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Energy Statement

Proposed dwelling at Land At Lower Brownspit Farm Lower Brownspitt Farm Gooseham Bude Cornwall EX23 9PH



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1.0 Introduction

- 1. This statement has been compiled to accompany the full detailed planning application submitted to the local planning authority in respect of the above site and works associated.
- 2. Energy statements have become a mandatory requirement for applications for all new residential dwellings (not those formed by material change of use) and must accord with the aspirations of policy SEC1.
- 3. The document sets out below the technical requirements for the replacement dwelling.

2.0 Background

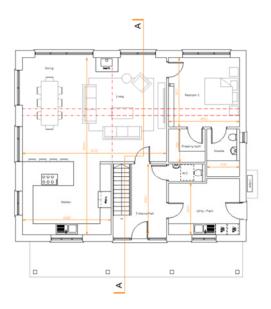
- 1. Cornwall Council adopted and declared a 'climate emergency' in 2019
- 2. This is in response to the growing global climate crisis.
- 3. In June of 2022 new government building regulation documents, or updates to pre existing approved documents were introduced. Primarily Part L (conservation of fuel and power) has been revised together with the introduction of new technical documents.
- 4. Essentially the revised and new documents seek to further address the carbon emissions from new dwelling houses, together with greater emphasis on the ventilation, heating, cooling and habits of dwelling occupiers.
- 5. SAP (standard assessment procedure) has long been a part and fundamental requirement of the building regulations. SAP is used to demonstrate the effective thermal fabric, dwelling emissions rates and space heating / hot water requirements for all new dwellings.
- 6. A similar approach is now required at planning stage as detailed above to accord with the Climate emergency development plan document and SEC1.

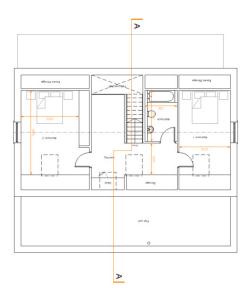


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3.0 Dwelling analysis and technical detail





Extract of Ground & Frist Floor Plan



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- 1. The proposed dwelling is a 3 bed 6 person detached dwelling.
- 2. The dwelling construction at this stage is assumed to be timber framed with a cavity and exterior skin of blockwork.
- 3. The revised approved document Part L of the building regulations sets out fabric u values for various elements of the building, these include floors, walls, roofs, windows, roof windows and doors.
- 4. The fabric u values for each of the above are as follows:
 - Floors 0.13 W/m2k
 - Walls 0.18 W/m2k
 - Roof 0.15 W/m2k
 - Windows 1.4 W/m2k
- 5. Approved document Part L of the building regulations also states that all new dwellings must show compliance in terms of conservation of fuel and power through the means of a SAP calculation.
- A SAP calculation is technical document and calculation which can only be prepared by accredited energy assessors. We hold suitable accreditation with Elmhurst energy and utilise their software for the production of SAP calculations.
- 7. Essentially the SAP calculation is a tool to model the dwelling as designed which in turn presents data in the form of carbon emissions values, which show compliance with the required DER (dwelling emission rate) and the TER (target emission rate) As data is inputted into the tool, the software generates the 'target' which the design must show compliance with. Fabric standards must also be met with compliance being shown with DUFEE and TUFEE requirements.
- 8. The proposed dwelling, in addition to the fabric U values stated above will incorporate the following:
 - underfloor heating system throughout.
 - Wastewater heat recovery fitted to showers / baths
 - Water efficiency measures (Part G of the building regulations) limiting the amount of water used per person per day.



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- 9. The proposed dwelling will be subject to an onsite air pressure test, which ensures the development as tested meets the design requirement of the SAP calculation. The dwelling will be designed with an air pressure rating of 5 m3/hm2
- 10. An as built SAP calculation will be prepared to reflect the site works and also to produce the mandatory EPC rating / certificate for the dwellings.
- 11. The dwelling will incorporate design measures to address summer overheating. This is now a mandatory requirement under Part O of the building regulations. The dwelling will feature natural ventilation for the control of internal air changes which accords with Part F of the building regulations.
- 12. The dwelling will need to show further compliance with AD Part O in the form of thermal dynamic modelling which addresses the solar gain, ventilation requirements and means to effectively cool the building.
- 13. The need to cool has been addressed in the design through promoting adequate cross ventilation as well as designing in solar shading.

4.0 Conclusion

- 1. The proposed dwelling has been designed to meet the requirements as set out in the Climate emergency development plan and policy SEC1
- 2. The dwelling features a number of low carbon technologies to reduce carbon emissions.
- This document sets out the parameters which each dwelling will be designed to in terms of the building regulations and also what measures need to be taken to ensure a broad compliance.
- 4. This document sets out the thermal fabric requirements for each of the construction elements which must be complied with at building regulation stage.