Report to the Cabinet

Report reference: ***C-070-2020/21***
Date of meeting: ***11 March 2021***

Epping Forest District Council

Portfolio: **Planning and Sustainability – Cllr. N Bedford**

Subject: **Sustainability Guidance for the District and Harlow and Gilston Garden Town**

Responsible Officer: **Alison Blom-Cooper (01992 564066).**

Democratic Services: **Adrian Hendry (01992 564246).**

Recommendations/Decisions Required:

(1) To note the public consultation process and outcomes (see Appendix C) and endorse the Epping Forest District Sustainability Guidance and Checklist documents (Volume 1: Major Developments Appendix A and Volume 2: Minor Developments Appendix B) as material planning considerations for the preparation of masterplans, pre-application advice, assessing planning applications and any other development management purposes within the District.

(2) To note the public consultation process and outcomes (see Appendix E), and endorse the Harlow and Gilston Garden Town (HGGT) Sustainability Guidance and Checklist (Strategic Sites) (Appendix D) as a material planning consideration for the preparation of masterplans, pre-application advice, assessing planning applications and any other development management purposes within the Harlow and Gilston Garden Town.

(3) To agree that the Planning Services Director, in consultation with the Planning and Sustainability Portfolio Holder be authorised to make minor amendments to the EFDC Sustainability Guidance and Checklist documents (Volume 1: Major Developments and Volume 2: Minor Developments) and HGGT Sustainability Guidance and Checklist prior to their final publication.

(4) To note progress made on the Draft EFDC Sustainability Guidance and Checklist Volume 3: Extensions and Refurbishments (Appendix F), and give delegated authority to the Portfolio Holder to approve the Guidance for public consultation for a six week period

(5) To note that, following consultation and any subsequent revisions, it is

intended that the final EFDC Sustainability Guidance and Checklist Volume 3 will be considered by Cabinet for endorsement as a material planning consideration for assessing householder planning applications (for extension or refurbishment work to an existing building), pre-application advice, and any other development management purposes within the District.

Executive Summary:

The Council's emerging Local Plan sets out policies in relation to sustainable and high quality design and construction of developments. On 19 September 2019 the Council declared a Climate Emergency, including a resolution to do everything within the Council's power to make Epping Forest District carbon neutral by 2030. To support these policies and this declaration, the Council has produced draft Sustainability Guidance and Checklist documents for use across the District; Volume 1: Major Developments (10+ units) and Volume 2: Minor Developments (1-9 units). These documents are in addition to the draft HGGT Sustainability Guidance and Checklist, which has been produced for sites located both within Epping Forest District and the Harlow and Gilston Garden Town. All three draft documents were approved by Cabinet for the purposes of public consultation on 19 October 2020.

This report sets out the changes proposed to the draft EFDC Sustainability Guidance and Checklist documents (Volume 1: Major Developments and Volume 2: Minor Developments) and the draft HGGT Sustainability Guidance and Checklist following the consultation process and seeks Cabinet endorsement of these documents.

In addition to the above documents, the Council is producing further EFDC Sustainability Guidance and Checklist Volume 3: Extensions and Refurbishment for use across the District. This document will provide householders with practical and technical guidance on how any extension or refurbishment work proposed to existing homes across the District can contribute to the Council's sustainability ambitions of becoming carbon neutral by 2030.

This report provides members with an update of progress in respect of Volume 3 and outlines a summary of the aims, objectives and purpose of the Volume 3 guidance. Further, this report requests that the Portfolio Holder for Planning and Sustainability is given delegated authority to approve the final draft of Volume 3 for public consultation. Following public consultation and any updates arising, the final Volume 3 guidance will return to Cabinet for endorsement as a material consideration in the determination of householder planning applications.

Reasons for Proposed Decision:

- To ensure that both the EFDC Sustainability Guidance and Checklist documents (Volume 1: Major Developments and Volume 2: Minor Developments) and the HGGT Sustainability Guidance and Checklist are afforded suitable planning weight by endorsing them as material considerations in the planning process. This will ensure that development proposals across the District contribute to the Council's sustainability ambitions, and that clear parameters are established for future pre-

application advice, preparation of masterplans, assessing planning applications and any other development management purposes.

- To agree that the draft EFDC Sustainability Guidance and Checklist Volume 3: Extensions and Refurbishments is delegated to the Portfolio Holder to agree for the purposes of a 6 week public consultation period.

Other Options for Action:

- Not to agree the EFDC Sustainability Guidance and Checklist documents (Volume 1: Major Developments and Volume 2: Minor Developments) and HGGT Sustainability Guidance and Checklist or endorse the three documents as material considerations in the planning process, which would mean that there would be no guidance to support the delivery of development proposals and achieve the objectives set out in the Council's emerging Local Plan policies SP3, DM5, DM9, DM11, DM15-22.

- Not to agree the draft EFDC Sustainability Guidance and Checklist Volume 3: Extensions and Refurbishments is delegated to the Portfolio Holder to agree for the purposes of a 6 week public consultation, which would mean that there would be no mechanism to support the delivery of sustainable extension and refurbishment of existing dwellings.

Report:

1. The National Planning Policy Framework sets out a presumption in favour of sustainable development. The policies in the emerging Epping Forest District Local Plan are in line with this objective and encourage the delivery of developments that promote growth in sustainable locations, sustainable transport and that mitigate the impact on biodiversity and natural habitats. Epping Forest District Council declared a Climate Emergency in September 2019, and a commitment to target net zero carbon across the District by 2030.

2. Sustainability Guidance documents have been developed to support key policies on sustainable and high-quality place making alongside the Council's commitment to deliver net zero carbon developments by 2030. The following documents are therefore attached to this report:

    - Appendix A – EFDC Sustainability Guidance and Checklist Volume 1: Major Developments, February 2021
    - Appendix B – EFDC Sustainability Guidance and Checklist Volume 2: Minor Developments, February 2021
    - Appendix C – EFDC Sustainability Guidance (Volume 1: Major Developments and Volume 2: Minor Developments) Engagement Tracker, February 2021
    - Appendix D – HGGT Sustainability Guidance and Checklist, February 2021
    - Appendix E – HGGT Sustainability Guidance and Checklist Engagement Tracker, February 2021
    - Appendix F – Draft EFDC Sustainability Guidance Volume 3: Extensions and

Refurbishments, February 2021

3. The National Design Guide (NDG) (published in 2019 and updated January 2021) supports the National Planning Policy Framework by setting out a list of 10 characteristics outlining the Government's priorities with regards to good design. The Sustainability Guidance documents align with the National Design Guide, especially with regards to the following principles;
    - Built Form; the NDG states that new developments should be compact in form and easily accessible by walking or cycling where possible. This aligns with the Sustainable Movement chapters of the Sustainability Guidance documents.
    - Movement; the NDG supports developments that prioritise active travel, and this is keeping with the ambitions of the Sustainable Movement chapters of the Sustainability Guidance documents.
    - Nature; the NDG's three ambitions as relating to the natural environment are (1) provide a network of high quality green infrastructure, (2) improve and enhance water management and (3) support rich biodiversity. These ambitions align with the Green Infrastructure chapters of the Sustainability Guidance documents.
    - Resources; the NDG places an emphasis on the energy hierarchy and careful selection of environmentally friendly materials and construction techniques – principles which are enforced throughout all of the Sustainability Guidance documents.
    - Lifespan; the NDG supports developments that are built to last, maintained by the communities that occupy them and adaptable to future needs. This section in particular is very closely aligned with the Socio-Economic Sustainability chapters of the EFDC Sustainability Guidance Volume 1 as well as the HGGT Sustainability Guidance.

4. This report seeks Cabinet endorsement for the EFDC Sustainability Guidance and Checklist documents (Volume 1: Major Developments and Volume 2: Minor Developments) and the HGGT Sustainability Guidance and Checklist to become material planning considerations when providing pre-application advice, preparing masterplans, assessing planning applications and any other development management purposes. The Guidance documents are intended to remain a consideration and support the policies in the Local Plan.

5. Applicants and designers will need to demonstrate how their proposals address the environmental sustainability checklist, and the socio-economic sustainability questions in the EFDC Sustainability Guidance and Checklist (Volume 1: Major Developments and Volume 2: Minor Developments) or HGGT Sustainability Guidance and Checklist, addressing the key principles for sustainable development. This should be through creating clear environmental targets, demonstrating an understanding and analysis of the site and landscape-led development, the proposed engagement with stakeholders and the community, and showing how the proposal will contribute to the existing communities and local needs of Epping Forest District, throughout the life of the

development.

6. The draft EFDC Sustainability Guidance and Checklist Volume 3: Refurbishments and Extensions will be the subject of public consultation prior to the endorsement as material planning consideration by the Council.

Objectives

EFDC Sustainability Guidance and Checklist documents (Volume 1: Major Developments and Volume 2: Minor Developments):

7. The principle objective for the EFDC Sustainability Guidance and Checklist documents (Volume 1: Major Developments and Volume 2: Minor Developments) is to act as a practical and technical guide for both applicants and officers in the design, development management and implementation processes to ensure new development in the District meets sustainability targets.

8. Within this overarching objective is a focus on a design and community-led and fabric-first approach to environmental, social and economic sustainability, to deliver high quality development while also establishing a framework for ensuring developments integrate themselves in existing communities and promote social equity.

9. The design of all new development should be landscape led and cross disciplinary and this should inform a proposal from its initial scoping through to detailed design submission of a planning application and discharge of conditions. The design should not address only a limited aspect of sustainability but demonstrate holistic consideration of the different topics presented within the guidance including; energy efficiency and carbon, renewable energy, sustainable movement, water efficiency, green infrastructure, circular economy, waste, pollution and air quality, and assuring performance. It is important that this design process is iterative, involving the Council's urban and landscape design officers, stakeholders; and that where appropriate, it is informed by use of the Quality Review Panel.

10. In addition to environmental sustainability, new developments within the District should also consider their implications on the social and economic sustainability of existing communities and residents. Applicants should demonstrate how their developments respond to the following areas: Health & Wellbeing, Economic Growth and Community Strength and Social Infrastructure.

11. The EFDC guidance documents were approved by Cabinet on 19 October 2020 for a 6 week public consultation period. Following the consultation (see details below), changes have been made based on the comments that were received. The intention is for the updated EFDC Sustainability Guidance and Checklist documents to be endorsed as material planning considerations in the consideration of planning proposals, including masterplans and concept frameworks, pre-application advice and

the determination of planning applications.

Draft EFDC Sustainability Guidance Volume 3: Extensions and Refurbishments:

12. The Guidance documents described above focus on new build developments. It is proposed to add to this suite of documents with a third volume for extensions and refurbishments. This guidance will provide practical and technical guidance on sustainability principles as they apply to householder applications, as well as make reference to the LETI Retrofit Working Group industry guidance (due to be published in early 2021). It will set out the EFDC policy context as it relates to sustainable development, provide best practice sustainable design principles that can be implemented by homeowners and signpost to other relevant guidance documents. It is proposed that this guidance should be consulted on once the LETI guidance has been published and included in the document as an Appendix.

13. Following consultation of the EFDC Sustainability Guidance Volume 3 (Extensions and Refurbishments) it will be updated to take account of consultation comments and then be brought back to Cabinet for endorsement as a material planning consideration in the consideration of planning proposals including householder applications for extension or refurbishment work to existing dwellings.

HGGT Sustainability Guidance and Checklist:

14. The principle objective for the HGGT Sustainability Guidance and Checklist is to act as a practical and technical guide for both applicants and officers in the design, development management and implementation processes to ensure new development in the Garden Town meets sustainability targets.

15. Within this overarching objective is a focus on a design and community-led and fabric-first approach to environmental, social and economic sustainability, to deliver high quality development while also establishing a framework for ensuring developments integrate themselves in existing communities and promote social equity.

16. The design of all new development should be landscape led and cross disciplinary and this should inform a proposal from its initial scoping through to detailed design submission of a planning application and discharge of conditions. The design should not address only a limited aspect of sustainability but demonstrate holistic consideration of the different topics presented within the guidance including; energy efficiency and carbon, renewable energy, sustainable movement, water efficiency, green infrastructure, circular economy, waste, pollution and air quality, and assuring performance.

17. In addition to environmental sustainability, new developments within the Garden Town should also consider their implications on the social and economic sustainability of existing communities and residents. Applicants should demonstrate how their developments respond to the following areas: Health & Wellbeing, Economic Growth and Community Strength and Social Infrastructure.

18. The HGGT guidance was approved by Cabinet on 19 October 2020 for a 6 week public consultation period. Following the consultation (see details below), changes have been made based on the comments that were received. The intention is for the HGGT Sustainability Guidance and Checklist to be endorsed as material planning considerations in the consideration of planning proposals, including masterplans and concept frameworks, pre-application advice and the determination of planning applications.

Consultation

<u>EFDC Sustainability Guidance documents (Volume 1: Major Developments and Volume 2: Minor Developments):</u>

19. The Council undertook some informal engagement prior to the development of the draft EFDC Sustainability Guidance and Checklist documents (Volume 1: Major Developments and Volume 2: Minor Developments). Following approval at Cabinet on 19 October 2020, these documents were published for formal consultation for a six-week period from 2 November 2020 to 14 December 2020.

20. The early engagement included whole-document reviews as well as specific topic-focused workshops with relevant officers across the Council. An EFDC Member workshop was held on 21 September 2020.

21. The formal consultation was undertaken in accordance with the Council's adopted Statement of Community Involvement. It took place during the COVID-19 pandemic, consequently involved both digital and non-digital means. The public was consulted simultaneously on the EFDC Sustainability Guidance and Checklist documents (Volume 1: Major Developments and Volume 2: Minor Developments) and the HGGT Sustainability Guidance and Checklist.

22. The following list provides a summary of the various engagement methods used during public consultation. Please refer to the October Cabinet report for more detail.

    Digital engagement:

    - Consultation notice via email to EFDC databases, statutory consultees and other targeted stakeholders.
    - Dedicated email address for enquiries and consultation response submissions, with automated acknowledgement email and links to FAQs.
    - Dedicated consultation page on EFDC website, including PDFs of documents and link to HGGT consultation website (for overview video and questionnaire).
    - Social Media awareness campaign
    - Staffed online webinars and Q&A for stakeholder groups

    Non-digital engagement:

    - Limited number of hard copy consultation packs on request: leaflet/ poster

information to provide summary, and link/ QR Code to online document, and to provide hard copy of questionnaire/ survey.
- Freepost address available in case any stakeholders wished to return consultation response by mail.

23. The Council received comments through email responses, 4 online events and an online questionnaire. A full schedule of the representations received is attached at Appendix C.

    The comments received in response can be broadly categorised into the following themes:

    - Issues around the relevance of checklist questions, and other submission requirements that the Sustainability Guidance documents ask for, to different types of development and different types of planning applications.

    - Clarification required on the purpose and status of guidance, as well as more information on the degree of flexibility allowed by the guidance checklist questions.

    - Clarification on whether Sustainability Guidance documents have been factored in to Viability Assessments.

    - Issues around the relevance of some of the case studies in terms of relevance to the context and character of development in the District.

    - Further information required around certain terminology used.

    - Detailed comments relating to specific themes and checklist questions.

24. Key updates and changes to the Guidance documents, to respond to the above consultation and comments, include:

    - Restructuring of Guidance checklists to split questions in to two categories: those that apply to Outline applications and those that apply to Full / Reserved Matters planning applications.

    - Further information provided in the Introduction chapter on role and purpose of the Guidance documents as material considerations in the assessment of planning applications, and degree of flexibility allowed by checklist questions.

    - Case studies amended to become more representative of the type and character of development in the District.

    - Changes made to ‘Air Quality’ section following more detailed conversations with EFDC Air Quality officer, to align document with District’s Air Pollution Mitigation Strategy.

- General updates made to address comments on specific checklist questions and glossary terms.

Draft EFDC Sustainability Guidance Volume 3 (Extensions and Refurbishments):

25. The Council will continue to conduct workshops with EFDC officers in the preparation of the draft EFDC Sustainability Guidance and Checklist Volume 3: Extensions and Refurbishments. Informal engagement has been undertaken with the Local Plan Implementation Forum and officers across different service departments including Planning and Housing.

26. In accordance with the Council's Statement of Community Involvement (SCI), the Council will consult stakeholders and the general public on the draft EFDC Sustainability Guidance and Checklist Volume 3: Extensions and Refurbishments. It is proposed to do this when the LETI guidance has been published. The proposed period of consultation in line with the SCI is six weeks. All those on the Council's planning policy database will be notified, information including the document and an online survey/ questionnaire will be made available on the Council's website and by notification to statutory consultees.

27. Given current restrictions on in-person engagement due to COVID-19, it is proposed that the focus will be primarily through digital means. The consultation will seek to include the following:

    - EFDC Sustainability Guidance Volume 3 available for viewing on EFDC website.
    - Digital questionnaire / survey available for viewing and completing on EFDC website.
    - Staffed online webinars and Q&A for particular stakeholder groups (e.g. Local residents and Community Groups, Developers, Members, Youth Councils)
    - Social Media awareness campaign
    - Notification of consultation via LPA Planning Policy databases and statutory consultees.

28. Consultation arrangements will be put in place and will be advertised ahead of the consultation, in accordance with the Statement of Community Involvement.

29. Following the consultation, the responses will be collated and where appropriate amendments made to the document. The EFDC Sustainability Guidance Volume 3 (Extensions and Refurbishments) will then return to Cabinet for formal endorsement as material planning consideration.

HGGT Sustainability Guidance and Checklist:

30. The Council undertook some informal engagement prior to the development of the draft HGGT Sustainability Guidance and Checklist. Following approval at Cabinet on 19 October 2020, the guidance was published for formal consultation for a six-week period from 2 November 2020 to 14 December 2020.

31. The early engagement included whole-document reviews as well as specific topic-focused workshops with relevant officers across the Council as well as HGGT Partner Authorities. External sustainability expertise has also been sought via the Quality Review Panel and UK Green Building Council. Two All-Member HGGT briefing and workshop sessions were held on 27 July 2020 and 26 August 2020.

32. The formal consultation was undertaken in accordance with the Council's adopted Statement of Community Involvement. It took place during the COVID-19 pandemic, consequently involved both digital and non-digital means. The public was consulted simultaneously on the EFDC Sustainability Guidance and Checklist documents (Volume 1: Major Developments and Volume 2: Minor Developments) and the HGGT Sustainability Guidance and Checklist.

33. The following list provides a summary of the various engagement methods used during public consultation. Please refer to the October Cabinet report for more detail.

    Digital engagement:

    - Consultation notice via email to HGGT databases, statutory consultees and other targeted stakeholders.
    - Dedicated email address for enquiries and consultation response submissions, with automated acknowledgement email and links to FAQs.
    - Dedicated consultation page on HGGT website including PDFs of documents, overview video and questionnaire.
    - Social Media awareness
    - Staffed online webinars and Q&A for stakeholder groups

    Non-digital engagement:

    - Limited number of hard copy consultation packs on request: leaflet/ poster information to provide summary, and link/ QR Code to online document, and to provide hard copy of questionnaire/ survey.
    - Freepost address available in case any stakeholders wished to return consultation response by mail.

34. The Council received comments through email responses, 6 online events and an online questionnaire. A full schedule of the representations received is attached at Appendix E.

    The comments received in response can be broadly categorised into the following themes:

    - Issues around the structure of checklist questions in relation to different scales of development and different types of planning applications.

- Issues around the ambition of the guidance in context of the upcoming government Future Homes Standards (2022).

- Clarification required on the status of guidance in assessing incoming planning applications, as well as more information on the degree of flexibility allowed by the guidance checklist questions.

- Clarification on whether Sustainability Guidance documents have been factored in to Viability Assessments.

- Detailed comments relating to specific themes and checklist questions; including additional emphasis placed on Digital sustainability and a more integrated thread of the impacts of covid-19 pandemic in the Socio-Economic section of the guidance.

36. Key updates and changes to the Guidance, to respond to the consultation and comments, include:

    - Restructuring of Guidance checklists to split questions in to two categories: those that apply to Outline applications and those that apply to Full / Reserved Matters planning applications.

    - Further information provided in the Introduction chapter on role and purpose of the Guidance documents as material considerations in the assessment of planning applications, and degree of flexibility allowed by checklist questions.

    - A new ‘Digital Sustainability’ page included in the ‘Environmental Sustainability’ section of the document

    - Revision of the ‘Job Creation’ section; and additional questions in the Socio-Economic checklist related to this.

    - Inclusion of questions from the ‘Healthy Towns Framework’ within the Socio-Economic section of the guidance

    - General updates made to address comments on specific checklist questions and glossary terms

37. The amended EFDC and HGGT documents have sought to address the issues raised in the consultation, to ensure that a robust set of Guidance documents have been produced. Next steps include: ongoing work with site developers and planning applicants to ensure that sustainable and good quality design, as set out, is being achieved; ensuring that the Guidance documents are understood and disseminated to key Service areas and officers within the Council, providing colleagues in the Planning Service department with training sessions to ensure best use of guidance documents

Resource Implications

The work to support the draft EFDC Sustainability Guidance documents to be viewed alongside the emerging Local Plan is covered by the local plan budget and staff within the Local Plan and Implementation teams. Undertaking consultation during COVID-19, and the associated emphasis on printed information such as leaflets/ surveys, and enabling return postage, rather than in-person events and responses, may incur additional costs which will be met from the existing local plan consultation budget.

Safer, Cleaner and Greener Implications:

The Sustainability Guidance seeks to take forward emerging Local Plan policies designed to promote the notion of making good places to live, work and visit. This will include sustainable development, sustainable transport, energy efficiency and environmental considerations as well as principles of socio-economic sustainability.
The delivery of the Sustainability Guidance will help to address the impacts of recreational pressure and air quality on Epping Forest Special Area of Conservation and will contribute to safer, cleaner, greener objectives by planning for sustainable development.

Consultation Undertaken:

For the EFDC Sustainability Guidance and Checklist documents (Volume 1: Major Developments and Volume 2: Minor Developments) and HGGT Sustainability Guidance and Checklist, informal engagement has been undertaken with officers, the EFDC Leadership Team, Local Plan Implementation Forum and EFDC Councillors.

Formal consultation was then undertaken for the above three documents, in accordance with the Council's adopted Statement of Community Involvement. It took place during the COVID-19 pandemic, consequently involved both digital and non-digital means.

For the draft EFDC Sustainability Guidance Vol.3 (Extensions and Refurbishments), informal engagement with EFDC Officers and the Local Plan Implementation Forum has been undertaken.

Background Papers:

- Cabinet Report C-027-2021– Draft Sustainability Guidance for the District and Harlow and Gilston Garden Town 19 October 2020 (EB152)

Risk Management:

The use of these documents as material planning considerations will support the Council's objectives of achieving high quality and sustainable design in the district and reduce the risk of poor quality development.

EB156

1/

EFDC SUSTAINABILITY GUIDANCE & CHECKLIST / MAJOR DEVELOPMENTS *(+10 units)*

DRAFT - REVISION 06
FEBRUARY 2021

EB156

FOR OPTIMUM VIEWING
In Acrobat Reader, go to View > Page Display > Two Page View
Make sure ‘Show Cover Page in Two Page View’ is ticked

Issue and Revision Record

REVISION	DATE
01	August 4th, 2020
02	August 28th, 2020
03	October 7th, 2020
04	October 30th, 2020
05	February 3rd, 2021
06	February 16th, 2021

Contents

EB156

1

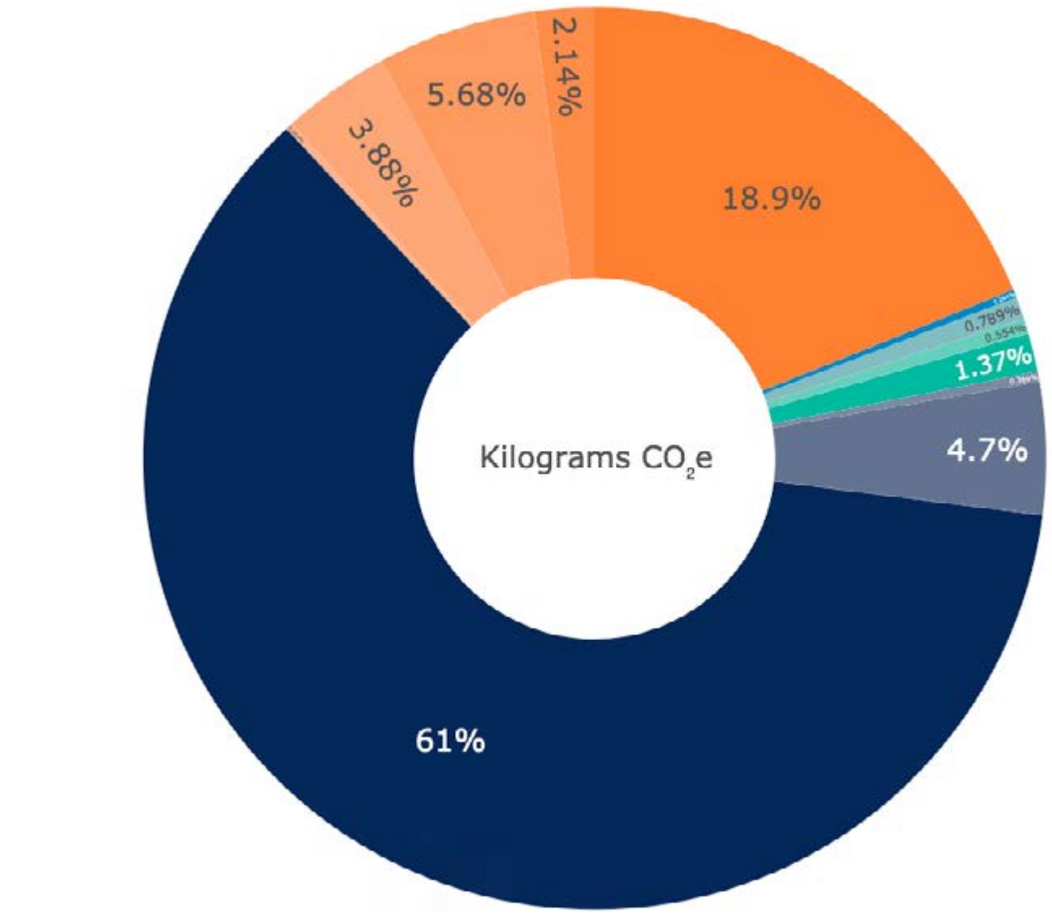
INTRODUCTION

This document supports the highest environmental commitment across the District - to become net zero carbon by 2030

EB156

Overview

Epping Forest District has an annual carbon emission contribution of 2,048 CO2 (kt) across all industries (2017 data). The graph below provides a break down of the District's emissions based on sector:



Source: scattercities.com

Overview

CLIMATE EMERGENCY

The UK Government and Epping Forest District Council have declared a Climate Emergency.

The global climate is changing, primarily as a result of greenhouse gas emissions from human activity. Communities, businesses and the natural environment are already feeling the impacts of the changing climate. Continuted change is now unavoidable and will disrupt everyday life, with higher average temperatures and more extreme weather events.

This Sustainability Guidance supports the highest commitment across the District, which is to produce net zero cabon emissions by 2030. It sets out practical solutions to set out a clear design and construction process for any new development, into a net zero future. EFDC believes that in order to meet our climate change targets, all new buildings must operate at net zero carbon by 2030.

Sustainability focuses on meeting the needs of the present without compromising the ability of future generations to meet their needs. High quality sustainable developments require adopting a holistic approach to environmental, social and economic sustainability.

EPPING FOREST FOREST DISTRICT COUNCIL

The Council's emerging Local Plan sets out the most significant level of development to be brought forward across the District in a generation.

Within the period 2011-2033 the growth proposed in the emerging Local Plan will provide for a minimum of 11,400 new homes. Much of this will be delivered through larger strategic sites which will require planning applicants to take a proactive and considered approach to matters of environmental and socio-economic sustainability.

The emerging local plan looks to balance future development alongside ecological well-being, responding to the climate emergency and meeting objectives to improve health and well-being.

PLANNING POLICY CONTEXT

There is a strong and committed national and local policy context for planning environmentally, socially and economically sustainable places and developments, and climate adaptation.

The National Planning Policy Framework (NPPF) (February 2019) sets out national policy for local planning authorities and decision makers. The NPPF states that there is a presumption in favour of sustainable development (paragraph 11), with sustainable development having economic, social and environmental objectives.

The environmental objective is that development should protect and enhance the natural, built and historic environment as well as protecting biodiversity, minimising pollution and adapting to climate change and the demands of a low carbon economy.

COVID-19 RECOVERY

The guidance has been developed during the COVID-19 pandemic, which has highlighted stark health inequalities relating closely to environmental, social and economic inequalities.

Now more than ever, high quality, sustainable and resilient design and development is needed to ensure that existing and new residents of Epping Forest District recover from the pandemic in a long term and locally-led manner.

Opportunities to foster community strength, provide job opportunities, support green and local economies and bolster residents health must be taken. All stakeholders are therefore expected to work collaboratively to contribute to this recovery, and ensure that the District is a joyful and sustainable place to live, work and play.

EB156

How to use this guidance?

1 / PURPOSE OF THIS GUIDANCE

The purpose of this guidance is to help applicants meet EFDC's goals of becoming net zero carbon by 2030, as well as building strong and integrated communities across new and existing places.

Planning for significant growth in the District, new developments need to have in place the foundations to enable exemplar placemaking and long term sustainability. This document provides practical and technical guidance on how relevant Sustainability indicators and policies (environmental, social, and economic) in the Epping Forest District Local Plan will be applied to new major residential and non-residential developments across the district.

The Sustainability Guidance will promote good and best practice and whilst it will be a material planning consideration in determining planning applications, it will not be adopted policy. Planning officers will need to make a judgement in terms of compliance with the Guidance, and this will feed in to the decision making process. Planning officers will also recognize that not all of the checklist questions will be relevant to each application (due to scale, site constraints etc.)

2 / WHO USES THIS GUIDANCE?

Applicants + Agents:
The document is to be used by developers, design teams, consultants and contractors in shaping development proposals, This will guide design, and ensure coordinated and integrated consideration of sustainability principles and targets at an early stage.

Local Authority Officers and decision-makers:
This document will be endorsed to have material planning weight and the Checklist will help guide the assessment of planning applications for developments coming forward within the District. It will inform pre-application discussions and assist decision-makers in sustainability matters.

The EFDC Quality Review Panel (QRP):
This Checklist will be utilised for QRP reviews to help form the basis of Sustainability discussions. The QRP panel members are independent experts, and applicants are advised to be in a position to discuss issues on all categories raised in this guidance.

3 / WHEN TO USE THIS GUIDANCE?

Masterplanning: This guide should be used at as early a stage as possible in the design process in order to reduce costly and time-intensive re-design at later stages.

Pre-Application; The Sustainability Checklist should accompany pre-application discussions to ensure all applications have considered and incorporated sustainability measures from the outset of their design.

Planning Application; A Sustainability Strategy incorporating the Checklist, with relevant certification, is to be submitted alongside planning applications.

Post-Planning; Relevant conditions will be discharged and planning obligations and monitoring will be coordinated to ensure that sustainable measures are in place through to delivery and beyond. Tools such as Post-Occupancy Evaluation for ongoing monitoring will be expected relating to key indicators.

4 / HOW TO USE THIS GUIDANCE?

High quality and sustainable development requires environmental, social and economic sustainability to be holistically considered. The guidance is split into the following two sections:
1. Environmental Sustainability
2. Socio-Economic Sustainability

Each section comprises the following categories:
1. Objectives & Requirements
2. Key Local Policy & Guidance
3. Case studies
4. Checklist (to be completed and submitted)

There is also a glossary within the Appendix at the end of the document.

5 / SUBMISSION REQUIREMENTS

1. Sustainability Checklists
2. Sustainability Statement

The Sustainability Statement should be accompanied with relevant certifications.

6 / APPLICATION OF GUIDANCE

The guidance is applicable to all major developments within Epping Forest District. This will include:
- All major residential-led developments and associated infrastructure proposals (10+ units, or floorspace over 999 sq.m.)
- Change of Use resulting in major development

7 / THE CHECKLIST

The Checklists indicate the quality of development in line with the District's standards. These will be assessed in the round to ensure a holistic approach to sustainability is being considered. Each theme will be assessed in the context of factors that may be unique to a development, providing flexibility in how each development is assessed. The applicant is expected to identify unique sustainability aspects of their development and include these in the 'Sustainability Statement'.

All checklists should be completed for full planning applications / reserved matters applications.
Outline planning applications need only to complete questions marked for outline applications.

Minimum Requirements (Low Quality)	**Net Zero-Carbon by 2050** (Medium Quality)	**Net Zero-Carbon by 2030** (High Quality)
Policy-compliant / Building Regulations compliant only	*These targets meet ultimate goal, but 20 years slower*	*These targets meet our goal and Climate Declarations*

8 / RELATIONSHIP TO THE LOCAL PLAN

This guidance has been endorsed to have material planning weight and should be read in conjunction with the policies found in the Epping Forest District Council Local Plan. It compliments the Local Plan policies by providing a practical tool for enhancing the sustainability of development in the District.

9 / PARTNERSHIP WORKING

Epping Forest District Council is committed to working with relevant organisations, service providers and community groups to ensure proposals are developed collaboratively and with thorough consideration of local priorities.

10 / REVIEW & MONITOR

The guidance will be reviewed and updated every 3 years. It will be reviewed upon national adoption of the Future Homes Standard. Current Building Regulations fall short of the 2030 net-zero carbon commitment by the District.

11 / INCENTIVES FOR SUSTAINABILITY

Design and Planning
Compliance with these sustainability standards will lead to a smoother planning process and faster assessment time.

Awards and Recognition
Exemplar schemes will be shared as case studies. The Council will work with applicants to put their schemes forward for local and national awards and partnership opportunities.

Cost Benefits
By 2030 all new buildings will need to operate at Net Zero (i.e. annual net zero carbon emissions), which means that by 2025 all new buildings must be designed to net zero carbon.

Net zero capital homes can be achieved at a capital cost uplift of between 3.5% - 15% for residential developments, or at equal cost - depending on economies of scale in alignment with various reports. (e.g. study of tower developments shows that net zero carbon homes can be achieved at a capital cost uplift of between 3.5% - 5.3%). This capital cost of sustainable buildings is likely to decrease over time as legislation improves, our electricity grid decarbonises, our supply chain upskills and cost of technologies decrease.

Costs can be offset by value benefits, including: increased rental premiums, lower tenancy void periods and lower offsetting costs. Furthermore, long-term operation costs of new homes are vastly reduced due to the lower energy demand from homes, eliminating changes such as fuel poverty, and providing cost savings of 30%-40% over 30 years. In a post COVID-19 society, more people are working from home, making sustainable homes and communities more attractive to homeowners and thereby providing a commercial benefit to developers.

EB156

2

ENVIRONMENTAL SUSTAINABILITY

This section looks at how Epping Forest District Council can become net zero carbon by 2030.

EB156
Design Approaches: First Principles

The following ‘First Principles’ are to be incorporated to ensure new developments are sustainable, and bring practical solutions towards good design. The principles act as an iterative design process, encouraging a wholistic approach to sustainability. The incorporation of these principles at an early stage of a development will make it easier to meet performance targets set out in the remainder of the Sustainability sections.

1 / LANDSCAPE LED DESIGN

The District is characterised by different types of landscapes. Study of existing strategies, analysis, survey and mapping should be undertaken of existing green infrastructure and ecological value of features. These include; topography, trees, hedgerows, woodland, grasslands, wetlands, meaowlands, farmlands, hills and lowlands, flood plains, views and vistas. Drawings, surveys, site photographs and precedent images should be utilised.

Design should be landscape led from the start and across all design stages. The best design and development outcomes will be delivered by engaging landscape and ecology consultants at an early stage. Additional spending on design fees will be very likely outweighed by the speed and ease of securing planning permission.

2 / SUSTAINABLE MOVEMENT

Identifying sustainable movement and active transport infrastructure is key to the success of sustainable growth in the District as they embed connectivity through movement corridors; playing a significant role in location, form and scale of development.

Local routes for everyday journeys to work, schools, and shopping should be identified as opportunities to knit communities together, rather than sever them. Strong transport links can tie-in with historic pathways identified through fine-grain analysis. Priority should be given to pedestrian and cycle networks that link to wider sustainable transport networks.

3 / ORIENTATION & FORM

Solar orientation must inform the topography, scale and massing of development at early stages of masterplanning, with south-facing buildings, fenestration, and amenities designed to take advantage of passive solar gain – absorbing the sun’s heat energy to warm buildings and spaces. Building axis’ should be orientated in the east-west direction to take advantage of maximum daylight and heat from the sun which significantly reduces the energy consumption of a building, and can reduce a homes’ heating and cooling costs by up to 85%. To stay cool in the summer months and avoid overheating, external shading provisions should be made to the buildings and surrounding areas, including the use of green infrastructure.

A Daylight / Sunlight Assessment can help provide more information on how much natural light your development will be exposed to.

4 / ENERGY HIERARCHY

New developments should comply with the following Energy Hierarchy principles:

BE LEAN: Use less energy: minimising the energy demand of new buildings through fabric performance: This step requires design that reduces the energy demand of a development. Energy Strategies need to demonstrate how energy efficiency measures reduce the energy demand in line with performance targets highlighted in this document.

BE CLEAN & GREEN: Supply energy efficiently: utilising energy efficiently in buildings including for space heating & cooling: Consideration must be given to how heat and energy will be provided to the development using low-carbon heating networks.

BE SEEN: Monitor & Report performance: for at least 5 years post-completion to remove the performance gap: This requires all major developments to monitor and report their energy performance post-construction to ensure that the actual carbon performance of the development is aligned with the EFDC ambitions of a net zero-carbon target.

5 / ADAPTABLE & FUTURE PROOF DESIGN

Building strong communities is aided by giving households the opportunity to have accommodation that can adapt to respond to their changing needs and abilities. This means looking at the macro-scale provision of green and blue infrastructure and management for climate adaptation, futureproofing infrastructure for technological innovation, a range of house types, adaptable facilities and meanwhile use spaces. And through to the micro-scale; for example the space and ease in ability to extend homes and facilities (physical and digital) to work from home.

It is important that strong communities are not broken due to the lack of adaptable design.

6 / FABRIC-FIRST APPROACH

A fabric-first approach requires the building envelope to be a high-performance thermal envelope, reducing energy waste. This means the proposed buildings must have external walls, roofs, floors, windows & doors that are: super insulated, airtight, and windtight.

A fabric-first approach includes the windows and doors – which provide significant heat loss and heat gains – depending on solar orientation. Windows and doors must therefore incorporate high-performance glazing to provide comfortable internal temperatures. A high-performance thermal envelope delivers exceptional indoor comfort and building energy efficiency.

7 / VENTILATION & OVERHEATING

A mixed-mode (natural and mechanical) ventilation strategy is encouraged for excellent indoor air quality. This involves the incorporation of a whole-house mechanical ventilation with heat recovery system (MVHR) – which is key to delivering radically energy efficiency and exceptional comfort, through providing clean, filtered air into habitable spaces.

Early stage overheating analysis will be expected to be carried out at design stage to identify key factors contributing to overheating risk. Where developments are at risk of overheating, additional detailed assessment and mitigation measures will be expected to be incorporated.

8 / EMBODIED & OPERATIONAL ENERGY

All design teams are expected to think about, and reduce the embodied energy required to develop their schemes. For example, depending on location, height, and site suitability, materials like timber could be favoured over less sustainable alternatives such as concrete.

In terms of operational energy, Developments should be aiming for net zero carbon – where energy on an annual basis is zero or negative. A net zero carbon building is highly energy efficient and powered from on-site and/or off-site renewable energy sources. Developments should be designed using realistic predictions of operational energy to avoid performance gap in a buildings’ energy use.

9 / RENEWABLE TECHNOLOGIES

Renewable energy uses natural resources such as sunlight, wind, tides and geothermal heat which are naturally replenished. Most forms of renewable energy are cheap to operate, but can be expensive to install.

Examples of technologies include; PV’s, solar thermal, ground/air source heat pumps, wind, hydro. The choice of renewable technologies should be dependent on an assessment on site and development suitability.

10 / AIRTIGHT & THERMAL BRIDGE FREE

An airtight strategy focuses on the internal comfort of a building, and will be required to develop a draught-free building envelope. The draught-free building ensures high energy efficiency, internal user comfort, and protects the building envelope. The airtight strategy must be continuous to ensure there are no unintended gaps in the building envelope that allow uncontrolled air to leak in and out of the building.

Internal comfort can be affected by excessive heat loss through the building fabric caused by poor detailing around junctions in the building envelope. Gaps in the insulation barrier or large areas of conductive thermal bridging should be designed out.

Post-occupancy evaluation enables air tightness and thermal bridging to be measured, to help close the known performance gap in these areas.

EB156
Energy Efficiency & Carbon

OBJECTIVES & REQUIREMENTS

The transition to net zero-carbon by 2030 must begin with providing genuinely affordable homes. Beyond the planning system, the government is considering changes to legislation and policy that will promote lower carbon buildings. Changes to Building Regulations to improve the energy efficiency of new homes were recently subject to consultation.

All new buildings should look to adopt a fabric-first approach (e.g. Passivhaus Standards), with the expectation that as our grid system decarbonises and we build more energy efficient homes, emphasis will be placed on the embodied energy involved in constructing new buildings.

With the decarbonising of the National Grid, achieving net zero-carbon will mean developments must respond to the key components of whole-life carbon; embodied carbon and operational energy. Achieving net zero operational energy means the building does not burn fossil fuels and is 100% powered by renewables.

A Whole Life Carbon (WLC) Assessment should be undertaken both during the pre-application stages and after practical completion, as new homes are expected to last 60+years, with carbon emission reduction in line with the targets in the Checklist.

Embodied Carbon Reduction Strategy:
- Using circular economy principles of reuse and refurbish, and designing for disassembly at end of life with processes including using offsite construction.
- Building low-energy homes, using fossil fuel-free technology to supply heating and power to them. Using renewable energy where necessary

Operational Carbon Reduction Strategy:
- Not burning fossil fuels for supply to homes
- 100% powered by renewable energy i.e.heat pumps
- Achieving energy performance in line with checklist

Embodied carbon can be measured by design teams by various software that allow quick analysis and visual representation of carbon use.

KEY LOCAL POLICY & GUIDANCE

EFDC Local Plan Policy:

- **SP2** Place Shaping
- **SP3(xvii)** Highest standards of energy efficiency
- **T1** Sustainable transport choices
- **T2** Safeguarding of routes and facilities
- **DM9** High Quality Design
- **DM20** Low Carbon and Renewable Energy
- **DM21** Local Environmental Impacts, Pollution and Land Contamination
- **DM 22** Air Quality

- Net Zero Carbon Buildings: A Framework Definition (UKGBC)

CASE STUDIES

Marmalade Lane, Cambridge
New masterplan built with fabric-first approach for energy efficient homes, alleviating fuel-poverty.

Goldsmith Street, Norwich
New masterplan built to Passivhaus standards, needing little energy for heating and cooling.

Viridio, Cambridge
Zero-carbon development of 208 homes, achieving Code for Sustainable Homes Level 5.

SUBMISSION CHECKLIST		Minimum Requirement	Net Zero-Carbon by 2050	Net Zero-Carbon by 2030
En.1 *	Operational Energy (KWh/m2/y) *(includes both regulated and unregulated energy use in the building, as measured at the meter)*	146 ☐	< 70 ☐	< 0 - 35 ☐
En.2*	Embodied Carbon (kgCO2e/m2)	1000 ☐	< 450 ☐	< 300 ☐
En.3 *	For applications greater than 99no. units, what BREEAM Communities Level is met?	Very Good ☐	Excellent ☐	Outstanding ☐
En.4	Space Heating Demand (KWh/m2/y)	54.26 ☐	25 ☐	15 ☐
En.5	Airtightness (air changes/ hr @ n50)	5 ☐	3 ☐	≤ 0.6 ☐
En.6	Ventilation Strategy (m3/hr/person)	Natural - extract fans ☐	Mechanical with extract fans ☐	Mechanical Heat Recovery (30) ☐
En.7	What is the on-site reduction in CO2 emissions against Building Regulations Part L (2013)?	0-34% ☐	35%-50% ☐	≥ 50% ☐
En.8	What Fabric U-Values has the proposal been designed to meet? W/(m2K)	☐	☐	☐
	External Walls	0.30 - 0.16	0.15 - 0.13	< 0.13
	Floor	0.25 - 0.11	0.10 - 0.08	< 0.07
	Roof	0.20 - 0.13	0.12 - 0.10	< 0.10
	Windows (triple glazing) & Doors	2.00 - 1.4	1.3 - 1.00	< 0.9
	Please attach Tables 12 & 13 of your Whole Life Carbon Assessment (see Appendix 3)			☐
	Please attach relevant certification of the above standards you have chosen, and use 'Sustainability Summary' pages where you are adding any further information.			

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EB156
Renewable Energy

OBJECTIVES & REQUIREMENTS

Our recent extreme weather has highlighted the need to ensure that buildings constructed today are fit for the future, and, designed for resilience over the next 60+ years. New developments have a unique opportunity to ensure that the heating and hot water they generate are fossil fuel free, as heat demand is estimated at more than 40% of the energy consumed across the District.

On-site renewable technologies such as Heat Pumps, Solar Photovoltaics, and Solar Thermals should be explored for adoption, and combined to provide the greatest benefit to new developments.

Applicants are to use the LETI Heat Decision Tree throughout the design stages, to assist them in choosing the most appropriate heating system. Renewable systems should be prioritised over connecting to district heating networks, which depend on fossil fuels.

New Developments should be designed to;

• Join Heat Sharing networks: particularly relevant for these strategic mixed-use development sites where opportunities for load shifting and heat sharing occur.
• Minimise system temperatures: high temperatures in heating systems are synonymous with fossil-fuel combustion
• Reduce Heat Demand at point of use: The greatest opportunity to meeting net zero-carbon emissions is to reduce the amount of heat needed: achieved through a fabric-first approach and limited hot water use, coupled with reuse of low temperature waste heat sources.
• Lean Design: load modelling can predict energy use and help size plant requirement.
• Harness Waste Heat: heat released as a by-product of an existing process enables otherwise wasted heat to contribute to meeting energy demands.

Please note that whilst categorised as a source of renewable energy, biomass has negative impacts on air quality and climate change, and therefore EFDC will not support applications where biomass is proposed.

KEY LOCAL POLICY & GUIDANCE

EFDC Local Plan Policy:

• **SP3 (xvii)** Highest standards of energy efficiency
• **DM9** High Quality Design
• **DM19** Sustainable Water Use
• **DM20** Low Carbon and Renewable Energy

CASE STUDIES

Project Etopia, Corby
Uses combined solar PV's and thermal panel to deliver net zero carbon on site.

Active Homes, Neath, South Wales
Battery technology used to store energy and solar PV & TSC's to generate 60% energy.

Tallack Road, Waltham Forest, London
Large-scale communal Air Source Heat Pump to feed ambient temperature heat network

SUBMISSION CHECKLIST		Minimum Requirement	Net Zero-Carbon by 2050	Net Zero-Carbon by 2030
Rn.1*	What on-site renewable energy technologies have been included in your development?	PV's + EV charging / CHP's ☐	Low-temperature District Heating ☐	Heat Pumps / Solar Thermal ☐
Rn.2*	What percentage of CO2 emission reduction is planned to be provided from on-site renewable energy sources? *(SAP 10 carbon emission factors to be used for calculation)*	> 20% ☐	> 50% ☐	> 70% ☐
Rn.3	What percentage of household electricity will on-site renewable technology provide? *(Net zero operational carbon does not burn fossil fuel and is 100% powered by renewables)*	> 35% ☐	> 50% ☐	100% ☐
Rn.4	Have any relevant government incentivised schemes been taken advantage of? *i.e. Non-Domestic Renewable Heat Incentive (RHI)*	None ☐		Non-Domestic RHI ☐
Rn.5	Space Heating Peak (kWh/m2/y)			10 (Equiv. to 6 kWh/m2.yr renewable electricity from the grid) ☐
Rn.6	Domestic hot water peak (kWh/m2/y)	42 ☐	20 ☐	6 (Equiv. to 9 kWh/m2.yr renewable electricity from the grid) ☐
	Please attach Energy Assessment			☐
	Please attach relevant certification of the above standards you have chosen, and use 'Sustainability Summary' pages where you are adding any further information.			

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EB156
Green Infrastructure

OBJECTIVES & REQUIREMENTS

Epping Forest District has a predominantly agricultural landscape, with remnants of an extensive ancient forest reflected in both Epping Forest as well as pockets of woodland and mature trees located across the District. New developments risk harm to the Epping Forest SAC, already under pressure due to pollution and recreational use, unless suitable mitigation measures are implemented. The delivery of new multifunctional green infrastructure will reduce the burden on the Forest and will be proactively encouraged by the Council.

The green infrastructure network of the District must be considered in an integrated way. Design of streetscapes and amenity spaces, with urban greening such as street trees, pocket parks, garden hedgerows, greens roofs and swales, can provide placeshaping benefits as well as contribute to climate resilience, through biodiversity enhancement and mitigating overheating. Play, social spaces, food growing, art and heritage trails should be integrated early into designs, with active frontages onto green spaces, to ensure natural surveillance.

Proposals must be landscape-led from the start, as set out in the EFDC Green Infrastructure Strategy. They should respond to the District's distinctive setting; expand and enhance the green and blue infrastructure network; and improve access to, and the quality of, the surrounding Green Belt. The GI Strategy details how Suitable Alternative Natural Greenspace (SANG) should be provided as part of new Strategic Masterplan Areas to relieve pressure on the SAC, as well as other important sites of ecological and natural heritage importance. Where applicable, a Landscape Framework should be submitted detailing the provision of SANG.

The Environmental Bill requires development to deliver at least a 10% Biodiversity Net Gain (BNG), Stewardship and Maintenance strategies should clearly set out net gain outcomes, through habitat creation or enhancement for a minimum of 30 years. Local species should be specified to ensure long-term resilience. The GI strategy should be referred to with regards to stewardship, as it identifies stewardship models to ensure sustainable management and maintenance of green infrastructure.

KEY LOCAL POLICY & GUIDANCE

EFDC Local Plan Policy:

- **SP2** Place Shaping
- **SP6** The Natural Environment, Landscape Character and Green and Blue Infrastructure
- **DM1** Habitat protection and improving biodiversity
- **DM2** Epping Forest SAC and the Lee Valley SPA
- **DM3** Landscape Character, Ancient Landscapes and Geodiversity
- **DM5** Green and Blue Infrastructure
- **DM6** Designated and undesignated open spaces
- **DM9** High Quality Design
- **DM15** Managing and reducing flood risk
- **DM22** Air Quality

- EFDC Green Infrastructure Strategy
- EFDC Open Space Strategy

- Essex SuDS Design Guide
- Green Essex Strategy
- Essex Biodiverstiy Action Plan
- Stort Catchment Management Plan
- Green Arc Strategy

CASE STUDIES

Ecology of Colour, Dartford by Studio Weave
Part of a project to bring public function and engagement with local ecology to a neglected corner of Dartford.

Thames Basin Heaths Special Protection Area
In order to allow new development while safeguarding the integrity of the area, the Council has put in place mitigation measures including SANG.

	SUBMISSION CHECKLIST	Low Quality	Medium Quality	High Quality
Gr.1*	Has a high quality landscape-led approach been demonstrated as set out in the EFDC Green Infrastructure Strategy?	No ☐	Some landscape analysis undertaken ☐	Ecology, topography, vistas, character & features driving design ☐
Gr.2*	What % of Biodiversity Net Gain does your development achieve? *(Environmental Bill requires min. 10%)*	0-9% BNG ☐	10-15% BNG ☐	15%+ BNG ☐
Gr.3*	Does the Ecology report show process of mitigation and location hierarchy, with Stewardship and Maintenance strategy provided for green infrastructure and BNG?	No strategy ☐	Outline strategy provided ☐	30 year strategy with input from community ☐
Gr.4*	Have play, community amenity and food production opportunities been proposed? Fields in Trust distances should be followed for play spaces.	No ☐	Yes - locations mapped with walking isochromes ☐	Yes - locations mapped, characters defined, strategies for play / food / active frontages ☐
Gr.5*	Has a Landscape Framework been provided that articulates whether an integrated approach has been taken to the provision of SANG, including the use of recognised tools to assess its value/quality? (e.g. Natural Capital Tool/ Ecometric)	No ☐	Yes - qualitative assessment undertaken ☐	Yes - qualitative assessment/ value calculated with exemplary score ☐
Gr.6*	Has an overheating assessment or modelling been provided, as set out in UKGBC's Housing Standards Playbook, taking into account impact of green infrastructure?	No ☐	Some assessment provided ☐	Yes - UKGBC Playbook followed ☐
Gr.7*	Has multifunctional green infrastructure been proposed at different scales, with clarity on how its quality and quantity reinforces the District?	Different scales not explored ☐	Yes - different scales shown, roles/ function undeveloped ☐	Yes - small, medium and large GI shown, qualities and roles defined ☐
	Please attach relevant certification of the above standards you have chosen, and use 'Sustainability Summary' pages where you are adding any further information.			

EB156
Sustainable Movement

OBJECTIVES & REQUIREMENTS

Sustainable movement and active transport infrastructure are key to the success of sustainable growth in the District, as 61% of the District's carbon emissions are caused by on road vehicles (refer to p.6). The provision of sustainable transport choices and securing modal shift away from reliance on the car is a key component in mitigating the future impacts of air-borne pollutants on the health of both the Epping Forest Special Area of Conservation and local residents, and achieving net zero carbon by 2030.

Development should minimise the need to travel, promote opportunities for sustainable transport modes, improve accessibility to services and support the transition to a low carbon future. New proposals must futureproof for change in travel habits, including reallocating parking and road space, innovation in travel technology, last mile deliveries and electric charging. Masterplanning for sustainable movement should address: walkable low-traffic neighbourhoods, sociable streets and placemaking; cycling, walking and public transport network; behaviour change programmes; rebalancing car use and parking design (including carpooling and car sharing) and availability; futureproofing with adaptable technology; deliveries and servicing; and construction impacts.

Development will be supported where they:
(i) promote sustainable transport choices, through improvements to public transport services and supporting infrastructure, and providing coherent and direct cycling and walking networks to provide a genuine alternative to the car and facilitate a modal shift
(ii) promote and improve safety, security and healthy lifestyles;
(iii) do not result in unacceptable increases in traffic generation or compromise highway safety.

Development proposals that are likely to generate significant amounts of vehicle movement (as defined in the Council's list of Validation Requirements) will be required to submit a Transport Assessment or Transport Statement and be supported by a Travel Plan.

This section should be read in conjunction with the Air Quality chapter.
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KEY LOCAL POLICY & GUIDANCE

EFDC Local Plan Policy:

- **SP2** Place Shaping
- **SP3 (xvii)** Highest standards of energy efficiency
- **T1** Sustainable transport choices
- **T2** Safeguarding of routes and facilities
- **DM9** High Quality Design
- **DM20** Low Carbon and Renewable Energy
- **DM21** Local Environmental Impacts, Pollution and Land Contamination
- **DM22** Air Quality

- Essex County Council Travel Plan Guidance
- Epping Forest District Cycling Action Plan
- EFDC Parking Standards
- Transport for London's Healthy Streets Approach

CASE STUDIES

St Chads Development, Essex
Designated as shared surface 'home zones', streets are designed to meet the needs of pedestrians and cyclists, and reduce the speed of vehicles.

Mini-Hollands,
Involve a range of innovative improvements for cyclists, including cycle training, cycle roadshows, bike maintenance courses and cycle parking.

Brooklands, Milton Keynes
A comprehensive network of routes for active travel and links into the wider Milton Keynes network of footpaths and 'Redways' (safe paths for walking and cycling across the city).

SUBMISSION CHECKLIST		Low Quality	Medium Quality	High Quality
Tr.1 *	Have walkable, low-traffic and permeable neighbourhoods been designed as a first principle?	No - vehicle access design prioritised ☐	Transport hierarchy considered ☐	Yes - walking & cycling desire lines, network, topography, user hierarchy as design drivers ☐
Tr.2 *	Have safe and high quality connections to active travel networks beyond the development boundary been proposed with Green Infrastructure (GI) considered?	Ongoing connectivity not considered ☐	Some connectivity - lacks GI consideration ☐	Strong connections to networks, with clear relationship to GI ☐
Tr.3	Have inclusive design principles / accessibility for all regarding sustainable movement been achieved?	Meets Equalities Act ☐	Inclusive Design Statement provided ☐	Exemplary inclusive design provided ☐
Tr.4	Has cycle parking been designed to be high quality, safe, secure and easy to access?	Cycle parking not provided ☐	Suitable quantity of spaces provided ☐	Suitable quantity and high quality environment provided ☐
Tr.5	Has a high quality transport assessment been undertaken?	No ☐	Yes - assessment undertaken ☐	Yes - qualitative assessment undertaken ☐
Tr.6	Has a thorough Sustainable Travel Plan been provided? Has Modeshift Stars accreditation been explored?	No ☐	Sustainable Travel Plan provided ☐	Yes - including behaviour change programme, travel coordinator, monitoring ☐
	Please attach relevant certification of the above standards you have chosen, and use 'Sustainability Summary' pages where you are adding any further information.			

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EB156
Water Management

OBJECTIVES & REQUIREMENTS

Due to the combined challenges of growing populations within Epping Forest District, changing land uses and the finite supply of water, action is required now to ensure the availability of water for the future. The Environment Agency has identified the District as being in an area of 'serious water stress'. There is likely to be less water available for future generations and therefore a need for demand management and water efficiency in the area.

It is important that any new development does not lead to an overall increase in demand for water. The Local Plan puts in place an approach which will secure the incorporation of water saving measures and provide targets for water efficiency standards.

The incorporation of sustainable drainage systems (SuDS), that mimic natural drainage and encourage its passive infiltration and attenuation, will be encouraged in all new developments. To avoid increased flood risk and make effective use of existing and planned drainage infrastructure, rainwater should be managed as a valuable resource rather than a waste product. A multi-functional approach to the delivery of SuDS can provide interest in the provision of public open space, and increase biodiversity.

New developments should therefore look to:
i) Reduce the risk of flood through the use of sustainable drainage systems (SuDS)
ii) Minimise use of mains water by incorporating water saving measures and equipment, and by designing residential developments so that mains water consumption is reduced in accordance with requirements found in the table overleaf.
iii) Promote the use of rainwater harvesting and using dual potable and grey water recycling measures

New developments will also be encouraged to incorporate carbon reduction systems, such as a waste water heat recovery system.

For more information on SuDS please refer to the EFDC Green Infrastructure Strategy.

KEY LOCAL POLICY & GUIDANCE

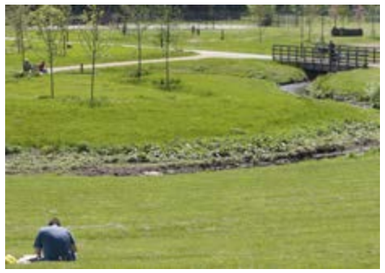
EFDC Local Plan Policy:

- **SP4(xvii)** Highest standards of energy efficiency
- **DM9** High Quality Design
- **DM16** Sustainable Drainage Systems
- **DM19** Sustainable Water Use
- **DM20** Low Carbon and Renewable Energy

- EFDC Green Infrastructure Strategy
- Essex SuDS Design Guide

CASE STUDIES

Flood Management
Knostrop Weir (Leeds) provides an echelon of three new pneumatically moveable weirs that can be lowered to let floodwater discharge quickly downstream; and a shared foot and cycle bridge



Ladywell Fields, Lewisham (SuDS)
Designed to create more sustainable drainage and reduce flooding, the river channel was modified to create a naturalistic setting incorporating backwaters and wetlands.

SUBMISSION CHECKLIST		Minimum Requirement	Net Zero-Carbon by 2050	Net Zero-Carbon by 2030
W.1 *	What water collection or recycling measures will be used?	100% provision of water butts ☐	Rainwater harvesting systems ☐	Grey water recycling & harvesting ☐
W.2 *	How much of the hard surfaces within the development and conveyance systems will be permeable (i.e streams, swales)	50% ☐	75% ☐	100% ☐
W.3 *	Have other SuDS measures been proposed? (i.e. permeable surfaces, rain gardens, green roofs, ponds/wetlands, soakaways)	No ☐		Yes ☐
W.4	Will water saving devices be installed wherever possible in the development? e.g. low flush toilets, smaller baths, taps and showers with flow regulators	No ☐		Yes ☐
W.5	Potable Water: What is the expected internal water use (litres/person/day)?	110 ☐	95 ☐	75 ☐
	Please attach relevant certification of the above standards you have chosen, and use 'Sustainability Summary' pages where you are adding any further information.			

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EB156
Circular Economy

OBJECTIVES & REQUIREMENTS

New developments should promote circular economy outcomes and aim to be net zero waste. In the UK, the largest contributor to waste nationally is the construction and demolition industry where a third of all waste is generated.

New developments within EFDC are to be designed to reduce construction waste and enable ease of access for future occupants to recycle and reduce waste. This can be encouraged through adopting a circular economy approach and the Waste Hierarchy found in the DEFRA Guidance.

Building in Layers principles should be adopted to determine realistic lifetimes for the elements of a building, and adapt the structure and fabric. Homes should be designed to be adaptable and flexible by considering the intended lifespan of each independent building layer, optimising building longevity and maximising material reclamation at end-of-life.

3 Key Principles expand the Circular Economy process:

1. Conserve Resources, Increase Efficiency, Source Ethically:
- Minimise the quantities of materials used by specifying low embodied carbon materials, and resuable materials.
- Minimise the quantities of other resources used including energy, water, and land.

2. Eliminate waste and ease maintenance by:
- Long-life & Loose fit: build to adapt to changing social, physical and economic environments.
- Design for Disassembly: at the commencement of the project, set out deconstruction plan and capture asset value.

3. Manage waste sustainably and at the highest value: this includes construction, demolition & excavation waste, operation & municipal waste

A Circular Economy Statement and Operational Waste Management Strategy should be provided to demonstrate chosen approach.

KEY LOCAL POLICY & GUIDANCE

EFDC Local Plan Policy:

- **SP3 (xvii)** Highest standards of energy efficiency
- **DM9** High Quality Design
- **DM20** Low Carbon and Renewable Energy
- **DM7** Heritage Assets
- **DM8** Heritage at Risk

- Circular Economy Guidance for Construction Clients (UKGBC)

CASE STUDIES

Illford Community Market, London
Designed for five years and will be dismantled and reconfigured on future meanwhile sites.

Queen Elizabeth Olympic Park, London
A waste target of 90% diversion from landfill of demolition waste by weight

Cork Housing, Studio Bark
A garden building made almost entirely out of cork, constructed as a building that can be completely recycled, reused or composted.

SUBMISSION CHECKLIST		Minimum Requirement	Net Zero-Carbon by 2050	Net Zero-Waste by 2030
CE.1	How much of the materials used on site are sourced from ethical and responsible supply chains?	80% ☐	95% ☐	100% ☐
CE.2	How much of the materials used are non-toxic?			100% ☐
CE.3	How much of the materials used can be easily extracted, recycled, and manufactured?	80% ☐	90% ☐	95% ☐
CE.4	To what amount are the new buildings circular-by-design?	20% ☐	40% ☐	65% ☐
CE.5	How much of the materials used are 'reusable'?			80% ☐
CE.6	How much of the materials used are 'reused'?			50% ☐
CE.7	How much biodegradable and recyclable waste will be diverted to landfill?			0 ☐
	Please attach the Circular Economy Statement			☐
	Please attach relevant certification of the above standards you have chosen, and use ‘Sustainability Summary’ pages where you are adding any further information.			

*** Outline planning applications need only respond to questions marked with an * asterisk. For full planning applications / reserved matters applications, please respond to all questions.*

EB156
Waste Management

OBJECTIVES & REQUIREMENTS

In line with becoming net zero carbon by 2030, EFDC want to ensure that the amount of waste produced by residents and visitors, as well as landfill waste, is significantly reduced, recycled, and used as a resource.

Developments should therefore be designed to ensure that residents and visitors to the District reduce the amount of waste they produce; with an overall ambition that no waste will end up as landfill.

This section of the guidance is linked closely with the section on Circular Economy regarding the necessity of designing buildings and places in a way that maximises the lifespan of a building and its components.

Innovative solutions for recyclable waste management, including underground refuse systems, are encouraged and applicants should support such initiatives. Whilst Essex County Council is responsible for decisions relating to the District's waste management, EFDC have a clear ambition to prevent waste going to landfill. Applicants are therefore expected to explore innovative ways to reduce waste at design stages, increase efficient recycling opportunities, and reduce household residual waste (including designing in opportunities for local food production through the provision of allotments, and space / opportunities for domestic composting).

Developers are expected to provide Operational Waste Strategies, including details of management of recyclable waste, residual waste and food waste. Developers are also encouraged to be innovative in contributing towards waste reduction campaigns.

KEY LOCAL POLICY & GUIDANCE

EFDC Local Plan Policy:

- **SP3 (xvii)** Highest standards of energy efficiency
- **DM9** High Quality Design
- **DM19** Sustainable Water Use
- **DM20** Low Carbon and Renewable Energy
- **DM11** Waste recycling facilities on new development
- **DM18** On site management of waste water and water supply

Essex County Council Waste Local Plan

CASE STUDIES

Eddington, Cambridge
Underground chutes replace thousands of traditional wheelie bins in an innovative waste disposal system

London Olympic Park, London
A waste target of 90% diversion from landfill of demolition waste by weight

Millerhill, Midlothian
Residual waste recycling and energy recovery facility

SUBMISSION CHECKLIST		Minimum Requirement	Net Zero-Carbon by 2050	Net Zero-Waste by 2030
Wa.1*	Has early engagement been undertaken with the EFDC Waste Management team to ensure their processes are taken into consideration?	No, LPA not engaged ☐		Yes, demonstrated ☐
Wa.2*	Have developments been designed to encourage ease in waste recycling?'			Yes ☐
Wa.3	How much construction, demolition and excavation (CD&E) waste will be recycled? *(This is to be incorporated in your Construction Management Plan)*			≥ 95% ☐
Wa.4	How much municipal waste (operational waste) will be recycled or composted vs sent to landfill or energy recovery?			65% : 35% ☐
	Please attach the Construction, Demolition and Excavation Waste Strategy			☐
	Please attach the Operational Waste Management Strategy, promoting reuse & recycling			☐
	Please attach relevant certification of the above standards you have chosen, and use 'Sustainability Summary' pages where you are adding any further information.			

***** *Outline planning applications need only respond to questions marked with an * asterisk. For full planning applications / reserved matters applications, please respond to all questions.*

EB156
Air Quality

OBJECTIVES & REQUIREMENTS

Every new development will have an impact on air quality, usually by increasing emissions from buildings or due to traffic generation. Poor air quality arises from sources including; traffic and transport, industrial processes, domestic and commercial premises, energy generation, agriculture, waste storage/treatment and construction sites.

Air pollution arising as a result of new developments risks harm to the Epping Forest Special Area of Conservation (SAC). New developments also risk cumulatively increasing local pollution levels which can negatively impact on human health. All new developments in the District should attempt to mitigate negative impacts on human health, and take in to consideration the District's requirements on Local Air Quality Action Plan, and Air Quality Assessments for developments. Developments should aim to improve local air quality, even if the area already complies with the air quality objectives. An air quality neutral assessment can assist with this.

The following net health gain principles (adopted from Public Health England's guidance) should be incorporated in to proposals during the design stages to reduce emissions and contribute to better air quality management; applicable irrespective of air quality assessments:

1. Reduce the need to travel by car to destinations
2. Provide zero / low-emission travel options (EV's)
3. Avoid siting buildings with vulnerable users (i.e. schools, nurseries, care homes) in areas where pollution levels are likely to be higher.
4. Avoid creating 'street canyons' which encourage pollution to build up
5. Incorporate green infrastructure to promote carbon and pollution sequestration
6. Orientate and design buildings to rely less on heating and cooling systems
7. Site residential accommodation away from roadsides
8. Incorporate whole-house ventilation systems for good indoor air quality

This section should not be used as a substitute for work otherwise undertaken in any normal full planning application. It should be read in conjunction with the Sustainable Movement chapter.

KEY LOCAL POLICY & GUIDANCE

EFDC Local Plan Policy:

- **SP3 (xvii)** Highest standards of energy efficiency
- **DM2** Epping Forest SAC and the Lee Valley SPA
- **DM8** Local Plan Review
- **DM9** High Quality Design
- **DM19** Sustainable Water Use
- **DM20** Low Carbon and Renewable Energy
- **DM21** Local Environmental Impacts, Pollution and Land Contamination
- **DM22** Air Quality

- EFDC Green Infrastructure Strategy
- EFDC Air Pollution Mitigation Strategy

SUBMISSION CHECKLIST		Low Quality	Medium Quality	High Quality
P.1 *	Have mitigation measures as described in the District's Air Pollution Mitigation Strategy been adhered to?			Yes ☐
P.2 *	Where the development has the potential to impact on air quality, has an air quality assessment been undertaken to ensure present and future occupants are not exposed to unacceptable levels of air pollution?	No ☐		Yes ☐
	Please attach relevant documentation, and use 'Sustainability Summary' pages where you are adding any further information.			

******* Outline planning applications need only respond to questions marked with an * asterisk. For full planning applications / reserved matters applications, please respond to <u>all</u> questions.*

EB156

Non-Domestic Development

OBJECTIVES & REQUIREMENTS

Epping Forest District Council seeks to ensure that climate resilience is built-into every project built in the District for decades to come, including non-domestic development.

It is recommended for all new non-domestic developments to follow the BREEAM assessment method, and to provide the relevant certification as part of the submission.

KEY LOCAL POLICY & GUIDANCE

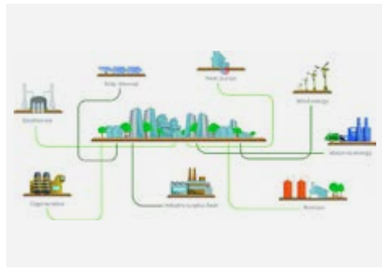
EFDC Local Plan Policy:

- **SP3 (xvii)** Highest standards of energy efficiency
- **DM 9** High Quality Design
- **DM 16** Sustainable Drainage Systems
- **DM 17** Protecting and enhancing watercourses
- **DM 19** Sustainable Water Use
- **DM 20** Low Carbon and Renewable Energy

CASE STUDIES

External Shading
External shading devices can be incorporated to prevent excessive internal solar gains and avoid overheating

Green Roofs
Green roofs can increase the thermal mass of a building, absorbing solar energy through the day and releasing heat at night.



Low-Carbon District Heating
The use of district heating to help manage the demand and supply of heat efficiently across larger developments.

SUBMISSION CHECKLIST		Minimum Requirement	Net Zero-Carbon by 2050	Net Zero-Carbon by 2030
ND.1 *	What BREEAM rating is the development targeting?	Very Good ☐	Excellent ☐	Outstanding ☐
ND.2 *	What annual building Operational Energy targets will your building/s achieve? (kWh/m^2/y)	< 170 ☐	< 110 ☐	0 - 55 ☐
ND.3 *	What annual building Embodied Carbon targets will your building/s achieve? (kgCO_2e/m^2)	<800 ☐	<650 ☐	<500 ☐
ND.4 *	What is the Potable Water Use designed for? (Litres/person/day)	16 l/p/d ☐	13 l/p/d ☐	10 l/p/d ☐
	Please use the 'Sustainability Summary' pages to describe what measures have been incorporated to design out the risk of overheating, giving priority to architectural approaches.			☐
	Please attach relevant certification of the BREEAM standards that the development is targeting, and use 'Sustainability Summary' pages where you are adding any further information.			☐

Assuring Performance

OBJECTIVES & REQUIREMENTS

Post construction energy and quality monitoring is required to bridge the 'performance gap' (difference between predicted performance and as-built performance of a building) found in new developments and achieve net zero-carbon. Achieving this requires a true understanding of a buildings' operational energy.

Addressing the performance gap in new homes and buildings is critical, as this affects both the 'happiness' of residents as well as the performance quality of the building. A poor performing building leads to higher energy bills due to poor building fabric, and risks exasperating challenging health conditions.

Studies undertaken by Innovate UK and the Zero Carbon Hub show that the majority of built projects do not meet their intended performance targets when tested, fall short even of compliance with Part L and Park F of Building Regulations.

For all new developments, design teams are required to undertake a Post Occupancy Evaluation (PoE), assessing both performance targets as well as the quality of life of current occupants. All developments will be required to monitor and report on residents' wellbeing and the actual operational energy performance of the building. The evaluation should be undertaken within the first two years of a building's occupation.

A template PoE form can be found here and should be used to demonstrate compliance. Broadly; evaluation will be required at the following stages:

1. Planning; predicted performance assessment
2. As-built; performance assessment
3. In-use; quality of life / wellbeing assessment

Further information can be found on the GLA website and the Zero Carbon hub website.

QUALITY STANDARD

In line with RIBA best practice, a Post Occupancy Evaluation is expected for submission, and should cover the following key areas:

1. Build Quality: performance of the completed buildings
2. Functionality: how useful the building is in achieving its purpose
3. Impact: how well these developments add social, economic, cultural and environmental value for occupants

*** Outline planning applications need only respond to questions marked with an * asterisk. For full planning applications / reserved matters applications, please respond to all questions.*

EB156

3

SOCIAL & ECONOMIC SUSTAINABILITY

Social and economic sustainability refers to the ways in which places are planned, designed, maintained, built and operated to improve local health and wellbeing, create jobs and bolster economic growth, and strengthen the community.

Introduction

OBJECTIVES & REQUIREMENTS

This section looks at the direct impacts of places on people - specifically how new developments will affect the communities they connect to.

Designing for social sustainability requires a framework for both creating new communities that thrive and ensuring existing communities are integrated in to new developments. It is important to address social sustainability at the beginning of development, as managing the long-term costs and consequences of decline and failure in new settlements is an issue of public value and political accountability.

The checklist in this section is designed as a socio-economic sustainability toolkit. Rather than provide a set of quantitative targets, the toolkit asks that developers carry out the appropriate engagements with the relevant communities and stakeholders, based on a demonstrable understanding of local needs. The guidance's aim is to ensure that new developments are equipped to incorporate the necessary 'community ingredients' that enable communities to thrive and that boost individual wellbeing - not just during occupation, but throughout all stages.

Community Ingredients should therefore cut across the different stages of developments, including:
1. Planning & design
2. Construction & occupation
3. Long-term stewardship

The list of key documents listed in the adjacent table should be used as reference by developers and applicants in understanding local socio-economic needs, and in planning engagement sessions. The list is not exhaustive but is intended to provide a starting point from which to develop more focused engagement sessions with local groups.

KEY LOCAL POLICY & GUIDANCE

EFDC Local Plan Policy:

- **SP2** Place shaping
- **H1** Housing Mix and Accommodation Types
- **H4** Traveller Site Development
- **E1** Employment Sites
- **E4** The Visitor Economy
- **DM9** High Quality Design
- **DM10** Housing Design and Quality
- **D2** Essential Facilities and Services
- **D4** Community, Leisure and Cultural Facilities

EFDC Statement of Community Involvement
EFDC Infrastructure Delivery Plan
EFDC Green Infrastructure Strategy
EFDC Economic Development Strategy
EFDC Health and Wellbeing Strategy
EFDC Cultural Strategy
EFDC Playing Pitch Strategy
EFDC Open Space Strategy
EFDC Employment and Skills Plan
Epping Forest District Tourism Strategy

NHS Healthy New Towns
HGGT Healthy Town Framework
RIBA Social Value Toolkit
Essex Design Guide
Essex Rights of Way Improvement Plan
Essex + Herts Digital Innovation Zone
essexmap.co.uk
Live Well Accreditation
Play England - Design for Play

Health & Wellbeing

OBJECTIVES & REQUIREMENTS

The health and wellbeing of residents should be the priority within any new developments. Measures should be taken to ensure this: including good accessibility to sustainable transport options, provision of high-quality public and green spaces, the use of green infrastructure and biodiversity to promote good mental and physical health, and investment in long-term resilient buildings and infrastructure.

In order to promote the health and wellbeing of new and existing communities, the Epping Forest District Council asks all new developments to take the following steps:

- Encourage physical activity, active living, active travel, and sport activities for residents (including through the provision of green infrastructure)
- Promote mental health and wellbeing through clear connections to existing support services
- Promote wellbeing through keeping noise pollution of new developments (both during construction phases and during occupation) to a minimum
- Encourage older people to live independent lives through increased community support and reduced winter pressures
- Support children and young people by incorporating access to affordable activities such as outdoor gyms, sports and leisure facilities, community allotments, travelling farms, and urban farming - helping to grow local fruits and vegetables for an improved diet
- Incorporating flexible workspaces, such as co-working, as part of the social infrastructure in new developments, particularly in light of pandemics like Covid-19 which will change the way we work moving forward

VOICE & INFLUENCE
New developments should look to amplify the voice and influence of residents. This involves governance structures to represent existing residents and engage new ones in shaping local decision-making and stewardship.

RESILIENCE & ADAPTABILITY
New developments should be forward-planning; including housing, infrastructure, and services that can adapt over time; as well as the incorporation of meanwhile use of buildings and public spaces.

CASE STUDIES

Urban Roof Greening

Great Kneighton, Cambridge
- allotments embedded as part of new development

Outdoor / Park Gyms

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Economic Growth & Job Creation

OBJECTIVES & REQUIREMENTS

New developments should look to promote long-term growth and development opportunities for local communities, as well as the facilities to develop new skills. This section of the guidance focuses on outcomes including local residents having comfortable homes that are affordable to operate; thriving local businesses; and long-term employments for skilled local labour.

The economic priorities and objectives for new developments should: businesses and jobs, places and people.

Business & Jobs: delivering on these priorities will lead to the following outcomes:
• Skills creation in existing communities and young people, including apprenticeships, to ensure economic impact of new developments continue in the longer term
• Use of local labour and supplies in new development projects
• A healthy business start-up rate and continued growth in the business base

Place: delivering on these priorities will lead to the following outcomes:
• An outstanding location and environment for businesses, that attract and retain more jobs in the District.
• A sufficient, high quality, viable employment land supply to meet future demand and provide a credible offer to prospective inward investors.
• New managed workspace and a mix of premises sizes and styles that cater for existing and future demand, including challenges resulting from Covid-19

People: what we want to achieve in EFDC are the following outcomes:
• New developments cater both to new and existing EFDC residents; the provided housing mixes should be such that they attract new families to settle in the District, but also provide the required homes for local needs
• EFDC, education and training institutions, individuals and local industries will have an informed view of future skills needs that provides a basis for education and training planning and provision.
• Businesses are able to access the workforce they need.

CASE STUDIES

St John's Estate, Chelmsford, (Metropolis Planning & Design), The project has delivered economic benefits to the local community, including the creation of 80 new jobs.

The Portland Inn (Baxendale Studio)
A commission to design a building that will host a diverse cultural programme. Part of the brief was that the local community would be able to participate in its construction.

Community Strength & Social Infrastructure

OBJECTIVES & REQUIREMENTS

New developments should ensure that they integrate existing communities with new ones through shared social infrastructure. Collective activities and social architecture allow the fostering of local networks, creating a sense of belonging and community identity. Measures such as stakeholder engagement and post-development governance will provide residents with ownership of their built environment.

New developments will be expected to provide certain key infrastructures, or contributions towards their provision. The incorporation of these both formal and informal amenities will work towards enabling social inclusion between the members of a community.

Social facilities for children and teenagers; particularly access to early years childcare and leisure centres, are lacking in the District. Developments that provide these and locate them within existing communities will be encouraged.

Further information can be found in the Epping Forest District Council Infrastructure Delivery Plan (IDP), which highlights the local infrastructure requirements of the District, along with their priorities for the area (critical, essential or desirable). These include, but are not limited to:

• Health, Social Care and Emergency Services
• Community Halls
• Walking and Cycling Initiatives
• Education
• Sports Facilities
• Suitable Alternative Green Space (SANGS)

New developments should refer to the IDP, and planning applications should highlight what infrastructure will be provided, alongside contributions to ensure local community needs are met.

CASE STUDIES

Bromley by Bow Centre
A pioneering charity that combines an extensive neighbourhood hub with a medical practice and a community research project.

The Big Lunch (Eden Project)
An annual national event that provides a hook for people to organise lunch with their neighbours, at home or in the street, supported by advice and ideas available on the web.

Castlebank Horticultural Training Centre, Lanark (EKJN)
A collection of neglected outbuildings behind Castlebank House have become a thriving horticultural training centre, a valuable community resource.

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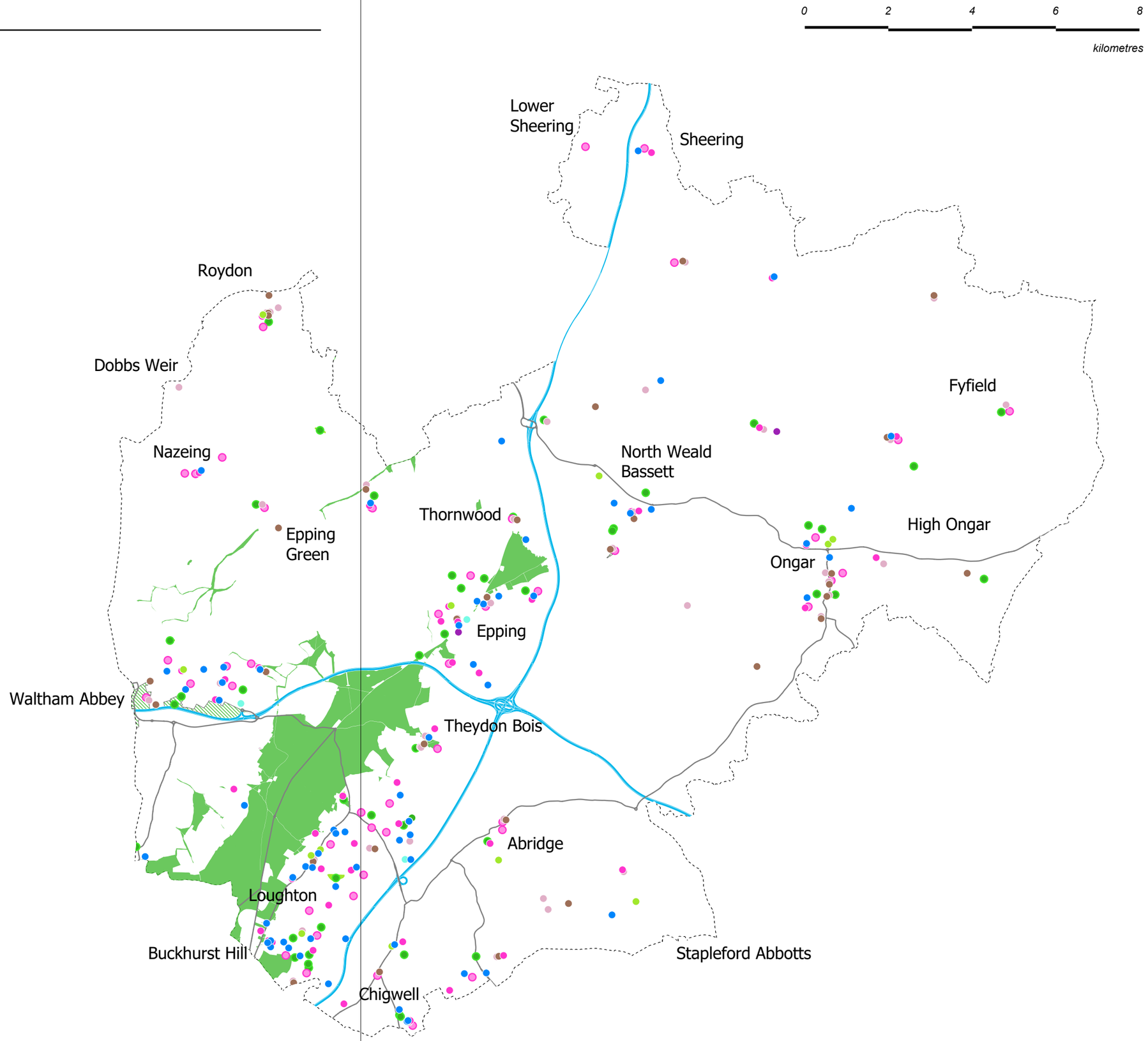
EFDC Social Infrastructure Map

The map and list on this page highlight existing social infrastructures and community groups within the District. These are not exhaustive but are intended to provide a starting point from which applicants are to develop more focused engagement sessions with local groups.

Please also refer to essexmap.co.uk for an interactive and live map of social infrastructures across Essex.

- EFDC Youth Council
- EFDC Community Champions
- Voluntary Action Epping Forest
- EFDC Health and Wellbeing Board
- Epping Forest District Dementia Action Alliance
- Epping Neighbourhood Action Panel
- Epping Forest Multi Faith Forum
- Rural Community Council of Essex



EB156
Additional Case Studies

Tibby's Triangle (Ash Sakula Architects)
There is a constant flow of people of all ages walking through this development in Southwold, going to the sea, to the shops, or just using it as a shortcut. Cars are accommodated by parking spaces adjacent to the homes and not at the expense of pedestrian circulation.

The Hamptons (Community Support Officer)
A local group helped turn two lakes into a fishery. They are now used by a wide spectrum of different social groups on the development.
This is supported by a strong, informative community website.

The Portland Inn (Baxendale Studio)
Baxendale was commissioned to build a temporary external structure that would help deliver a diverse programme with, given its limited budget, a key set of requirements as part of the brief. These were that the local community should be able to participate in its construction.

The Big Lunch (Eden Project)
The Big Lunch is an annual national event: an estimated 8.5m people took part in 2012. It provides a hook for people to organise lunch with their neighbours, at home or in the street, supported by advice and ideas available on the web.

Argal Workshops (Gluckman Smith)
A Cornish former farmstead, previously derelict, was transformed into rural workshops for a local furniture and product designer, to Passivhaus standards, making a new working community for the area.

The Hackney Carnival
Social Life was asked by Hackney Council to look at the social and economic value of the Hackney Carnival - particularly looking at how this brings money into the borough and how it helps make people feel at home in Hackney, and with their wider community.

Higham Hill Theatre (vPPR Architects)
The project is a small community amphitheatre in Higham Hill Park in Walthamstow, part of Waltham Forest's Making Places initiative to deliver public realm improvement works to every ward in the borough.

Social infrastructure: enabling social inclusion
Social Life and Hawkins Brown have been commissioned by the GLA to carry out a research inquiry into the role of social infrastructure in enabling social integration and supporting inclusive growth for London.

Castlebank Horticultural Training Centre, Lanark (EKJN)
What began as a collection of neglected and derelict outbuildings behind Castlebank House has become a thriving horticultural training centre, a very popular, much used and valuable community resource.

Socio-Economic Checklist

SUBMISSION CHECKLIST	
S.1 *	Explain how the proposals have been informed by the key stakeholders. (Include in response: the stakeholders you have engaged with, the findings from these sessions, and how you have implemented stakeholder recommendations) *(max. 250 words)*
S.2 *	Explain how the socio-economic needs identified in this section have been implemented in your proposal (include the ease of accessibility for existing communities to use new facilities and networks). *(max. 250 words)*
S.3 *	What 'meanwhile' uses are planning for existing communities during construction stage of major developments? How are they implemented? *(max. 250 words)*
S.4 *	Explain how the proposal responds to, and has been impacted by, the list of key documents highlighted in this section (include list of documents used and key findings). *(max. 250 words)*
S.5 *	Demonstrate how the EFDC Economic Growth Strategy has been incorporated in this scheme through; design stages, construction stage, and post-completion (identify what jobs have been created / will be created through this development). *(max. 250 words)*
	Please include your responses to the questions above in the "Sustainability Statement' pages which form part of your submission

****** Outline planning applications need only respond to questions marked with an * asterisk. For full planning applications / reserved matters applications, please respond to <u>all</u> questions.*

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4

SUBMISSION

This section includes the list of submission requirements, and the sustainability statement.

EB156
Submission

1. Submit the following as evidence of the completed Quality checklists. Please note that this list is in addition to, and does not supersede, the general submission requirements listed in the EFDC Planning Application Validation Requirements Checklist.

Design Principles	
	Daylight and Sunlight Assessment ☐
Environmental Sustainability	
Energy Efficiency & Carbon	
	Whole Life Carbon Assessment ☐
	Overheating Design Assessment ☐
Renewable Energy	
	Energy Assessment ☐
Sustainable Movement	
	Sustainable Travel Plan ☐
	Transport Assessment ☐
Water Management	
	Water Management / SUDS Strategy ☐
Green Infrastructure	
	Ecological Report (to include Biodiversity Impact Assessment) ☐
	Lighting Assessment ☐
	Landscape Character and Tree Surveys ☐
Circular Economy	
	Circular Economy Report (linked to Construction Management Statement) ☐
	Construction Management Statement ☐
Waste Management	
	Operational Waste Strategy ☐
Air Quality	
	Air Quality Impact Assessment ☐
Assuring Performance	
	Post-Occupancy Evaluation ☐
Socio-Economic Sustainability	
	Health Impact Assessment ☐
	Health Framework Action Plan ☐
	Community Engagement Strategy ☐
	Stewardship / Maintenance Strategy ☐

2. Include any additional strategies that have not been covered by the Quality checklists in the space below. All submitted assessments / reports will be conditioned to the LPA at post completion / pre-occupation stage to ensure that all new developments are being completed to the specified design standards in order to close the performance gap and create truly sustainable communities.

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APPENDIX

EB156

Appendix 1: Climate Emergency Declaration

EPPING FOREST DISTRICT COUNCIL

Declaration: Climate Emergency
Date of Declaration: 19th September 2019

Cllrs: S.Nevile + J.Phillip

Adopted Motion / Commitment:
1. Declare a ‘Climate Emergency’;

2. Pledge to do everything within the Council’s power to make Epping Forest District Council area Carbon Neutral by 2030;

3. Call on Westminster to provide the powers and resources to make the 2030 target possible;

4. Work with other governments (both within the UK and internationally) to determine and implement best practice methods to limit Global Warming to less than 1.5°C;

5. Continue to work with partners across the district and region to deliver this new goal through all relevant strategies and plans;

6. In the special circumstances of this district, resolves to protect the Special Area of Conservation through the Local Plan and every other means;

7. Implement an Air Quality Strategy and bring forward Sustainability Guidance on planning; and

8. Engage with young people when considering the issue of climate change and appoint a ‘Youth Ambassador’ from the Epping Forest Youth Council.”

Appendix 2: Building Performance Standards

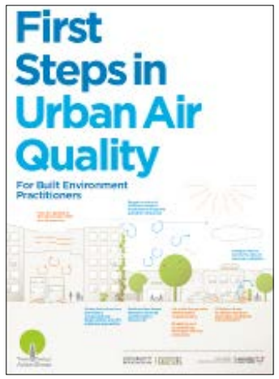
Net Zero Carbon Buildings - UKGBC

Passivhaus

BREEAM Communities

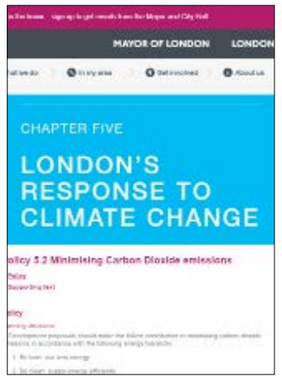
BREEAM HQM

RIBA 2030 Climate Challenge



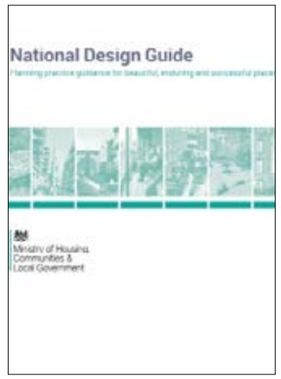
First Steps in Urban Air Quality

RICS Whole Life Carbon Assessment



London Plan: Energy Hierarchy

Future Homes Standard 2020



National Design Guide

Transport for New Homes Checklist

Appendix 3: Whole Life Carbon Assessment

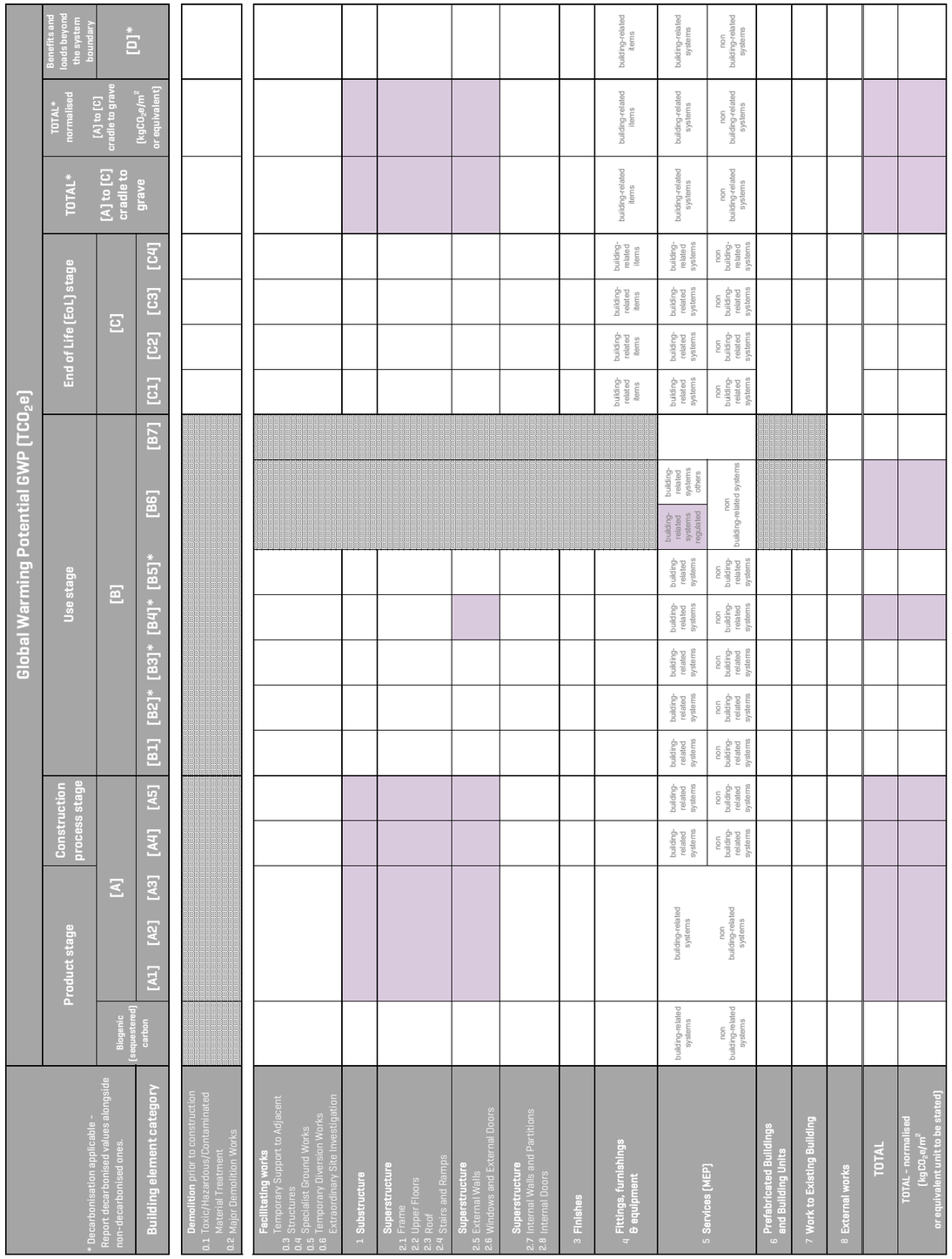
TABLE 12: THE PROJECT ID MATRIX

Date of assessment	Date of assessment completion
Verified by	Verifier name and organisation
Project type	New build or refurbishment of existing structure
Assessment objective	Brief assessment purpose statement
Project location	Full address
Date of project completion	Anticipated date of practical completion
Property type	Residential, public/civic, retail, office, infrastructure, etc. State planning use class
Building description	No. of storeys, structural frame, façade type, basement?, brief description of associated external areas and any ancillary structures
Size	NIA, GIA, volume, etc.
Project design life	In years
Assessment scope	Building parts and life stages/modules included
Assessment stage	Design stage at which the assessment has been conducted at
Data sources	List all data sources used in the assessment including building information and carbon data sources
Building elements coverage	See table below
Assumptions and scenarios	List all assumptions and scenarios used in the assessment including brief justifications

#	Building parts/element groups	Building elements	Coverage (%)
0	Facilitating works	0.1 Temporary/Enabling works/ Preliminaries	
		0.2 Specialist groundworks	
1	Substructure	1.1 Substructure	
2	Substructure	2.1 Frame 2.2 Upper floors incl. balconies 2.3 Roof 2.4 Stairs and ramps	
	Superstructure	2.5 External Walls 2.6 Windows and External Doors	
	Superstructure	2.7 Internal Walls and Partitions 2.8 Internal Doors	
3	Finishes	3.1 Wall finishes 3.2 Floor finishes 3.3 Ceiling finishes	
4	Fittings, furnishings and equipment (FF&E)	Building-related Non-building-related	
5	Building services / MEP	5.1–5.14 Building-related services	
		Non-building-related	
6	Prefabricated Buildings and Building Units	6.1 Prefabricated Buildings and Building Units	
7	Work to Existing Building	7.1 Minor Demolition and Alteration Works	
8	External works	8.1 Site preparation works 8.2 Roads, Paths, Pavings and Surfacings 8.3 Soft landscaping, Planting and Irrigation Systems 8.4 Fencing, Railings and Walls 8.5 External fixtures 8.6 External drainage 8.7 External Services 8.8 Minor Building Works and Ancillary Buildings	

These tables have been taken from the *RICS Whole Life Carbon Assessment for the Built Environment,* (November 2017). Please refer to the document for detailed guidance on how to fill out the assessments.

TABLE 13: RESULTS REPORTING TEMPLATE



Appendix 4: Glossary

Air Quality Management Area
Air Quality Management Areas (AQMA) are designations used by DEFRA (Department for Environment, Food and Rural Affairs) to manage areas with air pollution, that are unlikely to meet the Government's national air quality objectives.

Air Quality Action Plan
A document produced by the Council with Natural England setting out the steps that will be taken to reduce pollution within an Air Quality Management Area (AQMA). This could include steps to reduce car usage and promote public transport.

Airtightness
Building airtightness is defined as the resistance to air leakage through unintentional points or areas in the building envelope. Heat can be lost through these gaps in the walls, floors and roofs of buildings creating draughts and so it is extremely important to make sure these are eliminated. This down to good detailing and good site workmanship.

Biodiversity
The variety of plant and animal life in the world or in a particular habitat, a high level of which is usually considered to be important and desirable.

Blue Infrastructure
Infrastructure provision relating to water. This includes natural features such as rivers, streams and ponds, semi-natural features such as sustainable drainage systems, bio-swales and canals, and other engineering features such as dams, weirs and culverts. Blue and green infrastructure are often considered together, placing emphasis on the importance of biodiversity and flood risk mitigation.

BREEAM
BREEAM is one of the leading sustainability assessment methods for masterplanning projects, infrastructure and buildings. It is used for assessments across the built environment lifecycle, from new construction to in-use and refurbishment. BREEAM does this through third party certification of the assessment of a building's environmental, social and economic sustainability performance, using standards developed by BRE (Building Research Establishment).

Building in Layers
The concept of building in 'layers' was first proposed by architect Frank Duffy in the 1970s, and developed by Stuart Brand in the 1990s. It means that each element may easily be separated and removed. This facilitates reuse, remanufacture and recycling. For example, facades or heating systems may be designed and fitted as independent entities, integrated with other building systems but not entwined with the fabric of the building.

Carbon Footprint
The amount of carbon dioxide released into the atmosphere as a result of the particular individual, organisation or community. The carbon footprint of a development is counted over its lifetime i.e. the materials used and their sources, construction, lifetime use and demolition.

Circular Economy
The circular economy is a model of production and consumption, which involves sharing, leasing, reusing, repairing, refurbishing and recycling existing materials and products as long as possible. In this way, the life cycle of products is extended.

Cold Bridge
Occurs when there is a thermal break in the insulating materials between the inside and outside of a building e.g. a gap in the wall or roof insulation, allowing heat to escape.

Development
'Development' includes building operations (e.g. structural alterations, construction, rebuilding, most demolition); material changes of use of land and buildings; engineering operations (e.g. groundworks); mining operations; other operations normally carried out by a person operating a business as a builder; subdivision of a building (or any part of it) used as a dwelling house for the use as two or more separate dwelling houses. As defined by section 55 of the Town and Country Planning Act 1990.

Embodied Energy
The sum of the energy requirements associated, directly or indirectly, with the delivery of a good or service. This includes: the energy required to initially produce the building (the processing and the manufacture of the materials of the building as well as their transportation and assembly on site), the energy needed to refurbish and maintain the building over its lifetime, and the energy necessary to demolish and dispose of the building at the end of its life.

Environmental Impact Assessment
A procedure to be followed for certain types of projects to ensure that decisions are made in full knowledge of any likely significant effects on the environment.

Fossil Fuel
Fossil fuel is a general term for buried combustible geologic deposits of organic materials, formed from decayed plants and animals that have been converted to crude oil, coal, natural gas, or heavy oils by exposure to heat and pressure in the earth's crust over hundreds of millions of years. The burning of fossil fuels by humans is the largest source of emissions of carbon dioxide, which is one of the greenhouse gases that allows radiative forcing and contributes to global warming.

Green Belt
Land protected by a policy and land use designation to protect areas of largely undeveloped or agricultural land surrounding or neighbouring urban areas. Review of Green Belt boundaries is undertaken as part of the production of Local Plans where Green Belt exists.

Green Infrastructure
Green infrastructure is a network of high quality and multifunctional green spaces , both urban and rural, including environmental features such as parks, public open spaces, playing fields, sports pitches, woodlands, and allotments, which are capable of delivering a wide range of environmental and quality of life benefits for local communities. The provision of green infrastructure can provide social, economic and environmental benefits close to where people live and work.

Infrastructure Delivery Plan
This will contain the key infrastructure required to support the homes and commercial development in the Local Plan. This includes physical infrastructure such as transport energy and water, social and community infrastructure such as health, education and emergency services and green infrastructure such as open spaces and allotments. The Infrastructure Delivery Plan (IDP) sits alongside the Local Plan and will contain a programme identifying when items of infrastructure are expected to be in place, funding and costs. It will be regularly updated as more information becomes available.

Local Plan
The plan for the future development of the local area, drawn up by the local planning authority in consultation with the community and stakeholders. Once adopted the Local Plan will legally form part of the Development Plan for the District, superseding the Replacement Local Plan (2006).

Appendix 4: Glossary (cont.)

Meanwhile Use
The term ‘meanwhile use’ refers to the short-term use of temporarily empty buildings such as shops until they can be brought back into commercial use. The landlord will continue to look for a new commercial occupant for the space during the meanwhile use. Meanwhile uses are generally for the benefit of the local community, for example; meeting spaces, informal training and learning spaces, temporary rehearsal spaces, pop-up shops and exhibitions, and so on.

Modal Shift
Modal shift means a switching of energy consumption methods, such as when people switch from fossil fuel reliant forms of transport (such as cars) to sustainable transportation options such as busses, trains and (electric) bicycles.

National Planning Policy Framework
National Planning Policy Framework (NPPF) sets out the Government’s planning policies for England, and provides a framework within which local people and their accountable councils can produce their own distinctive local and neighbourhood plans, which reflects the needs and priorities of their communities.

Operational Energy
Operational energy is the energy required during the entire service life of a structure such as lighting, heating, cooling, and ventilating systems; and operating building appliances.

Passivhaus
A Passivhaus is a building in which thermal comfort can be achieved solely by post-heating or post-cooling the fresh air flow required for a good indoor air quality, without the need for additional recirculation of air.

Performance Gap
The difference between predicted performance and the as-built performance of a building.

Post Occupancy Evaluation
Post-occupancy evaluation (POE) of a building demonstrates how well it is performing in use and how far it is achieving against its intended purpose. POE also highlights any gaps in communication and understanding amongst building managers and occupants that my hinder a building’s operational performance.

Quality Review Panel
An independent panel of planning, architecture, urban design and construction experts set up by the Council to provide impartial expert advice to both applicants and local authorities on design issues in relation to important new development schemes and proposals for important public spaces including significant minor applications, major planning applications, pre-application development proposals, strategic masterplans and concept frameworks. The Quality Review Panel’s feedback is a material consideration for local authorities and the planning inspectorate when determining planning applications. The purpose of the Quality Review Panel is to ensure that new development is of a high quality and contributes to place making.

Renewable Energy
Renewable energy is energy that is collected from renewable resources, which are naturally replenished on a human timescale, such as sunlight, wind, rain, tides, waves, and geothermal heat.

Special Area of Conservation
Area given special protection under the European Union’s Habitats Directive which is transposed into UK law by the Habitats and Conservation of Species Regulations 2010.

Strategic Masterplan
A masterplan is the process by which organisations undertake analysis and prepare strategies, and the proposals that are needed to plan for major change in a defined physical area. It acts as a context from which development projects come forward for parts of the area.

Suitable Alternative Natural Greenspace
Suitable Alternative Natural Greenspace (SANG) is the name given to greenspace that is of a quality and type suitable to be used as mitigation to offset the impact of residential development and visitor pressure on Special Protection Areas (SPAs). The purpose of SANGs is to provide alternative greenspace to attract visitors away from SPAs.

Sustainable Drainage Systems
These are drainage systems designed to manage surface water and groundwater to sustainably reduce the potential impact of new and existing developments on flood risk. They can form part of a wider integrated water management approach.

Sustainable Transport
Efficient, safe and accessible means of transport with overall low impact on the environment, including walking and cycling, low and ultra-low emission vehicles, car sharing and public transport.

Thermal Bridging
It is important to make sure that the gap between the window frame and the wall is well sealed otherwise heat will be lost around the window even if the window itself is very energy efficient.

Transport Assessment
A comprehensive and systematic process that sets out transport issues relating to a proposed development. It identifies what measures will be required to improve accessibility and safety for all modes of travel, particularly for alternatives to the car such as walking, cycling and public transport and what measures will need to be taken to deal with the anticipated transport impacts of the development.

Transport Statement
A simplified version of a transport assessment where it is agreed the transport issues arising out of development proposals are limited and a full transport assessment is not required.

Validation Requirements
The information that is required to be submitted with a planning application in order to be considered ‘valid’. This includes particular plans or supporting documents that must be included with a planning application. It includes national requirements and local requirements which are specific to Epping Forest District. The up to date requirements are set out in the ‘Epping Forest District Council Planning Application Validation Requirements Checklist’ document.

Whole Life Carbon
Considering operational as well as embodied carbon emissions combined over a project’s expected life cycle.

Zero Carbon
Causing or resulting in no net loss of carbon dioxide into the atmosphere. A zero carbon building is one with zero net energy consumption or zero net carbon emissions on an annual basis.

EB156

2//

EFDC SUSTAINABILITY GUIDANCE & CHECKLIST / MINOR DEVELOPMENTS *(1-9 units)*

DRAFT - REVISION 06
FEBRUARY 2021

EB156

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In Acrobat Reader, go to View > Page Display > Two Page View
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Issue and Revision Record

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01	August 4th, 2020
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06	February 16th, 2021

Contents

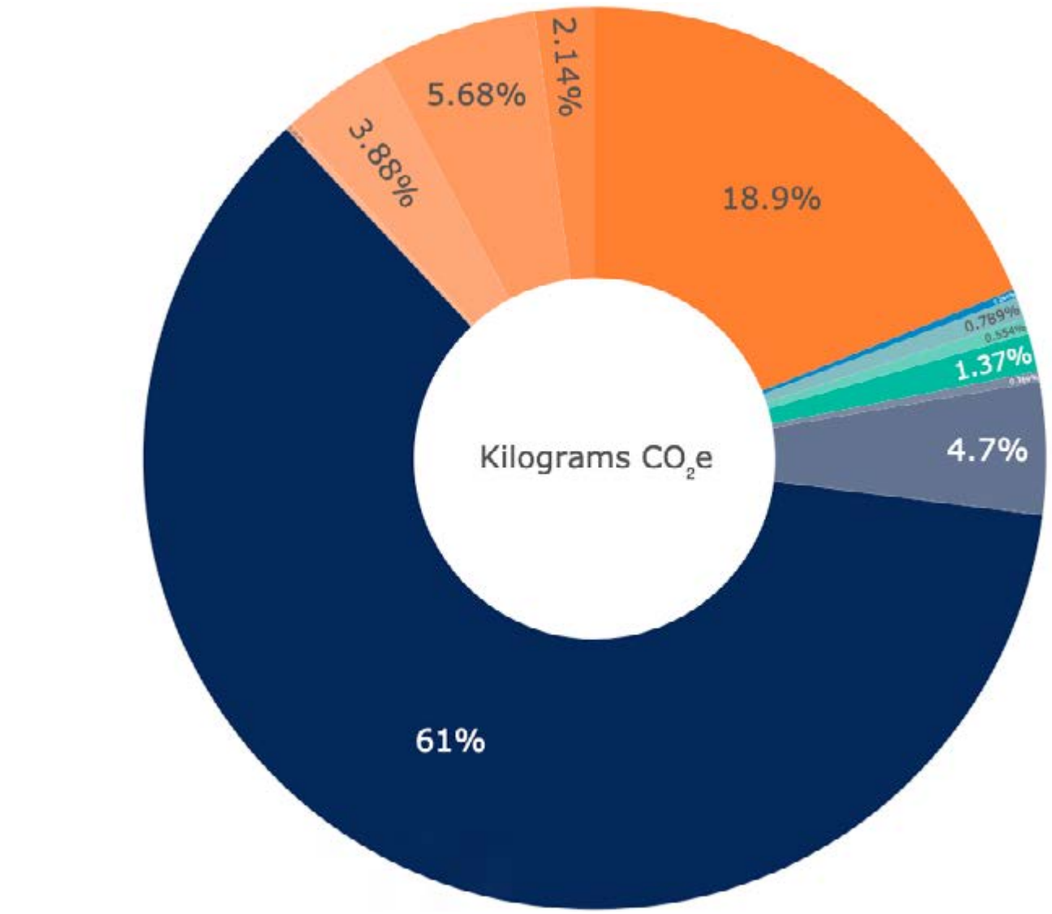
1

INTRODUCTION

This document supports the highest environmental commitment across the District - to become Carbon-Neutral by 2030

Overview

Epping Forest District has an annual carbon emission contribution of 2,048 CO2 (kt) across all industries (2017 data). The graph below provides a break down of the District's emissions based on sector:



Residential buildings
Commercial buildings & facilities
Institutional buildings & facilities
Industrial buildings & facilities
Agriculture
Livestock
Industrial Process
Wastewater
Solid waste disposal
Off-road
Aviation
On-road

Source: scattercities.com

CLIMATE EMERGENCY

The UK Government and Epping Forest District Council have declared a Climate Emergency.

The global climate is changing, primarily as a result of greenhouse gas emissions from human activity. Communities, businesses and the natural environment are already feeling the impacts of the changing climate. Continuted change is now unavoidable and will disrupt everyday life, with higher average temperatures and more extreme weather events.

This Sustainability Guidance supports the highest commitment across the District, which is to produce net zero cabon emissions by 2030. It sets out practical solutions to set out a clear design and construction process for any new development, into a net zero future. EFDC believes that in order to meet our climate change targets, all new buildings must operate at net zero carbon by 2030.

Sustainability focuses on meeting the needs of the present without compromising the ability of future generations to meet their needs. High quality sustainable developments require adopting a holistic approach to environmental, social and economic sustainability.

EPPING FOREST FOREST DISTRICT COUNCIL

The Council's emerging Local Plan sets out the most significant level of development to be brought forward across the District in a generation.

Within the period 2011-2033 the growth proposed in the emerging Local Plan will provide for a minimum of 11,400 new homes. Much of this will be delivered through larger strategic sites which will require planning applicants to take a proactive and considered approach to matters of environmental and socio-economic sustainability.

The emerging local plan looks to balance future development alongside ecological well-being, responding to the climate emergency and meeting objectives to improve health and well-being.

PLANNING POLICY CONTEXT

There is a strong and committed national and local policy context for planning environmentally, socially and economically sustainable places and developments, and climate adaptation.

The National Planning Policy Framework (NPPF) (February 2019) sets out national policy for local planning authorities and decision makers. The NPPF states that there is a presumption in favour of sustainable development (paragraph 11), with sustainable development having economic, social and environmental objectives.

The environmental objective is that development should protect and enhance the natural, built and historic environment as well as protecting biodiversity, minimising pollution and adapting to climate change and the demands of a low carbon economy.

COVID-19 RECOVERY

The guidance has been developed during the COVID-19 pandemic, which has highlighted stark health inequalities relating closely to environmental, social and economic inequalities.

Now more than ever, high quality, sustainable and resilient design and development is needed to ensure that existing and new residents of Epping Forest District recover from the pandemic in a long term and locally-led manner.

Opportunities to foster community strength, provide job opportunities, support green and local economies and bolster residents health must be taken. All stakeholders are therefore expected to work collaboratively to contribute to this recovery, and ensure that the District is a joyful and sustainable place to live, work and play.

EB156
How to use this guidance?

1 / PURPOSE OF THIS GUIDANCE

The purpose of this guidance is to help applicants meet EFDC's goals of becoming net zero carbon by 2030, as well as building strong and integrated communities across new and existing places.

Planning for significant growth in the District, new developments need to have in place the foundations to enable exemplar placemaking and long term sustainability. This document provides practical and technical guidance on how relevant Sustainability indicators and policies (environmental, social, and economic) in the Epping Forest District Local Plan will be applied to new minor residential and non-residential developments across the district.

The Sustainability Guidance will promote good and best practice and whilst it will be a material planning consideration in determining planning applications, it will not be adopted policy. Planning officers will need to make a judgement in terms of compliance with the Guidance, and this will feed in to the decision making process. Planning officers will also recognize that not all of the checklist questions will be relevant to each application (due to scale, site constraints etc.)

2 / WHO USES THIS GUIDANCE?

Applicants + Agents:
The document is to be used by developers, design teams, consultants and contractors in shaping development proposals, This will guide design, and ensure coordinated and integrated consideration of sustainability principles and targets at an early stage.

Local Authority Officers and decision-makers:
This document will be endorsed to have material planning weight and the Checklist will help guide the assessment of planning applications for developments coming forward within the District. It will inform pre-application discussions and assist decision-makers in sustainability matters.

The EFDC Quality Review Panel (QRP):
This Checklist will be utilised for QRP reviews to help form the basis of Sustainability discussions. The QRP panel members are independent experts, and applicants are advised to be in a position to discuss issues on all categories raised in this guidance.

3 / WHEN TO USE THIS GUIDANCE?

Pre-Application; The Sustainability Checklist should accompany pre-application discussions to ensure all applications have considered and incorporated sustainability measures from the outset of their design.

Planning Application; A Sustainability Strategy incorporating the Checklist, with relevant certification, is to be submitted alongside planning applications.

Post-Planning; Relevant conditions will be discharged and planning obligations and monitoring will be coordinated to ensure that sustainable measures are in place through to delivery and beyond. Tools such as Post-Occupancy Evaluation for ongoing monitoring will be expected relating to key indicators.

4 / HOW TO USE THIS GUIDANCE?

High quality and sustainable development requires environmental, social and economic sustainability to be holistically considered. The guidance is split into the following two sections:
1. Environmental Sustainability
2. Socio-Economic Sustainability

Each section comprises the following categories:
1. Objectives & Requirements
2. Key Local Policy & Guidance
3. Case studies
4. Checklist (to be completed and submitted)

There is also a glossary within the Appendix at the end of the document.

5 / SUBMISSION REQUIREMENTS

1. Sustainability Checklist
2. Sustainability Statement

The Sustainability Statement should be accompanied with relevant certifications.

6 / APPLICATION OF GUIDANCE

The guidance is applicable to all minor developments within Epping Forest District. This will include:
- All minor residential-led developments and associated infrastructure proposals (1-9 units, or floorspace of up to 999 sq.m.)
- Change of Use resulting in minor development

7 / THE CHECKLIST

The Checklists indicate the quality of development in line with the District's standards. These will be assessed in the round to ensure a holistic approach to sustainability is being considered. Each theme will be assessed in the context of factors that may be unique to a development, providing flexibility in how each development is assessed. The applicant is expected to identify unique sustainability aspects of their development and include these in the 'Sustainability Statement'.

Minimum Requirements (Low Quality)	**Net Zero-Carbon by 2050** (Medium Quality)	**Net Zero-Carbon by 2030** (High Quality)
Policy-compliant / Building Regulations compliant only	*These targets meet ultimate goal, but 20 years slower*	*These targets meet our goal and Climate Declarations*

8 / RELATIONSHIP TO THE LOCAL PLAN

This guidance has been endorsed to have material planning weight and should be read in conjunction with the policies found in the Epping Forest District Council Local Plan. It compliments the Local Plan policies by providing a practical tool for enhancing the sustainability of development in the District.

9 / PARTNERSHIP WORKING

Epping Forest District Council is committed to working with relevant organisations, service providers and community groups to ensure proposals are developed collaboratively and with thorough consideration of local priorities.

10 / REVIEW & MONITOR

The guidance will be reviewed and updated every 3 years. It will be reviewed upon national adoption of the Future Homes Standard. Current Building Regulations fall short of the 2030 net-zero carbon commitment by the District.

11 / INCENTIVES FOR SUSTAINABILITY

Design and Planning
Compliance with these sustainability standards will lead to a smoother planning process and faster assessment time.

Awards and Recognition
Exemplar schemes will be shared as case studies. The Council will work with applicants to put their schemes forward for local and national awards and partnership opportunities.

Cost Benefits
By 2030 all new buildings will need to operate at Net Zero (i.e. annual net zero carbon emissions), which means that by 2025 all new buildings must be designed to net zero carbon.

Net zero capital homes can be achieved at a capital cost uplift of between 3.5% - 15% for residential developments, or at equal cost - depending on economies of scale in alignment with various reports. (e.g. study of tower developments shows that net zero carbon homes can be achieved at a capital cost uplift of between 3.5% - 5.3%). This capital cost of sustainable buildings is likely to decrease over time as legislation improves, our electricity grid decarbonises, our supply chain upskills and cost of technologies decrease.

Costs can be offset by value benefits, including: increased rental premiums, lower tenancy void periods and lower offsetting costs. Furthermore, long-term operation costs of new homes are vastly reduced due to the lower energy demand from homes, eliminating changes such as fuel poverty, and providing cost savings of 30%-40% over 30 years. In a post COVID-19 society, more people are working from home, making sustainable homes and communities more attractive to homeowners and thereby providing a commercial benefit to developers.

EB156

2

ENVIRONMENTAL SUSTAINABILITY

This section looks at how Epping Forest District Council can become net zero carbon by 2030.

EB156
Design Approaches: First Principles

The following ‘First Principles’ are to be incorporated to ensure new developments are sustainable, and bring practical solutions towards good design. The principles act as an iterative design process, encouraging a wholistic approach to sustainability. The incorporation of these principles at an early stage of a development will make it easier to meet performance targets set out in the remainder of the Sustainability sections.

1 / LANDSCAPE LED DESIGN

The District is characterised by different types of landscapes. Study of existing strategies, analysis, survey and mapping should be undertaken of existing green infrastructure and ecological value of features. These include; topography, trees, hedgerows, woodland, grasslands, wetlands, meaowlands, farmlands, hills and lowlands, flood plains, views and vistas. Drawings, surveys, site photographs and precedent images should be utilised.

Design should be landscape led from the start and across all design stages. The best design and development outcomes will be delivered by engaging landscape and ecology consultants at an early stage. Additional spending on design fees will be very likely outweighed by the speed and ease of securing planning permission.

2 / SUSTAINABLE MOVEMENT

Identifying sustainable movement and active transport infrastructure is key to the success of sustainable growth in the District as they embed connectivity through movement corridors; playing a significant role in location, form and scale of development.

Local routes for everyday journeys to work, schools, and shopping should be identified as opportunities to knit communities together, rather than sever them. Strong transport links can tie-in with historic pathways identified through fine-grain analysis. Priority should be given to pedestrian and cycle networks that link to wider sustainable transport networks.

3 / ORIENTATION & FORM

Solar orientation must inform the topography, scale and massing of development at early stages of masterplanning, with south-facing buildings, fenestration, and amenities designed to take advantage of passive solar gain – absorbing the sun’s heat energy to warm buildings and spaces. Building axis’ should be orientated in the east-west direction – to take advantage of maximum daylight and heat from the sun which significantly reduces the energy consumption of a building, and can reduce a homes’ heating and cooling costs by up to 85%. To stay cool in the summer months and avoid overheating, external shading provisions should be made to the buildings and surrounding areas, including the use of green infrastructure.

A Daylight / Sunlight Assessment can help provide more information on how much natural light your development will be exposed to.

4 / ENERGY HIERARCHY

New developments should comply with the following Energy Hierarchy principles:

BE LEAN: Use less energy: minimising the energy demand of new buildings through fabric performance: This step requires design that reduces the energy demand of a development. Energy Strategies need to demonstrate how energy efficiency measures reduce the energy demand in line with performance targets highlighted in this document.

BE CLEAN & GREEN: Supply energy efficiently: utilising energy efficiently in buildings including for space heating & cooling: Consideration must be given to how heat and energy will be provided to the development using low-carbon heating networks.

BE SEEN: Monitor & Report performance: for at least 5 years post-completion to remove the performance gap: This requires all major developments to monitor and report their energy performance post-construction to ensure that the actual carbon performance of the development is aligned with the EFDC ambitions of a net zero-carbon target.

5 / ADAPTABLE & FUTURE PROOF DESIGN

Building strong communities is aided by giving households the opportunity to have accommodation that can adapt to respond to their changing needs and abilities. This means looking at the macro-scale provision of green and blue infrastructure and management for climate adaptation, futureproofing infrastructure for technological innovation, a range of house types, adaptable facilities and meanwhile use spaces. And through to the micro-scale; for example the space and ease in ability to extend homes and facilities (physical and digital) to work from home.

It is important that strong communities are not broken due to the lack of adaptable design.

6 / FABRIC-FIRST APPROACH

A fabric-first approach requires the building envelope to be a high-performance thermal envelope, reducing energy waste. This means the proposed buildings must have external walls, roofs, floors, windows & doors that are: super insulated, airtight, and windtight.

A fabric-first approach includes the windows and doors – which provide significant heat loss and heat gains – depending on solar orientation. Windows and doors must therefore incorporate high-performance glazing to provide comfortable internal temperatures. A high-performance thermal envelope delivers exceptional indoor comfort and building energy efficiency.

7 / VENTILATION & OVERHEATING

A mixed-mode (natural and mechanical) ventilation strategy is encouraged for excellent indoor air quality. This involves the incorporation of a whole-house mechanical ventilation with heat recovery system (MVHR) – which is key to delivering radically energy efficiency and exceptional comfort, through providing clean, filtered air into habitable spaces.

Early stage overheating analysis will be expected to be carried out at design stage to identify key factors contributing to overheating risk. Where developments are at risk of overheating, additional detailed assessment and mitigation measures will be expected to be incorporated.

8 / EMBODIED & OPERATIONAL ENERGY

All design teams are expected to think about, and reduce the embodied energy required to develop their schemes. For example, depending on location, height, and site suitability, materials like timber could be favoured over less sustainable alternatives such as concrete.

In terms of operational energy, Developments should be aiming for net zero carbon – where energy on an annual basis is zero or negative. A net zero carbon building is highly energy efficient and powered from on-site and/or off-site renewable energy sources. Developments should be designed using realistic predictions of operational energy to avoid performance gap in a buildings’ energy use.

9 / RENEWABLE TECHNOLOGIES

Renewable energy uses natural resources such as sunlight, wind, tides and geothermal heat which are naturally replenished. Most forms of renewable energy are cheap to operate, but can be expensive to install.

Examples of technologies include; PV’s, solar thermal, biomass, ground/air source heat pumps, wind, hydro. The choice of renewable technologies should be dependent on an assessment on site and development suitability.

10 / AIRTIGHT & THERMAL BRIDGE FREE

An airtight strategy focuses on the internal comfort of a building, and will be required to develop a draught-free building envelope. The draught-free building ensures high energy efficiency, internal user comfort, and protects the building envelope. The airtight strategy must be continuous to ensure there are no unintended gaps in the building envelope that allow uncontrolled air to leak in and out of the building.

Internal comfort can be affected by excessive heat loss through the building fabric caused by poor detailing around junctions in the building envelope. Gaps in the insulation barrier or large areas of conductive thermal bridging should be designed out.

Post-occupancy evaluation enables air tightness and thermal bridging to be measured, to help close the known performance gap in these areas.

EB156
Energy Efficiency & Carbon

OBJECTIVES & REQUIREMENTS

The transition to net zero-carbon by 2030 must begin with providing genuinely affordable homes. Beyond the planning system, the government is considering changes to legislation and policy that will promote lower carbon buildings. Changes to Building Regulations to improve the energy efficiency of new homes were recently subject to consultation.

All new buildings should look to adopt a fabric-first approach (e.g. Passivhaus Standards), with the expectation that as our grid system decarbonises and, we build more energy efficient homes, emphasis will be placed on the embodied energy involved in constructing new buildings.

With the decarbonising of the National Grid, achieving net zero-carbon will mean developments must respond to the key components of whole-life carbon; embodied carbon and operational energy. Achieving net zero operational energy means the building does not burn fossil fuels and is 100% powered by renewables.

A Whole Life Carbon (WLC) Assessment should be undertaken both at the pre-application stages and after practical completion, as new homes are expected to last 60+years, with carbon emission reduction in line with the targets in the Checklist.

Embodied Carbon Reduction Strategy:
- Using circular economy principles of reuse and refurbish, and designing for disassembly at end of life with processes including using offsite construction.
- Building low-energy homes, using fossil fuel-free technology to supply heating and power to them. Using renewable energy where necessary

Operational Carbon Reduction Strategy:
- Not burning fossil fuels for supply to homes
- 100% powered by renewable energy i.e.heat pumps
- Achieving energy performance in line with checklist

Embodied carbon can be measured by design teams by various software that allow quick analysis and visual representation of carbon use.

KEY LOCAL POLICY & GUIDANCE

EFDC Local Plan Policy:

- **SP2** Place Shaping
- **SP3 (xvii)** Highest standards of energy efficiency
- **T1** Sustainable transport choices
- **T2** Safeguarding of routes and facilities
- **DM9** High Quality Design
- **DM20** Low Carbon and Renewable Energy
- **DM21** Local Environmental Impacts, Pollution and Land Contamination
- **DM 22** Air Quality

Net Zero Carbon Buildings: A Framework Definition (UKGBC)

CASE STUDIES

Cassiobury Park, Watford
Multi-purpose community hub, designed with minimal energy consumption. It won the Most Sustainable Construction award at the 2018 Building Futures Awards.

Goldsmith Street, Norwich
Built to Passivhaus standards, needing little energy for heating and cooling.

Johnson Court, West Dene
A small development of rural affordable housing, designed to Passivhaus standards in Hertfordshire and shortlisted for sustainable construction excellence at the 2018 Building Futures awards.

	SUBMISSION CHECKLIST	Minimum Requirement	Net Zero-Carbon by 2050	Net Zero-Carbon by 2030
En.1	Operational Energy (KWh/m2/y) (includes both regulated and unregulated energy use in the building, as measured at the meter)	146 ☐	< 70 ☐	< 0 - 35 ☐
En.2	Embodied Carbon (kgCO2e/m2)	1000 ☐	< 450 ☐	< 300 ☐
En.3	Space Heating Demand (KWh/m2/y)	54.26 ☐	25 ☐	15 ☐
En.4	Airtightness (air changes/ hr @ n50)	5 ☐	3 ☐	≤ 0.6 ☐
En.5	Ventilation Strategy (m3/hr/person)	Natural - extract fans ☐	Mechanical with extract fans ☐	Mechanical Heat Recovery (30) ☐
En.7	What is the on-site reduction in CO2 emissions against Building Regulations Part L (2013)?	0-34% ☐	35%-50% ☐	≥ 50% ☐
En.8	What Fabric U-Values has the proposal been designed to meet? W/(m2K)	☐	☐	☐
	External Walls	0.30 - 0.16	0.15 - 0.13	< 0.13
	Floor	0.25 - 0.11	0.10 - 0.08	< 0.07
	Roof	0.20 - 0.13	0.12 - 0.10	< 0.10
	Windows (triple glazing) & Doors	2.00 - 1.4	1.3 - 1.00	< 0.9
	Please attach Tables 12 & 13 of your Whole Life Carbon Assessment (see Appendix 3)			☐
	Please attach relevant certification of the above standards you have chosen, and use ‘Sustainability Summary’ pages where you are adding any further information.			

EB156
Renewable Energy

OBJECTIVES & REQUIREMENTS

Our recent extreme weather has highlighted the need to ensure that buildings constructed today are fit for the future, and, designed for resilience over the next 60+ years. New developments have a unique opportunity to ensure that the heating and hot water they generate are fossil fuel free , as heat demand is estimated at more than 40% of the energy consumed across the District.

On-site renewable technologies such as Heat Pumps, Solar Photovoltaics, and Solar Thermals should be explored for adoption, and combined to provide the greatest benefit to new developments.

Applicants are to use the LETI Heat Decision Tree throughout the design stages, to assist them in choosing the most appropriate heating system. Renewable systems should be prioritised over connecting to district heating networks, which depend on fossil fuels.

New Developments should be designed to;

• Minimise system temperatures: high temperatures in heating systems are synonymous with fossil-fuel combustion
• Reduce Heat Demand at point of use: The greatest opportunity to meeting net zero-carbon emissions is to reduce the amount of heat needed: achieved through a fabric-first approach and limited hot water use, coupled with reuse of low temperature waste heat sources.
• Lean Design: load modelling can predict energy use and help size plant requirement.
• Harness Waste Heat: heat released as a by-product of an existing process enables otherwise wasted heat to contribute to meeting energy demands.

Please note that whilst categorised as a source of renewable energy, biomass has negative impacts on air quality and climate change, and therefore EFDC will not support applications where biomass is proposed.

KEY LOCAL POLICY & GUIDANCE

EFDC Local Plan Policy:

• **SP3 (xvii)** Highest standards of energy efficiency
• **DM9** High Quality Design
• **DM19** Sustainable Water Use
• **DM20** Low Carbon and Renewable Energy

CASE STUDIES

Passivhaus, Devon
This Passivhaus by architects McLean Quinlan in a rural setting in Devon operates full on renewable energy from solar panels and air source heat pumps.

Active Homes, Neath, South Wales
Battery technology used to store energy and solar PV & TSC's to generate 60% energy.

Tallack Road, Waltham Forest, London
Large-scale communal Air Source Heat Pump to feed ambient temperature heat network

SUBMISSION CHECKLIST		Minimum Requirement	Net Zero-Carbon by 2050	Net Zero-Carbon by 2030
Rn.1	What on-site renewable energy technologies have been included in your development?	PV's + EV charging / CHP's ☐	Low-temperature District Heating ☐	Heat Pumps / Solar Thermal ☐
Rn.2	What percentage of CO2 emission reduction will be provided from on-site renewable energy sources? *(SAP 10 carbon emission factors to be used for calculation)*	> 20% ☐	> 50% ☐	> 70% ☐
Rn.3	What percentage of household electricity will on-site renewable technology provide? *(Net zero operational carbon does not burn fossil fuel and is 100% powered by renewables)*	> 35% ☐	> 50% ☐	100% ☐
Rn.4	Have any relevant government incentivised schemes been taken advantage of? *i.e. Non-Domestic Renewable Heat Incentive (RHI)*	None ☐		Non-Domestic RHI ☐
Rn.5	Space Heating Peak (W/m2)			10 (Equiv. to 6 kWh/m2.yr renewable electricity from the grid) ☐
Rn.6	Domestic hot water peak (W/m2)			6 (Equiv. to 9 kWh/m2.yr renewable electricity from the grid) ☐
	Please attach Energy Assessment			☐
	Please attach relevant certification of the above standards you have chosen, and use 'Sustainability Summary' pages where you are adding any further information.			

EB156
Green Infrastructure & Air Quality

OBJECTIVES & REQUIREMENTS

Epping Forest District has a predominantly agricultural landscape, with remnants of an extensive ancient forest reflected in both Epping Forest as well as pockets of woodland and mature trees located across the District. New developments risk harm to the Epping Forest Special Area of Conversation (SAC), already under pressure due to pollution and recreational use. The delivery of new multi-functional green infrastructure will reduce the burden on the Forest, and the Council will pro-actively encourage developments that do so.

New developments also risk cumulatively increasing local pollution levels which can negatively impact on human health.

Proposals must be landscape-led from the start and across all design stages, as set out in the EFDC Green Infrastructure Strategy. They should respond to the District's distinctive setting and support a sustainable and diverse environment. The GI Strategy details how provision of Suitable Alternative Natural Greenspace (SANG) can help relieve pressure on the SAC, as well as other important sites of ecological and natural heritage importance. Where applicable for a development, a Landscape Framework should be submitted detailing the provision of SANG.

The latest Environmental Bill requires development to deliver at least a 10% Biodiversity Net Gain (BNG). Stewardship and Maintenance strategies should clearly set out net gain outcomes, through habitat creation or enhancement for a minimum of 30 years.

New developments should take in to consideration the District's requirements on Air Quality Management Areas, Local Air Quality Action Plan, and development Air Quality Assessments. Developments should aim to improve local air quality, even if the area already complies with the air quality objectives. An air quality neutral assessment can assist with this.

KEY LOCAL POLICY & GUIDANCE

EFDC Local Plan Policy:

- **SP2** Place Shaping
- **SP6** The Natural Environment, Landscape Character and Green and Blue Infrastructure
- **DM1** Habitat protection and improving biodiversity
- **DM2** Epping Forest SAC and the Lee Valley SPA
- **DM3** Landscape Character, Ancient Landscapes and Geodiversity
- **DM5** Green and Blue Infrastructure
- **DM6** Designated and undesignated open spaces
- **DM8** Local Plan Review
- **DM9** High Quality Design
- **DM15** Managing and reducing flood risk
- **DM22** Air Quality

- EFDC Green Infrastructure Strategy
- EFDC Open Space Strategy
- EFDC Air Pollution Mitigation Strategy

- Green Essex Strategy
- Essex Biodiverstiy Action Plan
- Stort Catchment Management Plan
- Green Arc Strategy

CASE STUDIES

Ecology of Colour, Dartford by Studio Weave
Part of a project to bring public function and engagement with local ecology to a neglected corner of Dartford.

Thames Basin Heaths Special Protection Area
In order to allow new development while safeguarding the integrity of the area, the Council has put in place mitigation measures including SANG.

	SUBMISSION CHECKLIST	Low Quality	Medium Quality	High Quality
Gr.1	Has a high quality landscape-led approach been demonstrated as set out in the EFDC Green Infrastructure Strategy?	No ☐	Some landscape analysis undertaken ☐	Ecology, topography, vistas, landscape character & features driving design ☐
Gr.2	What % of Biodiversity Net Gain does your development achieve? *(Environmental Bill requires min. 10%)*	0-9% BNG ☐	10-15% BNG ☐	15%+ BNG ☐
Gr.3	Does Ecology report show process of mitigation and location hierarchy, with Stewardship and Maintenance strategy provided for green infrastructure and BNG?	No strategy ☐	Outline strategy provided ☐	30 year strategy with input from community ☐
Gr.5	Has an overheating assessment or modelling been provided, as set out in UKGBC's Housing Standards Playbook, taking into account impact of green infrastructure?	No ☐	Yes - some assessment ☐	Yes - UKGBC Playbook followed ☐
Gr.6	Have measures been taken to reduce the need for car travel, and provide alternative zero and low-emission travel options?	No ☐		Yes ☐
Gr.7	Have mitigation measures as described in the District's Air Pollution Mitigation Strategy been adhered to?	No ☐		Yes ☐
Gr.8	Where the development has the potential to impact on air quality, has an air quality assessment been undertaken to ensure present and future occupants are not exposed to unacceptable levels of air pollution?	No ☐		Yes ☐
	Please attach relevant certification of the above standards you have chosen, and use 'Sustainability Summary' pages where you are adding any further information.			

EB156

Sustainable Movement

OBJECTIVES & REQUIREMENTS

Sustainable movement and active transport infrastructure are key to the success of sustainable growth in the District, as 61% of the District's carbon emissions are caused by on road vehicles (refer to p.6). The provision of sustainable transport choices and securing modal shift away from reliance on the car is a key component in mitigating the future impacts of air-borne pollutants on the health of the Epping Forest SAC and local residents, and achieving net zero carbon by 2030.

Development should minimise the need to travel, promote opportunities for sustainable transport modes, improve accessibility to services and support the transition to a low carbon future.

Development proposals that are likely to generate significant amounts of vehicle movement (as defined in the Council's list of Validation Requirements) will be required to submit a Transport Assessment or Transport Statement and be supported by a Travel Plan.

KEY LOCAL POLICY & GUIDANCE

EFDC Local Plan Policy:

- **SP3 (xvii)** Highest standards of energy efficiency
- **T1** Sustainable transport choices
- **T2** Safeguarding of routes and facilities
- **DM20** Low Carbon and Renewable Energy
- **DM21** Local Environmental Impacts, Pollution and Land Contamination
- **DM 22** Air Quality

- Essex County Council Travel Plan Guidance
- Epping Forest District Cycling Action Plan

CASE STUDIES

Mini-Hollands, Involve a range of innovative improvements for cyclists, including cycle training, cycle roadshows, bike maintenance courses and cycle parking.

SUBMISSION CHECKLIST		Low Quality	Medium Quality	High Quality
Tr.1	Has cycle parking been designed to be high quality, safe, secure and easy to access?	Cycle parking not provided ☐	Suitable quantity of spaces provided ☐	Suitable quantity and high quality environment provided ☐
Tr.2	Have inclusive design principles / accessibility for all regarding sustainable movement been achieved?	Meets Equalities Act ☐	Inclusive Design Statement provided ☐	Exemplary inclusive design provided ☐
Tr.3	Has a high quality transport assessment been undertaken?	No ☐	Yes - assessment undertaken ☐	Yes - qualitative assessment undertaken ☐
	Please attach relevant certification of the above standards you have chosen, and use 'Sustainability Summary' pages where you are adding any further information.			

Water Management

OBJECTIVES & REQUIREMENTS

The Environment Agency has identified EFDC as being in an area of 'serious water stress'. It is important that any new development does not lead to an overall increase in demand for water. The Local Plan puts in place an approach which will secure the incorporation of water saving measures and provide targets for water efficiency standards.

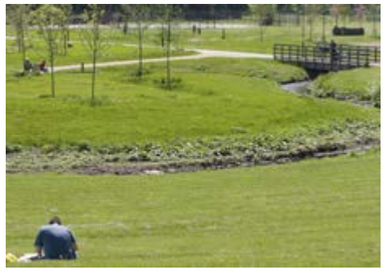
The incorporation of sustainable drainage systems (SuDS), that mimic natural drainage and encourage passive infiltration and attenuation, will be encouraged. New developments should also look to minimise use of mains water by incorporating water saving measures and equipment, and by designing residential developments so that mains water consumption is reduced in accordance with requirements found in the table below. For more information on SuDS please refer to the EFDC Green Infrastructure Strategy.

KEY LOCAL POLICY & GUIDANCE

EFDC Local Plan Policy:

- **SP3 (xvii)** Highest standards of energy efficiency
- **DM9** High Quality Design
- **DM16** Sustainable Drainage Systems
- **DM19** Sustainable Water Use
- **DM20** Low Carbon and Renewable Energy

CASE STUDIES



Ladywell Fields, Lewisham (SuDS) Designed to create more sustainable drainage and reduce flooding, the river channel was modified to create a naturalistic setting incorporating backwaters and wetlands.

SUBMISSION CHECKLIST		Minimum Requirement	Net Zero-Carbon by 2050	Net Zero-Carbon by 2030
W.1	Potable Water: What is the expected internal water use (litres/person/day)?	110 ☐	95 ☐	75 ☐
W.2	What water collection or recycling measures will be used?	100% provision of water butts ☐	Rainwater harvesting systems ☐	Grey water recycling & harvesting ☐
W.3	How much of the hard surfaces within the development and conveyance systems will be permeable (i.e streams, swales)	50% ☐	75% ☐	100% ☐
W.4	Will water saving devices be installed wherever possible in the development? e.g. low flush toilets, smaller baths , taps and showers with flow regulators	No ☐		Yes ☐
W.5	Have other SuDS measures have been proposed? (i.e. permeable surfaces, rain gardens, green roofs, ponds/wetlands, soakaways)	No ☐		Yes ☐
	Please attach relevant certification of the above standards you have chosen, and use 'Sustainability Summary' pages where you are adding any further information.			

EB156
Circular Economy & Waste

OBJECTIVES & REQUIREMENTS

New developments within EFDC should promote circular economy outcomes and aim to be net zero waste. In the UK, the largest contributor to waste nationally is the construction and demolition industry, where a third of all waste is generated. New developments are to be designed to reduce construction waste and enable ease of access for future occupants to recycle and reduce waste. This can be encouraged through adopting a circular economy approach and the Waste Hierarchy found in the DEFRA Guidance.

Homes should be designed to be adaptable and flexible by considering the intended lifespan of each independent building layer, optimising building longevity and maximising material reclamation at end-of-life.

3 Key Principles expand the Circular Economy process:

1. Conserve Resources, Increase Efficiency, Source Ethically:
- Minimise the quantities of materials used by specifying low embodied carbon materials, and resuable materials.
- Minimise the quantities of other resources used including energy, water, and land.

2. Eliminate waste and ease maintenance by:
- Long-life & Loose fit: build to adapt to changing social, physical and economic environments.
- Design for Disassembly: at the commencement of the project, set out deconstruction plan and capture asset value.

3. Manage waste sustainably and at the highest value: his includes construction, demolition & excavation waste, operation & municipal waste

Applicants are therefore expected to explore innovative ways to reduce waste at design stages, increase efficient recycling opportunities, and reduce household residual waste. A Circular Economy Statement and Operational Waste Strategy should be provided to demonstrate chosen approach.

KEY LOCAL POLICY & GUIDANCE

EFDC Local Plan Policy:

- **SP3 (xvii)** Highest standards of energy efficiency
- **DM9** High Quality Design
- **DM19** Sustainable Water Use
- **DM20** Low Carbon and Renewable Energy
- **DM7** Heritage Assets
- **DM8** Heritage at Risk
- **DM11** Waste recycling facilities on new development
- **DM18** On site management of waste water and water supply

CASE STUDIES

Illford Community Market, London
Designed for five years and will be dismantled and reconfigured on future meanwhile sites.

The Barn by Pad Studio
Planks of wood reclaimed from an old barn were used to clad this house in Hampshire, England, designed by Pad Studio.

Cork Housing, Studio Bark
A garden building made almost entirely out of cork, constructed as a building that can be completely recycled, reused or composted.

SUBMISSION CHECKLIST		Minimum Requirement	Net Zero-Carbon by 2050	Net Zero-Waste by 2030
Ce.1	How much of the materials used on site are sourced from ethical and responsible supply chains?	80% ☐	95% ☐	100% ☐
Ce.2	How much of the materials used are non-toxic?			100% ☐
Ce.3	How much of the materials used can be easily extracted, recycled, and manufactured?	80% ☐	90% ☐	95% ☐
Ce.4	The new buildings are circular-by-design to what amount?	20% ☐	40% ☐	65% ☐
Ce.5	How much construction, demolition and excavation (CD&E) waste will be recycled?			≥ 95% ☐
Ce.6	How much municipal waste (operational waste) will be recycled or composted vs sent to landfill or energy recovery?			65% : 35% ☐
Ce.7	How much of the materials used are 'reusable'?			80% ☐
Ce.8	How much of the materials used are 'reused'?			50% ☐
Ce.10	Has early engagement been undertaken with the EFDC Waste Management team to ensure their processes are taken into consideration?	No, LPA not engaged ☐		Yes, demonstrated ☐
Ce.11	Have developments been designed to encourage ease in waste recycling?	☐		Yes ☐
	Please attach the Design Stage Circular Economy Statement			☐
	Please attach the Construction, Demolition and Excavation Waste Strategy			☐
	Please attach the Operational Waste Management Strategy promoting reuse & recycling			☐
	Please attach relevant certification of the above standards you have chosen, and use ‘Sustainability Summary’ pages where you are adding any further information.			

EB156

Non-Domestic Development

OBJECTIVES & REQUIREMENTS

Epping Forest District Council seeks to ensure that climate resilience is built-into every project built in the District for decades to come, including non-domestic development.

It is recommended for all new non-domestic developments to follow the BREEAM assessment method, and to provide the relevant certification as part of the submission.

KEY LOCAL POLICY & GUIDANCE

EFDC Local Plan Policy:

- **SP3 (xvii)** Highest standards of energy efficiency
- **DM 9** High Quality Design
- **DM 16** Sustainable Drainage Systems
- **DM 17** Protecting and enhancing watercourses
- **DM 19** Sustainable Water Use
- **DM 20** Low Carbon and Renewable Energy

CASE STUDIES

External Shading
External shading devices can be incorporated to prevent excessive internal solar gains and avoid overheating

Green Roofs
Green roofs can increase the thermal mass of a building, absorbing solar energy through the day and releasing heat at night.

Low-Carbon District Heating
The use of district heating to help manage the demand and supply of heat efficiently across larger developments.

SUBMISSION CHECKLIST		Minimum Requirement	Net Zero-Carbon by 2050	Net Zero-Carbon by 2030
ND.1	What BREEAM rating is the development targeting?	Very Good ☐	Excellent ☐	Outstanding ☐
ND.1	What annual building Operational Energy targets will your building/s achieve? (kWh/m^2/y)	< 170 ☐	< 110 ☐	0 - 55 ☐
ND.2	What annual building Embodied Carbon targets will your building/s achieve? (kgCO_2e/m^2)	<800 ☐	<650 ☐	<500 ☐
ND.3	What is the Potable Water Use designed for? (Litres/person/day)	16 l/p/d ☐	13 l/p/d ☐	10 l/p/d ☐
	Please use the 'Sustainability Summary' pages to describe what measures have been incorporated to design out the risk of overheating, giving priority to architectural approaches.			☐
	Please attach relevant certification of the BREEAM standards that the development is targeting, and use 'Sustainability Summary' pages where you are adding any further information.			☐

Assuring Performance

OBJECTIVES & REQUIREMENTS

Post construction energy and quality monitoring is required to bridge the 'performance gap' (difference between predicted performance and as-built performance of a building) found in new developments and achieve net zero-carbon. Achieving this requires a true understanding of a buildings' operational energy.

Addressing the performance gap in new homes and buildings is critical, as this affects both the 'happiness' of residents as well as the performance quality of the building. A poor performing building leads to higher energy bills due to poor building fabric, and risks exasperating challenging health conditions.

Studies undertaken by Innovate UK and the Zero Carbon Hub show that the majority of built projects do not meet their intended performance targets when tested, fall short even of compliance with Part L and Park F of Building Regulations.

For all new developments, design teams are required to undertake a Post Occupancy Evaluation (PoE), assessing both performance targets as well as the quality of life of current occupants. All developments will be required to monitor and report on residents' wellbeing and the actual operational energy performance of the building. The evaluation should be undertaken within the first two years of a building's occupation.

A template PoE form can be found here and should be used to demonstrate compliance. Broadly; evaluation will be required at the following stages:

1. Planning; predicted performance assessment
2. As-built; performance assessment
3. In-use; quality of life / wellbeing assessment

Further information can be found on the GLA website and the Zero Carbon hub website.

KEY LOCAL POLICY & GUIDANCE

In line with RIBA best practice, a Post Occupancy Evaluation is expected for submission, and should cover the following key areas:

1. Build Quality: performance of the completed buildings
2. Functionality: how useful the building is in achieving its purpose
3. Impact: how well these developments add social, economic, cultural and environmental value for occupants

EB156

3

SOCIAL & ECONOMIC SUSTAINABILITY

Social and economic sustainability refers to the ways in which places are planned, designed, maintained, built and operated to improve local health and wellbeing, create jobs and bolster economic growth, and strengthen the community.

Introduction

OBJECTIVES & REQUIREMENTS

This section looks at the direct impacts of places on people - specifically how new developments will affect the communities they connect to.

Designing for social sustainability requires a framework for both creating new communities that thrive and ensuring existing communities are integrated in to new developments. It is important to address social sustainability at the beginning of development, as managing the long-term costs and consequences of decline and failure in new settlements is an issue of public value and political accountability.

The checklist in this section is designed as a socio-economic sustainability toolkit. Rather than provide a set of quantitative targets, the toolkit asks that developers carry out the appropriate engagements with the relevant communities and stakeholders, based on a demonstrable understanding of local needs. The guidance's aim is to ensure that new developments are equipped to incorporate the necessary 'community ingredients' that enable communities to thrive and that boost individual wellbeing - not just during occupation, but throughout all stages.

Community Ingredients should therefore cut across the different stages of developments, including:
1. Planning & design
2. Construction & occupation
3. Long-term stewardship

The list of key documents listed in the adjacent table should be used as reference by developers and applicants in understanding local socio-economic needs, and in planning engagement sessions. The list is not exhaustive but is intended to provide a starting point from which to develop more focused engagement sessions with local groups.

KEY LOCAL POLICY & GUIDANCE

EFDC Local Plan Policy:

- **SP2** Place shaping
- **H1** Housing Mix and Accommodation Types
- **H4** Traveller Site Development
- **E1** Employment Sites
- **E4** The Visitor Economy
- **DM9** High Quality Design
- **DM10** Housing Design and Quality
- **D2** Essential Facilities and Services
- **D4** Community, Leisure and Cultural Facilities

EFDC Statement of Community Involvement
EFDC Infrastructure Delivery Plan
EFDC Green Infrastructure Strategy
EFDC Economic Development Strategy
EFDC Health and Wellbeing Strategy
EFDC Cultural Strategy
EFDC Playing Pitch Strategy
EFDC Open Space Strategy
EFDC Employment and Skills Plan
Epping Forest District Tourism Strategy

NHS Healthy New Towns
HGGT Healthy Town Framework
RIBA Social Value Toolkit
Essex Design Guide
Essex Rights of Way Improvement Plan
Essex + Herts Digital Innovation Zone
essexmap.co.uk
Live Well Accreditation
Play England - Design for Play

Health & Wellbeing

OBJECTIVES & REQUIREMENTS

The health and wellbeing of residents should be the priority within any new developments. Measures should be taken to ensure this, including good accessibility to sustainable transport options; embedding the design of high-quality public and green spaces; the use of green infrastructure and biodiversity to promote good mental and physical health; and investment in long-term resilient buildings and infrastructure.

In order to promote the health and wellbeing of all of the new and existing communities of new developments, the Epping Forest District Council asks all new developments to take the following steps:

- Encourage physical activity, active living, active travel, and sport activities for residents
- Promote mental health and wellbeing through clear connections to existing support services
- Promote wellbeing through keeping noise pollution of new developments (both during construction phases and during occupation) to a minimum
- Encourage older people to live independent lives through increased community support and reduced winter pressures
- Support children and young people by incorporating access to affordable activities such as outdoor gyms, community allotments, travelling farms, and urban farming - helping to grow local fruits and vegetables for an improved diet

VOICE & INFLUENCE
New developments should look to amplify the voice and influence of residents. This involves governance structures to represent existing residents and engage new ones in shaping local decision-making and stewardship.

RESILIENCE & ADAPTABILITY
New developments should be forward-planning; including housing, infrastructure, and services that can adapt over time; as well as the incorporation of meanwhile use of buildings and public spaces.

CASE STUDIES

Urban Roof Greening

Great Kneighton, Cambridge
- allotments embedded as part of new development

Outdoor / Park Gyms

EB156

Community Strength & Social Infrastructure

OBJECTIVES & REQUIREMENTS

New developments should ensure that they integrate existing communities with new ones through shared social infrastructure. Collective activities and social architecture allow the fostering of local networks, creating a sense of belonging and community identity. Measures such as stakeholder engagement and post-development governance will provide residents with ownership of their built environment.

New developments will be expected to provide certain key infrastructures, or contributions towards their provision. The incorporation of these both formal and informal amenities will work towards enabling social inclusion between the members of a community.

New developments should also look to promote long-term growth and development opportunities for local communities, as well as the facilities to develop new skills.

Social facilities for children and teenagers; particularly access to early years childcare and leisure centres, are lacking in the District. Developments that provide these and locate them within existing communities will be encouraged.

Further information can be found in the Epping Forest District Council Infrastructure Delivery Plan (IDP), which highlights the local infrastructure requirements of the District, along with their priorities for the area (critical, essential or desirable). These include, but are not limited to:

- Health, Social Care and Emergency Services
- Community Halls
- Walking and Cycling Initiatives
- Education
- Sports Facilities
- Suitable Alternative Green Space (SANGS)

New developments should refer to the IDP, and planning applications should highlight what infrastructure will be provided, alongside contributions to ensure local community needs are met.

CASE STUDIES

Bromley by Bow Centre
A pioneering charity that combines an extensive neighbourhood hub with a medical practice and a community research project.

The Big Lunch (Eden Project)
An annual national event that provides a hook for people to organise lunch with their neighbours, at home or in the street, supported by advice and ideas available on the web.

Castlebank Horticultural Training Centre, Lanark (EKJN)
A collection of neglected outbuildings have become a thriving horticultural training centre, a valuable community resource.

The Portland Inn (Baxendale Studio)
A commission to design a building that will host a diverse cultural programme. Part of the brief was that the local community would be able to participate in its construction.

Additional Case Studies

The Portland Inn (Baxendale Studio)
Baxendale was commissioned to build a temporary external structure that would help deliver a diverse programme with, given its limited budget, a key set of requirements as part of the brief. These were that the local community should be able to participate in its construction.

Higham Hill Theatre (vPPR Architects)
The project is a small community amphitheatre in Higham Hill Park in Walthamstow, part of Waltham Forest's Making Places initiative to deliver public realm improvement works to every ward in the borough.

Argal Workshops (Gluckman Smith)
A Cornish former farmstead, previously derelict, was transformed into rural workshops for a local furniture and product designer, to Passivhaus standards, making a new working community for the area.

Socio-Economic Checklist

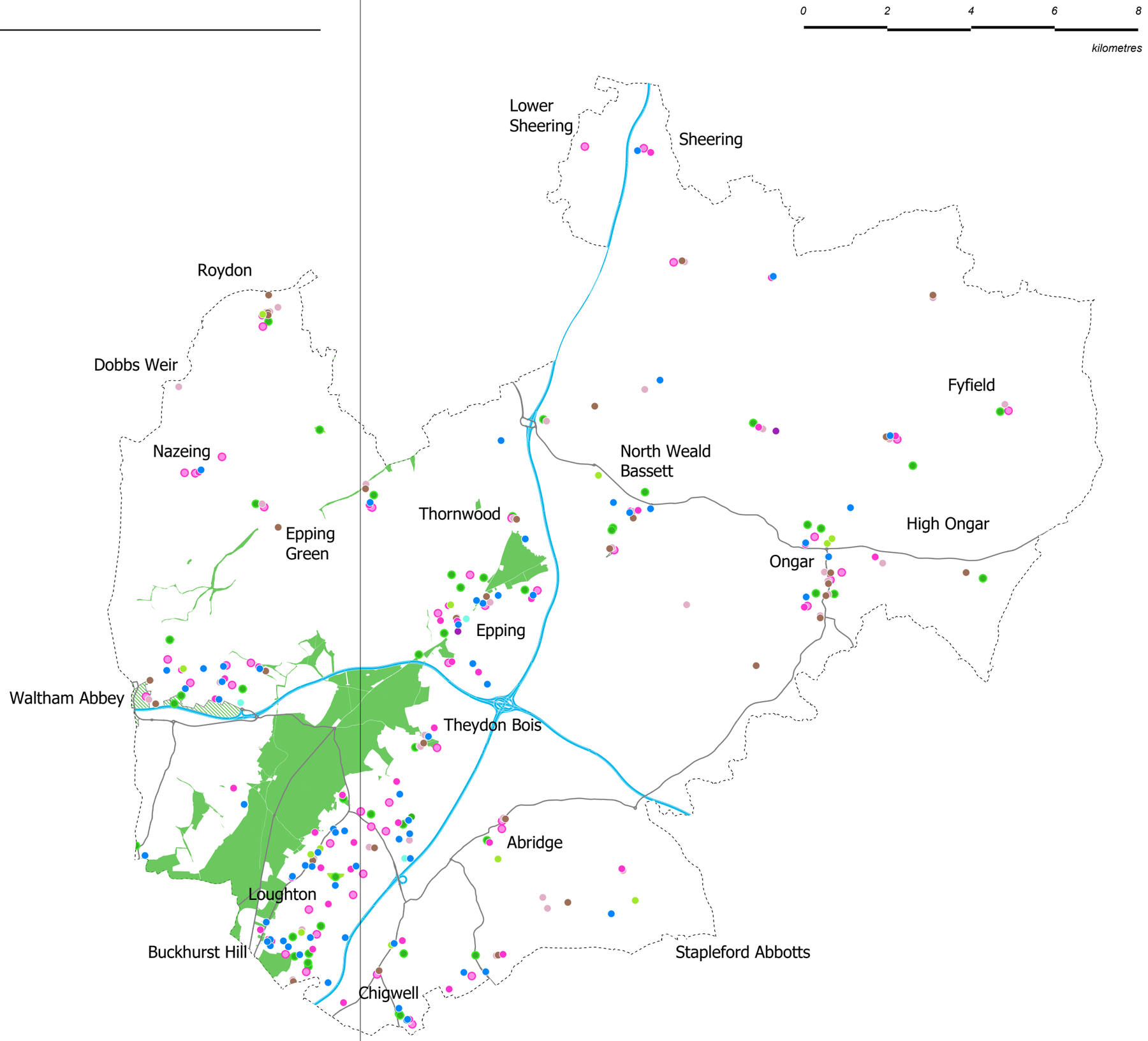
SUBMISSION CHECKLIST	
S.1	Explain how the proposals have been informed by the key stakeholders. (Include in response: the stakeholders you have engaged with, the findings from these sessions, and how you have implemented stakeholder recommendations) *(max. 250 words)*
S.2	Explain how the socio-economic needs identified in this section have been implemented in your proposal (include the ease of accessibility for existing communities to use new facilities and networks). *(max. 250 words)*
S.3	Explain how the proposal responds to, and has been impacted by, the list of key documents highlighted in this section (include list of documents used and key findings). *(max. 250 words)*
	Please include your responses to the questions above in the "Sustainability Statement' pages which form part of your submission

EB156
EFDC Social Infrastructure Map

The map and list on this page highlight existing social infrastructures and community groups within the District. These are not exhaustive but are intended to provide a starting point from which applicants are to develop more focused engagement sessions with local groups.

Please also refer to essexmap.co.uk for an interactive and live map of social infrastructures across Essex.

- EFDC Youth Council
- EFDC Community Champions
- Voluntary Action Epping Forest
- EFDC Health and Wellbeing Board
- Epping Forest District Dementia Action Alliance
- Epping Neighbourhood Action Panel
- Epping Forest Multi Faith Forum
- Rural Community Council of Essex



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4

SUBMISSION

This section includes the list of submission requirements, and the sustainability statement.

EB156
Submission

1. Submit the following as evidence of the completed Quality checklists. Please note that this list is in addition to, and does not supersede, the general submission requirements listed in the EFDC Planning Application Validation Requirements Checklist.

Design Principles	
	Daylight and Sunlight Assessment ☐
Environmental Sustainability	
Energy Efficiency & Carbon	
	Whole Life Carbon Assessment ☐
	Overheating Design Assessment ☐
Renewable Energy	
	Energy Assessment ☐
Sustainable Movement	
	Sustainable Travel Plan ☐
	Transport Assessment ☐
Water Management	
	Water Management / SUDS Strategy ☐
Green Infrastructure	
	Ecological Report (to include Biodiversity Impact Assessment) ☐
	Lighting Assessment ☐
	Landscape Character and Tree Surveys ☐
Circular Economy	
	Circular Economy Report (linked to Construction Management Statement) ☐
	Construction Management Statement ☐
Waste Management	
	Operational Waste Strategy ☐
Air Quality	
	Air Quality Impact Assessment ☐
Assuring Performance	
	Post-Occupancy Evaluation ☐
Socio-Economic Sustainability	
	Health Impact Assessment ☐
	Health Framework Action Plan ☐
	Community Engagement Strategy ☐
	Stewardship / Maintenance Strategy ☐

2. Include any additional strategies that have not been covered by the Quality checklists in the space below. All submitted assessments / reports will be conditioned to the LPA at post completion / pre-occupation stage to ensure that all new developments are being completed to the specified design standards in order to close the performance gap and create truly sustainable communities.

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APPENDIX

EB156

Appendix 1: Climate Emergency Declaration

EPPING FOREST DISTRICT COUNCIL

Declaration: Climate Emergency
Date of Declaration: 19th September 2019

Cllrs: S.Nevile + J.Phillip

Adopted Motion / Commitment:
1. Declare a ‘Climate Emergency’;

2. Pledge to do everything within the Council’s power to make Epping Forest District Council area Carbon Neutral by 2030;

3. Call on Westminster to provide the powers and resources to make the 2030 target possible;

4. Work with other governments (both within the UK and internationally) to determine and implement best practice methods to limit Global Warming to less than 1.5°C;

5. Continue to work with partners across the district and region to deliver this new goal through all relevant strategies and plans;

6. In the special circumstances of this district, resolves to protect the Special Area of Conservation through the Local Plan and every other means;

7. Implement an Air Quality Strategy and bring forward Sustainability Guidance on planning; and

8. Engage with young people when considering the issue of climate change and appoint a ‘Youth Ambassador’ from the Epping Forest Youth Council.”

Appendix 2: Building Performance Standards

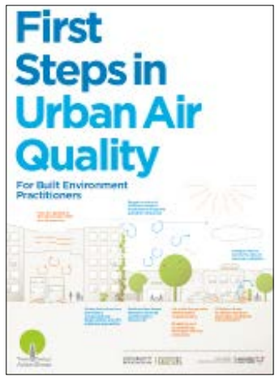
Net Zero Carbon Buildings - UKGBC

Passivhaus

BREEAM Communities

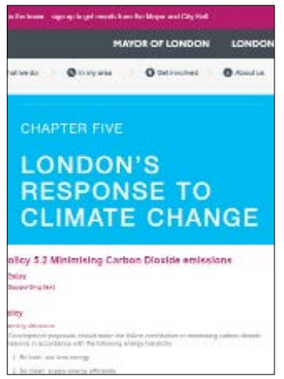
BREEAM HQM

RIBA 2030 Climate Challenge



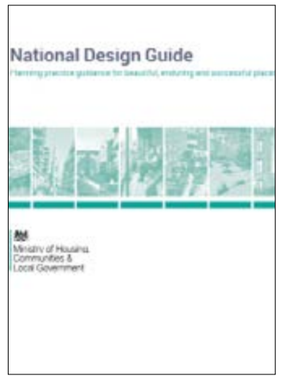
First Steps in Urban Air Quality

RICS Whole Life Carbon Assessment



London Plan: Energy Hierarchy

Future Homes Standard 2020



National Design Guide

Transport for New Homes Checklist

Appendix 3: Whole Life Carbon Assessment

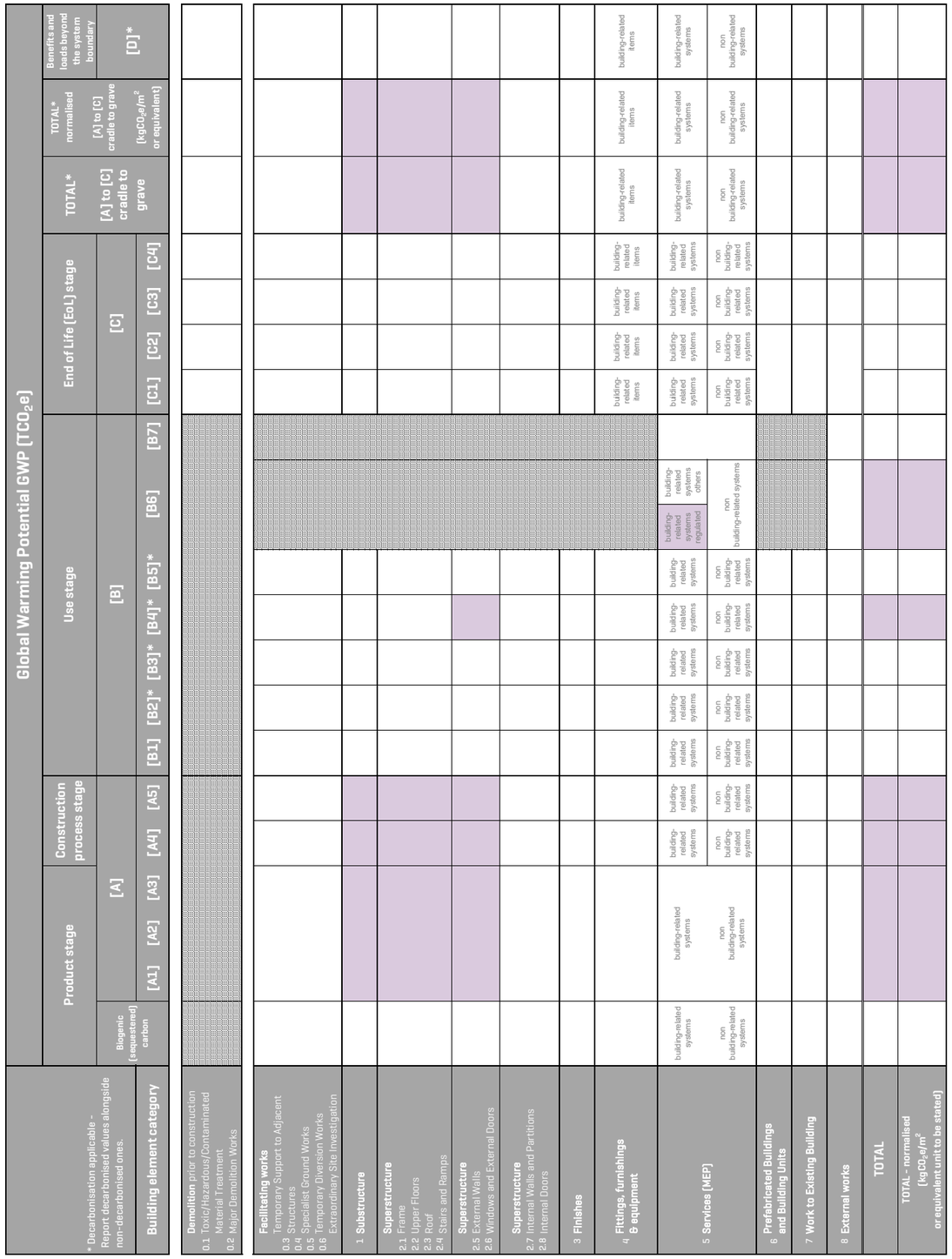
TABLE 12: THE PROJECT ID MATRIX

Date of assessment	Date of assessment completion
Verified by	Verifier name and organisation
Project type	New build or refurbishment of existing structure
Assessment objective	Brief assessment purpose statement
Project location	Full address
Date of project completion	Anticipated date of practical completion
Property type	Residential, public/civic, retail, office, infrastructure, etc. State planning use class
Building description	No. of storeys, structural frame, façade type, basement?, brief description of associated external areas and any ancillary structures
Size	NIA, GIA, volume, etc.
Project design life	In years
Assessment scope	Building parts and life stages/modules included
Assessment stage	Design stage at which the assessment has been conducted at
Data sources	List all data sources used in the assessment including building information and carbon data sources
Building elements coverage	See table below
Assumptions and scenarios	List all assumptions and scenarios used in the assessment including brief justifications

#	Building parts/element groups	Building elements	Coverage (%)
0	Facilitating works	0.1 Temporary/Enabling works/ Preliminaries	
		0.2 Specialist groundworks	
1	Substructure	1.1 Substructure	
2	Substructure	2.1 Frame 2.2 Upper floors incl. balconies 2.3 Roof 2.4 Stairs and ramps	
	Superstructure	2.5 External Walls 2.6 Windows and External Doors	
	Superstructure	2.7 Internal Walls and Partitions 2.8 Internal Doors	
3	Finishes	3.1 Wall finishes 3.2 Floor finishes 3.3 Ceiling finishes	
4	Fittings, furnishings and equipment (FF&E)	Building-related Non-building-related	
5	Building services / MEP	5.1–5.14 Building-related services	
		Non-building-related	
6	Prefabricated Buildings and Building Units	6.1 Prefabricated Buildings and Building Units	
7	Work to Existing Building	7.1 Minor Demolition and Alteration Works	
8	External works	8.1 Site preparation works 8.2 Roads, Paths, Pavings and Surfacings 8.3 Soft landscaping, Planting and Irrigation Systems 8.4 Fencing, Railings and Walls 8.5 External fixtures 8.6 External drainage 8.7 External Services 8.8 Minor Building Works and Ancillary Buildings	

These tables have been taken from the *RICS Whole Life Carbon Assessment for the Built Environment,* (November 2017). Please refer to the document for detailed guidance on how to fill out the assessments.

TABLE 13: RESULTS REPORTING TEMPLATE



Appendix 4: Glossary

Air Quality Management Area
Air Quality Management Areas (AQMA) are designations used by DEFRA (Department for Environment, Food and Rural Affairs) to manage areas with air pollution, that are unlikely to meet the Government's national air quality objectives.

Air Quality Action Plan
A document produced by the Council with Natural England setting out the steps that will be taken to reduce pollution within an Air Quality Management Area (AQMA). This could include steps to reduce car usage and promote public transport.

Airtightness
Building airtightness is defined as the resistance to air leakage through unintentional points or areas in the building envelope. Heat can be lost through these gaps in the walls, floors and roofs of buildings creating draughts and so it is extremely important to make sure these are eliminated. This down to good detailing and good site workmanship.

Biodiversity
The variety of plant and animal life in the world or in a particular habitat, a high level of which is usually considered to be important and desirable.

Blue Infrastructure
Infrastructure provision relating to water. This includes natural features such as rivers, streams and ponds, semi-natural features such as sustainable drainage systems, bio-swales and canals, and other engineering features such as dams, weirs and culverts. Blue and green infrastructure are often considered together, placing emphasis on the importance of biodiversity and flood risk mitigation.

BREEAM
BREEAM is one of the leading sustainability assessment methods for masterplanning projects, infrastructure and buildings. It is used for assessments across the built environment lifecycle, from new construction to in-use and refurbishment. BREEAM does this through third party certification of the assessment of a building's environmental, social and economic sustainability performance, using standards developed by BRE (Building Research Establishment).

Building in Layers
The concept of building in 'layers' was first proposed by architect Frank Duffy in the 1970s, and developed by Stuart Brand in the 1990s. It means that each element may easily be separated and removed. This facilitates reuse, remanufacture and recycling. For example, facades or heating systems may be designed and fitted as independent entities, integrated with other building systems but not entwined with the fabric of the building.

Carbon Footprint
The amount of carbon dioxide released into the atmosphere as a result of the particular individual, organisation or community. The carbon footprint of a development is counted over its lifetime i.e. the materials used and their sources, construction, lifetime use and demolition.

Circular Economy
The circular economy is a model of production and consumption, which involves sharing, leasing, reusing, repairing, refurbishing and recycling existing materials and products as long as possible. In this way, the life cycle of products is extended.

Cold Bridge
Occurs when there is a thermal break in the insulating materials between the inside and outside of a building e.g. a gap in the wall or roof insulation, allowing heat to escape.

Development
'Development' includes building operations (e.g. structural alterations, construction, rebuilding, most demolition); material changes of use of land and buildings; engineering operations (e.g. groundworks); mining operations; other operations normally carried out by a person operating a business as a builder; subdivision of a building (or any part of it) used as a dwelling house for the use as two or more separate dwelling houses. As defined by section 55 of the Town and Country Planning Act 1990.

Embodied Energy
The sum of the energy requirements associated, directly or indirectly, with the delivery of a good or service. This includes: the energy required to initially produce the building (the processing and the manufacture of the materials of the building as well as their transportation and assembly on site), the energy needed to refurbish and maintain the building over its lifetime, and the energy necessary to demolish and dispose of the building at the end of its life.

Environmental Impact Assessment
A procedure to be followed for certain types of projects to ensure that decisions are made in full knowledge of any likely significant effects on the environment.

Fossil Fuel
Fossil fuel is a general term for buried combustible geologic deposits of organic materials, formed from decayed plants and animals that have been converted to crude oil, coal, natural gas, or heavy oils by exposure to heat and pressure in the earth's crust over hundreds of millions of years. The burning of fossil fuels by humans is the largest source of emissions of carbon dioxide, which is one of the greenhouse gases that allows radiative forcing and contributes to global warming.

Green Belt
Land protected by a policy and land use designation to protect areas of largely undeveloped or agricultural land surrounding or neighbouring urban areas. Review of Green Belt boundaries is undertaken as part of the production of Local Plans where Green Belt exists.

Green Infrastructure
Green infrastructure is a network of high quality and multifunctional green spaces , both urban and rural, including environmental features such as parks, public open spaces, playing fields, sports pitches, woodlands, and allotments, which are capable of delivering a wide range of environmental and quality of life benefits for local communities. The provision of green infrastructure can provide social, economic and environmental benefits close to where people live and work.

Infrastructure Delivery Plan
This will contain the key infrastructure required to support the homes and commercial development in the Local Plan. This includes physical infrastructure such as transport energy and water, social and community infrastructure such as health, education and emergency services and green infrastructure such as open spaces and allotments. The Infrastructure Delivery Plan (IDP) sits alongside the Local Plan and will contain a programme identifying when items of infrastructure are expected to be in place, funding and costs. It will be regularly updated as more information becomes available.

Local Plan
The plan for the future development of the local area, drawn up by the local planning authority in consultation with the community and stakeholders. Once adopted the Local Plan will legally form part of the Development Plan for the District, superseding the Replacement Local Plan (2006).

Appendix 4: Glossary (cont.)

Meanwhile Use
The term ‘meanwhile use’ refers to the short-term use of temporarily empty buildings such as shops until they can be brought back into commercial use. The landlord will continue to look for a new commercial occupant for the space during the meanwhile use. Meanwhile uses are generally for the benefit of the local community, for example; meeting spaces, informal training and learning spaces, temporary rehearsal spaces, pop-up shops and exhibitions, and so on.

Modal Shift
Modal shift means a switching of energy consumption methods, such as when people switch from fossil fuel reliant forms of transport (such as cars) to sustainable transportation options such as busses, trains and (electric) bicycles.

National Planning Policy Framework
National Planning Policy Framework (NPPF) sets out the Government’s planning policies for England, and provides a framework within which local people and their accountable councils can produce their own distinctive local and neighbourhood plans, which reflects the needs and priorities of their communities.

Operational Energy
Operational energy is the energy required during the entire service life of a structure such as lighting, heating, cooling, and ventilating systems; and operating building appliances.

Passivhaus
A Passivhaus is a building in which thermal comfort can be achieved solely by post-heating or post-cooling the fresh air flow required for a good indoor air quality, without the need for additional recirculation of air.

Performance Gap
The difference between predicted performance and the as-built performance of a building.

Post Occupancy Evaluation
Post-occupancy evaluation (POE) of a building demonstrates how well it is performing in use and how far it is achieving against its intended purpose. POE also highlights any gaps in communication and understanding amongst building managers and occupants that my hinder a building’s operational performance.

Quality Review Panel
An independent panel of planning, architecture, urban design and construction experts set up by the Council to provide impartial expert advice to both applicants and local authorities on design issues in relation to important new development schemes and proposals for important public spaces including significant minor applications, major planning applications, pre-application development proposals, strategic masterplans and concept frameworks. The Quality Review Panel’s feedback is a material consideration for local authorities and the planning inspectorate when determining planning applications. The purpose of the Quality Review Panel is to ensure that new development is of a high quality and contributes to place making.

Renewable Energy
Renewable energy is energy that is collected from renewable resources, which are naturally replenished on a human timescale, such as sunlight, wind, rain, tides, waves, and geothermal heat.

Special Area of Conservation
Area given special protection under the European Union’s Habitats Directive which is transposed into UK law by the Habitats and Conservation of Species Regulations 2010.

Strategic Masterplan
A masterplan is the process by which organisations undertake analysis and prepare strategies, and the proposals that are needed to plan for major change in a defined physical area. It acts as a context from which development projects come forward for parts of the area.

Suitable Alternative Natural Greenspace
Suitable Alternative Natural Greenspace (SANG) is the name given to greenspace that is of a quality and type suitable to be used as mitigation to offset the impact of residential development and visitor pressure on Special Protection Areas (SPAs). The purpose of SANGs is to provide alternative greenspace to attract visitors away from SPAs.

Sustainable Drainage Systems
These are drainage systems designed to manage surface water and groundwater to sustainably reduce the potential impact of new and existing developments on flood risk. They can form part of a wider integrated water management approach.

Sustainable Transport
Efficient, safe and accessible means of transport with overall low impact on the environment, including walking and cycling, low and ultra-low emission vehicles, car sharing and public transport.

Thermal Bridging
It is important to make sure that the gap between the window frame and the wall is well sealed otherwise heat will be lost around the window even if the window itself is very energy efficient.

Transport Assessment
A comprehensive and systematic process that sets out transport issues relating to a proposed development. It identifies what measures will be required to improve accessibility and safety for all modes of travel, particularly for alternatives to the car such as walking, cycling and public transport and what measures will need to be taken to deal with the anticipated transport impacts of the development.

Transport Statement
A simplified version of a transport assessment where it is agreed the transport issues arising out of development proposals are limited and a full transport assessment is not required.

Validation Requirements
The information that is required to be submitted with a planning application in order to be considered ‘valid’. This includes particular plans or supporting documents that must be included with a planning application. It includes national requirements and local requirements which are specific to Epping Forest District. The up to date requirements are set out in the ‘Epping Forest District Council Planning Application Validation Requirements Checklist’ document.

Whole Life Carbon
Considering operational as well as embodied carbon emissions combined over a project’s expected life cycle.

Zero Carbon
Causing or resulting in no net loss of carbon dioxide into the atmosphere. A zero carbon building is one with zero net energy consumption or zero net carbon emissions on an annual basis.

EFDC Sustainability Guidance Vol.1 & 2 - Public Consultation Comments Tracker

Engagement Session	Commenter	Date received	Comment	Document	Section	Saved email	Response
Developer Forum - 10/11/2020	Developer	10/11/2020	**1. Environmental Sustainability: What barriers and obstacles can you see to developing sites to have high levels of sustainability, as set out in the documents?** - From the landowner's side, scrutinised, house building appraisal sustainability works, not only cost per plots. Agent as we are sailing side, there's no way to enforce it. - Post completion section: preoccupation conditions, it's important. - Economy of scale, many developers building Passive Haus, same cost of Building Regulations. It's is possible to build at the same cost of current regulation standards. - There are a lot of thing coming from EFDC, GI strategy, Sustainability Guidance, viability appraisal. - 3% residential uplift, well we respect good standards, building flexibility when we are looking transport, water management, landscape, all we be looking into it instead of expecting the high standard. We will be considering viability. - Document has introduced new things such as embodied carbon calculations, which some developers may not be doing - will take time to bed down. - Passivhaus method is different to Q50 method, will be a change that people have to get around. - BREEAM communities, 99 homes may be too small to undertake this, may not be used. - Important to know whether some aspects of a development may only hit amber whilst others hit green. What does that mean for planning process? - For example, may be difficult to hit ventilation targets with some developments due to other factors such as noise. - Waste management - potentially difficult to know on specific greenfield sites on construction waste	All	Environmental		Comments noted.
Developer Forum - 10/11/2020	Developer	10/11/2020	**2. Socio-Economic Sustainability: As a developer how would you seek to understand key socio-economic sustainability issues in and around your site, and respond to them?** - Site by site approach. -The ambition it's to be done in the site, but looking in the context, so taking the opportunity to link what already exist. With a strong consultation plan, what do you think it's lacking in your community? It could be an easy win. -The social infrastructure map could help developer to understand the needs of communities. Hopefully in the future the map can be updates and interactive. -You can still have the problem, that the community can respond the question of what they want, it's not relevant to the scheme or it's not regulations compliance. Constraints, of how you respond to people request. -It will be taking into consideration. The local community are the best to decide, in line with planning officers. Not always the developers would provide want the communities want, but it's necessary to think in other options after what discussions with communities. Eg: meanwhile spaces. -W: We have spent last two years engaging with key local stakeholders such as NP group, School govenors, walking officer, NP group, steering group, and others - started with blank piece of paper. Listening exercise, meeting key individuals, specific issues ad constraints raised, and consider how to adddress these. -K: analysis of local area, existing facilities, education health community retail, wider interest in existing neighbourhoods, don't want to arrive with pre-set consideration of needs in neighbourhoods	All	Socio-Economic		Comments noted.
Developer Forum - 10/11/2020	Developer	10/11/2020	Outline applications - will targets and committments be secured by condition?	All	General		All submitted assessments / reports will be conditioned to the LPA to ensure that all new developments are being completed to the specified design standards in order to close the performance gap and create truly sustainable communities.
Draft Sustainability Guidance (v.4 Public Consultation) - email response	The Epping Society	10/11/2020	Early points 1. Council should build sustainability into planning process; 2. are PV solar panels making a strong enough presence in these proposals; and 3. Grey water recycling - really is not expensive in done in bulk; more prominent please	All	General	Saved email responses - Public Consultation Draft Nov 2020\EFDC draft sustainability.msg	Comments noted.

Youth Council Workshop - 10/11/2020	Youth Council Members	10/11/2020	**1. What do you think is most important in your future home?** **Session 01 Poll Results (9 people):** Low cost energy bills and a structure built to last (50%), Good walking and cycling routes (20%), Nature and green spaces (10%), Tight knit community (10%), Other (10%) **Session 02 Poll Results (11 people):** Low cost energy bills and a structure built to last (36%), Good walking and cycling routes (36%), Nature and green spaces (27%), - Other: Need green spaces inside – garden – walk dogs, freedom to play. Private outdoor space important. - Low cost bils: Housing sustainable is important for families – although all are important, lots of activities outside the home e.g. school, community - Low cost bills: Couldn't decide between this and walking/cycling – equally important in terms of mental health and being able to live happily – e.g. stress with high costs - Nature and green spaces: Green spaces nearby can help you go out and be active – helps with both physical and mental health. Breathing in more oxygen. More motivated if it's closer by to visit regularly - Walking and cycling: Future home – needs easier way to get kids to school and yourself to work means more time for yourself after and therefore less stress. Travelling easier. A good way to get physical exercise outside.	All	General		Comments noted.
Youth Council Workshop - 10/11/2020	Youth Council Members	10/11/2020	**2. What do you think is most important to help you stay healthy?** **Session 01 Poll Results (9 people):** High quality health and community centres (30%), Regular physical activity and good air quality (30%), Outdoor spaces for physical and mental wellbeing (30%) **Session 02 Poll Results (11 people):** Regular physical activity and good air quality (64%), Outdoor spaces for physical and mental wellbeing (18%), A home with good light, ventilation and healthy materials (9%), Other (9%) - Other: Not just necessary to have high quality health centres but important for combinations – like a GP near a park, near residents. Have to sometimes weigh up options and adjust so it's not biased in any way. Other: Good healthcare – you can help yourself by going to park and running. Needs to balance where you place things and mix uses - All / Outdoor and Green Spaces: Prevent ill health from the start – sports injuries might happen. But long-term diseases etc. can be prevented by being active, especially at a young age. Prevent necessity for the other options if you get one right. Street and good air quality. Quality Homes: Majority of us spent a lot of time in our houses especially during lockdown – need good lighting to focus	All	General		Comments noted.
Youth Council Workshop - 10/11/2020	Youth Council Members	10/11/2020	**3. How do you want to travel in the future?** **Session 01 Poll Results (9 people):** Bike (56%), Walk (11%), Car / Moped (11%), Car Share (11%), Train (11%) **Session 02 Poll Results (11 people):** Car / Moped (36%), Walk (18%), Bus (18%), Train (18%), Bike (9%) - Not Bike: Streets in Loughton and Debden are dangerous, improve roads and pavements and you'll get more people to do that. Putting people at risk by asking people to do this – increases pressure on NHS - Bike: Good to get you close to local spaces like shops school or work. It's also healthy – good for you. More efficient and can get you to places quicker. If long distance then would choose a bus train or car. Not as good for the environment so would like to cycle more. Would be more likely to cycle if parents also cycled – they use cars - Walk: Helps with stress, and helps focus more. A longer journey – would be happy to walk to station or bus stop. PT is better for the environment. Traffic would make it stressful - Trains and buses: Becoming more eco-friendly – lots of lines being electrified. Mass transit, eco-friendly and not compromising on the environment - Train: 10 years in future – going to London without the worry of traffic - Car: Want to be able to take myself to other places – other ones like buses, taxis, trains etc. mean you don't have the same level of independence. Not the best for the environment, but the most efficient to get to places. Acknowledge bikes can also provide but car is preferable. If leisure things were closer then maybe would consider cycling but not everything is going to be that close - Car: Living in countryside – used to busy areas and traffic so that doesn't stress out. Better for time, can go at own pace – meeting deadlines like getting to work and having to wait for buses. Safer for families in cars – less restricted in own car. Mixing with strangers on the bus - Not car: Home and online shopping – one truck reduces wear and tear on the road rather than lots of cars because they only have to go out a couple of times a week and less heavy for people - 6 out of 9 in Session 1 said they wanted to cycle more.	All	General		Comments noted.

Youth Council Workshop - 10/11/2020	Youth Council Members	10/11/2020	**4. How can we help make communities more fair and equal for everyone?** **Session 01 Poll Results (9 people):** Support eco-friendly businesses (33%), Affordable homes (33%), Strong communities (11%), Improve residents' health and wellbeing (11%), Other (11%) **Session 02 Poll Results (11 people):** Provide skills, opportunities and training (50%), Improve residents' health and wellbeing (30%), Support eco-friendly businesses (10%), Strong communities (10%), - Other: Teach primary school kids and even earlier that this is how the community is – reiterate it so it's fair – different genders and lives. This leads to equality in other things. For money – provide skills and job opportunities, but not the most important for society - Eco-friendly businesses: Helping the council and everyone out as well as making money. Input into community. Win win for everyone	All	General		Comments noted.
Member's Briefing - 24/11/2020	EFDC Members	24/11/2020	•Safety around cycling, encouragement of more casual cyclists •Air quality for humans, any further measurements that need to be looked for this? •Own existing Council properties •Existing roads, what is being done for active travel? •Public transport to expand to help people take longer journeys •Street trees types that are best for air quality – Ana has a list that I will forward on also this is under review to make sure it's up to date. •Limes Farm Residents sustainable proposal for energy •Note to include fields for organised sports in new developments •Bus service to Epping Forest shopping centre to reduce car traffic, DRT on 87 bus route will cover this. •Shared spaces – some against this but inclusive designs would be used and would be the most up to date designs •Grass cutting regimes – part of the GBIS •Is there an opportunity for a gold, silver, bronze sustainability accreditation for takeaways/the high street to encourage good behaviours	All	General		Comments noted.
Member's Briefing - 24/11/2020	EFDC Members	24/11/2020	**1. What do you think is most important in your future home?** **Session 01 Poll Results (x people):** Low cost energy bills and a structure built to last (29%), Good walking and cycling routes (21%), Tight knit community (21%), Nature and green spaces (14%), Other (14%) •Impossible to separate as all connected •Tight knit community seen as important, community gardens and community energy schemes etc can help this •Many developments seen as lots of boxes together with no cohesion try to avoid this •Implementation of local plan – strong negotiation and practical green space ie. good shape and actively overlooked •Cycling and walking to integrate new builds into existing communities	All	General		Comments noted.
Member's Briefing - 24/11/2020	EFDC Members	24/11/2020	**2. What do you think is most important to help you stay healthy?** **Session 01 Poll Results (x people):** Engaged community with neighbourhood activities (36%), Regular physical activity and good air quality (9%), Outdoor spaces for physical and mental wellbeing (18%), Healthy home (18%), Other (18%) •Healthy home seen as important, inadequate damp, cramped housing the cause of many health issues. Fabric first and mechanical ventilation. Sound insulation important too for quality of life. •Smoking, drugs and alcohol big health issues but more of a socio economic issue coupled with ease of access. •Sufficient amenity space throughout and inclusion of playing fields in local plan – intention of net gain in biodiversity	All	General		Comments noted.

Member's Briefing - 24/11/2020	EFDC Members	24/11/2020	**3. How can we help make communities more fair and equal for everyone?** **Session 01 Poll Results (x people):** •Affordable housing to be truly affordable •Skills, training and job opportunities – employing local labour, apprenticeships •Social value – measure in socio economic section •Employing local people, starting businesses •Use opportunity to bring in community •Reservations oSupplementary planning document oAre policies strong enough to reference this oFollow through within committees	All	General		Comments noted.
Public Q&A - 30/11/2020	Cllr Janet Whitehouse	24/11/2020	It is disappointing that the turnout for this event is so low, and I contacted EFDC Comms team in regard to this. Need to ensure there are reminders for consultation events, and make sure that consultation page on website is easy to find.	All	General		Agree that larger turnout is desired, however hope that through the consultation process we have spoken and engaged with a large number of stakeholders. In the formal consultation period to date this has included an EFDC Member workshop, an EFDC Developer Forum, an EFDC Youth Council Workshop and this EFDC Community Q&A. We have also held equivalent consultation events for the HGGT Sustainable and Healthy Living consultation for the HGGT stakeholders and community. We did ensure that the Community Q&A date and details for RSVP was noted in the emailed letter issued to the Local Plan database, stakeholders and all Members at the start of the consultation period, and more recently advertised on EFDC social media channels too.
Public Q&A - 30/11/2020	Roger Lowry	30/11/2020	Why is the document only called Guidance?	All	General		Working within a policy context, see this document as a working tool for discussions and prompts during pre-app and masterplan, as well as an assessment tool. Also provides a stepping stone for where we expect policy to go over the next few years in relation to sustainability.
Public Q&A - 30/11/2020	Roger Lowry	30/11/2020	Pie chart near the start of the report notes on-road transport as largest contributor to CO2 emissions, but doesn't have detail on how much of this is through traffic in the District.	All	General		Can we look to provide more data on the traffic levels/ detail of through traffic versus residential traffic in the District in the Sustainable Movement section of the document. Or in initial context pages?
Public Q&A - 30/11/2020	Roger Lowry	30/11/2020	Can the document be better in terms of futureproofing for technologies not yet developed or tested, e.g. use phrase 'Other technologies to be developed'?	All	General		Document aims to be technology agnostic by not specifying which technologies have to be used, to leave open for innovation. E.g. document highlights fossil fuel free technologies. Also signposts to leading industry websites and documents (e.g. UKGBC, LETI, RIBA etc), as these will be kept up to date and updated more regularly than the document, which will be reviewed minimum every 3 years.
Public Q&A - 30/11/2020	Roger Lowry	30/11/2020	TR.2 'Minimise Movements' – this appears to be in conflict with South Epping Masterplan Area allocation, which was selected despite there being other more appropriate sites in terms of connection to movement networks.	All	General		The site allocations were based upon a large evidence base that has been through Local Plan examination, and is progressing towards adoption. The guidance and checklists seek to set out processes, practice and targets for sites which have been allocated, in order to make sure that we get the best outcomes on those sites, including promotion of sustainable and active travel networks.

Public Q&A - 30/11/2020	Roger Lowry	30/11/2020	Epping Society has a report noting that the area is on the verge on water supply deficiency, and all reasonable means should be done to reduce and conserve. Therefore can greywater recycling be noted at a lower level/ as a minimum in the checklist, rather than the 'green' which indicates this is a more difficult thing to achieve (when actually it is a low cost, easy option).	All	General		The checklist question relating to this (W.2) sets out a process or hierarchy for how to achieve a green, with SUDs being the minimum starting point for water management, and then rainwater harvesting and greywater recycling. However if this indicates that greywater recycling is more difficult perhaps we need to review how this is perceived, to ensure that greywater harvesting is clearly noted as a low costs and simple way to manage water.
Public Q&A - 30/11/2020	Roger Lowry	30/11/2020	The guidance notes that workplaces should be located near housing, but some of the Local Plan allocations looks to sell off town centre sites for residential. Is this aspiration therefore at odds with the Local Plan?	All	General		Locating housing in sustainable sites close to existing facilities is a key aspect of sustainable development. In larger new developments such as masterplan areas, where neighbourhoods are being developed, this best practice approach to urban design and masterplanning encourages homes to be in walkable or active travel distances to key facilities such as shops and workplaces where possible.
Public Q&A - 30/11/2020	Cllr Janet Whitehouse	30/11/2020	The checklists can appear quite daunting, is the minor developements guidance too onerous for smaller developers?	Minor Dev	General		Checklists for minor guidance is meant to be appropriate for scale of development. There are topics that can be addressed the same way at both scales, e.g. built fabric, energy efficiency, water recycling. However there are other topics where the checklists have been reduced in order to make them appropriate for use by applicants and developers for smaller sites. However it is important to recognise the impact that even smaller developments can have in terms of their environmental, social and economic footprint when it comes to sustainability. Need to ensure that development across the District is being brought up to a high quality standard, and minor developments must play their part in this.
Public Q&A - 30/11/2020	Mary Mott	30/11/2020	There are five development projects on the go in Epping, are these using the draft Sustainability Guidance?	All	General		Yes, we are encouraging applicants and design teams at pre-application stage to use the draft guidance as a working tool for pre-app discussions and forming a clear sustainability strategy for eventual applications. However, the document is currently in consultation and not yet endorsed, and we foresee that there will be changes to the document after the consultation period ends, so needs to stress that it is the draft Sustainability Guidance and Checklists document which is being utilised a the moment.
Public Q&A - 30/11/2020	Cllr Janet Whitehouse	30/11/2020	How will sustainable transport aspirations work in a place like Epping, given that the wider network remains in some cases unsafe and unattractive? How is the guidance remedying this?	All	General		The Sustainable Movement pages refer to the Epping Forest District Cycling Action Plan, which has clear improvement projects noted in regards to the cycle network, which are also picked up in the EFDC IDP. The Checklists also notes the development is expected to connect into the wider networks such as PROWS, bridleways and cycle routes. Improvements to the network as a whole remain in discussion with Essex County Council, and the Council's Sustainable Transport Officer (Stephen Lloyd-Jones) is also pursuing this to ensure that the network as a whole is being improved to promote sustainable and active travel. Whilst this document clearly sets out aspirations for how sustainable movement is approached in new developments, it dos not seek to provide a full strategy for sustainable travel across the District.

Public Q&A - 30/11/2020	Cllr Janet Whitehouse	30/11/2020	What does active travel mean and what are desire lines? Is there too much jargon in the documents?	All	General		Active travel is travel that is normally undertake by foot or by bike. Sustainable travel includes sustainable public transport options e.g. travelling by bus or by train. Desire lines describe the direct line or 'desire' to or from a destination or home. It is often the Shortest or most easily navigated. Route, and can sometimes be seen as an informal path where the ground is 'marked' by human traffic. We can look to add definitions for these into the glossary into the document.
Public Q&A - 30/11/2020	Cllr Janet Whitehouse	30/11/2020	Where there are employment sites allocated, is there anywhere which sets out the size of employment units which will need to be provided?	All	General		As per the socio-economic sustainability section of the guidance, it is important that applicants have a clear understanding of the needs of the local communities and areas in which they are developing. This includes market research and business community needs to understand the appropriate employment uses and sizes of units within proposals. Further information about ensuring socio0economi sustainability is also provided in the socio-economic pages of the guidance ad the associated checklist. This focuses particularly on engagement, understanding local context, needs and networks.
Draft Sustainability Guidance (v.4 Public Consultation) - email response	The Epping Society -	28/11/2020	Comments on the sustainability guidance (doc attached to email) - geenral comments: separate major and minor; cost per housing is significant; clarification on checklists; will these proposals apply to development indicated in Local Plan; should also look at the increased demand for water, electricity & sewage systems required by the Local Plan.	All	General	Saved email responses - Public Consultation Draft Nov 2020\EFDC Sustainability Guidance.msg	Comments noted. Many of the questions were also raised at the Public Q&A - please refer to answers there. Further responses to specific points below: 01d. The Sustainable Movement section aims to address traffic related carbon emissions, and signposts to other more focused sustainable transportation documents. 01g. Work is underway on volume 3 of the Sustainability Guidance which will be on Retrofits and Extensions. 02l. Specific quantitative targets for the delivery of social infrastructures are discussed in more detail in the Infrastructure Delivery Plan (IDP), which the document provides a link to.
Draft Sustainability Guidance (v.4 Public Consultation) - email response	LRAPG	06/12/2020	Response on Major developments	Major Dev	General	Saved email responses - Public Consultation Draft Nov 2020\LRAPG response - major developments.msg	All comments noted. High level responses to selected comments below: - Case studies amended to be more in keeping with the character of development in the District. - Glossary will be updated to include additional terms

Draft Sustainability Guidance (v.4 Public Consultation) - email response	LRAPG	06/12/2020	Response on minor developments	Minor Dev	General	Saved email responses - Public Consultation Draft Nov 2020\LRA Plans Group response - minor developments.msg	All comments noted. Typos have been corrected. High level responses to selected comments below: - The Guidance promotes best practice, working across themes to ensure a holistic approach to sustainability is considered. Each theme will be assessed by Officers in the round and in context of constraints that may be unique to a development, providing flexibility in how each application is assessed. - Drafting Points - all points have been addressed except the final point which queries the use of coloured pages as chapter markers - the document is intended to be used primarily as an interactive and digital pdf (hence the interactivity of the checklist), the number of people printing out the document will be a small percentage of the overall users.
Draft Sustainability Guidance (v.4 Public Consultation) - email response	Roger Anthony	07/12/2020	Comments on guidance - Sustainability; Climate Emergency; Pandemic; Covid-19 Recovery; Energy Efficiency & Carbon; Green Infrastructure; Sustainable Movement; Circular Economy; Waste Materials; Air Quality; Non Domestic Development; SOCIAL & ECONOMIC SUSTAINABILITY; Health & Wellbeing; Economic Growth & Job Creation; GLOSSARY	All	General	Saved email responses - Public Consultation Draft Nov 2020\SUSTAINABILITY GUIDANCE CHECKLIST.msg	All comments noted. Typos have been corrected. High level responses to selected comments below: - References to 'Garden Town' removed - Case studies amended to be more in keeping with the character of development in the District. - Glossary will be updated to include additional terms
Draft Sustainability Guidance (v.4 Public Consultation) - email response	Kevin Coleman	08/12/2020	However, the Council will also be aware that, under the 2012 Local Plan Regulations, it is not lawful for non-statutory documents to contain policies for the management of the development, including standards for environmental performance (see in particular Regulation 5(a) (iii) and (iv) of the 2012 Regulations).	All	General	Saved email responses - Public Consultation Draft Nov 2020\EFDC Sustainability Guidance - Consultation Response.msg	Comments noted. The Guidance promotes best practice, working across themes to ensure a holistic approach to sustainability is considered. Each theme will be assessed by Officers in the round and in context of constraints that may be unique to a development, providing flexibility in how each application is assessed.
Draft Sustainability Guidance (v.4 Public Consultation) - email response	Robert Harrison	09/12/2020	The main concern is that the document is creating new policy rather than building on Local Plan policy.	Major Dev	General	Saved email responses - Public Consultation Draft Nov 2020\EFDC Sustainability Guidance for Major Developments.msg	Comments noted. High level responses to selected comments below: - The Guidance promotes best practice, working across themes to ensure a holistic approach to sustainability is considered. Each theme will be assessed by Officers in the round and in context of constraints that may be unique to a development, providing flexibility in how each application is assessed. - Checklists to be amended within 'Major Developments' document to differentiate between Outline Planning Applications and Full Planning Applications / Reserved Matters Applications.
Draft Sustainability Guidance (v.4 Public Consultation) - email response	Anglia Water	10/12/2020	Water management and the submission checklist	All	General	Saved email responses - Public Consultation Draft Nov 2020\Consultation - Sustainability Guidance and Checklist.msg	Comments noted.

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Draft Sustainability Guidance (v.4 Public Consultation) - email response	Carr Richard (TFL)	11/12/2020	consider limiting car parking at new developments - imapcts of care use congestion and pollution. Graph in overvire shows road traffic and accounts for carbon emmissions - secrion on sustainable movement should be goven greater prominence	All	Transport	..\..\..\..\..\PLANNI~1\POLICY~1\FORWAR~1\T617E~1.LOC\T0981~1.245\SAVEDE~1\CONSUL~3.MSG	Comments noted. Reference to the TFL Healthy Streets guidance and EFDC Parking Standards included in updated draft.
Draft Sustainability Guidance (v.4 Public Consultation) - email response	Claire McLean	11/12/2020	CRT response - response attached to email (PDF)	All	General	..\..\..\..\..\PLANNI~1\POLICY~1\FORWAR~1\T617E~1.LOC\T0981~1.245\SAVEDE~1\CRTCON~1.MSG	Comments noted. High level responses to selected comments below: - Introduction updated to clarify purpose of guidance and checklist. All checklist submission requirements are in addition to general Validation Checklist requirements for a planning application. - Sustainable Movement and Air Quality sections are cross-referenced
Draft Sustainability Guidance (v.4 Public Consultation) - email response	Richard Cooke (ECC)	11/12/2020	response to the latter guidance is the need for a proportionate approach striking an appropriate balance for applicants (and decision-makers) towards minor developments / those with limited impacts 2 (non-exhaustive) practical examples of this consideration need consideration in relation to the requirements for applicants to provide HIA or Transport Assessments (in the full sense, e.g. compared to Transport Statements)	All	General	..\..\..\..\..\PLANNI~1\POLICY~1\FORWAR~1\T617E~1.LOC\T0981~1.245\SAVEDE~1\CONSUL~4.MSG	Comments noted. High level responses to selected comments below: - The Guidance promotes best practice, working across themes to ensure a holistic approach to sustainability is considered. Each theme will be assessed by Officers in the round and in context of constraints that may be unique to a development, providing flexibility in how each application is assessed. - Checklists to be amended within 'Major Developments' document to differentiate between Outline Planning Applications and Full Planning Applications / Reserved Matters Applications. - Case studies amended to be more in keeping with the character of development in the District. - Glossary will be updated to include additional terms
Draft Sustainability Guidance (v.4 Public Consultation) - email response	Heather Archer (Highways England)	11/12/2020	satisfied that the policies will not materially affect the safety, reliability and / or operation of the SRN (the tests set out in DfT Circular 02/2013, particularly paragraphs 9 & 10, and MHCLG NPPF2019, particularly paragraphs 108 and 109) - no comments	All	General	Saved email responses - Public Consultation Draft Nov 2020\HE Sustainability Guidance and Checklist consultation.msg	Comments noted.
Draft Sustainability Guidance (v.4 Public Consultation) - email response	Christopher Roberts	14/12/2020	response submitted on behalf of CEG and Hallam Land Management.	All	General	..\..\..\..\..\PLANNI~1\POLICY~1\FORWAR~1\T617E~1.LOC\T0981~1.245\SAVEDE~1\LATTON~1.MSG	Comments noted. High level responses to selected comments below: - The Guidance promotes best practice, working across themes to ensure a holistic approach to sustainability is considered. Each theme will be assessed by Officers in the round and in context of constraints that may be unique to a development, providing flexibility in how each application is assessed. - Checklists to be amended within 'Major Developments' document to differentiate between Outline Planning Applications and Full Planning Applications / Reserved Matters Applications. - Case studies amended to be more in keeping with the character of development in the District.

Draft Sustainability Guidance (v.4 Public Consultation) - email response	Higgins Homes	14/12/2020	representations to the Sustainability and Healthy Living consultation. Concerns the document is creating new policy, rather than building on existing policy.	All	General	..\..\..\..\..\PLANNI~1\POLICY~1\FORWAR~1\T617E~1.LOC\T0981~1.24S\SAVEDE~1\SUSTAI~2.MSG	Comments noted. High level responses to selected comments below: - The Guidance promotes best practice, working across themes to ensure a holistic approach to sustainability is considered. Each theme will be assessed by Officers in the round and in context of constraints that may be unique to a development, providing flexibility in how each application is assessed.
Draft Sustainability Guidance (v.4 Public Consultation) - email response	Paul Belton	14/12/2020	Comments in PDF doc	All	General	..\..\..\..\..\PLANNI~1\POLICY~1\FORWAR~1\T617E~1.LOC\T0981~1.24S\SAVEDE~1\EFDCSU~4.MSG	Comments noted. High level responses to selected comments below: - The Guidance promotes best practice, working across themes to ensure a holistic approach to sustainability is considered. Each theme will be assessed by Officers in the round and in context of constraints that may be unique to a development, providing flexibility in how each application is assessed. - Checklists to be amended within 'Major Developments' document to differentiate between Outline Planning Applications and Full Planning Applications / Reserved Matters Applications. - Case studies amended to be more in keeping with the character of development in the District.
Draft Sustainability Guidance (v.4 Public Consultation) - email response	Fairfield Partnership	14/12/2020	Comments in PDF doc	All	General	..\..\..\..\..\PLANNI~1\POLICY~1\FORWAR~1\T617E~1.LOC\T0981~1.24S\SAVEDE~1\FAIRFI~1.MSG	Comments noted. High level responses to selected comments below: - The Guidance promotes best practice, working across themes to ensure a holistic approach to sustainability is considered. Each theme will be assessed by Officers in the round and in context of constraints that may be unique to a development, providing flexibility in how each application is assessed. - Checklists to be amended within 'Major Developments' document to differentiate between Outline Planning Applications and Full Planning Applications / Reserved Matters Applications. - Section regarding cost uplift to developments will be amended to include broader range of building types - however the guidance only gives an indication of cost uplift but it is not within its scope to provide detailed case studies. - Glossary will be updated to include additional terms

Draft Sustainability Guidance (v.4 Public Consultation) - email response	Liz Burn	14/12/2020	Comments in PDF doc	All	General	Saved email responses - Public Consultation Draft Nov 2020\Sustainable and Healthy Living - Consultation Response.msg	Comments noted. High level responses to selected comments below: - The Guidance promotes best practice, working across themes to ensure a holistic approach to sustainability is considered. Each theme will be assessed by Officers in the round and in context of constraints that may be unique to a development, providing flexibility in how each application is assessed. - Checklists to be amended within 'Major Developments' document to differentiate between Outline Planning Applications and Full Planning Applications / Reserved Matters Applications. - Section regarding cost uplift to developments will be amended to include broader range of building types - however the guidance only gives an indication of cost uplift but it is not within its scope to provide detailed case studies.
Draft Sustainability Guidance (v.4 Public Consultation) - email response	Julie Morgan - Barwood Land	14/12/2020	Comments in PDF doc	All	General	Saved email responses - Public Consultation Draft Nov 2020\Sustainability Report Representations - Barwood Land.msg	Comments noted. High level responses to selected comments below: - The Guidance promotes best practice, working across themes to ensure a holistic approach to sustainability is considered. Each theme will be assessed by Officers in the round and in context of constraints that may be unique to a development, providing flexibility in how each application is assessed. - Checklists to be amended within 'Major Developments' document to differentiate between Outline Planning Applications and Full Planning Applications / Reserved Matters Applications.
Draft Sustainability Guidance (v.4 Public Consultation) - email response	Thomas Kilvert (Pegasus Group)	14/12/2020	Comments in PDF doc	All	General	..\..\..\..\..\PLANNI~1\POLICY~1\FORWAR~1\T617E~1.LOC\T0981~1.24S\SAVEDE~1\EFDCAN~1.MSG	Comments noted. High level responses to selected comments below: - The Guidance promotes best practice, working across themes to ensure a holistic approach to sustainability is considered. Each theme will be assessed by Officers in the round and in context of constraints that may be unique to a development, providing flexibility in how each application is assessed. - Checklists to be amended within 'Major Developments' document to differentiate between Outline Planning Applications and Full Planning Applications / Reserved Matters Applications. - Section regarding cost uplift to developments will be amended to include broader range of building types - however the guidance only gives an indication of cost uplift but it is not within its scope to provide detailed case studies.

Draft Sustainability Guidance (v.4 Public Consultation) - email response	Andy Butcher - Strutt and Parker	14/12/2020	Comments in PDF doc	All	General	..\..\..\..\..\..\PLANNI~1\POLICY~1\FORWAR~1\T617E~1.LOC\T0981~1.24S\SAVEDE~1\EFDCCO~1.MSG	Comments noted. High level responses to selected comments below: - The Guidance promotes best practice, working across themes to ensure a holistic approach to sustainability is considered. Each theme will be assessed by Officers in the round and in context of constraints that may be unique to a development, providing flexibility in how each application is assessed. - Checklists to be amended within 'Major Developments' document to differentiate between Outline Planning Applications and Full Planning Applications / Reserved Matters Applications. - Section regarding cost uplift to developments will be amended to include broader range of building types - however the guidance only gives an indication of cost uplift but it is not within its scope to provide detailed case studies.
Draft Sustainability Guidance (v.4 Public Consultation) - email response	Luke Boroughs (TFL CD)	14/12/2020	Comments to major development - movement and car parking in PDF	Major Dev	General	..\..\..\..\..\..\PLANNI~1\POLICY~1\FORWAR~1\T617E~1.LOC\T0981~1.24S\SAVEDE~1\TFLCDR~1.MSG	Comments noted. High level responses to selected comments below: - The Guidance promotes best practice, working across themes to ensure a holistic approach to sustainability is considered. Each theme will be assessed by Officers in the round and in context of constraints that may be unique to a development, providing flexibility in how each application is assessed. - Checklists to be amended within 'Major Developments' document to differentiate between Outline Planning Applications and Full Planning Applications / Reserved Matters Applications. - Section regarding cost uplift to developments will be amended to include broader range of building types - however the guidance only gives an indication of cost uplift but it is not within its scope to provide detailed case studies.
Draft Sustainability Guidance (v.4 Public Consultation) - email response	David Chalmers (Fairview)	18/12/2020	Comments in PDF doc	All	General	Saved email responses - Public Consultation Draft Nov 2020\Sustainable and healthy living consultation.msg	Comments noted. The Guidance promotes best practice, working across themes to ensure a holistic approach to sustainability is considered. Each theme will be assessed by Officers in the round and in context of constraints that may be unique to a development, providing flexibility in how each application is assessed.

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HGGT

HARLOW & GILSTON GARDEN TOWN

SUSTAINABILITY GUIDANCE & CHECKLIST

MARCH 2021

Interactive PDF: best viewed on computer screen

EB156

CONTENTS

Illustrations: Narea Bermejo Olaizola

Essex County Council · Hertfordshire · Harlow Council · Epping Forest District Council · East Herts Council

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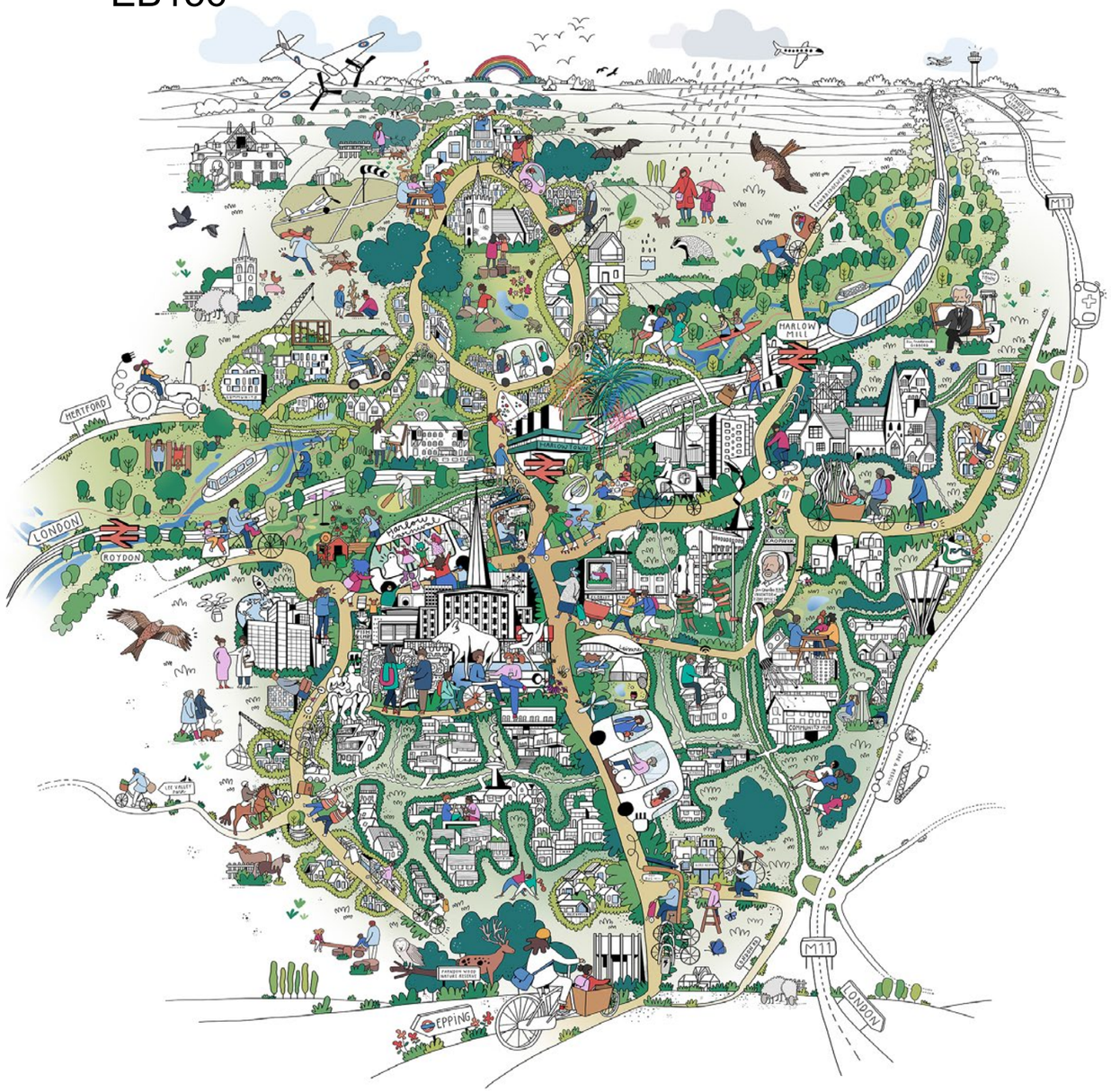


The pioneering New Town of Gibberd and Kao will grow into a Garden Town of enterprise, health and sculpture at the heart of the UK Innovation Corridor. Harlow and Gilston will be a joyful place to live with sociable streets and green spaces; high quality homes connected to fibre optic broadband; local centres accessible by walking and cycling; and innovative, affordable public transport.

It will set the agenda for sustainable living. It will be adaptable, healthy, sustainable and innovative.

HARLOW AND GILSTON GARDEN TOWN

Harlow and Gilston Garden Town (HGGT) will comprise new and existing communities in and around Harlow. Set in attractive countryside, with transformative investment in transport and community infrastructure, new neighbourhoods to the east, west and south and new villages to the north will be established.

East Herts, Epping Forest and Harlow District Councils are working together with Hertfordshire and Essex County Councils to ensure plans for the Garden Town support sustainable living and a healthy communities and economies, provide a good quality of life for existing and future residents, and respond to local landscape and character.

The HGGT Vision sets out the principles and indicators for the Garden Town which will ensure its growth and management is high quality and sustainable.

SUSTAINABLE LIVING

Sustainability focuses on meeting the needs of the present without compromising the ability of future generations to meet their needs. High quality sustainable developments require adopting a holistic approach to environmental, social and economic sustainability; in line with the UN Sustainability Development Goals.

The Garden Town seeks to set the agenda for sustainable living through ensuring growth that will be being net carbon neutral by 2030, and building strong and integrated communities across new and existing places, with social equity.

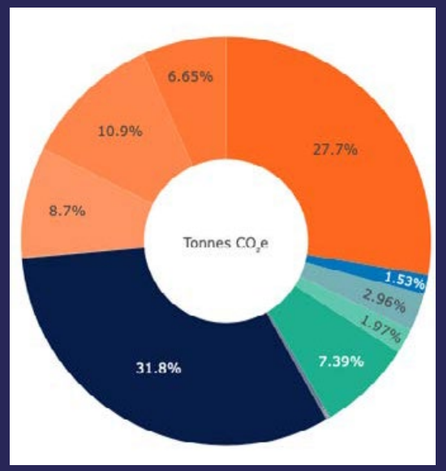
COVID-19 RECOVERY

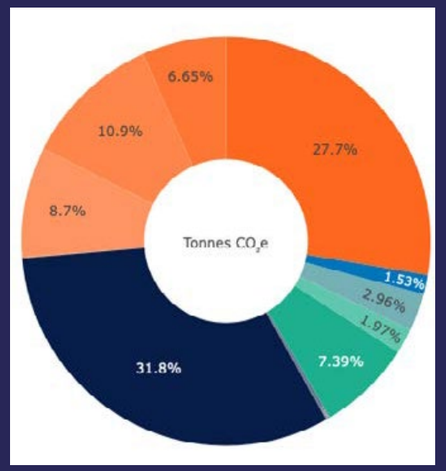
This Guidance has been developed during the pandemic of COVID-19. The pandemic has highlighted stark health inequalities which relate closely to environmental, social, and economic inequalities.

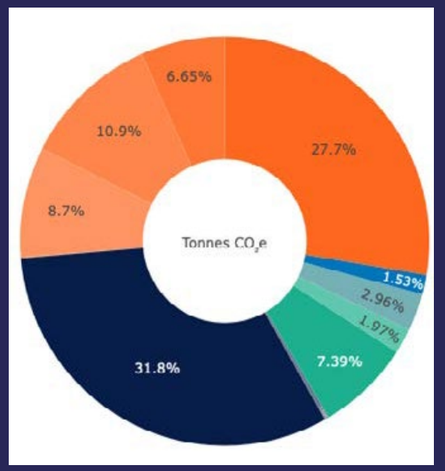
Now more than ever, high quality, sustainable and resilient design and development is needed to ensure that existing and new residents of the Harlow & Gilston Garden Town recover from this pandemic in a long term and locally-led manner.

Opportunities to foster community strength, provide job opportunities, support green and local economies and bolster residents health must be taken. All stakeholders are therefore expected to work collaboratively to contribute to this recovery, and ensure that the Garden Town is a joyful and sustainable place to live, work, and play.

Introduction







INTRODUCTION

1 | THE CLIMATE EMERGENCY

The UK Government and all five HGGT Partner Authorities have declared a Climate Emergency/ Actions.

This Sustainability Guidance supports the primary commitment across the Garden Town Authorities; to become Carbon-Neutral by 2030.

The global climate is changing, primarily as a result of greenhouse gas emissions from human activity.

Communities, businesses, and the natural environment are already feeling the impacts of the changing climate. Continued change is now unavoidable and will disrupt everyday life, with higher average temperatures and more extreme weather events.

There is a strong and committed national and local policy context for planning environmentally, socially, and economically sustainable places and developments, and climate adaptation.

2 | PURPOSE OF THIS GUIDANCE

The Garden Town will set the agenda for Sustainable living, making it easy for residents to adopt sustainable lifestyles.

The three district authorities have a combined carbon emission contribution of 2,048 CO2 (kt) across all industries. With the goal of reducing carbon emission contributions, and planning for significant growth in the Garden Town, new developments must have exemplar placemaking and long term sustainability.

This document provides practical and technical guidance on how to apply sustainability indicators and policies (environmental, social, and economic) in the HGGT Vision and partner authorities Plans to new major developments in the Garden Town.

The purpose of this guidance is to help applicants meet the Garden Town goals of becoming net zero-carbon by 2030, and, to build strong and integrated communities across new and existing places.

3 | WHO USES THIS GUIDANCE

Applicants + Agents:

The document is to be used by developers, design teams, consultants and contractors in shaping development proposals, This will guide the design of proposals and ensure coordinated and integrated consideration of sustainability principles and targets at an early stage.

Local Authority Officers and decision-makers:

This document will be endorsed to have material planning weight and the Checklist will help guide the assessment of planning applications for developments coming forward within the Garden Town. It will inform pre-application discussions and assist decision-makers in sustainability matters.

The HGGT Quality Review Panel (QRP):

This Checklist will be utilised for QRP reviews to help form the basis of Sustainability and Garden Town discussions. The QRP panel members are independent experts and applicants are advised to be in a position to discuss issues on all themes raised in this guidance.

4 | WHEN TO USE GUIDANCE

Masterplanning

This guide should be used at as early a stage as possible in the design process in order to reduce costly and time-intensive re-design at later stages.

Pre-Application

The Sustainability Checklist and relevant evidence should accompany pre-application discussions to ensure applications have considered and incorporated sustainability measures from the outset of their design.

Planning Application

A Sustainability Strategy incorporating the Checklist, with relevant evidence / certification, is to be submitted alongside planning applications.

Post-Planning

Planning conditions and obligations will be aligned to ensure that sustainable measures are secured through to delivery and beyond. Tools such as Post-Occupancy Evaluation for ongoing monitoring will be expected relating to key indicators.

HOW TO USE THIS GUIDE

5 | HOW TO USE GUIDANCE

High quality and sustainable development requires environmental, social and economic sustainability to be holistically considered. This document is split into two sections, with sustainability themes cross-referencing each other, and co-benefits indicated throughout as pop-ups.

1. The Environmental Section
2. The Socio-Economic Section

These Sections consists of a Theme, noting:

1. Objectives & Requirements
2. Key Local Policy & Guidance
3. Case studies: with links to external sources
4. Checklist: to be completed and submitted.

6 | TO BE SUBMITTED

1. Collated Sustainability Quality Checklist
2. Sustainability Statement/Strategy

This guidance assist applicants to provide the information for the above, in order to meet the Garden Town principles and local policies.

7 | APPLICATION OF GUIDANCE

The guidance is applicable to:

- Strategic Masterplan / Village Masterplan areas
- All major residential developments (≥ 10no.)
- Change of Use resulting in a major development
- Council-led housing within the Garden Town

8 | THE QUALITY CHECKLIST

The Checklists indicate the quality of development in line with the Garden Towns' standards through a red/ amber/ green approach. These work together across themes and will be assessed alongside each other to ensure a holistic approach to sustainability is being considered.
Each sustainability theme will be assessed by Officers in the round and in context of factors that may be unique to a development, providing flexibility in how each development is assessed. The applicant is expected to identify unique sustainability aspects of their development and include these in the 'Sustainability Statement', where the Applicant deems this necessary.

All checklists should be completed and submitted; except where highlighted in each checklist table, some questions that are required at Outline Planning Application only, with the remainder expected to be submitted at Full Planning and/or Reserved Matters, including updated figures for those submitted at Outline Planning.

All applications will be considered through the completion and submission of this Sustainability Checklist.

Minimum Requirements (Low Quality)	Net Zero-Carbon by 2050 (Medium Quality)	Net Zero-Carbon by 2030 (Garden Town High Quality)
These are policy-compliant / Building Regulations compliant, but do not meet Climate Declaration targets This sets out what HGGT consider low quality standards / outcomes	These targets meet ultimate goal, but 20 years slower This sets out what HGGT consider medium quality standards/ outcomes	These targets meet HGGT goal and Climate Declarations This sets out what HGGT consider high quality standards/ outcomes
Outline Planning Submission	Outline Planning Submission	Outline Planning Submission

9 | RELATIONSHIP TO THE HGGT VISION & DESIGN GUIDE

This document should be read in conjunction with the Harlow and Gilston Garden Town Vision, and Design Guide. The Sustainability Guidance takes the principles and objectives of the Vision as its starting point and provides guidance and checklists to help deliver these principles, and sustainability indicators.

The HGGT Design Guide sets out Design Quality Questions which applicants are expected to follow. The information in this document aim to build on these and provide further guidance and detail as appropriate.

10 | RELATIONSHIP TO LOCAL PLANS

This document has been endorsed to have material planning weight when determining applications.
This guidance should be read in conjunction with the policies in the current Epping Forest DC, East Herts DC, and Harlow DC Local Plans.
This guidance compliments the policies and relevant SPDs by providing a practical tool for enhancing and assessing the sustainability of developments in the Garden Town.

11 | PARTNERSHIP WORKING

In addition to cross-boundary working as part of the Councils' Duty to Cooperate, the Councils are committed to working with relevant organisations, service providers and community groups to ensure proposals are developed collaboratively and with thorough consideration of local priorities.

12 | REVIEW & MONITOR

This guidance will be reviewed and updated regularly (maximum every three years) to ensure that it remains fit for purpose. The Garden Town encourages Applicants to innovate with new technology to meet the overall Garden Town sustainability ambitions.
This guidance will be reviewed upon national adoption of the Governments' Future Homes Standard (Part L and Part F) - where the first stage of a two-part consultation process was undertaken in 2020. Current Building Regulations fall short of the carbon neutral by 2030 commitment by HGGT.

13 | INCENTIVES FOR SUSTAINABILITY

Design and Planning

Compliance with these sustainability standards will lead to a smoother planning process and faster assessment time.

Awards and recognition

Exemplar schemes will be hosted on the HGGT website and shared as case studies, promoting the most ambitious projects. The Garden Town will work with applicants to put their schemes forward for Local and National awards and partnership opportunities.

Incentives: Cost Benefit

By 2030 all new buildings will need to operate at annual net zero carbon, meaning that by 2025 all new buildings must be designed to net zero-carbon.

In the Garden Town, 16,000 new homes are expected over the next plan period, with more to follow. If the standards highlighted in this guidance are not met when homes are first constructed, they will require retrofit before 2050 just to keep up with changing legislation; this is likely to be five times more expensive than building them to be zero-carbon in the first place.

Net zero carbon homes can be achieved at a capital cost uplift of between 3.5%-15% for residential developments, or, at equal cost - depending on economies of scale in alignment with various reports (App. A).

This capital cost of sustainable buildings is likely to decrease over time as legislation improves, our electricity grid decarbonises, our supply chain upskills, and as cost of technology decreases.

Costs can be offset by value benefits, including; increased rental premiums (6-11% Link), lower tenancy void periods, and lower offsetting costs. Furthermore, long-term operation costs of new homes are vastly reduced due to the lower energy demand from homes, eliminating challenges such as fuel poverty (Link), and providing cost savings of 30%-40% (Link) over 30 years.

Finally, in a post covid society, more people are working from home, and look to live more sustainable lifestyles, making sustainable homes and communities more attractive to homeowners, thereby, providing a commercial benefit to developers (Link).

SUSTAINABILITY GUIDANCE APPLICATION AREA

The Garden Town comprises strategic development sites both within the Harlow administrative area and within East Hertfordshire District and Epping Forest District. This includes:

Gilston Area:

- Located in East Hertfordshire District
- Across 7 villages,
- 10,000 homes in total
- 3,000 built by 2033, a further
- 7,000 to follow post-2033

East of Harlow:

- Located in Harlow and Epping Forest Districts
- 3,350 new homes
- 2,600 within Harlow District
- 750 within Epping Forest District

Water Lane Area:

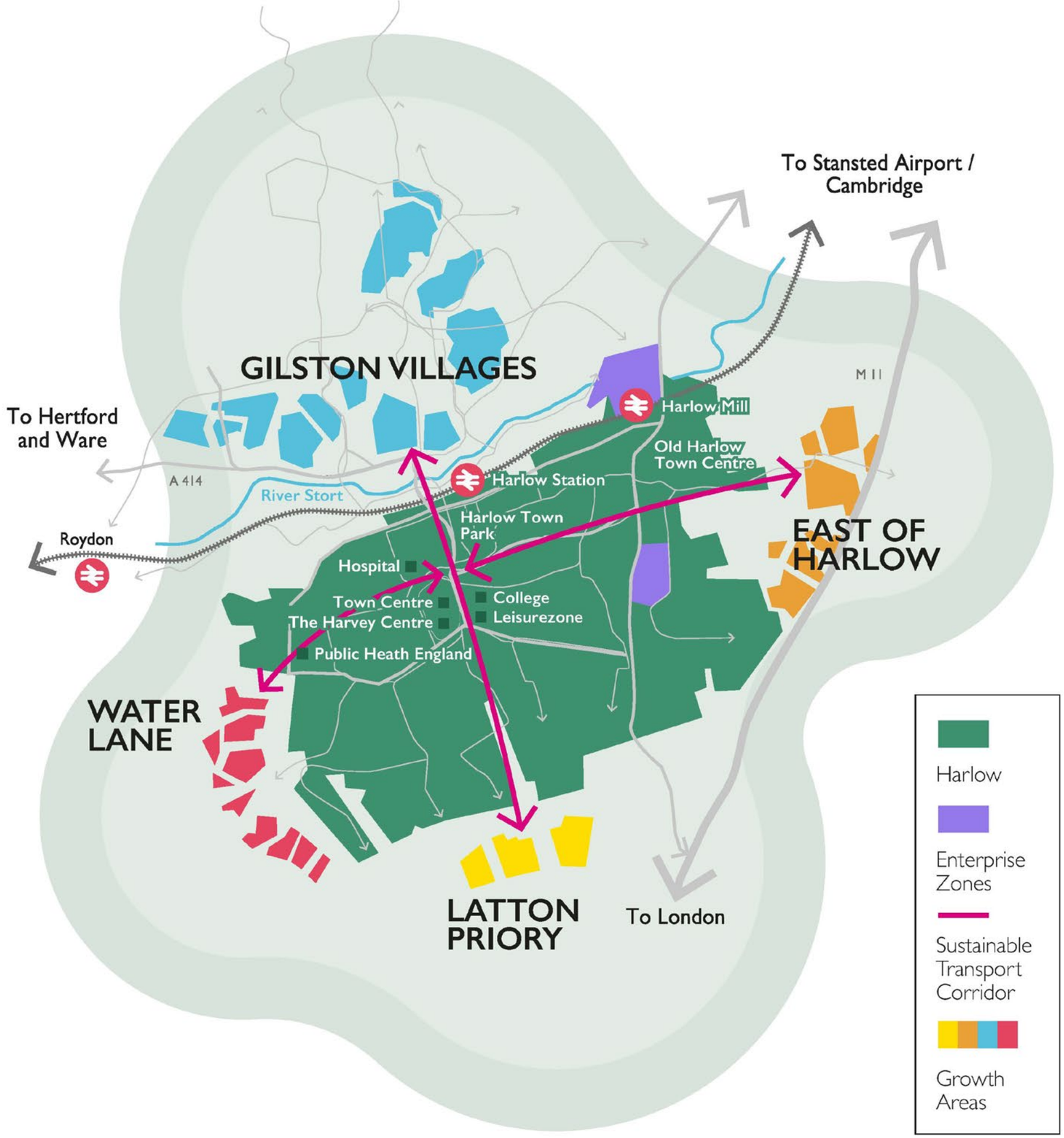
- Located in Epping Forest District
- 2,100 new homes

Latton Priory:

- Located in Epping Forest District
- 1,050 new homes

Draft Harlow Local Plan:

A further 21 sites, which together total 1,147 dwellings, are allocated in the draft Harlow Local Plan



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Environmental Sustainability

Goal: Net Zero-Carbon by 2030

DESIGN APPROACH: FIRST PRINCIPLES

These 'First Principles' are to be followed to ensure new Garden Town developments are sustainable, and evolve through good design. The First Principles act as a structured design process, and are iterative, with observations made to be referred back to when navigating the varying scales of design. Use of these principles will significantly benefit the proposal when assessing against the remainder of the Guidance.

1 | LANDSCAPE-LED DESIGN

Harlow and Gilston Garden Town is characterised by a number of different landscape characters areas and assets. Study of existing strategies, analysis, survey and mapping should be undertaken of existing green infrastructure and ecological value of features. These include; topography, trees, hedgerows, woodland, grasslands, wetlands, meadowlands, farmlands, hills and lowlands, scarps and valleys, flood plains, views and vistas. Drawings, surveys, site photographs, and precedent images should be utilised.

Design should be landscape led from the start and across all design stages. The best design and development outcomes will be delivered by engaging landscape and ecology consultants at an early stage. Additional spending on design fees will be very likely outweighed by the speed and ease of securing planning permission.

2 | SUSTAINABLE MOVEMENT

The Garden Town has ambitious sustainable travel mode shift targets, as set out in the HGGT Transport Strategy. To achieve this, sustainable movement must be considered as a first principle in design, alongside landscape and ecology.

Key destinations and active travel desire lines for journeys to work, schools, shops and leisure should be mapped, to be direct, inclusive, attractive and safe. Opportunities to knit communities together with movement routes and green infrastructure should be maximised.

Follow the HGGT User Hierachy on routes and access points; ensure walking and cycle networks connect to the Sustainable Transport Corridors and wider networks, and prioritise travelling to further destinations by public transport over private cars.

3 | ORIENTATION AND FORM

Solar orientation must inform the topography, scale and massing of development at early stages of masterplanning, with south-facing buildings, fenestration, and amenity being orientated to take advantage of passive solar gain – absorbing the sun's heat energy to warm buildings and spaces. Building axis' can be orientated in the east-west direction to take advantage of maximum daylight and heat from the sun which significantly reduces the energy consumption of a building, and can reduce a homes' heating and cooling costs by up to 85%.

To stay cool in the summer months and avoid overheating, external shading provisions should be made to the buildings and surrounding areas, including the use of green infrastructure.

4 | FOLLOW ENERGY HIERARCHY

When determining energy strategies for new developments and masterplans, the Energy Hierarchy is to be followed:

1. BE LEAN:
Use less energy: minimising the energy demand of new buildings through fabric performance: This step requires design that reduces the energy demand of a development. Energy Strategies need to demonstrate how energy efficiency measures reduce the energy demand in line with performance targets highlighted in this document.

2. BE CLEAN & GREEN:
Supply energy efficiently: utilising energy efficiently in buildings including for space heating & cooling: Consideration must be given to how heat and energy will be provided to the development using low-carbon heating networks.

3. BE SEEN:
Monitor & Report performance: for at least 5years post-completion to remove the performance gap: This requires all major developments to monitor and report their energy performance post-construction to ensure that the actual carbon performance of the development is aligned with the Garden Town ambitions of a net zero-carbon target.

5 | ADAPTABLE & FUTURE PROOF DESIGN

Building strong communities is aided by giving people and families the opportunity to have accommodation that can adapt to respond to their changing needs and abilities.

This means looking at the macro-scale of large scale green and blue infrasrtucture and management for climate adaptation, futureproofing infrastructure for technological innovation, provision of a range of house types, adaptable facilities and meanwhile use spaces. And through to the micro-scale; for example the space and ease in ability to extend homes and facilities (physical and digital) to work from home.

While technologies will change, the homes built here will exist for decades - 60+ years, and it is important that strong communities are not broken due to the lack of adaptable design.

DESIGN APPROACH: FIRST PRINCIPLES

6 | FABRIC-FIRST APPROACH

A fabric-first approach requires the building envelope to be a high-performance thermal envelope, reducing energy waste. This means the proposed buildings must have external walls, roofs, floors, windows & doors that are: super insulated, airtight, and windtight.

A fabric-first approach includes the windows and doors – which provide significant heat loss and heat gains – depending on solar orientation. Windows and doors must therefore incorporate high-performance glazing to provide comfortable internal temperatures. A high-performance thermal envelope delivers exceptional indoor comfort and building energy efficiency.

7 | VENTILATION & OVERHEATING

A mixed-mode (natural and mechanical) ventilation strategy is encouraged for excellent indoor air quality. This involves the incorporation of passive and/or whole-house mechanical ventilation with heat recovery system (MVHR) – which is key to delivering radically energy efficiency and exceptional comfort, through providing clean, filtered air into habitable spaces.

Early stage overheating analysis will be expected to be carried out at design stage to identify key factors contributing to overheating risk; where developments are at risk of overheating, additional detailed assessment and mitigation measures will be expected to be incorporated.

8 | EMBODIED & OPERATIONAL ENERGY

Embodied energy is the total energy required for the extraction, processing, manufacture and delivery of building materials to the building site, and the construction of the development.

All design teams are expected to think about, and reduce the embodied energy required to develop their schemes. For example, depending on location, height, and site suitability, materials like timber could be favoured over less sustainable alternatives such as concrete.

Operational Energy is concerned with the amount of carbon emissions associated with the building's annual operation. Developments should be aiming for net zero carbon – where energy on an annual basis is zero or negative. A net zero carbon building is highly energy efficient and powered from on-site and/or off-site renewable energy sources.

Developments should be designed using realistic predictions of operational energy to avoid performance gap in a building's energy use.

9 | RENEWABLE TECHNOLOGIES

Renewable energy uses natural resources such as sunlight, wind, tides and geothermal heat which are naturally replenished. Most forms of renewable energy are cheap to operate, but can be expensive to install.

Examples of technologies include; PV's, solar thermal, biomass, ground/air source heat pumps, wind, hydro. The choice of renewable technologies should be dependent on an assessment on site and development suitability.

10 | AIR-TIGHT STRATEGY & THERMAL-BRIDGE FREE

An air-tight strategy focuses on the internal comfort of a building, and will be required to develop a draught-free building envelope. The draught-free building ensures high energy efficiency, internal user comfort, and protects the building envelope.

The airtight strategy must be continuous to ensure there are no unintended gaps in the building envelope that allow uncontrolled air to leak in and out of the building.

Internal comfort is affected by heat loss through the building fabric, and poor thermal bridging – any gaps or thinning of the insulation. Therefore, the design approach must be to design them out.

Post-occupancy evaluation enables air tightness and thermal bridging to be measured, to help close the known perforamnce gap in these areas.

RETROFITTING

Design Principles for Retrofitting of existing buildings has not been addressed in this guidance. This is in anticipation of the emerging HGGT Sustainability Guidance for Retrofit. This document will signpost to industry standards and guidance regarding retrofitting.

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ENERGY EFFICIENCY & CARBON REDUCTION

OBJECTIVES & REQUIREMENTS

The transition to net zero-carbon by 2030 must begin with providing genuinely affordable homes. All new buildings are therefore expected to adopt a fabric-first approach (i.e. Passivhaus Standards), with the expectation that as our grid system decarbonises, and, we build more energy efficient homes, emphasis will be placed on the embodied energy involved in constructing new buildings, utilising more renewable technologies.

Currently (2017 figures), all 3 district councils contribute 558CO2kt from the domestic sector only (electricity, gas and other contributions). This accounts for almost a third (27%) of all CO2 contributions in the districts and represents a significant opportunity reduce our carbon impact and adopt circular economy principles.

With the decarbonising of the National Grid, achieving net zero-carbon will mean strategic sites must respond to the two key components of whole-life carbon; embodied carbon and operational energy. Achieving net zero operational energy means the building does not burn fossil fuels and is 100% powered by renewables.

A Whole Life Carbon (WLC) Assessment should be undertaken at pre-application, planning application, and after practical completion, as new homes are expected to last 60+years, with carbon emission reduction in line with the targets in the Checklist. Appendix 2a highlights the sequence of activities to complete an assessment.

Embodied Carbon Reduction Strategy:

1. Using circular economy principles of reuse and refurbish, and designing for disassembly at end of life with processes including using offsite construction.
2. Building low-energy homes, using fossil fuel-free technology to supply heating and power to them.
3. Using renewable energy where necessary

Operational carbon Reduction Strategy:

1. Not burning fossil fuels for supply to homes
2. 100% powered by renewable energy i.e.heat pumps
3. Achieving energy performance in line with checklist

For Outline Planning, Applicants can use Whole Life carbon assessment tools such as FCBS Carbon.

KEY LOCAL POLICY & GUIDANCE

HGGT Vision
- Placemaking and Homes: B9, B10, D3
- Landscape & Green Infrastructure: D1, D2, D3, D4
- Sustainable Movement: D6
- The emerging Garden Town Transport Strategy
- Building Futures – Hertfordshire Guide

HDC Local Plan Policy:
- HGT1: Development & Delivery of Garden Town
- PL3: Sustainable Design, Construction & Energy Use
- Harlow Area Action Plan (TC AAP)

EFDC Local Plan Policy:
- SP4(xvii): Highest standards of energy efficiency
- SP5 Garden Town Communities
- DM9: High Quality Design
- DM19: Sustainable Water Use
- DM20: Low Carbon and Renewable Energy

EHDC Local Plan Policy:
- CC3: Renewable and Low Carbon Energy
- DES1 Masterplanning
- DES4: Design of Development (a) & (b)
- HOU8 Self-Build and Custom Build Housing
- CFLR9 Health and Wellbeing
- 11.2 Harlow and Gilston Garden Town

SOCIO-ECONOMIC CO-BENEFITS +

CASE STUDIES (click image to visit website)

Marmalade Lane, Cambridge
Built with fabric-first approach for energy efficient homes, alleviating fuel-poverty.

Goldsmith Street, Norwich
Built to Passivhaus standards, needing little energy for heating and cooling.

Newhall , Harlow
Being highly sustainable with consideration for long-term energy use and incorporating measures to reduce energy use in properties

QUALITY CHECKLIST		Minimum Requirement	Net Zero-Carbon by 2050	Net Zero-Carbon by 2030
En.1	Operational Energy (KWh/m2/y)	146 ☐	< 70 ☐	< 0 - 35 ☐
En.2	Embodied Carbon (kgCO2e/m2)	1000 ☐	< 450 ☐	< 300 ☐
En.3	Space Heating Energy Demand (KWh/m2/y) of net living space	54.26 ☐	25 ☐	15 ☐
En.4	Airtightness (air changes/ hr @ n50)	5 ☐	3 ☐	≤ 0.6 ☐
En.5	Ventilation Strategy (m3/hr/person)	Natural - extract fans ☐	Mechanical - with extract fans ☐	Mechanical Heat Recovery (30) ☐
En.7	What is the on-site reduction in CO2 emissions against Building Regulations Part L (2013)?	0-34% ☐	35%-50% ☐	≥ 50% ☐
En.8	For applications greater than 99no. units, what BREEAM Communities Level is met?	Very Good ☐	Excellent ☐	Outstanding ☐
En.9	Thermal Bridging y-value (W/m2K)	0.0051 ☐	0.0039 ☐	0 ☐
En10	What Fabric U-Values has the proposal been designed to meet? W/(m2K)	☐	☐	☐
	External Walls	0.30 - 0.16	0.15 - 0.11	< 0.1
	Floor	0.25 - 0.11	0.10 - 0.08	< 0.07
	Roof	0.20 - 0.13	0.12 - 0.10	< 0.1
	Windows (triple glazing) & Doors	2.00 - 1.4	1.3 - 1.00	< 0.9
	Attach Whole Life Carbon Assessment Attach Overheating Design Assessment	☐		
	Attach certification of the above chosen standards, and use 'Statement' page for additional information			

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RENEWABLE ENERGY

OBJECTIVES & REQUIREMENTS

Our recent extreme weather has highlighted the need to ensure that buildings constructed today are fit for the future, and, designed for resilience over the next 60+ years. Other Climate mitigation and adaptation strategies span the breadth of this document, so this section focuses on the use of renewable energy for our heat supply, as heat demand is estimated at more than 40% of the energy consumed across all 3 boroughs.

The nature and scale of the strategic sites make them ideal to ensure that the heating and hot water they generate are fossil fuel free, supporting less demand on the national grid.

On-site renewable technologies such as Heat Pumps, Solar Photovoltaics, and Solar Thermals should be explored for adoption, and paired with each other to provide the greatest benefit to new developments; i.e. heat pumps paired with efficient buildings, and PV's paired with electric charging enabling sustainable travel.

Applicants are to use the LETI Heat Decision Tree (Appendix 3) at concept and developed design stages, to assist them in choosing the most appropriate heating system; where renewable systems should be prioritised over connecting to district heating networks, which depend on fossil fuels.

New Developments should be designed to;

- Heat Sharing Network: joining a heat sharing network is particularly relevant for these strategic mixed-use development sites where opportunities for load shifting and heat sharing occur.
- Minimise system temperatures: high temperatures in heating systems are synonymous with fossil-fuel combustion
- Reduce Heat Demand at point of use: The greatest opportunity to meeting net zero-carbon emissions is to reduce the amount of heat needed: achieved through a fabric-first approach and limited hot water use, coupled with reuse of low temperature waste heat sources.
- Lean Design: load modelling can predict energy use and help size plant requirement.
- Harness Waste Heat: heat released as a by-product of an existing process enables otherwise wasted heat to contribute to meeting energy demands.

KEY LOCAL POLICY & GUIDANCE

HGGT Vision
- Placemaking and Homes: B9, B10, D3
- Landscape & Green Infrastructure: D1, D2, D3, D4
- Sustainable Movement: D6

HDC Local Plan Policy:
- HGT1: Development & Delivery of the Garden Town
- PL3: Sustainable Design, Construction & Energy Use
- Harlow Area Action Plan (TC AAP)

EFDC Local Plan Policy:
- SP4(xvii): Highest standards of energy efficiency
- DM9: High Quality Design
- DM19: Sustainable Water Use
- DM20: Low Carbon and Renewable Energy

EHDC Local Plan Policy:
- CC3: Renewable and Low Carbon Energy
- DES4: Design of Development (a) & (b)
- Building Futures: Sustainable Design Toolkit

SOCIO-ECONOMIC CO-BENEFITS +

CASE STUDIES (click image to visit website)

Project Etopia, Corby
Uses combined solar PV's and thermal panel to deliver net zero carbon on site.

Active Homes, Neath, South Wales
Battery technology used to store energy and solar PV & TSC's to generate 60% energy.

Tallack Road, Waltham Forest, London
Large-scale communal Air Source Heat Pump to feed ambient temperature heat network

QUALITY CHECKLIST		Minimum Requirement	Net Zero-Carbon by 2050	Net Zero-Carbon by 2030
Rn.1	What on-site renewable energy technologies are planned to be included in the development?	PV's + EV charging / CHP's ☐	Low-temperature District Heating ☐	Electric Heat Pumps / Solar Thermal ☐
Rn.2	What percentage of CO2 emission reduction is planned to be provided from on-site renewable energy sources? (SAP 10 carbon emission factors to be used for calculation)	> 20% ☐	> 50% ☐	> 70% ☐
Rn.3	What percentage of household electricity will on-site renewable technology provide? (net zero operational carbon does not burn fossil fuel and is 100% powered by renewables)	> 35% ☐	> 50% ☐	100% ☐
Rn.4	Have any government incentivised schemes been taken advantage of? i.e. Non-Domestic Renewable Heat Incentive (RHI)	None ☐	N/A	Non-Domestic RHI ☐
Rn.5	Photovoltaic Energy Demand (kWh/m2/yr)	-854 ☐	-2,563 ☐	-2,563 ☐
Rn.6	Domestic hot water (kWh/m2/yr)	42 ☐	20 ☐	6 ☐
	Please attach Energy Assessment	☐		
	Please attach relevant certification of the above standards you have chosen	☐		
	Please use 'Sustainability Summary' pages where you are adding any further information			

Outline Planning submission

GREEN INFRASTRUCTURE

OBJECTIVES & REQUIREMENTS

The HGGT Vision sets out indicators for landscape and green infrastructure: proposals should respond to the distinctive landscape setting; expand and enhance the town's Green Wedge network; improve access to, and the quality of, the surrounding Green Belt; and support a sustainable and biodiverse environment.

The green and blue infrastructure network of the Garden Town and wider area must be protected and enhanced, and considered in an integrated way to meet sustainability, placeshaping and socio-economic objectives. Key assets include the Stort Navigation & Stort Valley; the River Lea & Lee Valley; the Green Wedge and Finger network; Grade II Listed Harlow Town Park; existing and Ancient woodland including Epping Forest; neighbourhood allotments & green spaces; the proposed Gilston Country Park; proposed Suitable Alternative Natural Greenspace; new 'Super Greenways'; sports, play and adventure spaces.

Proposals must be landscape-led from the start, and green infrastructure should be high quality and multifunctional, as set out in the East Herts Gilston Area Charter SPD and EFDC Green Infrastructure Strategy Relevant landscape and ecology expertise should be sought early in the design process.

Development should deliver at least 10% Biodiversity Net Gain (BNG) following the mitigation hierarchy, and then provided on-site where possible, before off-site or compensation are considered, Ecology Reports should set out targeted net gain outcomes, through baseline surveys, then consider protection, mitigation, habitat enhancement/ creation, with stewardship and maintenance for a minimum of 30 years.

Greening of streetscapes and amenity spaces, with street trees, pocket parks, hedgerows, Super Greenways, greens roofs and swales, provide placeshaping benefits as sociable streets and contribute to climate resilience, through biodiversity enhancement and mitigating overheating.

Multifunctional and inclusive green & blue infrastructure at various scales has an important role to play in placeshaping, health, wellbeing, and community resilience. Play, social spaces, food growing, art and heritage trails should be designed early, considering all ages and abilities, with active frontages to enable natural surveillance.

KEY LOCAL POLICY & GUIDANCE

- HGGT Vision & Design Guide
- HGGT Healthy Town Framework

Harlow Council: Local Plan Policy:
- WE1: Strategic Green Infrastructure
- WE2: Green Wedges and Fingers
- WE3: Biodiversity and Geodiversity
- PL4: Green Wedges and Green Fingers
- PL5: Other Open Spaces
- PL6: Trees and Hedgerows
- PL7: Green Infrastructure and Landscaping
- PL8: Biodiversity and Geodiversity Assets
- Harlow Area Action Plan (TC AAP)

EFDC Local Plan Policy:
- SP 3 Place Shaping
- SP 7 The Natural Environment
- DM 1 Habitat protection and improving biodiversity
- DM 2 Epping Forest SAC and the Lee Valley SPA
- DM 3 Landscape Character
- DM 5 Green and Blue Infrastructure
- DM 6 Designated and undesignated open spaces
- DM9: High Quality Design
- DM 15 Managing and reducing flood risk
- DM 22 Air Quality
- EFDC Green Infrastructure Strategy

EHDC Local Plan Policy:
- DES1: Masterplanning
- DES2 Landscape Character
- DES3 Landscaping
- DES4: Design of Development (a) & (b)
- CFLR1 Open Space, Sport and Recreation
- CFLR2 Local Green Space
- CFLR4 Water Based Recreation
- CFLR9 Health and Wellbeing
- NE3 Species and Habitats
- NE4 Green Infrastructure
- CC1 Climate Change Adaption
- East Herts Gilston Area Charter SPD

Wider Area
- Green Essex Strategy
- Essex Biodiverstiy Action Plan
- Hertfordshire Strategic Green Infrastructure Plan 2011
- Stort Catchment Management Plan
- Green Arc Strategy

SOCIO-ECONOMIC CO-BENEFITS +

CASE STUDIES (click image to visit website)

Community cohesion: Drapers Field
Addresses issues of community cohesion and play, improving wellbeing.

Ecology in Architecture: Barratt Homes
A progressive approach to wildlife-friendly housing, with 'Swift Bricks' built into homes.

Collaboration: Teignmouth, Devon.
Partnership with third sector to deliver ongoing BNG and between the LPA & RSPB to deliver strategic compensation.

QUALITY CHECKLIST		Low Quality	Medium Quality	Garden Town High Quality
Gr.1	Has a Landscape-led approach been demonstrated, as set out in the HGGT Vision / Gilston Area Charter SPD / EFDC Green Infrastructure Strategy?	No ☐	Some landscape analysis undertaken ☐	Ecology, topography, vistas, landscape character & features leading design ☐
Gr.2	What % of Biodiversity Net Gain (BNG) will be delivered?	0-9% BNG ☐	10-15% BNG ☐	15%+ BNG ☐
Gr.3	Does Ecology Report show process of mitigation and location hierarchy, with Stewardship and Maintenance strategy provided for green infrastructure and BNG?	No strategy ☐	Yes - Outline strategy provided ☐	Yes - hierarchies followed, and 30 year strategy with input from community ☐
Gr.4	Have play, community amenity and food production opportunities been maximised? All new homes should be within 800m of allotments, and Fields in Trust distances should be followed for play spaces.	No ☐	Yes - locations mapped with walking isochromes ☐	Yes - locations mapped, character of spaces defined, strategies for play / food / active frontages ☐
Gr.5	Have you used recognised tools to assess the value/ quality of green infrastructure? E.g. Natural Capital Tool/ Ecometric/ Building With Nature/ Green Flag Award/ Social Value Calculator	No ☐	Yes - qualitative assessment undertaken ☐	Yes - qualitative assessment/ value calculated with exemplary score ☐
Gr.6	Has an overheating assessment or modelling been provided, as set out in UKGBC's Housing Standards Playbook, taking into account impact of green infrastructure?	No ☐	Yes - some assessment ☐	Yes - UKGBC Playbook followed ☐
Gr.7	Has green infrastructure been proposed at different scales to reinforce the Garden Town Vision indicators, access and inclusive design principles?	Different scales not explored ☐	Yes - Different scales shown, roles/ function undeveloped ☐	Yes - Different scales designed, with qualities and roles defined, and inclusively designed ☐
	Please attach your BNG Report / Biodiversity Impact Assessment with Stewardship & Maintenance Strategy Please use 'Sustainability Summary' pages where you are adding any further information			

SUSTAINABLE MOVEMENT

OBJECTIVES & REQUIREMENTS

Sustainable movement and active transport infrastructure are key to the success of sustainable growth in the Garden Town. Positive travel choices that enable sustainable living lie at the heart of the Garden Town's Vision, Transport Strategy, and Healthy Town Framework. The three overarching objectives of the HGGT Transport Strategy are:

1. 50% of all trips originating from and ending within the whole Garden Town should be by active and sustainable travel modes. Within the new Garden Communities, 60% of trips originating from and ending within them should be by active and sustainable travel modes.

2. Mobility options will be based on a hierarchy of importance: Reduce the need to travel > walking and cycling > public transport > private vehicle use.

3. Support and encourage a culture of active and sustainable travel ensuring all journeys will be efficient and safe.

Masterplanning for Sustainable Movement should address: walkable low traffic neighbourhoods, sociable streets and placemaking; cycling, walking and public transport network; behaviour change programmes; rebalancing car use and parking design (including carpooling and car sharing); futureproofing with adaptable technology; deliveries and servicing; and construction impacts.

Sustainable Transport Corridors (STCs) will be a series of strategic public travel routes through the Garden Town providing inclusive, coherent, safe, direct, convenient and attractive public and active travel options that will connect neighbourhoods quickly with key destinations such as the town centre and Harlow Town railway station. The design of these should follow the HGGT STC Placeshaping Principles and Transport User Hierarchy.

'Mobility Hubs' provide transport interchange as well as social and community focal points. All new homes should be within 800m (10 minute walk) of a hub and within 400m of a bus stop.

Designs must futureproof for change in travel habits, including reallocating parking and road space, innovation in travel technology, last mile deliveries and appropriate provision for electric charging .

SOCIO-ECONOMIC CO-BENEFITS +

KEY LOCAL POLICY & GUIDANCE

- HGGT Vision & Design Guide
- HGGT Transport Strategy (draft)
- HGGT Healthy Town Framework (draft)
- HGGT Local Cycling & Walking Infrastructure Plan (LCWIP) (emerging)
- HGGT STC Placeshaping Principles (draft)
- HGGT Hubs 'How To' Guide (draft)
- HGGT Parking Strategy (emerging)

Essex County Council
- Local Transport Plan 3
- Sustainable Modes of Travel, Speed & Traffic Management Strategies
- Essex Design Guide
- Harlow Cycling Action Plan

Hertfordshire Council Council
- Local Transport Plan 4
- Hertfordshire Active Travel Strategy/Sustainable Modes of Travel Strategy
- Roads in Hertfordshire: A Design Guide

Harlow Local Plan Policy:
- HGT1 Dev & Delivery of the Garden Town
- PL3 Sust. Design, Construction & Energy Use
- IN1 Development and Sustainable Modes of Travel
- WE2 Green Wedges and Green Fingers
- Harlow Town Centre Area Action Plan (emerging)

EFDC Local Plan Policy:
- SP 3 Place Shaping
- SP 4 Garden Communities in HGGT
- T 1 Sustainable transport choices
- T 2 Safeguarding of routes and facilities
- DM 9 High Quality Design
- DM 22 Air Quality

East Herts Local Plan Policy:
- GA1 The Gilston Area
- TRA1 Sustainable Development
- TRA3 Vehicle Parking Provision
- DES4 Design of Development
- CFLR9 Health and Wellbeing
- DEL2 Planning Obligations
- EHDC Sustainability SPD

Other:
- UK Government Policy Paper: Gear Change
- Sport England Active Design Principles
- Sustrans Cycling For Everyone

CASE STUDIES (click image to visit website)

Dunsfold Park Masterplan, Surrey
Designing a walkable village entirely within 10 minutes' walk of the Market Square.

St Chads Development, Essex
Shared surface 'home zones' are designed to prioritise pedestrians and cyclists, while reducing vehicular speed.

VeloCity, National Infrastructure Commission. Enriching village life while creating new homes and employment in healthy and socially cohesive places.

QUALITY CHECKLIST		Low Quality	Medium Quality	High Quality
Tr.1	Have walkable low traffic neighbourhoods been designed as a first principle, based on the HGGT Transport User Hierarchy?	No - vehicle access design prioritised ☐	Transport hierarchy considered ☐	Yes - desire lines, permeability, topography, user hierarchy leading design ☐
Tr.2	Have safe and high quality connections to active travel networks beyond the development boundary been proposed with green infrastructure considered?	Ongoing connectivity not considered ☐	Some connectivity - lacks GI consideration ☐	Strong connections to networks, with clear relationship to GI/ ecology ☐
Tr.3	Have you followed the STC Placeshaping Principles when designing the STC and its transport interchanges?	Not shown ☐	Some achieved ☐	Yes - all achieved ☐
Tr.4	Are bus stops and hubs accessible and attractive for new and existing residents, offering appropriate shelter and including provision of a regular bus service?	Hubs and bus stops not meeting requirements ☐	STC hubs within 800m, bus stops within 400m of all new homes ☐	STC hubs co-located with facilities/sheltered bus stops within 800m/ 400m of all homes with regular service ☐
Tr.5	Has cycle parking designed to be high quality, safe and with ease of access?	Cycle parking not provided ☐	Suitable quantity of spaces provided ☐	Quantity and quality of environment provided ☐
Tr.6	Have inclusive design principles / accessibility for all regarding sustainable movement routes been achieved?	Does not meet Equalities Act ☐	Inclusive Design Statement provided ☐	Exemplary inclusive design provided ☐
Tr.7	Has a Transport Assessment been provided that clearly demonstrates how the mode split target is being achieved, as defined by HGGT?	Yes - minimum TA provided ☐	Yes - but multi modal modelling not included ☐	Yes - multi-modal modelling, and roadmap for achieving HGGT targets ☐
Tr.8	Has a thorough Sustainable Travel Plan been provided? Has Modeshift Stars accreditation been explored?	No	Sustainable Travel Plan provided	Yes - including behaviour change programme, travel coordinator, monitoring
	Please use 'Sustainability Summary' pages where you are adding any further information			

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WATER MANAGEMENT

OBJECTIVES & REQUIREMENTS

The combined challenges and opportunities of growing populations within the Garden Town, changing land uses, the finite supply of water, action is required now to ensure the availability of water for the future without having a detrimental impact on the environment. There is likely to be less water available for future generations and therefore a greater need for water demand management and water efficiency in the area. New development should therefore not lead to an overall increase in demand for water.

The strategy therefore looks for new developments to:

i) Reduce the risk of flood through the use of sustainable drainage infrastructure and robust green infrastructure design - including the use of biophillic design and permeable hard landscape.

ii) Minimise use of mains water by incorporating water saving measures and equipment, and, designing residential development so that mains water consumption is reduced in accordance with requirements found in the table overleaf.

iii) Promote the use of rainwater harvesting and using dual potable and grey water recycling measures

To avoid increased flood risk, and make the most effective use of the existing and planned drainage infrastructure, rainwater should be managed as a valuable resource, rather than a waste product and innovative ways of using water can be incorporated into community infrastructure.
There is a drive towards sustainable drainage systems that mimic the way nature manages rainwater. As a result, designing new developments for optimal sustainable water consumption has become even more important, with the Garden Town enabling ambitious targets for water efficiency in all new developments.

Existing homes and workplaces should become more water efficient through metering and water efficiency retrofits.

New developments should embrace carbon reduction systems such as a waste water heat recovery.

KEY LOCAL POLICY & GUIDANCE

HGGT Vision
- Placemaking and Homes: B9, B10, D3
- Landscape & Green Infrastructure: D1, D2, D3, D4
- Sustainable Movement: D6
- HGGT Watercycle Study 2018
- The emerging Garden Town Transport Strategy

HDC Local Plan Policy:
- HGT1: Development & Delivery of Garden Town
- PL3: Sustainable Design, Construction & Energy Use
- PL10: Water Quality, Water Management, Flooding and Sustainable Drainage Systems
- Harlow Area Action Plan (TC AAP)

EFDC Local Plan Policy:
- SP4(xvii): Highest standards of energy efficiency
- DM9: High Quality Design
- DM19: Sustainable Water Use
- DM20: Low Carbon and Renewable Energy

EHDC Local Plan Policy:
- CC3: Renewable and Low Carbon Energy
- DES4: Design of Development (a) & (b)
- Building Futures: Sustainable Design Toolkit
- WAT3 Water Quality and the Water Environment
- WAT4 Efficient Use of Water Resources
- WAT5 Sustainable Drainage

Essex:
- The Sustainable Drainage Systems Design Guide For Essex: Weblink Here

CASE STUDIES (click image to visit website)

Waltham Village Square | Rain Gardens
Full of native shrubs and flowers planted in a depression to temporarily hold and soak-in rain water runoff from roofs & driveways

Knostrop Weir, Leeds | Flood Management
Provides three new pneumatically moveable weirs that can be lowered to let floodwater discharge quickly downstream.

Ladywell Fields, Lewisham | SuDS
Creating sustainable drainage and reduce flooding by modifying the river channel with a naturalistic setting incorporating backwaters and

QUALITY CHECKLIST		Minimum Requirement	Net Zero-Carbon by 2050	Net Zero-Carbon by 2030
W.1	Potable Water: What is the expected internal water use (litres/person/day)?	110 ☐	95 ☐	75 ☐
W.2	What water collection or recycling measures will be used?	100% provision of water butts ☐	Rainwater harvesting systems ☐	Grey water recycling & harvesting ☐
W.3	How much of the hard surfaces within the development and conveyance systems will be permeable (i.e streams, swales)	50% ☐	75% ☐	100% ☐
W.4	Will water saving devices be installed in the development? e.g. low flush toilets, smaller baths , taps and showers with flow regulators	N/A	N/A	Yes ☐
W.5	What additional Sustainable Urban Drainage (SUDs) measures have been proposed? (i.e. permeable surfaces, rain gardens, green roofs, ponds/wetlands, soakaways)			
	Please use 'Sustainability Summary' pages where you are adding any further information			

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CIRCULAR ECONOMY

OBJECTIVES & REQUIREMENTS

New developments should promote circular economy outcomes and aim to be net zero waste. In the UK, the largest contributor to waste nationally is the construction and demolition industry where a third of all waste is generated.

The strategic sites in the Garden Town are to be designed to reduce construction & operational waste and enable ease of access for future occupants to recycle and reduce waste. This can be encouraged through adopting a circular economy approach (including the use of modern methods of construction (MMC) & Design for Manufacture and Assembly (DfMA)processes) and the Waste Hierarchy found in the DEFRA Guidance.

Building in Layers principles should be adopted to determine realistic lifetimes for the elements of a building, and adapt the structure and fabric. Homes should be designed to be adaptable and flexible by considering the intended lifespan of each independent building layer, optimising building longevity and maximising material reclamation at end-of-life.

3 Key Principles expand the Circular Economy process:
1. Conserve Resources, Increase Efficiency, Source Ethically:

- Minimise the quantities of materials used: by specifying low embodied carbon materials
- Minimise the quantities of other resources used: including energy, water, and land
- Source materials responsibly and sustainably: including all materials to be reusable

2. Eliminate waste and ease maintenance by:

- Long-life & Loose fit: build to adapt to changing social, physical and economic environments.
- Design for Disassembly: at the commencement of the project, set out deconstruction plan and capture asset value.

3. Manage waste sustainably and at the highest value:

- Construction, demolition & excavation waste
- Operation & Municipal waste

A Circular Economy Statement should be provided to demonstrate chosen strategy.

KEY LOCAL POLICY & GUIDANCE

HGGT Vision
- Placemaking and Homes: B9, B10, D3
- Landscape & Green Infrastructure: D1, D2, D3, D4
- Sustainable Movement: D6

HDC Local Plan Policy:
- HGT1: Development & Delivery of the Garden Town
- PL3: Sustainable Design, Construction & Energy Use
- PL9: Pollution and Contamination
- Harlow Area Action Plan (TC AAP)

EFDC Local Plan Policy:
- SP4(xvii): Highest standards of energy efficiency
- DM9: High Quality Design
- DM19: Sustainable Water Use
- DM20: Low Carbon and Renewable Energy
- DM 7 Heritage Assets
- DM 8 Heritage at Risk
- DM 11 Waste recycling facilities on new development
- DM 18 On site management of waste water and water supply

EHDC Local Plan Policy:
- CC3: Renewable and Low Carbon Energy
- DES4: Design of Development (a) & (b)
- HA1 Designated Heritage Assets
- HA2 Non-Designated Heritage Assets
- HA3 Archaeology
- HA4 Conservation Areas
- HA7 Listed Buildings
- HA9 Enabling Development

SOCIO-ECONOMIC CO-BENEFITS +

CASE STUDIES (click image to visit website)

Illford Community Market, London
Designed for five year and will be dismantled and reconfigured on future meanwhile sites.

London Olympic Park, London
A waste target of 90% diversion from landfill of demolition waste by weight

Clarion Housing, Merton Regeneration
Zero-carbon development of 208 homes, achieving Code for Sustainable Homes Level

QUALITY CHECKLIST		Minimum Requirement	Net Zero-Carbon by 2050	Net Zero-Waste by 2030
CE.1	How much of the materials used are expected to be 'reusable'	10% ☐	50% ☐	>80% ☐
CE.2	How much of the materials used are expected to be 'reused'	10% ☐	30% ☐	>50% ☐
CE.3	How much of the materials used on site are sourced from ethical and responsible supply chains?	80% ☐	95% ☐	100% ☐
CE.4	How much of the materials used are non-toxic?	☐	☐	100% ☐
CE.5	How much of the materials used can be easily extracted, recycled, and manufactured?	80% ☐	90% ☐	95% ☐
CE.6	The new buildings are circular-by-design to what amount?	20% ☐	40% ☐	65% ☐
CE.7	How much biodegradable and recyclable waste will be diverted to landfill?	☐	☐	0 ☐
	Please attach Circular Economy Statement (see guidance Here)			
	Please use 'Sustainability Summary' pages where you are adding any further information			

Outline Planning submission

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WASTE MANAGEMENT

OBJECTIVES & REQUIREMENTS

In line with becoming net zero carbon by 2030, the Garden Town want to ensure that the amount of waste produced by residents and visitors, as well as landfill waste, will be significantly reduced. There is also the ambition for waste to be recycled and used as a resource.

Developments should therefore be designed to ensure that residents and visitors to the Garden Town reduce the amount of waste they produce; with an overall ambition that no waste will end up in landfill.

This section ties strongly to the circular economy section regarding the necessity of designing buildings and places in a way that maximises the lifespan of a building and its' components, before its' components can be reused.

Innovative solutions for recyclable waste management including underground refuse systems are encouraged and applicants are expected to work closely with county councils in encouraging use.

While both Essex and Hertfordshire County Councils are responsible for making decisions on how waste is managed, the Garden Town have a clear ambition to prevent waste going to landfill, therefore applicants are expected to explore innovate ways to reduce waste at design and operational stages, increase efficient recycling opportunities, and reduce residual household waste (including designing-in opportunities for local food production through allotments); and, the waste strategies should consider the Essex Waste Local Plan, Hertfordshire Waste Local Plan, and, the emerging Hertfordshire Circular Economy Guidance should be referred to.

Developers are expected to provide Operational Waste Strategies including management of recyclable waste, residual waste, and food waste. Alongside this, developers are encouraged to be innovative in contributing towards waste reduction campaigns (i.e. collaborating with education providers such as Harlow College)

KEY LOCAL POLICY & GUIDANCE

Hertfordshire County Council
- Waste Local Plan, consisting of:
- Waste Core Strategy and Development Management Policies document
- Waste Site Allocations document

Essex County Council
- Waste Local Plan:

CASE STUDIES

Eddington, Cambridge
Underground chutes replace thousands of traditional wheelie bins in an innovative waste disposal system.

London Olympic Park, London
A waste target of 90% diversion from landfill of demolition waste by weight

Millerhill, Midlothian
Residual waste recycling and energy recovery facility

QUALITY CHECKLIST		Minimum Requirement	Net Zero-Carbon by 2050	Net Zero-Waste by 2030
W.1	Has early engagement been undertaken with LPA waste management teams to ensure due processes are taken into consideration?	No: LPA not engaged		Yes: demonstrated ☐
W.2	How much construction, demolition and excavation (CD&E) waste will be recycled? This is to be incorporated in your Construction Management Plan			≥ 95% ☐
W.3	How much municipal waste (operational waste) will be recycled or composted vs sent to landfill or energy recovery?	☐		65% : 35% ☐
W.4	Have developments been designed to encourage ease in waste recycling?	No ☐		Yes ☐
	Please attach: - Construction, Demolition and Excavation Waste Strategy - Operational Waste Strategy			
	Please use 'Sustainability Summary' pages where you are adding any further information			

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AIR QUALITY

OBJECTIVES & REQUIREMENTS

In this section, pollution focuses on air pollution as it acts as the single largest influence on air quality to human health in the districts. This section should not be used as a substitute for work otherwise undertaken in any normal full planning application.

Every new development will have an impact on air quality, usually by increasing emissions from buildings or from traffic generation. The links between poor air quality, human health, and the environment are well documented and is classed by Public Health England as a major public health risk alongside cancer, heart disease and obesity.

Air pollution causes more harm than passive smoking and is responsible for the early deaths of an estimated 40,000 people in the UK.

Air Pollution arises from sources and activities including; traffic and transport, industrial processes, domestic and commercial premises, energy generation, agriculture, waste storage/treatment and construction sites.

This section adopts Public Health England's 2019 "net health gain" principles to improve outdoor air quality and public health. New developments should adopt a strategic approach, in line with each Boroughs' Air quality policy and guidance, including any requirements on Air Quality Management Areas, Local Air Quality Action Plan, and development Air Quality Assessments.

Clean by Design: Better by Design:

The following net health gain principles should be incorporated in design to reduce emissions and contribute to better air quality management; applicable irrespective of air quality assessments:

1. Reduce the need to travel by car to destinations
2. Provide zero and low-emission travel options (EV's)
3. Not siting buildings with vulnerable users (i.e. schools, nurseries, care homes) in areas where pollution levels are likely to be higher.
4. Incorporate Clean Air Zones in larger developments
5. Avoid creating 'street canyons' which encourage pollution to build up
6. Incorporate green infrastructure to promote carbon and pollution sequestration
7. Orientate and design buildings to rely less on heating and cooling systems
8. Siting living accommodation away from roadsides
9. Incorporate whole-house ventilation systems for good indoor air quality

KEY LOCAL POLICY & GUIDANCE

HDC Local Plan Policy:
- HGT1: Development & Delivery of the Garden Town
- PL3: Sustainable Design, Construction & Energy Use
- PL9: Pollution and Contamination
- Harlow Area Action Plan (TC AAP)

EFDC Local Plan Policy:
- SP4(xvii): Highest standards of energy efficiency
- DM9: High Quality Design
- DM19: Sustainable Water Use
- DM20: Low Carbon and Renewable Energy
- DM 22 Air Quality

EHDC Local Plan Policy:
- CC3: Renewable and Low Carbon Energy
- DES4: Design of Development (a) & (b)
- Building Futures: Sustainable Design Toolkit
- EQ4 Air Quality

ASSURING PERFORMANCE

OBJECTIVES & REQUIREMENTS

Post-construction energy and quality monitoring is required to bridge the 'performance gap' found in new developments and achieve net zero-carbon .
Achieving this requires a true understanding of a buildings' operational energy .
The performance gap is the difference between predicted design and as-built performance of a building.

Addressing the performance gap in new homes and buildings is critical, as this affects both the 'happiness' of residents, as well as the performance quality of through; residents comfort in terms of poor thermal comfort, indoor air quality, health challenges such as respiratory issues. Furthermore, a poor performing building leads to higher energy bills due to poor building fabric, and exasperating challenging health conditions.

Findings from studies undertaken by Innovate UK and the Zero Carbon Hub consisting over 300 homes, results showed that none met their intended performance targets when tested, with the majority falling even short of Part L and Part F of the Building Regulations by a margin of over 50% post-completion.

The main challenges found in the studies are highlighted in the green box, and design teams and applicants are therefore required to undertake Post Occupancy Evaluation (PoE); assessing both performance standards and quality of life, to address these issues.

All major developments will therefore be required to monitor and report on residents' wellbeing, and the actual operational energy performance in order to close this performance gap and meet the net zero carbon by 2030 targets committed to by each partner authority.

A template PoE form can be found in Appendix 8 and should be used to show compliance. Broadly; evaluation will be required at the following stages:

1. Planning: predicted performance assessment
2. As-built: performance assessment
3. In-use: quality of life / happiness assessment

Further information can be found on the GLA website and the Zero Carbon Hub website.

PRIORITY ISSUES

1. Energy Literacy
2. Improving Quality Output
3. Demonstrating Performance
4. Evidence Gathering & Dissemination

QUALITY STANDARD

In line with the RIBA **Post Occupancy Evaluation** is expected for submission and should cover these key areas of Building in Quality:

1. **Build Quality**: performance of the completed buildings
2. **Functionality**: how useful the building and places is in achieving its purpose
3. **Impact**: how well these developments adds social, economic, cultural, and environmental value and improves human wellbeing

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DIGITAL SUSTAINABILITY

OBJECTIVES & REQUIREMENTS

Sustainable and future digital infrastructure will be a key component to the success of Harlow and Gilston Garden Town.

Future proof and wide-ranging digital infrastructure to enable HGGT to achieve its sustainability goals is crucial and an opportunity for HGGT to champion new delivery models and achieving the 60% modal shift goal. It will also enable HGGT to achieve the Garden Town principles of becoming net zero-carbon by 2030, with strong and connected communities. The opportunity to use sensor and 5G technology will make wireless internet possible everywhere, from smart cars to the Internet of Things (IoT).

The speed, capacity and connectivity of 5G will also provide many opportunities to enhance, protect and preserve the environment through increasing energy efficiency, reducing greenhouse gas emissions, minimising waste and enabling more use of renewable energy. It can also expand our understanding of, and hence improve, decision-making about weather, agriculture, pests, industry, waste reduction and much more.

COVID-19 pandemic has tested (and demonstrated) the importance of efficient, fast and reliable communications networks and other digital infrastructure. However, there is a clear challenge to ensure residents have the access and skills to enable them to take advantage and use new technologies. Focus must be given to ensure the reduction of the digital divide and ensure access by all residents.

HGGT also is part of the Essex & Hertfordshire Digital Innovation Zone (DIZ), which has one of its aims to ensure future digital infrastructure in new developments.

A Digital Vision has been produced, setting out the opportunities and challenges including a set of principles to achieve the sustainability by ensuring future proof digital infrastructure.

Developers are invited to present their plans for the individual sites and are encouraged to sign up the Vision and its principles to be used in their procurement of telecom providers.

PRINCIPLES

Health and Wellbeing - Using digital technologies to provide excellent access to services to helping people helping themselves through self-testing and monitoring.

Sustainable Movement - Utilising appropriate digital technology to enable deployment of innovative technologies and public transport solutions in order to minimising greenhouse gas emissions and local traffic congestion. Also, to ensure the connectivity with Harlow town centre and the wider connectivity.

Promoting a Circular Economy - Developing a Circular economy aimed at eliminating waste and the continual use of resources.

Smart energy and utilities - Utilising appropriate digital technology to minimise the use of natural non-renewable resources and maximise the use of renewable resources, to protect the environment

Smart Public Realm - Utilising appropriate Smart technology to maximise the safe, inclusive and enjoyment use of the public realm; to make it safe and enrich people's lives, and to minimise energy use.

Economy - To ensure the latest digital technology is available in all new homes to facilitate working from home and in new flexible workplaces to maximise productivity. Also, to ensure ease of movement of goods through smart transport infrastructure and monitoring.

Community and Social Infrastructure - To digitally connect people across HGGT to create a strong sense of community, enrich people's lives, and empower residents and businesses to harness digital opportunities for social mobility and equality.

Smart Data Sharing - Utilising appropriate Smart technology to digitally collect/monitor data to manage and maintain the function and quality of the village for the users and protect the wider environment.

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Social & Economic Sustainability

Goal: Enabling integrated communities

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INTRODUCTION

OBJECTIVES & REQUIREMENTS

This section looks at the direct impacts of places and people. Specifically, dealing with how new strategic sites (The East of Harlow site, Gilston Villages 1-7, Waterlane, Latton Priory) will affect the existing diverse communities they connect to.

Designing for Social Sustainability requires a collaborative approach between the private and public sector in order to create new communities that thrive. With the scale and pace of new development, communities must be socially, and economically, as well as environmentally sustainable, and critically, reflect the needs of existing communities. The Draft Harlow Town Centre Area Action Plan should be referred to in knitting existing community requirements with new development.

Addressing social sustainability at the beginning of development, helps manage the long-term costs and consequences of decline and failure in new settlements - an issue of public value and political accountability.

The issues raised in the HGGT Healthy Towns Framework must be addressed; as these highlight that significant proportions of the adult population in Harlow, East Herts, and Epping Forest are not physically active enough, are overweight, or have diabetes - with Harlow having the third highest rate of diabetes in the country.
All three districts have ageing population with an increasing number of people living with dementia. Child poverty and poor outcomes for children and young people are significant issues in Harlow and parts of Epping Forest.

It is therefore essential that all developments create opportunities for daily physical activity for all members of the community; as well as opportunities for supporting a healthier food environment.

Community Ingredients cut across different stages of developments including:
1. Planning & Design
2. Construction & Occupation
3. Long-term Stewardship

In implementing the high-quality Socio-Economic Sustainability Principles, developments ready themselves for strong communities that are well-integrated to the existing Harlow socio-economic fabric.

KEY LOCAL DOCUMENTS

- HGGT Healthy Town Framework
- Essex Health & Wellbeing Strategy: priorities for planning, transport and housing
- Hertfordshire Health & Wellbeing Strategy: priorities for improving mental health and encouraging healthier lifestyles
- NHS Healthy New Towns: Design, Deliver and Manage

Harlow Council:
- Draft Harlow Town Centre Area Action Plan
- Harlow Health & Wellbeing Partnership Strategy
- Harlow Economic Development Strategy
- Livewell Essex
- Harlow Agewell Guide
- HGGT Infrastructure Delivery Plan (IDP)
- HGGT Vision
- HGGT Design Guide
- HGGT Transport Strategy
- HGGT Stewardship Commission
- Essex & Hertfordshire Digital Innovation Zone
- Gilston Area Charter
- Harlow Health and Wellbeing Strategy
- EFDC / HDC / EHDC Statement of Community Involvement (SCI)
- Harlow Sculpture Town
- EFDC Youth Projects interactive map
- Visit Epping Forest
- EFDC Green Infrastructure Strategy
- The Essex Map


Herts & Essex Community Farm.
Photo credit: H&E Community Farm


Herts & Essex Community Farm.
Photo credit: Harlow Livewell Campaign


TBC


TBC

HEALTH & WELLBEING

OBJECTIVES & REQUIREMENTS

To promote a **healthy lifestyle**, active travel should be encouraged and invested in, including ensuring good accessibility to sustainable transport and transportation; embedding the design of high-quality public and green spaces; the use of green infrastructure and biodiversity to promote good mental and physical health; and investment in long-term resilient buildings and infrastructure.

The Harlow Health & Wellbeing Strategy highlights the following key priorities that should be embedded in new developments:
1. Early Help and Startwell
2. Bewell, Staywell, Workwell
3. Agewell
4. Physical Activity and Mental Health

Additional information on other partners in Essex can be found on the Livewell website and Agewell Guide.

The following actions are therefore required from all new developments:
- Look for how this new development can increase physical activity, active living, active travel, and sport - refer to the Green Infrastructure page in this Guidance.
- Promote mental health and wellbeing through clear connections to existing support services
- Encourage older people to "Agewell" by living independent lives through increased community support and reduced winter pressures
- Support children and young people through "Startwell" by incorporating access to affordable activities such as outdoor gyms, community allotments, travelling farms, and urban farming - helping to grow local fruits & vegetables - which also allow them to Eatwell.
- Incorporating flexible workspaces such as co-working, as part of the social infrastructure in new developments to help residents Workwell, particularly in light of pandemics like Covid-19 which will change the way we work moving forward.

VOICE & INFLUENCE

This involves governance structures to represent existing residents and engage new ones in shaping local decision-making and stewardship.

RESILIENCE & ADAPTABILITY

Provision of flexible forward-planning; including housing, infrastructure, and services that can adapt over time; and the incorporation of meanwhile use of buildings and public spaces.

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COMMUNITY STRENGTH & SOCIAL INFRASTRUCTURE

OBJECTIVES & REQUIREMENTS

Ensuring the existing social fabric is protected from disruption, and can benefit from new neighbouring development through shared spaces, collective activities and social architecture to foster local networks, belonging and community identity. A strong sense of local ownership; ensuring new communities are well-integrated into the surrounding area, including utilising critical measures such as stakeholder engagement and post-development governance; ensuring the social infrastructure to promote thriving social networks; and a diversity of building and non-building uses and tenures.

Incorporating the right (formal and informal) amenities to enable social inclusion. This section focuses on applicants having a thorough understanding of the local community. Applicants are therefore expected to undertake meaningful engagement with the local communities, particularly those closest to the relevant strategic site, ensuring members, local charity groups, local networks' comments are taken on board and responded to. The applicant will need to demonstrate what stakeholder engagement have been undertaken, beyond the requirements of the Statement of Community Engagement requirements. The Garden Town undertook high-level engagement and an initial list of stakeholders to be engaged can be found using the The Essex Map.

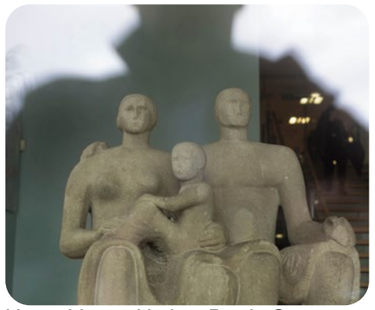
Development should tie into, and extend the rich art culture of Harlows' sculptural town - including engagement with the Harlow Art Trust.

Discover Harlow should be engaged through the development of communities; and can highlight key existing local businesses, organisations, and individuals who can share insight to the needs of Harlow residents.

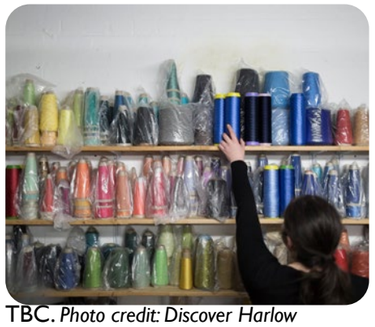
Additionally, documentation, including those found in the HGGT Infrastructure Delivery Plan (IDP), Harlow Infrastructure Delivery Plan, EFDC Infrastructure Delivery Plan, EHDC Infrastructure Delivery Plan; should be referred to and addressed in accordance with the infrastructure needs associated with planned housing and employment growth for each strategic site. Within the documents, these have been prioritised as:

- Critical
- Essential
- Desirable

Developments should therefore highlight what infrastructure will be provided alongside contributions to ensure a holistic approach to development.



Henry Moore; Harlow Family Group: part of the extensive public art collection in Harlow. *Photo credit: Discover Harlow*



TBC. *Photo credit: Discover Harlow*

Harlow community tree planting day. *Photo credit: Harlow Council*

Harlow hatches used during covid-19 to respond to community needs. TBC.

TBC. *Photo credit: Discover Harlow*

TBC. *Photo credit: Discover Harlow*

TBC. *Photo credit: Discover Harlow*

TBC. *Photo credit: Discover Harlow*

ECONOMIC GROWTH & JOB CREATION

OBJECTIVES & REQUIREMENTS

This theme focuses on outcomes including local residents having comfortable homes that are affordable to operate; thriving local businesses; decent jobs for local people, including hard to reach groups; long-term employments for skilled local labour. But also, embedding the fabric necessary to promote long-term growth and development opportunities and develop new skills, including the incorporation of principles found in the Essex & Hertfordshire Digital Innovation Zone (DIZ); and specifically, in the DIZ Strategy.

Developers can play a key role in supporting the success of the local economy and prosperity of the HGGT through both the planning, design and delivery phases of development.

HGGT needs to build upon and integrate with the existing local economy of Harlow and environs to support economic prosperity for residents, businesses and workers.
HGGT occupies a significant and well connected position in the UK Innovation Corridor extending between the global cities of London and Cambridge with significant strengths and innovation assets in key sectors such as digital and ICT, Life Sciences and Advanced Manufacturing.
Key investments in Harlow are being delivered and planned to ensure they both contribute to and benefit from the success of Harlow and the emerging HGGT bringing new employment and business. These include the Harlow Innovation Park with Anglia Ruskin University Innovation Centre, the new Princess Alexandra Hospital, Town centre regeneration and the relocation of Public Health England to Harlow.

Harlow Council has an existing Economic Development Strategy which outlines both the opportunities and challenges for economic success, including the need to support growing numbers of local businesses, ensure we generate quality employment that residents can access, ensuring the right type of accommodation for business and driving up the skills levels of local people.

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SOCIO-ECONOMIC CHECKLIST

QUALITY CHECKLIST

For each response, describe design responses within the Sustainability Statement and/or identify details on your plans (250no. words / question max).

Se.1	Has an audit (social mapping) of existing local amenities (shops, parks, school, pubs, playspace) been undertaken? Demonstrate how the outcome informed the development of compact neighborhoods including provision of a wide range of amenities (employment & retail spaces, community facilities and spaces) designed to be accessible by walking and cycling and encourage community interaction, cultural and civic life. Essex Map offers a good tool to assist with finding local services, groups, and activities available in the local area.
Se.2	Demonstrate how proposals have been informed by key stakeholders (including: youth, unemployed, ethnically diverse groups, local support organisations) to contribute to a more integrated community. (include in response: the stakeholders you have engaged with, the findings from these sessions, and how you have implemented stakeholder recommendations). Include community activation strategy (Ref: HGGT Engagement Strategy) produced as part of planning process to secure community engagement and cohesion.
Se.3	Demonstrate how your proposal has provided health and care assets or support the delivery of health and care priorities as set out in the local Health & Wellbeing Strategies. (include the ease of accessibility for existing Harlow communities to use new facilities and networks). Use of the Essex Map offers a good tool to assist with finding local services, groups, and activities available in the local area.
Se.4	What early wins / meanwhile uses are planned for existing Harlow residents during construction stage of strategic sites? And how are they to be implemented?
Se.5	Demonstrate how your proposal includes allotments and community gardens that are easily accessible from homes and spaces for fresh food markets; and how your development has connected with local food partnerships to agree strategies and actions to enable community accessibility to these assets.

QUALITY CHECKLIST

Se.6	Demonstrate how your proposal supports of deliver initiatives (physically and/or socially) which focus on integration between new and existing communities (including Harlow Town Centre, and network of existing local centres) - this to include your engagement with LPA Community Liaison Officers, and Community Representatives (i.e. Discover Harlow Ambassadors).
Se.7	Demonstrate how the HGGT Economic Growth Strategy have been incorporated in this scheme through; design stage, construction stage, and post-completion (identify what jobs have been created / will be created through this development)
Se.8	Demonstrate how the design enables business and workers to function? Is there good telecoms and digital infrastructure that support new business and work patterns.
Se.9	Demonstrate how spaces and buildings support the economic activity of businesses and workers. What type of business space contributes to the local economy? Can homes support working and learning? Can community spaces support economic activity, social enterprises, individual entrepreneurs and skills provision?
Se. 10	How will you work with the local authorities and local education providers to develop and deliver employment and skills plans that support local employment and skills activities through construction and where appropriate occupation phase?

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Submission:

1. Quality Checklist

(SUBMISSION OF: ENVIRONMENTAL & SOCIO-ECONOMIC PAGES)

2. Sustainability Statement

(ANY ADDITIONAL INFORMATION)

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SUBMISSION

1. Submit the following as evidence of the completed Quality Checklists

LIST OF SUBMISSION ATTACHMENTS	
DESIGN PRINCIPLES	
Daylight & Sunlight Assessment	☐
Noise Assessment	☐
ENVIRONMENTAL SUSTAINABILITY	
Energy Efficiency & Carbon Reduction	
Whole life carbon Assessment	☐
Overheating Design Assessment	☐
Renewable Energy	
Energy Assessment	☐
Sustainable Movement	☐
Sustainable Travel Plan	☐
Transport Assessment	☐
Water Efficiency	
Water Management / SUDs Strategy	☐
Green Infrastructure	
Ecological Report (to include Biodiversity Impact Assessment)	☐
Lighting Assessment	☐
Landscape Character and Tree Surveys	☐
Circular Economy	
Circular Economy Report (linked to Construction Management Statement)	☐
Construction Management Statement	☐
Waste Management	
Operational Waste Strategy	☐
Pollution: Air Quality	
Air Quality Impact Assessment	☐
Assuring Performance	
Post-Occupancy Evaluation	☐
SOCIO-ECONOMIC SUSTAINABILITY	
Health Impact Assessment (HIA) (Guidance Link)	☐
Health Framework Action Plan	☐
Community Engagement and co-creation strategy	☐
Stewardship Strategy / Long-term Maintenance Strategy	☐

2. Include any additional strategies that have not been covered by the Quality Checklists:

NB: all submitted assessments / reports will be conditioned to the LPA at post completion / pre-occupation stage to ensure that buildings and communities are being completed to the specified design standards; in order to close the performance gap and create truly sustainable communities.

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Appendix

APPENDIX 1: CLIMATE EMERGENCY DECLARATIONS

EPPING FOREST DISTRICT COUNCIL

Declaration: Climate Emergency
Date of Declaration: 19th September 2019
Motion Link: Here
Cllrs: S.Nevile + J.Phillip

Adopted Motion / Commitment:
1. Declare a 'Climate Emergency';

2. Pledge to do everything within the Council's power to make Epping Forest District Council area Carbon Neutral by 2030;

3. Call on Westminster to provide the powers and resources to make the 2030 target possible;

4. Work with other governments (both within the UK and internationally) to determine and implement best practice methods to limit Global Warming to less than 1.5°C;

5. Continue to work with partners across the district and region to deliver this new goal through all relevant strategies and plans;

6. In the special circumstances of this district, resolves to protect the Special Area of Conservation through the Local Plan and every other means;

7. Implement an Air Quality Strategy and bring forward Sustainability Guidance on planning; and

8. Engage with young people when considering the issue of climate change and appoint a 'Youth Ambassador' from the Epping Forest Youth Council."

EAST HERTS DISTRICT COUNCIL

Declaration: Climate Change Action
Date of Declaration: 24th July 2019
Motion Link: Here
Cllrs: Graham McAndrew

Adopted Motion / Commitment:
1. Join with other councils in recognising and declaring formally the necessity to do everything within the authority's power to reduce its impact on the climate and moreover do everything we can in supporting the whole of East Herts District to become carbon neutral by 2030,

2. Develop an ambitious sustainability strategy for reducing the council's own emissions, with an objective that the council becomes carbon neutral by 2030,

3. Work with national and regional partners to ensure that where at all possible we support climate friendly planning and building control regulations and seek where possible to include the very best measures into the Local Plan to minimise any negative impact on the environment,

4. Call on National Government for more powers and resources to make this pledge possible, and ask the council's Leader to write to the Secretary of state for Environment, Food and Rural Affairs to this effect,

5. Continue to work with partners across the district, county and region to deliver this new goal, through all relevant strategies and plans,

6. Take account of climate impacts within existing decision-making processes,

7. Set up an Environmental and Climate Forum, in line with the recommendations from the Task and Finish Group, which were approved by this Council on 5th March, 2019,

8. The Environmental Forum to monitor progress regularly, and to report back,
9. Commit to making available the appropriate training to members and officers to promote carbon neutral policies in order to achieve these aims.

HARLOW DISTRICT COUNCIL

Declaration: Climate Emergency
Date of Declaration: 11th July 2019
Motion Link: Here

Adopted Motion / Commitment:
1. Reducing the council's net carbon emissions as far as possible and reducing the carbon footprint at a greater rate than it is already committed to do so. Other actions include:

2. Planting 1,000 new trees and hedgerows across the town in the next year.

3. Encouraging the council's trading company HTS (Property & Environment) Ltd to switch over from petrol and diesel vehicles, plant and machinery to electric power vehicles, plant and machinery.

4. Encouraging HTS to source battery technology for its electric vehicles from companies who ensure environmentally friendly lithium mining techniques.

5. Reaffirming the council's commitment to the Garden Town development's principles of sustainable transport.

6. Eliminating the use of single use plastics across all public council buildings by January 2020 ahead of the national implementation date of April 2020.

7. Actively promote schemes to encourage children to walk to school such as the Walking Bus initiative and WOW (walk on Wednesdays).

8. Installing electric car charging points across all council car parks within the next five years where possible.

9. Developing a strategy which looks at the feasibility of:
i) Installing photovoltaic panels on all public council buildings within the next two years where possible; and
ii) New council built houses having a minimal carbon footprint; and
iii) An action plan is created to focus on reducing the impact of day-to-day living on the environment beyond that caused by greenhouse gas emissions.

HERTFORDSHIRE COUNTY COUNCIL

Declaration: Climate Emergency
Date of Declaration: 16th July 2019
Motion Link: Here
Cllrs: David Williams

Adopted Motion / Commitment:
Hertfordshire County Council's sphere of influence is broad with the ability to influence carbon emission reductions, improve air quality, promote energy efficiency, seek more sustainable sources of energy, reduce waste production, promote better land use practices, make links to health and wellbeing and influence procurement practices.

The Council's existing initiatives include an Air Quality Strategy, Energy Strategy, a Climate Change Resilient Communities Strategy, a Pollinator Strategy and the Leading by Example working group.

To fortify and coordinate the Council's existing initiatives, contribute to the national imperatives and provide local leadership:

• This Council agrees the declaration of a "Climate Emergency";
• Calls upon the Leader of the Council to commit to the development and implementation of an overarching Sustainable Hertfordshire Strategy. This will set out the policies, strategies, implementation plans and resourcing requirements to embed the values of sustainability into the Council's service delivery, operations, procurement and supplier management as well as the basis for engaging proactively with the County's many stakeholders, including the 10 Local Planning Authorities, who can contribute to a sustainable Hertfordshire; and
• Seek Cabinet approval of an ambitious Sustainable Hertfordshire Strategy by the end of 2019."

ESSEX COUNTY COUNCIL

Essex Climate Action Commission
Set up to tackle climate change making recommendations on how to improve the environment and economy of Essex. The Climate Action Commission will:

- Identify ways where we can mitigate the effects of climate change, improve air quality, reduce waste across Essex and increase the amount of green infrastructure and biodiversity in the county
- Explore how we attract investment in natural capital and low carbon growth

APPENDIX 2: PERFORMANCE STANDARDS

This list is not exhaustive and additional documents were used in the creation of this Guidance.

- Energiesprong
- Pasivhaus
- BREEAM Communities
- BREEAM Home Qualities Mark (HQM)
- UKGBC Net Zero Carbon Buildings
- First Steps Urban Air Quality
- Mayor of London Energy Assessment Guidance
- London Plan Energy Hierarchy
- RIBA Climate Challenge
- The Future Homes Standard
- National Design Guide
- London Plan: Monitoring - Be Seen
- Transport for New Homes
- GLA: Urban Greening Factor

APPENDICES LIST

Appendix 2a: Whole Life Carbon Assessment Flowchart
RICS Whole life Carbon Assessment Flowchart
https://www.rics.org/globalassets/rics-website/media/news/whole-life-carbon-assessment-for-the--built-environment-november-2017.pdf

Appendix 2b: Whole Life Carbon Assessment
RICS Whole life Carbon Assessment Tables 12 & 13
https://www.rics.org/globalassets/rics-website/media/news/whole-life-carbon-assessment-for-the--built-environment-november-2017.pdf

Appendix X: Overheating Design Assessment: Risk Tool
GHA Overheating in New Homes
https://goodhomes.org.uk/wp-content/uploads/2019/07/GHA-Overheating-in-New-Homes-Tool-and-Guidance.pdf

Appendix 8: Post Occupancy Evaluation Report
RIBA Sustainable Outcomes Report:
https://www.architecture.com/-/media/GatherContent/Test-resources-page/Additional-Documents/RIBASustainableOutcomesGuide2019pdf.pdf

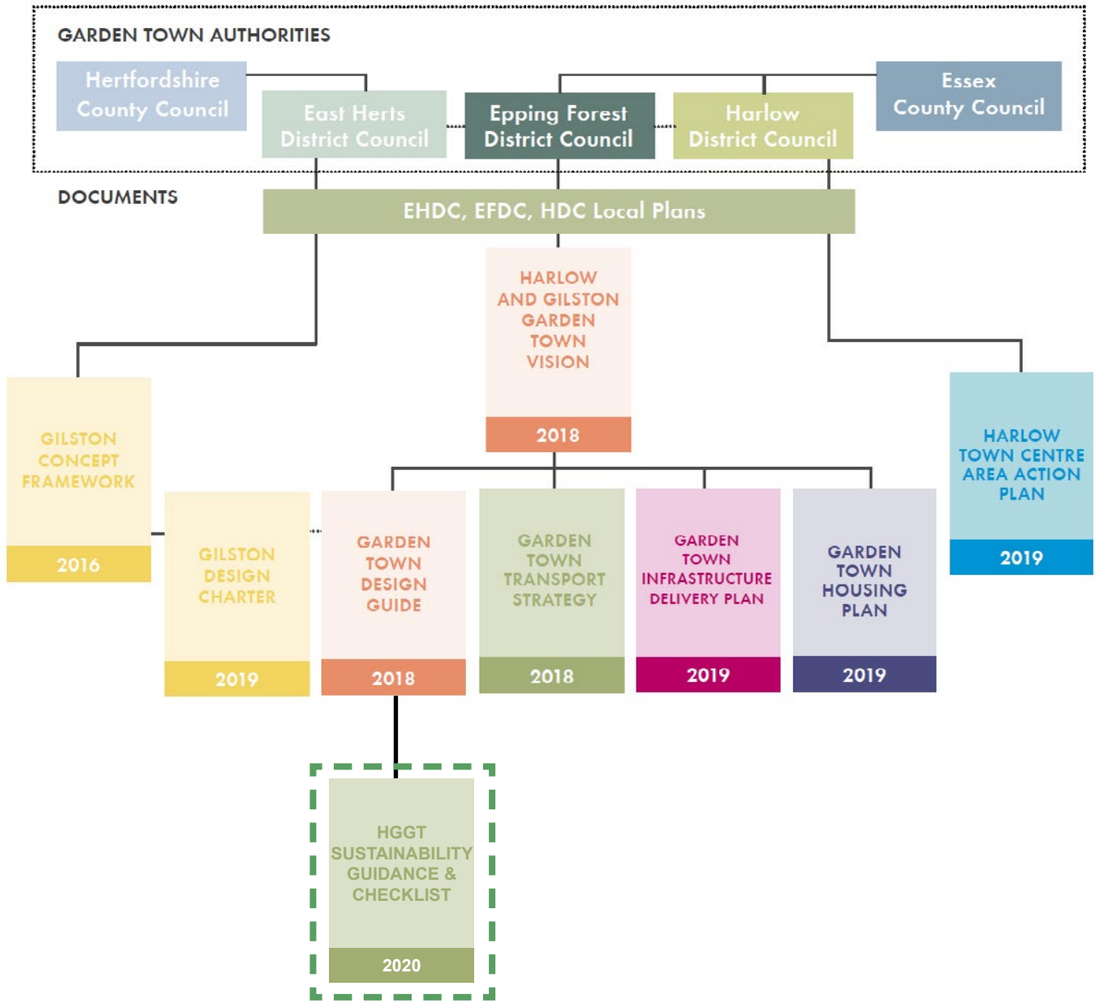
Appendix X: Circular Economy Statement
GLA Circular Economy Statement:
https://www.london.gov.uk/sites/default/files/ggbd_circular_economy_statement_guidance_2020_web.pdf

Appendix X: Draft Pre-Occupation Planning Condition / Obligation
Wording To Be Agreed

Appendix X: Heat Decision Tree
LETI Climate Emergency Design Guide: Heat Decision Tree (pgs 76 - 77)
https://b80d7a04-1c28-45e2-b904-e0715cface93.filesusr.com/ugd/252d09_3b0f2acf2bb24c019f5ed9173fc5d9f4.pdf

Appendix X: List of Net Zero Cost Reports
(See Architects App for list of documents)

APPENDIX X: FAMILY OF DOCUMENTS



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Glossary

Air Quality Action Plan — A document produced by the Council with Natural England setting out the steps that will be taken to reduce pollution within an Air Quality Management Area (AQMA). This could include steps to reduce car usage and promote public transport.

Air Quality Management Areas — Air Quality Management Areas (AQMA) are designations used by DEFRA the Department for Environment, Food and Rural Affairs to manage areas with air pollution. that are unlikely to meet the Government's national air quality objectives.

Airtightness — lots of heat is lost through unintentional gaps in the walls, floors and roofs of buildings creating draughts and so it is extremely important to make sure these are eliminated. This down to good detailing and good site workmanship

Biodiversity — The variety of plant and animal life in the world or in a particular habitat, a high level of which is usually considered to be important and desirable.

Blue Infrastructure — Infrastructure provision relating to water. This includes natural features such as rivers, streams and ponds, semi-natural features such as sustainable drainage systems, bio-swales and canals, and other engineering features such as dams, weirs and culverts. Blue and green infrastructure are often considered together, placing emphasis on the importance of biodiversity and flood risk mitigation.

BREEAM — Building Research Establishment Environmental Assessment Method: a widely recognised environmental assessment method and ratings system.

Carbon Footprint — The amount of carbon dioxide released into the atmosphere as a result of the particular individual, organisation or community. The carbon footprint of a development is counted over its lifetime i.e. the materials used and their sources, construction, lifetime use and demolition.

Carbon Neutral — Carbon neutrality means having a balance between emitting carbon and absorbing carbon from the atmosphere in carbon sinks.

Circular Economy — The circular economy is a model of production and consumption, which involves sharing, leasing, reusing, repairing, refurbishing and recycling existing materials and products as long as possible. In this way, the life cycle of products is extended.

Cold Bridge — Occurs when there is a thermal break in the insulating materials between the inside and outside of a building e.g. a gap in the wall or roof insulation, allowing heat to escape

Development — 'Development' includes building operations (e.g. structural alterations, construction, rebuilding, most demolition); material changes of use of land and buildings; engineering operations (e.g. groundworks); mining operations; other operations normally carried out by a person operating a business as a builder; subdivision of a building (or any part of it) used as a dwelling house for the use as two or more separate dwelling houses. As defined by section 55 of the Town and Country Planning Act 1990

Embodied Energy

The sum of the energy requirements associated, directly or indirectly, with the delivery of a good or service. This includes: the energy required to initially produce the building (the processing and the manufacture of the materials of the building as well as their transportation and assembly on site), the energy needed to refurbish and maintain the building over its lifetime, and the energy necessary to demolish and dispose of the building at the end of its life.

Environmental Impact Assessment

A procedure to be followed for certain types of project to ensure that decisions are made in full knowledge of any likely significant effects on the environment.

Fossil Fuel

Fossil fuel is a general term for buried combustible geologic deposits of organic materials, formed from decayed plants and animals that have been converted to crude oil, coal, natural gas, or heavy oils by exposure to heat and pressure in the earth's crust over hundreds of millions of years. The burning of fossil fuels by humans is the largest source of emissions of carbon dioxide, which is one of the greenhouse gases that allows radiative forcing and contributes to global warming

Green Belt

Land protected by a policy and land use designation to protect areas of largely undeveloped or agricultural land surrounding or neighbouring urban areas. Review of Green Belt boundaries is undertaken as part of the production of Local Plans where Green Belt exists.

Green Infrastructure

Green infrastructure is a network of high quality and multifunctional green spaces , both urban and rural, including environmental features such as parks, public open spaces, playing fields, sports pitches, woodlands, and allotments, which are capable of delivering a wide range of environmental and quality of life benefits for local communities. The provision of green infrastructure can provide social, economic and environmental benefits close to where people live and work.

HGGT

The Harlow & Gilston Garden Town; referring to all five partner authorities forming the Graden Town including; Essex County Council, Hertfordshire County Council, East Herts District Council, Epping Forest Dstrict Council, and, Harlow Council

Infrastructure Delivery Plan

This will contain the key infrastructure required to support the homes and commercial development in the Local Plan. This includes physical infrastructure such as transport energy and water, social and community infrastructure such as health, education and emergency services and green infrastructure such as open spaces and allotments. The Infrastructure Delivery Plan (IDP) sits alongside the Local Plan and will contain a programme identifying when items of infrastructure are expected to be in place, funding and costs. It will be regularly updated as more information becomes available.

Local Plan

The plan for the future development of the local area, drawn up by the local planning authority in consultation with the community and stakeholders. Once adopted the Local Plan will legally form part of the Development Plan for the District, superseding the Replacement Local Plan (2006).

National Planning Policy Framework

National Planning Policy Framework (NPPF) sets out the Government's planning policies for England, and provides a framework within which local people and their accountable councils can produce their own distinctive local and neighbourhood plans, which reflects the needs and priorities of their communities.

Net Zero Carbon

net zero carbon building is a building that is highly energy efficient and fully powered from on-site and/or off-site renewable energy sources.

Operational Energy

Operational energy is the energy required during the entire service life of a structure such as lighting, heating, cooling, and ventilating systems; and operating building appliances.

Passivhaus

A Passivhaus is a building in which thermal comfort can be achieved solely by post-heating or post-cooling the fresh air flow required for a good indoor air quality, without the need for additional recirculation of air.

Performance Gap

The difference between predicted performance and the as-built performance of a building.

Post Occupancy Evaluation

Post-occupancy evaluation (POE) of a building demonstrates how well it is performing in use and how far it is achieving against its intended purpose. POE also highlights any gaps in communication and understanding amongst building managers and occupants that my hinder a building's operational performance.

Quality Review Panel

An independent panel of planning, architecture, urban design and construction experts set up by the Council to provide impartial expert advice to both applicants and local authorities on design issues in relation to important new development schemes and proposals for important public spaces including significant minor applications, major planning applications, pre-application development proposals, strategic masterplans and concept frameworks. The Quality Review Panel's feedback is a material consideration for local authorities and the planning inspectorate when determining planning applications. The purpose of the Quality Review Panel is to ensure that new development is of a high quality and contributes to place making.

Renewable Energy

Renewable energy is energy that is collected from renewable resources, which are naturally replenished on a human timescale, such as sunlight, wind, rain, tides, waves, and geothermal heat.

Social Sustainability

The process for creating sustainable, successful places that promote well-being by understanding what people need from the places they live and work; combining design of the physical realm with design of the social world, to support citizen engagement and space for people and places to evolve. - Social Life

Special Area of Conservation

Area given special protection under the European Union's Habitats Directive which is transposed into UK law by the Habitats and Conservation of Species Regulations 2010.

Strategic Masterplan

A masterplan is the process by which organisations undertake analysis and prepare strategies, and the proposals that are needed to plan for major change in a defined physical area. It acts as a context from which development projects come forward for parts of the area.

Suitable Alternative Natural Greenspace

Suitable Alternative Natural Greenspace (SANG) is the name given to greenspace that is of a quality and type suitable to be used as mitigation to offset the impact of residential development and visitor pressure on Special Protection Areas (SPAs). The purpose of SANGs is to provide alternative greenspace to attract visitors away from SPAs.

Sustainable Drainage Systems

These are drainage systems designed to manage surface water and groundwater to sustainably reduce the potential impact of new and existing developments on flood risk

Sustainable Transport

Efficient, safe and accessible means of transport with overall low impact on the environment, including walking and cycling, low and ultra-low emission vehicles, car sharing and public transport.

Thermal bridging

It is important to make sure that the gap between the window frame and the wall is well sealed otherwise heat will be lost around the window even if the window itself is very energy efficient

Transport Assessment

A comprehensive and systematic process that sets out transport issues relating to a proposed development. It identifies what measures will be required to improve accessibility and safety for all modes of travel, particularly for alternatives to the car such as walking, cycling and public transport and what measures will need to be taken to deal with the anticipated transport impacts of the development.

Transport Statement

A simplified version of a transport assessment where it is agreed the transport issues arising out of development proposals are limited and a full transport assessment is not required.

UKGBC

The UK Green Building Council: a membership organisation concerned about the environmental impact of buildings and infrastructure on the environment, in particular the use of water, materials, energy, the impact of greenhouse gas emissions, and the health of building occupants.

Validation Requirements

The information that is required to be submitted with a planning application in order to be considered 'valid'. This includes particular plans or supporting documents that must be included with a planning application. It includes national requirements and local requirements which are specific to Epping Forest District. The up to date requirements are set out in the 'Epping Forest District Council Planning Application Validation Requirements Checklist' document.

Whole Life Carbon

Considering operational as well as embodied carbon emissions together over a project's expected life cycle constitutes the whole life approach.

Zero Carbon

Causing or resulting in no net loss of carbon dioxide into the atmosphere. A zero carbon building is one with zero net energy consumption or zero net carbon emissions on an annual basis.

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Acknowledgements

This document has been developed with the assistance of HGGT partner authorities and industry experts, participating in workshops, focused sessions and reviews. HGGT would like to sincerely thank all participants, alongside all involved stakeholders and consultation respondents for their feedback, assistance and contributions to the HGGT Sustainability Guidance & Checklist.

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Consultation Session	Commenter	Commenting on	Date received	No.	Comment	Section	Topic	Saved response	Response
EFDC Youth Council	Youth Councillors (13-14 y.o)	Draft Oct 2020 (Consultation Version)	10/11/2020		What do you think is most important in your future home? (Poll): **Low cost energy bills and a structure built to last: 50%**, Nature and green spaces close by: 10%, Good walking and cycling routes to get and from work, school and activities: 20%, A tight-knit community or neighbourhood:10%, Space to grow by own food and be near healthy activities: 0%, Other: 10%.	General			
EFDC Youth Council	Youth Councillors (13-14 y.o)	Draft Oct 2020 (Consultation Version)	10/11/2020		Need green spaces in the home – garden – walk dogs, freedom to play. Private outdoor space important.	Environmental	Green Infrastructure & Biodiversity		
	Youth Councillors (13-14 y.o)				What do you think is most important to help you to stay healthy? (Poll): **High quality health and community centres: 30%, Regular physical activity and good air quality: 30%,** A home with good light, ventilation and materials: 0%, **Great outdoor and green spaces for physical and mental wellbeing: 30%**, Strong community leadership and support networks: 0%, Other:10%	General			
EFDC Youth Council	Youth Councillors (13-14 y.o)	Draft Oct 2020 (Consultation Version)	10/11/2020		Not just necessary to have high quality health centres but important for combinations – like a GP near a park, near residents. Have to sometimes weigh up options and adjust so it's not biased in any way. Hard to say what is more important.	Environmental	Design Approach: First Principles		
EFDC Youth Council	Youth Councillors (13-14 y.o)	Draft Oct 2020 (Consultation Version)	10/11/2020		All / Outdoor and Green Spaces: Prevent ill health from the start – sports injuries might happen. But long-term diseases etc. can be prevented by being active, especially at a young age. Prevent necessity for the other options if you get one right. Street and good air quality	Environmental	Green Infrastructure & Biodiversity		
EFDC Youth Council	Youth Councillors (13-14 y.o)	Draft Oct 2020 (Consultation Version)	10/11/2020		How do you want to travel in the future? (Poll): Bus: 0%, **Bike: 56%,** Walk:11%, Car or Moped: 11%, Car Share: 11%, Taxi: 0%, Train: 11%	Environmental	Sustainable Movement		
EFDC Youth Council	Youth Councillors (13-14 y.o)	Draft Oct 2020 (Consultation Version)	10/11/2020		Bike: Good to get you close to local spaces like shops school or work. It's also healthy – good for you. More efficient and can get you to places quicker. If long distance then would choose a bus train or car. Not as good for the environment so would like to cycle more. Would be more likely to cycle if parents also cycled – they use cars	Environmental	Sustainable Movement		
EFDC Youth Council	Youth Councillors (13-14 y.o)	Draft Oct 2020 (Consultation Version)	10/11/2020		Not bike: Streets in Loughton and Debden are dangerous, improve roads and pavements and you'll get more people to do that. Putting people at risk by asking people to do this – increases pressure on NHS	Environmental	Sustainable Movement		
EFDC Youth Council	Youth Councillors (13-14 y.o)	Draft Oct 2020 (Consultation Version)	10/11/2020		Trains and buses: Becoming more eco-friendly – lots of lines being electrified. Mass transit, eco-friendly and not compromising on the environment	Environmental	Sustainable Movement		
EFDC Youth Council	Youth Councillors (13-14 y.o)	Draft Oct 2020 (Consultation Version)	10/11/2020		How can we help to make communities more fair and equal for everyone? (E.g. different ages, ethnicities, genders, money) (Poll): Responses: Create strong community feeling: 11%, Provide skills, training and job opportunities: 0%, **Support local and eco-friendly businesses: 33%**, Improve residents health and mental wellbeing: 11%, **Provide safe, warm and affordable homes: 33%**, Other:11%	Socio-Economic			
EFDC Youth Council	Youth Councillors (13-14 y.o)	Draft Oct 2020 (Consultation Version)	10/11/2020		Need to educate children from a young age about equality. Teach primary school kids and even earlier that this is how the community should be – reiterate it so it's fair – different genders and lives. This leads to equality in other things. For money – provide skills and job opportunities, but not the most important for society.	Socio-Economic	Community Strength & Social Infrastructure		
EFDC Youth Council	Youth Councillors (13-14 y.o)	Draft Oct 2020 (Consultation Version)	10/11/2020		Eco-friendly businesses: Helping the council and everyone out as well as making money. Input into community. Win win for everyone	Socio-Economic	Economic Growth & Job Creation		
EFDC Youth Council	Youth Councillors (13-14 y.o)	Draft Oct 2020 (Consultation Version)	10/11/2020		How are we minimising the noise and visual pollution of the M11? E.g. waterfalls in the gardens/planting. 24/7 noise, people want their windows open	Environmental	Design Approach: First Principles		
EFDC Youth Council	Youth Councillors (14-17 y.o)	Draft Oct 2020 (Consultation Version)	10/11/2020		What do you think is most important in your future home? (Poll): **Low cost energy bills and a structure built to last: 36%**, Nature and green spaces close by: 27%, **Good walking and cycling routes to get and from work, school and activities: 36%**, A tight-knit community or neighbourhood:0%, Space to grow by own food and be near healthy activities: 0%, Other: 0%.	General			
EFDC Youth Council	Youth Councillors (14-17 y.o)	Draft Oct 2020 (Consultation Version)	10/11/2020		Low cost bills: Housing needs to be sustainable. Financial security is important for families – although all the answers are important, lots of activities outside the home e.g. school, community.	Environmental	Energy Efficiency & Carbon Reduction		
EFDC Youth Council	Youth Councillors (14-17 y.o)	Draft Oct 2020 (Consultation Version)	10/11/2020		Low cost bills: Couldn't decide between this and walking/cycling – equally important in terms of mental health and being able to live happily – e.g. stress from high costs of bills.	Environmental	Energy Efficiency & Carbon Reduction		
EFDC Youth Council	Youth Councillors (14-17 y.o)	Draft Oct 2020 (Consultation Version)	10/11/2020		Nature and green spaces: Green spaces nearby can help you go out and be active – helps with both physical and mental health. Breathing in more oxygen. More motivated if it's closer by to visit immediately to de-stress and regularly.	Environmental	Green Infrastructure & Biodiversity		
EFDC Youth Council	Youth Councillors (14-17 y.o)	Draft Oct 2020 (Consultation Version)	10/11/2020		Walking and Cycling: Future home – needs easier way to get kids to school and yourself to work means more time for yourself after and therefore less stress. Travelling easier. A good way to get physical exercise outside.	Environmental	Sustainable Movement		
EFDC Youth Council	Youth Councillors (14-17 y.o)	Draft Oct 2020 (Consultation Version)	10/11/2020		What do you think is most important to help you to stay healthy? (Poll):Responses: High quality health and community centres: 0%, **Regular physical activity and good air quality: 64%** A home with good light, ventilation and materials: 9%, Great outdoor and green spaces for physical and mental wellbeing: 18%, Strong community leadership and support networks: 0%, Other: 9%	General			
EFDC Youth Council	Youth Councillors (14-17 y.o)	Draft Oct 2020 (Consultation Version)	10/11/2020		Good healthcare – you can help yourself by going to park and running. Needs to balance where you place things and mix uses	General			
EFDC Youth Council	Youth Councillors (14-17 y.o)	Draft Oct 2020 (Consultation Version)	10/11/2020		Quality Homes: Majority of us spent a lot of time in our houses especially during lockdown – need good lighting to focus	Environmental	Design Approach: First Principles		
EFDC Youth Council	Youth Councillors (14-17 y.o)	Draft Oct 2020 (Consultation Version)	10/11/2020		How do you want to travel in the future? (poll):Bus: 18%, Bike: 9%, Walk:18%, **Car or Moped: 36%**, Car Share: 0%, Taxi: 0%, Train: 18%	Environmental	Sustainable Movement		
EFDC Youth Council	Youth Councillors (14-17 y.o)	Draft Oct 2020 (Consultation Version)	10/11/2020		Car: Want to be able to take myself to other places – other ones like buses, taxis, trains etc. mean you don't have the same level of independence. Not the best for the environment, but the most efficient to get to places. Acknowledge bikes can also provide but car is preferable. If leisure things were closer then maybe would consider cycling but not everything is going to be that close	Environmental	Sustainable Movement		
EFDC Youth Council	Youth Councillors (14-17 y.o)	Draft Oct 2020 (Consultation Version)	10/11/2020		Walk: Helps with stress, and helps focus more. A longer journey – would be happy to walk to station or bus stop. PT is better for the environment. Traffic would make it stressful	Environmental	Sustainable Movement		
EFDC Youth Council	Youth Councillors (14-17 y.o)	Draft Oct 2020 (Consultation Version)	10/11/2020		Car: Living in countryside – used to busy areas and traffic so that doesn't stress out. Better for time, can go at own pace – meeting deadlines like getting to work and having to wait for buses. Safer for families in cars – less restricted in own car. Mixing with strangers on the bus	Environmental	Sustainable Movement		
EFDC Youth Council	Youth Councillors (14-17 y.o)	Draft Oct 2020 (Consultation Version)	10/11/2020		Train: 10 years in future – going to London without the worry of traffic.	Environmental	Sustainable Movement		
EFDC Youth Council	Youth Councillors (14-17 y.o)	Draft Oct 2020 (Consultation Version)	10/11/2020		Not car: Home and online shopping – one truck reduces wear and tear on the road rather than lots of cars because they only have to go out a couple of times a week and less heavy for people	Environmental	Sustainable Movement		
EFDC Youth Council	Youth Councillors (14-17 y.o)	Draft Oct 2020 (Consultation Version)	10/11/2020		How can we help to make communities more fair and equal for everyone? (E.g. different ages, ethnicities, genders, money) (poll): Create strong community feeling: 10%, **Provide skills, training and job opportunities: 50%,** Support local and eco-friendly businesses: 10%, Improve residents health and mental wellbeing: 30%, Provide safe, warm and affordable homes: 0%, Other:0%	Socio-Economic			
Harlow Youth Council	Youth Councillors	Draft Oct 2020 (Consultation Version)	16/11/2020		Sustainable Living: Stability, natural / renewable resources, financially stable, comfortable, not struggling, happiness, renewable energy, the environment	General			
Harlow Youth Council	Youth Councillors	Draft Oct 2020 (Consultation Version)	16/11/2020		Healthy living: Exercise, balanced diet, walking, open spaces, belonging, access to healthy food, physical, social and mental health and wellbeing	General			

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Harlow Youth Council	Youth Councillors	Draft Oct 2020 (Consultation Version)	16/11/2020	What do you think is most important in your future home? (poll): **38% good walking and cycling routes to and from work, school or activities**, 25% low cost energy bills and a structure built to last, 25% a tight-knit community or neighbourhood, 13% nature and green spaces close by, 0% Space to grow my own food and be near healthy activites, 0% Other	General	
Harlow Youth Council	Youth Councillors	Draft Oct 2020 (Consultation Version)	16/11/2020	Important to have convenient and safe routes to work, school and activities	Environmental	Sustainable Movement
Harlow Youth Council	Youth Councillors	Draft Oct 2020 (Consultation Version)	16/11/2020	Prices of houses are going up all of the time and so important to have affordable bills (low-cost energy bills).	Environmental	Energy Efficiency & Carbon Reduction
Harlow Youth Council	Youth Councillors	Draft Oct 2020 (Consultation Version)	16/11/2020	It's important to have green spaces nearby for people across all stages of life, from very young children all the way to the elderly.	Environmental	Green Infrastructure & Biodiversity
Harlow Youth Council	Youth Councillors	Draft Oct 2020 (Consultation Version)	16/11/2020	The pandemic also made it evident how important it is to have green spaces near by	Environmental	Green Infrastructure & Biodiversity
Harlow Youth Council	Youth Councillors	Draft Oct 2020 (Consultation Version)	16/11/2020	What do you think is most important to help you stay healthy? (poll): - **38% an inclusive and engaged community with neighbourhood activities and groups, 38% a healthy home, with good light, ventilation and materials**, 13% high quality health and community facilities, 13% outside spaces such as parks and outdoor gyms, 0% Regular physical activity and good air quality, 0% Other	General	
Harlow Youth Council	Youth Councillors	Draft Oct 2020 (Consultation Version)	16/11/2020	Community is still one of the most important factors, as we have seen in the current pandemic	Socio-Economic	Community Strength & Social Infrastructure
Harlow Youth Council	Youth Councillors	Draft Oct 2020 (Consultation Version)	16/11/2020	How do you want to travel in the future? (poll): Bus: 0%, Bike: 29%, **Walk: 43%**, Car or Moped: 0%, Car Share: 0%, Taxi: 0%, Train: 29%, Other: 0%	Environmental	Sustainable Movement
Harlow Youth Council	Youth Councillors	Draft Oct 2020 (Consultation Version)	16/11/2020	Walking because it is good for both the environment and our health	Environmental	Sustainable Movement
Harlow Youth Council	Youth Councillors	Draft Oct 2020 (Consultation Version)	16/11/2020	Train is good for longer journeys, and if we encourage trains then there will be less people driving cars	Environmental	Sustainable Movement
Harlow Youth Council	Youth Councillors	Draft Oct 2020 (Consultation Version)	16/11/2020	Prefer train to bus even though it might be more expensive, because it is more convenient and pleasant	Environmental	Sustainable Movement
Harlow Youth Council	Youth Councillors	Draft Oct 2020 (Consultation Version)	16/11/2020	How can we help to make communities more fair and equal for everyone? (E.g. different ages, ethnicities, genders, money) (poll): Foster community strength: 0%, **Provide skills, training and job opportunities: 75%,** Support local and eco-friendly businesses: 0%, Improve residents health and mental wellbeing: 0%, Provide safe, warm and affordable homes: 25%, Other:0%	Socio-Economic	Economic Growth & Job Creation
Harlow Youth Council	Youth Councillors	Draft Oct 2020 (Consultation Version)	16/11/2020	Providing skills to those who are struggling can give them a chance to start again	Socio-Economic	Economic Growth & Job Creation
Harlow Youth Council	Youth Councillors	Draft Oct 2020 (Consultation Version)	16/11/2020	Providing job opportunities is a way to ensure everyone has a decent salary and therefore decent living conditions	Socio-Economic	Economic Growth & Job Creation
Harlow Youth Council	Youth Councillors	Draft Oct 2020 (Consultation Version)	16/11/2020	It will help us have a more diverse workforce	Socio-Economic	Economic Growth & Job Creation
Harlow Youth Council	Youth Councillors	Draft Oct 2020 (Consultation Version)	16/11/2020	We should have a level playing field in terms of training and opportunities	Socio-Economic	Economic Growth & Job Creation
Harlow Youth Council	Youth Councillors	Draft Oct 2020 (Consultation Version)	16/11/2020	There are less and less young people buying their first homes, and so it's important to make sure we are also providing affordable homes (especially during the pandemic)	Socio-Economic	Economic Growth & Job Creation
HGGT All-Member Briefing	Members	Draft Oct 2020 (Consultation Version)	18/11/2020	What do you think is most important in future homes? (Poll): **Low cost energy bills and a structure built to last: 47%**, Nature and green spaces close by: 15%, Good walking and cycling routes to get and from work, school and activities: 26%, A tight-knit community or neighbourhood: 9%, Space to grow own food and be near healthy activities: 0%, Other: 3%.	General	
HGGT All-Member Briefing	Members	Draft Oct 2020 (Consultation Version)	18/11/2020	Low cost energy bills: Build quality is essential, you need to be able to afford to heat them.	Environmental	Energy Efficiency & Carbon Reduction
HGGT All-Member Briefing	Cllr Pope	Draft Oct 2020 (Consultation Version)	18/11/2020	Low cost energy bills, structure built to last - good design of the houses themselves and surrounding area – appropriate of design and character. Houses not crammed in, space between them	Environmental	Design Approach: First Principles
HGGT All-Member Briefing	Members	Draft Oct 2020 (Consultation Version)	18/11/2020	Nature and Green space oThe more we build the less green space you have. oYou need to be able to go out and walk or ride oCars are important to this generation as shops aren't close oPersonal green space are very important oYou should be able to grow your own food	Environmental	Green Infrastructure & Biodiversity
HGGT All-Member Briefing	Members	Draft Oct 2020 (Consultation Version)	18/11/2020	Close knit community oMental health important oLoneliness is important to address oCommunity spirit is really important oNew developments are soulless at first oYou should be able to connect with your neighbours	Socio-Economic	Community Strength & Social Infrastructure
HGGT All-Member Briefing	Cllr Bolton	Draft Oct 2020 (Consultation Version)	18/11/2020	Tight knit community or neighbourhood – compensates for a lot of other things that can be bad. Important for mental health	Socio-Economic	Health & Wellbeing
HGGT All-Member Briefing	Cllr Eric Buckmaster	Draft Oct 2020 (Consultation Version)	18/11/2020	Nature and green spaces. Grew up in the East End of London on council estate – two big parks in walking distance. Memories of youth = being outside all the time. Good for physical and mental health – formative years is access to green space	Environmental	Green Infrastructure & Biodiversity
HGGT All-Member Briefing	Cllr Sally Newton	Draft Oct 2020 (Consultation Version)	18/11/2020	Nature and green spaces. Born in and benefitted from Welwyn – green space and woods, schooling, ability of shops nearby – beginning to realise invaluable to provide opportunities to get where she is now. Green spaces absolutely essential.	Environmental	Green Infrastructure & Biodiversity
HGGT All-Member Briefing	Cllr Goodeve	Draft Oct 2020 (Consultation Version)	18/11/2020	Good walking and Cycling. Walked to school as a child – more connected with own neighbourhood. Greater sense of belonging. No need to be driven to school and polluting the environment. Didn't used to have fat children. Exercise did them good.	Environmental	Sustainable Movement
HGGT All-Member Briefing	Cllr Ruth Buckmaster	Draft Oct 2020 (Consultation Version)	18/11/2020	Walk and cycle everywhere – intention for modal shift to get people back into sustainable travel. We need safer routes. Better routes to schools, shops everywhere else. We need this in place in new developments and across the town	Environmental	Sustainable Movement
HGGT All-Member Briefing	Members	Draft Oct 2020 (Consultation Version)	18/11/2020	What do you think is most important to help people to stay healthy? (Poll): High quality health and community centres: 11%, **Regular physical activity and good air quality: 31%**, A home with good light, ventilation and materials: 17%, Outdoor spaces such as parks and outdoor gyms: 19%, An inclusive and engaged community with neighbourhood activities and groups 22%, Other: 0%	General	
HGGT All-Member Briefing	Members	Draft Oct 2020 (Consultation Version)	18/11/2020	Regular physical activity, good air quality o This is a personal choice, we can only enable people to exercise o You need open spaces which give you the ability to do physical activity o Air quality = control of cars o If you have a design which encourages people to walk and cycle then this builds in physical activity o Good for mental and physical wellbeing	Environmental	Air Quality
HGGT All-Member Briefing	Members	Draft Oct 2020 (Consultation Version)	18/11/2020	Healthy homes o Good quality housing is very important as it is the linchpin to good health, both mental and physical o You need to get the housing right to get the community right o You also need really good schools and education o Welwyn Garden City has stood the test of time and we need to emulate this o We need to be able to get out of the home, you need places outside the home like nature and community	Environmental	Energy Efficiency & Carbon Reduction
HGGT All-Member Briefing	Cllr Hill	Draft Oct 2020 (Consultation Version)	18/11/2020	Physical Activity - Incorporates all the other options anyway – an umbrella theme	Environmental	Health & Wellbeing
HGGT All-Member Briefing	Cllr McMullen	Draft Oct 2020 (Consultation Version)	18/11/2020	Physical Activity - Lives in the countryside, and Covid means noticed more people have been walking - importance of getting out and fresh air – healthy mind and healthy body	Environmental	Health & Wellbeing
HGGT All-Member Briefing	Cllr Carter	Draft Oct 2020 (Consultation Version)	18/11/2020	Inclusive and engaged community – requires people to do things themselves. We can facilitate but it's really down to the individual. Thinking of an outdoor gym – what can be designed in to help facilitate, and then down to individual to take the initiative?	Socio-Economic	Community Strength & Social Infrastructure

HGGT All-Member Briefing	Cllrs Buckmaster	Draft Oct 2020 (Consultation Version)	18/11/2020	Inclusive and engaged community linked with high quality facilities. More for older people than younger people there, but using different community, sports groups, can contact any of them if you need anything. Community engagement so important. Tool and engagement linked to infrastructure. Forever Active programme in Sawbridgeworth has kept people healthy and exercising, and people have gone through the programme and got to know each other – a pilot that has moved around the rest of the district	Socio-Economic	Community Strength & Social Infrastructure
HGGT All-Member Briefing	Cllr Sally Newton	Draft Oct 2020 (Consultation Version)	18/11/2020	People are walking and cycling everywhere – danger is that there is going to be a serious accident on the routes and lanes and tracks. Absolutely imperative we make them safe.	Environmental	Sustainable Movement
HGGT All-Member Briefing	Cllr Goodeve	Draft Oct 2020 (Consultation Version)	18/11/2020	What happens when gyms are shut – are paths then overcrowded with runners and cyclists?	Environmental	Sustainable Movement
HGGT All-Member Briefing	Cllr Pope	Draft Oct 2020 (Consultation Version)	18/11/2020	Outdoor spaces – there are people who maybe don't want to be part of a club – outdoor spaces mean they can meet friends or walk without joining anything formal. More inclusive and enables people to choose how they exercise	Environmental	Green Infrastructure & Biodiversity
HGGT All-Member Briefing	Members	Draft Oct 2020 (Consultation Version)	18/11/2020	How do you think the Garden Town project could help overcome health, social and economic inequalities and support your local area? (poll): **Foster community strength: 24%, Provide skills, training and job opportunities: 24%,** Support green and local businesses: 12%, Bolster residents health and mental wellbeing: 15%, Provide safe, warm and affordable homes: 18%, Other: 9%	Socio-Economic	
HGGT All-Member Briefing	Members	Draft Oct 2020 (Consultation Version)	18/11/2020	How can the GT project overcome inequalities? You need community spirit	Socio-Economic	Community Strength & Social Infrastructure
HGGT All-Member Briefing	Members	Draft Oct 2020 (Consultation Version)	18/11/2020	People need a place to sleep, food etc. before they can look for employment etc. People first need the support to access decent housing and jobs.	Socio-Economic	Economic Growth & Job Creation
HGGT All-Member Briefing	Members	Draft Oct 2020 (Consultation Version)	18/11/2020	It's the underlying issues: health, food, water etc. and then working up	Socio-Economic	Health & Wellbeing
HGGT All-Member Briefing	Members	Draft Oct 2020 (Consultation Version)	18/11/2020	We haven't mentioned education, good schooling and health centres is what you build the community around	Socio-Economic	Community Strength & Social Infrastructure
HGGT All-Member Briefing	Members	Draft Oct 2020 (Consultation Version)	18/11/2020	For some of these it will be different for different ages and genders. Young people want sport and community. Older look for security, people to talk to and how I can help others. People in the middle are looking for where to next. You need to be able to hit all these levels.	Socio-Economic	Community Strength & Social Infrastructure
HGGT All-Member Briefing	Members	Draft Oct 2020 (Consultation Version)	18/11/2020	Community strength is going to drive so much of this and the other desirable things that you want. It takes a long time to get cohesion. You need to put the social infrastructure in first	Socio-Economic	Community Strength & Social Infrastructure
HGGT All-Member Briefing	Members	Draft Oct 2020 (Consultation Version)	18/11/2020	Green and local businesses o If you support local business people walk and cycle more they don't need to travel so far o Local business and jobs, skills and training fosters community strength o People create their own communities by talking to each other and building bonds	Socio-Economic	Economic Growth & Job Creation
HGGT All-Member Briefing	Cllr Eric Buckmaster	Draft Oct 2020 (Consultation Version)	18/11/2020	Providing skills training – there is a wider economic area and it's important to sustain the whole area, whatever goes on in Harlow will have wider implications. self esteem that comes from long term employment is so important. The whole community need that security for long term health	Socio-Economic	Economic Growth & Job Creation
HGGT All-Member Briefing	Cllr Goodeve	Draft Oct 2020 (Consultation Version)	18/11/2020	Providing skills training - a believer in life long learning – opportunities to learn new skills like evening classes in an effort to better themselves academically or learn new skills and open up new opportunities. It's not too late to try and fix earlier mistakes or disinterest later on	Socio-Economic	Economic Growth & Job Creation
HGGT All-Member Briefing	Cllr Carter	Draft Oct 2020 (Consultation Version)	18/11/2020	Other – key expressions is health inequalities - big issue is access for those with disabilities – streets and houses design, but also raising the profile so that it becomes the norm. People don't like to be picked out because they are different, want to be absorbed into society. Not impeded by cars on shared surfaces etc. Not helpful for those in wheelchairs or guide dogs. Important, 20% of population have disability and can't be ignored. How many people are in the audience with a disability – not many, so we need to raise within these platforms. Not just best practice, but the norm.	General	Inclusive Design
HGGT All-Member Briefing	Cllr Hill	Draft Oct 2020 (Consultation Version)	18/11/2020	Bolster residents wellbeing – if the development is sympathetic, they will take into account the other options. Also, mental health linked to physical activity. Opportunity to go out into open space.	Socio-Economic	Health & Wellbeing
HGGT All-Member Briefing	Cllr Ruth Buckmaster	Draft Oct 2020 (Consultation Version)	18/11/2020	Skills and training – social and economic inequalities – if we provide the work, opportunities and ongoing training – helps mental wellbeing and career opportunities. Four different parts to the garden town and all of it needs to offer this, view as a while. Needs to be built in from the start, developers need to think of this.	Socio-Economic	Economic Growth & Job Creation
HGGT All-Member Briefing	Cllr Robert Mitchell	Draft Oct 2020 (Consultation Version)	18/11/2020	Can reduce energy bills through sustainable building materials/provision as you cannot control the energy prices through the suppliers. 20% of calculated power should be installed by developer through renewables at build. Broad agreement that renewable energy should be part of development and an assumption this is already part of the process. Govt have removed the Code for Sustainable Building - if they hadn't, I would have said a significant, if not all properties built to Code level 6.	Environmental	Renewable Energy
HGGT All-Member Briefing	Cllr Tony Stowe	Draft Oct 2020 (Consultation Version)	18/11/2020	should be aiming for Passivhaus type - we want get it right first time without needing to rebuild later	Environmental	Energy Efficiency & Carbon Reduction
HGGT All-Member Briefing	Cllr Nigel Bedford	Draft Oct 2020 (Consultation Version)	18/11/2020	Looking more to sustainable construction - reduction of plastics in the home - using more natural products... e.g. sheep's wool for insulation. Capture the carbon from within the timber itself.	Environmental	Energy Efficiency & Carbon Reduction
HGGT All-Member Briefing	Cllr Robert Mitchell	Draft Oct 2020 (Consultation Version)	18/11/2020	Walking & cycling is revenue in financial terms - need it everyday to go about ones business	Environmental	Sustainable Movement
HGGT All-Member Briefing	Cllr Robert Mitchell	Draft Oct 2020 (Consultation Version)	18/11/2020	Regular activity is something controlled by the family and the environment - we need to encourage the individual	Socio-Economic	Health & Wellbeing
HGGT All-Member Briefing	Cllr Nigel Bedford	Draft Oct 2020 (Consultation Version)	18/11/2020	People want to get outside especially through pandemic - you need good outdoor space to enjoy	Environmental	Green Infrastructure & Biodiversity
HGGT All-Member Briefing	Cllr Mione Goldspink	Draft Oct 2020 (Consultation Version)	18/11/2020	Poor air quality can be really damaging to people's health so this should be prioritised	Environmental	Air Quality
HGGT All-Member Briefing	Cllr Nigel Bedford	Draft Oct 2020 (Consultation Version)	18/11/2020	Focusing on HGGT air quality is not an issue on a harmful scale - harmful emissions are 8-10 meters from roadside - but in the home(s) air quality isn't too bad. Hopefully in 20 years when petrol and diesel cars are phased out we'll notice the impact	Environmental	Air Quality
HGGT All-Member Briefing	Cllr Tony Stowe	Draft Oct 2020 (Consultation Version)	18/11/2020	Mental health should be paid focus to here especially given the current climate	Environmental	Health & Wellbeing
HGGT All-Member Briefing	Cllr Nigel Bedford	Draft Oct 2020 (Consultation Version)	18/11/2020	Mental health - community cohesion and forging closer relationships with neighbours - paying focus to this will aid mental health improvement/prevention	Environmental	Health & Wellbeing
HGGT All-Member Briefing	Cllr Teresa Heritage	Draft Oct 2020 (Consultation Version)	18/11/2020	The community needs to be able to meet in community facilities - also good quality health facilities through new developments are essential. Multi-purposing the local pubs as community assets. Foster community strength by assisting the community to live, work and play together - unless they're brough together then silos will always exist. Accessibility to amenities is one thing but bringing residents together to use these together is important. It helps to provide safety to young people also by doing this well	Environmental	Community Strength & Social Infrastructure
HGGT All-Member Briefing	Cllr Tony Stowe	Draft Oct 2020 (Consultation Version)	18/11/2020	Jobs and skills - unless we have opportunities whereby it attracts young people then we won't tackle inequalities. Apprenticeships and work placements etc are important. History tells us that this works.	Socio-Economic	Economic Growth & Job Creation
HGGT All-Member Briefing	Cllr Nigel Bedford	Draft Oct 2020 (Consultation Version)	18/11/2020	Need skills and job opps to provide the mental stimulas to keep people striving for home ownership. Heavily linked to better mental health too.	Socio-Economic	Economic Growth & Job Creation
HGGT All-Member Briefing	Cllr Nigel Bedford	Draft Oct 2020 (Consultation Version)	18/11/2020	How do you bring existing housing stock up to the quality of the new planned communities. Redevelopment and regeneration likely. Ensuring the existing area of Harlow receives investment through the new planned developments	General	Retrofit
HGGT Community Q&A	Member of public	Draft Oct 2020 (Consultation Version)	24/11/2020	National and local ambition to reduce carbon emission etc – but the unit cost for gas vs electricity is massively different. If we do go electric, what is the source of the electricity and how are we going to help people afford these bills? What is the infrastructure that the LA will help people meet these costs?	Environmental	Energy Efficiency & Carbon Reduction

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HGGT Community Q&A	Member of public	Draft Oct 2020 (Consultation Version)	24/11/2020	Solar panels are a wasted opportunity if not used – heat pumps also give bigger output capacity per unit cost	Environmental	Renewable Energy
HGGT Community Q&A	Member of public	Draft Oct 2020 (Consultation Version)	24/11/2020	Sustainable drainage - permeable pavements sound great but the footprint of all these new homes is going to be much greater than that of pavements. Flooding is already a concern for us in Gilston. How can you guarantee that sustainable drainage will be enough? Lived in Gilston for 18 years and seen a lot more rainwater – concerns about flooding - how do you anticapte the impact – a formula to work out the drainage systems per the housing units.	Environmental	Water Management
HGGT Community Q&A	Member of public	Draft Oct 2020 (Consultation Version)	24/11/2020	Rain gardens etc needed as climate change only going to get worse so we need to plan for this	Environmental	Water Management
HGGT Community Q&A	Member of public	Draft Oct 2020 (Consultation Version)	24/11/2020	High land around farms is a big influencer, is there any way for HGGT to influence the land around developments?	Environmental	Water Management
HGGT Community Q&A	Member of public	Draft Oct 2020 (Consultation Version)	24/11/2020	What help with be given to existing older buildings in Harlow ours is a victorian house for example. What about existing Harlow sites or old houses to fit the new standards	General	Retrofit
HGGT Community Q&A	Member of public	Draft Oct 2020 (Consultation Version)	24/11/2020	Digital infrastructure – Swedish fibre – UK is way behind the curve – if you think about fibre infrastructure 30% cheaper at the point of build – for security, for CCTV, charging stations, IoT, drone management, needs fibre to make these things happen – fibre to the cabinet – think more about education – businesses start-ups – new software – 1000mbs/100 instead of 30/10mbs	General	Digital
HGGT Community Q&A	Member of public	Draft Oct 2020 (Consultation Version)	24/11/2020	Any consideration of non-traditional building materials for residential homes? I've been building with super-insulated panels in Florida - works very well, and quickly, there	Environmental	Circular Economy
HGGT Community Q&A	Member of public	Draft Oct 2020 (Consultation Version)	24/11/2020	Factory construction – you can't get a mortgage on them as non-standard construction	Environmental	Circular Economy
HGGT Community Q&A	Member of public	Draft Oct 2020 (Consultation Version)	24/11/2020	What is your ambition for consideration of embodied carbon in future development? The energy in creating the materials – is your ambition about looking at repurposing beyond 60 years of life expectancy – mandate it to make it the norm – are we going to insist on this? Need to almost shame developers in to doing this as they traditionally deliver the very least they can 'get away with'	Environmental	Energy Efficiency & Carbon Reduction
HGGT Community Q&A	Member of public	Draft Oct 2020 (Consultation Version)	24/11/2020	How can you protect existing green space for existing residents in the face of the requirements of the new garden town?	Environmental	Green Infrastructure & Biodiversity
HGGT Community Q&A	Member of public	Draft Oct 2020 (Consultation Version)	24/11/2020	Will HGGT be looking at the latest applications to see how whats been discussed tonight will be addressed in those?	General	
HGGT Community Q&A	Member of public	Draft Oct 2020 (Consultation Version)	24/11/2020	Where are you proposing these new developments going without taking anymore of our green space?	General	
HGGT Community Q&A	Member of public	Draft Oct 2020 (Consultation Version)	24/11/2020	There is likely to be a huge increase in internet shopping and delivery to private addresses. how does the guidance address this?	Environmental	Sustainable Movement
HGGT Community Q&A	Member of public	Draft Oct 2020 (Consultation Version)	24/11/2020	Community farm – would love to be part of the discussion and this ongoing work – keeping the quality there through mandating it is essential – advocate for community gardens/farms etc – ensuring that the things in the checklist are accessible for all residents of all abilities	Socio-Economic	Community Strength & Social Infrastructure
HGGT Community Q&A	Member of public	Draft Oct 2020 (Consultation Version)	24/11/2020	Are there plans to incorporate a music venue in to plans as this would fill the void left behind by the closure of The Square and would secure support of local people	Socio-Economic	Community Strength & Social Infrastructure
HGGT Community Q&A	Member of public	Draft Oct 2020 (Consultation Version)	24/11/2020	We don't want to see this 'us and them' type of perceptions between existing Harlow and the new developments – got to be benefit for Harlow residents	Socio-Economic	Community Strength & Social Infrastructure
HGGT Developer Forum	Developers	Draft Oct 2020 (Consultation Version)	26/11/2020	Will viability statement be updated to reflect updated sustainability aspirations? – Need to respond back on this.	General	Viability
HGGT Developer Forum	Developers	Draft Oct 2020 (Consultation Version)	26/11/2020	Passivhaus still saying 9% greater cost to deliver, still have economies of scale.	Introduction	Incentives
HGGT Developer Forum	Developers	Draft Oct 2020 (Consultation Version)	26/11/2020	Incentives – housebuilders, need to consider cash flow; when you put money in and where you put money out. Timing is really important in terms of targets and what is achievable, is it about whenever is completed, or in the first instance/ first phase	Introduction	Incentives
HGGT Developer Forum	Developers	Draft Oct 2020 (Consultation Version)	26/11/2020	Role of garden town – Developers don't want to be presented with something that can be dismissed quickly, viability needs to be based in reality and on garden town aspirations	General	Viability
HGGT Developer Forum	Developers	Draft Oct 2020 (Consultation Version)	26/11/2020	Need to ensure futureproofing is taken into account, e.g. developemnts will run over 10-15 years. Need to be clear on when will targets need to be met? E.g. trigger points.	General	Checklist
HGGT Developer Forum	Developers	Draft Oct 2020 (Consultation Version)	26/11/2020	Self assessment approach? How is it used at different stages e.g. Masterplan and pre-app stage = working tool (joint assessment), Planning application submission – self assessment to build sustainability strategy. All of detail isn't going to be there at masterplanning stage, or even at outline application stage, when you drill into detail of quality checklists. It is a process that builds over time, there is a lot there that simply couldn't be answered by even most detailed outline application (esp as most strat sites brought forward by parties not delivering all of the homes)	General	Checklist
HGGT Developer Forum	Developers	Draft Oct 2020 (Consultation Version)	26/11/2020	What can people realistically connect into in 20mins. Getting local people involved in it, ensuring that 5k loop for people to run, 10k for people to go on a longer run, a few small things can make a big difference. STC is crucial for Latton Priory	Environmental	Sustainable Movement
HGGT Developer Forum	Developers	Draft Oct 2020 (Consultation Version)	26/11/2020	STC offering alternatives to the car. 'You will have others ways you can make your journeys easily'. Within the site, walking and cycling is crucial. Balance and good alternatives. How do you prevent car ownership? Balancing alternatives more helpful for marketing purposes rather than 'don't have a car'	Environmental	Sustainable Movement
HGGT Developer Forum	Developers	Draft Oct 2020 (Consultation Version)	26/11/2020	Access to open space is absolutely key for marketing – health and wellbeing strategy for Gilston picks up on this. Headline is landscape and landscape setting. Making sure it is retained, accessible, can be used, PROWs, open spaces being accessible but not overcrowded.	Environmental	Green Infrastructure & Biodiversity
HGGT Developer Forum	Developers	Draft Oct 2020 (Consultation Version)	26/11/2020	Mental wellbeing – influence decisions that are made – empowering communities to make decisions.	Socio-Economic	Health & Wellbeing
HGGT Developer Forum	Developers	Draft Oct 2020 (Consultation Version)	26/11/2020	Danger in some of this that we become so focused on fabric and technologies, simplistically those changes will happen (Part L) development and housebuilding industry nationally across the country will deliver solutions to those. So more granular aspects need to be resolved.	Introduction	Incentives
HGGT Developer Forum	Developers	Draft Oct 2020 (Consultation Version)	26/11/2020	Sustainable Transport Corridor, so worrying it's not moving forward with real clarity. Getting the critical links to existing local facilities and ensuring local centre builds on from that. Transport hub needs to fulfil other functions as well, and co-working spaces could feature as a major part of this. Lots of people will continue to change, but there will be lots of people travelling to work, connections to stations.	Environmental	Sustainable Movement
HGGT Developer Forum	Developers	Draft Oct 2020 (Consultation Version)	26/11/2020	Making best and most efficient use of land, particularly when taking out of green belt, macro level of sustainability and creating viable sustainable hubs.	Introduction	Incentives
HGGT Developer Forum	Developers	Draft Oct 2020 (Consultation Version)	26/11/2020	Disparities between East Herts and Harlow health outcomes (skills, education, health) – how can Gilston address these (within East Herts). Needs to be brought out more in terms of health disparities in document. How will health facilities actually be operated – how will health providers be involved and engage with Developers.	Socio-Economic	Community Strength & Social Infrastructure
HGGT Developer Forum	Developers	Draft Oct 2020 (Consultation Version)	26/11/2020	Existing community very much want to be involved. Very positive at open space and SANG. Bridleyways were key for connectivity. Local community don't view things in silo, (e.g. this is good as mitigation or sustainability).	Environmental	Green Infrastructure & Biodiversity
HGGT Developer Forum	Developers	Draft Oct 2020 (Consultation Version)	26/11/2020	Routes into the secondary school on the site. How are kids going to get there e.g. from more rural areas in EFDC?	Environmental	Sustainable Movement
HGGT Developer Forum	Developers	Draft Oct 2020 (Consultation Version)	26/11/2020	RAG isn't best way to incentivise developer. When used as way Building for Life use it is more useful, as it allows for debate. But RAG status fixes on quantitative, and becomes stark, and takes away ability to have discussion. Risk is that it pushes developers into us and them situation, want Garden town to sit in middle of that as delivery and policy agency. Will you commit to exceeding building regs, yes or no.	General	Checklist

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HGGT Developer Forum	ECC	Draft Oct 2020 (Consultation Version)	26/11/2020	Grateful for points about healthy places and issues with securing healthcare provision (e.g. availability of GPs). I know my Public Health colleagues would concur with that point. Their call however would be to ensure that the design focus for Gilston & other HGGT developments is on creating a healthy place and promoting healthy lifestyles, thus switching the emphasis to a preventative approach with people living more active healthy lifestyles. Gilston has great opportunities for that - to capitalise on - and these can benefit the whole Garden Town, helping to address health inequalities too. The Healthy Town Framework should be treated as a prompt for the above approach / emphasis and the HIA process also promotes that approach and will help with it	Environmental	Design Approach: First Principles

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EFDC SUSTAINABILITY GUIDANCE & CHECKLIST / REFURBISHMENT & EXTENSIONS *(householders)*

DRAFT - REVISION 02
FEBRUARY 2021

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FOR OPTIMUM VIEWING
In Acrobat Reader, go to View > Page Display > Two Page View
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Issue and Revision Record

REVISION	DATE
-	7th January, 2021
01	3rd February, 2021
02	16th February, 2021

Contents

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1

INTRODUCTION

This document supports the highest environmental commitment across the District - to become net zero carbon by 2030

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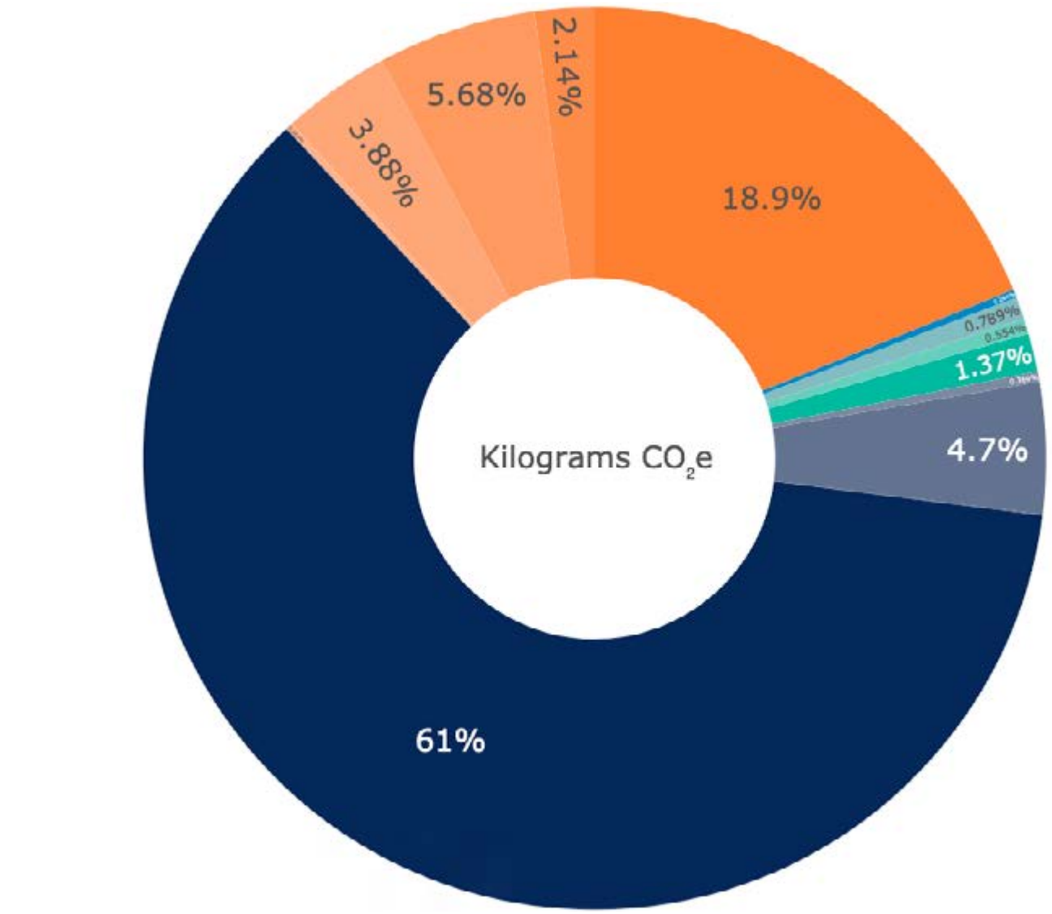
Overview

Epping Forest District has an annual carbon emission contribution of 2,048 CO2 (kt) across all industries (2017 data). The graph below provides a break down of the District's emissions based on sector:



Residential buildings
Commercial buildings & facilities
Institutional buildings & facilities
Industrial buildings & facilities
Agriculture
Livestock
Industrial Process
Wastewater
Solid waste disposal
Off-road
Aviation
On-road

Source: scattercities.com

Overview

CLIMATE EMERGENCY

The UK Government and Epping Forest District Council have declared a Climate Emergency.

The global climate is changing, primarily as a result of greenhouse gas emissions from human activity. Communities, businesses and the natural environment are already feeling the impacts of the changing climate. Continuted change is now unavoidable and will disrupt everyday life, with higher average temperatures and more extreme weather events.

This Sustainability Guidance supports the highest commitment across the District, which is to produce net zero cabon emissions by 2030. It sets out practical solutions to set out a clear design and construction process for any new development, into a net zero future. EFDC believes that in order to meet our climate change targets, all new buildings must operate at net zero carbon by 2030.

Sustainability focuses on meeting the needs of the present without compromising the ability of future generations to meet their needs. High quality sustainable developments require adopting a holistic approach to environmental, social and economic sustainability.

EPPING FOREST FOREST DISTRICT COUNCIL

The Council's emerging Local Plan sets out the most significant level of development to be brought forward across the District in a generation. Within the period 2011-2033 the growth proposed in the emerging Local Plan will provide for a minimum of 11,400 new homes. Much of this will be delivered through larger strategic sites.

The emerging local plan also recognizes the importance of adapting existing homes within the District to ensure they are liveable and comfortable in a changing climate. Housing stock improvement should be an integral part of future climate impact mitigation..

PLANNING POLICY CONTEXT

There is a strong and committed national and local policy context for planning environmentally, socially and economically sustainable places and developments, and climate adaptation.

The National Planning Policy Framework (NPPF) (February 2019) sets out national policy for local planning authorities and decision makers. The NPPF states that there is a presumption in favour of sustainable development (paragraph 11), with sustainable development having economic, social and environmental objectives.

The environmental objective is that development should protect and enhance the natural, built and historic environment as well as protecting biodiversity, minimising pollution and adapting to climate change and the demands of a low carbon economy.

COVID-19 RECOVERY

The guidance has been developed during the COVID-19 pandemic, which has highlighted stark health inequalities relating closely to environmental, social and economic inequalities.

Now more than ever, high quality, sustainable and resilient design and development is needed to ensure that existing and new residents of Epping Forest District recover from the pandemic in a long term and locally-led manner.

Opportunities to foster community strength, support green and local economies and bolster residents health must be taken. All stakeholders are therefore expected to work collaboratively to contribute to this recovery, and ensure that Epping Forest District is a joyful and sustainable place to live, work and play.

EB156

How to use this guidance?

1 / PURPOSE OF THIS GUIDANCE

The purpose of this guidance is to help both homeowners and applicants meet EFDC's goals of becoming net zero carbon by 2030.

EFDC will set the agenda for Sustainable living, making it is easy for residents to adopt sustainable lifestyles. This means the choices offered across all aspects of living, work, and play are sustainable. This document provides practical and technical guidance on how relevant Sustainability indicators and policies (environmental, social, and economic) in the Epping Forest District Local Plan will be applied to residential extensions and refurbishments across the district.

2 / WHO USES THIS GUIDANCE?

Homeowners + Applicants:
The document is to be used by homeowners, design teams, consultants and contractors in shaping development proposals, This will guide design, and ensure coordinated and integrated consideration of sustainability principles and targets at an early stage.

Local Authority Officers and decision-makers:
This document will be endorsed to have material planning weight and the Checklist will help guide the assessment of planning applications for residential extensions within the District.

3 / WHEN TO USE THIS GUIDANCE?

Best Practice: The guidance can be used as best practice guidance by any homeowner or resident within Epping Forest District who may be doing refurbishment or extension work to their home, the work does not require planning permission.

Pre-Application; The Sustainability Checklist should accompany pre-application discussions to ensure all applications have considered and incorporated sustainability measures from the outset of their design.

Planning Application; A Sustainability Strategy incorporating the Checklist, with relevant certification, is to be submitted alongside planning applications.

Post-Planning; Relevant conditions will be discharged and planning obligations and monitoring will be coordinated to ensure that sustainable measures are in place through to delivery and beyond. Tools such as Post-Occupancy Evaluation for ongoing monitoring will be expected relating to key indicators.

4 / HOW TO USE THIS GUIDANCE?

The guidance is split in to the following sections:

1. EFDC & Refurbishment - provides an introduction to the importance of Sustainability for existing buildings in the District

2. Design Principles - this section presents practical and technical guidance on how to approach sustainable refurbishments projects during early design stages. The principles encourage a wholistic approach to sustainability, and their incorporation at an early stage of a project will make it easier to meet Sustainability principles set out in the remainder of the Guidance.

3. Checklist (to be completed and submitted) - for use in planning applications

4. Appendix: LETI Guide to Refurbishments and Extensions - practical and technical best practice guidance from industry specialists on Sustainability targets for refurbishment and extension projects

Policy Context

5 / SUBMISSION REQUIREMENTS

1. Checklist
2. Sustainability Statement

The Sustainability Statement should be accompanied with relevant certifications where applicable.

6 / APPLICATION OF GUIDANCE

The guidance is applicable to all projects involving the refurbishment and/or extension of existing building within Epping Forest District.

8 / RELATIONSHIP TO THE LOCAL PLAN

This guidance should be read in conjunction with the policies found in the Epping Forest District Council Local Plan. The Sustainability guidance will be endorsed to have material planning weight when determining applications.

This EFDC sustainability guidance will need to be considered as part of the wider policy context but is expected to compliment the policies by providing a practical tool for enhancing the sustainability of development in the District.

9 / REVIEW & MONITOR

Requirements in this guidance are based on current (2021) regulations and best practice, and may be superseded by future standards. It is intended that the guidance will be updated every 3 years.

This document provides practical and technical guidance on how relevant Sustainability policies in the Epping Forest District Local Plan will be applied to residential extensions and refurbishments across the district.

Sustainability policies that relate to refurbishments and extensions in the Local Plan are:

DM1 Habitat protection and improving biodiversity
DM2 Epping Forest SAC and the Lee Valley SPA
DM3 Landscape character, ancient landscapes and geodiversity
DM5 Green and blue infrastructure
DM9 High quality design
DM12 Subterranean, basement development and lightwells
DM15 Managing and reducing flood risk
DM16 Sustainable drainage systems
DM17 Protecting and enhancing water courses and flood defences
DM19 Sustainable water use
DM20 Low carbon and renewable energy
DM21 Local environmental impacts, pollution and land contamination
DM22 Air quality

EFDC Green Infrastructure Strategy
EFDC Open Space Strategy
EFDC Heatlh and Wellbeing Strategy
EFDC Air Pollution Mitigation Strategy
Essex SuDS Design Guide

EB156

2

EFDC & RETROFIT

This section looks at how adapting existing buildings will help Epping Forest District Council can become net zero carbon by 2030.

EB156

Why is refurbishment important?

Why is refurbishment important?

Housing stock contributes a significant amount to carbon emissions across the country. We know that in Epping Forest District, existing residential buildings make up just under 20% of our annual carbon emissions.

Epping Forest District has **xxx** people living in **xxx** homes. Of these homes, the overwhelming majority - if not all - were designed for climatic conditions prevalent at the time of build rather than the climate we can expect to experience now and over the coming decades. This means that much of our housing stock will not deliver levels of comfort, safety and resource efficiency required in the 21st century. It is predicted that 70% of housing stock in 2050 will consist of the buildings that exist today. As our climate changes our housing stock will become increasingly inappropriate.

Therefore, widespread adaptation of existing homes is crucial to ensuring that they are comfortable, marketable, resource efficient and fit for purpose in the present and future.

What are the potential future effects of climate change on existing homes?

Flooding, water stress and overheating are the key changes projected for the East of England.

01. Flooding - increased urbanization as well as changes in weather patterns can result in a reduced capacity for regions to absorb water, leading to more water surface runoff and increased flooding.

02. Water Sress - climate change projections suggest that in the period to 2050 and beyond, the UK will experience wetter winters and drier summers. Overall precipitation may decrease by up to 15%.

03. Overheating - there is low awareness of domestic overheating as an impact of climate change. This can result in thermal discomfort, especially in more urban areas.

Effective adaptation options are available for all three of these impacts. Early, widespread adoption of appropriate adaptation measures will enable existing homes to remain habitable in increasing summer temperatures, be reoccupied more quickly after floods and consume less water.

What are the challenges facing householders?

01. Uptake of climate change adaptation measures is low because of the lack of information and awareness about adaptation options and access to appropriate technical advice.

02. In contrast to new buildings, the adaptation of existing homes is the responsibility of a complex range of independent actors, including the individual homeowner. It may be difficult for individual homeowners to raise the initial capital costs associated with refurbishment work.

03. As there is variation in the construction, age and condition of existing housing stock in the District, a level of individual assessment is necessary to select the most appropriate adaptation measures.

The Sustainability Guidance aims to help homeowners overcome some of these challenges by providing guidance on how to undertake refurbishment or extension work as well as signposting to successful case studies and additional resources. The guidance does not take a ‘one-size-fits-all’ approach but rather offers best practice advice that can be adapted to specific cases by individual homeowners.

The ‘Incentives’ section (p.14) also provides information on financial incentives for individuals.

Incentives

1 / INCENTIVES FOR THE DISTRICT

Planning
National planning policy is setting increasingly higher sustainability standards for development. Both the Planning White Paper and Affordable Housing White Paper place special emphasis on quality design and sustainability. Compliance with sustainability standards will ensure compliance with rider regulatory framework.

Awards and Recognition
Exemplar schemes will be shared as case studies. Schemes with excellent sustainability credentials may be put forward for local and national awards, gaining the Council recognition.

Building Regulations
The minimum energy efficiency standards for domestic rental properties are changing - from April 2020, a rental property will require a minimum rating of EPC E and this is likely to increase to a rating of EPC C by 2030. This will be applicable to social housing and housing associations as well as private landlords.

Cost Benefits
The long-term operation costs of refurbished homes are vastly reduced due to their lower energy demand, helping to eliminate issues such as fuel poverty, and providing cost savings of 30%-40% over 30 years.

Health & Wellbeing
There are numerous health benefits associated with sustainable homes. The comfort and wellbeing of inhabitants will be improved due to environmental factors such as healthier air quality and temperatures, improved humidity and noise levels.

Sustainable and healthy living also provide mental health benefits through the reassurance provided to inhabitants when their home is futureproofed and built to last.

2 / INCENTIVES FOR INDIVIDUALS

Design and Planning
Compliance with sustainability standards will lead to a smoother planning process and faster assessment time.

Awards and Recognition
Exemplar schemes will be shared as case studies. The Council will work with applicants to put their schemes forward for local and national awards.

Building Regulations
The minimum energy efficiency standards for domestic rental properties are changing - from April 2020, a rental property will require a minimum rating of EPC E and this is likely to increase to a rating of EPC C by 2030.

Funding Opportunities
Funding schemes provide financial incentives for homeowners to refurbish their homes to higher energy standards. These schemes include;
- Green Homes Grant
- Eco Flex
- Domestic Renewable Heat Incentive

Businesses that are looking to refurbish their offices may be eligible for tax incentives.

Cost Benefits
Studies have demonstrated correlations between homes with better energy efficiencies, and higher house prices. Furthermore, the long-term operation costs of refurbished homes are vastly reduced due to their lower energy demand, and can provide cost savings of up to 30%-40% over 30 years. Futureproofing a home to rely more on energy from renewable sources protects it from rising energy costs.

Health & Wellbeing
There are numerous health benefits associated with sustainable homes. The comfort and wellbeing of inhabitants will be improved due to environmental factors such as healthier air quality and temperatures, improved humidity and noise levels. Sustainable and healthy living also provide mental health benefits through the reassurance provided to inhabitants when their home is futureproofed and built to last.

3

EXTENSION & REFURBISHMENT DESIGN PRINCIPLES

This section looks at how the principles of sustainability can be incorporated in to a project at the design stages.

EB156

1 / Landscape Led Design

OBJECTIVE

Landscape and natural environments contribute both to the quality of a place, and the quality of life of its occupants. Whenever we build, we must protect and plan for the plants and animals that already live on the site. We should also look for opportunities to enhance and create new habitats and support biodiversity.

The land on sites of extensions or refurbishment projects should be used efficiently with new planting supporting existing local species of flora and fauna. Opportunities for the enhancement of existing species can be incorporated in to the design of your extension; e.g. bird boxes, swift bricks or bat boxes.

Opportunities to connect and introduce multifunctional green infrastructure should be considered e.g. by adding green roofs. Find out more about the green infrastructure networks in your area (look at the EFDC Green Infrastructure Strategy) which include open spaces, parks and gardens, allotments, woodlands, fields, hedges, lakes, ponds, playing field, as well as footpaths, cycleways and waterways. Consider how your landscape can strengthen and connect to local green infrastructure.

CASE STUDY

The Black Curve (Bromley) by Ar'Chic

A rear house extension that includes the creation of a garden terrace. The green meadow roof installed as part of the extension will enhance the insulation of the home, reducing energy usage, and give opportunities to wildlife to take over.

SOME THINGS TO CONSIDER

Are there opportunities to retain and/or enhance habitats and biodiversity?
Integrate green roofs with native wildflower and grass species, and plant small areas of green space around the extension. Retain protected trees and/or consider re-planting existing trees within the garden.

Some animals and plants are legally protected – are there any on your site?
To find out, a protected species survey may be required. For example, bats may roost in trees and buildings, and a pond may contain newts.

Where a new extension impacts on existing habitats, what mitigation measures will be put into place?
Phase construction works around local species' seasonal patterns of nesting, mating, foraging and hibernation.

USEFUL RESOURCES

The following are good sources of information on green infrastructure, and how to protect animals and plants on your construction site:

EFDC Green Infrastructure Strategy

Green Essex Strategy
Essex Biodiverstiy Action Plan
Stort Catchment Management Plan
Green Arc Strategy

Natural England
Wildthings Biodiversity Action Plan
National Design Guide

2 / Orientation

OBJECTIVE

Early adoption of passive design principles can allow your home to benefit from natural lighting whilst avoiding overheating.

When designing extensions, there is an opportunity to orient them to maximise natural daylight and sunlight into the building and take advantage of passive solar gain (absorbing the sun's heat energy to warm internal spaces).

Building axis' should be orientated in the east-west direction – to take advantage of maximum daylight and heat from the sun which significantly reduces the energy consumption of a building, and can reduce a homes' heating and cooling costs by up to 85%. External shading can help a home stay cool in the summer months and avoid overheating, including the use of landscape and plants. A Daylight / Sunlight Assessment can help provide more information on how much natural light your development will be exposed to.

Buildings in close proximity to each other can block out a neighbours natural light, so take care not to overshadow nearby homes.

CASE STUDY

Manor Farm (Oxfordshire) by Transition by Design

Extension to a listed Georgian country house that provides the home with new kitchen, dining room, garden room and utility spaces and follows sustainable design principles. The solar gains are optimised to the south allowing light and warmth to pour into the garden room yet protected in excess summer heat by the oversailing roof

SOME THINGS TO CONSIDER

Is your glazing sized and oriented to reduce heat loss, while allowing light and heat from the sun to enter?
Rooms facing south should be designed with shaded glazing (to exclude high-angle summer sun) and good ventilation (to remove summer heat gains).

Are your windows shaded to avoid overheating in the summer?
Features such as awnings, shutters, blinds or planting can protect rooms from the sun while allowing light, window ventilation and views out.

Have you incorporated other passive design features to avoid overheating in your home?
Replacing fitted carpets with wooden floors or tiles can expose the ground's cooling effects. Installing secondary glazing behind existing glazing to create triple glazing, with external ventilation of outer cavity, can greatly reduce solar heat gain.

USEFUL RESOURCES

The following are good sources of information on passive design principles:

Energy Saving Trust

EB156

3 / Energy Efficiency

OBJECTIVE

There are two ways buildings use energy: embodied and operational. When trying to reduce the amount of energy your home is responsible for, consider both types and follow the ‘energy hierarchy’ approach: (1) reduce the need for energy at home, (2) install different types of energy efficiency measures and (3) install renewable enery measures. By reducing energy demand through the first two stages, you should have cut down on how much energy you need to produce (Renewable Technologies).

Embodied Energy
The total energy required to manufacture or construct a building. You can reduce your embodied energy by using environmentally friendly, locally sourced and low impact building materials (Materials and Finishes).

Operational Energy
The energy used on a daily basis for heating and electrical appliances. You can reduce your operational energy by designing your home to be more energy efficient (Fabric-First Approach). This includes using high performance building components and installing smart appliances to control and monitor your energy usage.

CASE STUDY

80% House (London) by Prewett Bizley Architects

An extension to a townhouse that includes living, cooking and dining spaces A rooftop extension adds a third bedroom-cum-study. The house achieves an 80% reduction in CO2 emissions, primarily by incorporating high levels of insulation and air tightness. Fresh air is supplied by an MVHR system. A photovoltaic array on the roof with a provides a little over half the annual electricity requirement.

SOME THINGS TO CONSIDER

Could you install smart meters in your home?
Smart meters monitor your energy use and make sure you are billed accurately. They are usually provided and fitted without charge by your energy supplier.

How will your new extension contribute to reducing energy demand for heating, lighting and cooling within your home?
Following sustainable design principles such as orientation to maximise natural daylight, avoiding overheating and natural ventilation will help you reduce energy demand.

Are your new appliances energy efficient?
The Energy Saving Trust register is an extensive database of energy efficient products - use this to ensure any new appliances you purchase are energy efficient, and can help you reduce your energy consumption.

USEFUL RESOURCES

The following are good sources of information on how to make your home more energy efficient:

Centre for Sustainable Energy
LETI Embodied Carbon Primer
Energy Saving Trust
Smart Energy GB
Superhomes.org.uk

4 / Renewable Technologies

OBJECTIVE

Buildings can reduce their energy consumption by generating their own energy using renewable technologies. These technologies use little or no energy and are therefore cheap to operate.

Photovoltaics (PVs): Solar PV systems turn sunlight into electricity through the ‘solar cells’ they contain - this electricity can be used to power home appliances.

Solar Thermal Panels: Solar panels are used to absorb the heat of the sun and transfer it to heat the water you use in your home.

Ground Source Heat Pumps: This captures the heat trapped under the surface of the ground, and uses it to run central heating systems in homes.

Air Source Heat Pumps: An air source heat pump uses heat from the air outside (even when its freezing) to heat your home - via radiators, underfloor heating or to heat water in a storage tank for use in the kitchen or bathroom.

CASE STUDY

1860s Farm (Huntingdon), pump by Finn Geotherm

A ground source heat pump was installed in this 1860s farmhouse to replace an oil-fired boiler. The pump heats up radiators throughout the house, as well as provides hot water. The heat pump also runs entirely on renewable energy generated by the farm’s own turbine, making the farm carbon positive.

SOME THINGS TO CONSIDER

Could you create suitable space for solar thermal panels in your home?
Your roof should face south and have between 2-5 sq.m of available space free of shading. Some systems involve the installation of an additional hot water cylinder, so you may need space to fit this.

Is your home suitable for a ground or air source heat pump?
These technologies work best in well-insulated homes, as they are most effective in homes which warm up quickly, and keep the heat in. Improving the general energy efficiency of your home will help make it suitable for these pumps.

Have you checked what financial incentives are availble for you?
You can earn an income from the Renewable Heat Incentive (RHI) is you install any of the above technologies.

USEFUL RESOURCES

The following are good sources of information on renewable energy technologies, and funding incentives:

Domestic Renewable Heat Incentive (RHI)
Renewable Energy Consumer Code
Microgeneration Certification Scheme

Heat Pump Association
Ground Source Heat Pump Association
Superhomes.org.uk

5 / Adaptable & Future Proof Design

OBJECTIVE

We can ensure that homes designed today can be used by future generations by designing them to be flexible and adaptable to changing needs.

Internal walls can be lightweight and demountable construction, allowing layout arrangements to be reconfigured if required. The foundations of extensions can be future-proofed to accommodate for a potential additional future floor. Garage spaces could be incorporated in to the design, that have the potential to be converted in to living rooms in the future.

Doorways, floor levels and circulation space within the home and garden areas should be designed for easy access by all abilities and avoid creating trip hazards. Not just internal layouts, but any landscape features should also be designed with potential future needs in mind.

Future-proofing your home when doing extension or refurbishment work to it may help you save on additional costs in the future.

CASE STUDY

The Linney (Devon) by Casswell Banks Architects

An old 45 sq.m stone barn is refurbished to provide a home for a family of 6. The existing stone walls are left intact and a secondary skin is built behind it, allowing for a more flexible configuration of the interior, built with sustainable materials, without compromising the original walls. A series of lightweight insertions and sliding doors create an open plan ground floor that can be used in many different ways by the family.

SOME THINGS TO CONSIDER

Is the layout of your home flexible enough to allow for adaptation, conversion or extension?
Extensions should be designed to be adaptable - demountable internal walls, foundations able to support an additional floor, and easily accessible circulation will cater to potential future needs.

Is there space to work from home if you need to?
In a post Covid-19 society, more people will be working from home and this trend is likely to continue as our digital infrastructure continues to develop. Extensions to a home should look to accommodate future working space, if your home does not currently have it.

USEFUL RESOURCES

The following are good sources of information on designing your home to be adaptable and future-proof:

National Design Guide

6 / Fabric-First Approach

OBJECTIVE

A fabric first approach prioritises design and construction that minimises the need for heating and cooling. It is worth following ‘energy hierarchy’ (introduced under Energy Efficiency) to conceptualise this: (1) reduce the need for energy at home, (2) install different types of energy efficiency measures and (3) install renewable enery measures.

This translates to optimising building orientation or elemental aspects (i.e. windows) for passive solar gain; lots of insulation; high-performance windows and doors; and good overall air-tightness, so that no drafts can get in and no warm air can escape. A well-insulated, airtight house relies not just on the efficiency of its components but on the quality of the workmanship behind it.

When building an extension to your home, take care to reduce thermal bridging (where heat escapes from the interior via structural elements that cut across the tightly-sealed fabric). This can occur at weak spots such as junctions between walls, floors and roofs, and around windows and doors.

CASE STUDY

Max Fordham House (London) by bere Architects

Designed in collaboration with the renowned physicist and engineer Max Fordham, the elevations of this house are largely driven by the requirement to accommodate horizontally-sliding thermal shutters within the internal fabric of the building. Automatically operated, insulated internal window shutters have been developed for the project, and the intention is to test the completed building without any supplementary heating.

SOME THINGS TO CONSIDER

Can walls, floor, and roofs be insulated?
This is beneficial to reduce heat loos from your home, reducing your annual energy bills. You could consider insulating the inside face of your external walls, or, the outside face of your external walls where Planning permits.

Can windows, doors, and rooflight elements be replaced with more energy efficient elements?
You should aim for these elements to have low ‘u-values’ (ideally aim for a u-value below 1.00W/m2.K).

Could you look to measure the existing energy used in your home, with a view to analyse the energy savings you are likely to make once a refurbishment has been completed?
Monitoring the before-and-after energy use of your home will allow you to quantify the energy and financial savings afforded by the refurbishment.

USEFUL RESOURCES

The following are good sources of information on adopting a fabric-first approach for your home:

British Fenestration Rating Company
Green Building Store
LETI Design Guide
Superhomes.org.uk

7 / Materials & Finishes

OBJECTIVE

Construction materials frequently cause environmental damage during their production. For example, quarrying damages landscapes; wood can come from unsustainable sources; metals use significant amounts of energy in their production and PVC production results in atmospheric pollution, and even brick needs to be fired at high temperatures using fossil-fuels.

The ambition here is to reduce the use of embodied carbon caused through the use of new materials. Reclaimed materials, products made from recycled material, and adopting offsite construction principles cause less environmental damage than new products and can also reduce waste and land fill. Therefore, wherever possible, it is ideal to first reuse and refurbish your home, before looking to build new (‘retro-first’). Where you do have new elements, you should look to reuse existing elements such as bricks, timber rafters, and conservatories, in an innovative way. Where you have the opportunity to, aim for embodied carbon target of below 300 kgCO2e/m2.

CASE STUDY

Cork House, Matthew Barnett Howland with Dido Milne and Oliver Wilton

The Cork House is a residential extention project which explores the use of low carbon materials. Solid structural cork is used for the walls and roof of this building, resulting in the building having exceptionally low whole life carbon.

SOME THINGS TO CONSIDER

Can any demolished elements (walls, roofs, staircases, etc), be reused in your new extension or home?
Speak to an architect to explore innovative ideas for reuse.

Are you prioritising low carbon healthy materials (i.e. low VOC emitting materials) and products made of natural materials (e.g. hemp, timber or wool)?
For example, when choosing insulation, using a wood fibre insulation might bring embodied carbon benefits over PIR (Polyisocyanurate) insulation options.

When building an extension, could you reduce the ‘dead loads’ where possible?
Building with lighter materials reduces the structural load and therefore material use of the building.

USEFUL RESOURCES

The following are good sources of information on selecting and sourcing sustainable materials and finishes:

LETI Embodied Carbon Primer

8 / Indoor Air Quality

OBJECTIVE

Ensuring good indoor air quality is important for both your health and safety (as air pollution causes more harm than smoking), and for the maintenance of your home. There are ways to improve ventilation within the home; either by promoting natural and ‘passive’ cross-ventilation (e.g. allowing air move through rooms and corridors via windows on all sides) or ‘active’ ventilation through installation of mechanical ventilation systems including MVHR (Mechanical Ventilation with Heat Recovery), which filters and warms outside polluted air before distributing this within the home. This is particularly useful with nearby activities which might affect outside air quality such as industrial parks or busy roads.

Additionally, planting trees of particular species have a role to play in helping reduce air pollution; through ‘cleaning’ the air by absorbing harmful airborne particles and gaseous pollutants. For example, the silver birch tree is more effective than the white willow tree is in capturing particles. It is also known that that trees with large leaf areas can remove many times more particulate pollution than small ones.

CASE STUDY

Lark Rise (Buckinghamshire), bere Architects

Lark Rise is an all-electric, two-bedroom guest house designed to Passivhaus standards, producing at least twice as much energy in a year as it requires, while maintaining a very high level of comfort all year round. Ventilation is provided through MVHR units.

SOME THINGS TO CONSIDER

Where you live near an air polluted area, could you look to install an MVHR system?
Whilst natural ventilation is best to reduce energy consumption, MVHR units will ensure better air quality within your home.

Could you look to site the spaces you spend the most time in away from busy roads?
For example; when designing the layout of your new extension - think about locating your living room to the rear of a home, as this is one of the most occupied rooms of a house.

In your front or rear garden, could you look to plant tree species that help reduce poor air quality?
You can refer to the list of tree species listed by the Woodland Trust’s Urban Air Quality guidance, to find out which species are best for improving air quality.

USEFUL RESOURCES

The following are good sources of information on ensuring high indoor air quality in your home:

EFDC Air Pollution Mitigation Strategy
Woodland Trust Urban Air Quality
Superhomes.org.uk

9 / Water Management

OBJECTIVE

There are many simple measures to take at home to use less water. When designing new bathrooms, we can choose to use low flush WCs, have flow restrictors on taps and have low flow shower heads.

We can also reduce our reliance on mains water through the use of greywater recycling (the use of waste water from baths, showers and hand basins for toilet flushing, irrigation etc.) and rainwater harvesting (the collection of rainwater from roofs to use of toilet flushing, irrigation, the use of water butts etc.).

Consider also how you can manage surface water runoff due to rain sustainably. Covering driveways, gardens and patios with hard surfacing is increasingly popular, yet it prevents rainwater seeping into the ground, forcing the water to run off quickly into drains, or to pool on hard surfaces.

CASE STUDY

Example of domestic water management; water butts

A water butt is essentially a large container used to capture and store rainwater. When attached to a downpipe, the water butt collects the rainwater that lands on the roof of a building so it can be used later. It is this time of year, when rainfall has been scarce, that water butts become really useful.

SOME THINGS TO CONSIDER

Have you considered water saving measures? The installation of relatively affordable and simple water saving appliances in your bathrooms can contribute significantly to more efficient water use in your home. These measures can include low flush WCs and flow restrictors on taps.

Could you use planting and permeable materials in your landscape to naturally drain rainwater?
For example, the use of water butts in gardens can help collect rainwater for use in the house.

USEFUL RESOURCES

The following are good sources of information on sustainable water management for your home:

Superhomes.org.uk

10 / Waste Management

OBJECTIVE

Constructing buildings creates huge amounts of waste – over a third of all waste created in the UK. We can make a big difference by designing our buildings to use materials more effectively, using less material, making sure to recycle construction waste where possible and using recycled or renewable materials in the construction of our homes. We should also take care to recycle and compost as much of our household waste as possible.

It is therefore important to think of waste not only in terms of what material is used now, but also in designing for demolition. For example when using brickwork, lime mortars allows the bricks to be easily demolished in the future, so it can be reused in other parts of your house or sold to others.

You can also look to capture and harness waste heat from all sources around your home. Capturing heat that has been realised as a by-product of an existing activity can contribute to meeting energy demands. On a small scale, Exhaust Air Heat Pumps (EAHP) can be explored here; otherwise, exhaust air can be made available to other buildings via heat sharing networks.

CASE STUDY

Bill Powell's SuperHome (Cambridgeshire)

This was a householder refurbishment project of an existing 1950's house. The owner implemented a series of energy saving measures, including the installation of an Exhaust Air Heat Pump, which led to an overall reduction by 68% of the home's carbon use.

SOME THINGS TO CONSIDER

Could you take measures to reduce the waste that will be created as a result of your extension / refurbishment project?
It may be possible to recycle your construction waste. Alternatively, look to see if it is possible to use prefabricated building components during construction - which are manufactured off-site and are more efficient in terms of material waste.

Could you design your home so that the building elements are reusable in the future?
Speak to your Architect about making sure that this is a consideration in the early stages of the design.

Could you explore EAHP to contribute to your annual home heating needs?
As a series of ducts are required through the building to allow the flow of air to and from the EAHP, installation should happen during construction.

USEFUL RESOURCES

The following are good sources of information on sustainable waste management for your home:

Superhomes.org.uk

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4

SUBMISSION

This section includes the list of submission requirements, and the sustainability statement.

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Checklist

01 / Do you have a **design team** that you will be working with, who have experience in making sustainable buildings?

☐ Yes ☐ No →

↓

For information on finding the right design team, refer to:

https://www.greenregister.org.uk/
https://www.aecb.net/
https://www.climatechangeandyourhome.org.uk/

02 / Are you working with a **historic building**?

☐ No ☐ Yes →

↓

For additional information on work on existing historic buildings, refer to:

Energy Efficiency and Historic Buildings
EFDC Built Heritage

03 / Are you looking at **grant options** that may be available to you?

☐ Yes ☐ No →

↓

For information on funding and grants available to individuals, refer to:

Green Homes Grant
Eco Flex
Domestic Renewable Heat Incentive

04 / Have you incorporated **sustainable design principles** in your extension / refurbishment project?

☐ No ☐ Yes →

Please tick the principles (following page) you have incorporated, and use the Sustainability Statement to give an example from the project that illustrates each relevant principle.

04 / (cont.)

- ☐ Landscape-Led Design
- ☐ Orientation & Form
- ☐ Energy Efficiency
- ☐ Renewable Technologies
- ☐ Adaptable & Future-Proof Design
- ☐ Fabric-First Approach
- ☐ Materials & Finishes
- ☐ Indoor Air Quality
- ☐ Water Management
- ☐ Waste Management

05 / Pick the following **building elements** that apply to your extension / refurbishment project, and provide specification details for each.

☐	Draught-proofing	
☐	Upgrading windows	
☐	New boiler	
☐	New lighting	
☐	Rainwater harvesting	
☐	Green / brown roof	
☐	Renewable energy technologies	
☐	Insulation	
☐	Other - please specify	

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Sustainability Statement

Include any additional relevant information below.

NB. All submitted assessments / reports will be conditioned to the LPA at post completion / pre-occupation stage to ensure that all new developments are being completed to the specified design standards in order to close the performance gap and create truly sustainable communities.

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APPENDIX

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Appendix 1: Climate Emergency Declaration

EPPING FOREST DISTRICT COUNCIL

Declaration: Climate Emergency
Date of Declaration: 19th September 2019

Cllrs: S.Nevile + J.Phillip

Adopted Motion / Commitment:
1. Declare a ‘Climate Emergency’;

2. Pledge to do everything within the Council’s power to make Epping Forest District Council area Carbon Neutral by 2030;

3. Call on Westminster to provide the powers and resources to make the 2030 target possible;

4. Work with other governments (both within the UK and internationally) to determine and implement best practice methods to limit Global Warming to less than 1.5°C;

5. Continue to work with partners across the district and region to deliver this new goal through all relevant strategies and plans;

6. In the special circumstances of this district, resolves to protect the Special Area of Conservation through the Local Plan and every other means;

7. Implement an Air Quality Strategy and bring forward Sustainability Guidance on planning; and

8. Engage with young people when considering the issue of climate change and appoint a ‘Youth Ambassador’ from the Epping Forest Youth Council.”

Appendix 2: Glossary

Airtightness
Building airtightness is defined as the resistance to air leakage through unintentional points or areas in the building envelope. Heat can be lost through these gaps in the walls, floors and roofs of buildings creating draughts and so it is extremely important to make sure these are eliminated. This down to good detailing and good site workmanship.

Biodiversity
The variety of plant and animal life in the world or in a particular habitat, a high level of which is usually considered to be important and desirable.

Carbon Footprint
The amount of carbon dioxide released into the atmosphere as a result of the particular individual, organisation or community. The carbon footprint of a development is counted over its lifetime i.e. the materials used and their sources, construction, lifetime use and demolition.

Circular Economy
The circular economy is a model of production and consumption, which involves sharing, leasing, reusing, repairing, refurbishing and recycling existing materials and products as long as possible. In this way, the life cycle of products is extended.

Cold Bridge
Occurs when there is a thermal break in the insulating materials between the inside and outside of a building e.g. a gap in the wall or roof insulation, allowing heat to escape.

Development
‘Development’ includes building operations (e.g. structural alterations, construction, rebuilding, most demolition); material changes of use of land and buildings; engineering operations (e.g. groundworks); mining operations; other operations normally carried out by a person operating a business as a builder; subdivision of a building (or any part of it) used as a dwelling house for the use as two or more separate dwelling houses. As defined by section 55 of the Town and Country Planning Act 1990.

Embodied Energy
The sum of the energy requirements associated, directly or indirectly, with the delivery of a good or service. This includes: the energy required to initially produce the building (the processing and the manufacture of the materials of the building as well as their transportation and assembly on site), the energy needed to refurbish and maintain the building over its lifetime, and the energy necessary to demolish and dispose of the building at the end of its life.

Fossil Fuel
Fossil fuel is a general term for buried combustible geologic deposits of organic materials, formed from decayed plants and animals that have been converted to crude oil, coal, natural gas, or heavy oils by exposure to heat and pressure in the earth’s crust over hundreds of millions of years. The burning of fossil fuels by humans is the largest source of emissions of carbon dioxide, which is one of the greenhouse gases that allows radiative forcing and contributes to global warming.

Green Infrastructure
Green infrastructure is a network of high quality and multifunctional green spaces , both urban and rural, including environmental features such as parks, public open spaces, playing fields, sports pitches, woodlands, and allotments, which are capable of delivering a wide range of environmental and quality of life benefits for local communities. The provision of green infrastructure can provide social, economic and environmental benefits close to where people live and work.

Local Plan
The plan for the future development of the local area, drawn up by the local planning authority in consultation with the community and stakeholders. Once adopted the Local Plan will legally form part of the Development Plan for the District, superseding the Replacement Local Plan (2006).

Appendix 2: Glossary (cont.)

National Planning Policy Framework
National Planning Policy Framework (NPPF) sets out the Government's planning policies for England, and provides a framework within which local people and their accountable councils can produce their own distinctive local and neighbourhood plans, which reflects the needs and priorities of their communities.

Operational Energy
Operational energy is the energy required during the entire service life of a structure such as lighting, heating, cooling, and ventilating systems; and operating building appliances.

Quality Review Panel
An independent panel of planning, architecture, urban design and construction experts set up by the Council to provide impartial expert advice to both applicants and local authorities on design issues in relation to important new development schemes and proposals for important public spaces including significant minor applications, major planning applications, pre-application development proposals, strategic masterplans and concept frameworks. The Quality Review Panel's feedback is a material consideration for local authorities and the planning inspectorate when determining planning applications. The purpose of the Quality Review Panel is to ensure that new development is of a high quality and contributes to place making.

Renewable Energy
Renewable energy is energy that is collected from renewable resources, which are naturally replenished on a human timescale, such as sunlight, wind, rain, tides, waves, and geothermal heat.

Sustainable Drainage Systems
These are drainage systems designed to manage surface water and groundwater to sustainably reduce the potential impact of new and existing developments on flood risk. They can form part of a wider integrated water management approach.

Zero Carbon
Causing or resulting in no net loss of carbon dioxide into the atmosphere. A zero carbon building is one with zero net energy consumption or zero net carbon emissions on an annual basis.

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Appendix 3: LETI Retrofit Guidance

The LETI Retrofit Guidance will be inserted in here (under progress and to be released in the coming months).

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TO BE UPDATED.