

Design and Access Statement

for

Ground Source Heat Pump

At

Woodleys, OX20 1HJ

PROPOSAL:

PROPOSED INSTALLATION OF TWO GROUND SOURCE HEAT PUMP SYSTEMS AND REQUIRED COLLECTOR ARRAY TO SERVE WOODLEYS AND ASSOCIATED OUTBUILDINGS.

1. This Design & Access Statement is prepared in support of a Full Planning Application being made to West Oxfordshire District Council for the installation of two GSHP systems and associated ground arrays the above property.
2. Whilst ground source heating systems are covered under the General Permitted Development Order, the location of the development outside the curtilage of a dwelling house within existing paddock land means that planning permission is required.
3. It is the intension of the applicant to install a system to generate the domestic heating and hot water using low carbon GSHP technology which helps to lower carbon emissions and have less impact on the surrounding environment. This heat pump technology is a key element in reducing CO2 emissions. The alternative to a heat pump would be a fossil fuel boiler which would lead to higher CO2 emissions which the client is keen to avoid.

Justification

1. The GSHP systems will deliver an annual reduction in CO2 against oil (the alternative fuel source for this property) of approximately 84% which helps meet the well published Governments carbon reduction targets.
2. Heat pump technology is a key element in reducing CO2 emissions. As per current available technology this is the most sustainable form of space heating and production of domestic hot water.
3. Section 14 of the National Planning Policy Framework advises that support should be given to the delivery of renewable and low carbon energy and associated infrastructure. It should be recognised that even small scale projects provide a valuable contribution to cutting greenhouse gas emissions.
4. West Oxfordshire District Councils Local Plan outlines that climate change mitigation and adaption, and minimising carbon emissions will be key for the future success of the borough; their approach will therefore embrace cleaner and smarter growth that focuses on productivity gains which do not compromise the quality of the environment. Paragraph 148

of the NPPF also states that the planning system should support the transition to a low carbon future in a changing climate, taking full account of flood risk and coastal change. It should help to: shape places in ways that contribute to radical reductions in greenhouse gas emissions, minimise vulnerability and improve resilience.

5. Once a ground source heat pump is installed, there is no visual change to the land and the land can still be used in the same way. There are no external fans and no external equipment is visible. The system is quiet in operation, issues no emissions, is very safe and requires very little maintenance.
6. There will be no adverse impact on residential amenities and, given its location, it would not have a material impact on the street scene or wider landscape.

Project Description

The installation comprises of two new GSHP systems. One system is to be designed with a capacity to cover the heating and hot water load for the Main House and Coach House and the second system is to be designed with a capacity to cover the heating and hot water load for the Bell Barn and the Event Barn. Isoenergy are planning to install the required collector array for each system for the source of heat in the land immediately adjacent to the farm buildings to the west of the site as shown on the drawings attached with this application.

All soil removed for the installation of the pipework will be reused. The routing of any trenching work has been discussed, planned and as the location is currently a field there will be no damage to any trees or their roots. The new heat pump installation will remove the need for any bulk oil storage onsite, it will also remove the need for lorry and tractor movements for the delivery of wood chips into the existing biomass boiler fuel store.

Access to the site of the collector arrays and trenching is via the current access lane to the south or east of the property.

All pipework is buried at a depth of 1m underground, is not visible and the land over the top of the borehole array can continue to be used for recreational or farming purposes.

Conclusion:

There are no policies within the Local Plan that specifically address ground source heat pumps, therefore according to Policy SD1 and paragraph 11 of the NPPF, there should be a presumption in favour of development. This Statement has demonstrated that there will be no impacts derived from the proposed development. Due to the position of the collector array and pipes underground and the reinstatement of the land to its original state, there would not be any landscape or visual effects, nor any impacts on residential amenity.