

| Revision | Date | Description | Prepared By | Checked By |
|----------|------------|-------------------------|--------------------|-----------------|
| N1 | 08.03.2022 | For Information | Francesca Morrison | Maria Papantoni |
| N2 | 28.03.2022 | Updated for Information | Francesca Morrison | Maria Papantoni |

Introduction

This file note has been produced to discuss the plant requirement for providing ASHP to serve the domestic hot water system and the introduction of PV panels at 24 Endell Street to target the 20% reduction in carbon dioxide emissions through on-site renewables.

ASHP for Domestic Hot Water

In order to reach 20% carbon reduction, the building requires ASHP for domestic hot water production however due to the spatial constraints of the building this is not possible. Please see the below the required plant sizes for this system.

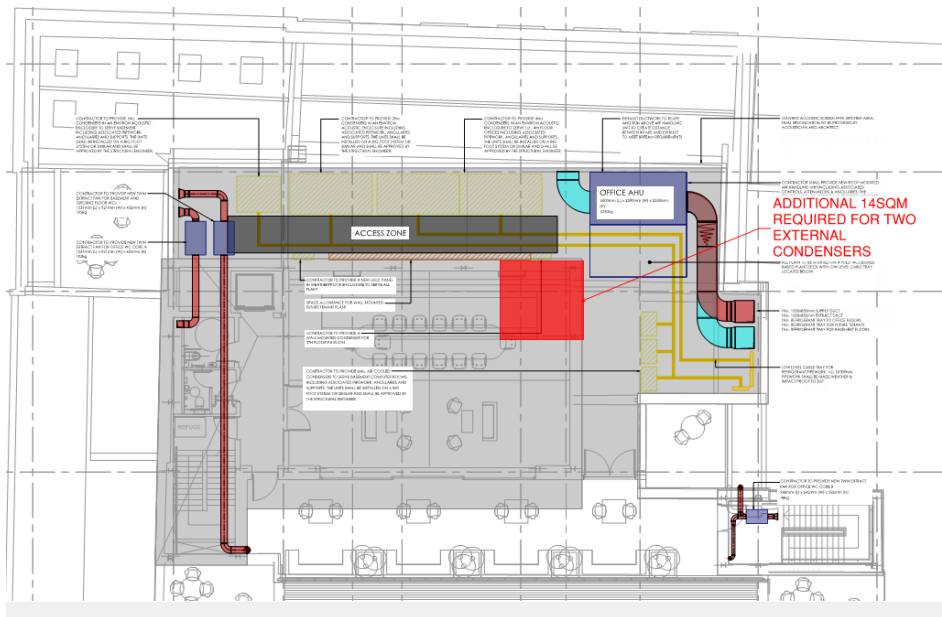


Figure 1 - Roof Plan

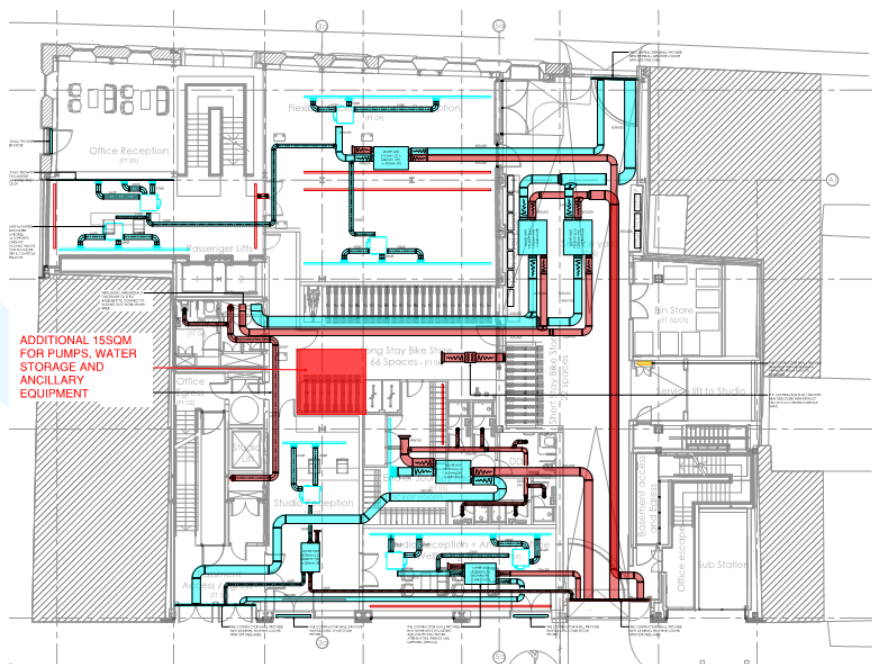


Figure 2 - Ground Floor Plan

Photovoltaic Panels

A simulation has been produced to determine the carbon reduction provided from the amount of PV that can fit within the constraints of the building. The system has been based on providing PV panels to the below areas and are subject to planning agreement.

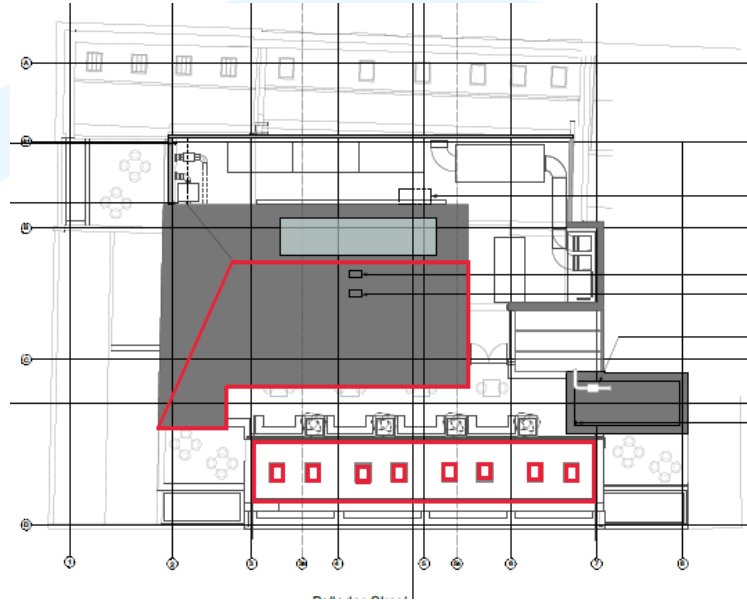


Figure 3 - Roof Plan with PV Locations

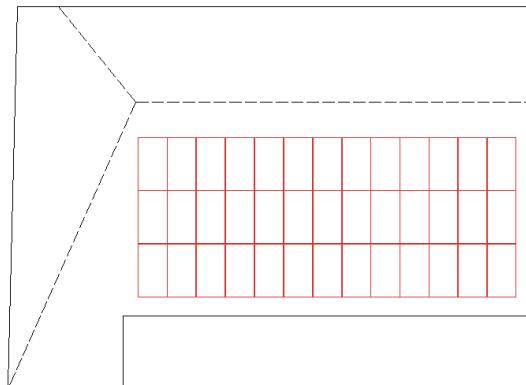


Figure 4 - Pavilion Roof PV Panels

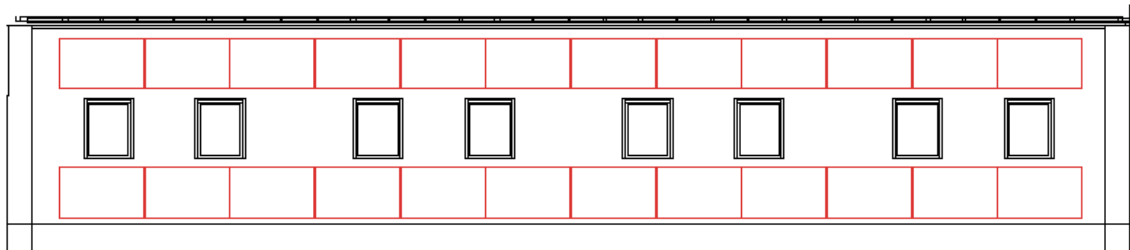


Figure 5 - Betterton Street Roof PV Panels

Providing PV to this area increases the carbon reduction to 15% as indicated in the attached BRUKL document.



Conclusion

As noted above, providing AHSP for the domestic hot water is not feasible however providing PV to the building sees an increase in carbon reduction and therefore we will incorporate this within the design.

