

South Oxfordshire SUSTAINABLE CONSTRUCTION CHECKLIST

Site Address:	
Proposal:	
Type of application:	
<p>Please tick the relevant box* below:</p> <p>This application requires certification under Part L (conservation of fuel and power) of the Building Regulations and the relevant part of the checklist (Part 1 or Part 2) has been completed in full.</p> <p style="text-align: right;"><input type="checkbox"/></p> <p>This application is exempt from Part L (conservation of fuel and power) of the Building Regulations.</p> <p style="text-align: right;"><input type="checkbox"/></p> <p>*For more information please see page 2 below.</p>	

South Oxfordshire District Council

Sustainable Design and Construction Checklist

Policy DES8: Sustainable Design of the South Oxfordshire Local Plan 2035 requires all development to be of a high-quality design that is sustainable and resilient to climate change. Proposals must demonstrate that they are seeking to limit greenhouse gas emissions through location, landform, layout/building orientation, design, massing, landscape, and planting.

This checklist must be completed for all applications as set out below to demonstrate compliance with these policy requirements. The checklist also asks for information that will be used to demonstrate compliance with South Oxfordshire Local Plan *Policies DES7: Efficient Use of Resources* and *Policy INF4: Water Resources*.

A separate householder checklist has been prepared to be completed by householder applications. This is set out in Part 2.

Proposals also required to meet the requirements of South Oxfordshire Local Plan *Policy DES10: Carbon Reduction* must submit a separate Energy Statement to demonstrate compliance with the carbon reduction requirements. Completing this checklist does not negate the need for an Energy Statement.

Guidance Notes:

What applications need to complete the Checklist?

Type of proposal: All proposals that require Building Regulations Part L (Conservation of fuel and power) certification need to complete the relevant parts of the checklist. Broadly, this applies to the following:

- all buildings, or extensions (except for a ground level conservatory, porch, covered way or carport); or
- the carrying out of any work to or in connection with any such building or extension

where the building is a roofed construction having walls; and uses energy to condition the indoor climate.

There are some exemptions to Part L, including:

- Certain buildings which are listed, in conservation areas or are included in the schedule of monuments - where compliance with the energy efficiency requirements would unacceptably alter their character or appearance.
- Buildings which are used primarily or solely as places of worship
- Temporary buildings with a planned time of use of 2 years or less, with low energy demand
- Industrial sites, workshops and non-residential agricultural buildings with low energy demand
- Stand-alone buildings other than dwellings with a total useful floor area of less than 50m²

[Regulation 21 of the Building Regulations 2010](#) sets out the exemption criteria regarding the Part L requirements.

If you are unsure whether your proposal requires a Part L certification, please seek appropriate advice from your builder, agent or architect or a qualified energy assessor before submitting your application.

Type of application: Outline, Full, Reserved Matters and, where appropriate, applications to discharge, vary or remove conditions must all complete the sections of the checklist as indicated in the tables below. We would also recommend completing the checklist for pre-application advice.

Submission format: The checklist should be submitted in its original format and layout, as a Word document or converted into a PDF. It should be attached as a separate document accompanying the application.

Supporting documents: The checklist should be accompanied by documents that provide further detail, such as Sustainability Statements or Energy Strategies. However, details must be provided for each section of the checklist not simply a reference to supporting documents. Please reference within the supporting documents where further information and drawings can be found. All the supporting documents should be combined and submitted as a single separate document titled "Sustainable Construction Checklist Supporting Documents" with a table of contents stating which documents are included.

Checklist Review: The checklist may be periodically updated to reflect changes in legislation, policy and practice.

Further information: Please call Planning Services on 01235 422422 or email planning.policy@southandvale.gov.uk

Part 1: All Development (excluding Householder Applications):

Table 1: The Proposal	
Address of the Proposal	
Brief description of proposal <i>e.g. type of development and size</i>	
Type of application	<p><i>Please tick to confirm:</i></p> <p>Full Planning Application <input type="checkbox"/></p> <p>Outline (all matters reserved) <input type="checkbox"/></p> <p>Outline (some matters reserved) <input type="checkbox"/></p> <p>Approval of Reserved Matters <input type="checkbox"/></p> <p>Discharge of condition(s) <input type="checkbox"/></p> <p>Removal or variation of condition(s) <input type="checkbox"/></p> <p><i>Please also confirm whether the proposal is:</i></p> <p>Major Development <input type="checkbox"/></p> <p>Minor Development <input type="checkbox"/></p>
Exemption	<p><i>Please tick to confirm:</i></p> <p>The proposal is exempt from Part L (Conservation of fuel and power) of the Building Regulations <input type="checkbox"/></p> <p>This application is to discharge/vary/remove a condition(s) that will not affect the greenhouse gas emissions associated with the development <input type="checkbox"/></p>

Every section of each table below (Tables 2-7) is to contain 500 words or less, summarising the approach, not simply a reference to other documents. Although additional detail should be signposted via references to named documents and drawings, e.g. roof layouts for PV, Sustainability Statements etc. However, even if a Sustainability Strategy or Energy Statement is submitted, its content is to be summarised in the Checklist for ease of assessment.

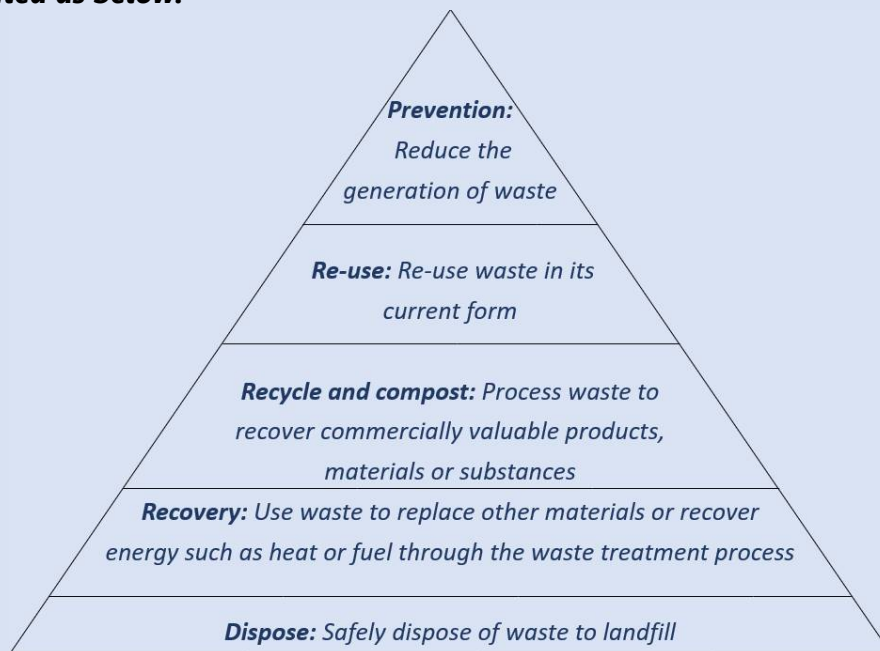
Table 2: Efficient use of Resources

2a) Efficient use of land

Please set out how the development has sought to make the most efficient use of land, including whether any of the land is previously developed (PDL) or comprises the best and most versatile agricultural land. In terms of conversions and refurbishments, please note where the proposal would result in a vacant building being brought back into use.

2b) Minimising waste

Please set out the waste strategy for the construction and operation of the proposed building(s)/development. This should include how the waste hierarchy has been implemented as below:



This can be demonstrated by a Site Waste Management Plan. [The Home Quality Mark](#) (for residential) and [BREEAM](#) (for non-residential) provide useful criteria for designing waste and recycling facilities.

2c) Energy efficient and environmentally friendly materials

Please set out the efficiency of the materials to be used, including information on the type, life cycle and source of the materials. This should include how the materials proposed, and the design of the proposal, seek to reduce embodied carbon.

For the impact of specific materials, please see the [Building Research Establishment's \(BRE\) Green Guide to Specification](#). For example, applicants could commit to using only materials rated "A" or "B" on the Green Guide. The Council would encourage all proposals to use materials with the highest ratings possible.

Guidance on the strategies available to reduce embodied carbon can be found in the [LETI Embodied Carbon Primer](#).

Table 3: Maximising passive solar heating and lighting

Please set out how the location and orientation of the building(s), including the size, position, shading and composition of the glazing, have been used to maximise solar gain to maintain a comfortable internal temperature range and appropriately lit environment that has reduced or eliminated the need for auxiliary heating or cooling and/or minimised internal lighting.

Table 4: Sustainable building design - including the structure and fabric of the building and any mechanical heating or cooling

4a) Maximising Energy Efficiency

Please set out how the proposal has maximised the energy efficiency of the building fabric and/or elements of the structure being incorporated into the design. – Please make specific reference to where the proposed elemental performance of the fabric will be higher than the notional U values set out in Part L of the Building Regulations. Also, where low energy fixtures and appliances will be used.

The Council support a 'fabric first' approach, whereby the components and materials that make up the building fabric are maximised before the use of mechanical or electrical building service systems. We would encourage applicants to consider incorporating [Passivhaus style fabric](#) to minimise heating and cooling requirements.

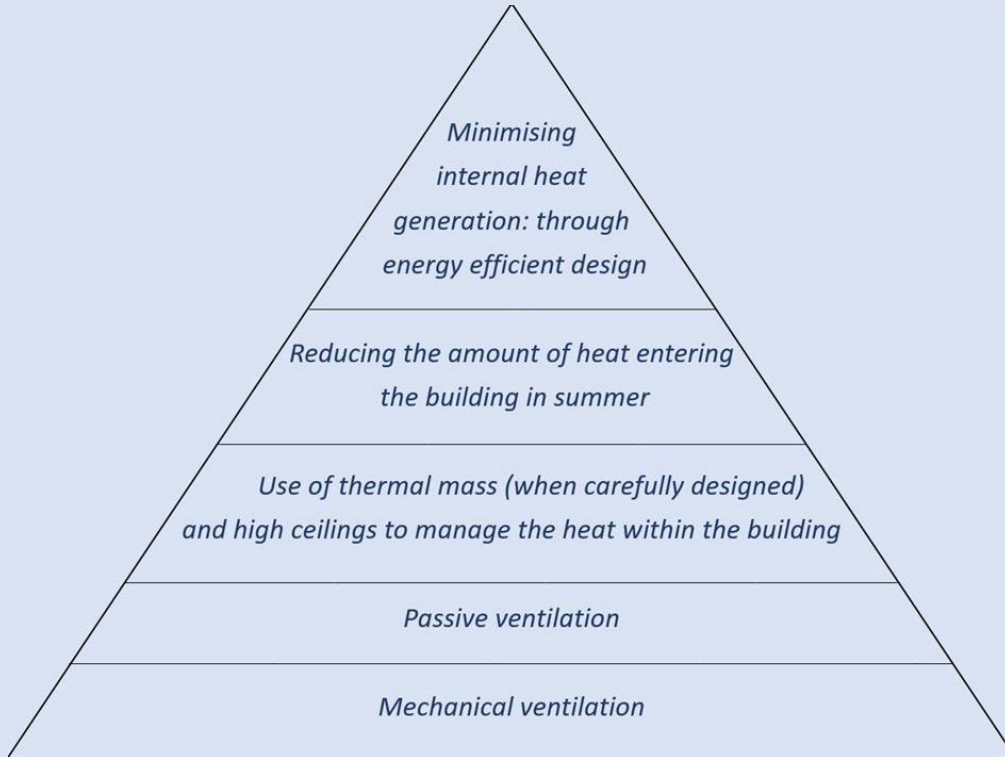
4b) Renewable and low carbon energy

Please set out all renewable and low carbon technologies to be incorporated into the design. For example, solar energy, biomass, heat pumps, solar thermal and heat networks. Please cite any drawings of renewable/low carbon technology.

The Council would specifically encourage the installation of Solar PV on all buildings, where appropriate, as well as the use of air source heat pumps.

4c) Heating, cooling, and hot water

Please set out the heating, cooling and hot water strategy for the proposed building(s)/development. This should include how the cooling hierarchy has been implemented as below:



**For information regarding overheating please see 4d) below.*

4d) Overheating, ventilation, and indoor air quality

Energy efficiency must be considered in conjunction with overheating and ventilation. For example, airtight buildings must be adequately ventilated so occupants don't have to open the windows in winter and lose energy.

Overheating: Please set out how the proposal addresses overheating. Solutions to overheating can be found in the [Zero Carbon Hub guidance](#).

Where tackling overheating is a key element of the design please use the CIBSE standards (TM59 for residential and TM52 for non-residential or up-to-date equivalent) to demonstrate this. The CIBSE assessment should use appropriate local data and run relevant summer scenarios both for the current (2020s) climate and future (2050) climate as set out in the [CIBSE Position Statement](#). Large-Scale Major Development (as defined in the Local Plan 2035) proposals are encouraged to show leadership in tackling overheating and follow the CIBSE methodology.

Ventilation: Please set out the type of ventilation that is proposed, for example natural or mechanical, details of windows, and how exposure to Volatile Organic Compound (VOC) Materials will be mitigated.

Airtightness: If a high airtightness target is proposed, please include the airtightness performance, and explain how the building will be ventilated in the winter other than by opening windows and doors.

Air quality: Where applications include wood burners please comment on the mitigation of impacts on external and internal air quality.

4e) Thermal bridging reduction

Thermal bridging is the movement of heat across an object that is more conductive than the materials around it. The conductive material creates a path of least resistance for heat. Thermal bridging can be a major source of energy loss in homes and buildings leading to higher utility bills. For more information on Thermal Bridging and how it can be minimised see the [Zero Carbon Hub guide to Thermal bridging](#).

Please set out the ways in which thermal bridging will be minimised.

4f) Energy Performance Gap

There is significant evidence to suggest that buildings do not perform as well when they are completed as was anticipated when they were being designed. The difference between anticipated and actual performance is known as the performance gap.

Please set out how the Performance Gap will be addressed throughout the development project (during the design process, the construction process and after construction) e.g. as required by the Soft Landings and Design for Performance processes. Including:

- ***Construction management practices***
- ***Aftercare and post-occupation measures to ensure correct commissioning (including seasonal commissioning) and thorough handover***
- ***Post-occupation performance monitoring to record whether targets are met in-use***

4g) Smart Infrastructure

Please set out any type of smart infrastructure incorporated into the design of the proposal, for example smart meters and appliances, energy storage, electric vehicle charging points, building management systems etc.

Table 5: Policy DES10 requirements

Carbon Reduction requirements

The following proposals:

- ***All new build residential dwelling houses***
- ***Developments including 1000 sqm or more C2 use (including student accommodation)***
- ***Housing in multiple occupation (C4 use or Sui Generis floorspace)***
- ***Major new non-residential buildings (1,000 sqm or more)***

please tick the box below to confirm a separate Energy Statement has been submitted with the application to demonstrate compliance with the carbon reduction requirements of Policy DES10. Please also set out below the percentage carbon reduction achieved by the proposal compared to a 2013 Building Regulations complaint base case and a short summary of how this is being achieved, for example through high fabric efficiencies, renewable or low carbon energy generation etc.

Please note: Where an application is required to meet the Policy DES10 carbon reduction requirements and an Energy Statement is not submitted, the application will not be registered for determination until an adequate Energy Statement is provided.

A separate Energy Statement has been submitted to support this application

The Energy Statement demonstrates compliance with the percentage carbon reduction required by Policy DES10 of the South Oxfordshire Local Plan

BREEAM requirements for non-residential proposals

All non-residential proposals please tick to confirm that the proposal meets the BREEAM Excellent standard and has achieved interim (design) certification to this standard. Where an alternative assessment methodology has been used, such as LEED, please provide evidence that the proposal as designed meets the equivalent standard.

The proposal meets BREEAM Excellent and interim (design) certification has been provided to demonstrate this

An alternative assessment methodology has been agreed that meets an equivalent standard and evidence has been provided to demonstrate that the proposal as designed meets this

Table 6: Landscaping and Planting

6a) Maximising energy efficiency through landscape and planting

Please set out how landscaping and planting has been used to maximise the energy efficiency of the proposal, for example by providing effective shading or acting as a windbreaker.

6b) Carbon capture through planting and vegetation

Please set out, where relevant, how carbon capture by vegetation has been optimised in the design of your proposal. For example, by replacing any removed trees and/or growing new ones.

Table 7: Water Resources

7a) Efficient use of water

Please set out the approach to water efficiency, for example low-flow sanitary ware and white goods, dual-flush valves on toilets, installing high efficiency plumbing fixtures, rainwater harvesting methods etc.

7b) Water efficiency standard for new homes

All new build residential proposals please tick the box below to confirm compliance with the higher water efficiency standard (required by Policy INF4 of the South Oxfordshire Local Plan 2035) and set out how it will be achieved:

The 110 litres per head per day requirement will be met

Table 8: Flexibility and Adaptability

8a) Flexibility

Please set out how the design allows for future modification of use or layout and facilitates future refurbishment and retrofitting.

The [principles of Lifetime Homes](#) can be followed, enabling buildings to adapt to be suitable for occupants at all life stages and be adaptable for future uses.

8b) Climate Adaptability

Please set out how the proposal has considered climate change adaptation

A review of measures to adapt to the changing climate is provided in the Technology Strategy Board's document [Design for Future Climate Report](#). Water and overheating are considered separately in Tables 4 and 6 above.

Part 2 Householder Applications:

Table 1) The Proposal	
Address of Proposal	
Brief description of proposal <i>e.g. type of development and size</i>	
Exemption	<p><i>Please tick to confirm:</i></p> <p>The proposal is exempt from Part L (Conservation of fuel and power) of the Building Regulations <input type="checkbox"/></p>

Every section of the tables below (Tables 2-5) should contain 500 words or less, summarising your approach, Additional detail can be signposted via references to named documents and drawings, e.g. roof layouts for PV, Sustainability Statements etc. However, even if a Sustainability Strategy or Energy Statement is referenced, its content is to be summarised in the Checklist for ease of assessment.

Table 2) Maximising energy efficiency and using environmentally friendly materials

Using energy efficient and environmentally friendly materials both helps save the environment as well as saving money. Proposals should seek to use materials that minimise energy waste, as well as materials with less 'embodied carbon', the amount of CO2 emitted in producing the material.

[The BRE Green Guide](#) provides easy-to-use guidance on how to make the best environmental choices when selecting construction materials and components. It provides comparable specifications based on a material's environment impact across its entire life cycle. For example, applicants could commit to using only materials rated "A" or "B" on the Green Guide. The Council would encourage all proposals to use materials with the highest ratings possible.

Guidance on strategies available to reduce embodied carbon can be found in the [LETI Embodied Carbon Primer](#).

Please set out below the efficiency of the materials to be used, including information on the type, life cycle and source of the materials, as well as how the materials proposed, and the design of the proposal, seek to reduce embodied carbon.

Please also set out how the proposal has maximised the energy efficiency of the building fabric and/or elements of the structure being incorporated into the design. Please make specific reference to where the proposed elemental performance will be higher than the notional U values set out in [Part L of the Building Regulations](#) (page 27). Also highlight where low energy fixtures and appliances will be used.

The Council support a 'fabric first' approach, whereby the components and materials that make up the building fabric are maximised before the use of mechanical or electrical building service systems. We would encourage applicants to consider incorporating [Passivhaus style fabric](#) to minimise heating and cooling requirements.



Table 3) Maximising passive solar heating and lighting

Houses can benefit from passive solar gain by collecting heat as the sun shines through windows and retaining it in materials that store heat, known as thermal mass. Based on the movements of the sun, passive solar houses typically have windows (glazing) on the southern facing side to absorb the sun's heat energy to warm the house during the winter. North facing windows should be kept small but openable, as they be useful for passive cooling as part of cross ventilation. Well-designed passive solar homes also provide daylight all year and comfort during the cooling season using night-time ventilation.

Please set out how your proposal maximises passive solar gain through the size, position and shading of glazing, as well as the composition of the glazing itself, and how this has been utilised to maintain a comfortable internal temperature range and appropriately lit environment that has reduced or eliminated the need for auxiliary heating or cooling and/or minimised internal lighting. Please also highlight if the proposal would result in increased passive solar gain for the existing dwelling.



Table 4) Landscaping and Planting

4a) Maximising energy efficiency through landscape and planting

A well-designed landscape can increase a property's attractiveness as well as reducing the heating and cooling costs. A well-placed tree, shrub, or vine can deliver effective shade and/or act as a windbreaker, which can reduce your energy bills. It has been shown that carefully positioned trees can save up to 25% of the energy a typical household uses.

Please set out how landscaping and planting has been used to maximise the energy efficiency of the proposal, for example by providing effective shading or acting as a windbreaker.

4b) Capturing carbon through planting and vegetation

Vegetation is one of the most important carbon sinks globally, the other being oceans. This means that it accumulates and stores some sources of carbon for an indefinite period and thereby lowers the concentration of CO₂ from the atmosphere. The long-term removal of CO₂ from the atmosphere to mitigate or reverse climate change is known as carbon sequestration. By planting new trees or replacing trees lost due to a development proposal, you can control erosion, attract beneficial insects, enjoy fresh fruit, and even reduce your home's energy needs through strategic shading. As trees grow, they capture carbon from the atmosphere and store it in the biomass of their trunk, branches, and leaves. They also contribute to carbon capture below the ground by increasing the amount of soil organic carbon. Trees will eventually release the carbon they capture when they die and decompose. However, certain types of trees, such as chestnuts and oaks, can comfortably live over 300 years. These trees function as essential long-term carbon sequestration strategies to which everyone can contribute.

Please set out, where relevant, how carbon capture by vegetation has been optimised in the design of your proposal. For example, by replacing any removed trees and/or growing new ones.

Table 5) Using water efficiently

Water efficiency is about reducing the amount of water that is wasted rather than restricting use. This can be achieved by

- *using low-flow sanitary ware and white goods*
- *dual-flush valves on toilets*
- *installing high efficiency plumbing fixtures*
- *harvesting rainwater for other uses such as watering plants etc.*

Please set out, where relevant, how your proposal will deliver an efficient use of water.

