

## **Planning Permission – Domestic Air Source Heat Pump**

**Meadowbank, Whitehough, SK236EJ**

### **Application Proposals**

*This application seeks to create a home with minimal reliance on the national grid by installing a renewable energy Air Source Heat Pump to complement the existing solar PV system. It is anticipated that, except on the coldest of days, net zero will be achieved.*

*The property will be disconnected from the mains gas grid, permanently avoiding any fossil fuel reliance.*

*All external gas furniture will be removed, thereby improving the street scene.*

### **Planning law**

Normally, homeowners do not require planning permission for an air source heat pump (ASHP) because it is classed as permitted development.

Except in one respect, this application meets all the permitted development criteria that satisfies the planning standards for the Class G Microgeneration Certificate Scheme. This lays down the legislative intentions for the installation, alteration or replacement of a microgeneration air source heat pump within the curtilage of a dwelling.

However, due to wall thickness of this detached gritstone house, with accompanying heat loss, this application seeks permission to install an ASHP with a cubic capacity marginally above the permitted 0.60 cubic meters.

This proposal marginally exceeds the 0.60 cubic meter dimension by approximately 0.08 cubic metres.

This is the only element of this application that does not satisfy the MCS standards. The applicant asks the planning authority to grant approval on the basis that the difference in size is not of sufficient scale to warrant refusal and asks the High Peak Planning Authority to exercise discretion on what is a small deviation from the guidance.

The following reasons for relaxation of the guidance are cited.

The length x height x width standard is based on a 0.60 cubic meter “box” This is a one-size-fits-all metric, primarily designed for compact housing in the urban environment; terraced houses, blocks of flats etc.

The MCS standard is based on the dimensions of the carcass in which the heat pump is enclosed and not on the kilowatt output of the pump itself. Within the industry this results in pumps of differing outputs being fitted in enclosures of differing dimensions meaning that some do and some don't meet the 0.60 threshold for permitted development, regardless of their power output.

This application does not fall into that category of environment, being a detached property in a rural setting with few neighbours, where the ASHP is not part of the street scene.

Trying to illustrate the difference in dimensions between an ASHP of 0.6 and 0.68 with any accuracy on a 1:100 elevation plan is extremely difficult so the following example is given. The additional 0.08 cubic meters can be compared to the size of a standard domestic microwave.

### **Approved Contractor**

The applicant has chosen an MCS Certified Company as the approved contractor and their advice, following a comprehensive heat loss survey and design phase, is to install a pump which meets the Government's micro generation certification standard (MCS20) down to a minus 7C external environment on the "coldest day of the year".

The system is covered under a warm home promise with extended guarantees of 15 years on both the installation and hardware over that period.

The external box dark grey ASHP box will be the only visible evidence of the heating system at the rear of the property as all the other elements are internal to the dwelling.

### **MCS Compliance already achieved**

All the following criteria already satisfy the MCS standard for permitted development.

- Only 1 air source heat pump will be installed within the curtilage of the building.
- No wind turbine is already installed within the curtilage of the dwellinghouse
- No part of the ASHP will be installed within 1 metre of the boundary of the curtilage of the dwelling.
- The ASHP will be not be installed on a flat roof or within 1 metre of the external edge of that roof.
- Within the Whitehough conservation area the air source heat pump will not be installed on a wall of the dwellinghouse where the wall fronts onto the highway or any part of that wall which is above the level of the ground floor storey.
- The air source heat pump will be used solely for domestic heating purposes.
- Sited so as to minimise its effect on the external appearance of the building and is not visible from any footpath or road.
- Meadowbank is not a listed building nor located in a world heritage site.

## **ASHP Design features**

The full specification of the proposed ASHP can be found at <https://www.airahome.com/en-gb/heat-pumps/outdoor-units>

The chosen ASHP is 12kW and has the highest Energy Efficiency rating of A+++

All air source pumps have a performance rating of a Seasonal Coefficient of Performance (SCOP) This is a metric used to evaluate the energy efficiency of a heat pump system over an entire heating season.

The SCOP for the proposed system is rated at 4.7 which means that for every kilowatt of power consumed by the heat pump, 4.7 kw of heat is produced. This is an industry leading performance where 3.5 is seen to be a good value.

The chosen ASHP has an aesthetically designed dark grey carcass to blend in with the natural stone of the building.

The unit is fitted a slanted grill which screens the internal workings from sight.

In normal running mode the unit has a whisper quiet output of 57dBA at peak and a running mode of 35 dBA, due to its soft ground anti-vibration base and a double-layered, sound insulation system which effectively blocks and absorbs noise produced by compression parts and vibrations.

The air source heat pump will be removed as soon as reasonably practicable when no longer needed and has an expected lifetime of approximately 20 years.

## **Neighbouring Properties**

- 1 Braeside, (Northern neighbour) is not fenestrated on the southern aspect and does not share a boundary with the applicant's curtilage. It is over 10 meters distant and the ASHP cannot be seen from any part of their property.
- 2 No 2 Glenside (Southern Neighbour) is not fenestrated on the shared boundary and the ASHP will be more than the required 1 meter from the shared boundary and at least 2 metres from their property.

The proximity of these two neighbouring dwellings can be seen on the Site Plan that accompanies the application and informal discussions with both these householders have already taken place.

EPC Meadowbank Certificate

<https://find-energy-certificate.service.gov.uk/energy-certificate/7296-3027-3205-4237-3204?print=true>