

Topic Paper: Environmental Sustainability and Climate Change

December 2017

To accompany Guildford borough Submission Local Plan: strategy and sites



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BOROUGH

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Contents

1. Purpose of this topic paper	4
2. Policy Context	4
National context	
Local context	
Neighbourhood Plans	
3. Evidence base	12
4. Appraisal and Local Plan Policy Approach	13
Consultation feedback	
Sustainable development and climate change adaptation	
Energy and carbon reduction	
5. Next Steps	19

Topic paper: Environmental Sustainability and Climate Change

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 Submission Local Plan: strategy and sites document. Each topic paper will look at the relevant national and local guidance that informs the Submission Local Plan. Topic papers explain how the strategy has developed, in addition to the information, evidence and feedback that have 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. Topic papers have been produced to accompany the Submission 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 emissions 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 Local plan 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.

Climate Change Act 2008

- 2.3 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. The targets set out in the Climate Change Act 2008 are ambitious.

Renewable Energy Directive 2009

- 2.4 Under EU Directive 2009/28/EC, the UK is committed to supplying 15% of its energy requirement (including electricity, heat and energy powering transport) 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 in meeting these national commitments.

Energy Performance of Buildings Directive 2010

- 2.5 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”.

European Union (Withdrawal) Bill

- 2.6 The UK has recently voted to exit the European Union. In March 2017 the government 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. The European Union (Withdrawal) Bill is currently moving through parliament. Section 2(1) of the bill states “EU-derived domestic legislation, as it has effect in domestic law immediately before exit day, continues to have effect in domestic law on and after exit day”. Section 3(1) the bill states “Direct EU legislation, so far as operative immediately before exit day, forms part of domestic law on and after exit day”. Therefore, the requirements of European Directives remain important considerations.

Energy Act 2008

- 2.7 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 and deployment caps were introduced in 2016 but the scheme otherwise continues. In November 2015, the government confirmed that RHI would be supported until at least 2020 with the following limitations: the amount paid under RHI is capped, subsidies are paid for seven years for domestic installations and 20 years for commercial installations, and new build dwellings are not eligible unless they are custom builds. Taken as a whole, this indicates continued support for small scale renewable energy at a national level.

Planning and Energy Act 2008

- 2.8 The Planning and Energy Act 2008 granted powers to 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.

Housing Standards Review

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

government's commitment to the national Zero Carbon homes standard¹ and set out changes to planning policy and Building Regulations. The statement announced the following relevant points.

- The government was committed to implementing the zero carbon homes standard in 2016, strengthening of minimum on-site energy performance requirements and had introduced in the Infrastructure Act 2015 the powers needed to enable off-site carbon abatement measures (Allowable Solutions).
- The Code for Sustainable Homes had been withdrawn.
- The introduction of the new “national technical standards” for housing which consisted of new optional higher level Building Regulations covering water efficiency* and access, and a new national planning standard for internal space.
- That from the date the Deregulation Bill is given royal assent, Local Plans should not include any additional local technical standards or requirements relating to the construction, layout or performance of new dwellings except the new national technical standards.
- 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 efficiency 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.

2.10 WMSs are material planning considerations.

Deregulation Act 2015 and Fixing the Foundations

2.11 The Deregulation Act 2015 at section 43 includes an amendment to the Planning and Energy Act 2008 that revokes the power for local authorities to set energy efficiency standards for new dwellings. This amendment was intended to put into law the restrictions on local energy efficiency standards referred to in the WMS of March 2015. However, the commencement date for this amendment has not yet been announced. The WMS of March 2015 stated that commencement of this amendment would coincide with the introduction of the national Zero Carbon standard.

2.12 Four months after the WMS of March 2015 in the productivity plan “Fixing the Foundations” (July 2015), the then Chancellor stated that the government now did not intend to proceed with the national Zero Carbon standard but that instead energy efficiency standards would be kept under review. There was little explanation of this decision and no clarity provided on whether this meant the amendment to the Planning and Energy Act 2008 would still commence. The government did not withdraw the ministerial statement of March 2015 and its commitment to introducing the Zero Carbon standard. The government has not updated the NPPF or the PPG to reflect its decision not to go ahead with the national Zero Carbon Standard though it has had the opportunity to do so when updating the PPG to refer to the new

¹ The national Zero Carbon homes standard requires new homes to mitigate, through various measures, all the carbon emissions produced on-site as a result of the regulated energy use (energy used for building services). The standard consists of a minimum fabric energy efficiency standard to reduce energy use, and a combination of on-site renewable and low carbon energy provision and “allowable Solutions” off-site site carbon abatement measures to remove or mitigate any remaining carbon emissions.

housing technical standards (the NPPF and the PPG still both refer to “the Government’s zero carbon buildings policy”). As a result, it is not clear whether introduction of the national Zero Carbon standard for dwellings has been abandoned or simply delayed.

- 2.13 There has been no indication since 2015 that the amendment to the Planning and Energy Act 2008 will commence and it is reasonable to assume that it may never do so.
- 2.14 The situation regarding energy efficiency standards described above is complicated as the government’s U-turn on the introduction of the Zero Carbon housing policy has 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 2.5 and 2.6), and that the power for Local Plans to set energy efficiency standards for new dwellings will be revoked at that point.
- 2.15 It 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 2008 through the commencement of section 43 of the Deregulation Act, though it has had several opportunities to do so as other bills have passed through parliament. It therefore seems reasonable to conclude that the government expects Local Authorities to consider using local energy efficiency standards either indefinitely or until the national Zero Carbon standard is introduced, though not where they exceed the equivalent for Code for Sustainable Homes level 4.
- 2.16 Local Planning Authorities will retain the power to set energy efficiency standards for non-residential development regardless of whether or not the amendment to the Planning and Energy Act 2008 commences as the amendment applies only to dwellings.
- 2.17 The situation surrounding the power in the Planning and Energy Act 2008 to set a proportion of energy to be sourced from renewable sources and/or local low carbon sources in the locality of the development is much more clear. Parliament debated revoking this power during the passage of the Deregulation Bill and chose not to do so, so it is clear that the intention is that Local Authorities should continue to use it where justified. The possible future commencement of the amendment to the Planning and Energy Act 2008 would not affect this as the amendment does not address the provisions that deal with provision of renewable and low carbon energy.
- 2.18 Whilst government policy in recent years has sometimes been opposed to the use of local standards in planning, the UK’s parliamentary system means that the will of parliament, expressed through legislation, takes priority over government policy. Where legislation conflicts with policy the conflict must be resolved in favour of legislation. The Council has received Counsel’s opinion which confirms this view and that the all the requirements of Policy D2 are lawful.

National planning policy and guidance

National Planning Policy Framework (NPPF)

- 2.19 The following paragraphs of part 10 of the NPPF (Meeting the challenge of climate change, flooding and coastal change) are particularly relevant.
- 2.20 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.
- 2.21 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. The recent Housing [White Paper: Fixing Our Broken Housing Market](#) (2017) states that the government proposes to add rising temperatures to the list of issues that should be addressed.
- 2.22 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.
- 2.23 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.
- 2.24 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.
- 2.25 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. The recent Housing [White Paper: Fixing Our Broken Housing Market](#) (2017) states that the government is proposing to amend the NPPF to make it clear that local planning policies should support measures for the future resilience of communities and infrastructure to climate change.
- 2.26 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 and
- 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)

- 2.27 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).
- 2.28 The PPG (Climate Change, para. 3) 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 and
 - promoting adaptation approaches in design policies for developments and the public realm.
- 2.29 The impact of climate change needs to be taken into account in a realistic way (PPG para, 5). 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.

- 2.30 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.
- 2.31 The PPG dedicates a full chapter 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 (Renewable and low carbon energy, paragraph 1). It makes the following statements (paragraph 3).
- 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 and programmes

- 2.32 Other national strategies and programmes are relevant. While they do not always directly apply to the planning system, they do indicate the direction of travel that the UK is taking and can flesh out the requirements that have been placed on planning policy. These strategies include the following.
- The Renewable Energy Roadmap (2011, updated 2012 and 2013) (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 (2010) 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 energy used for transport 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.
 - 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.
 - The government established the Heat Networks Delivery Unit in 2013 which provides funding and guidance to Local Authorities for heat network project development. The unit produced the document “Investing in the UK’s Heat Infrastructure: Heat Networks” in 2015 which states that local authorities are instrumental in helping to shape heat networks, including those developed by the private sector and serving new build properties, through their ownership of the local plan and their role as decision makers.

- 2.33 These national strategies and programmes 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

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

Guildford Borough Council Corporate plan 2015

- 2.35 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 (SMP) and Surrey Waste Plan (SWP)

- 2.36 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.

Neighbourhood Plans

- 2.37 Neighbourhood Planning enables Neighbourhood Forums and Parish Councils to develop a plan setting out 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 Local Plan policies.
- 2.38 There is currently one adopted Neighbourhood Plan (Burpham), one emerging, post-examination Neighbourhood Plan (Effingham), and one progressing towards examination (East Horsley) within the borough. Six other Parish Councils are also currently producing Neighbourhood Plans.
- 2.39 Burpham Neighbourhood Plan policy B-FD4 requires developments to consider water supply and flood risk. Submission Local Plan Policy D2 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.
- 2.40 The Effingham Neighbourhood Plan does not contain any policies that deal with sustainable design, construction and energy and there are not considered to be any conflicts between the Effingham Neighbourhood Plan and the Submission Local Plan in this area.

- 2.41 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 examination, which has resolved any remaining objections, and is progressing towards a referendum. The East Horsley neighbourhood plan is progressing towards examination and is accorded very little weight at this stage.
- 2.42 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 study)
 - The [Guildford Renewable Energy Mapping Study 2015](#)
 - The Guildford borough [Assessment of the Viability of Carbon Emission Targets for New Builds 2017](#)
 - Guildford Local Plan Viability Update 2017
 - [Surrey Minerals Plan Core Strategy Development Plan Document 2011](#)
 - Advice received from the Carbon Trust (2016)

ESCC study

- 3.3 The ESCC study aggregates policy and evidence on sustainability and climate change from a wide variety of sources. It sets out the current and future threats and risks and identifies needs and opportunities for action. The key findings are:
- Guildford borough's greenhouse gas (GHG) emissions are very high when compared to other areas, and a larger than usual portion falls under the scope of local authority influence and can be addressed by the Council, including through the local plan
 - high GHG emissions are driven by levels of car use and domestic energy consumption higher than in other areas
 - installed small scale renewable energy capacity in Guildford borough is low compared to other areas and
 - water consumption is very high while availability is low.
- 3.4 The results of the ESCC study lead to the following conclusions:
- 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 is a need for, and there are opportunities for, mitigation of climate change through reducing emissions from transport, improving energy efficiency particularly in the domestic sector, improving water efficiency and encouraging the uptake of renewable and low carbon energy technologies.

Renewable Energy mapping Study

- 3.5 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.
- 3.6 The PPG (Renewable and low carbon energy, paragraph 5) states “In the case of wind turbines, a planning application should not be approved unless the proposed development site is an area identified as suitable for wind energy development in a Local or Neighbourhood Plan.” The Renewable Energy Mapping Study (see page 40) found very few sites suitable for medium or large scale wind farms. Additionally, no sites were put forward by landowners for wind developments. As a result, no wind energy sites have been identified in the plan.

Assessment of the Viability of Carbon Emission Targets for New Builds 2017

- 3.7 The Assessment of the Viability of Carbon Emission Targets for New Builds 2017 looks at the costs of meeting carbon reduction targets of 10, 15 and 20 per cent against a baseline build cost of meeting the requirements of the Building Regulations for different types of development. It finds that meeting the 20 per cent carbon reduction target in Policy D2: Sustainable Design, Construction and Energy would add around 1 per cent to build costs for dwellings, up to two per cent for offices and around four and five per cent for care homes and retail units respectively. The costs are considered to be reasonable and viable (see 4.29 onwards).

Carbon Trust advice

- 3.8 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 employed the Carbon Trust to act as a critical friend providing advice, guidance and technical expertise during the development of the sustainable energy element of Policy D2. The trust made several suggestions which have been incorporated into the policy including the following.
- Include a heating/cooling technology 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 thresholds for sufficiently large or intensive developments to the thresholds now seen in Policy D2 to avoid missing opportunities for delivery.
 - Require the provision of energy statements to demonstrate requirements have been met.
- 3.9 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.

Consultation feedback

- 4.2 As part of developing the Local Plan we have consulted at the following main stages:

- Regulation 18 Issues and options (October 2013) – which identified a range of issues and potential options for how we should plan for Guildford borough
- Regulation 18 Draft Local Plan (July 2014) – which outlined our preferred approach for planning for Guildford borough
- Regulation 19 Proposed Submission Local Plan (June 2016) – which included the policies and sites that we had intended to submit for examination
- Regulation 19 Proposed Submission Local Plan (June 2017) – a targeted consultation on proposed changes to policies and sites

4.3 Comments received as part of the consultation stages have been taken into account in the preparation of the Local Plan. The main issues raised in all four consultations, together with our response, is set out in the accompanying Consultation Statement.

4.4 The Draft Local Plan: Strategy and Sites in 2014 included a sustainable design, construction and energy policy (Policy 7). The representations received in 2014 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.

4.5 As a result of this feedback, Policy D2 in the regulation 19 plans was drafted to make the wording more precise and less aspirational and to make the requirements of the policy more clear. The other points raised could not be addressed, either because they covered a matter that did not relate to sustainable design, construction or energy, because they dealt with detailed matters that are not appropriate to include in a strategic policy, or because they ran contrary to national policy.

4.6 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 sustainability theory and practice. The policy presents waste and energy hierarchies to set out the approach clearly.

Sustainable development and climate change adaptation

4.7 The review of legislation and government statements in the Policy Context section of this paper indicates that the UK has ambitious carbon reduction targets 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 targets as a matter of national 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, and to require a proportion of energy used in a new development to be from low and zero carbon sources, but should not set other technical standards for dwellings.

- 4.8 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 the planning system must secure radical reductions in greenhouse gas emissions through other policies. The government has committed to reviewing Building Regulations standards in lieu of a national planning carbon emissions standard, but Building Regulations fall outside the planning system so do not satisfy this NPPF requirement.
- 4.9 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.
- 4.10 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 existing and future. This presents an opportunity to satisfy the requirements of the NPPF and legislation.
- 4.11 The “sustainable development” section of Policy D2 supports Zero Carbon development and the supporting text defines this as the national definition. This meets the requirement of the NPPF and PPG to set any local requirement for a building’s sustainability in a way consistent with the Government’s zero carbon buildings policy and to adopt nationally described standards.
- 4.12 The policy calls for sustainable design and construction practice in a way that follows the energy hierarchy. This 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 before low carbon energy provision is considered. This is consistent with the government’s zero carbon buildings policy, which follows the same hierarchy.
- 4.13 The policy requires development proposals to set out how they will deliver “the lowest levels of carbon emissions”. This requirement does not set a quantifiable target, but is a qualitative standard, and differs starkly from the standards set by the new housing technical standards 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 not considered a technical standard and is not prohibited by the WMS of March 2015. This view is supported by Counsel’s advice obtained by the Council.
- 4.14 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).
- 4.15 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 the established approach to sustainable resource management. The requirement for the “efficient use of mineral resources and the re-use of aggregates, and material derived from development sites” helps deliver policies MC4 and MC5 of the Surrey Minerals Plan Core Strategy Development Plan Document 2011. Surrey County Council support this provision.
- 4.16 The policy requirement for waste minimisation supports policy CW1 of the Surrey Waste Plan 2008. 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 and can therefore also support policy CW1.
- 4.17 The ESCC study found that per capita water consumption in the borough is currently high and that we are in an area of serious water stress. The PPG states that promoting water efficiency is a climate change adaptation action. National policy and legislation requires local plans to deliver development that is adapted to the expected impacts of climate change and considers this an integral part of sustainable development. Policy D2 therefore identifies water efficiency in new buildings as a strategic priority both due to the exceptional need for the measure and in order to satisfy legislative requirements.
- 4.18 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. This is justified given the high level of water stress in the area. This also accords with the Thames River Basin District Management Plan (page 45) produced by the Environment Agency which calls for Local Authorities in the Thames River Basin to adopt the optional higher standard set out in Building Regulations.
- 4.19 Throughout consultations, respondents have largely supported higher standards in sustainable construction and wanted to see strongly worded, focused policies that would not be easy to evade. 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.
- 4.20 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 intended for use at the local level, and the carbon emissions reduction target which parliament wishes local authorities to be able to implement.

Energy and carbon reduction

- 4.21 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’s focus

on climate change mitigation and the PPG where it identifies the provision of opportunities for renewable and low carbon energy technologies and decentralised energy and heating as appropriate climate change mitigation actions.

- 4.22 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”.
- 4.23 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.
- 4.24 The Guildford Renewable Energy Mapping Study indicates an opportunity for Local Plan policy to drive the implementation of CHP and CCHP networks by identifying Heat Priority Areas where these are likely to be viable due to the density of development and nearby heat sources. This study 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... the matters local planning authorities should think about include... the range of technologies that could be accommodated and the policies needed to encourage their development in the right places...”. The allocation of the Heat Priority Areas on the policies map, and the heating/cooling hierarchy that applies in these areas through policy D2 together comply with this advice.
- 4.25 The heating and cooling hierarchy was incorporated into the policy following the Regulation 18 consultation in 2014 and engagement with the Carbon Trust. The inclusion of the hierarchy provides clarity for the policy that was lacking in Policy 7 of the 2014 Regulation 18 consultation. The same approach has been included in the Horsham District Planning Framework and has successfully passed examination.
- 4.26 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 DECC²](#). 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.
- 4.27 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 below the minimum set out in Building Regulations through the provision of on-site low and zero carbon energy technologies. Whilst the Planning and Energy Act 2008 grants permission for local policies to set a proportion of energy used in a

² Summary evidence on District Heating Networks in the UK (DECC, 2013)

development to be sourced from low and zero carbon energy, and not a reduction in carbon emissions, it is considered that the two are synonymous to all intents and purposes.

- 4.28 The carbon reduction approach is different to the “Merton Rule” which is somewhat common in local planning policy. The Merton Rule requires a proportion of the energy used in a development to be from zero and low carbon sources, whereas the carbon reduction rule requires a reduction in carbon emissions from the energy used in the development. This is considered the most appropriate approach because it avoids the situation that could occur under the Merton Rule whereby a building is very wasteful in energy but still complies with the rule by simply installing more low carbon energy. The carbon reduction approach therefore is more closely aligned with the energy hierarchy and established sustainability principles. The carbon reduction approach is currently being used in London (35 per cent reduction on 2013 Building Regulations), Manchester (15 per cent reduction on 2010 Building Regulations) and in Guildford borough (10 per cent reduction on current Building Regulations).
- 4.29 The Council first introduced a carbon reduction rule in 2011, set at 10 per cent. This minimum has been increased to 20 per cent in Policy D2 because 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.
- 4.30 This level of carbon reduction is supported by the Council’s Assessment of the Viability of Carbon Emission Targets for New Builds (the assessment). The assessment indicates that meeting the 20 per cent reduction in carbon emissions will increase build costs by up to 1.16 per cent for dwellings and up to 1.99 per cent for office buildings. The Guildford Local Plan Viability Update 2017 indicates that this does not raise any implications for delivery of the Local Plan.
- 4.31 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.
- 4.32 A significant reason for the disparity in increased build costs between the different types of building is the disparity in the base build cost: the higher the base build cost, the smaller the percentage increase against that base cost provided by meeting the carbon reduction standard. The assessment established that the base build cost (adjusted for location) is higher for developments of offices and dwellings than for care homes or retail units. As a result, the uplift in build costs appears higher for care homes and retail units, but instead reflect the lower base build costs.”
- 4.33 In the case of care homes it is anticipated that the uplift on build costs is acceptable due to the nature of these developments; care homes are very likely to be built as long term investments and this means that the increase in build costs can therefore be factored in to the overall costs covering a long period. This effect is likely to be offset over time by virtue of the efficiency measures that policy D2 will drive as running costs are reduced.
- 4.34 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 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 development and encouraging development in the most sustainable location,

and on balance will deliver the most sustainable outcome. For retail units outside the town centre, the impact in build costs is considered acceptable given that these developments would be sited in less sustainable locations, and therefore compensatory improvements in sustainable design, construction and energy are needed in order to deliver sustainable development.

- 4.35 During the 2017 Regulation 19 consultation, respondents sought clarity over whether domestic units as part of a mixed retail development would also be exempt from the 20 per cent carbon reduction requirement. The policy does not exempt domestic units from the requirement and a minor amendment has been proposed to the policy and supporting text to correct any ambiguity.
- 4.36 The government is reducing the amount paid through the FiT over time, but at the same time the cost of some low and zero carbon energy technologies has fallen rapidly and continues to fall. The Council will monitor changes to national policy, Building Regulations standards and low and zero carbon technology viability and review this standard at appropriate intervals.

5 Next steps

- 5.1 The draft Local Plan strategy on sustainable design, construction and energy, and on climate change, responds to the requirements of national policy and the results of our evidence.
- 5.2 This topic paper accompanies the Submission Local Plan: strategy and sites that is submitted to the Secretary of State in December 2017. For more information please visit: www.guildford.gov.uk/newlocalplan.