DESIGN AND ACCESS STATEMENT

Property Address: Fron Uchaf Farm, Fron Isaf, Chirk, Wrexham, LL14 5AL
Proposal: Installation of a Domestic Air Source Heat Pump (ASHP) Cascade System (2x Stiebel Eltron HPA-O 10.2 Trend units)
Designations: Grade II Listed Building / Clwydian Range and Dee Valley National Landscape (AONB)
Document Reference: DAS-ASHP-02
Application Ref: P/2026/0575

1. Introduction & Context

This Design and Access Statement (DAS) accompanies the joint application for Listed Building Consent and Householder Planning Permission at Fron Uchaf Farm. The proposal involves replacing the existing domestic oil-fired heating system and bulk oil storage tank with a ground-mounted air source heat pump cascade system (2x Stiebel Eltron HPA-O 10.2 Trend units, total output 18.98 kW) and associated internal emitter upgrades.

2. Design Principles & Siting Strategy

Design Consideration	Proposal Details	Planning & Heritage Rationale
Layout & Position	Ground-mounted on a 2.6m x 0.8m concrete base pad adjacent to the external elevation in an established secondary utility yard, directly replacing the existing domestic oil tank footprint.	Completely hidden from public view, highways, and primary landscape sightlines within the National Landscape (AONB). Reuses an established service zone.
Appearance & Materials	Two outdoor units in factory Dark Grey powder-coated metal casing (1170mm W x 727mm D x 960mm H each) set side-by-side on a pre-formed concrete pad.	Low-profile, neutral dark tone blending discreetly against the masonry baseline without dominating the building facade.

Design Consideration	Proposal Details	Planning & Heritage Rationale
Building Fabric & Pipework	All flow and return pipework runs (including two 22mm loops to the cylinder) route through the existing oil boiler flue aperture. Void is insulated, sleeved, and sealed with traditional breathable lime mortar.	Zero new core drilling into historic masonry. Preserves the physical integrity of the Grade II listed stone walls. Fully reversible.
Acoustic / Environmental	Low-noise outdoor fan operation complying with MCS 020 sound standards (46 dB(A) sound power level per unit).	No adverse acoustic impact on nearby property boundaries or the local rural setting.

3. Access Considerations

- **Vehicular & Pedestrian Access:** The proposal involves no alterations to existing property access routes, driveways, or parking arrangements.
- **Maintenance Access:** The outdoor units are positioned at ground level within an accessible secondary yard, allowing straightforward routine servicing and maintenance without requiring scaffolding or ongoing structural work.
- **Inclusive Physical Access:** Internal living space circulation, thresholds, and doorways remain entirely unaffected by the heating system upgrades.

4. Summary

The proposed heat pump installation complies with national planning policy for historic buildings and protected landscapes. It provides a sustainable, low-carbon heating solution with zero disruption to site access, zero physical loss of historic wall masonry, and no visual impact on the surrounding National Landscape.