



SUSTAINABILITY AND ENERGY ASSESSMENT

applicant

Adrian KIRKPATRICK

site

Sandhill Farm, Sandhill Lane, Crawley Down, Crawley RH10 4LE

proposal

temporary agriculturally-tied caravan accommodation

stage

full planning application

date

October 2024

1. Introduction

This Sustainability and Energy Assessment supports the full planning application for the proposed temporary agriculturally-tied caravan accommodation at Sandhill Farm. This assessment addresses how the proposal aligns with the sustainability requirements outlined in Policy DP39 of the Mid Sussex District Plan (2014-2031). Each relevant criterion of Policy DP39 is considered in light of the project's specific agricultural function and temporary nature, while showcasing sustainable measures in energy, water, and waste management.

2. Sustainability and Energy Measures

2.1 Minimising Energy Use through Design and Layout

- The caravan has been positioned for maximum passive solar gain, with windows oriented to optimize natural lighting and reduce the need for artificial lighting.
- Natural ventilation has been integrated through strategic placement of windows to facilitate airflow and minimize reliance on mechanical cooling.
- High-quality insulation has been incorporated to enhance thermal efficiency, reducing the need for additional heating during colder periods.

2.2 Efficient Energy Supply

- A significant portion of the caravan's power needs will be met through the 24 kW solar photovoltaic (SPV) array installed on the nearby barn, providing renewable, low-emission energy. This solar array offsets the need for grid electricity, significantly reducing the environmental footprint of the accommodation.
- In cases where supplementary heating is necessary, energy-efficient low-wattage electric heaters will be used, supported by the solar array.



- Lighting and small appliances within the caravan will also draw power from the solar array, ensuring that energy needs are met through a sustainable source.

2.3 Use of Renewable Sources of Energy

- The on-site solar photovoltaic system (24 kW) on the nearby barn directly supports the energy needs of the caravan, aligning with the Policy DP39 emphasis on renewable energy use.
- This renewable energy source reduces dependency on non-renewable grid energy and aligns the proposal with sustainability goals for low-carbon energy solutions.

2.4 Efficient Use of Resources: Minimizing Waste and Maximizing Recycling/Re-use of Materials

- The construction and setup of the caravan prioritize resource efficiency, with materials chosen for their recyclability and potential for re-use upon removal of the temporary accommodation.
- Waste generated during installation and occupation will be minimized, and recycling facilities will be available for occupants to ensure responsible waste disposal.
- Non-permanent construction methods allow for disassembly and potential re-use of materials, further reducing waste impacts at the end of the accommodation's use period.

2.5 Water Use Limitation

- The Proposed Block Plan includes a rainwater harvesting butt to capture rainwater runoff, which will be used for non-potable purposes, such as irrigation or cleaning, reducing the demand on mains water supply.
- Water-saving fixtures, including low-flow taps and showerheads, will be installed to limit water consumption, targeting the policy standard of 110 litres per person per day.
- Guidance on water conservation practices will be provided to occupants to promote responsible water use.

2.6 Climate Resilience and Adaptation

- The caravan has been strategically positioned in a part of the site that is protected from flood risk and adverse weather conditions, increasing its resilience to climate change impacts.
- The temporary nature of the structure allows for adaptation or relocation if environmental conditions change, ensuring flexibility and climate-resilient design.



3. Conclusion

This Sustainability and Energy Assessment demonstrates that the proposed temporary agriculturally-tied caravan accommodation at Sandhill Farm meets the sustainability goals of Policy DP39 of the Mid Sussex District Plan. By drawing most of its energy from the 24 kW solar photovoltaic array on the nearby barn, the proposal emphasizes renewable energy use and low environmental impact. Additionally, water sustainability measures, such as the rainwater harvesting butt, contribute to resource conservation and align with policy standards.

The project's design thoughtfully integrates energy efficiency, renewable energy, and sustainable water management, supporting both agricultural operations and local sustainability objectives. The applicant is committed to managing the site responsibly in line with these sustainability measures throughout the permitted occupancy.