

Climate Change, Energy and Sustainable Development Questionnaire

When should this questionnaire be used?

This questionnaire is for minor developments (developments from one to nine residential units and one to 1000 square meters of non-residential floor space) and householder developments.

Developments of a scale above these thresholds (major developments) should not use the questionnaire, but should instead submit a Sustainability Statement and an Energy Statement. See policy 'D2: Climate change, sustainable design construction and energy' (policy D2) and the 'Climate Change, Sustainable Design, Construction and Energy SPD' (the 'SPD') for more information. The SPD is available on the Council's website.

What is the purpose of this questionnaire?

Policy D2 requires non-major developments to submit "adequate information" about how the development complies with the energy requirements of policy D2 and "information proportionate to the size of the development" regarding other matters of sustainability. These requirements for information will be deemed to have been met if a correctly completed questionnaire is submitted.

The questions in the questionnaire are based on requirements set out in Local Plan policies and you should refer to these to make full use of the questionnaire. The Climate Change, Sustainable Design, Construction and Energy SPD sets out guidance on the matters covered within the questionnaire.

The questionnaire is not an exhaustive list of sustainability matters and additions to the questionnaire are welcome.

The questionnaire is intended to guide development towards sustainable outcomes through compliance with Local Plan policy, from the initial proposal and site layout through to detailed design proposals, the construction process and finally the operation of the completed building. As a result, it is important that the questionnaire is first considered at the outset of planning and at the earliest stage of design. It should be updated as plans evolve.

If planning permission is granted, a condition will be applied requiring work to be carried out in accordance with the information provided in the questionnaire. It is important that the questionnaire is completed in good faith and any works identified within it are deliverable.

Applicant's name:	Mr and Mrs Dean
Agent's name:	Adam Knibb Architects
Site Address:	Wynchmoor, Pursers Lane, Peaslake, Guildford, GU5 9RE
Application reference (if known):	23/P/01704
Description of proposal: (e.g. total and types of units/floorspace)	Replacement single storey dwelling, detached garage and associated landscaping works
Questionnaire prepared by: (name and qualification/job title)	Chris Little (obo Adam Knibb Architects). Architect
Signature of above:	<i>Chris Little (obo Adam Knibb Architects).</i>
Energy information prepared by: (name and qualification/job title):	Chris Little (obo Adam Knibb Architects). Architect
Signature of above:	<i>Chris Little (obo Adam Knibb Architects).</i>

Part 1: Sustainable design, construction and climate change adaptation

1. Efficient use of minerals, use of secondary aggregates, waste minimisation and reuse of material from excavation and demolition (Policy D2 1a &1b). See 'Resources, materials and waste' in the sustainable design and construction guide in section 5 of the SPD.

1.a Will the use of primary minerals be minimised through e.g. the use of renewable materials, recycled and secondary aggregates, and other recycled and reused materials? Please provide details.

The proposed method of construction for the dwelling is either timber frame or SIPS. Recycled or renewable materials will be used where feasible/ possible.

1.b. Will demolition/excavation material from the proposed works be reused on site? Please provide details of where material will be derived and where it will be used.

Demolition waste i.e. hardcore/ rubble will be used as oversite/ used as sub layers to the landscaping. Existing sanitary ware and glazing will listed for re-use to enable some else to make use of the materials.

1.c. Will unused mineral waste be sent for reuse or recycling? Please provide details.

Excavated top soil will be distributed on site where possible. Sub soil will be removed from site for re-use/ recycling.

1.d. Will non-mineral construction waste (e.g. packaging, timber, plastics) be minimised? Please provide details.

Non-mineral waste will be minimised where possible and recycling will be promoted as a method of removal.

1.e. Will locally sourced materials be used? Please provide details.

Traditional Bargate stone is of limited supply and so either York stone or Bath Stone with be used instead.

1f. Will materials be sustainably sourced (e.g. FSC certified timber)? Please provide details.

FSC or PEFC certified timber will be used within the construction of the dwelling.

2. Low energy design: landform, layout, building orientation, massing and landscaping (Policy D2 1c and 2). See 'Site layout, landscaping and urban form' and 'Building design' in the sustainable design and construction guide in section 5 of the SPD.

2a. Will operational energy demand be minimised through low energy design and the use of energy efficient fabric? Please provide details. This information should align with the energy data provided in parts 2a and 2b of this questionnaire.

High levels of thermal insulation will be used within the construction of the dwelling. This will maximise thermal performance, air tightness and energy usage. The design incorporates solar panels to provide a zero-carbon power supply and storage battery to fuel the dwelling and a car charging point. The applicants will also install an Air Source Heat Pump or Ground Source Heating as a means to provide more a sustainable heating source and to help mitigate the impact of the development on climate change.

2b. Has the layout of the site, landscaping and orientation of buildings taken account of solar receipts and other environmental factors to reduce the need for mechanical heating and artificial lighting in the development? Please provide details.

The design incorporates roof overhangs which provide shading to key spaces. The proposed glazing used within the dwelling will have solar coatings applied to mitigate potential overheating.

2c. Will the internal layout of buildings make best use of solar gain and natural light? Please provide details.

The proposal is orientated to maximise solar gain (heat and light) from the site during cold months, and its siting looks to overcome any potential overshadowing from the neighbouring trees. Large elements of glazing are primarily focused towards the south and west.

2d. Will passive cooling/ventilation measures be incorporated into the scheme? Please provide details.

The design will incorporate an MVHR system as well as openable windows for purge ventilation.

2d. Will the scheme include mechanical cooling (e.g. air conditioning)? If so, explain why passive measures would not be adequate.

No air conditioning is currently proposed.

3. Water efficiency (Policy D2 1d). See 'Water efficiency' in the sustainable design and construction guide in section 5 of the SPD.

3a. If the scheme includes new dwellings, will these be designed to the national optional building regulation water efficiency standard of 110 litres per person per day (regulation 36(2b))? The relevant Water Efficiency Calculation (s) (Part G) for the new dwellings should be submitted to the Council prior to occupation.

The proposal will be built national optional building regulation water efficiency standard of 110 litres per person per day.

3b. For all developments, will water efficiency measures be incorporated into the scheme to reduce the demand for water? Please provide details.

Water consumption will be minimised by fitting aerating taps; toilets will utilise a dual flush function to reduce water usage.

3c. For all developments, will water harvesting measures be incorporated into the scheme? Please provide details.

A rainwater harvesting tank will be explored to further reduce the pressure upon freshwater resources.

4. Measures that enable sustainable lifestyles for building occupants (Policy D2 1e). See 'Measures that enable sustainable lifestyles for building occupants' in the sustainable design and construction guide in section 5 of the SPD.

4a. Will measures that enable sustainable lifestyles for building occupants be incorporated into the scheme? Please provide details.

EV charging will be incorporated within the detached garage to support electric vehicle charging. A 7kw fast charge point is the preferred connection. Cycle parking is provide within the store of the detached garage. Bins storage will be accommodated to the rear of the aggro to enable waste separation and recycling.

5. Climate change adaptation (Policy D2 4 and P4). See 'Climate change adaptation' in the sustainable design and construction guide in section 5 of the SPD.

5a. Will the scheme incorporate adaptations for the full range of expected climate impacts including: hotter/drier summers, warmer/wetter winters, more frequent and severe heatwaves and overheating, and more frequent and severe heavy rainfall events and flooding? Please provide details.

High performance glazing will be specified to minimise heat loss and will have solar coatings applied to minimise the risk of overheating. The design incorporates overhang and vertical louvres to further reduce the risk of overheating. Down pipes and gutters will be designed oversized to accommodate for increased future rainfall.

5b. Will the use of soft landscaping and permeable surfaces be maximised (as opposed to hard surfacing)? Please provide details.

The proposed driveway modifications will utilise permeable driveway treatments. Soft planting is proposed to the perimeter of the proposal to assist with surface water drainage/ run off.

5c. Will surface water be managed by Sustainable Drainage Systems (SuDS)? Please provide details.

Soak-aways are proposed to manage surface water.

6. Any further information

6a. Please provide information about any other sustainable design, construction and climate change measures that will be incorporated into the scheme.

Part 2a: Energy

7. Combined (Cooling) Heating and Power ((C)CHP) networks (Policy D2 6, 7 and 8).

7a. Will the development fall within the vicinity of a (C)CHP/heat distribution network (of any scale from single building to district heat)? If so, please list the identified networks.

N/A

7b. If the development will fall within the vicinity of a (C)CHP/heat distribution network, will the proposed development connect to it or be connection-ready? If not, please set out a clear justification.

N/A

7c. Is the development within a Heat Priority Area? If so, is a (C)CHP or heat distribution network proposed as the primary source of energy for the development? If not, please set out a clear justification.

N/A

7d. If a new (C)CHP or heat distribution network is proposed, is it designed in accordance with the CIBSE Heat Networks Code of Practice? If not, please provide a clear justification.

N/A

8. Low and zero carbon energy

8a. If the scheme includes the provision of low and zero carbon technologies, provide details of the proposed energy systems here including: type of technology, location of installation and predicted energy yield.

The design incorporates solar panels to provide a zero-carbon power supply and storage battery to fuel the dwelling and a car charging point. The applicants will also install an Air Source Heat Pump or Ground Source Heating as a means to provide more a sustainable heating source and to help mitigate the impact of the development on climate change. An MVHR system is also proposed.

The plant required is proposed to be distributed between the plant room located in the garage and within the attic/ utility spaces within the main dwelling.

9. New buildings: Carbon reduction calculation

9a. Will the proposed scheme deliver any new buildings (net or gross)?

The proposal is for a replacement dwelling.

9b. If the answer to 9a is yes, please complete the following carbon reduction calculation template in part 2b.

Part 2b: Carbon reduction calculation

For guidance on how to complete this table, see section 'Questionnaire Part 2b: Carbon reduction calculation' in section 6 of the SPD. Add more rows as appropriate.

1. Reference	2. Target Emission Rate (TER)	3. Dwelling Emission Rate (DER) or Building Emission Rate (BER)	4. % carbon reduction from TER
e.g. Plot 1	e.g. 17.2	e.g. 13.4	e.g. 22.09%

