touch building-services strategy has been adopted to optimize the quantity and performance of new plant, and thereby reduce any additional ambient noise in the area.

*3. The Site*

Threeways House is an 8 storey commercial office building located at 40-44 Clipstone Street, one block east of Great Portland Street on the western edge of Fitzrovia. The building is not within a Conservation Area.

*4. Existing Roof Condition*

There are currently 4 no. existing clusters of plant equipment on the roof comprised of refrigerant chillers and heat pumps of a similar dimension to those being proposed. These installations are routed into the building through existing risers in fire-escape stairwells.



*Figure 1 – Existing Roof Condition – Looking North showing existing access through fire escape stair.*



*Figure 2 - Proposed high efficiency heat-pump with heat recovery.*

*Figure 3 – Satellite image of existing roof level. Proposed plant installation shown in red.*

### *5. Proposed Installation*

It is proposed to install 3 no. heat-pumps and 2 no. external condenser units for a total of 5 no. pieces of plant. These units will be routed into the existing risers to serve the refurbished office area at ground and first floor. The plant is shown on CBDSP drawing no 60704-CBD-R-XX-DR-C-5100. No additional acoustic attenuation or screening is proposed.

### *6. Acoustic Survey*

Anderson Acoustics has completed a noise impact assessment of proposed plant. An assessment of the noise impact from the operation of the proposed plant has been undertaken in accordance with WCC criteria which require that the noise level from the plant is at least 10 dB below the existing background noise level at the nearest noise sensitive premises. An unattended noise survey has been conducted at the rear of the property which has established the existing background noise level to be 50 dB LA90,15min, therefore setting a target level of 40dB (A) at the nearest noise sensitive premises when considering WCC's criteria. Noise levels from the proposed plant are predicted to comply with WCC criteria.

### *7. Access*

Access to maintain the proposed plant will be through the existing fire-escape stair, no modifications to the building are necessary. Existing edge protection is sufficient to provide a safe working environment for plant maintenance.

### *8. Conclusion*

The proposed plant has been designed to be as compact as possible, and is being added to a portion of the roof that has existing plant installations. An acoustic survey has predicted that the ambient noise produced by the proposed equipment will comply with WCC criteria.