

Supplementary Planning Document Design and Amenity of New Development; Guidance for interpretation of Local Plan Policy DP7

**Draft for Consultation
November 2021**

With thanks for the use of extracts from the Net Zero Carbon Toolkit



Net Zero Carbon Toolkit is licensed under Creative Commons Licence 4.0 International (CC BY-NC-SA 4.0). Licence Deed: <https://creativecommons.org/licenses/by-nc-sa/4.0/legalcode>

Attributed to: Levitt Bernstein, Elementa, Passivhaus Trust and Etude commissioned by West Oxfordshire, Cotswold and Forest of Dean District Councils, funded by the LGA Housing Advisers Programme

1.Introduction

1.1 In February 2019, Mendip District Council (the Council) declared a Climate and Ecological Emergency pledging to make best endeavours to enable Mendip District to be carbon neutral by 2030. In August 2021 the Council adopted a Carbon Management Plan to guide its path towards decarbonisation. The Carbon Management Plan¹ includes energy efficiency targets for domestic and non-domestic buildings, including energy efficiency, decarbonised heating systems and increased use of renewable energy.

1.2 The Council is dedicated to supporting individuals, businesses and communities towards carbon neutrality. A Net Zero Carbon Toolkit providing technical information to both developers and homeowners, has been endorsed by the Council.

1.3 This Supplementary Planning Document (SPD) accompanies the Mendip District Local Plan 2006 to 2029: Strategies and Policies (LPP1) Policy DP7: Design and Amenity of New Development. Policy DP7 aims to support high quality design which results in useable, durable, adaptable, sustainable and attractive places. The policy acknowledges the role of good design in making places that are attractive to visitors and residents, and sustainable in the way they use resources.

1.4 The SPD aims to help applicants demonstrate how their proposal responds to the need to ensure that resource efficiency, sustainable construction techniques and onsite renewable energy have been considered. This SPD complements the technical information provided within the Toolkit and provides a formal guide to interpretation of Policy DP7. It should be read alongside the Toolkit.

1.5 Sustainability Statements are required to accompany planning applications for "major development". These are applications comprising residential development of 10 or more dwellings, development sites of 1 hectare or more and development involving floor space of 1,000m² or more or as or as otherwise provided in the Town and Country Planning (Development Management Procedure) (England) Order 2015.

1.6 The Toolkit provides technical information for developers on sustainable construction techniques and also includes a section on retrofit of existing building to help those who own and maintain buildings to reduce their carbon output. The Toolkit can be used to inform the content of Sustainability Statements and illustrates the measures that are needed to meet some of the requirements of Policy DP7.

1.7 Smaller applications do not have to include a Sustainability Statement and applicants are invited to use the questionnaire appended to this SPD to ensure that the requirements of Policy DP7 have been considered in their proposals.

¹ The plan may be viewed on the Council's website at <https://www.mendip.gov.uk/article/10314/Carbon-Management-Plan>

Householder applications will not be required to include the questionnaire but may still wish to include information to show they are compliant with DP7.

2.National Policy

2.1 The National Planning Policy Framework (NPPF) July 2021 recognises the importance of good design in the development process. NPPF Paragraph 126 sets out the Government's position with regard to design;

“The creation of high quality, beautiful and sustainable buildings and places is fundamental to what the planning and development process should achieve. Good design is a key aspect of sustainable development, creates better places in which to live and work and helps make development acceptable to communities. Being clear about design expectations, and how these will be tested, is essential for achieving this. So too is effective engagement between applicants, communities, local planning authorities and other interests throughout the process.” (Para 126, NPPF 2021)

2.2 The NPPF supports the transition to a low carbon future. Paragraph 152 reads as follows;

“The planning system should support the transition to a low carbon future in a changing climate, taking full account of flood risk and coastal change. It should help to: shape places in ways that contribute to radical reductions in greenhouse gas emissions, minimise vulnerability and improve resilience; encourage the reuse of existing resources, including the conversion of existing buildings; and support renewable and low carbon energy and associated infrastructure.” (Para 152, NPPF 2021)

2.3 The NPPF sets out an expectation that new development will address the need to mitigate and adapt to Climate Change as set out in Paragraphs 154 and 157;

New development should be planned for in ways that:

a) avoid increased vulnerability to the range of impacts arising from climate change. When new development is brought forward in areas which are vulnerable, care should be taken to ensure that risks can be managed through suitable adaptation measures, including through the planning of green infrastructure; and

b) can help to reduce greenhouse gas emissions, such as through its location, orientation and design. Any local requirements for the sustainability of buildings should reflect the Government’s policy for national technical standards.” (Para 154, NPPF 2021)

In determining planning applications, local planning authorities should expect new development to:

a) comply with any development plan policies on local requirements for decentralised energy supply unless it can be demonstrated by the applicant, having regard to the type of development involved and its design, that this is not feasible or viable; and

b) take account of landform, layout, building orientation, massing and landscaping to minimise energy consumption. (Para 157, NPPF 2021)

2.4 In addition to the NPPF, a National Design Guide² was published in January 2021. The National Model Design Code³ was published in June 2021. Together they illustrate how well-designed places that are beautiful, healthy, greener, enduring and successful can be achieved in practice. The documents form part of the Government's collection of planning practice guidance.

The Government has indicated that standards for addressing efficiencies in the fabric of buildings should be addressed through national technical standards such as the building regulations (as set out in Paragraph 154, NPPF 2021).

3. Local Policy

3.1 The Mendip District Local Plan 2006 to 2029: Part 1 Strategies and Policies was adopted in December 2014. While the development plan for the district needs to be considered as a whole, LPP1 includes Policy DP7: Design and Amenity of New Development which specifically addresses the sustainability of development. The policy is reproduced below.

Policy DP7: Design and Amenity of New Development

The Local Planning Authority will support high quality design which results in usable, durable, adaptable, sustainable and attractive places.

1. Proposals for new development should demonstrate that they:

- a) are of a scale, mass, form and layout appropriate to the local context*
- b) protect the amenity of users of neighbouring buildings and land uses and provide a satisfactory environment for current and future occupants*
- c) optimise the potential of the site in a manner consistent with other requirements of this policy*
- d) incorporate all practical measures to achieve energy efficiency through siting, layout and design*
- e) maximise opportunities for:
 - i. The use of sustainable construction techniques*
 - ii. The use of sustainable drainage systems*
 - iii. Renewable energy generation on site*
 - iv. The use of water efficiency measures, recycling and conservation*
 - v. New residents to minimise, re-use or recycle waste**
- f) use locally sourced or recycled materials wherever practically possible*
- g) meet the access needs of a wide range of users*
- h) incorporate appropriate crime prevention measures*
- i) undertake construction in a manner that makes efficient use of materials and minimises waste.*

² <https://www.gov.uk/government/publications/national-design-guide>

³ <https://www.gov.uk/government/publications/national-model-design-code>

2. All allocations will be the subject of either an appropriately detailed Development Brief or Masterplan or other structured and agreed pre-application process prepared in conjunction with the relevant community. Where a Development Brief/Masterplan is prepared, it will, where appropriate, be adopted as a Supplementary Planning Document prior to the granting of planning permission.

3.2 The Somerset Waste Core Strategy was adopted in February 2013 and also forms part of the development plan for Mendip District. Policy WCS1: Waste Prevention requires that:

WCS1: Waste prevention

Somerset County Council, as Waste Planning Authority, will work with local residents, businesses and other partners to maximise the scope for waste prevention.

a) For proposed development, this will mean working with Local Planning Authorities to promote and require the following supporting information to be submitted with planning applications:

- A site waste management statement for the construction of minor development (less than 10 dwellings or where the floorspace to be created by the development is less than 1000m²); or*
- A site waste management plan for the construction of 10 or more dwellings or where the floor space to be created by the development is 1000m² or more; or*
- A site waste management strategy for the construction of large-scale major projects (200 or more dwellings or where the development covers more than 10,000 m²) or for multi-site projects within the same application.*

b) On completion of development, this will mean supporting the Somerset Waste Partnership in its work on waste minimisation including, but not limited to, the delivery of its municipal waste management strategy and its work with the supply chain to reduce the negative impacts of packaging.

3.3 Policy WSC2: Recycling and Reuse addresses the need to store and collect waste within development. The policy is reproduced below.

Policy WCS2: Recycling and Reuse

General considerations

Planning permission will be granted for waste management development that will maximise reuse and/or recycling of waste subject to the applicant demonstrating that the proposed development will, in particular, be in accordance with Development Management Policies 1-9.

Temporary storage and access

During the planning stages of residential and non-residential development, Somerset County Council (as Waste Planning Authority) will encourage the provision of adequate space and facilities – both within buildings and

externally - that enables effective separation, temporary storage and collection of waste. To do this, the County Council will:

- a) work with the Somerset Waste Partnership to encourage developers to provide adequate space and facilities for waste separation and storage and access for waste collection in new and existing developments;*
-) encourage District and Borough planning authorities to include relevant development management policies, conditions and/or guidance on waste separation and storage and access for waste collection; and*
- c) require effective access to be provided, via its highway standards, throughout new development for waste collection and recycling vehicles.*

Recycling and reuse of inert waste

Applications for all types of development should demonstrate that viable opportunities to minimise construction and demolition waste disposal will be taken, making use of existing industry codes of practice and protocols, site waste management plans (as detailed in strategic policy WCS1) and relevant permits and exemptions issued by the Environment Agency.

Before considering inert landfill disposal, inert waste that cannot be reused or recycled on-site should be diverted off-site for recycling and/or the following beneficial uses, subject to the general considerations mentioned above:

- a) the restoration of quarries and other excavation sites (excluding peat sites);*
- b) other uses with clear benefits to the local community and environment; or*
- c) other facilities that will facilitate such positive use.*

Interpretation of Policy DP7

4 Scale, mass, form and layout appropriate to the local context

4.1 High quality design responds to its local context. The layout of a scheme will determine how open spaces and blocks of development relate to one another and the adjoining buildings to create places. The form of buildings, the shape, height, bulk and alignment will determine the shape and form of the spaces between. The scale of buildings, and the spaces between will affect how they are used and experienced.

4.2 The Council will expect designs to respect the local context and to fit harmoniously with the proposal's surroundings.

4.3 The National Design Guide offers guidance on how good design can be achieved.

5. Protecting the amenity of users of neighbouring buildings and land uses and providing a satisfactory environment for current and future occupants

5.1 Development proposals will be expected to respect neighbouring buildings both in terms of their use and their layout, scale, form and mass. Development should not result in ongoing nuisance to existing occupiers or occupiers of the new buildings.

5.2 The Council will support good quality design which respond to its surroundings ensuring that the amenity of current and new occupiers is protected. Proposals should ensure that the development is “fit for purpose; durable; and brings delight” in accordance with the definition of good design set out in Paragraph 4 of the National Design Guide. Proposals should also ensure that these qualities are not lost from buildings and spaces surrounding it. The National Design Guide offers guidance on how good design can be achieved.

6. Optimise the potential of the site in a manner consistent with other requirements of this policy

6.1 Land should be used efficiently so that housing needs can be met while minimising the need for building on additional greenfield land. Mendip District Local Plan: Part 1 sets out broad guidelines for the net density of new housing development in Paragraph 4.44 as follows;

- Sites within towns – 30-40 dwellings per hectare
- Site in rural areas – 25-30 dwellings per hectare

6.2 Higher densities will be considered in appropriate locations, where the local context allows and any impacts can be satisfactorily mitigated. Where lower densities are proposed, the Design and Access Statement should justify this.

7. Incorporate all practical measures to achieve energy efficiency through siting, layout and design

7.1 The Government consulted on a Future Homes Standard to accompany the Building Regulations during 2019 and it is anticipated that significant improvements to Part L of the Building Regulations will be introduced from 2025. It is expected that the equivalent of a 75% carbon reduction over existing Part L Building Regulation will be introduced. As an interim provision a 31% improvement over Part L standards is expected to be introduced during 2022.

7.2 The Government has made it clear that the Building Regulations are the most appropriate means of regulating the energy efficiency of building fabric. However, the siting, layout and design of buildings can have a fundamental impact on energy efficiency and is more appropriately addressed through the planning system. This SPD addresses those matters.

7.3 It is expected that proposals will be designed to maximise energy efficiency in terms of siting and orientation, layout and design. Whilst it may not be possible to include all aspects of good practice within the constraints of a proposal, it is expected that schemes will maximise their energy efficiency using the range of measures set out, utilising the most appropriate for the circumstances. If, for instance, a building cannot be located within a layout to make best use of natural features of the site, maximise solar gain or reduce the inherent need for energy, then compensatory measures should be considered such as additional renewable energy generation or additional low carbon building systems.

7.4 Siting and orientation

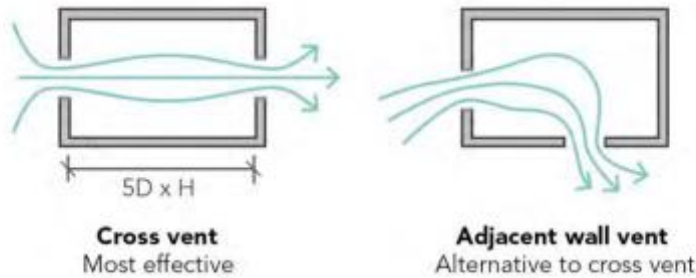
- Buildings should be orientated to maximise daylight and sunlight into the building.
- Roofs should be orientated to create maximum effective space for Photo Voltaic installations.
- Where possible, buildings should be sited to avoid areas within the site that would create a need for additional heating or cooling, for example by avoiding exposed hilltops and frost hollows within a site.

7.5 Layout

- Layouts should respond to the natural topography, and take advantage of natural features that may lessen the need for energy within the building, e.g. existing trees that provide shade and shelter, south facing slopes.
- Sufficient space should be allowed between groups of buildings to allow for rainwater harvesting and natural infiltration and to allow space for SUDs schemes. Layouts that allow space between buildings for community food growing should also be considered.

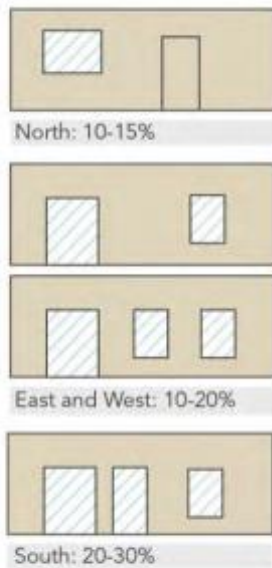
7.6 Design

- Buildings should allow natural ventilation, particularly on south facing elevations, with window and door openings allowing effective movement of air through the building. Passive stack ventilation may also be an option. Plans should allow for dual aspect units (with openable windows on at least two sides), allowing effective movement of air through the building, windows designed to be locked partially open without compromising security to allow for passive ventilation and night time purging during heatwaves.



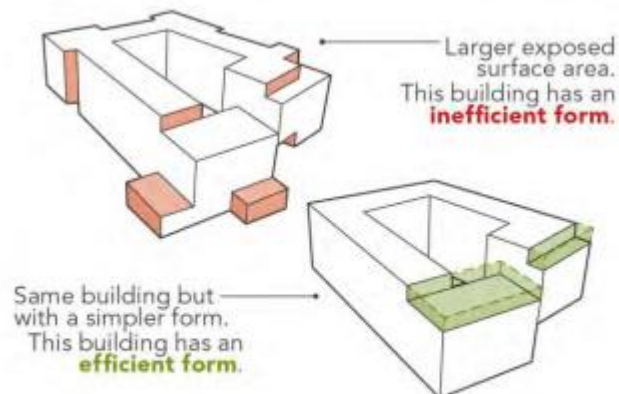
Design for dual aspect homes to allow for natural cross ventilation

- Window and door openings should take full advantage of natural daylight and sunlight and allow for solar gain in the heating season, whilst not leading to overheating in the summer months. Sun spaces and conservatories which can be closed off from the main buildings are a useful means of achieving this. Solar shading may be needed on south facing windows.
- Thermal mass can help to stabilise temperatures inside the building, both providing a cooling effect in hot weather and storing heat in cold weather. Thermal mass should be maximised within building designs, with the use of brick, block, concrete or ceramic in suitable parts of the building. Green walls and green roofs may also contribute to stabilising indoor temperatures.
- Smaller windows/fewer openings on the north elevations can minimise heat losses in colder weather. The right glazing-to-wall ratio on each façade can minimise heat losses in colder weather. Minimise heat loss to the north (smaller windows) while providing sufficient solar heat gain from the south (larger windows).



Recommended glazing percentages of each external facade

- The surface area of the exterior of the building should be minimised to avoid heat loss. The potential for use of building forms that have fewer exposed exterior walls, such as semi-detached and short terraces, should be carefully considered. The building form should be as simple and compact as possible reducing the exposed surface area for heat loss. Stepped roofs, roof terraces, overhangs and inset balconies should be avoided as these features will decrease the building's energy efficiency.



Designing the building to have an efficient form

- Building designs should encourage energy saving behaviour by residents, such as incorporating outdoor drying facilities.

8. Maximising opportunities for the use of sustainable construction techniques

8.1 It is expected that low carbon technology is used in building systems wherever possible and that building designs will allow for the convenient installation of low carbon technology. This might include ventilation systems including heat recovery, low carbon heating systems such as air or ground source heat pumps and smart system controls.

8.2 Embodied energy in materials selected should be minimised, using locally sourced, recycled or lightweight materials wherever possible.

9. Maximising opportunities for the use of sustainable drainage systems

9.1 SUDS limit the volume and rate of surface water entering the public sewer system. They therefore have the potential to play an important role in helping to ensure local sewerage networks have the capacity to cater for development and ensure resilience to the effects of climate change.

9.2 It is the responsibility of a developer to make proper provision for surface water drainage to ground, water courses or a surface water sewer as drainage of surface water to the foul sewer is a major contributor to sewer flooding. The connection of surface waters to the public sewer will not be permitted without confirmation from the Lead Local Flood Authority that the sequential approach to the disposal of surface water has been followed and all practical alternatives have been explored.

9.3 Separate guidance is in preparation for the provision of SUDs schemes.

10. Maximising opportunities for renewable energy generation on site

10.1 Proposals are expected to maximise potential for renewable energy generation on site. Roofs should be oriented to maximise the potential for Photo Voltaic installation and solar thermal generation and should be pitched so as to take maximum advantage of solar gain. Solar panels should be installed wherever possible. Where, exceptionally, solar panels are not proposed as part of the original scheme, roofs should be able to accept retrofitting without significant modification.

10.2 Opportunities for small hydro and small wind generation may be considered on suitable sites but will not normally be an efficient approach on smaller sites.

10.3 Opportunities to develop district heating systems should be considered on suitable sites.

11. Maximising opportunities for the use of water efficiency measures, recycling and conservation

11.1 The treatment and supply of clean water is carbon intensive and it is expected that proposals will maximise opportunities to improve water efficiency, recycling and conservation. Proposals will be expected to show how water efficiency has been maximised, with consideration of low flow taps and appliances, water recycling and rainwater harvesting as appropriate. Facilities for grey water recycling should be carefully considered.

11.2 Applications for dwellings with gardens will be expected to include rainwater harvesting for garden use, which can be achieved simply and at low cost by the installation of water butts.

11.3 Technical guidance and SPD concerning phosphates is anticipated in 2022, and this may provide further guidance on water efficiency.

12. Maximising opportunities for new residents to minimise, re-use or recycle waste

12.1 Buildings will be expected to incorporate facilities that allow for convenient recycling, including storage of recycling boxes and bins.

12.2 Community food growing spaces can contribute to sustainable development since locally grown food reduces food miles, lowers the embodied carbon in procuring food and contributes to improved air quality. In addition, vegetated open spaces can help to reduce any heat island effects while the permeable surfaces of food growing spaces and the harvesting of rainwater can contribute to sustainable drainage.⁴

12.3 Provision of garden composting facilities should be considered where appropriate. The inclusion of community composting facilities can increase the sustainability of community food growing by reducing the amount of organic waste transported off site and the amount of compost transported into the site.

⁴ The guidance document “Good planning for good food - using planning policy for local and sustainable food” (2011), prepared by Sustain, explores how local authorities and communities can use planning policy and decisions to create more local and sustainable food systems. The report is available at: https://www.sustainweb.org/publications/good_planning_for_good_food/

13. Using locally sourced or recycled materials wherever practically possible

13.1 Recycled materials are likely to have less embodied energy and therefore lower carbon emissions associated with their production and use. Similarly, locally sourced materials will have generated fewer emissions from transport to site. It is expected that recycled or locally sourced materials will be used wherever possible.

13.2 It is expected that embodied energy will be assessed as part of the development of any scheme and evidence proportionate to the scheme included in Design and Access Statements. Detail should be included within Sustainability Statements where they are required.

13.3 The Net Zero Carbon Toolkit gives technical information on how to approach assessing embodied carbon.

14. Meeting the access needs of a wide range of users

14.1 Buildings will be used by people at different stages of life and with different abilities – children, young people, adults, families and older people, both able-bodied and disabled. Proposals will need to be designed for people with a range of access needs and this constitutes an important part of the process of creating good design.

14.2 Layouts for larger schemes are expected to include suitable safe routes for cyclists and pedestrians. Buildings must include secure storage for bicycles unless an exception can be justified.

14.3 Buildings will be expected to include provision for Electric Vehicle charging. Dwellings should make provision for Electric Vehicle charging within each plot or in an accessible communal area and Design and Access statements should justify any proposals where this is not included. Somerset County Council have prepared a “Electric Vehicle Charging Strategy”⁵ (Oct 2020) which sets out good practice for provision of EV charging infrastructure. EV parking standards are also in preparation. It is expected that proposals will comply with the guidance set out in these documents. Electrical systems should be Electric Vehicle ready, and designs should include an accessible location where charging can be carried out. It is anticipated that a requirement for all new dwellings to provide Electric Vehicle charge points will be introduced by the Government during 2022.

14.5 Access standards within buildings are governed by Part M of the Building regulations. It is the Government's intention to upgrade the requirement of Part M in due course.

15. Incorporating appropriate crime prevention measures

15.1 Crime has a significant impact on the long-term sustainability of developments. Secure By Design is a Police security initiative providing guidance on designing safe and secure external environments and providing guidance to developers. Guidance is available covering a wide range of development types, including homes and

⁵ www.somerset.gov.uk/climate-emergency/somersets-climate-emergency-strategy-documents/

commercial development. Security should be considered early in the design process. Designing Out Crime officers will also be consulted on appropriate planning applications.

15.2 It is expected that appropriate crime prevention measures recommended by Secure By Design⁶ will be incorporated into development proposals.

16. Undertaking construction in a manner that makes efficient use of materials and minimises waste.

16.1 It is expected that all opportunities to re-use building materials and waste on site during construction will be taken. This might include re-use of hardcore, use of materials in landscaping and re-use of building materials reclaimed from demolition.

16.2 The Somerset Waste Core Strategy provides more guidance on construction waste. Policies WCS1 and WCS2 are set out in Section 3 of this document. Further guidance is available within the Waste Core Strategy⁷.

17. Masterplanning and Development Briefs

17.1 Development briefs or masterplans need to be prepared for allocated sites, and for other larger sites as required.

17.2 A well-designed place is unlikely to be achieved by focusing only on the appearance, materials and detailing of buildings. Master plans and development briefs should show how the issues identified in Policy DP7 will be addressed in the design. Developers are encouraged to discuss schemes at an early stage through pre-application discussions with the Council. Requirements to incorporate measures to improve energy efficiency, sustainable construction techniques, SUDs, renewable energy, water efficiency, minimising, re-using and recycling waste, specification of materials, meeting access needs, incorporating crime prevention and minimising construction waste are all fundamental to the creation of successful places and should be incorporated.

17.3 Guidance on good design and a local design code are in preparation and will inform the preparation of masterplans and design briefs when available.

18. Resources

18.1 There are many online resources available to support the use of more sustainable design and construction. The Net Zero Carbon Toolkit provides more detail regarding many of the techniques set out above and should be referred to for technical information. Inclusion of measures described in the Toolkit will help applicants to meet the requirements of policy DP7.

⁶ www.securedbydesign.com

⁷ <https://www.somerset.gov.uk/waste-planning-and-land/somerset-waste-core-strategy/>

18.2 Applicants should also consider how their developments will meet the requirements of the Government's Future Homes Standard and Future Buildings Standard which are intended to enhance the requirements made under Building Regulations. It is anticipated that the standards will start to be introduced from June 2022, however transitional arrangements indicate that building works commenced before June 2023 will continue to comply with the existing 2013 Part L standards. Further information on the standards will be available from the Government in due course. Early adoption of these standards is encouraged.

Appendix 1: Climate Change and Sustainable Development Questionnaire for minor applications.

What is the purpose of this questionnaire?

Adopted Policy DP7: Design and Amenity of New Development of the Mendip District Plan Part 1: Strategies and Policies (Adopted 2014) requires proposals to demonstrate that the development complies with the criterion set out in the policy.

The questionnaire aims to assist those applying for minor schemes, (up to 10 homes or up to 1,000sqm of new office, retail, manufacturing or other floorspace) to demonstrate that the policy requirements have been met. The questionnaire may be submitted alongside the application.

The Design and Amenity of New Development SPD and Net Zero Carbon Toolkit set out guidance and information on the matters covered within the questionnaire. The questionnaire is not an exhaustive list of sustainability matters and additional information is welcome.

The questionnaire is intended to guide development towards more sustainable proposals from early in the development process. The questionnaire should be considered at the earliest stage of design and updated as the plans evolve.

Major developments (residential applications for 10 or more dwellings, development sites of 1 hectare or more and development involving floor space of 1,000m² or more) will need to submit a Sustainability Statement as set out in the Planning Application Validation Guidance (as Updated November 2021).⁸

⁸ www.mendip.gov.uk/media/27679/Planning-Application-Validation-Guidance/pdf/Planning_Application_Validation_Guidance_Nov_2021.

Questionnaire.

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).

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).

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?

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?

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.

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?

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.

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.

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

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

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

12. Has the scheme been designed using the principles of Secure By Design.
How does the scheme design out crime?

13. Will materials be reused and/or recycled on site? Does the proposal comply
with Somerset Waste Core Strategy policies WCS1 and WCS2.