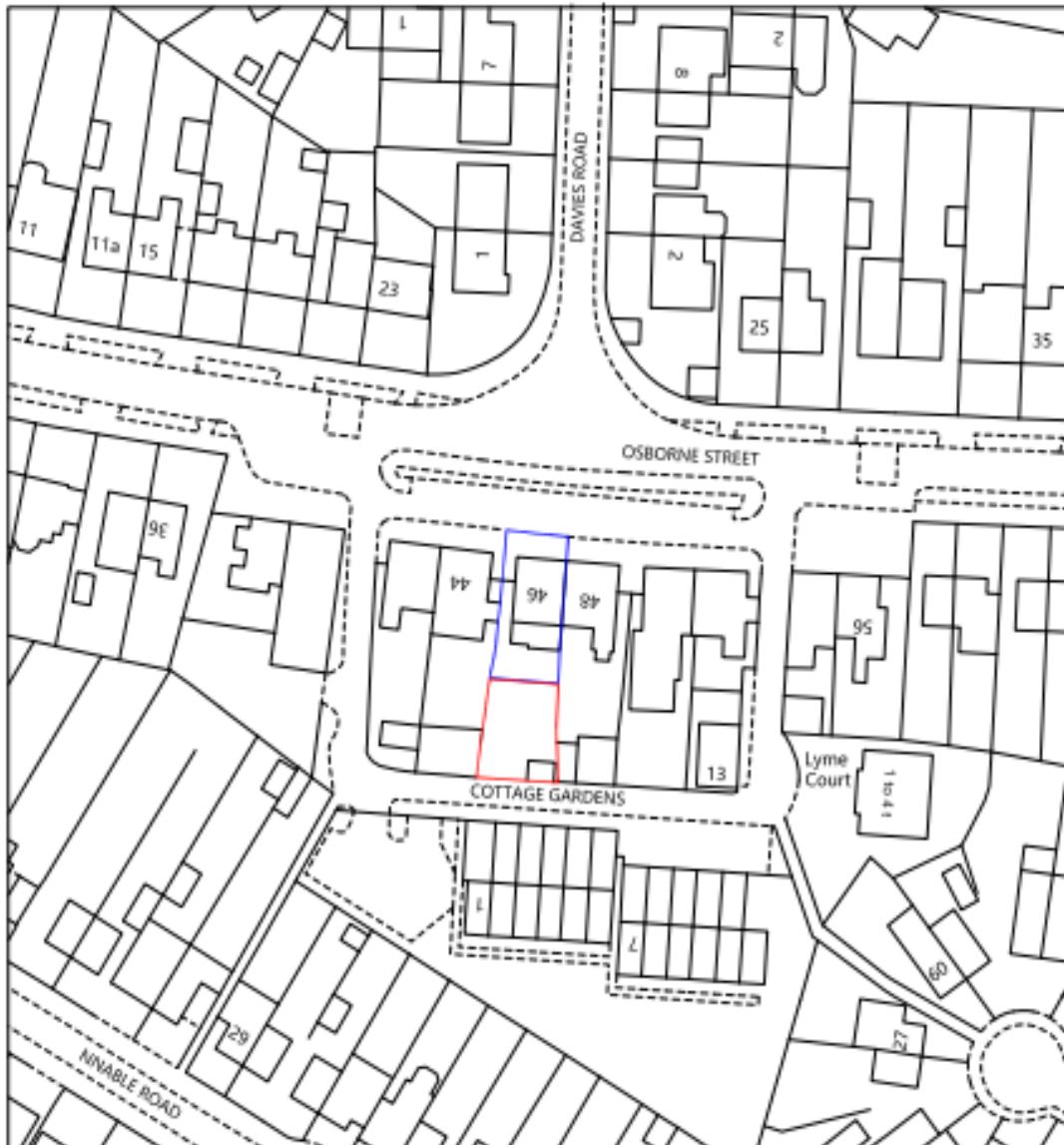


Energy Statement



**Erection of a detached single storey dwelling to the rear of 46 Osborne Street,
Bredbury, Stockport, SK6 2DA**

Reference: DC/090582

1. The application for the construction of 1No. Dwelling to the rear of 46 Osborne Street, Bredbury, is supported by this energy statement.
2. The footprint of the bungalow is 50 sq. m. and therefore does not trigger local carbon reduction policy target thresholds by it does not propose greater than 10 residential units nor does the cumulative floor area of the development exceed more than 1000 sq. m.
3. Connection to an existing heat network is not feasible. Therefore, standalone solutions will be considered as a consideration to energy reduction in the proposed dwelling.
4. The following supplementary technologies have been considered for inclusion in the development and are detailed in Table 1 below:

Table 1: Low & Zero Carbon Technologies Considered

Technology	Technical Feasibility	Carbon Savings	Estimated Costs	Financial Viability
Solar Photovoltaic	The dwelling will be orientated along the north south axis with the roof pitches facing east and west. The installation of panels on east and west facing roof pitches would result in sub-optimal performance. Nevertheless, the roof pitch offers opportunities for 42 solar panels to be installed.	*Approximately 45% reduction in carbon emission over 2006 Building regulations. (* ref. Guide to cost assessment of low carbon technologies for new developments SMBC)	*Approximately £5,000 (* ref. Guide to cost assessment of low carbon technologies for new developments SMBC)	n/a

Wind	<p>Opportunity exists to install wind turbines either on the dwellinghouse or within the curtilage.</p> <p>However, it is not feasible to provide sources of wind power as the predicted wind speed (2 m/s) is less the 5m/s minimum requirement.</p>	n/a	n/a	n/a
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Micro Hydro	<p>There is no capacity for micro hydro on this site since there are no local water courses available.</p>	n/a	n/a	n/a
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District Heating	<p>Stockport Council informed that there are no existing or planned district heating networks to facilitate connection at this stage.</p>	n/a	n/a	n/a
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Solar Hot Water	<p>The dwelling will be orientated along the north south axis with the roof pitches facing east and west. The installation of panels on east and west facing roof pitches would result in sub-optimal performance.</p> <p>Moreover, the installation of an energy efficient condensation boiler is the preferred manner to heat the dwelling. Consequently, a solar hot water system will not be installed.</p>	n/a	n/a	n/a
Heat Pumps	<p>The amenity space available to install GCHP coils in a horizontal plane is limited. Vertical loops may be technically feasible, but proximity to surrounding amenities may be problematic and the cost of boring up to 60m deep financially prohibitive.</p>	n/a	n/a	n/a

<i>Biomass</i>	An appropriate biomass pellet boiler could be installed to service a traditional wet heating system. There is, however, no provision for pellet storage and there is limited opportunity to provide any without limiting amenity space significantly.	n/a	n/a	n/a
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5. Notwithstanding the fact the dwellings will be constructed to Part L Building regulations, based on the above assessment, the technically feasible technologies for this project are solar photovoltaics, solar thermal hot water, and wind.
6. In terms of project viability, only solar photovoltaics has capacity to contribute to reducing the carbon emissions of the site without impacting on the likelihood of the development going forward in terms of project costs.
7. The carbon savings from the proposed technology contribute an overall carbon reduction of 45% over 2006 building regulations, and the costs of the carbon reduction measures as a proportion of the overall project costs are approximated to be 9.25%.