De-Carbonisation Project – Air Source Heat Pumps

Marsh House, Park Lane, Southwick, BN42 4DLJB

Design and Access Statement

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Contents

1. Introduction 3
Site Location and description of development 3

2. Design and Access Statement **4**
Design 4
Access 5

3. Conclusion 5

1. Introduction

1.1. This Design and Access Statement has been prepared by Bailey Partnership on behalf of The District Council of Adur (the applicant) in support of a full planning application for the following:

De-carbonisation project to deliver a 75% reduction in carbon emissions from heating by replacing existing gas fired boilers with new air source heat pumps for central heating and hot water system as part of Adur & Worthing Councils' net zero 2030 target and Carbon Neutral Plan. Works subject to planning permission comprise installation of new external air source heat pump units within the grounds of Marsh House enclosed within new fencing.

1.2. This statement provides a description of the site and proposed development, and an analysis of the design and access arrangements covered by the proposals.

Site Location and description of development

1.3. The site is located within the grounds of the property known as “Marsh House, Park Lane, Southwick, BN42 4DL”.

1.4. Marsh House is a purpose built sheltered retirement housing block constructed in 1983, consisting of 38nr individual flats over three floors plus common areas including lounge, dining room, laundry, guest room, hairdressing room and an office for use by the Housing Support Officer when on-site, plus associated circulation, storage and plant rooms. The tenanted flats generally consist of a bedroom, lounge, kitchen and bathroom plus hall. The block is popular and occupancy levels are high, with the site in east reach of the nearby shops, medical centre and library.

1.5. The building was constructed in 1983 and has typical traditional construction for that era, consisting of brick and block cavity walls and pitched tiled roofs. The building is a mixture of three and two storey. The main entrance and car park are via the southern elevation off Park Lane, with a garden area wrapping around the western elevation, and a small car park and service area to the northern elevation off Albert Road.

1.6. The applicant proposes to replace the existing life-expired gas fired boilers and central heating and hot water system with a new system heated by air source heat pumps (ASHP’s).

1.7. The works requiring planning permission are limited to the new air source heat pump units, which have to be sited externally.

1.8. This work forms part of Adur District Council's de-carbonisation policy and target to become carbon neutral by the year 2030. Air source heat pumps absorb heat from the outside air and use this alongside electricity to generate heat for the central heating and hot water systems. The combination of extracting heat from the air and using electricity, which can be obtained from renewable sources, makes ASHP's a much more energy efficient and low carbon alternative to traditional gas boilers.

2. Design and Access Statement

Design

2.1. The proposed location for the external ASHP units is to the north-western corner of the site, in close proximity to the existing plant room containing the boilers, pumps etc and as outlined in red on the Site Plan.

2.2. This is a relatively secluded location, alongside an existing boundary wall and fence, with minimal impact upon the northern elevation of the property.

2.3. The 5nr ASHP units are sited in a row and enclosed with a new timber enclosure to screen the units from view and to secure them. Pipework between the units and the nearby plant room would be concealed below ground.

2.4. The proposed fencing is timber 'hit-and-miss' style, with vertical timber slats fixed on both sides of the posts and rails with gaps between each staggered; this allows air to flow through the fence, whilst maintaining screening and security. A typical image is provided below.



Above: Example image of timber hit-and-miss fencing

2.5. This style of fencing remains in-keeping with a traditional residential building and neighbouring properties. The final design details need to be confirmed by the contractor to ensure the enclosure can be sited on the ground without the need for foundation posts or pads into the ground.

2.6. Discussions have been had with Adur District Council's Environmental Health Team on the Noise Impact Assessment and the proposed attenuation levels and, given the distance from the nearest residential dwelling, the attenuation measures put in place, and the fact that the heat pumps will only be running at full capacity when windows are very likely to be closed, it has been agreed that the proposed attenuation measures to achieve a mitigation level of 8dB(A) should mitigate any potential acoustic impact on neighbouring residents. This level of mitigation can be achieved by the proposed attenuators fitted to the sides and top of each ASHP, thereby avoiding a higher and larger acoustic louvered metal enclosure.

Access

2.7. Access to the ASHP's would only be required for staff and maintenance operatives from time-to-time. Controls for everyday use will be located within the existing plant room.

2.8. Access to the area of the ASHP compound is already available via the northern car park and service area adjacent to the plant room accessed from Albert Road.

2.9. Access into the air source heat pump compound for maintenance is via a proposed double gate in the new enclosure , located on the south elevation facing Marsh House.

2.10. The proposals do not affect any existing access arrangements to Marsh House, with the site located clear of any existing paved paths, ramps, landings or other circulation routes.

3. Conclusion

3.1. It is not considered that there will be any adverse impact for the granting of planning permission for this proposal.

3.2. The location and design of the ASHP site has been carefully considered in order to minimise the impact on both residents and neighbours. The overall size and height of the enclosure has been minimised and moved as far to the western corner of the site as possible whilst allowing sufficient space for the acoustic attenuators and airflow space around each unit.

3.3. We respectfully request that the proposals should be approved.