
Shaping Elmbridge A New Local Plan



Key Theme Summary Paper Climate Change & the Natural Environment

Elmbridge Local Plan Evidence Base

January 2020



Elmbridge
Borough Council
... bridging the communities ...

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Key theme Summary

This Key Theme Overview paper brings together legislation and national policy requirements, guidance and our local plan evidence base which inform the development of planning policies on Climate Change and the natural environment in the new Local Plan.

Protecting and enhancing the natural environment includes adapting and mitigating the effects of Climate Change, air quality, how we use resources such as water, managing transport sustainability, flood risk and our green and blue infrastructure.

Climate Change is a key priority and many areas of policy direction in the new Local Plan can contribute to addressing Climate Change including our approaches to sustainable travel, air quality, use of resources, and how we conserve and enhance our natural environment. National Policy requires us to have a policy on how our Local Plan is going to address Climate Change and reduce carbon emissions.

Our open and green spaces provide important habitat areas for wildlife and areas for recreation, which contribute to the health and wellbeing of communities. Protecting and enhancing them is an important aspect of our proposed policy direction. We are proposing to introduce a new designation of Local Green Space for those areas that are valued by the community.

In ensuring that we use resources efficiently we are proposing policies that support the optimisation of land and use it efficiently, as well as encouraging the prudent use of natural resources in new development such as limiting water consumption.

This paper brings together all these challenges and evidence and explains the policy directions we are considering in the new Local Plan, *Creating our vision, objectives and the direction for development management policies 2020* consultation. The consultation is running from 27 January 2020 to 9 March 2020 and is seeking views on the vision, objectives and direction of development management policies as part of the preparation of the new Local Plan.

Further information on the consultation can be found at: elmsbridge.gov.uk/localplan2020

1. Introduction

Purpose

1.1 This Theme Summary Paper on Climate Change and the Natural Environment (Key Theme 1) is one in a series of three that have been produced to support the consultation on the new Local Plan, *Creating our vision, objectives and the direction for development management policies 2020*. The purpose of each Theme Summary Paper is to provide more detail on the legislation, policy and evidence base that have informed the direction for the development management policies for consultation. The two other Key Theme summary papers in this series are:

- Key Theme 2: Growing a prosperous economy
- Key Theme 3: Ensuring health and wellbeing for all

1.2 This paper provides a summary analysis on the technical evidence base produced to date, bringing this together with the legislative and policy requirements which the new Local Plan will be expected to meet regarding Climate Change and the natural environment.

Overview

1.3 Bringing together key pieces of information, the aim of this paper is to provide technical background information for stakeholders and interested parties on the development of the policies in the new Local Plan. The paper does not contain any policies or proposals. This paper covers the topics of:

- Climate Change
- Sustainable environment
- Green and blue infrastructure
- Air quality
- Carbon emissions
- Biodiversity
- Waste
- Flood risk
- Transport

1.4 The document sets out firstly in section 2 an overview of the legislation and policy requirements; in section 3 a summary analysis of the technical evidence

base and in section 4 an overview of the next steps in furthering the evidence base, where needed, and the development of policies. The summary at the front of the document provides a snapshot of the key requirements and issues arising, and the next steps for the consultation.

2. Policy Context

- 2.1 In developing the Local Plan, regard must be had to relevant legislation and National Planning Policy and guidance, as well as regional and local plans and strategies. This section of the paper summarises those that are relevant to the development of the direction of policies on Climate Change and the natural environment.

Legislation

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 emission reduction 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 National Planning Policy Framework (NPPF, 2019) requires us to have regard to the objectives of the 2008 Climate Change Act. The targets set out in the 2008 Act are ambitious.

Renewable energy directive 2009

- 2.4 Under EU Directive 2009/28/EC, the UK is committed by 2020 to supplying 15% of its energy requirement from renewable sources. There are no specific local targets set out for boroughs to meet but it is clear that the new Local Plan should assist in meeting these national commitments.

Energy Performance of Buildings Directive 2010

- 2.5 An obligation for all new buildings to be “nearly zero energy” is contained within this Directive. This is defined 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”.

Planning and Energy Act 2008

- 2.6 The Planning and Energy Act 2008 granted powers to local councils in England and Wales to set reasonable requirements in their Local Plans 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.

Environment Bill

- 2.7 Prior to the dissolution of Parliament on 6 November 2019, the Environment Bill was making passage through the various levels of decision making. The Bill proposes environmental governance which seeks to create a world-leading system for environmental governance and the creation of a new public body – the Office for Environmental Protection. Specific environmental areas that it covers in detail are air quality, sustainable water sources, and restoring and enhancing nature and green spaces. An Environment Bill was included in the December 2019 Queens speech, but further details are awaited.

National Policy and Guidance

National Planning Policy Framework (NPPF) 2019

- 2.8 The NPPF has at its core the achievement of sustainable development through three overarching and interdependent objectives – economic, social and environmental. To ensure that these are positively pursued, the framework has a presumption in favour of sustainable development. For plan-making paragraph 11 makes clear that:
- a) plans should positively seek opportunities to meet the development needs for their area, and be sufficiently flexible to adapt to rapid change;
 - b) strategic policies should, as a minimum, provide for objectively assessed needs for housing and other uses, as well as any needs that cannot be met within neighbouring areas, unless:
 - i. the application of policies in this Framework that protect areas or assets of particular importance provides a strong reason for restricting the overall scale, type or distribution of development in the plan area; or
 - ii. any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole.
- 2.9 The NPPF, in paragraph 148, expects the planning system to support “*the transition to a low carbon future in a changing climate, taking full account of flood risk and coastal change*”. The planning system should also: “*shape places in ways that contribute to radical reductions in greenhouse gas emissions, minimise vulnerability and improve resilience; encourage the reuse*

of existing resources, including the conversion of existing buildings, and support renewable and low carbon energy and associated infrastructure”.

- 2.10 In developing a new Local Plan, the NPPF expects authorities to plan for Climate Change, by taking a “proactive approach to mitigating and adapting to Climate Change, taking into account the long-term implications for flood risk, coastal change, water supply, biodiversity and landscapes, and the risk of overheating from rising temperatures”.
- 2.11 In planning new development any increased vulnerability to the range of impacts arising from Climate Change should be avoided, any risks should be managed through suitable adaptation. The Government’s policy for national technical standards should also be reflected in any local requirements for the sustainability of buildings.
- 2.12 Paragraph 151 requires Local Plans to help increase the use and supply of renewable and low carbon energy and heat. In doing this, plans should have a positive strategy to provide energy from these sources, consider identifying suitable areas for renewable and low carbon energy sources, and supporting infrastructure, and identify opportunities for development to draw its energy supply from decentralised, renewable or low carbon energy supply systems.
- 2.13 In terms of flood risk, the NPPF requires Local Plans to be informed by a Strategic Flood Risk Assessment and manage flood risk from all sources, and take a sequential, risk-based approach to the location of development. Strategic policies should also “*consider [the] cumulative impacts in, or affecting, local areas susceptible to flooding, and take account of advice from the Environment Agency and other relevant flood risk management authorities, such as lead local flood authorities and internal drainage boards*” (paragraph 156).
- 2.14 Strategic policies are expected to (paragraph 157):
- a) apply the sequential test and then, if necessary, the exception test;
 - b) safeguard land from development that is required, or likely to be required, for current or future flood management;
 - c) use opportunities provided by new development to reduce the causes and impacts of flooding; and
 - d) where Climate Change is expected to increase flood risk so that some existing development may not be sustainable in the long-term, seek opportunities to relocate development, including housing, to more sustainable locations.
- 2.15 Paragraph 170 requires local planning policies to contribute towards and enhance the natural and local environment through six key actions:

- a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils;
 - b) recognise the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services;
 - c) maintaining the character of the undeveloped coast;
 - d) minimising impacts on and providing net gains for biodiversity;
 - e) preventing new and existing development from contributing to, being put at risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability; and
 - f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.
- 2.16 Paragraph 171 states that plans should “*distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value, where consistent with other policies in this Framework; take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries*”.
- 2.17 Local Plans should protect and enhance biodiversity and geodiversity through identifying, mapping and safeguarding local wildlife-rich habitats and wider ecological networks and this should include the hierarchy of international, national and locally designated sites of importance for biodiversity, wildlife corridors and the stepping stones that connect them, and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation. Plans should also “promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity”.
- 2.18 It should be noted that in relation to the presumption in favour of sustainable development that in paragraph 177, the NPPF states that this does not apply “*where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site*”.
- 2.19 Planning policies should also take account of ground conditions, and any risks arising from pollution (paragraph 178) and ensure that new development is appropriate for its location when considering the likely effects of pollution on health, living conditions and the natural environment (paragraph 180).
- 2.20 At the plan-making stage the NPPF expects consideration to be given to air quality, with planning policies sustaining and contributing “towards compliance

with relevant limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and Clean Air Zones, and the cumulative impacts from individual sites in local areas”. Paragraph 181 goes on to state “opportunities to improve air quality or mitigate the impacts should be identified, such as through traffic and travel management, and green infrastructure provision and enhancement. So far as possible these opportunities should be considered at the plan-making stage, to ensure a strategic approach and limit the need for issues to be reconsidered when determining individual applications”. The NPPF also states that the focus of planning policies should be on whether the proposed development is an acceptable use of land, rather than the control of processes or emissions, as it should be assumed that other regimes, such as pollution control, will operate effectively.

Planning Practice Guidance

- 2.21 Planning Practice Guidance (PPG), which gives further guidance on the NPPF requirements, identifies Climate Change as a core land use planning principle that should be reflected in Local Plans and states that spatial planning should support the delivery of appropriately sited green energy and influence the emission of greenhouse gases. Planning can help increase the resilience to the impacts of Climate Change through the location, mix and design of development. The PPG notes that every area will have different challenges and opportunities for reducing carbon emissions from new development and that Government’s data on carbon emissions for each local authority can be used to inform emission reduction options. The PPG promotes the use of the sustainability appraisal to test integration of Climate Change mitigation and adaptation measures and the long-term implications of decisions.
- 2.22 PPG sets out examples of Climate Change mitigation and adaptation actions. Examples of mitigating Climate Change by reducing emissions are:
- 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.
- 2.23 Examples of adapting to a Changing Climate are:

- considering future climate risks (including flood risk) 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.

2.24 These solutions are expected to be integrated into Local Plans, “when preparing local plans...local planning authorities should pay particular attention to integrating adaptation and mitigation approaches and looking for ‘win-win’ solutions that will support sustainable development. This could be achieved in a variety of ways:

- by maximising summer cooling through natural ventilation in buildings and avoiding solar gain;
- through district heating networks that include tri-generation (combined cooling, heat and power); or
- through the provision of multi-functional green infrastructure, which can reduce urban heat islands, manage flooding and help species adapt to Climate Change – as well as contributing to a pleasant environment which encourages people to walk and cycle” (Paragraph: 004 Reference ID: 6-004-20140612).

2.25 A realistic approach to Climate Change is expected through the PPG, with an expectation that Local Authorities consider the following:

- 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, such as setting back new development from rivers so that it does not make it harder to improve flood defenses in future
- the potential vulnerability of a development to Climate Change risk over its whole lifetime

2.26 The PPG advocates the use of Climate Change risk assessments to support the production of Local Plans by informing the sustainability appraisal. The risk assessments can be used to identify the risks the planning system can address, including the implications for the built environment and development,

infrastructure, services and biodiversity. It is expected that other parts of the Local Plan evidence base on Climate Change includes the following:

- Strategic Flood Risk Assessment
- Water Resource Management Plan
- Water Cycle Study
- The risk assessments of other infrastructure providers should also be considered

2.27 On air quality the PPG is clear that all development plans can influence air quality in a number of ways, for example through what and where development is proposed, and the provisions made for sustainable transport. The PPG sets out where air quality could be a limitation on development, “it is important to take into account air quality management areas, clean zones and other areas including sensitive habitats or designated sites of importance for biodiversity where there could be specific requirements or limitations on new development because of air quality”. The PPG expects plans, through drawing on a review of air quality to consider the following:

- what are the observed trends shown by recent air quality monitoring data and what would happen to these trends in light of proposed development and/ or allocations;
- the impact of point sources of air pollution (pollution that originates from one place);
- the potential cumulative impact of a number of smaller developments on air quality as well as the effect of more substantial developments, including their implications for vehicle emissions;
- ways in which new development could be made appropriate in locations where air quality is or is likely to be a concern, and not give rise to unacceptable risks from pollution. This could, for example, entail identifying measures for offsetting the impact on air quality arising from new development including supporting measures in an air quality action plan or low emissions strategy where applicable; and
- opportunities to improve air quality or mitigate impacts, such as through traffic and travel management and green infrastructure provision and enhancement.

2.28 Air quality trends will need to be considered, in the presence and absence of development, in sustainability appraisals, as well as any opportunities for improvements/ mitigation of any impacts arising from the plan’s proposals.

2.29 The NPPF sets strict tests for flood risk and the PPG sets out how, at a strategic level flood risk has to be considered when preparing a new local plan. There is a requirement for a local authority to undertake a Strategic

Flood Risk Assessment to fully understand flood risk in the area to inform local plan preparation. In site selection as part of local plans local authorities have to take a sequential approach, as set out in detail in the PPG, and as far as reasonable possible locate development where the risk of flooding (from all sources) is lowest, taking account of Climate Change and the vulnerability of future site uses to flood risk. If needed, the sequential test is followed by an exception test.

2.30 The PPG sets out how strategic policies can identify the location of existing and proposed green infrastructure networks and set out policies for their protection and enhancement. In aiding the development of these strategic policies, a borough wide strategy and assessment of green and blue infrastructure can be prepared. These assessments need to be evidence based and include assessments of the quality of current green infrastructure and any gaps in provision. The PPG sets out the benefits of green infrastructure:

- contributing towards building a strong and competitive economy through creating high quality environments which are attractive to business and investors.
- Achieving well-designed places, contributing to a sense of place and natural beauty.
- Promoting healthy and safe communities, improving the wellbeing of a neighbourhood with opportunities for recreation, exercise, social interaction, experiencing and caring for nature, community food-growing and gardening, all of which can bring mental and physical health benefits.
- Mitigating Climate Change, flooding and coastal change through contributing to carbon storage, cooling and shading, opportunities for species migration to more suitable habitats and the protection of water quality and other natural resources.
- Conserving and enhancing the natural environment through contributing to ecological connectivity, facilitating biodiversity net gain and nature recovery networks.

2.31 Section 40 of the Natural Environment and Rural Communities Act 2006 places a duty on all public authorities in England and Wales to have regard, in the exercise of their functions, to the purpose of conserving biodiversity. A key purpose of this duty is to embed consideration of biodiversity as an integral part of policy and decision making throughout the public sector, which should be seeking to make a significant contribution to the achievement of the commitments made by government in its 25 Year Environment Plan.

- 2.32 Development plans and planning decisions have the potential to affect biodiversity or geodiversity outside as well as inside relevant designated areas. In developing a strategic approach to biodiversity planning authorities should consider the 25 Year Environment Plan. National Policy expects 'Local Wildlife Sites' and 'Local Geological Sites' to be identified in local plans, as well as policies to secure their protection from harm or loss and also to help enhance them and their connection to wider ecological networks.
- 2.33 The PPG states that "Plans, and particularly those containing strategic policies, can be used to set out a suitable approach to both biodiversity and wider environmental net gain, how it will be achieved, and which areas present the best opportunities to deliver gains. Such areas could include those identified in: natural capital plans; local biodiversity opportunity or ecological network maps; local green infrastructure strategies; strategic flood risk assessments; water cycle studies; air quality management plans; river basin management plans; and strategic protected species licensing areas. Consideration may also be given to local sites including where communities could benefit from improved access to nature".
- 2.34 National policy and guidance is clear that local plans have to recognise the intrinsic character and beauty of the countryside and "strategic policies should provide for the conservation and enhancement of landscapes. This can include nationally and locally-designated landscapes but also the wider countryside".
- 2.35 The PPG recognises the important role that planning plays in increasing the amount of energy obtained from renewable and low carbon sources. The potential for renewable and low carbon energy generation has to first be considered when drawing up a local plan, with the key matters to consider are:
- the range of technologies that could be accommodated and the policies needed to encourage their development in the right places;
 - the costs of many renewable energy technologies are falling, potentially increasing their attractiveness and the number of proposals;
 - different technologies have different impacts and impacts can vary by place;
 - the UK has legal commitments to cut greenhouse gases and meet increased energy demand from renewable sources. Whilst local authorities should design their policies to maximise renewable and low carbon energy development, there is no quota which the Local Plan has to deliver.

2.36 In shaping local criteria for policies on renewable energy for inclusion in Local Plans, a local planning authority needs to be clear on:

- the need for renewable or low carbon energy does not automatically override environmental protections;
- cumulative impacts require particular attention, especially the increasing impact that wind turbines and large-scale solar farms can have on landscape and local amenity as the number of turbines and solar arrays in an area increases;
- local topography is an important factor in assessing whether wind turbines and large-scale solar farms could have a damaging effect on landscape and recognise that the impact can be as great in predominately flat landscapes as in hilly or mountainous areas;
- great care should be taken to ensure heritage assets are conserved in a manner appropriate to their significance, including the impact of proposals on views important to their setting;
- proposals in National Parks and Areas of Outstanding Natural Beauty, and in areas close to them where there could be an adverse impact on the protected area, will need careful consideration¹;
- protecting local amenity is an important consideration which should be given proper weight in planning decisions.

2.37 The planning system has to plan positively for water supply and quality through “Good design and mitigation measures can be secured through site specific policies for allocated sites and through non-site specific policies on water infrastructure and protecting the water environment”.

2.38 The concerns regarding water supply, wastewater and water quality will vary for each local plan area, in plan-making we need to consider:

Water Infrastructure:

- identifying suitable sites for new or enhanced wastewater and water supply infrastructure. When identifying sites, it is important to recognise that water and wastewater infrastructure can have specific locational needs (and often consists of engineering works rather than new buildings). This means exceptionally otherwise protected areas may have to be considered, where this is consistent with their designation.
- existing and proposed development in the vicinity of a location under consideration for water and wastewater infrastructure. In two-tier areas there will need to be close working between the district and county councils.

¹ Not applicable in the case of Elmbridge borough

- whether new development is appropriate near to sites used (or proposed) for water and wastewater infrastructure (for example, odour may be a concern).
- phasing new development so that water and wastewater infrastructure will be in place when and where needed. The impact on designated sites of importance for biodiversity should be considered to ensure the required infrastructure is in place before any environmental effects occur.

Water Quality:

- how to help protect and enhance local surface water and groundwater in ways that allow new development to proceed and avoids costly assessment at the planning application stage. For example, can the plan steer potentially polluting development away from the most sensitive areas, particularly those in the vicinity of drinking water supplies (designated source protection zones or near surface water drinking water abstractions)
- where an assessment of the potential impacts on water bodies and protected areas under the Water Environment Regulations 2017 may be required, consider the type or location of new development
- whether measures to improve water quality, for example sustainable drainage schemes, can be used to address impacts on water quality in addition to mitigating flood risk

Wastewater:

- the sufficiency and capacity of wastewater infrastructure
- the circumstances where wastewater from new development would not be expected to drain to a public sewer
- the capacity of the environment to receive effluent from development in different parts of a strategic policy-making authority's area without preventing relevant statutory objectives being met

3. Evidence base

- 3.1 National Planning Policy requires us to develop policies in the new Local Plan based on 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 draft Local Plan.
- 3.2 The council has published several evidence base documents relating to Climate Change and the natural environment which are all available to view on the council's website. These evidence base studies cover the topics of air quality, flood risk, water cycle, strategic views and landscapes and veteran trees.
- 3.3 The key current pieces of evidence relevant to Climate Change and the natural environment are:
- Air Quality Assessment Phase 1 2019
 - Air Quality Annual Status Report 2019
 - Strategic Flood Risk Assessment Level 1
 - Landscape Sensitivity Study 2019
 - Strategic Views Study 2019
 - Water Cycle Study 2019 (emerging)
 - Ancient and Veteran Trees 2018
 - Local Green Space Designation Study 2016
 - Open Space and Recreation Assessment 2014
 - Absolute Constraints Update Report 2019
 - Habitats Regulation Assessment 2019

Air Quality Assessment Phase 1 2019

- 3.4 A phase 1 assessment of the Air Quality in the borough was undertaken in 2019 by Cambridge Environmental Research Consultants (CERC). The phase 1 assessment provides information on the baseline modelling for the year 2017. The assessment states that the main sources of air pollution in the borough is road traffic emissions. The aim of the modelling is to ascertain whether or not the development associated with the Local Plan has the potential to cause air quality issues, i.e. approaching or exceeding air quality standards for nitrogen oxides (NO_x and NO₂) or particulate matter (PM₁₀ and PM_{2.5}). Human health and habitats impacts are of concern.
- 3.5 As the baseline, on high resolution air quality maps were generated the human health impacts of NO₂, PM₁₀ and PM₂₅ across the borough have been

assessed. These were used to determine the extent to which the air quality objectives for these pollutants are exceeded. In examining the baseline, the report states “with the exception of some locations close to major roads, the air quality objectives are met throughout the borough. There are modelled exceedances of the annual mean NO₂ objective of 40 µg/m₃ along the M25 and other busy roads. Exceedance of short-term NO₂ and PM₁₀ objectives are less extensive. The annual mean PM_{2.5} objective of 25 µg/m₃ is met throughout the borough”.

- 3.6 In terms of sensitive habitats impacts, the baseline study calculated the annual average NO_x concentrations at the area of each Special Protection Area (SPA) within the borough for comparison with the critical level of 30µg/m₃. The modelling at each sensitive habitat location exceeded the critical levels. For each SPA the baseline modelling concluded, “the model predicted annual average NO_x concentrations exceed this critical level across the majority of this SPA. Concentrations below the critical level are found towards the centre of the SPA and at the boundaries away from the major roads. Within the Thames Basin Heaths SPA, the close proximity of the M25 and A3 result in model-predicted annual average NO_x concentrations exceeding the critical level across the majority of this SPA. Concentrations below the critical level are found towards the centre of the SPA and at the boundaries away from major roads”.
- 3.7 In terms of NO₂ (contributions to nitrogen deposition), this was calculated at each of the SPAs, with the baseline concluding “the ammonium (NH₄), nitrate (NO₃) and nitric acid (HNO₃) contributions to nitrogen deposition were taken into account using background concentrations of these species. For South West London Waterbodies SPA, the nitrogen deposition falls below the critical load range of 20-30 kg N ha⁻¹ yr⁻¹. Thames Basin Heaths SPA comprises both forest and grassland habitats. The calculated nitrogen deposition shows exceedances of the critical load of 5-15 kg N ha⁻¹ yr⁻¹ for the forest habitat; and values within the critical load range of 10-20 kg N ha⁻¹ yr⁻¹ for the grassland habitat”.

Air Quality Annual Status Report 2019

- 3.8 The borough currently has seven Air Quality Management Areas (AQMAs), and in line with the Local Air Quality Management (LAQM) Technical Guidance (TG) the borough has produced an Air Quality Annual Status Report.
- 3.9 In reviewing the air quality monitoring for the borough the report concludes continued improvements at many locations across the borough. However, it

does identify that exceedances of the annual mean NO₂ objective have been identified at four monitoring locations in 2018. Three of these sites are located in the Esher AQMA (Esher 1, Esher 7 and Esher 8), whilst one site (Esher 5) is not located within the AQMA. The Esher 5 site is located at the Copsem Lane Roundabout, where Copsem Land adjoins the A3 Esher bypass.

3.10 Working with the Surrey Air Alliance (SAA), the borough is part of a modelling project that aims to provide a better understanding of air quality in the borough and Surrey. Utilising the results of the SAA modelling project the borough will be reviewing existing AQMA's and investigating any potential areas for further investigation identified.

3.11 Priorities for the Air Quality Annual Status Report include:

- Seeking provision of infrastructure through the planning process for the promotion and support of low emission vehicle usage;
- Utilising development management control within the borough's AQMAs to avoid introducing more people to poor air quality or additional sources of pollution;
- Working collaboratively with other Surrey authorities, SCC Public Health team, Surrey's Clinical Commissioning Groups, SCC Local Highway and Transport Authority, in addition to actively participating in the SAA;
- Promoting air quality, raising awareness and seeking to change behaviours;
- Increasing electric vehicle charging points in council car parks and exploring further incentives for electric vehicle users.

Strategic Flood Risk Assessment Level 1 (AECOM, 2019)

3.12 The Strategic Flood Risk Assessment Level 1 (2019) provides a strategic overview of flood risk within the borough, taking into account all sources of flooding and the impacts of Climate Change. Crucially this document identifies the functional floodplain (Flood Zone 3b) in conjunction with the Environment Agency. The assessment includes a number of policy recommendations and development management measures to inform the development of the Local Plan and day-to-day decision making.

Landscape Sensitivity Study 2019

- 3.13 The Landscape Sensitivity Study was undertaken by Arup in 2019 with the primary purpose of assessing the extent to which the character and quality of the landscape within the borough is sensitive to change for the introduction of a development scenario. For the purposes of the study this scenario was a large scale residential and mixed-use development.
- 3.14 The study looked at the whole borough and used the 2015 Surrey Landscape Character Assessment as a basis of the desktop study, as well as Natural England's National Character Areas, GIS data and the sub areas identified within the council's Green Belt Boundary Review (2018). This desktop analysis produced landscape units which were then assessed on value and susceptibility, and then sensitivity. Landscape susceptibility is the ability of a landscape to accommodate the development type without undue negative change to its character, and landscape value refers to the relative value that is attached to different landscapes by society, whether this be the landscape as a whole or individual element. The sensitivity of the landscape is then assessed based on a combination of the landscape value and susceptibility in each case.
- 3.15 The results of the study have to be considered at a strategic and borough wide level. The study looked at 25 landscape units across the borough. The study indicates that those landscape units with high or moderate-high sensitivity tended to also have a higher landscape value rating, whether by virtue of the presence of national or international designations such as SSSI or RAMSAR status or due to their historic significance; such as at Painshill Park or Brooklands Motor Racing Circuit. Other areas of higher sensitivity include those landscape units which offer significant and valued recreation opportunities such as at Prince's Converts or Esher Common.
- 3.16 The report concludes that "Landscape units with lower sensitivity to large scale residential and mixed-use development were found to be those where urban influence from surrounding settlements had encroached to a greater degree upon the landscape, whether by virtue of less well-defined settlement edges or by urban fringe development and land use. These lower sensitivity landscapes also tended to show erosion in terms of landscape pattern and/ or associated presence of large-scale landscape change.

Strategic View Study 2019

- 3.17 This study examines the rationale and appropriateness for the selection of 7 strategic views presented in the current Elmbridge Local Plan (Core Strategy

2011) and identifies potential approaches to view management and protection through bench-marking with examples in other Surrey local authorities and further afield, and field surveys.

- 3.18 The study recommended that of the current 7 views identified, two remain as Strategic Views. These two are Strategic View 1: The River Thames Meadowlands from St Mary's Church, Hampton, and Strategic View 7 Dorking Gap from Oxshott Heath.

Ancient and Veteran Trees 2018

- 3.19 This study was undertaken in response to the new NPPF (published in July 2018 and updated in February 2019) which updated the guidance for the consideration of ancient and veteran trees. The report establishes an appropriate methodology for assessing ancient and veteran trees in the borough and applied it to an area of search within the borough.

- 3.20 The NPPF defines an ancient and veteran tree as:

“A tree which, because of its age, size and condition, is of exceptional biodiversity, cultural or heritage value. All ancient trees are veteran trees. Not all veteran trees are old enough to be ancient but are old relative to other trees of the same species. Very few trees of any species reach the ancient life-stage.”

- 3.21 Following the desk survey and site visits, eight trees were recorded as ancient or veteran. Two trees (T6 and T8 Sweet Chestnuts) met the requirements to be categorised as ancient. Six trees (T1, T2, T3, T4, T5 and T7 English Oaks) meet the requirements to be categorised as veteran. All these trees are now covered by Tree Preservation Orders (TPOs).

Water Cycle Study 2019

- 3.22 The Water Cycle Study assesses the most appropriate options for development in the borough with respect to water infrastructure and the water environment. Planned and proposed future development throughout the borough has been assessed with regards to water supply capacity, wastewater capacity and environmental capacity.
- 3.23 The assessment was made on the basis of two housing growth scenarios, one which focuses on urban optimisation only and one which considers a combination of urban optimisation and partial Green Belt release.

- 3.24 In terms of wastewater treatment the study identifies that both the Sewage Treatment Works that serve the borough have capacity to treat the additional wastewater volumes from proposed growth. However, the study did identify that water quality modelling was needed due to the impact of the increased pollutant load on the water quality. These assessments showed that the Water Framework Directive objectives could be met for all proposed housing scenarios without the need for significant upgrade to treatment infrastructure.
- 3.25 The study concluded regarding water supply “Based on the growth assessed, allowing for the planned resource management for Affinity Water’s, Thames Water Utilities’ and Sutton and East Surrey Water’s supply areas in the borough, the water supply companies would have adequate water supply to cater for growth over the plan period”.
- 3.26 The Water Cycle Study sets out ways in which demand for water can be minimised as a result of development, including technological measures to deliver more water efficient development and reduced water consumption through development management policies.

Local Green Spaces Designation Study 2016

- 3.27 The Local Green Spaces Designation Study (2016) and the Local Green Spaces Assessments (2016) sets out the methodology used for the assessment of potential areas for designation as Local Green Spaces and the assessments themselves.
- 3.28 As a result of extensive consultations with the community and Members, 164 areas were suggested as Local Green Space opportunities. A number of these potential areas were excluded from consideration as they were protected from development by an existing piece of legislation or policy (e.g. Sites of Special Scientific Interest (SSSI)), were below the site size threshold set by the Council or had planning permission for an alternative form of development. Following on from the detailed assessments, the initial findings found that there are 38 areas which meet the Local Green Space Criteria. The Study is being updated to consider new areas submitted for consideration as Local Green Space.

Elmbridge Open Space and Recreation Assessment (2014)

- 3.29 The Elmbridge Open Space and Recreation Assessment was produced in 2014 by the consultants Atkins. The assessment identified the quantity and appraised the quality, value, and accessibility of open space provision across the borough.

- 3.30 It identified a level of local open space needs by analysing demographic and socio-economic indicators that influence the open space needs of different localities. It found that natural or semi-natural greenspaces represent the largest share of total open space, and there is a good coverage of natural greenspace across the borough. There was no additional requirement in terms of accessibility.
- 3.31 The study assessed the quality and value of the borough's open spaces. It concluded that the value placed on open space is multi-functional and relates to a range of roles. It found that 22% of the open spaces assessed were of high quality / of high value to the community. However, many of the high-quality / low value spaces represent mono-functional open spaces which only contribute to the community in a limited way.
- 3.32 It identified areas deficient in public open space and children's play provision and recommended that public park provision should increase by 6 ha and that the remaining deficiencies could be met by improving the facilities within existing open spaces.
- 3.33 The assessment identified individual spaces that had scope for improvement and how the open spaces can be improved. The assessment concluded that projected population growth will place increasing pressure on existing open spaces and recreational facilities as the number of users increase and potentially, that existing facilities are likely to face increasing pressure from development for alternative uses. The assessment of open space is being updated as part of ongoing work on Green Infrastructure.

Absolute Constraints Update Report 2019

- 3.34 National Planning Policy Framework paragraph 11 states that local plans should meet objectively assessed needs, with sufficient flexibility to adapt to rapid change, unless; there is any adverse impact of doing so that would significantly and demonstrably outweigh the benefit, when assessed against the policies within the National Planning Policy Framework (NPPF) or where specific policies in the Framework indicate development should be restricted.
- 3.35 Footnote 6 of the NPPF provides a list of constraints, now often referred to as the 'national constraints' and this is considered a definitive list. The relevant constraints located within Elmbridge are as follows:
- Flood Zone 3b (1 in 20-year flood outline – undeveloped land);
 - Sites of Special Scientific Interest (SSSIs);
 - Special Protection Area (SPA) and Ramsar Sites;

- Suitable Alternative Natural Greenspace (SANG);
 - Registered Parks and Gardens;
 - Irreplaceable habitats (Ancient Woodlands and Ancient and Veteran Trees); and
 - Registered Commons & Village Greens.
- 3.36 The Planning Practice Guidance makes it clear that whilst the establishment of development needs should be unbiased, relevant constraints, including environmental constraints need to be addressed when bringing evidence bases together and formulating policies. To ensure that the council takes necessary account of this and, can demonstrate that an appraisal of the national constraints relevant to the borough has been undertaken, it has carried out a Review of Absolute Constraints (RAC) 2016 and Absolute Constraints update Report 2019.
- 3.37 The report identified the relevant national constraints that are located in the borough which would prevent development taking place as the impacts from such development could not be mitigated. This assessment work has been used to shape the options for growth set out in the plan preparation to date.
- 3.38 It should be noted that national policy does identify Green Belt as a constraint, however, through the plan-making process there may be exceptional circumstances where it is appropriate to consider the alteration of existing Green Belt boundaries, these circumstances are set out in national planning policy. Green Belt was not included the council's assessments because of the lack of developable land needed to meet the borough's development needs.
- 3.39 In addition, Local Green Space (LGS) is also identified as a national constraint. The Local Green Spaces Designation Study 2016 prepared as part of the Local Plan evidence base has identified potential land in the Borough that is suitable for this designation. However, as designations are achieved through the adoption of new Local Plan, at this stage in the plan making process there is no LGS designation to be considered an 'absolute' constraint.

Habitats Regulation Assessment 2019

- 3.40 The EC Habitats Directive 1992 and Wilds Birds Directive 2009 as transposed into UK law by the Conservation of Habitats and Species Regulations (2017) require a Habitats Regulations Assessment (HRA) of land use plans such as a Local Plan to establish whether the plan, alone, or in combination with other plans or projects, is likely to have a significant effect on an international nature conservation sites (Special Protection Areas (SPA), Special Areas of Conservation (SAC) or Ramsar sites). These are also known as Natura 2000 sites.
- 3.41 In preparing the new Local Plan, the assessment is carried out in an iterative process as the HRA is, in turn used to inform the development of the spatial

strategy and planning policies.

- 3.42 A HRA is prepared to inform each stage in the plan preparation and the assessments to support the two Regulation 18 consultations (Strategic Options Consultation and the Options Consultation) are available to view on the council's website. The HRA which supported the Options consultation concluded that due to the broad nature of the Regulation18 options at this stage, it is not possible to rule out Likely Significant Effects (LSEs) on the European sites at this stage.
- 3.43 With regards to the HRA screening exercise, Likely Significant Effects (LSEs) on Natura 2000 sites have not been identified in relation to the vision, objectives and policy directions Regulation 18 consultation as there is no information on sites. The draft policies and site allocations will need to be considered and assessed to support the next stage in the Local Plan preparation.

4. Natural Environment

- 4.1 This section of the report brings together the legislation, national policy requirements and the main issues and challenges highlighted by the evidence base in relation to the policy areas being discussed in this consultation.
- 4.2 Each of the headings below relate to the policy directions being considered in Theme 1: protecting and enhancing our natural environment in the consultation document.

Green and blue infrastructure

- 4.3 The NPPF and supporting PPG sets out that local planning authorities should develop strategies to enhance and protect green and blue infrastructure. As part of this we are updating our study on open green space, and continuing to assess spaces, in line with the criteria, for designation as Local Green Space.
- 4.4 Our green spaces in the borough are important both for the health and wellbeing of our communities, and also for nature and biodiversity. Our proposed policy direction seeks to continue to enhance these spaces through better access and biodiversity net gains.

Improving air quality and reducing carbon emissions

- 4.5 Through our Local Plan, we are required by national planning policy to address the impacts of Climate Change, both through adaptation and mitigation. There are a number of ways that our new Local Plan can meet this requirement.
- 4.6 We already have seven Air Quality management Areas in the borough, and poor levels are attributed to pollution from vehicles. Promoting and achieving a modal shift to more sustainable transport choices to improve air quality and mitigate Climate Change is a key policy direction, in combination with other policies regarding the provision of electric vehicle charging and car clubs across the borough.
- 4.7 In contributing to reducing our carbon emissions as a borough we are also proposing policy directions that would include carbon emission targets for new buildings and ensuring a higher level of sustainable design is achieved.

Conserving and enhancing biodiversity

- 4.8 Part of the borough is located within the buffer zone of the internationally protected habitats at the Thames Basin Heaths SPA. As such we are required to provide Suitable Alternative Natural Green Space (SANGS) as part of new development. Our proposed policy direction continues to ensure that this provision is made.
- 4.9 Alongside these, other areas provide an opportunity for enhanced ecological benefits. For example, we are proposing that all new development will contribute to achieve a biodiversity net gain.

Waste and resource management

- 4.10 As part of addressing Climate Change we need as a borough to address how we manage our resources and waste to take account of the waste hierarchy. Our proposed policy directions include optimising the use of our land, ensuring that it is used efficiently in line with NPPF requirements and supporting the use of sustainable construction methods and materials.
- 4.11 Our emerging Water Cycle Study evidence base has strongly recommended that we should look at becoming water neutral, limiting the water resources we use. We are proposing that we will implement through our new Local Plan the optional technical standard in the Planning Practice Guidance to limit water in new dwellings to 110 litres per person per day.

5. Next steps

- 5.1 This review brings together the national policy requirements, regional strategies and the evidence base document outcomes and recommendations that have led to the policy directions considered in the consultation. The NPPF requires us to base our policies on up to date evidence.
- 5.2 As part of our evidence base, an assessment of green space in the Borough and a Green (and Blue) Infrastructure Strategy is currently being produced. A qualitative assessment is being undertaken of our existing open spaces and recreation areas with the aim of establishing links between spaces and future development.
- 5.3 Following the consultation we will consider the feedback to these policy approaches and whether any further evidence is required.