POPE

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Reference: The Shoreham Centre, 2 Pond Road, Shoreham, BN43 5WU
Our Reference No: 4560
Project Description: Installation of Rooftop Air Source Heat Pumps
Dated: 1st June 2021

Design & Access Statement

Reference should be made to the following drawings which form part of our planning submission:

- 4560-P001 P1
- 4560-P002 P2

Background

In line with Worthing and Adur Council's commitment to reduce carbon emissions from their properties, grant funding has been secured to provide and install Air Source Heat Pumps. The new heat pumps will serve a significant proportion of the Centre's energy demand for heating and hot water, instead of solely being served by the existing gas-fired boilers.

The conversion to electric Air Source Heat Pumps will provide significant carbon reductions immediately after installation. These carbon reduction savings will increase over time as the national grid decarbonises in line with government policy.

Proposal and location for the air source heat pumps

We are proposing to install a quantity of eight 43kw monobloc air to water heat pumps to the flat roof of the Shoreham Centre. These heat pumps are proposed to be positioned to the upper section of flat roof to the east elevation as indicated:

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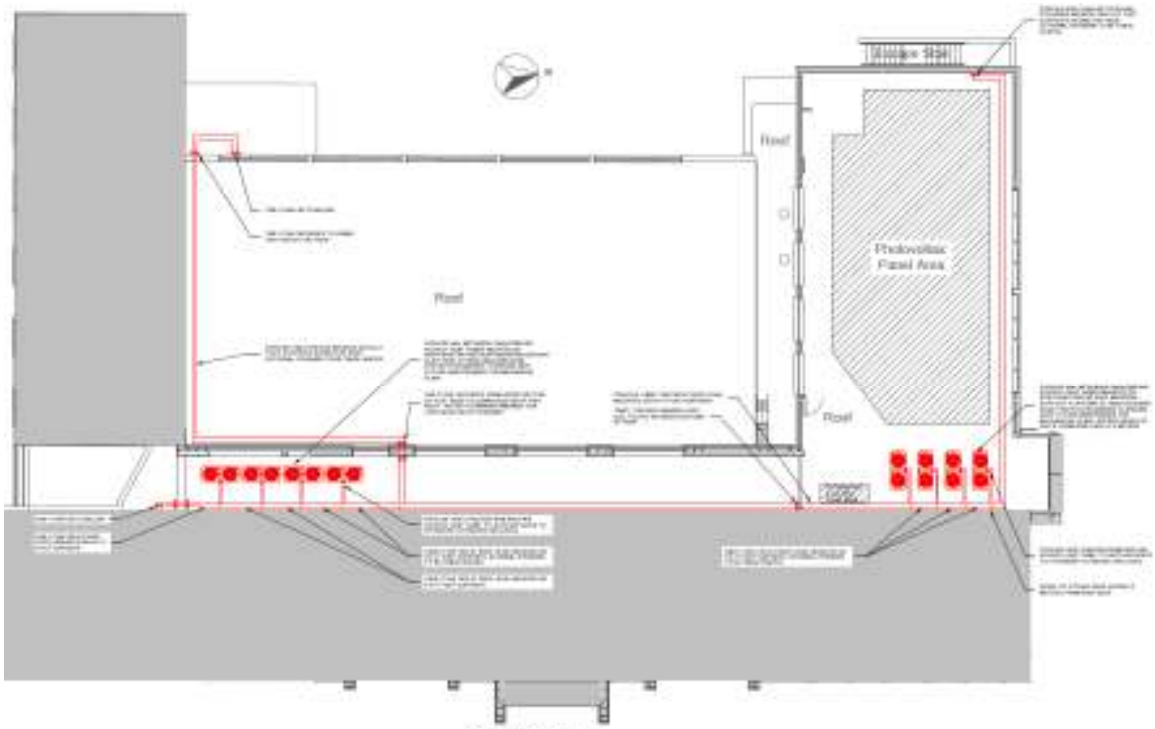

DETAIL PLAN
(SCALE 1:200 @ A1)

There are residential properties to the south and to the west of the Shoreham Centre, which can be seen from the Google Earth image below. The nearest property from the proposed position of the air source heat pumps exceeds a horizontal distance of 40m. It is very unlikely based on the height of the Shoreham Centre and the distance to nearby residential properties that the air source heat pumps will be seen at ground level where they might be noticed.



Access to air source heat pumps

The proposed air source heat pumps will be accessed from the existing vertical access ladder between the lower and upper sections of the flat roof. We propose to position four of the heat pumps to the section of roof which is at the north-end of the building and four heat pumps at the south end. The heat pumps will be mounted on non-penetrative support platforms to reduce noise transmission through the structure and to allow adequate air flow around the units. The units are deliberately positioned far enough away from street level and neighbouring properties to reduce any impact on noise transfer.

Our proposals include for the extension of the existing edge protection barriers at roof level to safe working access to the heat pumps during future maintenance work.

Weight, dimensions and noise from the air source heat pumps

Each heat pump weighs 526Kg and dimensions 1978mm wide, 759mm deep and 1710mm high. The heat pumps are inverter driven which means that the noise levels vary dependant on the buildings heating demand. By calculation, the sound pressure level at 20m from the source will reduce to approx. 33dB and at 40m it will be approx. 27dB which is anticipated to be far below the background noise level at roadside.

We propose for a crane mounted lorry will transfer the air source heat pumps to the flat roof from the car park.