

McCarthy and Stone

London Road, Purbrook

Energy Statement

August 2015



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1.0 Introduction

Instructions were received from Mr T. Jones of McCarthy and Stone Ltd to complete an energy statement for the proposed development on London Road, Purbrook, Hampshire. The statement is to be submitted in conjunction with a detailed planning application for the mixed use development of 42 retirement apartments and two retail units.

The site is located on the eastern side of London Road (the A3) bounded to the north by Stakes Road and with Lady Bridge Road only a short distance to the south. The site is currently occupied by a number of small scale commercial properties; it is proposed that these will be demolished to enable the site to be used to its full potential.

This statement has three primary aims:-

1. Establish the relevant policies from Havant Borough Council's Core Strategy
2. Review the Energy Strategy
3. Respond to the Core Strategy requirements

This statement has referred to the following documentation in its preparation

Document	Author
Havant Borough Core Strategy. March 2011.	Havant Borough Council
Design Stage SAP Calculations	McCarthy and Stone

2.0 Context

2.1 Local Policy Context

The Havant Borough Council's Core Strategy addresses a broad spectrum of environmental issues. However, for the purposes of this report, the following relevant policies taken from the strategy have been deemed relevant.

2.1.1 Policy CS14 – Efficient Use of Resources

Policy CS14 states that:

'Planning permission will be granted for development that:

- 1. Provides adequate land or funding for waste management infrastructure.*
- 2. Locally contributes to the delivery of the PUSH [Partnership for Urban South Hampshire] target of 100MW of renewable energy by 2020 for the whole of the PUSH area. Major areas of development must ensure that their on-site renewable energy production is maximised and resource efficiency is maximised.*
- 3. On completion, unless proven to be financially or technically unviable, meets the following standards:*
 - Multi-occupation homes and non-residential development over 500 m² – BREEAM 'Very Good'*
 - Improvements to this standard throughout the plan period will be encouraged*
 - Particular attention should be paid to water efficiency measures*
- 4. Allowable Solutions may be used to achieve higher levels of carbon reduction where on-site proposals are not feasible or viable.'*

2.2 National Policy Context

It is important to establish the current position in national policy related to carbon emissions and energy regulation as this directly responds to the planning requirement.

The most significant change to have occurred in recent months which is relevant to this application is the conclusion of the Housing Standards Review and its link to the de-regulation bill.

The Housing Standards Review (HSR) evaluated many of the regulations covering the construction of houses and, in so doing, sought to consolidate them to provide greater efficiency within the industry. The outcome of the HSR was enacted by the deregulation bill which received Royal Assent on 26th March 2015.

The overarching intention of the HSR and the incorporated deregulation bill is for energy consumption and the carbon emissions associated with housing to be managed within the building regulations framework.

Among other changes, the act has introduced a clause which will amend the Planning and Energy Act 2008 limiting the local authorities from requiring higher levels of energy efficiency than Building Regulations.

2.3 Review

The HSR necessarily impacts upon Policy CS14 outlined in the section above. In discussions with planning officers at Havant Borough Council, it has been established that this policy is currently under review and is subject to being repealed in line with the new government standards. Until such a time that Policy CS14 has been either modified or repealed, it has been clearly outlined by the planning officers at the Council that they cannot stipulate developments meet specific sustainability and energy performance related criteria above and beyond that which is specified within national Building Regulations.

Despite this, the discussions confirmed that Havant Borough Council still require all new developments to give consideration to their environmental impact. As such, the following section will look to demonstrate the development's ability to deliver significant energy savings and carbon reductions.

3.0 Approach

It is widely accepted that, to most effectively and economically reduce the carbon emissions of the built environment, it is essential to first enhance a building's energy efficiency. This is often termed 'Be Lean' and forms the fundamental basis of the 'energy hierarchy' – a classification through which carbon reduction measures in the built environment can be prioritised.

3.1 Energy Efficiency

In line with the energy hierarchy, it is the intention of McCarthy and Stone to maximise the use of energy efficiency measures in respect of the Purbrook development. Primarily this will concern improvements in the efficiency performance of the building fabric above the minimum requirements of Part L – the so-called 'fabric first' approach. The highly performing fabric of the building will be complemented by an efficient mechanical and electrical services strategy.

To this end, McCarthy and Stone have provided details of their current specification which aligns with the Building Regulations AD Part L1a compliance requirements. The fabric performance is assessed in the table below against the minimum backstops of AD Part L1a as a comparison.

Building Element	Notional Part L 2013 Specification	Purbrook Proposed Specification
External walls U-Value	0.30	0.17
Roof U-Value	0.20	0.16
Ground Floor U-Value	0.25	0.09
Window U-Value	2.00	1.40
Party Wall U-Value	0.20	0.00
Door U-Value	2.00	1.40
Boiler Efficiency	89.50%	100%
Pressure Test	5.00	4.00
Thermal Bridge Y-Value	0.15 (Default)	0.027 (Bespoke)

This specification represents McCarthy and Stone's intention to employ a 'fabric first' approach; the proposed U-Values offer a significant improvement over Part L's minimum requirements.

All of the main building elements have been designed to provide a thermally efficient building envelope which achieves an improvement on the minimum requirements set out within Part L. The use of highly insulated cavity walls, roof, floors and openings provide a comfortable environment within the development and reduce the building's reliance on the mains heating system.

Intelligent construction methods and high quality of construction is also utilised in the specification of this development, using bespoke calculated thermal bridges in conjunction with more stringent air permeability targets. In this way, thermal performance is enhanced by minimising heat and energy losses through thermal bridges and air gaps.

The mechanical specification of the building has also been designed with energy efficiency in mind. Due to the demographic of the targeted building user, it is likely that many residents will spend a large portion of their time indoors. As such, it has been decided to use an electric under floor system to satisfy the space heating demand as these are more efficient where the heating will likely be required for long periods of time. This approach works well with the high thermal mass, helping to regulate temperatures and maintain comfort levels for the occupants.

In order to further enhance the efficiency of this system there will be full time and temperature zone control. This will ensure that the system doesn't function when it is not required.

It is also proposed to use a mechanical ventilation and heat recovery (MVHR) system. This system will work to maintain whole dwelling ventilation while, simultaneously, efficiently extracting up to 95% of heat from stale outgoing air to pre-heat the fresh ingoing air, thus reducing the heating demand load.

3.1.1 Retail Units

Being included in the overall envelope of the building, the two retail units will share the same fabric performance as that cited in the table above, therefore exceeding the target U-values for all elements defined within AD Part L2a.

The units will be constructed to shell only; fit out will be undertaken by the tenant. Within McCarthy and Stone's remit and as far as is practicable, therefore, the units will meet the same exacting standards for energy performance as that of the rest of the building. All fit out works undertaken by the tenant will meet building control requirements.

3.2 Low and Zero Carbon Technology

Given the fabric first approach undertaken by McCarthy and Stone the use of renewables is limited to where necessary for regulation compliance.

Once the detailed design of the scheme is completed renewables may be incorporated for compliance, if this is the case photovoltaic (PV) panels are the preferred technology used by McCarthy & Stone.

4.0 Conclusion

This statement has reviewed the proposed development of a mixed use building including 42 retirement apartments and two retail units.

Through simultaneous consideration of appropriate excerpts of the Havant Borough Council's Core Strategy and McCarthy and Stone's proposed specification, it has been comprehensively demonstrated that the development can satisfy all relevant policy.

Despite local and national policy both currently being subject to significant change, McCarthy and Stone have designed a sustainable specification that focuses on fabric performance. It is felt that, by engineering energy efficiency into the fabric this engrains the benefits for the long term.

Appendix 1

Site Plan



Notes:

Please report all discrepancies, errors and omissions.

Verify all dimensions on site before commencing any work on site or preparing shop drawings.

All materials, components and workmanship are to comply with the relevant British Standards, Codes of Practice, and appropriate manufacturers' recommendations that from time to time shall apply.

For all specialist work, see relevant drawings.

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When this document is provided in electronic file format it is intended as a guide only and the recipient is to verify all dimensions and details with the Architects. If this is not acceptable, the files must be returned unused together with a written communication declining acceptance of this condition.

Revisions:

rev date revision



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Proposed Retirement Living
38-44 London Road,
Purbrook, Hampshire

drawing title
Proposed Site Plan

scale 1:200 @ A1
date July 2015
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revision

Appendix 2

Artistic Impression



View From London Road

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