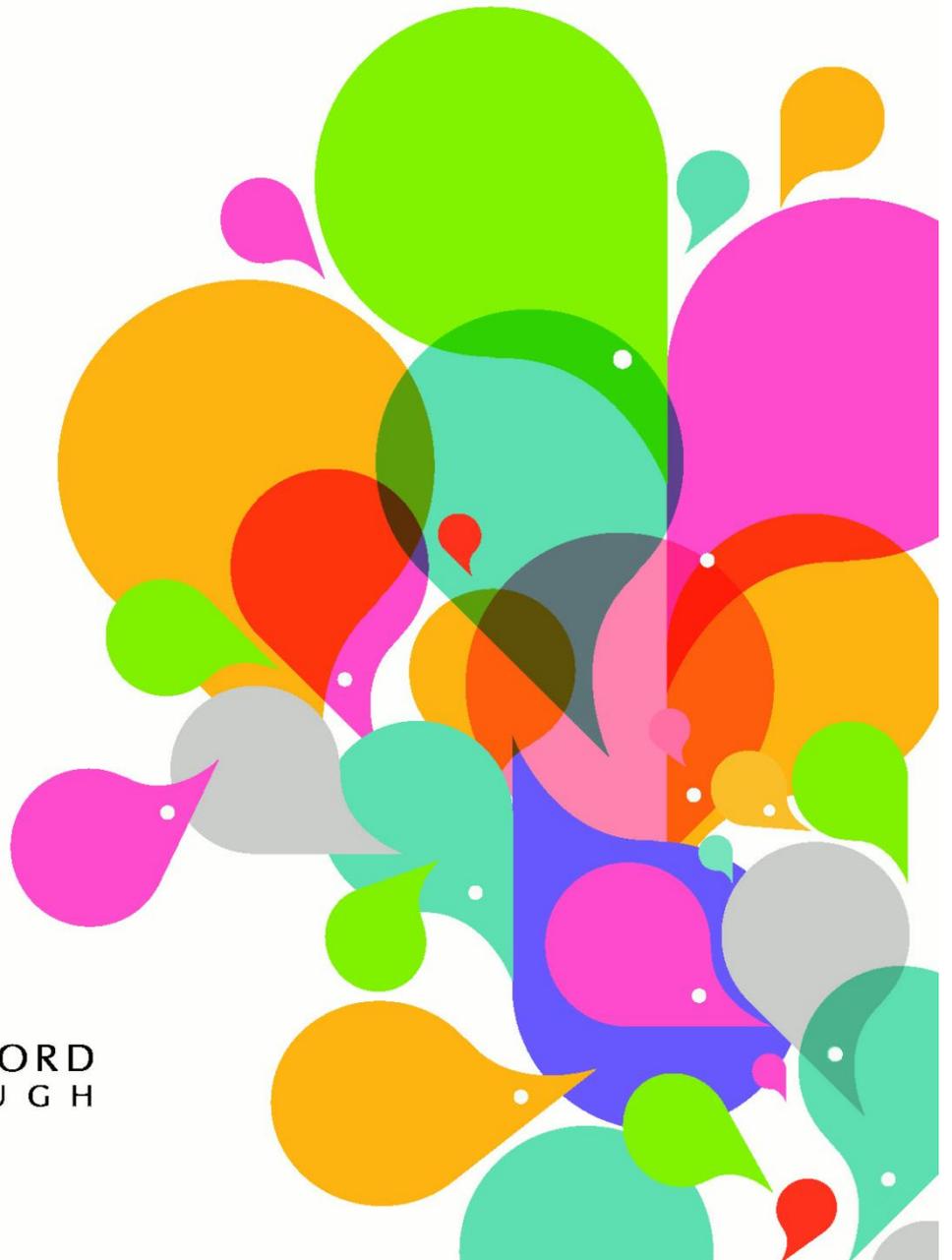


Topic paper: Environmental Sustainability and Climate Change June 2017

To accompany Guildford borough Proposed Submission Local Plan: strategy and sites



Further information and alternative formats

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DRAFT

Topic paper:

1. Purpose of this topic paper

- 1.1 This topic paper is one in a series, which sets out how we have developed the key strategy within the Guildford borough proposed submission Local Plan: strategy and sites document (the plan). Each topic paper will look at the relevant national and local guidance that informs the plan. Topic papers explain how the strategy has developed and the information, evidence and feedback that has informed the choices made in formulating the policies.
- 1.2 The intention of the topic papers is to provide background information; they do not contain any policies, proposals or site allocations. All topic papers will be finalised to accompany the submission of the draft Local Plan to the Secretary of State for examination.
- 1.3 The issues covered by this topic paper are:
 - sustainable design and construction
 - sustainable energy and
 - carbon reduction in new developments.
- 1.4 This topic paper explains the development of Policy D2 Sustainable Design, Construction and Energy, which deals with the sustainability of new buildings and sustainable energy. The issue of sustainability, which includes environmental sustainability, is embedded into the Local Plan process and has been considered throughout the production of the plan. Other topic papers set out how policies have been developed to lead to sustainable outcomes in areas such as the spatial pattern of development and transport.

2. Policy Context

National context

- 2.1 Our policies must be positively prepared, justified, effective and consistent with national policy and legislation. The [National Planning Policy Framework \(NPPF\)](#) sets out the overarching planning policy framework, supported by [Planning Practice Guidance \(PPG\)](#).

Legislation and statements from government

Planning and Compulsory Purchase Act 2004

- 2.2 Section 19 of the 2004 Planning and Compulsory Purchase Act, as amended by the 2008 Planning Act, places a legal duty for Local Authorities to ensure that Local Plan policies contribute to the mitigation of and adaptation to climate change.

Renewable Energy Directive 2009

- 2.3 Under EU Directive 2009/28/EC, the UK is committed to supplying 15% of its energy requirement (including electricity, transport and heat) from renewable sources by 2020. It is not clear whether the UK is currently on track to meet this target, but it did meet the interim target set for the period covering 2013 and 2014. There is no specific local target that our borough should be aiming to meet, but it is implicit that the Local Plan should assist the UK in meeting its commitments.

Climate Change Act 2008

- 2.4 The Climate Change Act 2008 put into statute CO₂ emissions reductions targets of 80 per cent by 2050 and at least 26 per cent by 2020 against a 1990 baseline. The 2020 target was amended to 34 per cent in 2009. While there is no specific emissions reduction target that we need to meet locally, the NPPF requires us to have regard to the objectives of the 2008 Climate Change Act. These are ambitious targets.

Energy Act 2008

- 2.5 The Energy Act 2008 introduced Feed-in Tariffs (FiT) and the Renewable Heat Incentive (RHI) scheme to increase small scale renewable energy generating capacity throughout the UK. The amount paid under FiT was reduced in 2016 but the payment presently remains in place. In November 2015, the government confirmed that RHI would be supported until at least 2020, though the amount paid would be capped. In 2016 and 2017 the government introduced caps on the number of new installations eligible for payments. Taken as a whole, this indicates continued support for small scale renewable energy at a national level, though support has fallen since 2008.

Planning & Energy Act 2008

- 2.6 The Planning and Energy Act 2008 allowed local councils in England and Wales to set reasonable requirements in their Development Plan Documents for:
- the proportion of energy used in a development to be sourced from renewable sources and/or local low carbon sources in the locality of the development; and
 - energy efficiency standards that exceed Building Regulation requirements.
- 2.7 The Deregulation Act 2015 includes an amendment to the Planning and Energy Act (section 43) that revokes the power to set energy efficiency standards for dwellings. The commencement date for this amendment has not yet been announced, but in a ministerial statement (25 March 2015) the government stated that this will coincide with the introduction of the Zero Carbon standard, which includes tightened energy efficiency requirements in Building Regulations and an “Allowable Solutions” carbon offsetting scheme, for new dwellings in 2016.
- 2.8 In the productivity plan “Fixing the Foundations” (July 2015), the then Chancellor stated that the government now did not intend to proceed with the Zero Carbon standard (with little explanation provided), but stated that energy efficiency standards would be kept under review. In May 2016 the House of Lords, while discussing the Planning and Housing Bill, voted in favour of reintroducing the standard through the bill, but this was rejected by government. The government has not updated the NPPF or the PPG to reflect its decision not to commence with the Zero Carbon standard (though it has updated the PPG to refer to the new technical standards)

and, as a result, it is not clear whether the Zero Carbon standard has been abandoned or simply delayed.

- 2.9 There has been no indication in national planning policy during the last two years that Section 43 of the Deregulation Act will commence and there is now a reasonable prospect that it will never do so.
- 2.10 The Planning and Energy Act 2008 empowers local planning authorities to include policies within their Local Plans that secure a carbon emission rate below that prescribed by Building Regulations. Parliament debated revoking this power during the passage of the Deregulation Bill but decided that it should remain in place.
- 2.11 The situation described above is complicated as government U-turns on Zero Carbon policy for dwellings have made the direction of travel for national planning policy unclear. It is assumed that the Zero Carbon standard, or an equivalent, will be introduced before 2020 to meet the obligations in the Energy Performance of Buildings Directive (see below), and that the power for Local Plans to set an energy efficiency standard in new dwellings above Building Regulations will be revoked at that point. It also seems clear that the government does not wish to see energy efficiency standards in new dwellings slip as it has chosen not to amend the Planning and Energy Act through the commencement of section 43 of the Deregulation Act, despite several opportunities to do so as other bills have passed through parliament. It therefore seems reasonable to assume that the government expects Local Authorities to consider using local energy efficiency standards until the national standard is introduced, though the government prefers that these do not exceed the equivalent for Code for Sustainable Homes level 4 (see Housing Standards Review below). Local Planning Authorities retain the power to set energy efficiency standards for other types of development.
- 2.12 The situation surrounding the power to set a proportion of energy to be sourced from renewable sources and/or local low carbon sources is more clear. Parliament debated revoking this power and chose not to do so, so it is clear that the intention is that Local Authorities should continue to use it where justified. Whilst government policy in recent year has been opposed the use of local standards in planning, the parliamentary system of the UK means that the will of parliament, expressed through legislation, takes primacy over government policy. The government cannot use written ministerial statements to restrict powers conferred by legislation.

Energy Performance of Buildings Directive 2010

This directive contains an obligation for all new buildings to be 'nearly zero energy' by 2020. Nearly zero energy is defined in the directive as "a building that has a very high energy performance. The nearly zero or very low amount of energy required should be covered to a very significant extent by energy from renewable sources, including energy from renewable sources produced on-site or nearby". The UK has recently voted to exit the European Union and the government has published the [Great Repeal Bill White Paper](#), which sets out the intention to incorporate all applicable EU law into British law and to preserve EU law already incorporated into British law. Therefore, the Energy Performance of Buildings Directive 2010 remains an important consideration.

Housing Standards Review and the Deregulation Act 2015

- 2.13 Following the Housing Standards Review consultation in 2013, the government produced a written [ministerial statement](#) in March 2015 which reaffirmed the

government's commitment to the Zero Carbon standard and set out changes to planning policy and Building Regulations. The statement announced the following relevant points:

- the Code for Sustainable Homes had been withdrawn,
- new "optional higher level" Building Regulations for water efficiency and access for new dwellings that can be required through local planning policy*,
- a new national space planning standard for new dwellings,
- that from the date the Deregulation Bill is given royal assent, Local Plans should not include any additional (to the new "optional Building Regulations" and the new national space standard) local technical standards or requirements relating to the construction, layout or performance of new dwellings,
- clarification that the statement did not modify the NPPF policy allowing the connection of new housing development to low carbon infrastructure such as district heating networks,
- clarification that Local Plan policies could still require energy efficiency standards above Building Regulations up to Code for Sustainable Homes level 4 until the introduction of the national Zero Carbon standard.

*Guildford Borough Council adopted the optional Building Regulation for water on October 1 2015, which is set at 110 litres per occupant per day. This is equivalent to the standard in the Code for Sustainable Homes level 3, which had been in place in the borough since 2011.

- 2.14 Written ministerial statements are material planning considerations. The Deregulation Bill has now been given royal assent so Local Plans should not set technical standards for construction, layout or performance of dwellings except the optional Building Regulations, the planning space standard and energy performance requirements up to the equivalent of Code for Sustainable Homes Level 4, without a compelling reason to do so.

Planning policy

National Planning Policy Framework (NPPF)

- 2.15 The following paragraphs of part 10 of the NPPF (Meeting the challenge of climate change, flooding and coastal change) are particularly relevant.
- 2.16 Paragraph 93: planning policy plays a key role in:
- helping shaping places to secure radical reductions in greenhouse gas emissions
 - minimising vulnerability and providing resilience to climate change impacts and
 - supporting the delivery of renewable and low carbon energy and associated infrastructure.
- 2.17 Paragraph 94: local planning authorities should adopt proactive strategies to mitigate and adapt to climate change, taking full account of flood risk, ...and water supply and demand considerations",
- 2.18 Paragraph 95: To support the move to a low carbon future, local planning authorities should:

- plan for new development in locations and ways which reduce greenhouse gas emissions;
- actively support energy efficiency improvements to existing buildings; and
- when setting any local requirement for a building's sustainability, do so in a way consistent with the Government's zero carbon buildings policy and adopt nationally described standards".

2.19 Paragraph 96: In determining planning applications, local planning authorities should expect new development to:

- comply with adopted Local Plan policies on local requirements for decentralised energy supply unless it ... is not feasible or viable
- take account of landform, layout, building orientation, massing and landscaping to minimise energy consumption.

2.20 Paragraph 97: to help increase the use and supply of renewable and low carbon energy, local planning authorities should recognise the responsibility on all communities to contribute to energy generation from renewable or low carbon sources. This achieve this, local planning authorities should:

- have a positive strategy to promote energy from renewable and low carbon sources;
- design their policies to maximise renewable and low carbon energy 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 the development of such sources
- support community-led initiatives for renewable and low carbon energy, including developments outside such areas being taken forward through neighbourhood planning; and
- identify opportunities where development can draw its energy supply from decentralised, renewable or low carbon energy supply systems and for co-locating potential heat customers and suppliers.

2.21 Paragraph 99: Local Plans should take account of climate change over the longer term, including factors such as flood risk, coastal change, water supply and changes to biodiversity and landscape. New development should be planned to avoid increased vulnerability to the range of impacts arising from climate change.

2.22 Other relevant sections in the NPPF include:

- Paragraph 151: Local plans must be prepared with the objective of contributing to sustainable development
- Paragraph 152: LPAs should seek opportunities to achieve each of the economic, social and environmental dimensions of sustainable development and net gains across all three. Significant adverse impacts on any of these dimensions should be avoided and, wherever possible, alternative options which reduce or eliminate such impacts should be pursued. Mitigation or compensation measures may also be appropriate
- Paragraph 154: Local plans should be aspirational but realistic. Only policies that provide a clear indication of how a decision maker should react to a development proposal should be included.
- Paragraph 156: Local plans should include strategic policies to deliver climate change mitigation and adaptation.

- Paragraph 173: Pursuing sustainable development requires careful attention to viability and costs in plan-making and decision-taking. Plans should be deliverable. To ensure viability, the costs of any requirements likely to be applied to development, such as requirements for affordable housing, standards, infrastructure contributions or other requirements should, when taking account of the normal cost and development and mitigation, provide competitive returns to a willing landowner and willing developer to enable the development to be deliverable.

National Planning Practice Guidance (PPG)

- 2.23 The PPG identifies addressing climate change as a core land use planning principle that should be reflected in Local Plans. Spatial planning should support the delivery of appropriately sited green energy and influence the emission of greenhouse gases (Climate Change, para. 1).
- 2.24 The PPG gives specific examples of climate change mitigation and adaptation actions:
- Reducing the need to travel and providing for sustainable transport
 - Providing opportunities for renewable and low carbon energy technologies
 - Providing opportunities for decentralised energy and heating
 - Promoting low carbon design approaches to reduce energy consumption in buildings, such as passive solar design
 - Considering future climate risks when allocating development sites to ensure risks are understood over the development's lifetime
 - Considering the impact of and promoting design responses to flood risk and coastal change for the lifetime of the development
 - Considering availability of water and water infrastructure for the lifetime of the development and design responses to promote water efficiency and protect water quality
 - Promoting adaptation approaches in design policies for developments and the public realm
- 2.25 The impact of climate change needs to be taken into account in a realistic way. In doing so, local planning authorities should consider:
- identifying no or low cost responses to climate risks that also deliver other benefits, such as green infrastructure that improves adaptation, biodiversity and amenity
 - building in flexibility to allow future adaptation if it is needed and
 - the potential vulnerability of a development to climate change risk over its whole lifetime.
- 2.26 The PPG (climate change, paragraph 7) states, "Every area will have different challenges and opportunities for reducing carbon emissions from new development such as homes, businesses, energy, transport and agricultural related development." This indicates that a local approach should be taken that draws upon local circumstances.
- 2.27 The PPG dedicates a full section to renewable and low carbon energy and states that planning has an important role in the delivery of new renewable and low carbon energy infrastructure in locations where the local environmental impact is acceptable. It makes the following statements:
- When drawing up a Local Plan local planning authorities should first consider what the local potential is for renewable and low carbon energy generation.

- the UK has legal commitments to cut greenhouse gases and meet increased energy demand from renewable sources.
- When identifying suitable areas [for low carbon energy] it is... important to set out the factors that will be taken into account when considering individual proposals in these areas.

Other Strategies

2.28 Other national strategies are relevant. While they do not always directly apply to the planning system, they do often indicate the direction of travel that the UK is taking and sometimes flesh out the requirements that have been placed on us. These strategies include:

- The *Renewable Energy Roadmap* (2011) (DECC) seeks to increase the UK's use of renewable energy in order to achieve the target of 15% of gross energy use from renewable sources by 2020 with support for wind and wave power, biomass electricity and heat, ground and air source heat pumps, and low or zero carbon transport.
- The *United Kingdom National Renewable Energy Action Plan* (2009) describes how the United Kingdom plans to achieve its legally binding target of a 15% of energy from renewable sources by 2020. It suggests an appropriate way (though not the only way) to meet the target above would be by producing 30% of electricity, 12% of heat and 10% of transport energy from renewable sources.
- The *National Adaptation Programme* (2013) highlights the variability of climate change across the country and the need to manage it locally. It identifies flooding, high temperatures and water efficiency as particular issues for the built environment and a point of action for urban design.
- The *Low Carbon Transition Plan* and the *Renewable Energy Strategy* were both published on 15 July 2009 and set out how the UK will achieve dramatic reductions in emissions and meet targets on renewables. The Low Carbon Transition Plan identifies growth in the green economy as a key requirement.
- *The Household Energy Management Strategy, Warmer Homes, Greener Homes*, published in March 2010, gives more importance to district heating schemes and identifies the essential role of planning to facilitate the implementation of them.
- DECC have published *The Heat Strategy* and *National Heat Map* which gives a strategic framework for low-carbon heat. The map is a spatial plan of heat demand from buildings for all of England, designed to help planners develop and promote low-carbon heating solutions.
- *Future Water 2008* acknowledges the increasing likelihood of both droughts and floods and sets out a vision for sustainable and secure water supplies and an improved and protected water environment in 2030. The strategy highlights the importance of both reducing water demand by managing consumption and protecting and improving water supplies, and identifies building design as a way that can help achieve this.

2.29 These national strategies indicate a strong movement towards a decarbonised energy supply with particular support for district heating, a national move towards climate change adaptation and a movement towards greater consideration of water supply and demand.

Local context

- 2.30 There are a number of local plans, policies, strategies and other documents that have been taken into consideration.

Guildford Borough Council Corporate plan 2015

- 2.31 The Council's Corporate Plan sets out an over-arching framework that indicates the direction of travel the Council will take over a five year period. The corporate plan presents a vision for 2020 (page 4) which includes strategic priorities of reduced energy and water use, less waste, more re-use and recycling and improved resilience through sustainability.

Surrey Minerals Plan (SWP) and Surrey Waste Plan (SMP)

- 2.32 These statutory plans, produced by Surrey County Council, include a number of relevant policies, including :
- SWP Policy CW1, which encourages Local Planning Authorities to include policies in development plans which seek to minimise waste in construction
 - SMP Core Strategy Policy MC5, which seeks to ensure that development plans encourage the re-use of construction and demolition waste at source or its separation and collection for recycling.
 - SMP Core Strategy Policy MC4, which states that the Mineral Planning Authority, in partnership with LPAs and other bodies, will promote the use of sustainable design and construction that provides for efficient use of minerals and enables the incorporation of a proportion of recycled or secondary aggregate in new projects.

Carbon Trust policy advice

- 2.33 The Carbon Trust were previously the government's advisor on energy saving and carbon reduction and have helped a number of local authorities develop policies and defend them at examination. The Council sought advice from the trust on the content of Policy D2. The trust made several suggestions which have been incorporated into the policy:
- include a heating/cooling hierarchy
 - include a requirement to future proof buildings so they can connect to future (C)CHP networks ((C)CHP refers to both combined heating and power (CHP) and combined cooling heating and power(CCHP))
 - reduce the focus (previously in the policy) on community ownership/benefit of decentralised energy systems to an aspiration
 - change the thresholds for sufficiently large or intensive developments to avoid missing opportunities
 - require the provision of energy statements to demonstrate requirements have been met

Consultation

- 2.34 The council consulted on the Local Plan Issues and Options in 2013, and the Draft Local Plan: Strategy and Sites in 2014, which included a sustainable design, construction and energy policy (policy 7). Representations largely covered the following points:
- strong support for good construction standards and climate change adaptation/mitigation in principle

- objection to weak wording (such as support rather than require) and the inclusion of language like “subject to viability” that were considered a get-out clause
- objection to overly aspirational, imprecise wording and the lack of targets and monitoring indicators
- support for the idea of including requirements for specific technologies or design features (e.g. grey water reuse systems, swift boxes, rainwater harvesting, electric charging points, water meters)
- objection that the policy didn’t go further to cover other elements of sustainability like flood risk, air quality, sustainable transport, the spatial pattern of development and the housing number
- objection that the policy doesn’t rule out development in areas including the AONB, the Green Belt, the countryside and in areas with environmental designations.
- a small number of objections on the ground that sustainable construction should be left to national policy or should not constrain/place burdens on developers
- a small number of objections in principle on the grounds that large renewable energy schemes are harmful to the landscape or don’t work, or that climate change doesn’t exist.

Neighbourhood Plans

- 2.35 Neighbourhood Planning enables Neighbourhood Forums and Parish Councils to develop a vision and planning policies for their designated neighbourhood area. Those ‘Neighbourhood Plans’ which are successfully adopted will form part of the statutory development plan for the area that they cover. Where a Neighbourhood Plan is adopted or emerging before an up-to-date Local Plan is in place, the local planning authority should take it into account when preparing the Local Plan policies.
- 2.36 There is currently one adopted Neighbourhood Plan (Burpham) and one emerging Neighbourhood Plan (Effingham) within the borough. Seven other Parish Councils are also currently producing Neighbourhood Plans. Once formally adopted these documents form part of the Development Plan and can carry weight in the planning process.
- 2.37 Burpham Neighbourhood Plan policy B-FD4 requires developments to consider water supply and flood risk. Policy D2 also deals with water supply in that it seeks to achieve higher water efficiency in new dwellings. There is not considered to be a conflict between Policy D2 and B-FD4, or any other policies of the Burpham Neighbourhood Plan.
- 2.38 The weight given to an emerging plan will depend on, among other things, the extent to which there are unresolved objections to the plan (NPPF paragraph 216). Therefore, an emerging neighbourhood plan will pick up weight once evidence of consultation is published and the level of unresolved objection is known. At time of writing, the Effingham Neighbourhood Plan has been through two statutory consultations. The plan is progressing towards examination and is accorded limited weight at this stage.
- 2.39 Details are available at <http://www.guildford.gov.uk/neighbourhoodplanninginformation>.

3. Evidence base

- 3.1 The National Planning Policy Framework requires us to develop policies based on up to date evidence. Our evidence base comprises documents that have helped inform past and current stages of our Local Plan policy development; emerging evidence will help inform future development of policies for the Local Plan.
- 3.2 The key pieces of evidence base relevant to environmental sustainability and climate change are:
- The Guildford Borough [Environmental Sustainability and Climate Change Study](#) 2013 (ESCC)
 - The [Guildford Renewable Energy Mapping Study](#) 2015
- 3.3 The ESCC sets out the current and future threats and risks and identifies needs and opportunities for action. The key findings are:
- water shortage, rising temperatures and increased flood risk are likely to be key threats that should be addressed through suitable adaptations in new developments and
 - there are opportunities for mitigation of climate change through reducing emissions from transport, improving energy efficiency in the domestic sector and increasing the production of renewable and low carbon energy.
- 3.4 The Renewable Energy Mapping Study considers opportunities for renewable energy in the borough. It identifies district heat priority areas (areas which are likely to have the most potential for (C)CHP distribution networks) and significant potential for domestic renewable energy systems.
- 3.5 Further information and copies of the evidence base documents are available on the Councils website at: <http://www.guildford.gov.uk/newlocalplan/evidencebase>.

4. Appraisal and Local Plan Policy Approach

- 4.1 The following section brings together relevant legislation and key evidence base findings where appropriate. It highlights the main areas relevant to formulating a Local Plan policy approach for sustainable design construction and energy in our borough, and indicates how this has informed the choices made during the development of the policy.
- 4.2 The overarching approach taken by policy D2 is to follow established sustainability principles, which focus on eliminating and reducing consumption of energy and resources as a first step, followed by sustainable supplies as a second step. This 'reduction first' approach is well established in both sustainability theory and practice. The policy presents waste and energy hierarchies to set out the approach clearly.

Sustainable development and climate change adaptation

- 4.3 The review of legislation and government statements above indicates that the UK is on a trajectory for ambitious carbon reduction and that local plans should be assisting this – local plans must deliver climate change mitigation as a matter of law and have regard to national carbon reduction commitments as a matter of policy. The principles of sustainability demonstrate that this should be achieved both through the decarbonisation of energy and through increased energy efficiency. Local authorities have been granted the power to set energy efficiency standards for development,

including dwellings up to the equivalent of Code for Sustainable Homes level 4, but must not set other technical standards for dwellings.

- 4.4 The NPPF amplifies the decarbonisation trajectory calling for the planning system to secure “radical reductions” in greenhouse gas emissions. The national Zero Carbon planning standard has not been introduced so it stands to reason that the planning system must therefore secure radical reductions in greenhouse gas emissions through local policy. The government has committed to reviewing Building Regulations standards in lieu of a national planning carbon emissions standard. However, Building Regulations fall outside the planning system. The NPPF requires any standards for sustainable construction to be compatible with the Zero Carbon standard, but otherwise strongly supports sustainable design and construction. The PPG provides clarification and identifies promoting low carbon design approaches to reduce energy consumption in buildings as a climate change mitigation action. Taking the above together, it is clear that local planning policy should promote carbon reduction and energy efficiency in new buildings.
- 4.5 The ESCC study found that current domestic energy use in our borough is particularly high and identified both a need and an opportunity to improve the efficiency of our building stock, both current and future. This presents an opportunity to satisfy the requirements of the NPPF and legislation.
- 4.6 The “sustainable development” section of Policy D2 supports Zero Carbon development under the national definition (stated in the supporting text). The policy calls for sustainable design and construction practice in a way that follows the energy hierarchy which will lead to higher levels of energy efficiency in both new dwellings and other buildings as it requires energy minimisation measures to be applied as a first step.
- 4.7 The policy requires development proposals to set out how they will deliver “the lowest levels of carbon emissions”. This does not set a quantifiable target, but is a qualitative standard. The requirement differs starkly from the standards set by Building Regulations (including the optional Building Regulations of the national technical standards) and the new national space standard in that it does not mandate an approach to construction, does not regulate internal layout or building performance and does not set caps or target values for performance regarding things like fabric efficiency and energy use. The requirement is therefore not a technical standard and should be considered a design standard.
- 4.8 Beyond energy efficiency the NPPF requires:
- The minimisation of waste and pollution (paras. 7, 17, 109, 110, 143 and 156)
 - the prudent use of natural resources (para. 7)
 - taking account of water supply and demand (paras. 94 and 99)
 - management of the risks of climate change through suitable adaptation measures in new developments (paras. 14, 94, 99 and 156).
- 4.9 The NPPF calls for improved use of natural resources and a reduction in waste. As a development plan policy, the types of resources and waste that Policy D2 can have most influence over are those associated with construction. The policy therefore requires the efficient use of mineral resources and the re-use of aggregates, and material derived from development sites. This accords with the waste hierarchy and supports the objectives of the Surrey Waste Plan and Surrey Minerals Plan. The policy also requires the implementation of measures that support sustainable

lifestyles, which would include facilities like composters and recycling storage that can have an impact on personal waste.

- 4.10 The ESCC study found that per capita water consumption in the borough is currently high though we are in an area of serious water stress. The PPG states that promoting water efficiency is a climate change adaptation action. Therefore, Policy D2 calls for the highest levels of water efficiency in new development that are achievable, and defines this in the supporting text as the 'optional Building Regulation' for water efficiency, which is 110 litres per day per person or a tighter standard should this be reviewed. The policy calls for the highest standard available (meaning the lowest level of water consumption) because the South East of England is the area of the UK with the highest water stress and it stands to reason that the highest available standard should apply in this region.
- 4.11 National policy and legislation requires local plans to deliver development that is adapted to the expected impacts of climate change and this is considered an integral part of sustainable development. Policy D2 therefore presents this as a strategic priority.
- 4.12 Throughout consultations, respondents have largely supported higher standards in sustainable construction and wanted to see strongly worded, focused policies that would not be easily evaded. The NPPF also requires policies to be clear for the decision maker (paragraph 154). Policy D2 is therefore quite detailed and avoids the strongly aspirational approach sometimes used in strategic policies. The policy requires the submission of sustainability and energy statements to ensure that the decision maker will have evidence before them that sets out how the policy requirements have been met.
- 4.13 While Policy D2 is detailed, it does not include content that would more appropriately sit in a development management policy, such as detailed design and construction standards. It also meets national policy by avoiding technical standards, except the nationally described water standard, which is clearly intended for use at a local level, and the 20 per cent reduction in carbon emissions, which parliament has decided local authorities should retain the power to implement.

Energy and carbon reduction

- 4.14 The review of legislation and government statements above demonstrates strong support for low and zero carbon energy and indicates that the planning system should play a key role in securing this. This is further supported by the NPPF at paragraphs 93 and 97 and the PPG which identifies providing opportunities for renewable and low carbon energy technologies and decentralised energy and heating as appropriate climate change mitigation actions.
- 4.15 The PPG aligns with other national documents and ministerial statements by focusing on decentralised CHP networks in particular as a favourable technology: paragraph 9 of the Renewable and Low Carbon chapter provides links to national tools that have been provided to support the development of CHP networks where the technology is described as a "highly efficient process".
- 4.16 While it is not clear if and when the implementation of the national Zero Carbon standard for dwellings will commence, there remains the European obligation for all new building to be nearly zero energy by 2020, with remaining energy need to be offset by onsite or nearby renewable energy. This represents a significant movement

beyond the current standards set in Building Regulations and is likely to need a long adjustment period. To encourage the movement towards meeting the second part of this commitment, Policy D2 requires the use of low and zero carbon energy generating technologies, both on site and from nearby decentralised energy networks.

- 4.17 The Guildford Renewable Energy Mapping study indicates an opportunity for Local Plan policy to drive the implementation of CHP and CCHP networks by identifying areas where these are likely to be viable due to the density of development and nearby heat sources. This directly accords with the PPG (Renewable and low carbon energy, paragraph 3) which states “When drawing up a Local Plan local planning authorities should first consider what the local potential is for renewable and low carbon energy generation”. This study has resulted in the Heat Priority Areas identified on the Proposals Map and it is considered that this work is in line with PPG advice.
- 4.18 Policy D2 aligns with national legislation, policy and guidance by offering strong support for low and zero carbon and decentralised energy with a particular focus on CHP and CCHP.
- 4.19 Policy D2 requires developments within Heat Priority Areas and significantly large or intensive developments outside Heat Priority Areas to select heating and cooling technologies in line with the heating and cooling hierarchy. Significantly large or intensive developments are defined through thresholds (a), (b) and (c). These thresholds were developed initially based on online guidance and a [survey of existing district heating schemes undertaken by DECC¹](#). The thresholds were revised to their current form following advice from the Carbon Trust which draws on experience at local plan examinations and in the practice of delivering heat networks.
- 4.20 The ESCC study finds that our borough currently lags behind other areas in installed small scale renewable capacity. In view of this, and the particular focus in national legislation and policy on delivering low and zero carbon energy, Policy D2 implements the power granted under the Planning and Energy 2008 Act to require development to achieve a reasonable reduction in the carbon emissions of at least 20 per cent beyond the minimum set out in Building Regulations through the provision of on-site low and zero carbon energy technologies. This approach is currently being used in London and Manchester.
- 4.21 The Council first introduced a carbon reduction rule in 2011, set at 10 per cent. This minimum has been increased to 20 per cent as low and zero carbon technologies are now more established and widespread than in 2011, and increasing the requirement in gradual steps represents progress towards the 2020 European target of nearly zero energy buildings with remaining energy need met by low and zero carbon energy. This level of carbon reduction is supported by the Council’s Assessment of the Viability of Carbon Emission Targets for New Builds (the assessment).
- 4.22 The assessment indicates that for dwellings, meeting the 20 per cent reduction in carbon emissions will increase build costs by up to 1.16 per cent. The Guildford Local Plan and CIL Viability study produced for the Proposed Submission Local Plan Strategy and Sites in 2016 made the assumption that the carbon reduction requirement would add 2.5 per cent to build costs. Therefore, this study demonstrates that the requirement is viable for dwellings and will result in fewer

¹ Summary evidence on District Heating Networks in the UK (DECC, 2013)

additional costs than tested for during the viability testing of the new Local Plan. The increase in build costs for office buildings is calculated to be up to 1.99 per cent.

- 4.23 The assessment indicates that the build costs would be up to 4.22 per cent higher for care home developments, and up to 5.2 per cent for retail developments. It is anticipated that, in the case of care homes, these costs would be factored in to the cost of development. Whilst the same is true of retail developments, the Council has identified a particular issue regarding the viability of retail developments in Guildford town centre, which means the additional build costs could jeopardise or discourage the delivery of retail developments in this location. As a result, the policy includes a caveat that the 20 per cent carbon reduction requirement does not apply to Guildford town centre retail developments. Guildford Town Centre is the most sustainable location for development so it is considered that overall the policy strikes a balance between delivering energy efficient developments and encouraging development in the most sustainable location, and on balance will deliver the most sustainable development.
- 4.24 The government is reducing the amount paid through the FiT, but at the same time the cost of low and zero carbon energy technologies is falling. The Council will monitor changes to national policy, Building Regulations minimum standards and low and zero carbon technology viability and review this standard at appropriate intervals.
- 4.25 Policy D2 Sustainable Design, Construction and Energy responds to the requirements of national policy and the results of our evidence. In preparing this new Local Plan we have carried out two consultations, the first in October 2013 on issues and options for the new Local Plan and the second in summer 2014 on a draft Local Plan, including policies and sites for allocation.

5. Next steps

- 5.1 The Proposed Submission Local Plan: strategy and sites (June 2017) – referred to as the Draft Local Plan 2017 for shorthand in this topic paper – will be subject to public consultation for 6 weeks from 9 June to 24 July 2017. This public consultation will be focused solely on the proposed changes made to the Draft Local Plan 2016; these changes are identified as such in the Draft Local Plan 2017. This is described as a targeted consultation.
- 5.2 Following this, all comments and representations relating to changes made to the 2016 Draft Local Plan during the consultation period will be considered. Consideration will then be given to any amendments deemed to be necessary to the plan and a decision taken on whether to consult further or to formally submit the plan to the Secretary of State.
- 5.3 For more information please visit: www.guildford.gov.uk/newlocalplan.