CLIMATE CHANGE
BACKGROUND PAPER

FOR THE PURPOSES OF LOCAL PLAN REGULATION 18
CONSULTATION, NOVEMBER 2022 - JANUARY 2023

better homes • better places
EAST HAMPSHIRE LOCAL PLAN 2021-2040

EAST HAMPSHIRE DISTRICT COUNCIL

CONTENTS

1.0 INTRODUCTION

1.1. Climate change will present major challenges affecting people's lives, homes and businesses, which need to be considered in the delivery of development. Mitigating against and adapting to climate change is an international, national and local priority.

> *"It is unequivocal that human influence has warmed the atmosphere, ocean and land…The scale of recent changes across the climate system as a whole – and the present state of many aspects of the climate system – are unprecedented over many centuries to many thousands of years…Global surface temperature will continue to increase until at least mid-century under all emissions scenarios considered. Global warming of 1.5°C and 2°C will be exceeded during the 21st century unless deep reductions in carbon dioxide (CO_2) and other greenhouse gas emissions occur in the coming decades."*
>
> Source: Intergovernmental Panel on Climate Change, August 2021

1.2. East Hampshire District Council (EHDC) declared a Climate Emergency in July 2019 and produced its Climate and Environment Strategy 2020-2025. The Council also announced an intention for all new developments to be *'energy efficient, zero-carbon homes'*.

1.3. The Council's Climate and Environment Strategy recognises that the Local Plan provides an opportunity to influence future greenhouse gas (GHG) emissions in the district and minimise the climate impact of new development. Carbon dioxide (CO_2) is an important greenhouse gas and as such it is commonly used as a metric for reporting climate impacts.

1.4. This background paper provides information on the climate emergency and summarises the evidence that the Council is using to identify a range of options for its emerging Local Plan. A quick summary of what a local plan can and can't do is included at Appendix 3.

1.5. It will be very challenging to deliver zero-carbon buildings during the plan period and difficult to substantially reduce GHG emissions from other sources. At the time of writing, the English planning system provides neither the national planning policies nor detailed guidance to deliver the Council's ambitious agenda, so it is for the Council to investigate and determine the meaning of 'net zero-carbon development' and how it could be achieved. Consultants have been undertaking a Net Zero Carbon study on behalf of the Council (see page 5 of this background paper) that will identify feasible policy approaches in more detail.

2.0 PROFILE OF EAST HAMPSHIRE

2.1. The district is home to 125,700 residents and comprises an area of 514km^2, 57% of which is in the South Downs National Park.

2.2. The key environmental and climate change issues faced by the district include:

- CO_2 emissions per resident in East Hampshire are 4.8 tonnes[1];
- Increased likelihood of fluvial, surface and groundwater flooding;
- Designations of areas having medium and high probability of flooding from rivers[2];
- 32% of the district's carbon emissions are from energy use in homes[3];
- 50% of the district's carbon emissions are from vehicles due to high levels of car ownership and "out-commuting"[4];
- Levels of walking, cycling and public transport are low with the modal share of local journeys comprising[5]:
    - 80% by private/motorised vehicles
    - 9% by walking;
    - 8% by public transport;
    - 2% by bicycle; and
    - 1% by motorcycles or other.

2.3. The **EHDC Local Cycling & Walking Infrastructure Plan** (LCWIP) explains that of the 80% of journeys made by private/motorised vehicles, 45% and 19% of all journeys made are less than 10km and 2km. This is the equivalent of a 30-minute cycle ride and a 23-minute walk respectively.

[1] Department for Business, Energy & Industrial Strategy, 2021. Figure quoted is an estimate for emissions in 2019, which was the latest available data at the time of writing. This was above the South East (4.4 tonnes) regional average per person.
[2] The areas at risk include, but are not limited to, River Deadwater, River Lavant, River Wey and the Haslemere Stream. Source: East Hampshire Strategic Flood Risk Assessment, 2022
[3] Department for Business, Energy & Industrial Strategy, 2021. Figure quoted relates to those emissions within the scope of influence of local authorities and is an estimate for emissions in 2019, which was the latest available data at the time of writing.
[4] Department for Business, Energy & Industrial Strategy, 2021. Figure quoted relates to those emissions within the scope of influence of local authorities and is an estimate for emissions in 2019, which was the latest available data at the time of writing.
[5] EHDC LCWIP 2020 – Data source from the National Census (2011) as a proxy for overall travel patterns.

3.0 BACKGROUND AND CONTEXT

International and National Policy Context

3.1. In 2016, the UK become a signatory to the **Paris Agreement**. The UK is therefore committed to taking action to limit global warming to no more than 2 degrees Celsius, with an aim of limiting it to no more than 1.5 degrees Celsius above pre-industrial levels.

3.2. The **UK Climate Change Act 2008** (amended in 2019) sets a legal requirement for a 100% reduction in GHG emissions by no later than 2050. This is often referred to as the UK's net zero emissions target.

3.3. **Part L of the UK Building Regulations** is the key statutory guidance document on the conservation of fuel and power in new and existing buildings. All new buildings, and those undergoing major refurbishment works or extensions, are required to demonstrate compliance with Part L, which sets requirements for:

- Energy efficiency of the building fabric
- Primary energy use
- CO_2 emissions arising from regulated energy use

3.4. The Government has also announced its intention that a Future Homes Standard (FHS) and Future Buildings Standard (FBS) will be fully implemented from 2025. These standards would result in reductions to CO_2 emissions from new homes and other buildings of 75-80% compared with Part L at 2013. Coupled with further decarbonisation of the national electricity grid, the Government considers that these standards will lead to 'zero-carbon ready' buildings, in terms of emissions that are regulated by the Building Regulations[6].

English Planning System

3.5. Section 19 of the **Planning and Compulsory Purchase Act 2004** places a legal duty on local planning authorities to ensure that development plans '*include policies designed to secure that the development and use of land in the local planning authority's area contribute to the mitigation of, and adaptation to, climate change'*.

3.6. The **Planning and Energy Act 2008** enables local authorities to impose 'reasonable requirements' for a proportion of energy used in development to be renewable; a proportion of energy to be low carbon energy from sources in the locality of the development; and for development to comply with energy

[6] MHCLG, 2021. See: https://questions-statements.parliament.uk/written-questions/detail/2021-03-09/165449/

efficiency standards that exceed the energy requirement of building regulations.

3.7. The **National Planning Policy Framework** (NPPF, 2021) provides a dedicated section on climate change. The NPPF states how the planning system should *'support the transition to a low carbon future in a changing climate',* including shaping places to deliver *'radical reductions in greenhouse gas* emissions' and, supporting *'renewable and low carbon energy and associated infrastructure'.*

3.8. Paragraph 153 (NPPF) requires plans to take a proactive approach towards mitigating and adapting to climate change. This includes taking into account the long-term implications of flood risk, water supply, biodiversity, landscapes, community resilience and the risk of overheating. It also includes ensuring that risks can be managed through suitable mitigation measures, such as providing space for physical protection measures, planning for green infrastructure, or making provision for the reallocation of vulnerable development and infrastructure. The location, orientation and design of developments should also seek to reduce greenhouse gas emissions.

3.9. Local standards for the sustainability of buildings must however reflect the Governments national technical standards policy. In its response to the consultation on its Future Homes Standard, the Government acknowledged the need to clarify Local Planning Authorities' role in setting energy efficiency requirements beyond the minimum standards of the Building Regulations.

3.10. The **Environment Act 2021** outlines the UK's green standards and environmental protection. The Act includes a number of wide-ranging changes, which includes the introduction of a mandatory 'biodiversity net gain' requirement for developments. It is envisaged this will be a 10% gain on the site's existing biodiversity value, according to a prescribed metric. The protection and enhancement of habitats would also be supported through Nature Recovery Network, which would establish Local Nature Recovery Strategies.

3.11. The 25 **Year Environment Plan for England** (DEFRA 2020) sets out government action to help the natural world regain and retain good health, building its resilience to climate change and thus its ability to sequester GHG emissions. It aims to deliver cleaner air and water in our cities and rural landscapes, protect threatened species and provide richer wildlife habitats.

Local **Policy Context**

3.12. Hampshire County Council declared a climate emergency in July 2019, and in doing so produced a **Climate Change Strategy (2020)**. The strategy provides a direction and framework for the County's climate change programme and sets out the carbon emissions baseline, the carbon budget pathway to 2050 and the strategic priorities required to deliver against emissions reductions and resilience targets.

3.13. East Hampshire District Council adopted its **Corporate Strategy (2020–24)** in August 2020 which sets out the key priorities for the Council for the next five years. The Strategy considers how the district council can champion positive behaviours in relation to wider issues such as climate change.

3.14. The East **Hampshire Climate & Environment Strategy (2020-25)** was adopted in August 2020. The Strategy provides a statement of the district council's climate and environmental objectives and, in doing so, sets out the priorities of the district council over the next five years following the climate emergency declaration the previous year.

3.15. The Strategy outlines two high-level ambitions:

- To reduce carbon emissions to net zero by 2050 in line with the Climate Change Act 2008; and
- To protect, improve and enhance the local natural environment to achieve biodiversity net gain.

3.16. The Enhance **East Hampshire Place-Making Strategy (2019-36)** was adopted in September 2019. It provides a framework for strengthening the connections between people and places; prioritising investment in public places and the built environment; and engaging and inspiring people to want to live, work and enjoy the district.

3.17. The Strategy sets out how a stronger focus on climate change and environmental issues – along with health and wellbeing – has created a fresh impetus to design physical infrastructure that better supports the use of sustainable transport, including further opportunities for walking, cycling and better public transport.

3.18. The Strategy states that in designing future towns, the council will address its climate change obligations by protecting and improving the natural environment, conserving natural resources and reducing emissions.

4.0 EVIDENCE

Overview

4.1. The Local Plan needs to respond to the climate change emergency, taking into account both national and local policy context. The Council aspires to make the next Plan the 'greenest' ever, and is undertaking a number of studies to identify ways in which the Local Plan can help to mitigate GHG emissions and ensure that new development would be resilient to the effects of climate change. These studies will form part of the evidence base for the Local Plan, to demonstrate that the Local Plan's proposals are robust and "fit for purpose". Some of the studies are already in place but some will require further updating as we move forward towards the Regulation 19 consultation.

Net Zero Carbon

4.2. The Council has commissioned consultants, Ricardo AEA Ltd, to undertake a robust **Net Zero Carbon study** that will inform the emerging Local Plan. The study provides advice on the extent to which the climate impact of new development can be minimised through the Local Plan, by means of its policies and its proposals for where new development – e.g. new housing – would be located in East Hampshire (outside of the South Downs National Park).

4.3. For purposes of setting new policies and proposals to address the climate emergency, it is firstly important to define what is meant by 'net-zero carbon development'. There is currently no definition of this term within national planning policy, so the Council needs to determine what it could and should mean for the emerging Local Plan.

4.4. Based on a review of industry standards and precedents in other Local Plans, a requirement for 'net-zero carbon development' could aim to avoid additional carbon dioxide emissions[7] arising from all operational energy use (both regulated and unregulated) within new buildings; and to reduce carbon dioxide emissions from non-operational sources (such as from building construction, maintenance, repair and demolition) as much as possible. This is compatible with, but goes further than, the Future Homes Standard and Future Buildings Standard that are described by the Government as providing for 'net zero ready' buildings.

4.5. Assessment of meeting such a requirement for 'net-zero carbon development' could potentially involve a third-party certification scheme, such as Passivhaus, HQM or BREEAM. The Council's Net Zero Carbon Study considers the advantages and disadvantages of these schemes.

Defining 'Net-Zero Carbon Development' for the East Hampshire Local Plan

The Council is aspiring to ensure that all new developments in the district would be "energy efficient, zero-carbon homes". This level of ambition is broader than and exceeds the energy efficiency standards proposed as part of the interim Building Regulations Part L uplift for domestic buildings and the Future Homes Standard.

In this context, the Council's emerging Net Zero Carbon study provides the evidence to inform a definition of 'net-zero carbon development'. A best practice definition for new development is considered to be one that:

[7] Other GHG emissions, such as methane and nitrous oxide, are not accounted for in planning processes or within the building standards regulations. No industry standard assessment methods for estimating these emissions have been identified by the Net Zero Carbon study, so it appears impracticable to require that new development is "net zero" for these GHG emissions. This is an unfortunate blind spot within the current planning system.

- Includes operational energy demands for new buildings that are regulated by building standards
- Includes operational energy demands for new buildings that are *not* currently regulated by building standards
- Requires all energy use to be met with the equivalent amount of renewable power generation (onsite or offsite)
- Estimates and reduces non-operational carbon dioxide emissions as much as possible

This would mean that additional carbon dioxide emissions from lighting, heating and other operational needs of new buildings would be avoided, whilst the emissions associated with a building's production, maintenance and eventual demolition would be taken into account and minimised as far as possible.

4.6. Non-operational emissions are often referred to as "embodied" or "whole life cycle" emissions, for these are the emissions associated with the production, maintenance, demolition and disposal of buildings. For example, they refer to (amongst other things) the emissions arising from extracting and producing the proposed building materials, and their transportation to a development site. It would be preferable to set quantitative targets for ensuring that these non-operational emissions do not lead to additional emissions of GHGs. However, the emerging Net Zero Carbon study suggests that there is insufficient data to define such a goal. It would therefore be impracticable to set planning policies to achieve it.

4.7. Developers could instead be asked to provide information on non-operational emissions and how their choices would minimise them, with the aim of gathering data so that a quantitative target could eventually be set. This would be in line with the UK Green Building Council's recommendation to include targets for "whole life cycle" or non-operational emissions.

4.8. The key messages from the Net Zero Carbon study which require further investigation by the Council at this stage in the plan-making process are:

- **Defining Net-Zero Carbon development** – the Council aspires to net-zero carbon development, but does its understanding of this policy goal (see above) appropriately balance aspiration with feasibility?
- **Operational GHG emissions** – Should a quantitative net-zero carbon development target include emissions associated with regulated and unregulated energy use?

- **Reducing GHG emissions: onsite versus offsite** – Best practice calls for following an energy hierarchy of using less energy in new buildings; maximising efficiencies in the use of energy; and then maximising the use of renewable energy sources. This focuses efforts on achieving onsite reductions to carbon emissions. Should offsite reductions – e.g. achieved through carbon offsetting schemes – be acceptable as a "last resort" to reach net zero?

- **Energy supply** – To align with industry best practice, the definition of operational net-zero carbon development should require 100% of energy demands to be met via renewable technologies. This would preclude the use of any fossil fuels, including any new gas connections. Should this approach be pursued?

- **Non-operational, or Embodied/Whole Life Cycle GHG emissions** – these emissions are recognised as being important in decarbonising the construction sector, but they are not covered by the current Building Regulations and there is no industry standard for estimating them. What approach should be pursued to mitigate these emissions?

Settlement Hierarchy and Accessibility

4.9. Settlements with more local facilities and services than others can be more sustainable locations for new development, because new residents would be able to access the facilities and services without the need to travel long distances by car. A classification of East Hampshire's towns and villages, to form a 'settlement hierarchy' that is based on the presence and accessibility of facilities and services, can therefore be important for planning a sustainable pattern of new development. In early 2019, a settlement hierarchy for the emerging Local Plan was proposed but this hierarchy was determined before the Council had declared a climate emergency.

4.10. In the context of the climate emergency, it is more important than ever to encourage people to walk, cycle or use public transport wherever possible. Whilst an increased use of electric cars could help to reduce GHG emissions from motor vehicles, the electricity grid is not yet decarbonised – which means that a proportion of our electricity is still being generated by fossil fuels – and there are "embodied GHG emissions" involved in the production of electric vehicles[8]. It is not yet feasible to avoid these embodied emissions because manufacturing processes for new electric vehicles lead to GHG emissions. Travelling on foot, by bike or by train or bus will therefore remain important for

[8] For example, in 2019 it was estimated that smaller electric cars and vans would take between 2 and 4 years to have saved the amount of carbon dioxide (in comparison with driving a petrol or diesel equivalent) that was emitted in making their batteries (source: https://reports.electricinsights.co.uk/q2-2019/how-clean-is-my-electric-car/)

the sake of substantially reducing GHG emissions during the Local Plan period.

4.11. The Local Plan will need to encourage a modal shift away from private vehicles by prioritising active travel (i.e. pedestrian, cyclist and public transport movements) over users of private vehicles. One way in which the strategy of the Local Plan could help to achieve this is by using a settlement hierarchy that is based on accessibility to services and facilities by active travel modes, to inform where new development is located. A focus on locating new development in places where more people could potentially walk and cycle to their destinations could reduce GHG emissions from motor vehicles used for short journeys and encourage physical activity as part of day-to-day movements.

4.12. A revised Settlement Hierarchy Background Paper has been produced by the Council, where the idea of **living locally** has informed the ranking of settlements within the planning area, using the concept of a 20-minute neighbourhood[9]. This concept recognises a settlement's potential to support good accessibility to services and facilities by active travel modes. The concept of a 20-minute neighbourhood focuses on the co-location of key destinations – such as commercial, community, education, leisure and sports facilities – allowing residents to make one linked trip rather than multiple trips to different places. Accessing local services and facilities on foot or by bike helps to reduce GHG emissions by reducing the number of motor vehicle trips, whilst also improving the vitality and viability of an area.

Explainer: what is a 20-minute neighbourhood?

"The 20-minute neighbourhood is about creating attractive, interesting, safe, walkable environments in which people of all ages and levels of fitness are happy to travel actively for short distances from home to the destinations that they visit and the services they need to use day to day – shopping, school, community and healthcare facilities, places of work, green spaces, and more." (Town & Country Planning Association, March 2021)

4.13. The revised settlement hierarchy (which is published as a separate background paper) implements the idea of living locally based on walking distances "as the crow flies". This gives an indication of which settlements could better support access to services and facilities by sustainable modes, but it omits details such as the presence of suitable walking routes within settlements and between destinations. As the Council moves forward with its emerging Local Plan to its second Regulation 18 consultation in 2023, more sophisticated measures of accessibility to/from nearby services and facilities and potential development sites will be used to demonstrate the ability of

[9] https://tcpa.org.uk/collection/the-20-minute-neighbourhood/

different development sites to support reductions to greenhouse gas emissions through living locally.

Flood **Risk**

4.14. Climate change has increased the frequency and intensity of floods, and other natural weather-related events. A considerable proportion of the district is at risk of flooding from rivers, surface water and groundwater.

4.15. A proportion of East Hampshire is located in areas that have a Medium and High probability of flooding from rivers (i.e. Flood Zones 2 and 3). The floodplain of the River Wey (and its tributaries) affects the north and east of the district including the towns of Alton, Whitehill & Bordon and the surrounding villages. The floodplain of the Lavant Stream (south) affects the south of the district including the village of Rowlands Castle. However, it is groundwater that affects a wider area than other sources of flood risk to the district. The risk of groundwater flooding is predominantly associated with the extensive chalk (and other permeable rock) bedrock geology underlying the majority of East Hampshire.

4.16. As a Local Planning Authority the Council has the responsibility, in accordance with the NPPF, to ensure that flood risk is understood and managed effectively. As such the Council frequently maintains and updates its **Strategic Flood Risk Assessment** (SFRA); the latest version was published in May 2022.

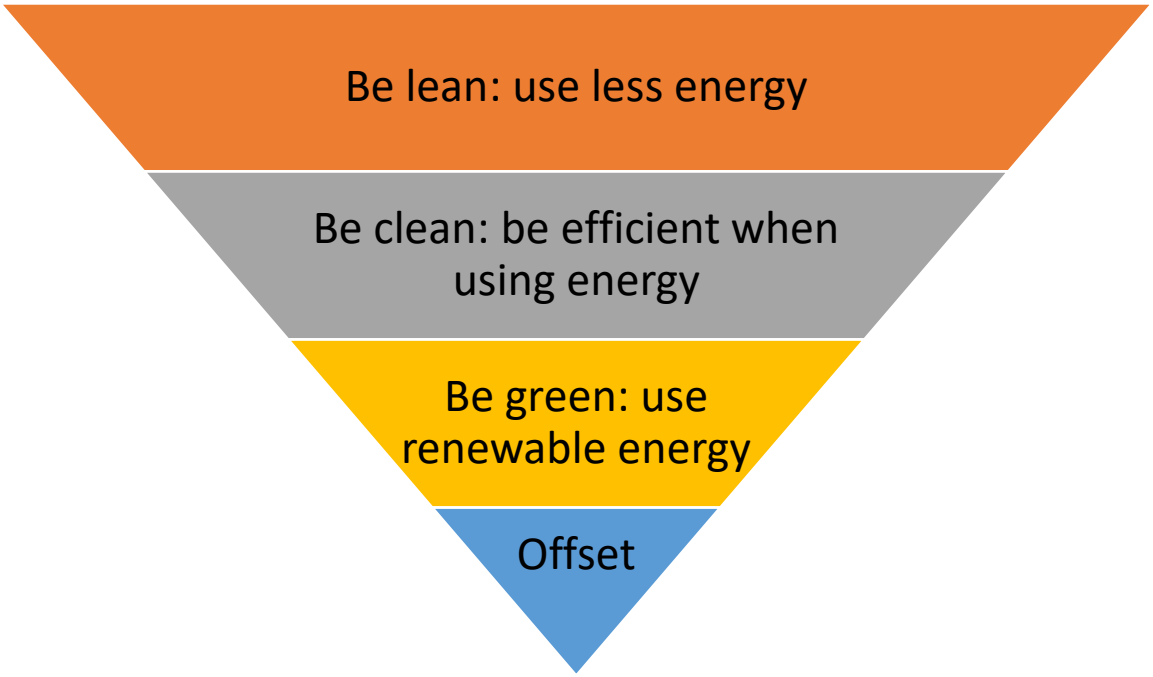
4.17. The current SFRA (known as a Level 1 SFRA) provides an overview of the risk of flooding from **all sources** across the Council's Planning Authority Area and provides the evidence for adapting to increases in flood risks associated with climate change. Potential increases to peak river flows and peak rainfall intensities due to climate change have been modelled for East Hampshire and its relevant catchments. This enables the Council to understand which parts of its planning area could be susceptible to an increased risk of flooding because of more intense storms, or higher rainfall in winter months. Maps to show fluvial flood risk and climate change allowances are available to view on the Council's website[10]. These maps and their underlying information will be very important when considering where new development should be located.

4.18. Adapting to increased flood risks is likely to include setting out approaches to design and construction which provide resilience to extreme weather events, such as including measures to incorporate sustainable drainage systems (SuDS) where these would be appropriate. SuDS can also provide a number of multi-environmental benefits which help adapt to climate change, for example where they provide habitats for local biodiversity, helping species to adapt to a warming climate.

[10] To view the relevant maps, please visit: https://www.easthants.gov.uk/strategic-flood-risk-assessment

Urban Design

4.19. The design and layout of new developments will be at the forefront of the Local Plan in helping to mitigate GHG emissions and in responding to the impacts of climate change. The energy hierarchy (mentioned above; see illustration on the following page) involves prioritising a reduction in energy use over efficiency measures, then prioritising energy efficiency enhancements over renewable power generation. The use of an energy hierarchy is an accepted policy approach to mitigating GHG emissions, as demonstrated by The London Plan[11]. It is an approach that also has implications for the design and layout of new development.



4.20. The first three steps in the hierarchy are likely to affect how a new development would appear and how it functions:

- The orientation of new buildings and the distance between them, together with the positioning and design of windows can help to maximise passive heating in the winter, or passive cooling in the summer, reducing energy demands. This can affect how a building looks and how they are laid out.
- Reducing waste in the construction process, re-using and adapting existing buildings where possible, can also help to reduce the energy

[11] See Policy SI 2 – Minimising greenhouse gas emissions of The London Plan 2021, available at: https://www.london.gov.uk/what-we-do/planning/london-plan/new-london-plan/london-plan-2021

demands of new development. The retention of existing structures can affect the layout of new development.

- The achievement of high standards of energy efficiency through optimal levels of thermal insulation need not affect how a building looks, but the inclusion of renewable energy generating technologies can have design and layout implications e.g. roofs could be orientated to increase the efficiency of solar panels.

4.21. In addition to emissions from buildings, the layout of new development can help to reduce GHG emissions associated with transport. Prioritising connections between new developments and existing footpaths and/or cycle routes—e.g. ensuring that new connections are provided, and that new routes feel safe and attractive to use—can empower residents to use sustainable modes of transport for local journeys. More information on how the design of new development can help to reduce energy demand and increase energy efficiency can be found in the Council's Climate Change and Sustainable Construction SPD (April 2022)[12].

4.22. Policies for the design and layout of new development in the emerging Local Plan could respond to the above issues, to help to embed the energy hierarchy and complement other policies requiring net-zero carbon development. A balanced policy approach to design will be needed to make sure that other aspects of well-designed places relating to local built character and community requirements are also promoted. The Government's National Design Guide[13] provides the over-arching framework, but the Local Plan can set more specific guidance to meet the priorities of local communities, such as in relation to reducing GHG emissions.

4.23. The design of new development can also help communities to adapt to the impacts of climate change. Resilient environments can be created through:

- incorporating SuDS where appropriate, avoiding development in areas of flood risk and adopting a landscape-sensitive design that makes use of natural shade and shelter;
- 'greening' the built environment through the provision of many new trees and plants within public open space. This can increase natural water storage and shade opportunities, whilst reducing the urban 'heat island' effect (whereby concentrations of hard, man-made surfaces act to absorb and retain heat in urban areas);
- including water saving measures in new buildings, such as water-efficient fixtures and fittings, plus the retention of rainwater on-site for irrigation purposes;

[12] See Chapter 4 of the SPD, which is available at: https://www.easthants.gov.uk/spd
[13] https://www.gov.uk/government/publications/national-design-guide

- implementing building designs that passively regulate internal temperatures, to avoid extremes of hot and cold (e.g. the inclusion of green roofs, the size, location and design of windows, the colour of materials used in construction).

4.24. The above measures often coincide with or complement those that would help to reduce GHG emissions. Determining which measures are most appropriate for a given development site will involve taking account of the local context (the constraints to, and opportunities for development). Detailed criteria for climate change mitigation and adaptation could be left to new non-strategic policies of the Local Plan or to Neighbourhood Plans. There would also be opportunities to use design codes to specify measurable requirements. Such design codes are likely to have an increased status under a reformed planning system[14].

Biodiversity **Net Gain and the Climate Emergency**

4.25. In addition to the direct impacts on the economy, societies and people's health, rapidly advancing climate change negatively impacts many of the world's species and ecosystems, driving biodiversity loss. At the same time, protecting and restoring biodiversity is crucial to addressing climate change by providing "natural solutions" to its impacts (such as increased shade and water storage capacities) and helping to mitigate GHG emissions.

4.26. Biodiversity Net Gain (BNG) is an approach to development which leaves biodiversity in a better state than before. Achieving BNG means that natural habitats will be extended or improved as part of a development or project. Development will be designed in a way that provides benefits to people and nature and reduces its impact on the wider environment.

4.27. In principle, BNG should seek to bolster the local ecological network by providing habitat that is relevant to the area and which will complement the existing habitat mix. The Council's existing guidance[15] advises that biodiversity enhancements are considered at the outset in development proposals, taking account of the local ecological network opportunities. The emerging Local Plan could support the evolving Local Nature Recovery Strategy covering Hampshire which, as a strategic document, will set out opportunity areas for biodiversity networks without setting boundaries.

4.28. BNG is an emerging topic and as it develops the Council will ensure it is at the heart of its policy making. The Council is represented on the Hampshire and

[14] For example, Levelling Up and Regeneration Bill has proposed that every local planning authority produces a design code for its area that would have full weight in making decisions on development. For details, see: https://www.gov.uk/government/publications/levelling-up-and-regeneration-further-information/levelling-up-and-regeneration-further-information

[15] The Council published its 'Biodiversity Guidance for East Hampshire' in June 2021. This guidance document is available here: https://www.easthants.gov.uk/guidance-documents

Isle of Wight BNG forum[16], which has been established to build and develop a strategic, long-term, county-wide approach to BNG. Its aim is to share knowledge and experiences related to biodiversity net gain. This can help to inform detailed policies for the emerging Local Plan.

[16] The Hampshire and Isle of Wight BNG forum is made of up of representatives from all local planning authorities within the Hampshire and Isle of Wight administrative areas, representatives from the Hampshire Biodiversity Information Centre, the Hampshire and Isle of Wight Wildlife Trust and the Local Nature Recovery Partnership.

5.0 SUMMARY

5.1. In line with the Climate and Environment Strategy, the Council's ambition is that both the individual Local Plan policies, as well as the wider spatial strategy, will all contribute towards mitigating and adapting to climate change. The Council has announced its intention "that all new developments are energy efficient, zero-carbon homes that are clean and cost-effective'.

5.2. The emerging Local Plan can establish a clear definition of net-zero carbon development, helping developers and local communities to understand what would be required to meet this goal during the plan period. As noted in the background paper, tackling the climate emergency will involve more than delivering sustainable construction because there are GHG emissions associated with other activities, for example with personal transport. The emerging Local Plan could also:

- Allocate new development to help mitigate these transport-related emissions and to avoid areas that are at risk of flooding;
- Place an increased focus on those aspects of the design and layout of new development that would help to mitigate and adapt to climate change; and
- Establish a new focus on achieving biodiversity enhancements with the climate in mind.

Appendix 1 – **Glossary**

Biodiversity Net Gain – As part of any development habitats should be left in a better state than before development.

BREEAM (Building Research Establishment Environmental Assessment Method) – a sustainability assessment method used to masterplan projects, infrastructure and buildings. BREEAM assessment evaluates the procurement, design, construction and operation of a development against a range of targets based on performance benchmarks.

Climate change adaptation - Adjustments made to natural or human system in response to the actual or anticipated impacts of climate change, to moderate harm or exploit beneficial opportunities.

Climate change mitigation - Action to reduce the impact of human activity on the climate system, primarily through reducing greenhouse gas emissions (such as carbon dioxide).

Energy hierarchy – A classification of energy options, prioritized to assist progress towards a more sustainable approach to construction.

Embodied Carbon – A notional quantity of carbon, representing the amount of CO_2 already emitted in order to manufacture or assemble any given construction material (s) and transport it to site.

Green Infrastructure - A network of multi-functional green space and other green features, urban and rural, which can deliver quality of life and environmental benefits for communities.

HQM – a quality and sustainability assessment method (the initials stand for 'home quality mark') for new housing that incorporates an assessment of a new home's climate resilience.

Net-zero carbon development (including net-zero carbon homes): new development that does not directly result in an increase to greenhouse gas (principally carbon dioxide) emissions when these are calculated in accordance with an agreed methodology. Wherever practicable, any increases in emissions that would be associated with a building during its lifetime – such as by its construction, or subsequently through its use – would be overcome by considering its location, design, layout and/or the use of renewable or low carbon energy.

Part L of the Building Regulations – Approved documents L1A and L2A of the Building Regulations relate to the conservation of fuel and power in new dwellings and new buildings other than dwellings respectively.

Passive Design – buildings designed to maintain a comfortable temperature range without mechanical cooling or heating.

Passivhaus – A whole-building approach to construction that focuses on passive design to significantly reduce the energy demands of a building.

Regulated energy use – The energy used by fixed building services, as defined in Part L of the Building Regulations. These include fixed systems for lighting, heating, hot water, air conditioning, and mechanical ventilation. NB: unregulated energy is that used by appliances that are typically installed by choice by the householder (e.g. fridges, televisions, computers, desk lamps etc.).

Renewable and Low Carbon Energy: renewable energy is energy that is obtained from sources that are constantly renewed through natural processes. Examples of renewable energy sources include wind, solar and geothermal power, which may be used for heating and cooling, as well as for generating electricity. Low carbon energy technologies are those that can help to reduce emissions compared to conventional use of fossil fuels.

Sustainable Drainage Systems (SuDS) – an alternative approach to improving the sustainable management of water for a site, by managing rainwater runoff from buildings and hardstanding surfaces. A benefit of the system is to reduce the quantity and rate of surface water flow, running directly to rivers via stormwater networks.

Appendix 2 – Table and links to East Hampshire District Council Evidence Base Studies

EVIDENCE DOCUMENT	PUBLISHED DATE	LINK
East Hampshire Corporate Strategy (2020–24)	August 2020	https://www.easthants.gov.uk/corporate-strategy-2020-24-pdf-694-kb
East Hampshire Climate & Environment Strategy (2020-25)	August 2020	https://www.easthants.gov.uk/climate-and-environment-strategy-2020-25-pdf-802-kb
East Hampshire District Council Local Cycling & Walking Infrastructure Plan	August 2020	https://www.easthants.gov.uk/local-cycling-and-walking-infrastructure-plan
Enhance East Hampshire Place-Making Strategy (2019-36)	July 2019	https://www.easthants.gov.uk/enhance-east-hampshire
East Hampshire Net Zero Carbon Study	Ongoing, due to be published in Winter 2022	N/A
East Hampshire Strategic Flood Risk Assessment (SFRA);	May 2022	https://www.easthants.gov.uk/strategic-flood-risk-assessment
Biodiversity Guidance for East Hampshire	June 2021	https://www.easthants.gov.uk/biodiversity-guidance-east-hampshire-district-pdf-54-mb
East Hampshire Green Infrastructure Strategy	May 2019	https://www.easthants.gov.uk/green-infrastructure-strategy

Appendix 3 – Climate Change: What Can the Local Plan do?

The conclusions of the Intergovernmental Panel on Climate Change about recent (i.e. post-1850) climate change, and its projections for the future under different GHG emissions scenarios, are deeply concerning[17]. Land-use planning is an important policy tool in responding to these conclusions, but there are many other things that governments and individuals can do that do not directly involve the development of land. The following contrasts what could be achieved by a local plan with other issues beyond its scope:

A Local Plan can:

- Help to determine where new homes and businesses are built so as to reduce the need for new residents to travel long distances on a daily basis
- Help to ensure that the energy hierarchy is followed in the design and construction of new buildings, so as to reduce the associated emissions
- Help to co-ordinate investment to green infrastructure projects and any specific carbon-offsetting schemes, to mitigate the impacts of development where this cannot be achieved on-site
- Embed an approach to the design and layout of new development that facilitates reductions to its GHG emissions whilst adapting to the impacts of climate change (such as increased risks of flooding, extreme weather and overheating)

This means that a Local Plan will generally assist the residents of new buildings to live more sustainably. Local Plans can also include planning policies to ensure that changes to existing buildings – such as extensions or redevelopments – are undertaken sustainably. But where no building or development is planned, a Local Plan won't necessarily have any effect.

If development is not required, a Local Plan cannot affect:

- How our food is produced and regulated, including how land is managed in this regard
- Rates of afforestation or deforestation
- How goods and services are transported
- How we fuel our motor vehicles and planes
- How existing homes and places of work are heated
- How household and industrial waste is dealt with
- How investment decisions are made to assist the emergence of new low-carbon generating technologies

All of the above will influence our future GHG emissions. Indeed, many are referenced in the *Government's Net Zero Strategy: Build Back Greener* (October 2021). It is therefore clear that the role of the planning system – and local plans in particular – is just part of a wider set of concerted actions that must be undertaken to realise the goal of reducing GHG emissions to a net-zero level.

[17]See: https://www.ipcc.ch/report/sixth-assessment-report-working-group-i/