

Energy & Sustainability Statement

Property: Annexe, 19 Farncombe Road, Worthing, West Sussex, BN11 2AY

Development: Construction of Garden Annexe

Framework: Submission in compliance with the Worthing Local Plan (2020-2036)

1. Introduction & Context

This statement has been prepared to discharge the Sustainable Design Conditions for the construction of an annexe building at 19 Farncombe Road. The purpose of this report is to demonstrate how the construction of the garden annexe complies with the local sustainability mandates set out by the Local Planning Authority (LPA). Specifically, this scheme has been engineered to meet and exceed the requirements of **Policy DM16 - Sustainable Design** of the **Worthing Local Plan 2020-2036** (adopted 2023).

2. Compliance with Policy DM16 (Sustainable Design)

Policy DM16 outlines the council's commitment to addressing climate change by mandating strict carbon reduction targets for new developments. For non-domestic buildings, the policy dictates that proposals must achieve an average 27% reduction in emissions compared to the Building Regulations Part L 2013 standard, unless superseded by tighter national policy.

To satisfy Policy DM16, the building has been modelled using approved SBEM/TAS software under the current, highly stringent **Building Regulations Part L 2021** framework. Because the national Part L 2021 uplift was explicitly structured to deliver a mandatory 27% carbon reduction over the outgoing 2013 baseline, passing the strict Target Emission Rates (TER) generated by the Part L 2021 engine inherently satisfies and validates compliance with the carbon criteria of Policy DM16.

The pre-construction BRUKL compliance assessments confirm that the asset successfully passes these rigorous target thresholds:

The Annexe (67.28 Footprint): * Building Emission Rate (BER): 4.77 vs. Target Emission Rate (TER): 5.27 (PASS)

- **Building Primary Energy Rate (BPER): 50.27 vs. Target Primary Energy Rate (TPER): 55.71 (PASS)**

3. Pre-Construction Energy Performance Asset Rating

Reflecting the premium thermal efficiencies built into the fabric design, the Building construction should achieve an **EPC Asset Rating Band A**. This places the asset within the top tier of energy-efficient commercial stock in the region, validating the "fabric-first" methodology prior to the deployment of operational generation or plug-in storage assets. This also exceeds the LPAs DM16 policy target of EPC B for new commercial buildings.

4. Sustainable Design, Fabric & Ecology Commitments

In accordance with the broader design quality and climate resilience objectives of Policy DM16, the site delivers its long-term environmental value through durable structural, mechanical, and ecological integration:

- **Advanced Fabric Insulation:** The scheme relies on a high-performance envelope to drive down space heating demand at the source. The annexe features advanced thermal specifications, including walls at 0.15 , floors at 0.14 , and flat roof sections at 0.16 .
- **High-Efficiency HVAC Integration:** Fossil-fuel heating has been completely omitted. Space heating and hot water requirements are served by highly efficient commercial Air Source Heat Pump (ASHP) services. The annexe uses an ASHP network with a minimum SCOP of 4.7.
- **Passive Solar & Overheating Mitigation:** To limit auxiliary air conditioning loads on hot summer days, localised high-performance solar control films and adjustable internal blinds are specified across key south and west-facing glazing orientations. This addresses solar gain requirements responsively without adding carbon load.
- **Retention of Approved Ecological Infrastructure:** In strict adherence to prior approvals granted by the council, the annexe roof space fully retains its designed green sedum and wildflower roof. This deployment aligns with Policy DM16's emphasis on climate adaptation and biodiversity by providing robust sustainable urban drainage (SuDS) via stormwater attenuation, enhancing localised urban cooling, protecting the structural roof fabric, and offering genuine biodiversity net gains within a conservation-sensitive area.

5. Conclusion

The detailed pre-construction modelling attached to this application verifies that the development at 19 Farncombe Road delivers the exact carbon reductions and sustainable building practices required under **Policy DM16 - Sustainable Design** of the adopted Worthing Local Plan. The council is respectfully requested to approve these details and discharge any associated sustainability conditions.