

Report to the Cabinet

Report reference: C-027-2020/21
Date of meeting: 19 October 2020



Portfolio: Planning Services
Subject: Draft 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 agree that the Draft EFDC Sustainability Guidance documents (Major Developments and Minor Developments) and Draft HGGT Sustainability Guidance and Checklist (Strategic Sites) be approved for public consultation for a six week period, and;
- (2) To agree that the Planning Services Director, in consultation with the Planning Portfolio Holder be authorised to make minor amendments to the Draft EFDC Sustainability Guidance (Major Developments and Minor Developments) prior to the public consultation;
- (3) To note that, following consultation, and any subsequent revisions to the documents, it is intended that the final EFDC Sustainability Guidance and Checklists (Major Developments and Minor Developments), will be considered by Cabinet for endorsement as a material planning consideration for the preparation of masterplans, pre-application advice, assessing planning applications and any other development management purposes within the District.
- (4) To note that, following consultation, and any subsequent revisions to the documents, it is intended that the final HGGT Sustainability Guidance & Checklist, will be agreed 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 & Gilston Garden Town.

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 Council area carbon neutral by 2030. To support these policies and this declaration, the Council has produced two EFDC draft Sustainability Guidance documents for use across the District; one for Major Developments (10+ units) and one for Minor Developments (1-9 units). The documents are in addition to the draft HGGT Sustainability Guidance and Checklist, which is relevant for sites which are located both within Epping Forest District and the Harlow and Gilston Garden Town.

The EFDC Sustainability Guidance documents will provide both planning applicants and officers practical and technical guidance on how new developments across the District can comply with the Council's sustainability ambitions of becoming carbon neutral by 2030 and promote social equity and community resilience across the District. In addition, the Guidance documents also include sustainability checklists for applicants to complete, providing an indication of the development's performance against known sustainability indicators. The guidance documents will ensure that all new development in the District is delivered to meet the targets set by the Council regarding environmental, social and economic sustainability. The document will also be utilised by the Quality Review Panel to help form the basis of environmental and socio-economic sustainability discussions.

This report provides members with a summary of the aims, objectives and purpose of the EFDC Sustainability Guidance (Major Developments and Minor Developments). The intention is that following public consultation and any updates arising that the Final Guidance will be return to Cabinet for endorsement as a material consideration in the determination of planning applications, and guide design and implementation processes. A separate report is available with further detail on the draft HGGT Sustainability Guidance and Checklist, the purpose and process undertaken, proposed consultation and next steps (this is attached as Appendix C).

The Harlow & Gilston Garden Town seeks to set the agenda for sustainable living through ensuring growth that will be net carbon neutral by 2030 and building strong and integrated communities across new and existing places. The UK Government has declared a Climate Emergency, with all five HGGT Partner Authorities also declaring a Climate Emergency/ Action. The draft HGGT Sustainability Guidance and Checklist supports the highest commitment across the Garden Town authorities, which is to become Carbon-Neutral by 2030, and will relate to major development within the Garden Town, including the strategic sites/ Garden Communities.

Once consulted upon and with comments incorporated, the HGGT Sustainability Guidance and Checklist will be endorsed by the partner authorities to be a material planning consideration in 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 document will also be utilised for HGGT Quality Review Panel reviews to help form the basis of environmental and socio-economic sustainability discussions.

Reasons for Proposed Decision:

- To ensure that the EFDC Draft Sustainability Guidance documents (Major Developments and Minor Developments) are afforded suitable planning weight by agreeing that the documents should be consulted upon prior to endorsement as

material planning considerations. This will ensure that development proposals across the District target the Council's sustainability ambitions, and that clear parameters are established for future pre-application advice, assessing planning applications and any other development management purposes.

- To ensure that the HGGT Sustainability Guidance and Checklist are afforded suitable planning weight by agreeing the document should be consulted upon prior to endorsement as a material planning consideration, to ensure that development proposals within the Garden Town target the HGGT sustainability ambitions, and that clear parameters are established for future pre-application advice, assessing planning applications and any other development management purposes within the Garden Town.

Other Options for Action:

- Not to agree the EFDC Sustainability Guidance documents (Major Developments and Minor Developments) and HGGT Sustainability Guidance and Checklist can be published for a 6 week consultation 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.

Report:

1. The National Planning Policy Framework sets out a presumption in favour of sustainable development. The emerging Epping Forest District Council's Local Plan policies 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. Draft Sustainability Guidance documents (Major Developments and Minor Developments) 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 – Draft EFDC Sustainability Guidance: Major Developments, September 2020
 - Appendix B – Draft EFDC Sustainability Guidance: Minor Developments, September 2020
 - Appendix C – Draft HGGT Sustainability Guidance and Checklist, September 2020
 - Appendix D - HGGT Board Report - Sustainability Guidance for Consultation
 - Appendix E – QRP Report for HGGT Sustainability Guidance and Checklist, January 2020
 - Appendix F - EqlA Sustainability Guidance documents consultation Oct 20
3. The intention is for the EFDC Sustainability Guidance documents (Major Developments and Minor Developments) to be the subject of public consultation prior to the endorsement as material planning considerations by the Council. The Guidance documents are intended to remain a consideration alongside and beyond the life of the Local Plan.

4. Applicants and designers will need to demonstrate how their proposals address the environmental sustainability checklist, and the socio-economic sustainability questions in the Sustainability Guidance (Major Developments and Minor Developments), 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, a 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.

Objectives

5. The principle objective for the guidance 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 meets sustainability targets.
6. Within this 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.
7. 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.
8. In addition to environmental sustainability, new developments 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.
9. The intention is following consultation for the Sustainability Guidance to be updated to take account of consultation comments and then be endorsed as a material planning consideration in the consideration of planning proposals including masterplans and concept frameworks and the determination of planning applications.
10. The Guidance currently focuses on new build developments. Further EFDC Sustainability Guidance to add to this suite of documents, relating to the retrofit and refurbishment of existing buildings, will be developed in Autumn 2020, for consultation in early 2021. This guidance will align with the LETI Retrofit Working Group industry guidance, which is due to be published in December 2020.

Programme for consultation

11. Early engagement on the EFDC Sustainability Guidance has been taking place in part alongside engagement for the HGGT Sustainability Guidance, upon which the EFDC document for major developments is based. There has been extensive input from officers from all HGGT partner authorities into the draft HGGT Sustainability Guidance

and Checklist, with a number of rounds of engagement across various services and departments in order to create a holistic and agreed guidance and checklists questions on a broad range of topics. This has included whole-document reviews as well as specific topic-focused workshops with relevant officers. External sustainability expertise has also been sought via the Quality Review Panel and UK Green Building Council.

12. The Council has and will continue to conduct workshops with EFDC officers and Members for the EFDC Sustainability Guidance documents. Informal engagement has been undertaken with the EFDC Leadership team, Local Plan Implementation Forum and officers across different service departments including Planning, Housing, Community, Culture and Wellbeing, Technical and Regulatory Services, and Economic Development.
13. Members have been engaged on the draft Sustainability Guidance, to provide early comments and queries in order to shape the documents. An EFDC Member workshop was held on 21 September 2020 and two All-Member HGGT briefing and workshop sessions were held on 27 July 2020 and 26 August 2020. Further engagement with members is scheduled in October and during the public consultation period in November/ December.
14. In accordance with the Council's Statement of Community Involvement (SCI), the Council is required to consult stakeholders and the general public on the draft Sustainability Guidance. 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 documents, an online survey/ questionnaire and potential video content explaining the document will be made available on the Council's website and by notification to statutory consultees. Public Consultation on the draft EFDC Sustainability Guidance documents and draft HGGT Sustainability Guidance and Checklist is proposed to run concurrently over a six week period from November – December 2020.
15. Given current restrictions on in-person engagement due to COVID-19, we will focus on reaching a broad audience primarily through digital and, where possible, non-digital means. The consultation will seek to include:

Digital engagement:

- EFDC Sustainability Guidance documents available for viewing on EFDC website.
- HGGT Sustainability Guidance and Checklist and pre-recorded and accessible overview video available for viewing on HGGT website, with links to this from partner authority websites.
- Digital questionnaire / survey available for viewing and completing on HGGT website and Council Websites.
- Staffed online webinars and Q&A for particular stakeholder groups (e.g. Local residents and Community Groups, Developers, Members, Youth Councils, Partner Officers)
- Social Media awareness campaign (via HGGT, partner authorities and EFDC Comms Team).
- Notification of consultation via LPA Planning Policy databases and statutory consultees.

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.
 - A COVID-19 secure staffed event, with a small number of hard copies of the document and survey available for review and completion, if this is considered safe to do so.
16. Consultation arrangements will be put in place and will be advertised ahead of the consultation, in accordance with the Statement of Community Involvement.
17. The intention is to simultaneously consult publicly on the EFDC Sustainability Guidance documents (Major Developments and Minor Developments), the HGGT Sustainability Guidance and Checklists, and also the HGGT Healthy Town Framework (approved for consultation by the Council's Cabinet in March 2020). Therefore, particular attention will be given to explaining these separate documents, their purpose, use and audience, and where they align or diverge.
18. Following the consultation, the responses will be collated and where appropriate amendments made to the documents. The EFDC Sustainability Guidance documents (Major Developments and Minor Developments) and the HGGT Sustainability Guidance and Checklists will then return to Cabinet for formal endorsement as material planning considerations.

Resource Implications:

The work to support the draft EFDC Sustainability Guidance 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

Legal and Governance Implications:

EFDC Sustainability Guidance documents (Major Developments and Minor Developments) and the HGGT Sustainability Guidance and Checklist have been developed in the context of Government Policy (NPPF), Planning Practice Guidance and good practice.

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 documents (which were based on the HGGT

EB152

Sustainability Guidance as appropriate) informal engagement has been undertaken with officers, the EFDC Leadership Team, Local Plan Implementation Forum and EFDC Councillors.

For the draft HGGT Sustainability Guidance and Checklist informal engagement has been undertaken with partner officers, the HGGT Quality Review Panel, UK Green Building Council, HGGT Developer Forum and HGGT partner authority Councillors

Background Papers:

- None.

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.

EFDC
SUSTAINABILITY
GUIDANCE
/
MAJOR
DEVELOPMENTS
(+10 units)

DRAFT FOR CONSULTATION - REVISION 03
OCTOBER 2020



Issue and Revision Record

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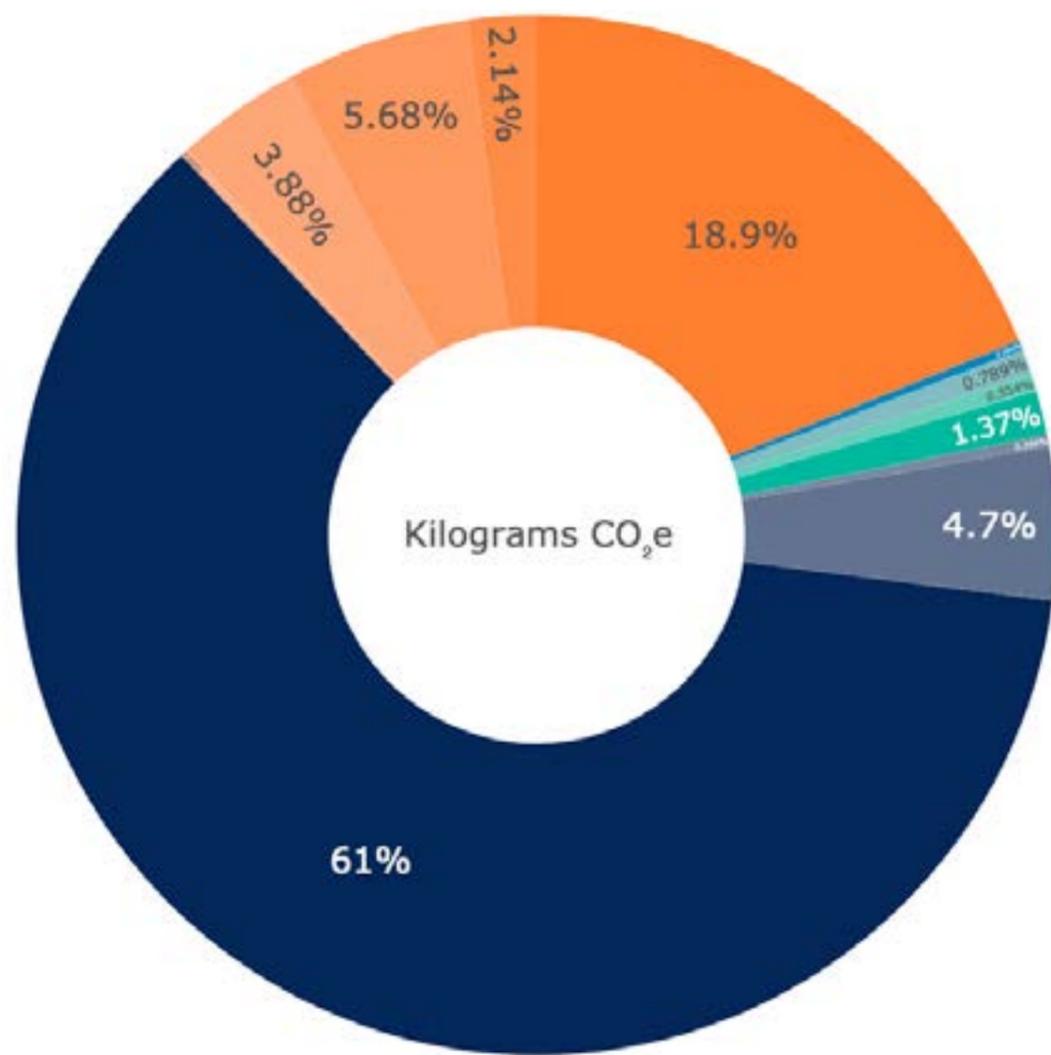
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INTRODUCTION

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

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. Continued 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 carbon 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 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 Garden Town is a joyful and sustainable place to live, work and play.

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.

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.

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.

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 in to 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)

5 / SUBMISSION REQUIREMENTS

1. Collated 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 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 Collated Checklist visually indicates whether proposals meet the District’s sustainability principles and goals of becoming net zero carbon by 2030.

Minimum Requirements (Low Quality)	Net Zero-Carbon by 2050 (Medium Quality)	Net Zero-Carbon by 2030 (High Quality)
<i>Policy-compliant / Building Regulations compliant, but do not meet Climate Declaration targets</i>	<i>These targets meet ultimate goal, but 20 years slower</i>	<i>These targets meet our goal and Climate Declarations</i>

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. It will help inform a collaborative master planning and application process.

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

Requirements in this guidance are based on current (2020) regulations and best practice, and may be superseded by future standards. It is intended that the guidance will be updated every 3 years.

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 carbon homes can be achieved at a capital cost uplift of between [3.5% - 5.3% for residential developments](#), or, at equal cost - depending on economies of scale. 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.

Finally, in a post COVID-19 society, more people are working from home and looking to live more sustainable lifestyles, making sustainable homes and communities more attractive to homeowners and thereby providing a commercial benefit to developers.

ENVIRONMENTAL SUSTAINABILITY

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

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, meadows, 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.

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 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 performance gap in these areas.

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 (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 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.

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
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.



Virido, 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	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	For applications greater than 99no. units, what BREEAM Communities Level is met?	Very Good	Excellent	Outstanding
En.9	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.				

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.

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 will be provided from on-site renewable energy sources? <i>(SAP 10 carbon emission factors to be used for calculation)</i>	> 20%	> 50%	> 70%
Rn.3	What percentage of household electricity will on-site renewable technology provide? <i>(Net zero operational carbon does not burn fossil fuel and is 100% powered by renewables)</i>	> 35%	> 50%	100%
Rn.4	Have any relevant government incentivised schemes been taken advantage of? <i>i.e. Non-Domestic Renewable Heat Incentive (RHI)</i>	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.				

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 Biodiversity 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?	0-9% BNG	101-15% 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? 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, 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.				

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.

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

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, London
 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.				

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.

KEY LOCAL POLICY & GUIDANCE

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
- 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	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.				

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 reusable 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



Clarion Housing, Merton Regeneration
Zero-carbon development of 208 homes, achieving Code for Sustainable Homes Level 5.

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 are 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.				

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 Garden Town 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).

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
W.1	How much construction, demolition and excavation (CD&E) waste will be recycled? <i>(This is to be incorporated in your Construction Management Plan)</i>			≥ 95%
W.2	How much municipal waste (operational waste) will be recycled or composted vs sent to landfill or energy recovery?			65% : 35%
W.3	Has early engagement been undertaken with the EFDC Waste Management team to ensure their processes are taken in to consideration?	No, LPA not engaged		Yes, demonstrated
W.4	Have developments been designed to encourage ease in waste recycling?'			Yes
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.				

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 and activities 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), already under pressure due to current traffic levels. The links between poor air quality and human health are well documented by Public Health England. New developments should also attempt to mitigate negative impacts on human health, and take in to consideration the District's requirements on Air Quality Management Areas, Local Air Quality Action Plan, and development Air Quality Assessments.

The following net health gain principles (adopted from Public Health England's guidance) should be incorporated 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. 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. Site residential accommodation away from roadsides
9. 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.

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 (draft)

CASE STUDIES



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		Minimum Requirement	Net Zero-Carbon by 2050	Net Zero-Carbon by 2030
P.1	Have measures been taken to reduce the need for car travel, and provide alternative zero and low-emission travel options?	No		Yes
P.2	Where the development has the potential to impact on air quality, has an assessment been undertaken to measure levels of impact on the Epping Forest SAC?	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.				

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 Part 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.

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

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.

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](#)

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 requires 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
- 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

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.

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



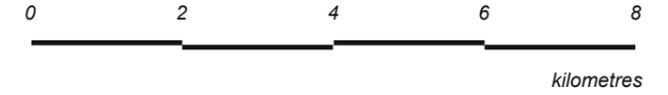
Bromley by Bow Centre A pioneering charity that combines an extensive neighbourhood hub with a medical practice and a community research project.



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.



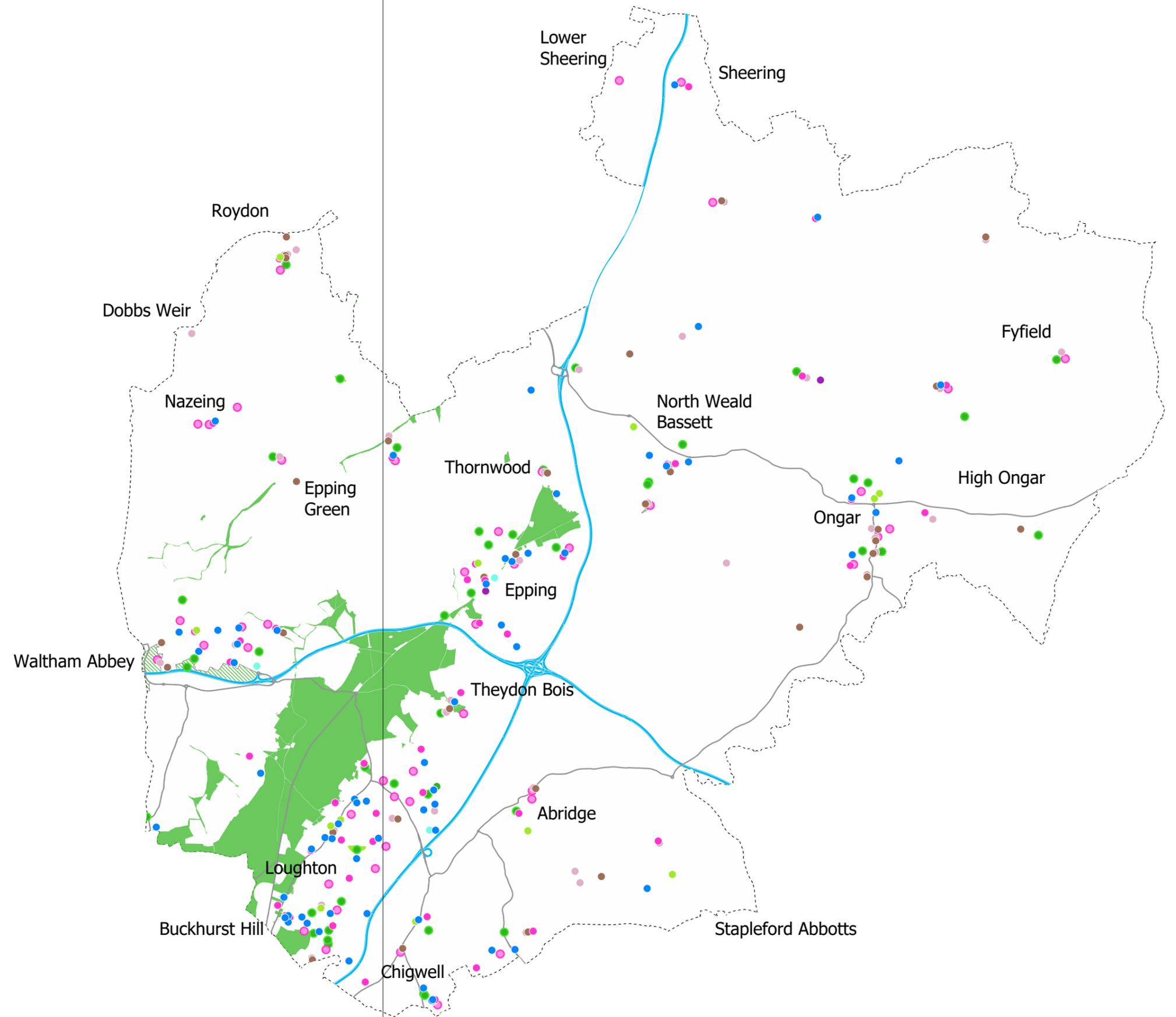
Castlebank Horticultural Training Centre, Lanark (EKJN) A collection of neglected outbuildings behind Castlebank House have become a thriving horticultural training centre, a valuable community resource.



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





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.

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) <i>(max. 250 words)</i>
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). <i>(max. 250 words)</i>
S.3	What 'meanwhile' uses are planning for existing communities during construction stage of major developments? How are they implemented? <i>(max. 250 words)</i>
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). <i>(max. 250 words)</i>
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). <i>(max. 250 words)</i>
Please include your responses to the questions above in the "Sustainability Statement" pages which form part of your submission	

SUBMISSION

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

1. Submit the following as evidence of the completed Quality checklists:

Design Principles	
Daylight and Sunlight Assessment	
Noise 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:

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.

APPENDIX

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."

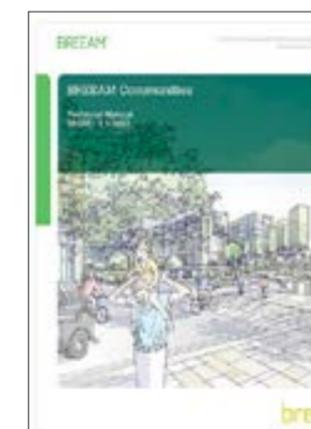
Appendix 2: Building Performance Standards



Net Zero Carbon Buildings - UKGBC



Passivhaus



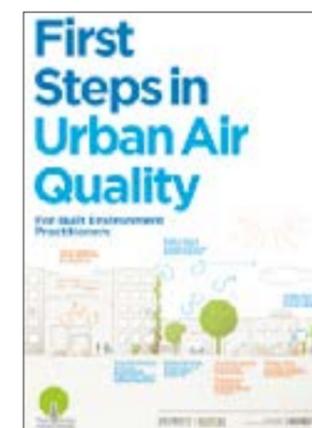
BREEAM Communities



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

To be added.

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

DRAFT FOR CONSULTATION - REVISION 03
OCTOBER 2020



Issue and Revision Record

REVISION	DATE
01	August 4th, 2020
02	August 28th, 2020
03	October 7th, 2020

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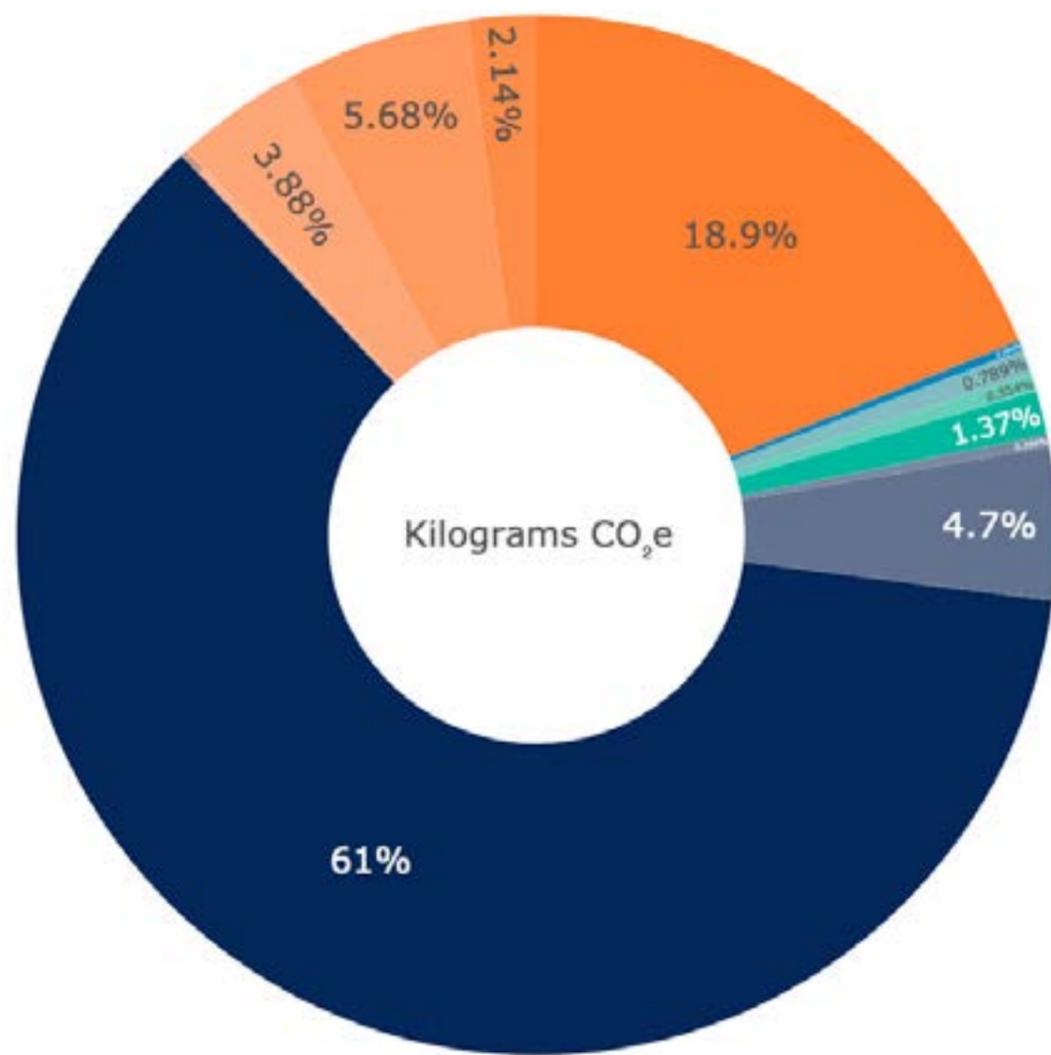
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INTRODUCTION

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

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. Continued 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 carbon 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 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 Garden Town is a joyful and sustainable place to live, work and play.

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.

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.

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.

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 in to 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)

5 / SUBMISSION REQUIREMENTS

1. Collated 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 Collated Checklist visually indicates whether proposals meet the District’s sustainability principles and goals of becoming net zero carbon by 2030.

Minimum Requirements (Low Quality)	Net Zero-Carbon by 2050 (Medium Quality)	Net Zero-Carbon by 2030 (High Quality)
<i>Policy-compliant / Building Regulations compliant, but do not meet Climate Declaration targets</i>	<i>These targets meet ultimate goal, but 20 years slower</i>	<i>These targets meet our goal and Climate Declarations</i>

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. It will help inform a collaborative master planning and application process.

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

Requirements in this guidance are based on current (2020) regulations and best practice, and may be superseded by future standards. It is intended that the guidance will be updated every 3 years.

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 carbon homes can be achieved at a capital cost uplift of between [3.5% - 5.3% for residential developments](#), or, at equal cost - depending on economies of scale. 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.

Finally, in a post COVID-19 society, more people are working from home and looking to live more sustainable lifestyles, making sustainable homes and communities more attractive to homeowners and thereby providing a commercial benefit to developers.

ENVIRONMENTAL SUSTAINABILITY

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

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, meadows, 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.

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 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 performance gap in these areas.

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 (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 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.

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
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.



Virido, 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	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.				

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.

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 will be provided from on-site renewable energy sources? <i>(SAP 10 carbon emission factors to be used for calculation)</i>	> 20%	> 50%	> 70%
Rn.3	What percentage of household electricity will on-site renewable technology provide? <i>(Net zero operational carbon does not burn fossil fuel and is 100% powered by renewables)</i>	> 35%	> 50%	100%
Rn.4	Have any relevant government incentivised schemes been taken advantage of? <i>i.e. Non-Domestic Renewable Heat Incentive (RHI)</i>	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.				

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 Conservation (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.

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. Air pollution arising as a result of new developments also risks harm to the SAC. The GI Strategy details how Suitable Alternative Natural Greenspace (SANG) should be provided as part of new masterplan developments to 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.

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 Quality Mitigation Strategy (draft)

- Green Essex Strategy
- Essex Biodiversity 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?	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.4	Have play, community amenity and food production opportunities been proposed? 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	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	Where the development has the potential to impact on air quality, has an assessment been undertaken to measure levels of impact on the Epping Forest SAC?	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.				

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



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.

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.				

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.

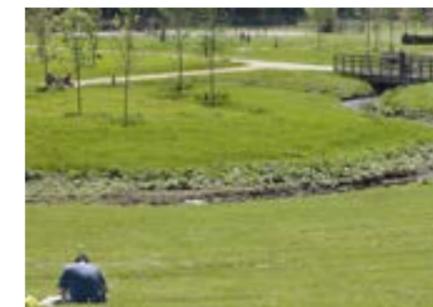
The incorporation of sustainable drainage systems (SuDS), that mimic natural drainage and encourage passive infiltration and attenuation, will be encouraged. New developments should also look to minimise use of mains water by incorporating water saving measures and equipment, and by designing residential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

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



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.				

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 reusable 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

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.



Queen Elizabeth 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 5.

SUBMISSION CHECKLIST		Minimum Requirement	Net Zero-Carbon by 2050	Net Zero-Waste by 2030
W.1	How much of the materials used on site are sourced from ethical and responsible supply chains?	80%	95%	100%
W.2	How much of the materials used are non-toxic?			100%
W.3	How much of the materials used can be easily extracted, recycled, and manufactured?	80%	90%	95%
W.4	The new buildings are circular-by-design to what amount?	20%	40%	65%
W.5	How much construction, demolition and excavation (CD&E) waste will be recycled?			≥ 95%
W.6	How much municipal waste (operational waste) will be recycled or composted vs sent to landfill or energy recovery?			65% : 35%
W.7	How much of the materials used are 'reusable'?			80%
W.8	How much of the materials used are 'reused'?			50%
W.9	How much biodegradable and recyclable waste will be diverted to landfill?			0
W.10	Has early engagement been undertaken with the EFDC Waste Management team to ensure their processes are taken in to consideration?	No, LPA not engaged		Yes, demonstrated
W.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.				

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 Part 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.

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

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.

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](#)

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 requires 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
- 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

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.



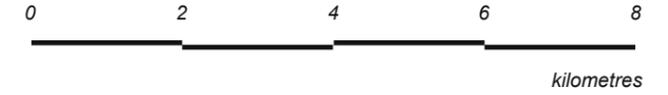
Higham Hill Theatre (VPPR Architects)
The project is a small community amphitheatre in Higham Hill Park in Walthamstow, part of Waltham Forest's Making Places initiative to deliver public realm improvement works to every ward in the borough.



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

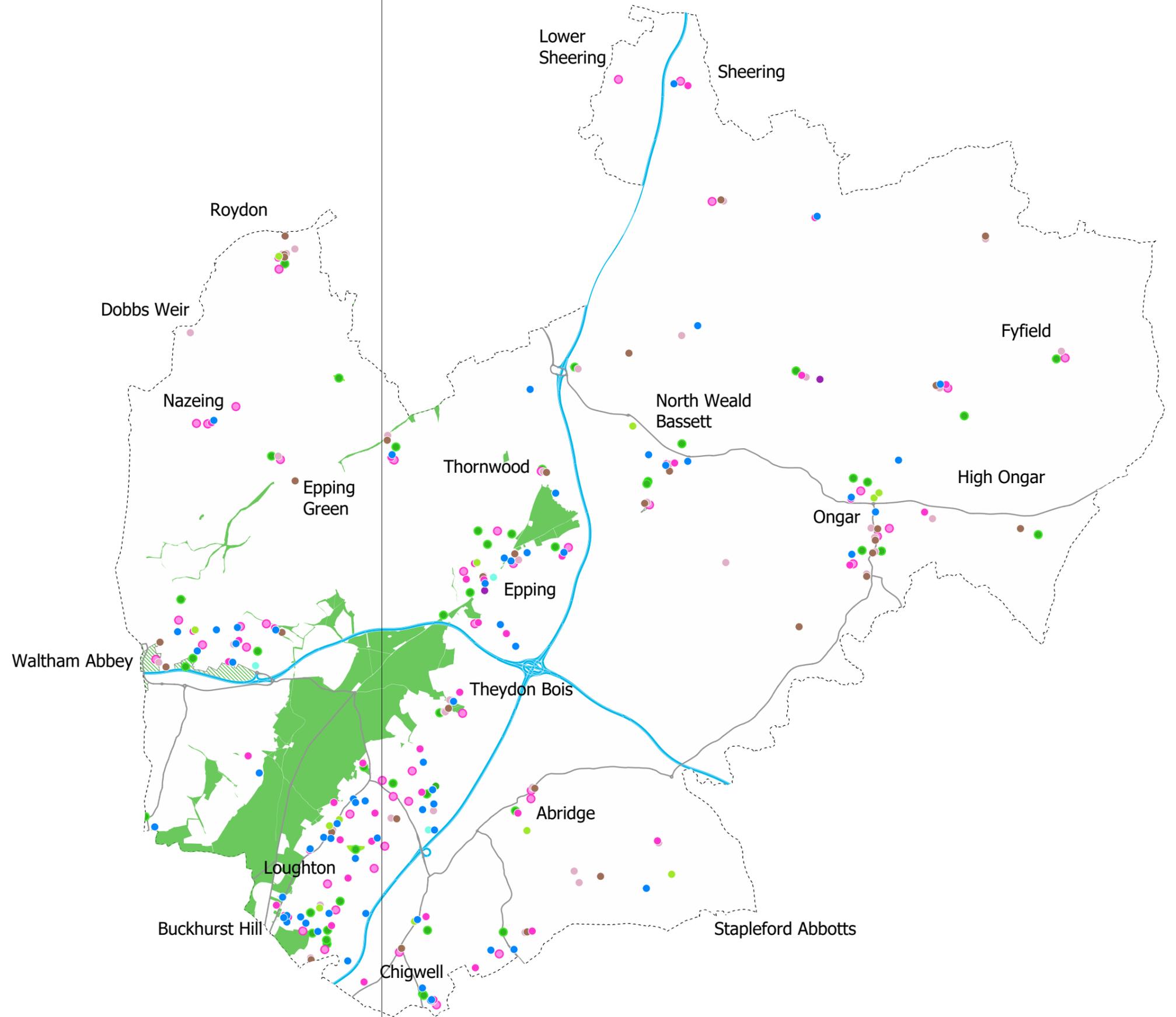
SUBMISSION CHECKLIST	
S.1	Explain how the proposals have been informed by the key stakeholders. (Include in response: the stakeholders you have engaged with, the findings from these sessions, and how you have implemented stakeholder recommendations) <i>(max. 250 words)</i>
S.2	Explain how the socio-economic 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). <i>(max. 250 words)</i>
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). <i>(max. 250 words)</i>
Please include your responses to the questions above in the "Sustainability Statement" pages which form part of your submission	



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



SUBMISSION

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

1. Submit the following as evidence of the completed Quality checklists:

Design Principles	
Daylight and Sunlight Assessment	
Noise 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:

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.

APPENDIX

Appendix 1: Climate Emergency Declaration

EPPING FOREST DISTRICT COUNCIL

Declaration: Climate Emergency

Date of Declaration: 19th September 2019

CIrs: 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."

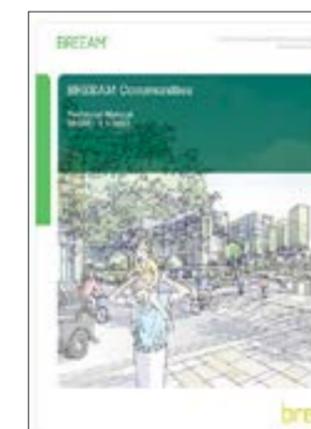
Appendix 2: Building Performance Standards



Net Zero Carbon Buildings - UKGBC



Passivhaus



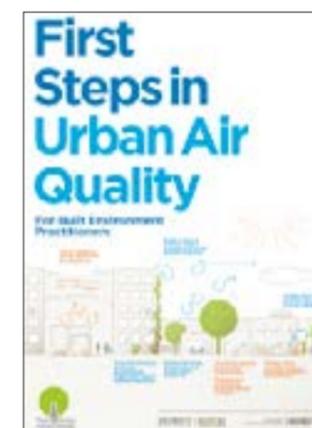
BREEAM Communities



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

To be added.

EB152

HGGT

HARLOW & GILSTON
GARDEN TOWN

SUSTAINABILITY GUIDANCE & CHECKLIST

SEPTEMBER 2020

Interactive PDF: best viewed on computer



EB152 CONTENTS

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GLOSSARY

APPENDICES





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





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 categories 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.



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 categories 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 Categories, 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

A Sustainability Statement or Strategy will be required; this guidance and checklist will assist applicants to provide the information for this, 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

10 | RELATIONSHIP TO LOCAL PLANS

This document will be endorsed to have material planning weight when determining applications.

This guidance should be read in conjunction with the policies in the most recent versions of the [Epping Forest DC](#), [East Herts DC](#), and [Harlow DC](#) Local Plans.

This guidance compliments to the policies and relevant SPDs by providing a practical tool for enhancing and assessing the sustainability of development 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 document will be reviewed regularly (maximum every three years) to ensure that it remains fit for purpose, and updated as necessary.

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, which means that by 2025 100% of 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%-5.3% for residential developments ([Link](#)), or, at equal cost - depending on economies of scale.

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](#)).

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 categories and will be assessed alongside each other to ensure a holistic approach to sustainability is being taken.

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	These targets meet ultimate goal, but 20 years slower	These targets meet HGGT goal and Climate Declarations
This sets out what HGGT consider low quality standards / outcomes	This sets out what HGGT consider medium quality standards/ outcomes	This sets out what HGGT consider high quality standards/ outcomes

9 | RELATIONSHIP TO VISION

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.



EB152 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:

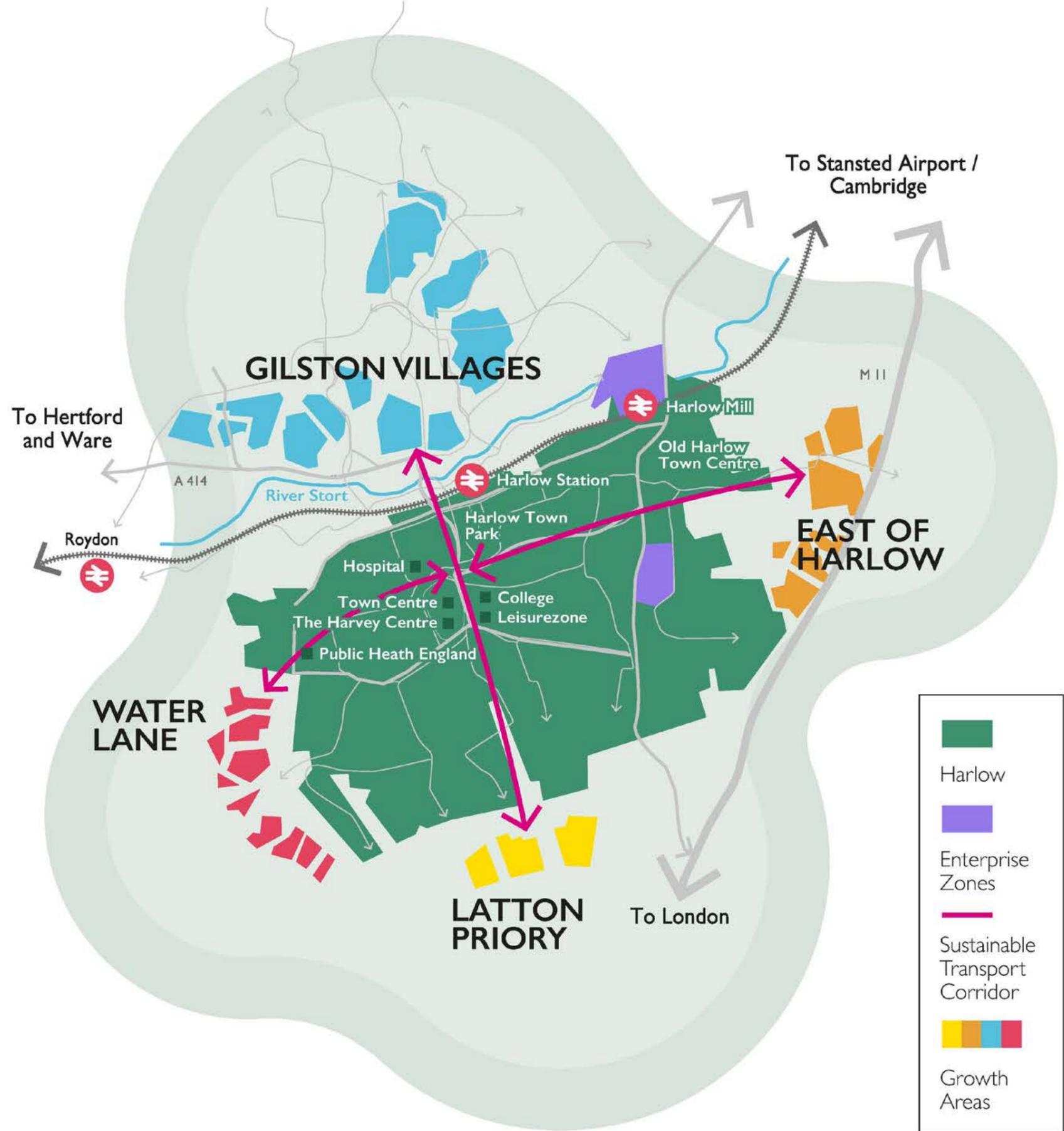
- Located in Epping Forest District
- 2,100 new homes

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



Environmental Sustainability

Goal: Net Zero-Carbon by 2030



EB152 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.

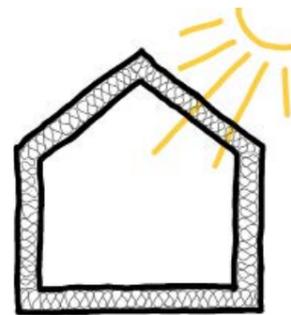
Key destinations and active travel desire lines for journeys to work, schools, shops and leisure should be mapped, to be direct, inclusive, attractive and safe. Opportunities to knit communities together with movement routes and green infrastructure should be maximised.

Follow the HGGT User Hierarchy 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.



Solar Orientation

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 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 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 infrastructure 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.



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.

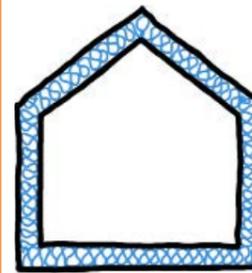
8 | EMBODIED & OPERATIONAL ENERGY

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.



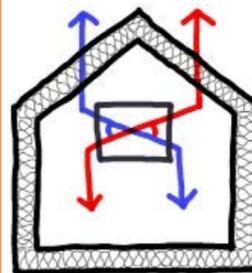
Super-Insulation



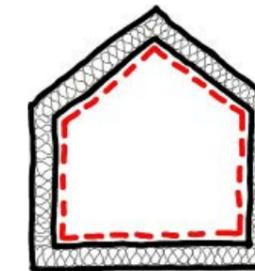
9 | RENEWABLE TECHNOLOGIES

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.



Ventilation & Overheating



Air-tightness

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 performance 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.



EB152 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

Carbon measuring tools (i.e. **HIB:ERT**) enable analysis.

SOCIO-ECONOMIC CO-BENEFITS +

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
- I1.2 Harlow and Gilston Garden Town



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
En.10	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				



EB152 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)

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- 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



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 have been included in your development?	PV's + EV charging / CHP's	Low-temperature District Heating	Electric 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 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				



EB152 GREEN INFRASTRUCTURE

OBJECTIVES & REQUIREMENTS

The HGGTVision 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

- HGGTVision & 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
- CCI Climate Change Adaption
- East Herts Gilston Area Charter SPD

Wider Area

- Green Essex Strategy
- Essex Biodiversity Action Plan
- Hertfordshire Strategic Green Infrastructure Plan 2011
- Stort Catchment Management Plan
- Green Arc Strategy

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 HGGTVision / 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				



EB152 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 .

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:

- GAI 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



EB152 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 biophilic 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		



EB152 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 GardenTown 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



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 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.7	How much of the materials used are 'reusable'?			>80%
CE.8	How much of the materials used are 'reused'?			>50%
CE.9	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				



EB152 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	How much construction, demolition and excavation (CD&E) waste will be recycled? This is to be incorporated in your Construction Management Plan			≥ 95%
W.2	How much municipal waste (operational waste) will be recycled or composted vs sent to landfill or energy recovery?			65% : 35%
W.3	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.4	Have developments been designed to encourage ease in waste recycling?			
Please attach Construction, Demolition and Excavation Waste Strategy				
Please attach Operational Waste Strategy				
Please use 'Sustainability Summary' pages where you are adding any further information				



EB152 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:

- HG1: 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



Social & Economic Sustainability

Goal: Enabling integrated communities



EB152 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.



EB152 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 Harlow's 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.

Harlow Council have been successful in developing business ___ as highlighted in Harlow's Economic Development Strategy planned for the next 5 years.

Economic priorities and Objectives:
Business & Jobs:

Delivering on these priorities will lead to the following outcomes:

- Securing more investment and jobs from key industries such as Life Sciences, MedTech, ICT & digital and Aerospace.
- More jobs and investment by businesses that are part of the supply chain of key industries.
- Continued growth in the business base.
- A healthy business start-up and survival rate.
- Young people and adults gaining entrepreneurial skills and experience to help with future career success and entrepreneurship.

Place:

Delivering on these priorities will lead to -

- An outstanding location and environment for businesses, particularly those where Harlow has existing strengths - including ICT, Advanced Manufacturing and Life Sciences industries.
- Attract and retain more jobs in Harlow.
- A world class Public Health Campus.
- 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.
- A vibrant, inclusive Town Centre that attracts and retains existing and new residents and workers and where expenditure and footfall increases.



EB152 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?

QUALITY CHECKLIST

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.
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)

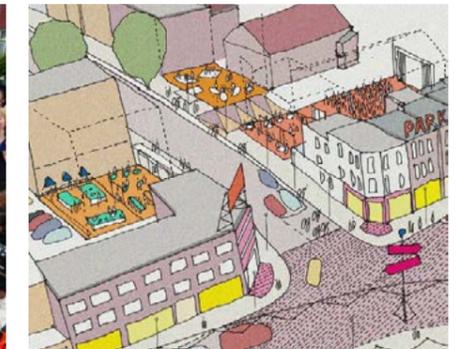
ADDITIONAL CASE STUDIES



Manor House Development Trust
A community centre managed by MHDT, a resident-led social enterprise, which uses the space to provide art programmes, employment and workshops



The Big Lunch (Eden Project)
The Big Lunch is an annual national event where people organise lunch with their neighbours, at home or in the street.



Social infrastructure: enabling social inclusion
A research inquiry into the role of social infrastructure in enabling social integration in communities.



Submission:

1. Quality Checklist

(SUBMISSION OF: ENVIRONMENTAL & SOCIO-ECONOMIC PAGES)

2. Sustainability Statement

(ANY ADDITIONAL INFORMATION)



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.



EB152 Glossary

GLOSSARY

Harlow & Gilston Garden Town (HGGT): refers to all partner authorities highlighted above

Carbon Neutral = Net zero carbon (both are used interchangeably throughout this guidance)

UKGBC: UK Green Building Council

Net zero-carbon (construction): When the amount of carbon emissions associated with a building's product and construction stages up to practical completion is zero or negative, through the use of offsets or the net export of on-site renewable energy. - UKGBC

Net zero-carbon (operational): When the amount of carbon emissions associated with the building's operational 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, with any remaining carbon balance offset. - UKGBC

Social Sustainability: a process for creating sustainable, successful places that promote wellbeing, 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

[GLOSSARY: TO BE COMPLETED]



Appendices



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

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

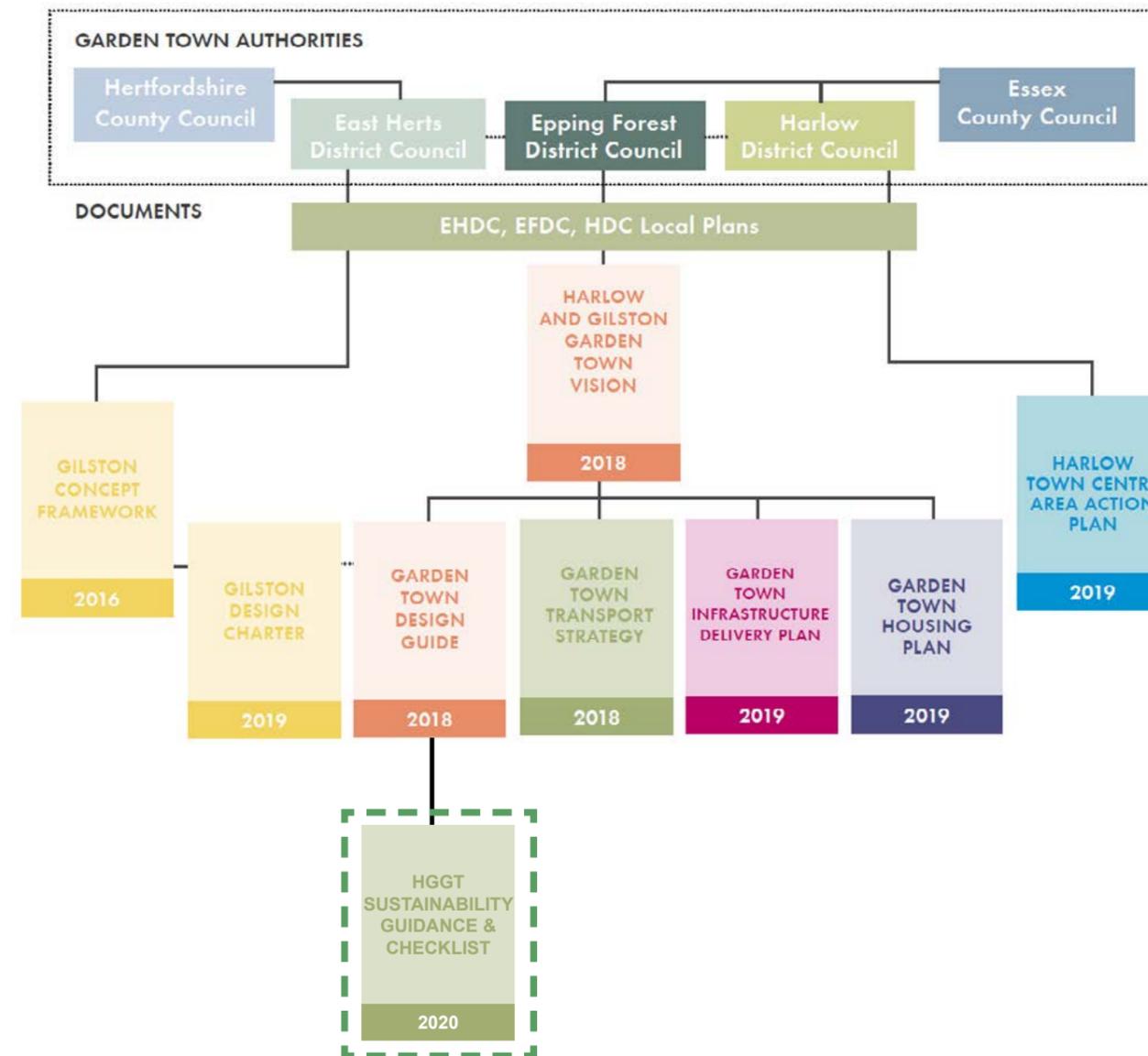
Appendix X: Draft Pre-Occupation Planning Condition / Obligation

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: FAMILY OF DOCUMENTS



APPENDIX X: LIST OF KEY PERFORMANCE STANDARDS & GUIDANCE REFERENCED

This list is not exhaustive and there are additional documents used in the creation of this Guidance.

- Energiesprong: Performance requirements: Part L UK vs Energiesprong vs Passivhaus.
- Pasivhaus Trust
- 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
- Zero Carbon Hub: Closing the Gap between Design & As-built: July 2014
- Innovate UK: Building Performance Evaluation Programme: Findings from non-domestic projects

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.



Agenda Item: 8

Report to: HARLOW AND GILSTON GARDEN TOWN BOARD

Title: Endorsement of Draft HGGT Sustainability Guidance and Checklist for Public Consultation

Date: 28th September 2020

Report Author: Ione Braddick - HGGT Placeshaping & Engagement Lead

Enclosures: Draft HGGT Sustainability Guidance & Checklist
HGGT QRP Report for draft Sustainability Guidance & Checklist

EXECUTIVE SUMMARY:

The Harlow & Gilston Garden Town (HGGT) seeks to set the agenda for sustainable living by ensuring growth will be net carbon neutral by 2030 and building strong and integrated communities across new and existing neighbourhoods.

The UK Government and all five HGGT partner Authorities have declared a Climate Emergency. The partner Authorities have adopted various actions to respond to the emergency. The HGGT Sustainability Guidance & Checklist supports the primary commitment across the Garden Town Authorities, namely to become Carbon Neutral by 2030.

This document provides practical and technical guidance on how relevant sustainability indicators and policies (environmental, social, and economic) in the HGGT Vision, HGGT draft Transport Strategy and partner Authorities' Local Plans will be applied to new strategic developments in the Garden Town.

The Guidance & Checklist is to be used by applicants and partner Authorities when preparing and discussing masterplans, pre-application proposals, planning and discharge of conditions applications. This will ensure coordinated and integrated consideration of sustainability principles and targets at an early stage of the development process across the Garden Town. The Guidance and Checklist will be applied to all major developments, categorised as 10 homes and above.

Once consulted upon, and with comments incorporated, the Guidance can be endorsed to be a material planning consideration in 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 Guidance will also be applied by the HGGT

Quality Review Panel to help form the basis of environmental and socio-economic sustainability discussions and reviews.

RECOMMENDATIONS:

1. **To note the report as set out and the draft HGGT Sustainability Guidance & Checklist as attached in Appendix A.**
 2. **To recommend that the draft HGGT Sustainability Guidance & Checklist is submitted to the East Herts Executive on 6th October 2020, to Harlow Cabinet on 15th October 2020 and to Epping Forest District Council Cabinet on 19th October 2020 with the recommendation to agree that the draft HGGT Sustainability Guidance and Checklist is published for a six-week period of public consultation from October – December 2020 in their respective Districts.**
 3. **To note that, following the public consultation and any subsequent revisions to the document, it is intended that the final HGGT Sustainability Guidance & Checklist will be endorsed by the three District Councils 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 & Gilston Garden Town.**
-

1. Introduction

- 1.1 The HGGT Sustainability Guidance & Checklist has been prepared by the Garden Town, led by the HGGT Sustainability Officer in the HGGT Quality Design workstream, (now the Placeshaping & Engagement Workstream), with input from all partner authorities and external expertise where appropriate. The Guidance & Checklist is intended to provide practical and technical assistance to both Planning applicants and officers, in relation to environmental, social and economic sustainability within the Garden Town.

I.2 The Guidance & Checklist are consistent with the principles and indicators within the HGGT Vision, draft HGGT Transport Strategy and the Local Planning Authorities adopted and emerging Local Plan policies and SPDs.

I.3 The Guidance and Checklist covers the following topics in a simple format to enable maximum accessibility, use and consistency:

Introduction

Environmental Sustainability

- Design Approach: First Principles
- Energy Efficient & Carbon Reduction
- Renewable Energy
- Sustainable Movement
- Water Management
- Green Infrastructure & Biodiversity
- Air Quality
- Circular Economy
- Waste Management
- Assuring Performance

Socio-Economic Sustainability

- Introduction
- Creating Strong Communities
- Health & Wellbeing
- Voice & Influence
- Social Infrastructure
- Circular Economy
- Economic Growth

Appendices

- HGGT Documents Chart
- Climate Emergency Declarations
- Whole Life Carbon Assessment
- LETI Heat Decision Tree
- Standard Planning Conditions / Obligations
- Post-Occupancy Evaluation Templates

I.4 The Guidance & Checklist is intended to be used by applicants and partner Authorities when preparing and discussing masterplans, pre-application proposals, planning and discharge of conditions applications. This will ensure coordinated and integrated consideration of sustainability principles and targets at an early stage across the Garden Town.

2. Process undertaken

- 2.1 There has been extensive input from all partner Authorities into the draft Guidance & Checklist, with engagement across various Authority services and departments in order to create a holistic and agreed single guidance with a suite of checklists questions across a broad range of themes. This process has included whole-document reviews through the Quality Design workstream, as well as specific topic-focused workshops.
- 2.2 An early draft of the HGGT Sustainability Guidance & Checklist was reviewed by the Garden Town Quality Review Panel (QRP) on 24th January 2020; the full QRP report is attached as Appendix 'B'. The review was undertaken by the Panel Chair and two sustainability experts, and particular questions for the QRP focused on the document's legibility, whether it was sufficiently robust to be implemented by officers and applicants; whether it was ambitious enough; any omissions; and how strong incentives could be incorporated to encourage applicants to aim for 'best practice'.
- 2.3 The QRP welcomed and supported the aspirations of the document and its layout and clarity but recommended focusing on where this document could have the most immediate impact – in particular, in relation to audience e.g. housebuilders and Local Authority officers. The Panel also recommended being clearer through the RAG checklist on the outcomes being sought and suggested further work on how the guidance would be applied during planning and post-completion. The QRP recommended providing greater emphasis on the importance of masterplanning and placeshaping in achieving sustainable places, and the critical need for training and resourcing for Local Authority officers to deliver the sustainability ambitions.
- 2.4 Expert advice was also commissioned from the UK Green Building Council (UKGBC), through the facilitation of two Sustainability Workshops on 5th February 2020, to review and discuss the draft Guidance & Checklist with over 30 experts in Sustainability in attendance. A summary of recommendations from the UKGBC workshops included; being more bespoke in terms of audience and development type; re-organising the RAG checklists to state achievement of specific targets (e.g. Net Zero Carbon by 2030); using the guidance to facilitate collaboration of developers to achieve sustainable goals; providing clarity on the overlaps between different requirements and sections in the guidance; considering the commissioning of a green infrastructure map, a social value map, and undertaking a detailed assessment of residents' needs across the Garden Town; developing a comprehensive training programme, and; the importance of the Garden Town playing a key role in driving best practice, through coordination, communications, messaging, and awards.
- 2.5 Engagement with local stakeholders, developers and elected Members has also been undertaken, to help shape the guidance at an early stage. An HGGT Developer Forum workshop on the Guidance & Checklist was held virtually on 7th May 2020, with 29 attendees; two All-Member Workshops were held on 27th July 2020 and 26th August 2020. A Socio-Economic Sustainability Workshop with a number of local community and voluntary sector groups and organisations based within the Garden Town was held on the 29th July 2020. Comments and queries from these sessions have been tracked,

incorporated and/or responded to within the updated Guidance & Checklist. This has led to a number of clarifications in the document, including in the overarching narrative, to ensure it remains accessible and clear in terms of the sustainability ambitions of the Garden Town, the importance of integration of new and existing residents as a socio- economic sustainability goal and acknowledging the impact of COVID-19.

- 2.6 The document has been through a series of iterations to respond to the recommendations and comments received. Given the broad scope of topics, it has also become clear that there are some elements which are beyond the scope of this document, and which will need to be considered for potential future work, such as sustainability advice for retrofit and refurbishment, a wider Landscape Strategy for the Garden Town, and ensuring consistent information and best practice for engagement and integration in the upcoming HGGT Communications Strategy.
- 2.7 The amended draft HGGT Sustainability Guidance & Checklist is attached as Appendix 'A' and the Board is asked to agree Recommendations 1-3 set out in this report.

3. Endorsement and Consultation

- 3.1 It is proposed that following an endorsement for consultation from the HGGT Board, the draft HGGT Sustainability Guidance & Checklist will be taken to the District Council Cabinets/ Executives for approval to formally consult in their respective Districts for a six week consultation in October - December 2020 and to note that, following consultation and any subsequent revisions to the document and that the final HGGT Sustainability Guidance & Checklist to be endorsed as a material planning consideration for the preparation of masterplans, pre-application advice, assessing planning applications and any other development management purposes within the Garden Town.
- 3.2 Given current restrictions on face to face engagement due to COVID-19, it is intended that the consultation will focus on reaching a broad audience primarily through digital channels, non-digital means will be available to ensure maximum accessibility but will be subject to social distancing rules and guidance. The consultation will seek to include:

Digital engagement:

- HGGT Sustainability Guidance and Checklist available for viewing on HGGT website, with links to this from partner authority websites.
- Overview of document via accessible pre-recorded video available for viewing on HGGT website.
- Digital questionnaire / survey available for viewing and completing on HGGT website.

- Staffed online webinars and Q&A for particular stakeholder groups (e.g. Local residents and Community Groups, Developers, Members, Youth Councils, Partner Officers)
- Social Media awareness campaign (via HGGT and partner authorities).
- Notification of consultation via LPA Planning Policy databases and statutory consultees.

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.
- A COVID-19 secure staffed event within the Garden Town, with a small number of hard copies of the document available for review, if this is considered safe to do so.

3.3 Consultation arrangements will be put in place and will be advertised ahead of the formal consultation period, in accordance with the adopted Statements of Community Involvement of the respective Local Planning Authorities.

3.4 HGGT is also planning to consult on the Sustainability Guidance & Checklist in parallel with the HGGT Healthy Town Framework. This consultation has been previously approved by the HGGT Board in July 2019. Epping Forest District Council will also be consulting on the draft EFDC Sustainability Guidance documents (Major Developments and Minor Developments) which are aligned in format and scope to the HGGT Sustainability Guidance & Checklist. Attention will be given to explaining these separate documents, their purpose and use, and where they align or diverge.

4. Next Steps

4.1 Once the draft HGGT Sustainability Guidance & Checklist has been endorsed for consultation by the HGGT Board, the next steps will be:

- Ask LPA Executive/ Cabinets to agree that the draft HGGT Sustainability Guidance & Checklist is published for a six-week period of public consultation in October – December 2020;
- Public consultation is undertaken;
- Consideration of comments and production of final Guidance & Checklist;
- Submit the final version of the HGGT Sustainability Guidance & Checklist to the HGGT Board in early 2021 with the recommendation that it be considered for endorsement as a material planning consideration by the District Councils;

- The final version of the HGGT Sustainability Guidance & Checklist will be submitted to the District Councils' Executive/ Cabinets in early 2021 to be formally endorsed as a material planning consideration;
- Ensure the Guidance & Checklist is embedded into the masterplanning and planning processes for the new Garden Town communities, neighbourhoods and developments;
- Develop a comprehensive and bespoke training programmes for elected Members and for Local Authority officers on the Guidance, best practice and application of the Guidance & Checklist; and
- Develop an additional HGGT Sustainability Guidance document for Retrofit and Refurbishment, based on the LETI Retrofit Workstream outputs.

Appendices

Appendix 'A' – Draft HGGT Sustainability Guidance and Checklist, September 2020

Appendix 'B' – QRP Report on Draft Sustainability Guidance and Checklist, January 2020

**Harlow and Gilston Quality Review Panel****Report of Chair's Review Meeting: Harlow and Gilston Garden Town
Sustainability Guidance**

Friday 24 January 2020

Frame Projects, 44-48 Wharf Road, London, N1 7UX

Panel

Peter Maxwell (chair)

Sophia Cox

Judith Sykes

Attendees

Tara Gbolade

Epping Forest District Council

Ione Braddick

Epping Forest District Council

Alison Blom-Cooper

Epping Forest District Council

David Watts

Harlow District Council

Allison De Marco

Frame Projects

Sarah Thwaites

Frame Projects

Apologies / report copied to

Nigel Richardson

Epping Forest District Council

Deborah Denner

Frame Projects

1. Project name

Harlow and Gilston Garden Town Sustainability Guidance

2. Aims of the Quality Review Panel meeting

The Quality Review Panel provides impartial and objective advice from a diverse range of highly experienced practitioners. This report draws together the panel's advice and is not intended to be a minute of the proceedings. It is intended that the panel's advice may assist project and development management teams in making design improvements where appropriate and in addition may support decision-making, in order to secure the highest possible quality of development.

3. Background

The Harlow and Gilston Garden Town Sustainability Guidance and Checklist is being prepared to promote sustainability standards supporting the delivery of the Harlow and Gilston Garden Town vision and principles, and the local planning authorities (Harlow, Epping Forest District and East Herts) environmental and sustainability policies. The document has been produced by the in-house Harlow and Gilston Garden Town project team. It is intended to be used by planning officers and applicants. A RAG (Red, Amber, Green) checklist is intended to be used by officers and at QRP review sessions.

The Sustainability Guidance will be reported to the Garden Town Member board with a recommendation for endorsement and agreement to take back to three district councils- giving it some material planning weight when considering applications.

The panel is asked to comment on: the document's legibility, whether it is sufficiently robust to be implemented by officers and applicants; whether it is ambitious enough; any omissions; and how strong incentives can be incorporated to encourage applicants to aim for 'best practice'.



4. Quality Review Panel's views

Summary

The Quality Review Panel warmly welcomes and supports the work being undertaken in developing the Sustainability Guidance – it promises to be a helpful tool in guiding applicants and officers in interpreting and applying adopted sustainability policies within the Garden Town. While the panel commends the broad scope and audience of the Guidance, it recommends prioritising and focusing on where it can have the greatest and most immediate impact. It will also be important that the document can adapt as targets shift over the Garden Town project's long-term delivery. The panel strongly recommends being clearer about outcomes sought – this will ensure the document's longevity and relevance. While the panel thinks the Sustainability Guidance will be an excellent tool supporting pre-application discussions, it would like to hear more about how the Guidance will be applied during the planning application stage and post-completion. It will be critical to consider training and resourcing as part of the business case for the Garden Town project. It also recommends setting higher targets – these should match the ambition of the Garden Town. While the panel supports the overarching aims and structure of the document it recommends refinements including: work to close the gap between sustainability and placemaking; greater emphasis on the importance of masterplanning; clarity about definitions, including zero carbon; renewable / low carbon hierarchy; fabric performance; circular economy; and socio-economic sustainability. It also provides advice on testing the guidance and notes some omissions. Further details on the panel's views are provided below.

Approach and priorities

- The panel strongly supports the aim of the Sustainability Guidance – in providing timely guidance on how to implement the adopted and emerging environmental and social sustainability policies of the five authorities, within the Garden Town.
- The scope of the Guidance is broad, as is its potential audience. It will be critical to prioritise elements that are more readily achievable in the short term, against those that need more time.

The case for change

- The panel has been asked to comment on how developers can be incentivised to aim for best practice.
- The panel thinks this can be achieved by developing a strong narrative describing the inevitability of changes being made across the industry, including the national regulatory context. A low carbon future will bring huge opportunities for built environment professionals with expertise delivering net zero schemes. The panel highlights that the future will reward these developers – and those that do not adapt, will become uncompetitive.



- It thinks the case for change, and incentives for adopting best practice standards, can be worked into the front section of the document – possibly articulated as a ‘manifesto for change’.

Outcomes

- The Guidance will benefit from greater clarity in the strategic sustainability outcomes that it seeks to achieve. This will set a framework for understanding and evolving individual sustainability requirements over time.
- For example, the panel points to the ‘Green Infrastructure and Biodiversity’ section which sets requirements using an Urban Greening Factor matrix. While these granular requirements will aid sustainable outcomes, it recommends more explicitly emphasising a key desired outcome – such as net biodiversity gain.

Efficacy and application

- The panel thinks the Sustainability Guidance will be an excellent tool supporting pre-application discussions.
- It wonders however how the Guidance will be applied during the planning application stage. It questions the type and volume of documentation the Guidance will require that developers submit – and by whom and how it will be assessed. The panel thinks it will be critical to consider training and resourcing as part of the business case for the Garden Town project (see below).
- It also wonders how commitments made at planning application stage will be monitored and enforced.

Ambition and targets

- Given the long-term delivery of the Garden Town’s strategic sites, up to 25 – 30 years, it will be important to ensure minimum requirements are aspirational enough.
- The panel understands the pressures that will come with setting ambitious targets – but it will be important that the Garden Town clearly ‘sets out its stall’. It does not think some of the targets are high enough to be considered best practice – and recommends they be further considered. For example, it recommends setting the minimum BREEAM targets higher.
- It will be important to show leadership – championing high sustainability standards for the Garden Town’s own public sector projects.



Audience

- The panel understands the Guidance is intended to be read by a broad audience – from homeowners, to housebuilders and local authority officers. It thinks this is a challenging ambition.
- The panel questions whether aiming the document at such a broad audience from the outset is the most effective way of implementing the ambitious changes required, quickly.
- The panel recommends, in the first instance, focusing on audiences who will have the biggest purchase. For example, housebuilders and local authority officers.
- If elements of the Guidance are to be aimed at homeowners they will need to be more explicit – and further work undertaken on how digital presentation could aid accessibility.

Placemaking and masterplanning

- The panel recommends further work to close the gap between environmental and socio-economic sustainability and placemaking. It recommends giving the document more spatial specificity – to show how environmental and socio-economic sustainability objectives can go hand in hand.
- It commends the way the Sustainability Guidance identifies the importance of Orientation and Form as part of the ‘Design Approach: First Principles’ at Pages 12 – 13. However, the panel recommends this should also emphasise other aspects of masterplanning in supporting sustainability.
- Decisions made at a masterplan scale will be fundamental in either supporting or hindering how individual buildings perform. It points to BioRegional and CABI guidance produced to support the eco-towns – which emphasised the importance of exemplary placemaking and masterplanning.
- It recommends being explicit about a hierarchy of masterplanning issues – for example, green infrastructure, biodiversity and water. It recommends including masterplanning as a category within the RAG Checklist.

Final score v final RAG checklist

- The panel has been asked to comment on whether the Guidance should aim to provide a ‘final score’ for schemes assessed against the requirements set. It thinks a ‘final score’ could have unintended consequences.
- It suggests a final RAG checklist that sets ‘mandatory’ minimum requirements for specific core / important categories – where it would be unacceptable to fail. For example, mandatory requirements in respect of potable water use.



- It recommends looking at a combination of ‘mandatory’ minimum requirements plus ‘recommended’ minimum requirements.

Implementation and monitoring

- The panel wants to understand how implementation will be monitored, to ensure commitments made at planning application stage are delivered on the ground. It highlights how post-planning decision pressures such as value-engineering and user behaviour can impact on how schemes perform in reality.
- A monitoring and evaluation process will also enable a circular process, where feedback influences future iterations of the Guidance.

Local authorities: resourcing and upskilling

- The panel highlights the importance of supporting behavioural change, to enable the Guidance to be implemented effectively.
- It strongly recommends directing efforts and resources on training, support and upskilling – and thinks this should be part of the business case for the project. It recommends including building control officers.

Developers: incentivisation and capacity building

- Developers will be incentivised to apply the Guidance if they are provided with ongoing support, rather than being left to apply the Guidance in isolation.
- The panel recommends trialling the Guidance with developers – with support to help them design and implement schemes using the Guidance. For example, Garden Town Officers could undertake capacity building with developers to demonstrate new technologies such as heat pumps.
- The panel also recommends considering how applicants can be incentivised to apply the Guidance, through accelerated planning application management.

Zero carbon

- It will be important to be clear about what is meant by ‘zero carbon’. The panel suggests further work to define this, and points to UKGBC work providing a framework definition. It suggests augmenting the glossary at page 2 to provide a fuller definition – which could illustrate the approach for achieving ‘zero carbon’ diagrammatically.
- In respect of operational energy, the panel recommends setting a heating target, not just an overarching operational target. It highlights that factors such as occupancy can significantly change the amount of energy being used, so it is important to set a heating target.

- Reporting requirements should be made clear, particularly if zero carbon is being targeted. UKGBC guidance includes minimum reporting requirements summarised in template documents specifying how the scheme should be quantified.

Testing

- It will be important to sense check what is being asked of developers, including by testing the Guidance with them.
- The panel points to examples of design teams testing undertaken when developing Design Codes – testing design options against proposed Codes, to establish whether these are sufficiently robust. i.e. whether they can be ‘broken’.

Document structure

- The panel applauds document layout, and thinks it is already a clearly legible document. It likes the consistent layout adopted across the document.
- It supports the document’s digital interactivity – including interactive Table of Contents and Index.

Energy efficiency and carbon reduction (p.14)

- The panel questions if best practice energy efficiency standards should be higher and recommends being clearer about minimum requirements in order to achieve zero carbon, where this is targeted.

Climate change – domestic and non-domestic (p.16 & 18)

- The panel is unclear about the intent of the climate change sections. These sections refer to carbon reduction rather than climate adaption or resilience to climate change. If these sections are about carbon reduction, it recommends refinements and relabelling.
- Guidance aimed at climate adaption / resilience, such as flood risk management, overheating and microclimatic analysis, could be drawn into a separate section.

Renewable energy (p.20)

- The panel recommends adjusting the hierarchy of renewable / low-carbon technologies. For example, connected CHP is shown as a ‘satisfactory requirement’ within the submission checklist, whereas emerging policy documents are already removing references to gas fired CHP.

- The panel recommends placing heat pumps at the top of the hierarchy – and recommends explaining the case for heat pump technology as the preferable option. Heat pump technology will become increasingly important, particularly in the lead-up to 2025 – when gas heating in new homes will be banned.
- The panel does not think hydrogen or biogas will be a feasible, scalable alternatives. It also explains that solar photovoltaic and solar thermal technologies will not be sufficient to meet energy needs – placing additional onus on heat pump technology and building fabric efficiency.
- The panel recommends adding guidance on energy storage in respect of solar photovoltaics.

Construction quality (p.32)

- The panel supports how the Guidance emphasises the importance of a ‘fabric-first approach’ in the Design Principles section upfront. However, it thinks fabric performance should then be given much greater emphasis when detailing requirements – including setting minimum requirements.
- It recommends revisiting the circular economy references and providing clearer about guidance about what is being asked here. It however cautions that there is a need to be proportionate in respect of circular economy minimum requirements. It notes that there are significant cost implications, potentially increasing costs by 30 – 35%.
- Guidance could be provided in this section on post-commissioning processes and post-occupancy evaluations.

Combined checklist (p.34)

- The panel supports inclusion of the Combined Checklist. It recommends the team test the checklist, and requirements throughout, by assessing current schemes, at pre-application or post-submission stage.

Socio-economic sustainability (p.40)

- Socio-economic sustainability will be driven by understanding the critical strategic moves that are needed – to articulate local needs. Work undertaken on other strategic documents could start to form a list of key local assets and infrastructure requiring enhancement, for example cycle route improvements identified through strategic transport work. These should then form a framework for guidance on social value.
- The socio-economic section would also benefit from further work on social indicators.



- The panel points to community building precedents such as those on the Queen Elizabeth Olympic Park – where significant work has been undertaken building community spirit to support new neighbourhoods.

Omissions

- The panel recommends refinements and additional work on: waste, including food waste and other operational waste; logistics and deliveries; and cycling infrastructure.
- It recommends a joined-up approach to waste and logistics. For example, considering how storage and waste associated with deliveries such as Amazon could be centrally coordinated and managed.

Next steps

The panel strongly supports the work undertaken on the Sustainability Guidance. It would like to know how this work is influencing the Garden Town's strategic sites, including existing schemes already submitted as planning applications.



Section 1: Identifying details

Your function, service area and team: **Planning Directorate**

If you are submitting this EqlA on behalf of another function, service area or team, specify the originating function, service area or team: **N/A**

Title of policy or decision: **Endorsement for Public Consultation: Draft HGGT Sustainability Guidance and Checklist and Draft EFDC Sustainability Guidance documents (Major Developments and Minor Developments)**

Officer completing the EqlA: **Ione Braddick** Email: **ibraddick@eppingforestdc.gov.uk**

Date of completing the assessment: **04 September 2020**

Section 2: Policy to be analysed

2.1	<p>Is this a new policy (or decision) or a change to an existing policy, practice or project? No</p>
2.2	<p>Describe the main aims, objectives and purpose of the policy (or decision):</p> <p>This draft HGGT Sustainability Guidance and Checklist will provide practical and technical guidance in relation to sustainability indicators and policies (environmental, social, and economic) to be applied to new strategic developments in the Garden Town.</p> <p>What outcome(s) are you hoping to achieve (ie decommissioning or commissioning a service)?</p> <p>To ensure members are fully briefed on the requirement for a HGGT Sustainability Guidance and Checklist and agreement that the draft Guidance and Checklist can be approved for public consultation</p>
2.3	<p>Does or will the policy or decision affect:</p> <ul style="list-style-type: none"> • service users • employees • the wider community or groups of people, particularly where there are areas of known inequalities? <p>The report is to provide an overview of the Draft HGGT Sustainability Guidance and EFDC Sustainability Guidance documents (Major Developments and Minor Developments) to be approved for public consultation – they are guidance documents to support policies in the emerging Local Plan and the principles and indicators in the Harlow and</p>

	<p>Gilston Garden Vision, in relation to sustainability and high-quality design. The intention is for the Sustainability Guidance documents to return to Cabinet following public consultation and be approved as a material consideration in the development management and implementation process.</p> <p>This decision will not affect any group at this stage as it is being recommended that the draft guidance documents should be subject to consultation</p> <p>Will the policy or decision influence how organisations operate?</p> <p>Following consultation if the guidance documents are agreed then the guidance and checklists will be used to determine planning applications within the District and within the Harlow and Gilston Garden Town.</p>
2.4	<p>Will the policy or decision involve substantial changes in resources?</p> <p>No</p>
2.5	<p>Is this policy or decision associated with any of the Council's other policies and how, if applicable, does the proposed policy support corporate outcomes?</p> <p>The work being undertaken is required to support policies in the emerging Local Plan in relation to sustainability, high quality design and social equity. If endorsed to be a material planning consideration, the guidance documents will inform development management and implementation processes to ensure delivery of high-quality and sustainable growth in the District and within the Harlow and Gilston Garden Town.</p>

Section 3: Evidence/data about the user population and consultation¹

As a minimum you must consider what is known about the population likely to be affected which will support your understanding of the impact of the policy, eg service uptake/usage, customer satisfaction surveys, staffing data, performance data, research information (national, regional and local data sources).

3.1	<p>What does the information tell you about those groups identified? The current position affects the District as a whole.</p>
3.2	<p>Have you consulted or involved those groups that are likely to be affected by the policy or decision you want to implement? If so, what were their views and how have their views influenced your decision?</p> <p>Early engagement on the draft EFDC Sustainability Guidance has been taking place in part alongside engagement for the HGGT Sustainability Guidance, upon which the EFDC documents are based. There has been extensive input from officers from all HGGT partner authorities into the draft HGGT Sustainability Guidance and Checklist, with a number of rounds of engagement across various services and departments in order to create a holistic and agreed guidance and checklists questions on a broad range of topics. This has included whole-document reviews as well as specific topic-focused workshops with relevant officers. External sustainability expertise has also been sought via the HGGT Quality Review Panel and UK Green Building Council.</p> <p>The Council has and will continue to conduct workshops specifically with EFDC officers and Members for the EFDC Sustainability Guidance documents. Informal engagement has been undertaken with the EFDC Leadership team, Local Plan Implementation Forum and officers across different service departments including Planning, Housing, Community, Culture and Wellbeing, Technical and Regulatory Services, and Economic Development.</p> <p>Members have been engaged on the draft Sustainability Guidance, to provide early comments and queries in order to shape the documents. Two All-Member HGGT briefing and workshop sessions were held on 27th July 2020 and 26th August 2020, with another EFDC Member workshop held on 21st September 2020. Further engagement with members is scheduled in October and during the public consultation period in November/ December.</p>
3.3	<p>If you have not consulted or engaged with communities that are likely to be affected by the policy or decision, give details about when you intend to carry out consultation or provide reasons for why you feel this is not necessary:</p>

In accordance with the Council's Statement of Community Involvement (SCI), the Council is required to consult stakeholders and the general public on the draft Sustainability Guidance. 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 documents, an online survey/questionnaire and potential video content explaining the document will be made available on the Council's website and by notification to statutory consultees.

Public Consultation on the draft HGGT Sustainability Guidance and Checklist and the draft EFDC Sustainability Guidance documents will take place over a six week period from October – December 2020. Given current restrictions on in-person engagement due to COVID-19, we will focus on reaching a broad audience primarily through digital and, where possible, non-digital means. The consultation will seek to include:

Digital engagement:

- **HGGT Sustainability Guidance and Checklist and pre-recorded and accessible overview video available for viewing on HGGT website, with links to this from partner authority websites.**
- **EFDC Sustainability Guidance documents available for viewing on EFDC website.**
- **Digital questionnaire / survey available for viewing and completing on HGGT website and Council Websites.**
- **Staffed online webinars and Q&A for particular stakeholder groups (e.g. Local residents and Community Groups, Developers, Members, Youth Councils, Partner Officers)**
- **Social Media awareness campaign (via HGGT, partner authorities and EFDC Comms Team).**
- **Notification of consultation via LPA Planning Policy databases and statutory consultees.**

Non-digital engagement:

- **Postal/ leaflet/ poster information to provide link/ QR Code to online document, and to provide hard copies of questionnaire/ survey where possible.**
- **A COVID-19 secure staffed event, with a small number of hard copies of the document and survey available for review and completion, if this is considered safe to do so.**

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

The intention is to simultaneously consult publicly on the HGGT Sustainability Guidance and Checklists, the EFDC Sustainability Guidance documents (Major Developments and Minor Developments), and also the HGGT Healthy Town Framework (approved for consultation by the Council's Cabinet in March 2020). Therefore, particular attention will be given to explaining these separate documents, their purpose, use and audience, and where they align or diverge.

Following the consultation, the responses will be collated and where appropriate amendments made to the documents. The HGGT Sustainability Guidance and Checklists, and the EFDC Sustainability Guidance documents (Major Developments and Minor Developments) will then return to Cabinet for formal endorsement as material planning considerations.

Section 4: Impact of policy or decision

Use this section to assess any potential impact on equality groups based on what you now know.

Description of impact	Nature of impact Positive, neutral, adverse (explain why)	Extent of impact Low, medium, high (use L, M or H)
Age	Adverse – potential for restrictions due to COVID-19 to make non-digital engagement more difficult, with potential for this to affect consultation with age groups (possibly children and the elderly) who are less digitally enabled.	M
Disability	Adverse – potential for restrictions due to COVID-19 to make non-digital engagement more difficult, with potential for this to affect consultation with those with disabilities that affect their ability to engage digitally enabled.	M
Gender	Neutral – no impact	L
Gender reassignment	Neutral – no impact	L
Marriage/civil partnership	Neutral – no impact	L
Pregnancy/maternity	Neutral – no impact	L
Race	Neutral – no impact	L
Religion/belief	Neutral – no impact	L
Sexual orientation	Neutral – no impact	L

Section 5: Conclusion			
		Tick Yes/No as appropriate	
5.1	Does the EqIA in Section 4 indicate that the policy or decision would have a medium or high adverse impact on one or more equality groups?	No <input type="checkbox"/>	
		Yes <input checked="" type="checkbox"/>	If ' YES ', use the action plan at Section 6 to describe the adverse impacts and what mitigating actions you could put in place.

Section 6: Action plan to address and monitor adverse impacts

What are the potential adverse impacts?	What are the mitigating actions?	Date they will be achieved.
Adverse – potential for restrictions due to COVID-19 to make non-digital engagement more difficult, with potential for this to affect consultation with age groups (possibly children and the elderly) who are less digitally enabled.	Utilise forums such as the authority’s Youth Council(s) to engage younger audience and seek to hold a non-digital staffed event or drop in which is COVID-19 secure. Advertise consultation in non-digital manner (through Town and Parish Council magazine, posters/ leaflets). Ensure that online material is accessible for all and easy to read and feedback and questionnaires are simple to understand and complete.	Oct - Nov 2020
Adverse – potential for restrictions due to COVID-19 to make non-digital engagement more difficult, with potential for this to affect consultation with those with disabilities that affect their ability to engage digitally enabled.	Seek to hold a non-digital staffed event or drop in which is COVID-19 secure. Advertise consultation in non-digital manner (through Town and Parish Council magazine, posters/ leaflets). Ensure that online material is accessible for all and easy to read and feedback and questionnaires are simple to understand and complete. This will include captioning any video material.	Oct - Nov 2020

Section 7: Sign off

**I confirm that this initial analysis has been completed appropriately.
(A typed signature is sufficient.)**

Signature of Head of Service: Alison Blom-Cooper

Date: 04 September 2020

Signature of person completing the EqIA: Ione Braddick

Date: 04 September 2020

Advice

Keep your director informed of all equality & diversity issues. We recommend that you forward a copy of every EqIA you undertake to the director responsible for the service area. Retain a copy of this EqIA for your records. If this EqIA relates to a continuing project, ensure this document is kept under review and updated, eg after a consultation has been undertaken.