Design and Access Statement

for **Fernlea, Buxton Road, Chinley**

November 2017

Architect

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Proposed new dwelling at Fernlea, Buxton Road, Chinley 20th November 2017

Design and Access Statement

Planning approval is sought by the new owner who wishes to demolish the existing bungalow and construct a new house of quality with a high level of sustainable design.

1. Background

Fernlea is a dilapidated bungalow sited on Buxton Road, located between the railway overbridge at the junction of the A624 and B6062 and the Network Rail Chinley signal box. The land adjacent on both sides is in agricultural use and the neighbours are separated from Fernlea by field on either side. The bungalow sits well set back on the site and to one side, originally positioned to allow space for future development. The toll house, Toll Bar View, sits at the back of the pavement and is the nearest neighbour.

Toll Bar View – Sited on the back of pavement, this is a typical example of the ribbon development between the settlements of Chinley and Chapel en le Frith

Fernlea outbuildings and entrance set well back from Buxton Road

2. Siting

The proposed design is a response to both the pattern of the nearby development and to the site constraints and opportunities. The site is situated on the outskirts of Chinley village, on the busy and noisy Buxton Road heading towards the concentrated development of Chapel en le Frith. To the South is open countryside and the spectacular long wide views are to be maximised.

We are proposing that the new house be sited close to the back of pavement on Buxton Road, nestled down below a traditional dry stone wall that runs the length of the site. This enhances the site as the building line is similar to the other properties in the immediate context, following the ribbon development of the settled valley pasture rather than the prominent suburban form and siting, as it is currently.

Visualisation of proposed design from Buxton Road, showing the uninterrupted views of the horizon

The effect of this design is to reinforce the street edge and to enhance the experience of the countryside setting by opening up the long wide views to the South as seen from the road, the pavement and the trains passing by along the railway line. The proposed house will form an effective buffer between the noisy side of the site and the private/more tranquil countryside setting. The garden will benefit from reduced road noise and be focused on the landscape and views to the South. This also means the visual impact of the road from views across the countryside will be reduced.

The access will remain in the same position with a garage set back in order to provide sufficient parking and turning spaces suitable for a detached dwelling – the entrance and egress to the site will be greatly improved as currently the access requires a car to reverse blindly back out onto the busy Buxton Road, or reverse into the site with restricted visibility. The proposed garage would be of the same construction and materials as the proposed house and will replace the existing three dilapidated outbuildings - the largest outbuilding is brick sided but the other two are constructed of concrete panels and corrugated iron.

3. Massing

The proposed house takes the form of a half-buried single storey house wrapped around a sheltered courtyard which will replace the large pitched form of the existing bungalow, reducing the visual impact of the site and enhancing the long views of the countryside. This form is a direct response to the topography, orientation and openness that characterise the setting. The two side wings will provide fully accessible separate accommodation for long term guests (family on long stays or a dependant relative) with the main accommodation in the other wing. The primary living spaces are concealed behind the dry stone wall to the road, linking the two wings and forming an external courtyard which is enclosed on three sides to provide a sheltered outdoor space.

(above) Model Photos showing the massing and form of the proposed dwelling

4. Design and Place Making

The brief is for a well designed sustainable home of high quality that reflects the locally distinct character of place, sits well in the context of Chinley and is clearly a building that belongs to and enhances the High Peak countryside. This is consistent with advice in the High Peak Local Plan adopted in April 2016. Particularly relevant to this project is the following advice in Policy EQ 6 and the Design and Place Making section of the development management policies in the High Peak Local Plan:

5.45: Well-designed buildings respond to the character and setting of their surroundings and make a positive contribution to making places better for people. Towns and villages in the High Peak have a distinct local character which has been defined by their architectural and historic development as well as by the use of natural materials such as stone. It is important that any new development in the Plan area is capable of achieving a high standard of design - by reflecting the locally distinct character and features of the area. Development will be encouraged to enhance local character, for example through use of dry stone walls or hedge planting where appropriate, instead of post and rail fencing.

5.46: There is the opportunity for new development on the edge of settlements to improve the urban/countryside interface. Development will be required to consider this interface in its design and to protect and enhance landscape character.

5.48: Sustainability is at the heart of the Council's design policies. The Council supports use of sustainable design and construction methods and is committed to delivering new homes with environmentally sustainable design that helps to save the environment, energy, water and money.

5.51: The Lifetime Homes Design Guide describes the design requirements for accessible homes that will meet the differing and changing needs of households as they experience life events. With an ageing population and increasing numbers of people working from home, High Peak is committed to the provision of new homes that are designed with flexibility to respond to future social, technological and economic needs.

Visualisation of proposed design from an elevated position on Buxton Road, showing views out over the open countryside

Along the roadside the house is designed to be visually insignificant, improving the urban/countryside boundary by reinstating the experience of openness and enhancing the long views of the countryside. The design achieves this by being half-buried beneath the ground and behind the traditional dry stone wall to the pavement, and concealed beneath green roofs. The only windows on the roadside of the house are at the west end of the site, separated from the road by a good distance of ground, where the topography naturally grades away and allows views out towards the surrounding landscape.

On the southern side of the house the character would be more open and respond to the scale of the landscape. Elevations would be extensively glazed to open the internal spaces to the views and natural light. Deep overhanging zinc canopies and eaves would set glazing into shade in order to reduce internal glare and the potential for overheating in summer. The partially buried single storey form of the building enhances the countryside setting by appearing visually indiscernible, significantly reducing the current visual impact of the site.

Visualisation of proposed design from Charley Lane

The design continues local tradition by being constructed seemingly from the ground beneath it, using materials that are appropriate in terms of colour, texture and scale. The materials are a response to the local context of the High Peak countryside; gently sloping walls will be made of natural dry stone, with additional living walls and green roofs to encourage biodiversity and wildlife, visually supporting the openness of the Green Belt. The limited use of zinc for the canopies will gain a natural patina over time and is a reinterpretation of traditional Derbyshire lead roofs, both similar in colour and texture and prized for their use on roofs with a low pitch. Triple glazed high performance windows will be set back into the walls and finished in either traditional timber or a recessive grey powder coated aluminium.

With fully accessible accommodation and living spaces the design delivers the flexibility to respond to future social, technological and economic needs and provides a house for life.

5. External Spaces

The layout is designed to maximise the quality of external space, both for the general public who will benefit from the enhanced open views, and the owner, who will benefit from sheltered, private garden spaces. The gardens and external space will be split into distinct areas;

- The entrance court and parking area which provides suitable parking and turning space, and grades down around the garage to the entrance providing an accessible route.
- A sheltered external courtyard between the three main parts of the accommodation.
- Terraced areas adjacent to the south facing facades.
- Variety of garden types, including a vegetable garden and open space.

6. Sustainability

The proposed house results in well organised and proportioned accommodation which is suitable for the way people live today. It replaces existing non-traditional accommodation with a view to the future, reducing the likelihood of further extensions and alterations.

The house has been designed to operate to Passivhaus levels of environmental performance. While the applicant is not planning to seek full certification to the Passivhaus Standard, the house will be designed and built to meet the Standard. At the design stage we've allowed for the additional width of insulation required in the Standard and allowed height internally for ducting to carry a whole house ventilation/heat recovery system. We are modelling the design through thermal software to demonstrate that the design meets the Standard.

The basic characteristics of the design fundamentally outline its intention of performing to such a high standard of environmental performance. Partially burying the house increases the thermal mass of the structure, taking advantage of the thermal lag of the earth which helps to naturally heat the house in winter and cool it in summer, and shelters and protects against unwanted air infiltration. The thermal mass is further increased through the use of green roofs and living walls, which also enhance biodiversity and wildlife, reduce pollution and significantly reduce rainwater run-off.

The orientation of the design and the extensive glazing to the south aims to take full advantage of passive solar gain from the sun which will provide natural light and heat. Zinc canopies and the depth of windows in the walls respond to the height of the sun in the sky and provide natural shading in the summer months to limit any unwanted solar gain. In winter, the lower position of the sun in the sky means that solar gain is maximised when it is most needed.

The shallow depth of the plan in each wing of the house means it will benefit from natural cross ventilation and high levels of natural light, greatly reducing the need for artificial lighting and mechanical ventilation. Building the house from a highly insulated, well sealed fabric including high performance triple glazed windows will ensure the house has excellent air tightness and heat loss qualities. Further to this extensively considered sustainable design, renewables such as solar thermal and PV panels will be used to provide energy and heat, as well as replenishing batteries for powering the house when required. Rainwater harvesting is also being considered.

The well considered and combined use of all these sustainable design principles demonstrates the ambition of the house to achieve an excellent standard of environmental performance. The passive design means that the need for any extra heating and cooling is minimal. Therefore, there is a drastic reduction in energy consumption required for the home compared to homes of typical construction.

7. Conclusion

The proposed design clearly demonstrates a highly specific response to this site, the local context and its setting in the High Peak. It's siting, massing and design is derived from local pattern of settlement and the traditional features of the area. The proposed design will significantly enhance the experience of this High Peak countryside setting by revealing the long wide uninterrupted views and sense of openness so characteristic of this part of the world. The house will be designed and built to meet the Passivhaus Standard, creating a highly energy efficient and sustainable home for the 21st century and the future.

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