

Background paper on Natural Environment

Introduction

- 1.1 This paper describes the natural environment of the District, referencing the many sources of information in this regard, and explains the Councils policy approach contained in the Draft Local Plan for the period up until 2033. This paper begins at the landscape scale, moves on to consider the importance of trees within that landscape and the nature conservation value of significant parts of the local area. National policy is explained before some key evidence is outlined and referenced.
- 1.2 The response to the Community Choices consultation in 2012 is briefly visited. The areas of interest and concern expressed by communities are summarised in the Draft Local Plan prior to the relevant policies. Successive public consultations have reinforced the high value placed upon the natural environment and open spaces by communities in Epping Forest District. This is followed by an explanation of the assessments undertaken in producing the Draft Local Plan that are pertinent to the natural environment. Finally, the paper considers the Draft Local Plan approach of supporting the development of green infrastructure networks and the policies therein.
- 1.3 The Natural Environment has a key role in meeting the vision of the Draft Local Plan as well as the Environment and Design objectives¹. The Draft Local Plan includes the objectives *to protect Epping Forest and its setting, including the buffer lands; and, to protect, and encourage appropriate management of other designated wildlife sites in the District, including the Lee Valley Special Protection Area, Sites of Special Scientific Interest, Local Nature Reserves and Local Wildlife Sites.*

Where are we now?

- 1.4 Around 90% of the land in the District could be described as ‘countryside’ with agriculture being the largest land use by area hence the ‘natural environment’ is a significant feature of the District. The landscape of the District contains and provides the setting for the towns, villages, hamlets and farms whilst the wide range of natural features from river valleys to veteran trees define much of the character of the area.

The landscape character of the District

- 1.5 Landscape character² is the product of the natural shape of the land, formed over millennia, combined with its current vegetation cover, as shaped by natural forces and the actions of

¹ Refer paragraph 3.26 Epping Forest District Local Plan - Draft Local Plan 2016.

²The importance of landscape character is recognised at European level and Natural England has published a European Landscape Convention action plan, revised for 2009/10 and regional character area profiles which support assessments for planning. Epping Forest District is described in National Character Areas - the South Suffolk and North Essex Clayland and the Northern Thames Basin. Essex County Council has published its own landscape character assessments for the county, as has Hertfordshire. Epping Forest District Council has commissioned and adopted more detailed assessment at the District and sub District level noted in the evidence section below.

people – it is locally distinct. The District sits on a plateau, immediately north of the basin in which Greater London is largely contained. The plateau is cut by the two main river systems, the Lea/Stort and the Roding. Soils have been influenced by glaciation and erosion, but are generally London clay, with boulder clay to the north and some overlays of glacial sands and gravels, notably on the higher land where Epping Forest now grows. Particular factors shaping the current landscape include the relatively low rainfall, that it is underlain by London clay, together with the effects of past glaciation on the topography, creating the gently sloping landform, with its wooded ridges, crowned by the forests of Epping and Hainault. The gently undulating landscapes of south west Essex are a significant contribution to landscape character in the District. Given its location, climate and topography the main factor shaping the District's landscape character outside the urban areas is the presence or absence of trees, as influenced by farming practice.

- 1.6 The presence of London created a ready market for agricultural produce, and particularly encouraged the growth of arable farming and woodland management, in the District, for fuel and charcoal production for the fires and ovens of the capital. Agriculture has remained a key shaper of the landscape, but with a marked switch from pasture to arable and consequent significant hedgerow loss in the mid-20th century. Active woodland management has declined, although woodland cover has remained broadly constant.
- 1.7 Landscape character changes over time in response to factors such as the effects of climate change on vegetation, changes in land use and farming practice, but also to the effects of development. The key influence for the relative lack of change to landscape character in the district in the second half of the twentieth century has been the existence of the Metropolitan Green Belt, and its impact on land use planning, in particular in largely preventing the encroachment of development outside the existing settlements. The District is home to a number of historic footpaths and green lanes that are greatly valued by communities and visitors. Many of these green lanes are of considerable landscape and ecological importance in their own right and they form a distinct local characteristic of the landscape.

Trees

- 1.8 Trees³ are probably the most important single element of green infrastructure in Epping Forest District, as the key physical component of: the ancient forests of Epping and Hainault; the many woods; the miles of ancient hedgerow that still define its countryside pattern; the lining of its rivers and streams; or enriching features of urban open spaces, gardens and streets. In urban areas trees are the dominant green infrastructure assets and make a significant contribution to human health and wellbeing, extending even to increased land

³To date the Council has researched, developed and published five Community Tree Strategies, with linked action plans, in partnership with local town or parish councils, other local amenity organisations and the wider community. These strategies are closely linked to other relevant strategies, in particular the Essex Biodiversity project, the county wide Biodiversity Action Plan and the Council's own adopted Biodiversity Action Plan.

values and economic vitality⁴. Trees in particular moderate extremes of weather and it is for this reason among others that the space for large trees to grow is a key contributor to the wellbeing of urban dwellers. In the countryside, forests and woods, and even individual veteran or ancient trees are important as extremely rich habitats in their own right for birds, other animals and a wide variety of associated plants and fungi. Other notable natural assets of the District include its ancient meadows and its riverine habitats, particularly along the valleys of the rivers Lea, Stort and Roding.

Nature Conservation

- 1.9 The District has an extremely rich heritage of areas that are important for the conservation and improvement of habitat for wildlife. A useful broad reference to this value is found in the Epping Forest District Sustainability Appraisal and Habitats Regulations Assessment Scoping Report 2010⁵. Maps of the significant areas of international importance (protected under international agreements as well as UK law) as well as those of local importance are found at Figures 4.2 and 4.3 in the document. There is a great deal of information available on local nature conservation and biodiversity matters on the Councils website.
- 1.10 Animal species found in the district range from bats and barn owls to deer and water voles. The District houses many protected species of animals, birds, plants and habitat from fungi and insects that live on dead wood to internationally important bird species.
- 1.11 The whole of Epping Forest south of Epping is a ‘Special Area of Conservation’ and as such has special protection under the European Habitats Directive designed to protect a variety of wild animals, plants and habitats. The Turnford and Cheshunt pits in the Lee Valley are a ‘Special Protection Area’ - internationally important for wetland birdlife.
- 1.12 The Lower Epping Forest is also one of eight ‘Sites of Special Scientific Interest’ in the District which also affords them a degree of protection. These are:
- Epping Forest (including Wintry Wood, Epping; Gernon Bushes, Coopersale; Yardley Hill, Sewardstonebury; and Lord’s Bushes, Buckhurst Hill. The SSSI extends into the London Boroughs of Redbridge and Waltham Forest (total area 1790 ha);
 - Hainault Forest, Chigwell and Lambourne, extends into the London Borough of Redbridge (total area 136 ha);
 - Royal Gunpowder Factory Woodlands, Waltham Abbey (34.2 ha);
 - Roding Valley Meadows, Loughton and Chigwell (19.8ha);
 - Cornmill Stream and Old River Lee, Waltham Abbey (24.6ha);
 - Turnford and Cheshunt Pits, extends into Broxbourne Borough (total 173.28 ha);
 - Chingford Reservoirs extends into the London Boroughs of Enfield and Waltham Forest (total area 391ha); and

⁴ Green Infrastructure Guidance 2009 Natural England, and Rolls S and Sunderland T, 2014, Microeconomic Evidence for the Benefits of Investment in the Environment 2 (MEBIE2). Natural England Research Reports No 057

⁵ In particular pages 14 – 21

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- River Lee diversion (a very small part of the Chingford Reservoirs SSSI).
- 1.13 Three SSSI abut the District boundary at Curtsmill Green (near Stapleford Abbots); Harlow Woods (Harlow); and Hunsdon Mead (north of Roysdon). A further two SSSIs are in close proximity but do not abut the District boundary - Parndon Wood, Harlow and Rye Meads near Stanstead Abbots.
- 1.14 Nine local nature reserves have been designated and the Essex Wildlife Trust has identified over 220 local wildlife sites (LoWs) – these are discrete areas of land which are considered to be of significance for their wildlife features in a District context⁶. The Local Nature Reserves are:
- Chigwell Row Wood;
 - Church Lane Flood Meadow;
 - Home Mead;
 - Linder’s field;
 - Nazeing Triangle;
 - Roding Valley Meadows;
 - Roughtalley’s Wood;
 - Thornwood Flood Meadow; and
 - Weald Common Flood Meadow.
- 1.12 There are several ancient woodlands in the District in addition to Epping Forest, including remnants of Hainault Forest, whilst a significant number of veteran trees, including hedgerow pollards are present, adding a key landscape feature. The western edge of the district (excluding the built-up areas of Waltham Abbey and Nazeing) is included in the Lee Valley Regional Park. This is managed by the LVRP Authority as a place for leisure, recreation, sport and nature conservation.
- 1.13 The habitats present in the District include:
- Floodplain grassland, flooded gravel pits and wet woodland – for example in the Lee Valley Regional Park;
 - Native broadleaved woodland, mature scrub and open grassy margins, amenity grassland, semi improved acid grassland – for example Hainault Forest;
 - Ancient wood pasture, old grasslands, heaths, wetlands and pond – for example, Epping Forest;
 - Traditionally managed lowland hay meadow, grassland and fen habitats and hedgerows, scrub and secondary woodland - for example The Roding Valley Meadows; and
 - Rivers and wetlands – for example of the River Lee and River Roding.

⁶ A number of LoWs are also ‘green’ or ‘protected’ lanes refer Epping Forest District Protected Lanes Assessments December 2015 Essex County Council. Refer also Epping Forest District Council Website for details of the LoWs www.eppingforestdc.gov.uk/index.php/out-and-about/countrycare/local-wildlife-sites

National Planning Policy Framework 2012 (NPPF)

- 1.15 As a result of its importance conservation of the natural environment is enshrined in a wide range of domestic and international legislation. In particular the Town & Country Planning Act 1990, allied legislation and the National Planning Policy Framework outline many of the planning considerations. The NPPF, throughout, stresses that protection and enhancement of the natural environment are key requirements of sustainable development.
- 1.16 The NPPF notes an environmental role as one of the three key roles of sustainable development⁷ and makes it clear that the Council should enable positive gains in the quality of the natural environment, including specifically biodiversity and the conditions in which people live, work, travel and take leisure⁸. There are a number of core principles of the planning system of relevance noted in paragraph 17:
- *“take account of the different roles and character of different areas, promoting the vitality of our main urban areas, protecting the Green Belts around them, recognising the intrinsic character and beauty of the countryside and supporting thriving rural communities within it;.....*
 - *Contribute to conserving and enhancing the natural environment and reducing pollution. Allocations of land for development should prefer land of lesser environmental value, where consistent with other policies in this document;..*
 - *Promote mixed use developments, and encourage multiple benefits from the use of land in urban and rural areas, recognising that some open land can perform many functions (such as for wildlife, recreation, flood risk mitigation, carbon storage, or food production);....*
 - *Conserve heritage assets in a manner appropriate to their significance, so that they can be enjoyed for their contribution to the quality of life of this and future generations;...*
 - *Take account of and support local strategies to improve health, social and cultural wellbeing for all, and deliver sufficient community and cultural facilities and services to meet local needs.”*
- 1.17 NPPF Chapter 7, *Requiring good design*, emphasises the importance of robust and comprehensive policies, based on stated objectives specific to the district. It sets out the particular aims required of design policies, including the need for appropriate landscaping to achieve a visually attractive result⁹. The designation of Local Green Spaces is included in Chapter 8, as a green infrastructure contribution to promoting healthy communities. Chapter 9, *Protecting Green Belt land* also includes specific reference to the requirement to plan positively “to retain and enhance landscapes, visual amenity and biodiversity”¹⁰. The NPPF Chapter 11, *Conserving and enhancing the natural environment*, sets out in detail the policy expectation, from the wider aims for the planning system to the more detailed policy

⁷ Paragraph 7

⁸ Paragraph 9

⁹ Paragraph 58

¹⁰ Paragraph 81

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requirements. The strategic requirements are set out in paragraph 109. Those most often applicable in the Epping Forest district are:

- *“..Protecting and enhancing valued landscapes...and soils;*
- *Recognising the wider benefits of ecosystem services;*
- *Minimising impacts on biodiversity and providing net gains...where possible”.*

- 1.18 Paragraph 110 continues, *“In preparing plans to meet development needs, the aim should be to minimise pollution and other adverse effects on the local and natural environment”*. In addition, it is advised that when allocating land for development this process should reflect the relative environmental or amenity value of the land, consistent with other policies. The local plan is expected to plan positively for the creation, protection, enhancement and management of networks of biodiversity and green infrastructure¹¹. The relevant policies should be criteria based¹². The particular requirements for plans to minimise impacts on biodiversity are set out at paragraph 117. In planning for biodiversity consideration should be given to ecological networks as a whole and ensuring that priority habitats and ecological networks should be preserved, restored and re-created, enabling the recovery of priority species populations.
- 1.19 Most importantly it is noted that the presumption in favour of sustainable development¹³ does not apply to the consideration, planning or determination of applications for development requiring appropriate assessment as part of the Habitats Regulations Assessment¹⁴ under the Birds or Habitats Directives. This affords additional protection to the SAC, SPA and RAMSAR sites in the District.
- 1.20 Finally, the NPPF notes that Local Plans should, among other matters, include strategic policies to deliver climate change mitigation and adaptation, conservation and enhancement of the natural and historic environment, including landscape¹⁵. In addition¹⁶:
- *Identify where development would be inappropriate, for instance because of its environmental or historical significance; and*
 - *Contain a clear strategy for enhancing the natural, built and historic environment... ”*
- 1.21 The Planning Practice Guidance identifies guidance that has been incorporated into the production of the Draft Local Plan in the section on Natural Environment. Reference ID: 8-001-20140306

¹¹ Paragraph 114

¹² Paragraph 113

¹³ Paragraph 14

¹⁴ Appropriate Assessment is an assessment of the effect of a development on the Natura 2000 network (A Europe-wide network of sites of international importance for nature conservation). The network comprises Special Protection Areas under the Birds Directive and Special Areas of Conservation under the Habitats Directive (collectively referred to as European sites). Habitats Regulation Assessment (HRA) is a process whereby the potential impact of development on sites protected by the Habitats Directive is assessed.

¹⁵ Paragraph 156

¹⁶ Paragraph 157

Key Evidence sources

- 1.22 The critical evidence sources in relation to the natural environment, landscape character and green infrastructure are listed in the Draft Local Plan prior to the relevant policies¹⁷. In addition to the evidence on citations relating to designation of nature conservation sites, descriptions of Local Wildlife Sites and biodiversity action plans probably the most important key sources of evidence for the Draft Local Plan rests in the studies undertaken to inform policy. These include a suite of Landscape Character Assessments and the Historic Characterisation Study¹⁸ describing in varying detail the characteristics and sensitivities to change of the natural environment of the District¹⁹. The Historic Characterisation Study 2015 details eighteen character areas further divided into zones with significant fine grain detail of both the built and natural character of the District. In addition, the Epping Forest Open Space, Sport and Recreation Assessment (2012) outlines provision of and standards for natural open spaces such as Woodland, including semi natural open space, Epping Forest and Buffer Lands. It also identifies information on Accessibility to Natural Green Space²⁰. An Analysis of Accessible Natural Greenspace Provision for Essex 2009 identified that 98% of households in Epping Forest District have access to some form of accessible natural greenspace within the standards proposed by Natural England²¹. It is clear therefore that most residents have some access to the natural environment, in the form of trees and open space within urban areas, or to the countryside using the extensive footpath network. As well as the major green infrastructure assets there are many attractive destinations close to urban areas, including the Local Nature Reserves, and woods. However, ease of access to the local countryside varies considerably across different areas, as does the quality of open space provision. The integration of this evidence enables detailed analysis to identify future green networks and deficiencies in the current networks that can support proposals for and decision making on development.
- 1.23 In addition, a series of issues capable of being addressed in local plan policy have been identified from studies and local intelligence. For example, the Landscape Character Assessment (2010) and Settlement Edge Landscape Sensitivity Study (2010) highlight the pressures on landscape character in the District whilst the wealth of information regarding the presence of protected species in the district highlight sensitive areas. Threats to the green infrastructure assets in the district are direct and indirect, intentional and unintended, and range from wide scale effects such as climate change to the impact of particular developments on individual assets. Barriers to increasing connections between parts of the green networks include physical realities, notably the major road network and in particular the M11 and M25 motorways, to a lesser extent the railway, the financial regime for farming, which historically lead to the removal of a high percentage of the hedgerow network,

¹⁷ For example, Policy SP 6 The Natural Environment, Landscape Character and Green Infrastructure.

¹⁸ Epping Forest District Historic Characterisation Study 2015

¹⁹ Epping Forest District Council Landscape Studies – Landscape Character Assessment 2010, Epping Forest District Council Settlement Edge Landscape Sensitivity Study 2009.

²⁰ For a synopsis of this matter please refer to BGP3 Open Space and Standards Background Paper 2016.

²¹ Epping Forest District Council Open Space, Sport and Recreation Assessment 2012.

particularly those areas most suited for industrial arable farming, and the decline of management of woodland and hedgerows, the difficulties of securing funding for enhancement projects, and in particular their long term management.

- 1.24 In urban areas key issues are the pressure on space as a result of the overriding planning need to protect the Green Belt and efficient use of land tending towards more intensive development. This poses particular challenges for meaningful tree retention and securing adequate space for the next generation of large trees. The provision, planting and management of existing open space in urban areas can be planned so that it may be used to the maximum to contribute to public well-being. While the long term impacts of climate change are not clear, it will bring change as some species suffer and others benefit. The importance of providing sufficient shade may increase, but also of greater resilience in the face of more frequent severe weather events. It will be important to take care with species of new trees in particular so as to choose those most likely to remain healthy over their lifetime, which may include a greater proportion of exotic species.
- 1.25 During the preparation of the Draft Local Plan the Council has taken account of the wide range of evidence associated with the natural environment including responses from organisations such as Natural England, the Environment Agency, the Conservators of Epping Forest and the Lee Valley Regional Park Authority²². The Council has prepared a Draft Infrastructure Delivery Plan 2016 (the Draft Infrastructure Plan) as part of the preparation of the Draft Local Plan. This identifies existing provision and shortfalls on a settlement basis in respect of types of open space based on the studies undertaken.

Community Choices Consultation

- 1.26 The Community Choices consultation in 2012 asked a series of questions in relation to Landscape and Biodiversity. The issues raised in relation to these matters are outlined in each policy section in the Draft Local Plan. The need to emphasise effective protection and enhancement of the following assets was raised:
- wildlife sites including Local Wildlife Sites;
 - hedgerows and field boundaries;
 - unmetalled lanes, ancient paths and walks, green lanes and bridleways;
 - protected trees;
 - playing fields;
 - buffer lands around Epping Forest;
 - farmland (for food production);
 - access to and biodiversity value of agricultural land;
 - allotments;
 - parks;
 - urban green space (recognising the critical part this plays in people's lives);
 - ecological corridors, including between the Lee Valley and Epping Forest;
 - areas of dark skies, for their biodiversity value; and
 - green spaces within built up areas.

²² Responses to Community Choices consultation 2012.

- 1.27 In addition the impacts of development on rights of way, the landscape view, biodiversity (resulting from land take and increased pollution) as well as landscape character resulting from settlement edge development were apparent concerns. There was significant and notable support for a green infrastructure approach by bodies such as Natural England, Lee Valley Regional Park Authority, City of London (regarding the Epping Forest) and the Environment Agency as well as a number of individuals.

Assessments for the Draft Local Plan 2016

- 1.28 The consideration of the natural environment was extremely important in the process of selection of sites in the Draft Local Plan to meet identified needs for development. The Epping Forest District Council Report on Site Selection (2016) (“Report on Site Selection”) identifies the site selection methodology as a staged process. Stage 1 considers major policy constraints and several were identified including:
- international sites for biodiversity – sites were removed from consideration where the sites are entirely located within internationally designated sites of importance for biodiversity (SAC, SPA or RAMSAR);
 - County and local wildlife sites – sites were removed from consideration where the site was entirely within an Essex County Council owned or managed wildlife site or Council owned or managed Local Nature Reserve; and
 - Epping Forest and its Buffer Lands – sites were removed from consideration where the site was entirely located within Epping Forest or Epping Forest Buffer Land ²³.
- 1.29 Stage 2: Quantitative and Qualitative assessment contained a range of criteria relating to impact on environmental and heritage designations and biodiversity. These included: 1.1 Impact on internationally protected sites; 1.2 Impact on nationally protected sites; 1.3a Impact on ancient woodland; 1.3b Impact on ancient and veteran trees outside of ancient woodland; 1.4 Impact on Epping Forest Buffer Land; 1.5 Impact on BAP Priority species or habitats; 1.6 Impact on Local Wildlife Sites; 4.3 Capacity to improve access to open space;²⁴ 5.1 Landscape sensitivity; 6.4 Impact on Tree Preservation Order (TPO) Trees. All of these impacts were assessed and scored at this stage²⁵.
- 1.30 Stage 3: “Identify Candidate Preferred Sites” notes that this stage seeks the ‘best’ fit sites for the particular settlement and therefore assesses reasonable alternatives to accommodate growth in each settlement. This stage of the process also notes that a sequential approach to site selection will be applied, in accordance with the proposed strategy for the Draft Local Plan as follows:
- The sequential flood risk assessments – proposing land in Flood Zone 2 and 3 only where need cannot be met in Flood Zone 1;
 - Sites located on previously developed land within settlements;

²³ Based upon land within the City of London Corporation’s ownership on 15 June 2016

²⁴ For further details refer to BGP 3- Open Space and Standards

²⁵ For the full methodology refer Appendix A Site Selection Methodology and Appendix B1.4 Stage 2 Assessment in Epping Forest District Local Plan Report on Site Selection 2016

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- Sites located on open space within settlements where such selection would maintain adequate open space provision within the settlement;
- Previously developed land within the Green Belt;
- Green field/ Green Belt Land on the edge of settlements:
 - of least value to the Green Belt if the land meets other suitable criteria for development;
 - of greater value to the Green Belt if the land meets other suitable criteria for development;
 - of most value to the Green Belt if the land meets other suitable criteria for development.
- Agricultural land:
 - of Grade 4-5 if the land meets other suitable criteria for development;
 - of Grade 1-3 if the land meets other suitable criteria for development.

1.31 Sites that reached Stage 3 were subject to more detailed assessment including accounting for policy constraints which affect the developable area of land and again included significant reference to natural environment features²⁶. The methodology identifies that sites which were identified in Stage 3 would be assessed through the following stages of site selection:

- Stage 4: Deliverability;
- Stage 5: Sustainability Appraisal/Habitats Regulation Assessment of Preferred sites; and
- Stage 6: Review of Preferred Sites following Draft Local Plan Consultation.

1.32 Stage 4 and the cumulative assessment of the impact of proposed development sites at Stage 5 have both been undertaken. Where allocations are proposed in the Draft Local Plan that impact on the natural environment mitigation measures are to be identified.

1.33 The incorporation of sustainability appraisal into the production of the Local Plan provides an additional safeguard to ensure that the natural environment is given sufficient weight in decision making. Sustainability Appraisal has been undertaken at a number of stages of the production of the Draft Local Plan to date. The Sustainability Appraisal framework used for the Draft Local Plan reinforces the importance of protection of the natural environment and the development of green infrastructure networks in its thematic topics²⁷. The Interim Sustainability Appraisal of the strategic development options²⁸ uses a framework that also reinforces their importance through Biodiversity and Landscape sustainability themes²⁹. The full Habitat Regulations Assessment of the Local Plan is yet to be undertaken, requiring further detailed transport modelling and this will be completed prior to the pre submission

²⁶ Refer Appendix B1.5.3 Detailed Methodology for More Detailed Assessment of Housing Sites in Epping Forest District Local Plan Report on Site Selection 2016.

²⁷ Epping Forest District Draft Local Plan Scoping Report 2010 Scott Wilson, Epping Forest District Draft Local Plan Sustainability Appraisal Non technical Summary 2016 AECOM

²⁸ Sustainability Appraisal of Strategic Spatial Options for the West Essex and East Hertfordshire Housing Market Area Sustainability Appraisal Report 2016 AECOM

²⁹ Refer Pages 12-14

version of the Local Plan publication under Regulation 19. In addition, the assessment of the development options across the Strategic Housing Market Area³⁰ included the environmental context, Geo environmental and Landscape considerations. A Draft Memorandum of Understanding has been developed by East Hertfordshire, Epping Forest, Harlow and Uttlesford Districts, Essex and Hertfordshire County Councils with Natural England and the Conservators of Epping Forest to ensure that the Epping Forest Special Area of Conservation is monitored to ensure that the growth does not adversely affect air quality in the Forest³¹.

A green infrastructure approach to the Natural Environment

- 1.34 There is a significant body of evidence demonstrating that by linking features and spaces in the natural environment it makes them more valuable for people and some species of wildlife, whilst fragmentation of natural features diminishes that value. Improving physical connections is – together with active management – one of the most effective means of increasing the value of the natural environment, by creating ecological “stepping stones” or “green corridors” that allow species to move and increase the available range of habitats, as well as in some cases offering amenity and recreation connections through cycling and walking routes. This principle of connections underlies the idea of “green infrastructure”. The NPPF defines Green Infrastructure as

*“a network of high quality green spaces and other environmental features such as parks, public open spaces, playing fields, sports pitches, woodlands, and allotments. The provision of Green Infrastructure can provide social, economic and environmental benefits close to where people live and work”.*³²

For simplicity this includes what is sometimes separately designated as blue infrastructure – rivers, streams, ponds and drainage systems. In scale and nature the green infrastructure ranges from woodland and nature reserves to urban roof gardens, green walls, or sustainable drainage systems. Green infrastructure assets also include residential gardens which can be extremely rich in wildlife, village greens and local nature reserves.

- 1.35 People gain a wide range of social and economic benefits from the natural world. Our health, wellbeing and economic productivity depend upon a range of ‘services’ provided by ecosystems and their constituent parts³³. Such services range from soil formation and photosynthesis; supplying food, fibre and fuel; regulating air and climate as well as improving the appearance of places and providing recreational features.

³⁰ Harlow Strategic Site Assessment Final Report 2016 AECOM

³¹ Draft Memorandum of Understanding Managing the impacts of growth within the West Essex/ East Hertfordshire Housing Market Area on Epping Forest Special Area of Conservation.

³² <http://planningguidance.communities.gov.uk/blog/policy/achieving-sustainable-development/annex-2-glossary/>

³³ Many references including The Natural Choice: Securing the value of nature HM Govt 2011, and Green Infrastructure Guidance 2009 Natural England, Rolls S and Sunderland T, 2014, Microeconomic Evidence for the Benefits of Investment in the Environment 2 (MEBIE2). Natural England Research Reports No 057

- 1.36 Taking advantage of these assets allows us to gain multiple benefits from green networks. For example, whilst a street tree may be seen primarily as a visible improvement to an urban environment, it will also reduce airborne pollution, provide shade, reduce wind chill and supplement and enhance biodiversity. Fundamentally, a green infrastructure approach to land use planning, design and management has the capacity to deliver more from our surroundings in a sustainable way. A good example is using green infrastructure for water management which can provide a cost effective means to provide essential infrastructure that can reduce the number of properties at risk from flooding. Where a ‘grey infrastructure’ solution of paving and piped drainage that is impermeable to rain increases flows into drainage systems and rivers, an effective green infrastructure network is a cheaper and more efficient equivalent to draining into soil and managing groundwater. This type of system is known as sustainable drainage or SuDs.
- 1.37 Therefore, green networks can meet multiple objectives of sustainable transport, nature conservation and biodiversity improvement, climate change mitigation and adaptation, flood alleviation and water management, health and wellbeing, providing character to neighbourhoods, and bringing economic and tourism benefits as well as use for social and educational benefit.

Draft Local Plan Policies

- 1.38 The Draft Local Plan takes a comprehensive and proactive green infrastructure approach that seeks to protect, enhance and extend the natural assets in the District³⁴. The strategic policy Draft Policy SP 4 (Place Shaping) together with Draft Policy SP 6 (The Natural Environment, Landscape Character and Green Infrastructure) and the relevant supporting text explain the Councils aim to improve upon and extend a full network of open spaces that will be used for a wide range of purposes. These green infrastructure ‘assets’ are to be protected and their value improved for biodiversity and community use. In particular public access to the range of natural spaces is to be extended using the policies of the plan. The strategic approach is developed through the individual district wide policies. In particular Draft Policy DM 5 (Green Infrastructure and Design of Development) sets out the Councils requirements of development to provide and link natural features and open spaces, and particularly notes that larger developments will be required to do so via the process of masterplanning. An associated policy is Draft Policy DM 16 (Sustainable Drainage Systems) which will add to the space for amenity and potential wildlife habitat.
- 1.39 Matters of Landscape Character and the protection of ancient landscapes are addressed by Draft Policy DM 2 which identifies how the Council expects developers to consider landscape impact in their proposals and use the suite of evidence available to support assessments of impact.
- 1.40 A number of draft policies influence aspects of nature conservation and enhancement. Draft Policy DM 1 (Habitat protection and improving biodiversity) seeks net gains in biodiversity in the District over the plan period and guides development to avoid the fragmentation of

³⁴ Refer Draft Local Plan 2016 paragraphs 3.99- 3.103

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habitats and improve connectivity between them. Draft Policy DM 3 (Epping Forest SAC and the Lee Valley SPA) specifically seek protection and improvement to these habitats as well as improving upon linkages between them. In addition, the provision of additional buffer habitats for the Epping Forest SAC is sought by Draft Policy DM 4 (Suitable Accessible Natural Green Spaces and Corridors). These buffers can include improved access, improving the naturalness of the spaces and connections between open green spaces – again increasing the amount of accessible public open space.

- 1.41 The Draft Local Plan also makes provision for amenity and landscape space on new developments through its Draft Policies DM 9 (High Quality Design) and DM 10 (Housing Design and Quality), whilst Policy DM 6 (Designated and undesignated open spaces) allows for development to provide open space and links to open space in relation to standards to be developed should the Council decide that this is an appropriate course of action. It also allows in exceptional cases, for the development on part of open space only if it does not result in a total loss of open space. It places caveats on the remaining space where a partial loss is considered justified that ensure the remainder is predominantly open and its appearance and function for recreation is improved.
- 1.42 A further set of policies influence the natural environment in respect of protection such as Draft Policy DM 21 (Local environmental impacts, pollution and land contamination).
- 1.43 The suite of policies in the Draft Local Plan therefore make provision for increasing the amount of publicly accessible land in the District, ensuring that communities have access to the wide range of open spaces in the District and that new development makes provision for new open space for residents and existing communities. By applying the local plan policy and implementing the infrastructure delivery plan the Council will seek to ensure that there continues to be suitable levels of public and private open space in future developments in the District.
- 1.44 The Draft Infrastructure Delivery Plan contains a section on Green Infrastructure³⁵ that outlines the approach, and identifies objectives for the strategy regarding green infrastructure as work on the Local Plan progresses.

Next Steps

- 1.45 In order to support the implementation of the Local Plan the Infrastructure Delivery Plan will set out the approach to delivering a green infrastructure network. Prior to the publication of the submission Local Plan under Regulation 19 the Council will further identify with partners the necessary detailed evidence required to establish suitable accessible natural green space and corridors (refer Draft Policy DM 4).

³⁵ Epping Forest District Council Draft Local Plan Draft Infrastructure Delivery Plan 2016 page 117 onward