

# **Design and Access Heritage Statement**

## **Proposed siting and installation of air source heat pump**

**Oldridge Farm, Ashbourne Road, Whiston. ST10 2HU**

**Document version 1**  
**Completed by Thomas Petty 05/04/24**

### **1. BACKGROUND**

1.1 The proposal consists of installation and siting of an air source heat pump (ASHP) hot water and heating system at the Grade II listed Oldridge Farm. This would provide a sustainable alternative to the current oil fuelled system.

1.2 The previous heritage statements (2021 and 2024) in relation to recent listed building consent applications SMD/2024/0048 and SMD/2021/0719 have already provided detailed information about the heritage asset and associated works. Both statements are attached to this application for reference.

1.3 This design and heritage statement provides additional relevant and appropriate, but proportionate, information.

1.4 Oldridge Farm lies approximately 400m north of the A52 Ashbourne Road, to the northeast of Whiston, along the southwest fringe of the Peak District national park.

1.5 Whiston village lies within the Churnet Valley, in the parish of Kingsley, just to the east of Froghall.

1.6 Oldridge Farm was bought by the current owners in 2021 and continues to be used agriculturally.

1.7 They are in the process of carrying out various works in response to repairs required but also to improvements to meet their needs, where these do not impact upon historic fabric or character.

## 2. DESCRIPTION OF THE ASSET

### List description:

|                        |                    |
|------------------------|--------------------|
| Listed building grade: | II                 |
| List entry number:     | 1038022            |
| Date first listed:     | 15/12/86           |
| List Entry Name:       | Oldridge Farmhouse |

2.1 Please consider this statement alongside the 2024 heritage statement section 2.0, as provided with application [SMD/2024/0048](#) (attached).

### Additional comments:

2.2 The previous owners installed an oil fired “Stanley” boiler and range at some point in the 1990s and sited a large plastic oil storage tank approximately 3m from the house on the south-east side (see accompanying document with plan/aerial photo).

2.3 The house benefits from central heating to the ground and first floors only at present.

2.4 The owners have recently applied for changes/replacements to the existing windows in order to introduce more thermally efficient double or secondary glazing to the property. Slimline, heritage double glazing has already been agreed in parts of the property (snug, utility room, cellar).

2.5 The property has previously been repaired with cement and gypsum plaster in parts. As part of the previously approved work, the owners are in the process re-introducing/restoring lime mortars/plasters to ensure the sandstone is protected and breathability of the building is restored.

### **3. ASSESSMENT OF SIGNIFICANCE**

Please consider alongside the 2024 heritage statement, section 3.0 as provided with application SMD/2024/0048.

Additional comments:

3.1 In relation to aesthetic value, the current plastic oil tank detracts from the historic setting, although this type of structure is common in isolated farmsteads where a mainline gas supply is not available.

3.2 The current oil tank is housed behind a round post/half round rail agricultural fence which offers little screening.

3.3 With particular note to the cellar- as stated by conservation officer Mel Morris, evidential value is boosted by its survival which was originally a dairy.

3.4 Historical value for the property is high, and the presence of the cellar is particularly interesting.

#### **4. DESIGN CONCEPT**

4.1 It is proposed that the current oil-powered hot water and heating be replaced by an ASHP system.

4.2. It was previously agreed in principle within application SMD/2021/0719 that a ground source heat pump “plant room” be placed in the old privy adjacent to the house. This building will not be large enough for the apparatus and the owners have decided to move to an air source system instead.

4.3 It is now proposed that the ASHP plant room be located in the existing cellar.

4.4 Details of external excavation and remedial works to the east side of the cellar have been agreed under application SMD/2021/0719 and DOC/2023/0009 (condition 8), including an opening for a soil pipe, repointing and installation of a French drain. For ease of reference please see attached plans “1088-AL(0)102 - Ground Floor Plan and Basement” and “1088-AL(0)105 - Sections As Proposed”.

4.5 The source of damp in the north-east corner of the cellar has been identified as the disconnected gutter downpipe which was discharging down the side of the house. This has now been temporarily diverted away from the building before work commences.

4.6 The owners are no longer planning to remove the brick thrawls following advice from the conservation structural engineer.

4.7 The internal cellar renovation will now be limited as the owners no longer intend to bring it into the living space. It will be limited to re-pointing, repairs and replacement of glazing agreed in application SMD/2021/0719. Variation of the conditions to simplify the cellar stairs has recently been considered and agreed under application SMD/2023/0626.

4.8 There is an unsightly power cable running along the outside of the building on the east aspect. It is proposed that this be lowered to run internally and underground at the time of the excavations.

#### **ASHP internal elements:**

4.9 The internal ASHP apparatus consists of a floor-standing domestic hot water tank alongside a wall-mounted buffer cylinder and expansion vessel (see accompanying document).

4.10 It is proposed that 18mm marine ply be attached to the cellar walls to allow attachment of the pipework and lighter items (to minimise drilling into the stone fabric).

4.11 It is proposed that the wall-mounted buffer and expansion vessel be fixed through plywood into the stone for stability/strength using M10 plugs and bolts/screws.

4.12 The domestic hot water cylinder is floor mounted and can be set on a level paving flag on top the existing floor.

4.13 It is proposed that installation of the ASHP electricity supply and insulated pipe to the ASHP can happen at the same time as the works described in 4.4 and the replacement of the kitchen floor (agreed under SMD/2021/0719). This will streamline the process into one excavation. The supply and pipe will require careful drilling through the cellar level east wall.

## **ASHP external elements:**

4.14 It is proposed that the new external ASHP apparatus be placed on the same site as the oil tank, which is to be removed entirely (see accompanying document). This currently lies approximately 3m away from the house in an adjacent field.

4.15 The ASHP apparatus consists of two units placed on a concrete base with a small soakaway (see diagrams in document "VAILLANT ASHP DIMENSIONS AND BASE BUILDING GUIDANCE - 0823"). If possible the time of excavation, this will be sunk into the ground to reduce the eventual height of the installation.

4.16 A 750mm deep, narrow trench will be dug from the ASHP units to the house, to carry the pre-insulated pipe and power supply. It will be carefully tunnelled under the dry stone wall.

4.17 There would be 2 x 10kW units. Each unit measures 1100mm width, 1565mm height. A 500mm gap is required between the the two units and a 3m zone in front.

4.18 The total new ASHP apparatus (2 units) would therefore be 2700mm width and 1565mm height. The current oil tank is 2000mm width and 1680mm height.

4.19 It is proposed that the apparatus be screened to the front and sides by a temporary "dead hedge" to the same height of the units and at the appropriate distances described in 4.17. The rear will be obscured by the existing dry stone wall and garden plants.

4.20 At the same time, the owners will plant a new beech hedge adjacent to the dead hedge which, once established, will provide permanent cover enabling the dead hedge to be removed.

## **5. THE IMPACT**

5.1 The proposed plant room is currently an empty cellar which is away from the main living areas of the house. The cellar is of high historic significance as noted in in the previous heritage statement and in 3.3/3.4.

5.2 The attachment of ASHP apparatus to the east cellar wall will require permanent fixing to the stone as described which will impact the historic fabric. The number of fixings will be minimised by using marine plywood panels.

5.3 The installation of the pre-insulated pipe and power supply will require a hole to be created through the wall at cellar level. This will impact the historic fabric but will not be visible externally as it will sit below ground level.

5.2 The temporary (dead hedge) and then permanent (beech hedge) screening will limit the external ASHP apparatus from view and will be an aesthetic improvement on the current unscreened plastic oil tank.

5.3 The laying of the ASHP electricity supply and insulated pipe will be done at the same time as and close to the location of the previously agreed soil pipe, which will limit any additional impact.

5.4 In conclusion, the proposed changes will seek to improve the current external amenity and will provide the property with a sustainable energy system for central heating and hot water.

## **REFERENCES**

Design and Access Heritage Statement Kate Walker 2021  
Design and Access Heritage Statement Kate Walker 2024  
ASHP Accompanying document  
1088-AL(0)102 - Ground Floor Plan and Basement  
1088-AL(0)105 - Sections As Proposed  
VAILLANT ASHP DIMENSIONS AND BASE BUILDING GUIDANCE - 0823  
Location plan