

EPPING FOREST DISTRICT COUNCIL SUSTAINABILITY GUIDANCE / DEVELOPER FORUM 10.11.2020


*PLANNING POLICY &
IMPLEMENTATION TEAM*



1

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


DRAFT FOR CONSULTATION - REVISION 04
OCTOBER 2020



2

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

DRAFT FOR CONSULTATION - REVISION 04
OCTOBER 2020



Developer Forum - Agenda

EFDC Sustainability Guidance Presentation	<i>15 min</i>
Q&A	<i>15 min</i>
<i>Break</i>	<i>5 min</i>
Workshop Discussion	<i>30 min</i>
Further Comments & Wrap-Up	<i>15 min</i>

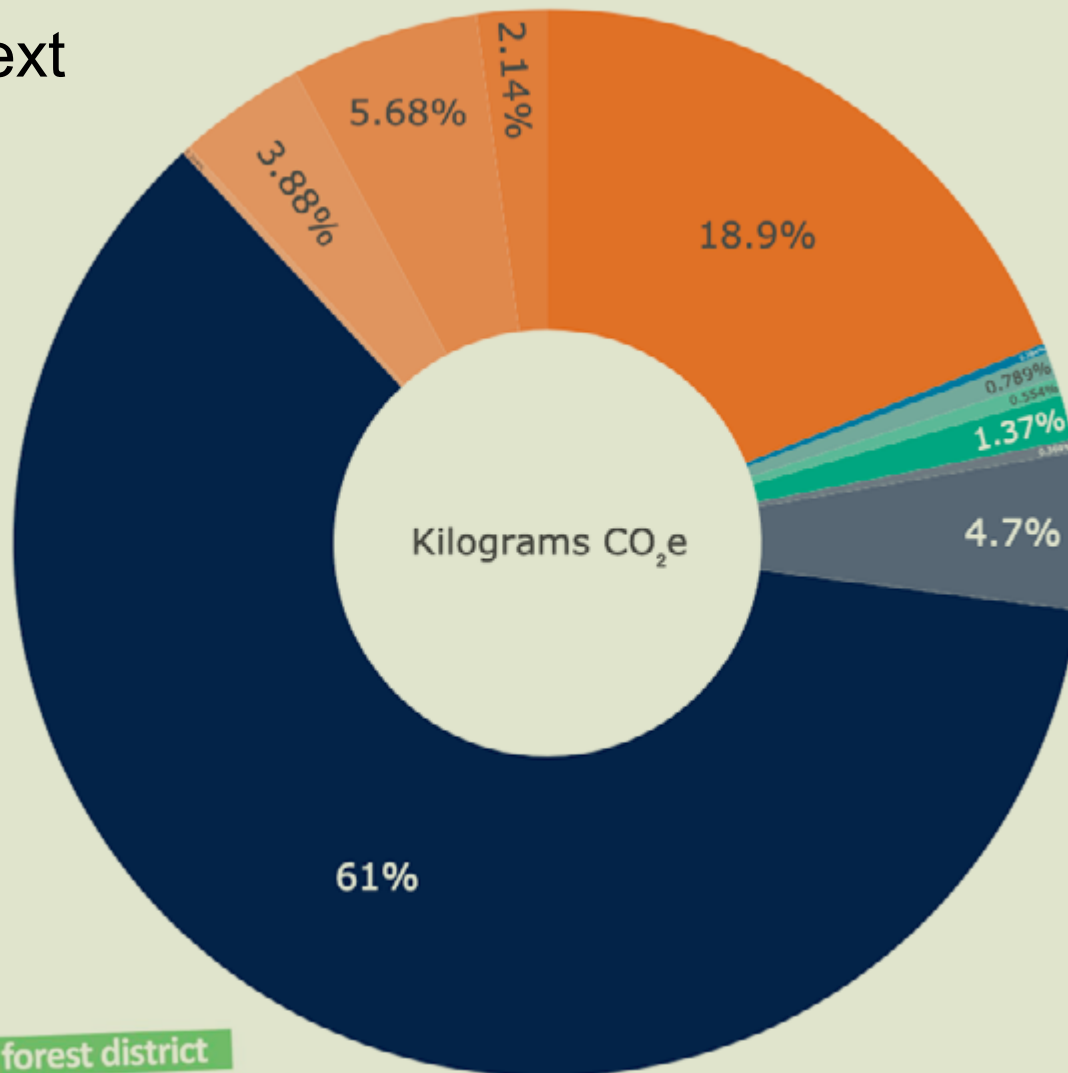
Context

- The Sustainability Guidance is supported by emerging Local Plan policies *SP2, SP4 (xvii), T1, DM1, DM2, DM5, DM9, DM19, DM20, DM21, and DM22*, amongst others, as well as the the NPPF's presumption in favour of sustainable development, with sustainable development having economic, social and environmental objectives.
- Follows EFDC's Climate Emergency declaration and commitment to target net zero carbon by 2030 (September 2019)
- Expands on the work done for the HGGT Sustainability Guidance
- Aligns with other key EFDC documents such as the Infrastructure Delivery Plan, Green Infrastructure Strategy etc.

EFDC Sustainability Guidance



Context



Epping Forest District has a carbon emission contribution of 2,048 CO₂ (kt) across all industries (2017 data).

The two leading contributors are on-road vehicles and residential housing, responsible for just under 80% of all emissions.

- 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



Purpose of the Document

- To support considerations of planning proposals
- To provide practical and technical guidance on how relevant Sustainability indicators and policies (environmental, social, and economic) in the EFDC Local Plan will be applied to new residential and non-residential developments across the district.
- Document is split in to two sections: Environmental Sustainability & Socio-Economic Sustainability
- To be used by: **Residents, Applicants, Agents, Local Authority Officers, QRP**

EFDC Sustainability Guidance



Purpose of the Document

- Includes a Checklist that follows a red-amber-green rating system to give an indication of whether a development is meeting targets

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 2a + 2b)				
Please attach relevant certification of the above standards you have chosen, and use 'Sustainability Summary' pages where you are adding any further information.				



EFDC Sustainability Guidance



Programme

Progress to date

- | | |
|--------------------|----------------------------------------------------------------|
| June - September | - Draft guidance
- Workshops with EFDC officers and Members |
| October 19th | - EFDC Cabinet for approval for public consultation |
| Nov 2nd - Dec 14th | - 6 week Public Consultation period |



EFDC Sustainability Guidance



Suite of Documents

10+ units

1-9 units

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Contents

1 / INTRODUCTION	4
Overview	6
How to use this guide?	8
2 / ENVIRONMENTAL SUSTAINABILITY	10
Design Approaches: First Principles	12
Energy Efficiency & Carbon	14
Renewable Energy	16
Green Infrastructure	18
Sustainable Movement	20
Water Management	22
Circular Economy	24
Waste Management	26
Air Quality	28
Non-Domestic Development	30
Assuring Performance	31
3 / SOCIAL & ECONOMIC SUSTAINABILITY	32
Introduction	34
Health & Wellbeing	35
Economic Growth & Job Creation	36
Community Strength & Social Infrastructure	37
EFDC Social Infrastructure Map	38
Additional Case Studies	40
Socio-Economic Checklist	41
4 / SUBMISSION	42
APPENDIX	46
Appendix 1: Climate Emergency Declarations	48
Appendix 2: Building Performance Standards	49
Appendix 3: Whole Life Carbon Assessment	50
Appendix 4: Glossary	52

Energy Efficiency & Carbon

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/ly) (includes both regulated and unregulated energy use in the building, as measured at the meter)	146 <input type="checkbox"/>	< 70 <input type="checkbox"/>	< 0 - 35 <input type="checkbox"/>
En.2	Embodied Carbon (kgCO2e/m2)	1000 <input type="checkbox"/>	< 450 <input type="checkbox"/>	< 300 <input type="checkbox"/>
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En.7	What is the on-site reduction in CO2 emissions against Building Regulations Part L (2013)?	0-34% <input type="checkbox"/>	35%-50% <input type="checkbox"/>	≥ 50% <input type="checkbox"/>
En.8	For applications greater than 99no. units, what BREEAM Communities Level is met?	Very Good <input type="checkbox"/>	Excellent <input type="checkbox"/>	Outstanding <input type="checkbox"/>
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
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	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)				<input type="checkbox"/>
Please attach relevant certification of the above standards you have chosen, and use 'Sustainability Summary' pages where you are adding any further information.				

Green Infrastructure

OBJECTIVES & REQUIREMENTS

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

The green infrastructure network of the District must be considered in an integrated way. Design of streetscapes and amenity spaces, with urban greening such as street trees, pocket parks, garden hedgerows, greens roofs and swales, can provide placemaking 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 <input type="checkbox"/>	Some landscape analysis undertaken <input type="checkbox"/>	Ecology, topography, vistas, character & features driving design <input type="checkbox"/>
Gr.2	What % of Biodiversity Net Gain does your development achieve?	0-9% BNG <input type="checkbox"/>	101-15% BNG <input type="checkbox"/>	15%+ BNG <input type="checkbox"/>
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 <input type="checkbox"/>	Outline strategy provided <input type="checkbox"/>	30 year strategy with input from community <input type="checkbox"/>
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 <input type="checkbox"/>	Yes - locations mapped with walking isochromes <input type="checkbox"/>	Yes - locations mapped, characters defined, strategies for play / food / active frontages <input type="checkbox"/>
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 <input type="checkbox"/>	Yes - qualitative assessment undertaken <input type="checkbox"/>	Yes - qualitative assessment/ value calculated with exemplary score <input type="checkbox"/>
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 <input type="checkbox"/>	Some assessment provided <input type="checkbox"/>	Yes - UKGBC Playbook followed <input type="checkbox"/>
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 <input type="checkbox"/>	Yes - different scales shown, roles/ function undeveloped <input type="checkbox"/>	Yes - small, medium and large GI shown, qualities and roles defined <input type="checkbox"/>
Please attach relevant certification of the above standards you have chosen, and use 'Sustainability Summary' pages where you are adding any further information.				

Air Quality

OBJECTIVES & REQUIREMENTS

Every new development will have an impact on air quality, usually by increasing emissions from buildings or due to traffic generation. Poor air quality arises from sources 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 Local Air Quality Action Plan, and Air Quality Assessments for developments.

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

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

This section should not be used as a substitute for work otherwise undertaken in any normal full planning application.

KEY LOCAL POLICY & GUIDANCE

EFDC Local Plan Policy:

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

- EFDC Green Infrastructure Strategy
- EFDC Air Pollution Mitigation Strategy

SUBMISSION CHECKLIST		Low Quality	Medium Quality	High Quality
P.1	Have mitigation measures as described in the District's Air Pollution Mitigation Strategy been adhered to?			Yes <input type="checkbox"/>
Please attach relevant documentation, and use 'Sustainability Summary' pages where you are adding any further information.				

Introduction

OBJECTIVES & REQUIREMENTS

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

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

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

Community Ingredients should therefore cut across the different stages of developments, including:

1. Planning & design
2. Construction & occupation
3. Long-term stewardship

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

KEY LOCAL POLICY & GUIDANCE

EFDC Local Plan Policy:

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

EFDC Statement of Community Involvement

[EFDC Infrastructure Delivery Plan](#)

[EFDC Green Infrastructure Strategy](#)

EFDC Economic Development Strategy

[EFDC Health and Wellbeing Strategy](#)

[EFDC Cultural Strategy](#)

[EFDC Playing Pitch Strategy](#)

[EFDC Open Space Strategy](#)

EFDC Employment and Skills Plan

[Epping Forest District Tourism Strategy](#)

[NHS Healthy New Towns](#)

[HGGT Healthy Town Framework](#)

[RIBA Social Value Toolkit](#)

[Essex Design Guide](#)

[Essex Rights of Way Improvement Plan](#)

[Essex + Herts Digital Innovation Zone](#)

[essexmap.co.uk](#)

[Live Well Accreditation](#)

[Play England - Design for Play](#)

Health & Wellbeing

OBJECTIVES & REQUIREMENTS

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

In order to promote the health and wellbeing of new and existing communities, the Epping Forest District Council 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

Economic Growth & Job Creation

OBJECTIVES & REQUIREMENTS

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

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

Business & Jobs: delivering on these priorities will lead to the following outcomes:

- Skills creation in existing communities and young people, including apprenticeships, to ensure economic impact of new developments continue in the longer term
- Use of local labour and supplies in new development projects
- A healthy business start-up rate and continued growth in the business base

Place: delivering on these priorities will lead to the following outcomes:

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

People: what we want to achieve in EFDC are the following outcomes:

- New developments cater both to new and existing EFDC residents; the provided housing mixes should be such that they attract new families to settle in the District, but also provide the required homes for local needs
- EFDC, education and training institutions,

individuals and local industries will have an informed view of future skills needs that provides a basis for education and training planning and provision.

- Businesses are able to access the workforce they need.

CASE STUDIES



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



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

Community Strength & Social Infrastructure

OBJECTIVES & REQUIREMENTS

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

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

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

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

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

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

CASE STUDIES



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

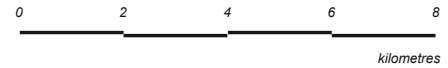


The Big Lunch (Eden Project)
An annual national event that provides a hook for people to organise lunch with their neighbours, at home or in the street, supported by advice and ideas available on the web.



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

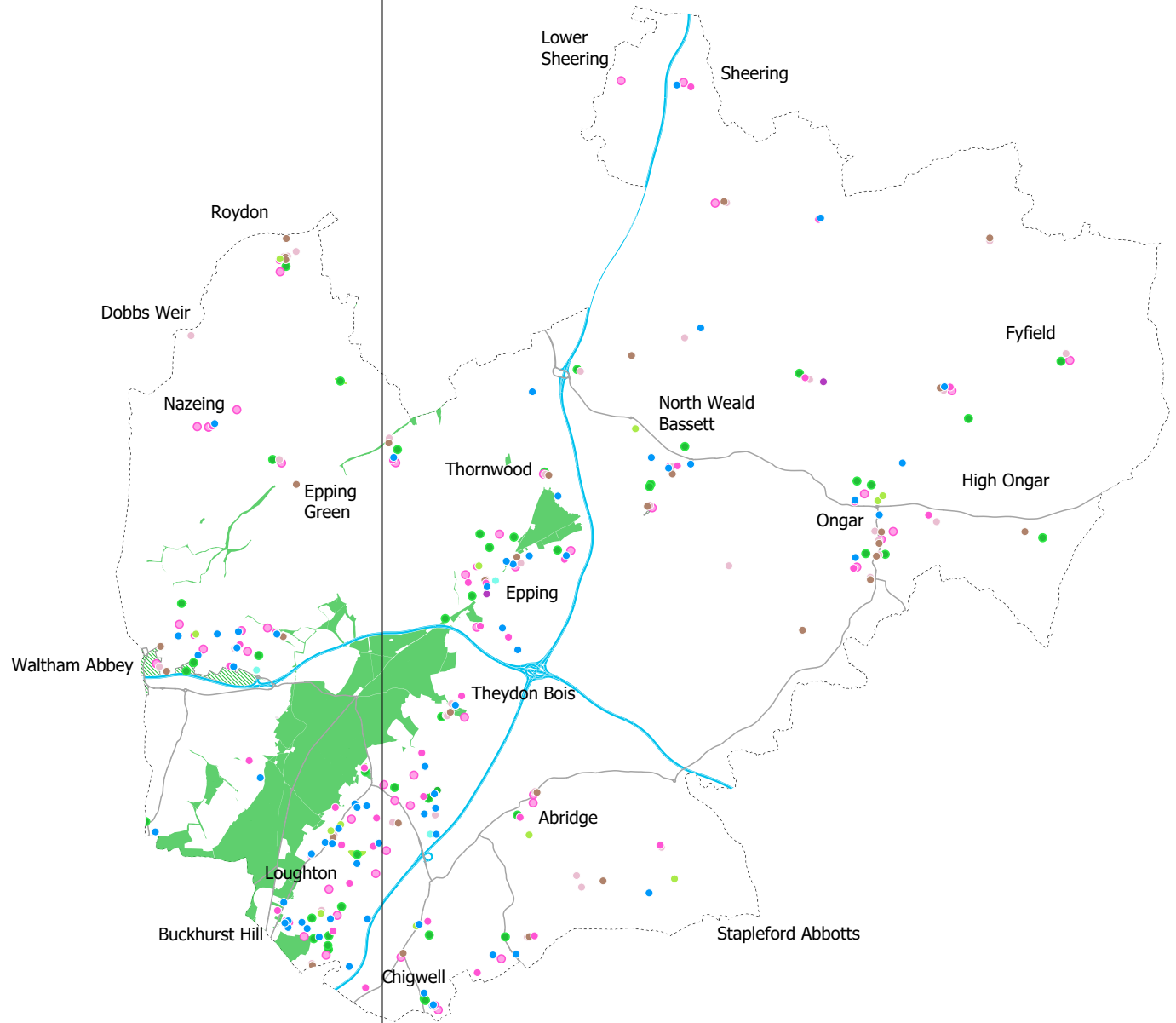
EFDC Social Infrastructure Map



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

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

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



- Nurseries
- Breakfast and Holiday Clubs
- Schools
- Community Facilities
- Community Centre and Village Hall
- Village and Community Halls
- Sports Halls
- Health and Fitness
- Childrens Playground
- Allotments
- Motorway
- A Road
- The Epping Forest
- - - District Boundary
- ▨ District Open Land

Incentives for Developers

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.

Incentives for Developers

Cost Benefits

- By 2030 all new buildings will need to operate at net zero. This 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 (UKGBC).
- Costs can be offset by value benefits, including:
 - increased rental premiums
 - lower tenancy void periods
 - lower offsetting costs
 - long-term operational are vastly reduced due to the lower energy demand from homes, providing cost savings of 30%-40% over 30 years.

EFDC Sustainability Guidance



Format

Topic description

Reference to key supporting policies and documents

Case studies

Checklist

Energy Efficiency & Carbon

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 as programme plug-ins (i.e. [HUB-ERT](#) for Architects) allow quick analysis and visual representation of carbon use.

SOCIO-ECONOMIC CO-BENEFITS +

KEY LOCAL POLICY & GUIDANCE

EFDC Local Plan Policy:

- **SP1** Presumption in favour of sustainable development
- **SP3** Place Shaping
- **SP4(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

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.



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)	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 (link) of your Whole Life Carbon Assessment (see Appendix 2a + 2b (link))			
	Please attach relevant certification of the above standards you have chosen, and use 'Sustainability Summary' pages where you are adding any further information.			

EFDC Sustainability Guidance



Key Differences

- Major developments document is similar to HGGT. Key changes are to case studies, reference to specific policies and documents
- Input from GI Strategy (emphasis on SUDs, SANG, etc.)
- References air quality and impact on Epping Forest SAC

Green Infrastructure

OBJECTIVES & REQUIREMENTS

Epping Forest District has a predominantly agricultural landscape, with remnants of an extensive ancient forest reflected in both Epping Forest as well as pockets of woodland and mature trees located across the District. New developments risk harm to the Epping Forest SAC, already under pressure due to pollution and recreational use, if a suitable range of mitigation measures are not identified and implemented.

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.

The green infrastructure network of EFDC must be considered in an integrated way. Design of streetscapes and amenity spaces, with urban greening such as street trees, pocket parks, garden hedgerows, Super Greenways, greens roofs and swales, can provide placemaking benefits as sociable streets 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 and across all design stages, as set out in the EFDC Green Infrastructure Strategy ([link](#)). They should respond to the District's distinctive setting; expand and enhance the green infrastructure network; improve access to, and the quality of, the surrounding Green Belt; and support a sustainable and diverse environment.

The latest [Environmental Bill](#) ([link](#)) 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.

SOCIO-ECONOMIC CO-BENEFITS +

Epping Forest District Council / Sustainability Guidance

KEY LOCAL POLICY & GUIDANCE

EFDC Local Plan Policy:

- **SP3** Place Shaping
- **SP7** 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

Wider Area

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

CASE STUDIES (click image to visit website)



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		Minimum Requirement	Net Zero-Carbon by 2050	Net Zero-Carbon by 2030
Gr.1	Has a high quality landscape-led approach been demonstrated?	No	Yes - some landscape analysis undertaken	Yes - topography, vistas, landscape character & features driving design
Gr.2	What level of Biodiversity Net Gain does your development achieve?	0-9% BNG	10-15% BNG	15%+ BNG
Gr.3	Have Stewardship and Maintenance Strategies been provided including for green infrastructure and biodiversity net gain?	No strategy	Yes - Outline strategy provided	Yes - 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 (link) 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/ (link) 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 (link), taking into account impact of green infrastructure?	No	Yes - some assessment	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, with 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.				

Epping Forest District Council / Sustainability Guidance



EFDC Sustainability Guidance



Key Differences

- Socio-Economic Sustainability Section:

Whilst the HGGT document focuses on integration of new development with existing communities, key goal for EFDC is community resilience and social equity, especially in terms of access to facilities, health and wellbeing, public health etc.

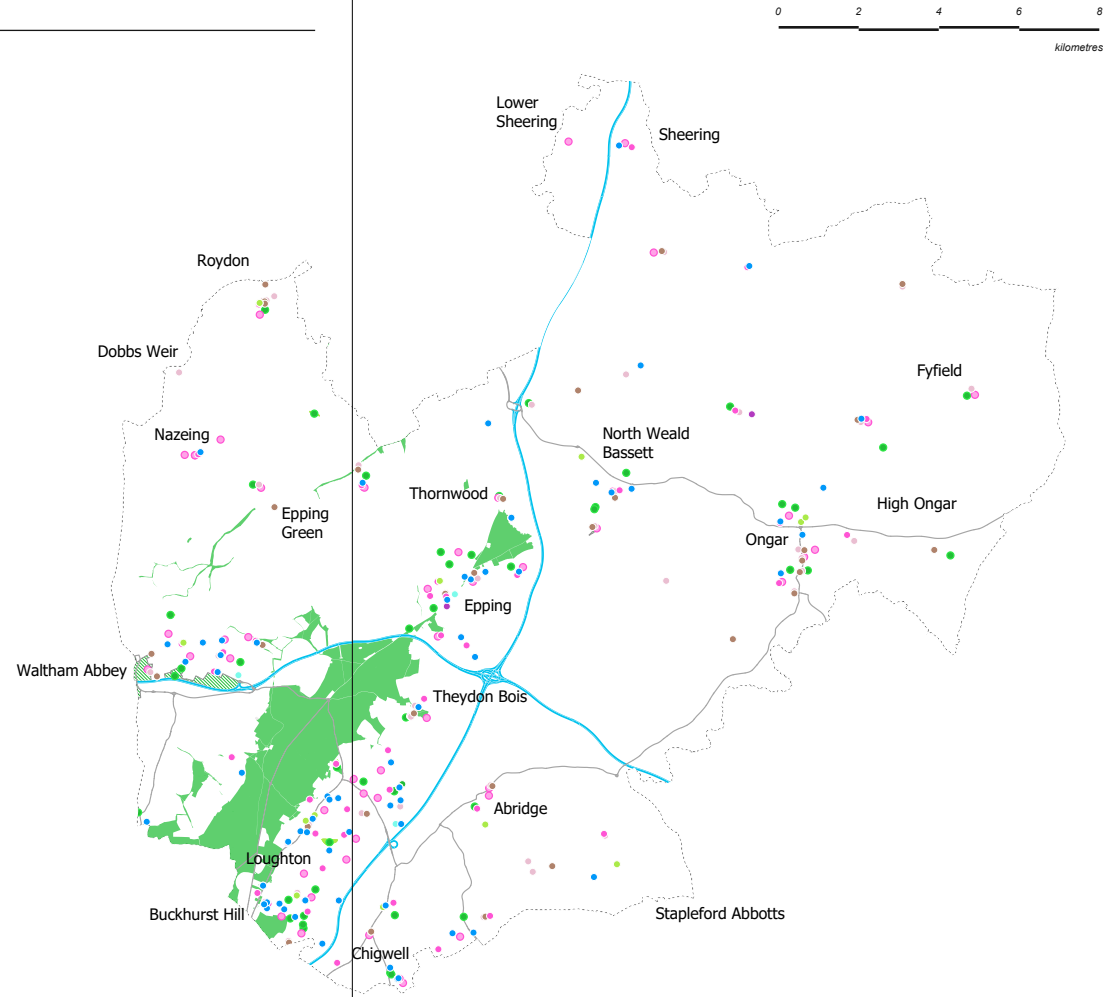
EFDC Social Infrastructure Map

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

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

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

- Nurseries
- Breakfast and Holiday Clubs
- Schools
- Community Facilities
- Community Centre and Village Hall
- Village and Community Halls
- Sports Halls
- Health and Fitness
- Childrens Playground
- Allotments
- Motorway
- A Road
- The Epping Forest
- ⋯ District Boundary
- ▨ District Open Land



EFDC Sustainability Guidance



Exemplar Projects - Environmental Sustainability



Goldsmith Street
- Mikhail Riches'
Architects &
Norwich City
Council
High density
housing - largest
Passivehaus
scheme in the UK

planning our future
local plan

Exemplar Projects - Social & Economic Sustainability



Higham Hill Theatre - vPPR' Architects & Waltham Forest

Part of the council's 'Making Places' programme, the theatre accommodates seating for the adjacent café, or performances organised by local youth groups, musicians and other creatives.

Case Studies - Community Engagement



OTHER TOOLKIT SESSIONS

- SESSION 2**
Show us your neighbourhood
- SESSION 3**
Tell us what you want
- SESSION 4**
Tell us how we're doing
- SESSION 5**
You said, we did

READY TO START RUNNING YOUR OWN WORKSHOP?

Click the link below to download the resources for this session.

planning our future
local plan

USEFUL LINKS

SHARE THIS

Inform

Voice Opportunity Power

This is a toolkit and free resource developed by Grosvenor Estates and ZCD Architects, providing practical guidance on how to involve young people throughout all design stages of a new development.

Case Studies - Community Engagement



Involve

Block Builders

This engagement in collaboration with Love Wolverton used present and future models of a community space to demonstrate the projected changes in an interactive way. Both models were shared with 90 young people from local schools during three days of workshops.

Case Studies - Community Engagement



Empower

Space Invaders

This is an initiative of Phoenix Community Housing and involves young people in the regeneration of derelict outdoor spaces through co-designed interventions.

EFDC Sustainability Guidance



Programme

Next steps

- | | |
|--------------------|--------------------------------------------------------------------|
| Nov 2nd - Dec 14th | - 6 week Public Consultation period |
| March 2021 | - EFDC Cabinet for endorsement for material planning consideration |
| | - Sustainability Guidance vol.03: Extensions & Refurbishments |



EFDC Sustainability Guidance



Thank you.



FAQ

Q1. Who will use the EFDC Sustainability Guidance & Checklist?

A. Applicants, EFDC Officers, the EFDC Quality Review Panel

Q.2 What weight will be given to this guidance?

A. The guidance is to be endorsed by the EFDC Cabinet to have material planning weight when determining planning applications that come into the District.

Q3. When will the guidance be used?

A. At Masterplanning stage, Pre-application, Planning Application, and Post-completion Stages.

Q4. What further engagement is planned?

A. The following engagement is planned sessions are planned during public consultation:

- EFDC Youth Council: November 10th, 2020
- EFDC Member's Briefing: November 24th, 2020
- Community Q&A: November 230th, 2020

Developer Forum *Workshop Questions*

Q1. Environmental Sustainability

What barriers and obstacles can you see to developing sites to have high levels of sustainability, as set out in the guidance documents?

Q2. **Socio-Economic Sustainability**

As a developer, how would you seek to understand key socio-economic sustainability issues in and around your site, and respond to them?