

Topic paper: Climate Change and Sustainable Development

June 2022

To accompany Guildford borough Submission Local Plan:
Development Management Policies



GUILDFORD
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Contents

1. Purpose of this topic paper	4
2. Policy context.....	4
National context	4
3. Appraisal and justification for policy approach	8
Policy D12: Sustainable and Low Impact Development.....	9
Policy D13: Climate Change Adaptation	12
Policy D14: Climate change mitigation.....	12
Policy D15: Large Scale Renewable and Low Carbon Energy	16
4. Next steps	21

1. Purpose of this topic paper

- 1.1 This topic paper sets out the approach taken in developing the policies for climate change and sustainable development within the Guildford borough Local Plan: Development Management Policies (LPDMP). The topic paper looks at the relevant national and local guidance that informed the Submission LPDMP. Topic papers explain how the strategy has developed and set out the information, evidence and feedback that have informed the choices made in formulating policies.
- 1.2 The intention is to provide background information; topic papers do not contain any policies, proposals or site allocations. This topic paper has been produced to aid understanding of the policies and to ultimately accompany the Submission LPDMP to the Secretary of State for examination.
- 1.3 Draft versions of this Topic Paper were published as part of the Regulation 19 publication and this version has been updated and finalised for the submission stage. This topic paper provides commentary on the development of policy where it is needed in order to complete the justification for the policy alongside the supporting text in the submission LPDMP. It does not provide commentary on matters for which there is already adequate justification provided in the LPDMP's supporting text.
- 1.4 The main areas covered by this topic paper are:
 - sustainable design and construction;
 - climate change adaptation; and
 - renewable and low carbon energy and infrastructure.
- 1.5 This topic paper explains the development of the following LPDMP policies:
 - Policy D12: Sustainable and Low Impact Development;
 - Policy D13: Climate Change Adaptation;
 - Policy D14: Carbon Emissions from Buildings; and
 - Policy D15: Renewable and Low Carbon Energy Generation and Storage.

2. Policy context

National context

Legislation and strategy

- 2.1 The Climate Change Act 2008 (as amended) sets a legally binding target to bring all greenhouse gas emissions to net zero by 2050 and provides for the Committee on Climate

Change to set out binding carbon budgets for 5-year periods. Alongside these measures, the UK has adopted an interim target for carbon reduction 78% by 2035.

- 2.2 Section 19(1A) Planning and Compulsory Purchase Act 2004 stipulates that development plan documents must (taken as a whole) include policies designed to ensure that the development and use of land in the local planning authority's area contribute to the mitigation of, and adaptation to, climate change.
- 2.3 The Planning and Energy Act 2008 grants powers to Local Planning Authorities to set requirements for energy efficiency that are better than the standards set out in the Building Regulations and for a portion of energy used in developments to be supplied from low carbon sources in the locality of the development.
- 2.4 The government's Net Zero Strategy: Build Back Greener (October 2021)¹ sets out how national decarbonisation targets will be achieved. It identifies emissions from buildings as a significant contributor to the UK's emissions which must be eliminated. The necessary measures it identifies include improved energy efficiency as a critical first step, the end of fossil fuel-based heat replaced by electric technologies through the mass rollout of low carbon heating technologies like heat pumps and district heat, and the introduction of new heating technologies like hydrogen boilers. It also sets out plans to phase out fossil fuel heating from existing buildings by retrofitting low carbon technologies. The Heat and Buildings Strategy (2021) confirms this approach to decarbonising buildings and sets out detail on how it will be achieved,
- 2.5 The strategy acknowledges that as well as moving to electrification of heating, it is necessary to fully decarbonise grid electricity by 2035, a commitment announced in October 2021². To achieve this, it envisions a large increase in offshore wind, but also accelerated deployment of onshore wind, solar and other renewables, and notes that this must be supplemented by energy storage to smooth out price spikes and spikes in demand and production. It supports the approach set out in the Energy White Paper³, which calls for a "... low-cost, net zero consistent electricity system [which] is most likely to be composed predominantly of wind and solar generation..." Onshore wind and solar are identified as key building blocks of the future generation mix, along with offshore wind (page 45).
- 2.6 The Queen's Speech May 2022 included proposals for an Energy Security Bill which will enable the transition to cheaper, cleaner and more secure energy building on the success of COP26. The detail is not yet known but the Policy Paper: British Energy Security Strategy⁴ published in April 2022 suggests the bill will include measures to enable and improve domestic energy efficiency, reduce reliance on gas, reduce domestic energy bills, increase the supply while reducing the cost of heat pumps, simplify planning processes for rooftop

¹ Available at <https://www.gov.uk/government/publications/net-zero-strategy>

² See <https://www.gov.uk/government/news/plans-unveiled-to-decarbonise-uk-power-system-by-2035>

³ Available at <https://www.gov.uk/government/publications/energy-white-paper-powering-our-net-zero-future>

⁴ Available at <https://www.gov.uk/government/publications/british-energy-security-strategy/british-energy-security-strategy>

solar and phase out gas boilers (including replacements for existing boilers). On large scale renewable energy, it states that a new initiative to support onshore wind facilities in areas of community support will be established and repowering of existing facilities will be supported, while planning rules will be amended to strengthen policy in favour of ground-mounted solar development on non-protected land.

- 2.7 The NPPF contains a number of paragraphs that address measures to mitigate or adapt to climate change. The overarching requirements are 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 (Paragraph 152).
 - Plans should take a proactive approach to mitigating and adapting to climate change, taking into account the long-term implications for flood risk, coastal change, water supply, biodiversity and landscapes, and the risk of overheating from rising temperatures... In line with the objectives and provisions of the Climate Change Act 2008 (Paragraph 153 and footnote 53).
- 2.8 The NPPF also contains paragraphs that address specific climate change matters and issues. These are identified later in this document.
- 2.9 It should be noted that the Net Zero Strategy: Build Back Greener includes the commitment to “Ensure the planning system can support the deployment of low carbon energy infrastructure” (page 95). It explains that the government will “make sure that the reformed planning system supports our efforts to combat climate change and help bring greenhouse gas emissions to net zero by 2050” and that it intends to “review the National Planning Policy Framework to make sure it contributes to climate change mitigation and adaptation as fully as possible” (page 252).
- 2.10 When the NPPF was updated in 2021, the Government also published its response to the consultation on those changes. The response highlighted that respondents had “recognised the importance of climate change and indicated a need for stronger terminology to reflect this, such as specific references to the net zero target and emphasis on renewable energy” and stating it is “committed to meeting its climate change objectives and recognises the concerns expressed across groups that this chapter should explicitly reference the Net Zero emissions target. It is our intention to do a fuller review of the Framework to ensure it contributes to climate change mitigation/adaptation as fully as possible” in line with the Planning White Paper.
- 2.11 As a result, it does not appear that NPPF support for the delivery of decarbonisation measures and low carbon development through local plans will be weakened and that the obligations placed on Local Plans in that regard may be strengthened in order to more

closely align local plans with the aims and objectives of the various national strategies and policy papers that deal with development, energy and climate change.

2.12 The government's Design Guide (2019) echoes established good practice on climate change. It states that well-designed places and buildings:

- mitigate climate change, primarily by reducing greenhouse gas emissions by minimising energy need through design and energy efficient materials and meeting residual energy need from low carbon sources in line with the energy hierarchy,
- minimise embodied energy and carbon through the use of low carbon materials and the reuse of existing buildings,
- are fit for purpose and adaptable over time, reducing the need for redevelopment and offering resilience to prevailing and forecast environmental conditions, with regard to overheating and the 'heat island' effect,
- use innovative techniques and smart technologies including off-site manufacture of buildings and components and digital infrastructure, where appropriate.
- include green and blue spaces that help to cool built areas and provide flood alleviation, and
- conserve water through rainwater harvesting or grey-water systems.

Local context

2.13 The Council declared a climate emergency on 23 July 2019. The emergency notes that all governments (national, regional and local) have a duty to act (to combat climate change) and that the Council has a crucial role to play in both leading by example and influencing the way that the residents and businesses of Guildford Borough live and work. The declaration further commits to working towards making the Council's activities net-zero carbon by 2030 and to determine how and when Guildford Borough could become carbon neutral, with a target goal of 2030 for reaching net zero emissions. The Council's Corporate Plan 2021-2025 recognises this and states "We will put the environment at the heart of our actions and decisions to deliver on our commitment to the climate change emergency" (in the section 'Our vision, mission and values'). It further identifies the climate change programme as a key programme.

2.14 The County Council has produced Surrey's Climate Change Strategy, Surrey's Greener Future⁵. This document acts on the joint ambition of Surrey local authorities to address carbon emissions across eight sectors including energy generation, housing and planning, buildings and infrastructure, waste and resources, and adaptation. It presents a pathway for Surrey to achieve carbon neutrality by 2050 by identifying strategic priorities for action in each sector.

⁵ Available at <https://www.surreycc.gov.uk/people-and-community/climate-change/what-are-we-doing/climate-change-strategy/2020>

- 2.15 LPSS Policy D2 Climate Change, Sustainable Design, Construction and Energy sets the following requirements for new developments (summarised):
- use mineral resources efficiently;
 - reduce waste and reuse materials;
 - reduce energy and water demand through site and building design;
 - deliver measures that enable sustainable lifestyles;
 - include adaptations for a changing climate and weather patterns;
 - ensure new buildings are designed to reduce carbon dioxide emissions of at least 20 per cent measured against the relevant Target Emissions Rate in Building Regulations (Part L 2013) and consider the use of Combined Cooling Heat and Power as a primary energy source where suitable; and
 - be adapted for changing climate and weather and resilient to the full range of expected impacts.
- 2.16 The policy also requires developments to submit adequate information showing that the energy requirements have been met and proportionate information showing the other requirements have been met. For major developments, the policy stipulates that this information must be provided in the form of an Energy Statement and a Sustainability Statement.
- 2.17 LPSS Policy D2 is supplemented by the Climate Change, Sustainable Design and Construction Supplementary Planning Document 2020⁶ (the SPD) which provides guidance for each policy matter. Specific provisions of LPSS Policy D2 and the SPD are discussed later in this document. The SPD provides guidance on the information that must be included within energy and sustainability statements for major developments. It also sets out the information that minor developments must provide, and provides a questionnaire that can be completed as a simple route to compliance.

3. Appraisal and justification for policy approach

- 3.1 The Regulation 18 LPDMP Issues, Options and Preferred Options (the 'Preferred Options document') included the following relevant preferred options:
- Policy D12: Sustainable and Low Impact Development
 - Policy D13: Climate Change Adaptation
 - Policy D14: Climate change mitigation
 - Policy D15: Large Scale Renewable and Low Carbon Energy

⁶ Available at <https://www.guildford.gov.uk/article/24211/Climate-Change-Sustainable-Design-Construction-and-Energy-SPD>

- 3.2 The following section sets out a justification for the proposed policy approach informed by guidance and best practice, responses received during the Regulation 19 consultation and other considerations.

Policy D12: Sustainable and Low Impact Development

The energy hierarchy and ‘fabric first’ (paragraph 1)

- 3.3 LPSS Policy D2 sets a high-level requirement for new development proposals to follow the energy hierarchy. The energy hierarchy sets a series of steps for reducing carbon emissions in order of preference so proposals should maximise measures at each step of the hierarchy before moving on to the next step. The first step is to eliminate energy need/use through low energy design including energy efficient materials and components (‘fabric’). The policy requires applicants to submit adequate information showing that the hierarchy has been applied, and the SPD sets a methodology for presenting this information: the information must show how much the Dwelling Emission Rate (DER) or Building Emission Rate (BER) has been improved over the Target Emission Rate (TER) through the use of fabric and design before low carbon energy is used to reduce the emissions further. The SPD (paragraph 4.72) states that energy statements “should demonstrate that the development has been designed in accordance with the energy hierarchy, employing a low energy design and ‘fabric first’ approach that maximises energy demand reduction before reducing carbon emissions further by supplying energy from renewable and low carbon technologies.”
- 3.4 Since LPSS Policy D2 and the SPD were adopted (in April 2019 and September 2020 respectively), proposals have shown a marked improvement in DER and BER values over the TER through fabric measures. However, sometimes this has required time consuming negotiation, with officers reviewing numerous iterations of energy statements, and in some cases the Council has had significant pushback from developers who have advanced schemes while seemingly disregarding the energy hierarchy until advanced stages of design. Experience has shown that the energy efficiency of proposed buildings can be improved to a certain point through improvements to insulation, thermal bridging and airtightness, but beyond that point it is necessary to either change materials or increase the thickness of external walls. This can have a consequent impact on site layout or internal layouts. Energy efficiency at stage one of the hierarchy must therefore be considered at the earliest stage of design as it becomes difficult to retrofit high levels of efficiency when a design is at an advanced stage. In order to address these issues, Paragraph 1 of LPDMP Policy D12 reinforces the energy hierarchy by making the ‘fabric first’ approach an explicit requirement of policy. This both brings attention to the requirement up front and makes the requirement a part of development plan policy, rather than being contained in an SPD, with the additional weight this would bring. The aim of this is to bring greater clarity to smooth the planning process and reduce the time spent by officers, applicants and energy consultants negotiating and redrafting proposals, and to achieve higher energy efficiencies.

Embodied carbon (paragraphs 2 & 3)

- 3.5 For the purposes of policy, embodied carbon refers to the carbon emissions that result from the production and transportation of materials. LPSS Policy D2 addresses embodied carbon indirectly by promoting the reuse of construction waste. However, it does not address the embodied carbon in new construction materials. The SPD discusses the issue of embodied carbon in new materials, and major developments often address the issue in their sustainability statements through commitments to the use of materials that meet a specific carbon rating and/or have lower transport emissions.
- 3.6 As operational carbon emissions are reduced through improved energy efficiency and low carbon building systems, embodied carbon emissions will make up an increasingly large proportion of the total carbon emissions from buildings, so it is necessary that the issue of embodied carbon is adequately addressed. Reliable materials ratings databases are now freely available and it is easy to find data on the embodied carbon of construction materials (some applicants already provide this information in their sustainability statements).
- 3.7 Paragraphs 2 and 3 of policy D12 addresses embodied carbon directly for the reasons set out above.

Energy improvements (paragraph 4)

- 3.8 LPDMP Policy D12 supports proposals to improve the energy efficiency and carbon emission rate of existing buildings to a level significantly better than the Council's adopted standards or national standards for new buildings. The purpose of this is to encourage the reuse of existing buildings (which reduces the operational and embodied carbon inherent in the demolition and construction processes, and reduces waste) and to encourage energy improvements generally as a carbon saving measure. In instances where there is a change of use, e.g. from commercial to residential, the Building Regulations will require improvements to the building to bring it up to the minimum standard for its new use. As a result, policy support is reserved for those developments that would make significant improvements above minimum standards.

Waste (paragraph 5)

- 3.9 The SPD, implementing the waste requirements of LPSS Policy D2, expects schemes above the value of £500,000⁷ to consider implementing a Site Waste Management Plan (SWMP). Where an SWMP is implemented the Council will consider the waste requirements of LPSS Policy D2 met and, consequently, major developments often commit to a SWMP in their sustainability statement. Despite the revocation of the Site Waste Management Plan Regulations 2008, SWMP remains a commonly understood and frequently used methodology for managing construction waste in a sustainable manner. The Council often

⁷ Based on tender price. The value threshold was calculated by applying inflation to the values set out in the now revoked [Site Waste Management Plan Regulations 2008](#).

applies a condition requiring an SWMP where schemes would generate a large amount of waste (e.g. where there is demolition or significant excavation).

- 3.10 Preferred option D12 proposed to make SWMP mandatory for developments above the specified value. Following the Regulation 18 consultation LPDMP Policy D12 now proposes that the requirement should apply to all major development, and development proposals that involve the demolition of at least one building and/or engineering works that involve the importation or excavation of hard core, soils, sand and other material. This change was made because several respondents made the point that the preferred option threshold (project value) was somewhat arbitrary and difficult to judge. The policy instead now focuses the developments that are most likely to generate large amounts of waste.
- 3.11 The mandating of SWMPs is necessary because the waste information submitted within major developments' sustainability statements has sometimes been very limited, and this in turn has resulted in delays as officers must request additional information on waste to be added. Where submitted information has been adequate it is often because it has followed SWMP methodology, which demonstrates the value of SWMP. As SWMPs are well understood by the construction industry, mandating them will prevent this issue arising and result in a smoother planning process, saving time both for decision makers and applicants.

Water efficiency (paragraph 6)

- 3.12 The South East is a region classified by Defra as suffering from 'serious' water stress⁸. LPSS policy D2 already requires developments to achieve 'the highest national standards for water efficiency', which at present are the 'optional' building regulations standard for new dwellings (110 litres per person per day, as opposed to the national standard of 125) and ordinary building regulations standards for non-residential. If national standards change, the policy is written so as to implement whichever national standard is highest. This is consistent with Written Ministerial Statement HCWS488 of March 2015 which prohibits the development of new technical standards by local authorities but allows adoption of the "new national technical standards", which include the optional building regulations for new dwellings. The SPD states that developments should generally seek to be water efficient in line with the waste hierarchy, which LPSS D2 requires development to follow. However, the requirement to seek water efficiency beyond the 110 litre standard needs to be made clearer. This is addressed by paragraph 6 of LPDMP Policy D12.
- 3.13 Experience of planning applications indicates that general water conservation measures such as efficient fixtures and fittings and water harvesting (e.g. water butts in gardens) are easily achievable so the new policy makes these an expectation, but not a requirement as it is acknowledged that there may be situations where it is not possible. For example, mid terrace homes may not have access to a downpipe from which to harvest water. It should be noted that the 110 litre standard can be met wholly through efficient fixtures and fittings

⁸ See <https://www.gov.uk/government/publications/water-stressed-areas-2021-classification>

(the easiest method) so efficient fixtures and fittings are employed in virtually all new dwellings already. It is acknowledged that measures such as water reuse and recycling systems have a differential impact on development in terms of cost and space taken. These systems are usually powered and require a change in approach to plumbing and layout and need periodic maintenance like any building system. As a result, the policy states that these should be implemented 'where possible'.

Policy D13: Climate Change Adaptation

- 3.14 LPSS Policy D2 (4) sets a high-level requirement for all development proposals to be fit for purpose and remain so into the future. It requires major developments to include sufficient information detailing the measures taken in a sustainability statement covering adaptations for a changing climate and changing weather patterns in order to avoid increased vulnerability and offer high levels of resilience to the full range of expected impacts. The SPD sets out the expected impacts that should be addressed, but in practice the submitted information is sometimes limited and does not cover all the impacts. Alongside this, since 2018 the NPPF has specifically required plans to address the risk of overheating, which is one of the key climate change risks for the built environment in the borough (see the Council's Environmental Sustainability and Climate Change Study⁹). Where limited information is provided, the planning application process has been delayed while officers have sought improvements to the Sustainability Statement and/or the proposals.
- 3.15 Policy D13 sets out in policy the key climate change impacts that must be addressed based on local circumstances: overheating, the urban heat island, more frequent and severe rainfall events, and wildfires. This list was established through a review of national, regional and local climate change risk assessments and other documents and advice, and through local experience. Overheating, urban heat island and changing rainfall are well understood to be key issues for the Southeast of England. Wildfires are a particularly local issue as the Thames Basin Heaths and dry grassland are susceptible, both of which have a significant presence in the borough. The borough experiences wildfire periodically.
- 3.16 The primary purpose of LPDMP Policy D13 is to make clearer the scope of LPSS Policy D2 (4) by setting out the specific issues that must be considered in applicant's sustainability statements. This clarity will also make it clearer for decision makers whether climate change adaptation has been adequately addressed and ensure a smoother planning process.

Policy D14: Climate change mitigation

- 3.17 Policy D14 supersedes several paragraphs of LPSS Policy D2 to reflect changes to national guidance and current practice regarding Combined Heating and Power/Combined Cooling, Heating and Power systems (collectively termed '(C)CHP') and the changes to maximum

⁹ Available at <https://www.guildford.gov.uk/article/25517/Environmental-sustainability-and-climate-change-study>

carbon emission rates in the Building Regulations. The following table sets out the LPSS Policy D2 paragraphs that are superseded by LPDMP Policy D14 paragraphs.

LPSS Policy D2 paragraph	LPDMP Policy D14 paragraph
D2 (5)	D14 (1)
D2 (6)	D14 (2)
D2 (7)	D14 (3)
D2 (9)	D14 (4)

D14 paragraphs 1-3

- 3.18 Paragraphs 1-3 of Policy D14 supersede LPSS Policy D2 paragraphs 5-7. They extend the provisions of policy D2 that deal with (C)CHP networks so that they apply to all types of low carbon heat networks. This reflects changes in national guidance and national energy strategies, the decarbonisation of the electricity grid and the increasing use of heat networks powered by heat pumps. Further detail is set out in the reasoned justification below the policy and in the SPD. The SPD already states that references to (C)CHP should be read as a reference to low carbon heat networks, but some applicants have not noticed or acknowledged this and have continued to follow the process for assessing gas fired (C)CHP even though their proposals for heat pump-based networks are already compliant. This adds unnecessary steps to the planning process and creates work for applicants and decision makers.
- 3.19 Paragraph 8 of LPSS Policy D2 remains unchanged. This paragraph requires (C)CHP networks to be scaled and operated in order to maximise the potential for carbon reduction. (C)CHP networks typically provide only a baseload of heat and power (i.e. the minimum hourly demand) with extra demand met from other sources, meaning that the scale of the system can strongly influence the overall efficiency and consequent carbon saving. This does not necessarily apply to other heat network technologies, so paragraph 8 has not been revised to broaden it to cover other technologies.

D14 paragraph 4

- 3.20 Paragraph 9 of LPSS Policy D2 sets the Council’s carbon emissions standard for new developments and requires the DER or BER of new buildings to be at least 20% better than the TER based on the Building Regulations 2010 as amended in 2013. Paragraph 4 of LPDMP Policy D14 alters this requirement to 31% for new dwellings and 27% for other types of buildings. These standards were chosen to match the (then) proposed incoming interim uplift to Building Regulations standards set out in the government’s response to the Future Homes and Future Buildings consultations respectively. Since the policy was drafted, both standards have been confirmed for implementation through changes to Building Regulations commencing on June 15 2022¹⁰, or June 15 2023 for buildings covered by a building notice,

¹⁰ See <https://www.gov.uk/government/news/new-homes-to-produce-nearly-a-third-less-carbon>

initial notice, or full plans deposit submitted before 15 June 2022 and which are commenced before 15 June 2023.

- 3.21 Local Planning Authorities have been granted legal powers to set standards for energy efficiency and requirements for low carbon energy through the Planning and Energy Act 2008. The Deregulation Act 2015 included a clause (to be commenced at a date after royal assent) that would have removed the power for LPAs to set energy efficiency standards for new dwellings. This would have left LPAs with the power to set requirements for low carbon energy for new dwellings, and both energy efficiency standards and requirements for low energy for other types of buildings. Alongside this, the Written Ministerial Statement of March 2015 instructed LPAs not to set energy efficiency standards higher than the Code for Sustainable Homes or develop new technical standards. As a result, there has been some confusion as to whether LPAs should set standards for new dwellings and how far those standards could go.
- 3.22 This was considered during the examination of the LPSS¹¹ and the 20% carbon reduction standard in Policy D2 was found sound¹². Since that time the Government has confirmed it will not commence the amendment to the Planning and Energy Act, which further clarifies that LPAs can set standards for energy efficiency and requirements for low carbon energy for all types of building. There remains the Written Ministerial Statement, but the view advanced by the Council, and apparently accepted by the LPSS inspector who did not raise an issue over whether the plan was empowered to set carbon emission standards, is that the government cannot fetter the legal powers of LPAs by issuing policy (i.e. the WMS cannot restrict the provisions of the Planning and Energy Act). In any event, neither the existing nor proposed Local Plan standards are energy efficiency standards as neither specify minimum fabric performance levels so are not caught by the WMS. Since 2015, LPAs have continued to set standards for carbon emissions, energy efficiency and low carbon energy. While Policy D2 promotes a fabric first approach, this is a design measure and is not a technical standard for energy efficiency. More detail on these matters can be seen in the LPSS topic paper “Topic Paper 2017 - Environmental Sustainability and Climate Change” (pp. 5-7).¹³
- 3.23 There were good reasons for including the (then) proposed but unconfirmed new national Building Regulations standards in the Regulation 19 policy. The Council was mindful that the improvement to carbon emissions standards proposed by government was proposed to enter into force during the plan period and therefore built the expected consequent uplift on build costs into the viability testing of the plan.¹⁴ One of the roles of the planning system is to seek public benefit from private development and the Council’s view is that reducing

¹¹ See the Inspector’s Initial Questions, question 33, available at <https://www.guildford.gov.uk/article/24925/Local-Plan-examination-documents>

¹² See paragraph 147 of the Inspector’s Final Report, available at <https://www.guildford.gov.uk/article/24925/Local-Plan-examination-documents>

¹³ Available at <https://www.guildford.gov.uk/localplan/topicpapers>

¹⁴ See Guildford Borough Council – LPDMP & Stage 1 CIL Viability Assessment

carbon emissions from new buildings is a significant public benefit as it will mitigate climate change, reduce fuel poverty, combat poor air quality etc. If for any reason the government had decided to delay the uplifts to building regulations standards, that benefit would be lost for the delay period. Additionally, the opportunity to seek alternative public benefit would have been lost. Therefore, it is in the public interest to ensure the standards are introduced.

- 3.24 Following publication of the 2022 Building Regulations, which confirmed that the proposed new standards would not be delayed or cancelled, the Council has proposed a minor modification to the policy to instead state that new developments should achieve an emission rate no higher than building regulations standards, rather than specifying a 31% and 27% improvement on the previous standards. This is because specifying a carbon reduction against the outgoing standards would require applicants to produce energy modelling (SAP and SBEM) assessments using the 2013 Part L methodology and software. This would produce a process cost for the applicant that would not improve the outcome.
- 3.25 Consideration was given to whether a policy is still necessary at all. The Council's view is that it is. By putting the standards in planning policy, planning decision makers will be able to scrutinise proposals to ensure that the standards will be genuinely achieved. This will act to close the chronic performance gap that developments in England are well understood to suffer from¹⁵. Additionally, the policy interacts with policy D2, which requires schemes to follow the energy hierarchy, where it replaces the 20% carbon emission reduction target with the new building regulations Target Emission Rates. Taken together, policy D2 and proposed policy D12 will require schemes to achieve current building regulations emissions standards through the application of the energy hierarchy. It is important that the requirement to follow the energy hierarchy when meeting emissions targets is retained because while the new building regulations include a good improvement to carbon emissions standards as an interim step on the path to Future Homes/Future Buildings in 2025, the improvements to fabric standards (both the notional values and the limiting values) are somewhat modest and would likely result in a fabric performance that is typically not as good as the standards that have hitherto been achieved under the Policy D2 energy hierarchy. As a result, it is important that the policy references the new building regulations standards to link them more closely to the energy hierarchy so as to avoid a fall in energy efficiency standards.
- 3.26 As set out above, the intention is that the policy will require applicants to design schemes that achieve the June 2022 building regulations Target Emission Rates but in a manner that complies with the energy hierarchy by reducing energy demand through efficient fabric, then efficient building services and finally through low carbon energy. The Council is of the view that the proposed policy with the proposed minor amendment would achieve this

¹⁵ Some of the evidence for a chronic performance gap is provided on the Designing Buildings wiki: https://www.designingbuildings.co.uk/wiki/Performance_gap_between_building_design_and_operation

outcome but will be happy to consider further modifications to the policy if the inspector considers that proposals are not sufficiently clear in doing so.

- 3.27 The Council considered whether to implement carbon emissions standards that were more demanding than the June 2022 building regulations standards and commissioned evidence to establish the increase on build costs that would result from improving emissions rates by 25, 30 and 35% against the outgoing building regulations for a range of building types.¹⁶ The data shows that the costs jump significantly when improvements increase from 30% to 35%, and the LPDMP viability testing shows that this uplift on build costs along with the wide range and significant impact of other development and policy costs may jeopardise the viability of some schemes. As a result, the viability study recommends not seeking higher carbon standards at this point.
- 3.28 However, the Council wishes to strongly encourage schemes to minimise reduce carbon emissions as much as possible. As a result, paragraph 5 strongly encourages development proposals to improve upon the standards in paragraph 4.

Policy D15: Large Scale Renewable and Low Carbon Energy

Context

Local context

- 3.29 The Council's climate emergency declaration commits to working towards making the Council's operations net zero by 2030 and sets a target goal of 2030 for reaching net zero across the whole borough. The climate emergency declaration also noted that local governments have a duty to act (against climate change) and that the Council has a crucial role to play both by leading by example and by influencing the way that the residents and businesses of Guildford Borough live and work.
- 3.30 Achieving net zero will necessarily require a significant reduction in the use of fossil fuels (with residual emissions subject to offsetting, at least in the short to medium term) which will consequently require a significant increase in the use of electricity in place of hydrocarbon energy along with decarbonisation of the electricity supply.
- 3.31 The climate declaration acknowledges that the Council must play its part in meeting national targets for decarbonisation of energy, which includes the target for the national grid to be fully decarbonised by 2035. Locally, the goal of a zero-carbon borough by 2030 means that fossil fuel use in the borough must be drastically reduced or its emissions offset. An increase in local renewable energy would assist in either reducing or offsetting borough carbon emissions, depending on whether renewable schemes meet local energy demand or feed clean energy into the national grid. The former would reduce the borough's emissions directly while the latter could be considered primarily an offsetting measure as, while it

¹⁶ Available at <https://www.guildford.gov.uk/article/25516/Viability-of-carbon-emission-targets-for-new-builds>

would reduce the emissions associated with electricity use within the borough only fractionally (by decarbonising the national grid), it would prevent emissions arising elsewhere by displacing electricity generated from fossil fuels.

- 3.32 Surrey's Climate Change Strategy, Surrey's Greener Future, includes Energy Generation Strategic Priority 1 which is to expand renewable energy generation capacity across the county with a focus on solar PV installations as the technology with the greatest carbon reduction potential. Energy Generation Strategic Priority 2 is to develop localised smart energy systems that focus on providing low carbon energy to local businesses and residents, whilst reducing costs. The section presents a target for 15% of energy to be from solar PV by 2032.
- 3.33 The document notes that if you divide the amount of installed renewable capacity in the UK by the population, Surrey's 82.6 MW of renewable energy capacity falls far short of the expected 880 MW. Additionally, it notes that "The county has great potential for expanding this generation capacity, with the Southeast region able to generate 36% more electricity from PV schemes than other areas of the UK." This is relevant given the Council has declared that it has a duty to act: Surrey is both well-placed to make a significant contribution through solar PV and to-date has failed to do so. Additionally, in order to produce energy to provide local businesses and residents (Strategic Priority 2), solar schemes will need to be sited close to energy customers so will necessarily need to be located throughout Surrey boroughs if the priority is to be achieved.

National policy

- 3.34 The NPPF (paragraph 152) requires the planning system to "support the transition to a low carbon future... help to: shape places in ways that contribute to radical reductions in greenhouse gas emissions... and support renewable and low carbon energy and associated infrastructure." To help increase the use and supply of renewable and low carbon energy and heat, paragraph 155 states plans should:
- provide a positive strategy for energy from these sources, that maximises the potential for suitable development, while ensuring that adverse impacts are addressed satisfactorily (including cumulative landscape and visual impacts);
 - consider identifying suitable areas for renewable and low carbon energy sources, and supporting infrastructure, where this would help secure their development; and
 - identify opportunities for development to draw its energy supply from decentralised, renewable or low carbon energy supply systems and for co-locating potential heat customers and suppliers
- 3.35 Paragraph 156 adds "Local planning authorities should support community-led initiatives for renewable and low carbon energy, including developments outside areas identified in local plans or other strategic policies that are being taken forward through neighbourhood planning" and 158 states that applications for renewable or low carbon energy should be

approved “if its impacts are (or can be made) acceptable” (except for new wind turbines which are subject to additional tests).

- 3.36 The British Energy Security Strategy states that planning rules will be amended to support ground-mounted and rooftop solar installations and that a consultation will be held in relaxing the prohibitive policies that surround onshore wind turbines where local communities are in support.

Policy approach

- 3.37 The preferred option consultation included D15: Large Scale Renewable and Low Carbon Energy which set out the following options:
- Option 1 - (Preferred option) To allocate one or more sites for renewable and low carbon energy development in appropriate locations where visual and other impacts will be minimised and where energy potential is good. New large scale renewable and low carbon energy developments are required to set out in a management plan how biodiversity will be supported, maximising opportunities for biodiversity gain in line with good practice guidance.
 - Option 2 - Not to allocate land for renewable and low carbon energy developments, but to have a general policy that supports the principle of renewable and low carbon energy development in appropriate places, setting criteria that prevents negative impacts on landscape, heritage, Green Belt etc. This could provide guidance on which elements of such energy developments would be acceptable within the Green Belt and clarifying the NPPF overarching policy.
 - Option 3 - To not have a specific policy covering this issue but to consider planning applications against other relevant policies in the Local Plan Strategy and Sites 2019 and to rely on guidance in the National Planning Policy Framework and Planning Practice Guidance.
- 3.38 The Council commissioned a study that aimed to ultimately identify a site or sites suitable for renewable energy with a view to allocating land in the LPDMP. The initial findings of the work were that broad areas of the borough would be suitable and that it would be difficult to identify any specific sites that performed significantly better than all the others thereby justifying a specific site allocation. Additionally, many feasible locations are within the Green Belt.
- 3.39 A review of renewable energy policies and planning applications for renewable energy schemes indicated that there is no precedent either for allocating land for renewable energy in the Green Belt or for removing land from the Green Belt to accommodate such development. While the NPPF at paragraph 151 does not specify which elements of renewable energy development would constitute ‘inappropriate development’ under Green Belt policy, precedent in previous schemes, mostly through the appeal process, indicates that developments such as solar farms are considered to be, at least in part, inappropriate

development (see later for further discussion of the NPPF and renewable energy in the Green Belt).

- 3.40 Therefore, in order to allocate sites for renewable energy, the LPDMP would likely need to remove land from the Green Belt. In this instance, exceptional circumstances would need to be demonstrated, in accordance with NPPF paragraph 140. It is not clear that this would be possible as no precedent for removing land from the Green Belt for renewable energy development was found and, in any event, the study indicated that identifying a 'best' site for such a development would be difficult. Furthermore, Green Belt boundary amendments should have regard to their intended permanence. Solar farm schemes have a limited lifespan of around 30 to 45 years and it is not considered justified to remove land from the Green Belt for a use that is unlikely to be permanent.
- 3.41 A review of existing schemes that have been permitted across the country indicates that renewable energy schemes can be delivered in the Green Belt by demonstrating 'very special circumstances' through the planning application process. A general policy that supports renewable energy in appropriate places whilst preventing unacceptable harm would therefore be effective.
- 3.42 As a result of this analysis, the preferred option was not taken forward. The "do nothing" option was also rejected as the option of a general policy supporting such developments is considered to more closely align with the NPPF at paragraphs 152 and 155 as well as the Council's climate emergency declaration.

Support for renewable energy development (paragraph 1)

- 3.43 Paragraph 1 of the policy supports renewable energy and storage developments in accordance with NPPF paragraphs 152 and 155, and offers particular support for community-led developments in accordance with paragraph 156. The remainder of the policy deals with the matters likely to arise for such an application and sets out the relevant considerations.
- 3.44 This approach was largely preferred by consultation respondents over allocating land for renewable development. Some respondents requested a blanket prohibition on such development in the Green Belt and/or AONB. However, this would not accord with the NPPF or planning precedent where renewable energy developments have been found to be acceptable subject to specific criteria being met.

Green Belt, 'very special circumstances' and visual impacts (paragraphs 2 and 3)

- 3.45 The NPPF generally supports renewable energy development. However, it is slightly more ambivalent about renewable energy development in the Green Belt at paragraph 151 where it states: "When located in the Green Belt, elements of many renewable energy projects will comprise inappropriate development. In such cases developers will need to demonstrate

very special circumstances if projects are to proceed.” It does not state which elements will compromise inappropriate development, or indicate what very special circumstances may entail except where it goes on to state that they “may include the wider environmental benefits associated with increased production of energy from renewable sources.” This lack of clarity is problematic as the undeveloped land where such proposals are likely to come forward are mainly in the Green Belt. Policy is therefore required to bring clarity to how the existence of ‘very special circumstances’ will be judged in order to achieve the aim of a plan-led system.

- 3.46 Paragraph 147 states that inappropriate development is harmful to the Green Belt and must pass a ‘very special circumstances’ test in order to receive consent. Paragraph 148 states “When considering any planning application, local planning authorities should ensure that substantial weight is given to any harm to the Green Belt. ‘Very special circumstances’ will not exist unless the potential harm to the Green Belt by reason of inappropriateness, and any other harm resulting from the proposal, is clearly outweighed by other considerations.” This clarifies that if other considerations outweigh any identified harm, including harm to the Green Belt, then very special circumstances will exist and renewable energy developments can be permitted in the green belt. This is consistent with paragraph 158 which states that applications for renewable and low carbon [energy] should be approved if impacts are or can be made acceptable.
- 3.47 In order to both support renewable energy and decarbonisation in accordance with the NPPF, and to help deliver borough, county and national ambitions and strategies, it is necessary that Green Belt renewable energy schemes are given adequate and reasonable consideration so that a default refusal is avoided and schemes that pass the relevant tests can be approved, as has happened nationally.
- 3.48 The NPPF (para. 151) states that the wider environmental benefits of renewable energy are one of the considerations relevant to the ‘very special circumstances’ test. Paragraph 2 of Policy D15 is consistent with this where it states “climate change mitigation and other benefits will be taken into account when considering whether very special circumstances exist.”
- 3.49 The supporting text includes the sections ‘Green Belt’ and ‘Visual impacts’ which provide detail on the further considerations that are likely to be relevant depending on the specific proposals. This is provided to assist applicants and decision makers and to ensure consistency across applications that to deliver a plan-led system and a smoother planning process. It also provides guidance for applicants to help them improve their proposals to maximise the public benefit. The list of considerations has been produced through a review of similar policies and guidance adopted in other districts, the NPPF and PPG, and planning applications and appeals.

3.50 A critical consideration is that schemes should be designed to minimise visual impacts in order to protect the openness of the Green Belt and landscape character. The policy specifies this at paragraph 3 and sets out detail in the considerations in the supporting text.

Biodiversity (paragraph 3)

3.51 Renewable energy developments offer substantial opportunities for biodiversity net gain. The Building Research Establishment (BRE) has produced detailed guidance in this regard and recent developments have seen renewable developments achieve net gains as high as 178%.¹⁷ This demonstrates a substantial potential for biodiversity net gain that could make a significant contribution to reversing Surrey’s severe biodiversity decline (see the Natural Environment topic paper) so it is important that opportunities to support biodiversity are fully explored in proposals for new renewable developments.

3.52 The policy responds to this at paragraph 3 where it requires schemes to be managed to maximise opportunities for biodiversity and in the supporting text where improvements to biodiversity are presented as a consideration for the ‘very special circumstances’ test.

Temporary permissions (paragraph 4)

3.53 Many renewable energy installations are temporary and the policy recognises this at paragraph 4. A review of planning appeals indicates that inspectors have considered this relevant to the application, and the weighing of the limited life of any harms would be consistent with the approach for other types of temporary development. A key consideration is that the land must be returned to an acceptable state once the development reaches the end of its life in order to protect the character of the borough and the openness of the Green Belt, and remove the possibility of blight and contamination. This is reflected in the policy and supporting text.

Wind turbines

3.54 During the Regulation 18 consultation NATS (the air traffic control provider responsible for UK upper airspace, the name is not an acronym) and Gatwick Airport both requested to be consulted in the event that proposals are put forward for wind turbines. A statement to this effect is included in the supporting text in order to ensure that there is clarity regarding this obligation. At Regulation 19, the Ministry of Defence requested the same and a minor modification has been proposed to add it to the list of consultees.

4. Next steps

4.1 The draft Local Plan policies for the climate change and sustainable development covered in this topic paper respond to the requirements of national policy, the findings of the evidence

¹⁷ Application no. 20202016, Broadland District Council, [Link](#)

base review and has been informed by the Regulation 18 consultation. This topic paper accompanies the proposed submission Local Plan: Development Management Policies at submission. For more information, please visit [New Local Plan: Development Management Policies - Guildford Borough Council](#)¹⁸.

¹⁸ Available at: <https://www.guildford.gov.uk/article/25707/New-Local-Plan-Development-Management-Policies>