

Climate Change and Sustainable Development Questionnaire for minor applications.

1. How does the proposal relate to the buildings around it? Is it of a similar size and scale to neighbouring buildings? Does the layout relate well to the surroundings?

(Please cross reference the Design and Access Statement as appropriate).

There are a mix of plots & sizes in immediate area. The scheme reflects existing terrace 15-19 Frome Road (approx.. 52m from the site). Please see Planning, Design & Access Statement for further information.

2. Does the proposal protect the amenity of neighbouring buildings and land uses? Will nuisance be caused to existing occupiers of neighbouring properties by the proposed use, or by the layout, scale, form or mass of the proposal? (Please cross reference the Design and Access Statement as appropriate). 50m from nearest corner of Plot 3 to the PH and 31.4m to No. 51 Church Lane. Gap of 23.4m between Plot 1 and No. 46 Church Lane. Therefore, the amenity of neighboring buildings and uses is protected.

3. Does the proposal make efficient use of the land. If residential, does the proposal result in development of 30-40 dwelling /ha if in a town, or 25-30 dwellings/ha in a rural area? If not, is there a justification for this? The development land take is 0.106 hectares, giving a proposed density of 28.3 dwellings/hectare.

4. Has the proposal maximised energy efficiency? Does the proposal;
 - a. Ensure that the siting and orientation of buildings will promote energy efficiency, for instance, maximising daylight, creating space for solar PV or avoiding areas of the site where conditions would increase the need to use energy within buildings, such as exposed hilltops or frost pockets.
 - b. Take advantage of natural topography to maximise energy efficiency, utilising natural features such as south facing slopes or shelter belts.
 - c. Allow for food growing within the layout
 - d. Allow for natural ventilation to avoid over heating.
 - e. Ensure any conservatories and sun spaces self contained and able to be closed off from the main building, to avoid overheating or heat loss?
 - f. Utilise thermal mass, to help stabilise temperatures inside buildings?

- g. Minimise heat loss through exterior openings?
- h. Minimise heat loss by minimising the surface area of the exterior of buildings, using building forms such as short terraces or semi-detached buildings?
- i. Including outdoor drying facilities?

See the enclosed energy statement. Also, the gardens/rear of properties are SW facing to maximise daylight and good orientation for PV on rear roof slope. Housetypes are designed to meet current Building Regulations for energy efficiency by using fabric first requirements to optimise thermal mass whilst windows and doors minimise heat loss. Also, calculation sheet attached for passing overheating/ventilation requirements.

5. Does the proposal use sustainable construction techniques? What techniques are to be included. Does the scheme include any of the following:

- a. Low carbon ventilation system
- b. Mechanical heat recovery
- c. Air or ground source heat pump
- d. Smart system controls
- e. Low embodied energy materials.

The proposal could use air source heat pumps and smart controls or alternatively high efficiency boilers & PVs.

6. Does the proposal include a SUDs scheme? Have permeable spaces been left between buildings and hard surfaces to allow for infiltration? Does the scheme include rain gardens? Permeable paving can be found to driveways and access area.

7. Does the scheme include renewable energy generation on site? Does the scheme include any of the following;

- a. Solar PV panels
- b. Solar thermal panels
- c. Roofs designed to accept solar energy generation at a later date
- d. Small hydro generation
- e. Small wind generation
- f. Connection to a district heating system

Roofs can accommodate PVs if that is the desired energy source route.

8. Does the scheme include measures to improve water efficiency? Does the scheme include any of the following;
- a. Low flow taps and appliances
 - b. Grey water recycling
 - c. Rain water harvesting for interior use
 - d. Rain water harvesting for garden use, e.g. water butts.

Options a & d can easily be accommodated if desired

9. Does the scheme encourage future occupiers to minimise, re-use or recycle waste conveniently? Does the proposal include any of the following:
- a. Facility for the storage of recycling boxes and bins
 - b. Space for food growing
 - c. Garden composting facilities

All options can be accommodated if desired.

10. Has an assessment of embodied energy been carried out? If not, does the scheme consider the impact of proposed materials and construction methods on the environment? Does the scheme include any of the following;
- a. Recycled materials
 - b. Light weight materials
 - c. Locally produced materials
 - d. Materials where the manufacturer has taken steps to significantly reduce the carbon profile of the material

As a new build development, an embodied energy assessment is not applicable.

Options c & d could be adopted if desired.

11. Does the scheme ensure accessibility for all by including the following:
- a. Safe and convenient routes for pedestrians and cyclists (please cross reference transport statements if appropriate)
 - b. Secure storage for bicycles
 - c. EV charging facilities

All options can be accommodated if desired

12. Has the scheme been designed using the principles of Secure By Design. How does the scheme design out crime? Yes – see crime prevention statement.

13. Will materials be reused and/or recycled on site? Does the proposal comply with Somerset Waste Core Strategy policies WCS1 and WCS2. **Not applicable as there are no existing buildings that have materials that can be reused.**