

Erection of 1no dwelling

Rear of Prospect Farm, Cutmill

Sustainability Statement

At detailed design stage, post planning permission, the design and specification for the project will be carefully developed to use sustainable materials and technologies to achieve high environmental standards that are appropriate for the setting to reduce the dwelling's impact and enhance the Environment.

The development will utilise design and construction techniques to conserve energy, be water efficient, reduce waste and recycle materials.

Water usage.

The final detailed design of the dwelling will ensure that the new build meets the minimum of 110 litres per day per person by reducing flow rates etc. During the building regulation phase this requirement will be further assessed by Building Control as the Part G water assessment.

Water efficient fittings within dwellings would include;

- Low volume dual flush toilets, 6 litres (full) / 3 litres (part)
- Wash hand basin tap limited to 4 litres per minute
- Kitchen sink tap limited to 6 litres per minute
- Bath (where fitted) limited to 175 litres to overflow
- Shower limited to 9 litres per minute
- Washing machines 8.17 litres per kg dry load water use
- Dishwashers limited to 1.25 litres per place setting water use

Sustainable Design.

The UK Green Building Council produced a 'Policy Handbook' for local authorities in March 2020 which states on page 17 - "It is recommended that local planning authorities set a requirement for new homes as follows: A 19% reduction on the Dwelling Emission Rate (DER) against the Target Emission Rate (TER) based on the 2013 Edition of the 2010 Building Regulations (Part L) whilst meeting the TER solely from energy efficiency measures as defined within the SAP calculation

model. For absolute clarity, the reference to 'solely energy efficiency measures' refers to DER against the TER (i.e. the current requirements of Part L 2013) not to the 19% improvement factor."

The strategy calculates the total CO₂ arising from the dwelling and demonstrates that a reduction exceeding a 19% total Carbon can be achieved through prioritising the fabric efficiency of the dwelling – this is before applying 4kWp Solar PV [10no 400W panels] total to the dwelling along a possible air source heat pump for hot water and underfloor heating, when the combination of the two will result in a significant CO₂ saving.

The strategy would also provide 10% of the energy demand of the dwelling through on-site renewable energy with all other energy demand being acquired from 100% renewable energy suppliers.

In order to achieve a minimum of 19% Carbon improvement (over part L), 4kWp of Solar PV combined with an air source heat pump is our preferred choice, following reduction of the energy demand and improved efficiency of this development. This would require 10no 400W panels.

Adopting these measures, I anticipate that overall CO₂ reductions would be well in excess of the target 19% reduction over a development built to comply with the CO₂ targets under the latest revision of the Building Regulations, Part L1A 2013. This would also represent a 12% reduction in the energy requirements of the site, provided by renewables.

Indeed, a recent SAP report for the new dwelling at Chalk Lane Nursery – which has both pv panels and an ASHP – demonstrates a 40.2% CO₂ saving!

Full details will be provided at reserved matters design stage, if required, and SAP and Water reports can be submitted at that time in compliance with an appropriately worded planning condition.

Finally, I can confirm that the proposed dwelling will be provided with an electric car charging point, which will be indicated on the submitted reserved matters drawings.