

Climate Change and Sustainable Development

Draft Supplementary Planning
Document



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1. Introduction and background

- 1.1 East Staffordshire Borough Council declared a climate emergency in August 2020 with a pledge to make the Council's actions and operations climate neutral by 2040.
- 1.2 The Council intends to:
 - Reduce energy consumption and emissions from our own activities
 - Promote green travel and transport
 - Protect and enhance our environment
 - Improve air quality
 - Reduce fuel poverty
 - Reduce waste
 - Promote sustainable development
- 1.3 The Climate Change Action Plan identifies the development of a Climate Change SPD which will, once adopted be material consideration in the determination of planning applications to provide high quality sustainable development that minimises the adverse impacts of climate change.
- 1.4 In February 2022 ESBC also made a Nature Recovery declaration, identifying that nature is in long term decline. The nature recovery declaration seeks to embed nature's recovery into all strategies and policy areas, and ensure that measures to mitigate climate change are in keeping with the principles of nature recovery. Further information on the ESBC Climate Change and Nature Recovery declarations can be found on the East Staffordshire Borough Council website.

2. Legislation and national policy

- 2.1 The Climate Change Act 2008 set a legally binding target to reduce the UK's greenhouse gas emissions by at least 80% in 2050 from 1990 levels. In 2019 this was amended (by The Climate Change Act 2008 (2050 Target Amendment) Order 2019) to a 100% reduction from 1990 levels by 2050- in other words, to net zero carbon.
- 2.2 Specific to planning, Section 19 of the Planning and Compulsory Purchase Act 2004 states that: "Development plan documents must (taken as a whole) include policies designed to secure that the development and use of land in the local planning authority's area contribute to the mitigation of, and adaptation to climate change."
- 2.3 The NPPF 2021 in paragraphs 153 – 158 sets out how policies and decision making should consider climate change.
- 2.4 Along with the new NPPF, the government has also published its carbon reduction strategy "Build Back Greener" October 2021. This document sets out the government's intention to use policy incentives and new technologies to decarbonize the economy across all sectors.

- 2.5 The document re-emphasizes the government’s commitment to a UK net zero economy by 2050 with intermediate targets for each sector such as transport, manufacturing and energy production between then and now. Many of these initiatives are relevant to planning, such as the ending of installation of gas boilers in new homes by 2025, the encouraging of lower carbon technologies such as district heating systems and the need to develop the infrastructure to support electric vehicles as petrol and diesel vehicles are phased out.

3. What is an SPD?

- 3.1 An SPD is a document which adds further detail to the policies in a Local Plan.
- 3.2 An SPD can be used to provide further guidance for development on specific sites, or on particular issues such as, in this case, climate change.
- 3.3 SPDs can be material consideration in planning decisions.
- 3.4 There are legal and national policy limits on what a Supplementary Planning Document can do.
- 3.5 **SPDs are guidance on policies which are already in place, they can’t create new policy.** For example, legislation does not permit an SPD to allocate land for any purpose, **nor can this document introduce a new ‘burden’ (for example, a financial burden) on development which is not already covered in the Local Plan.**
- 3.6 Because of this, the Climate Change SPD does not introduce any specific new targets or requirements that developments meet a particular standard. However, where national standards are in place, developments are expected to meet these.

4. Consultation

- 4.1 This draft SPD will be subject to a 6 week consultation period between May and June 2022.

5. Policies in the Local Plan

- 5.1 This SPD is part of the Council’s response to the climate emergency but its key purpose is to offer guidance on the following policies in the East Staffordshire Local Plan:
- Strategic Policy 23: Green Infrastructure
 - Strategic Policy 27: Climate Change, Water Body Management and Flooding
 - Strategic policy 28: Renewable and Low Carbon Energy Generation
 - Strategic Policy 35: Accessibility and Sustainable Transport

- Detailed Policy 2: Designing in Sustainable Construction
- 5.2 This draft document takes each overarching policy topic and provides some guidance on how the policy requirements can be met.
- 5.3 The draft Climate Change SPD should be read alongside ESBC’s other SPDs and guidance documents. For example, those on tree planting, parking and design are likely to be relevant, as is the Natural England biodiversity metric and forthcoming (as of 2022) national and Borough biodiversity guidance. This is to ensure that proposed developments take into account all relevant requirements and take a joined-up approach to climate change mitigation and nature recovery.
- 5.4 On adoption, this SPD will contain a checklist for applicants to help evaluate the proposal’s contribution to reducing climate change and mitigating its effects.

6. Green Infrastructure

- 6.1 Green infrastructure (GI) is a term used to describe a network of multi-functional green spaces. This network of both public and privately owned land and water supports native species, maintains natural and ecological processes, sustains air and water resources (sometimes separately identified as “Blue Infrastructure”), and contributes to the health and quality of life of people and communities.
- 6.2 The Local Plan identifies the growth proposed in the Borough as an opportunity to plan for a green infrastructure network, serving the needs of both rural and urban communities and strengthening the links between them. This will also help to contribute to the objectives of Local Plan Strategic Policy 29 Biodiversity and Geodiversity.
- 6.3 The goals of growing the green infrastructure network in the Borough, nature recovery, and climate change mitigation, especially through carbon capture, are inextricably linked. Applications which seek to improve one of these elements should indicate how they also benefit the others.

What does the policy aim for and how can this be achieved?

- 6.4 Strategic Policy 23 aims to see developments contribute to the creation, enhancement and ongoing management of Green Infrastructure. This can be achieved through a variety of ways:
- Green infrastructure should be considered at the earliest stages of design. For large scale development, applicants are encouraged to seek early engagement with stakeholders such as the National Forest, Staffordshire Wildlife Trust and the Borough Council open spaces team to seek advice on maximizing the GI value from the site and ensure sufficient consideration has been given to the long-term maintenance of the space
 - Design GI to build in biodiversity net gain¹

¹ In accordance with paragraph 174 of the NPPF 2021 and the Environment Act 2021

- Integrate existing and new natural features into a multifunctional green infrastructure network.
- Proposals for green infrastructure should ensure that the location, materials, scale and use of green infrastructure is sympathetic and complements the landscape character. For example, increasing the mosaic of habitats, including grasslands and woodland.
- Prioritise native planting that provides habitat for local wildlife.
- Prioritise native tree planting in the national forest area
- Where possible, transitional habitats should be created between woodland and grasslands to increase the diversity of microclimates and habitats for species, an important feature for climate change adaptation
- Tree lined streets as set out in national Planning Practice Guidance

6.5 For smaller scale developments applicants are encouraged to consider the following:

- Green front gardens
- Pick trees that are climate resilient²
- Natural SuDS features where possible
- Increase green cover as much as possible
- Permeable paving
- A range of habitats such as wildflower meadows, grassland and woodlands
- Features which encourage connectivity for biodiversity such as hedgehog highways, bee bricks, sparrow terraces; and
- Restoration of hedgerows and other features such as ponds

7. Water Management

- 7.1 The most obvious effect climate change is likely to have on East Staffordshire is to increase the potential for flooding in certain parts of the Borough due to the greater incidence of sudden, extremely heavy episodes of rainfall forecast for the future.
- 7.2 ESBC Local Plan Strategic Policy 27 sets out detailed policy on water management and Climate Change.
- 7.3 Much of the built-up area of Burton upon Trent lies within areas at risk of flooding limiting new development to areas not at risk severely curtails the options open for the growth of Burton on Trent town and

² Guided by the Staffordshire County Council Tree Toolkit 'Right Trees, Right Place'

similarly for Uttoxeter.

- 7.4 In line with national policy, the first preference should be to avoid development in flood risk areas. Where development is necessary in such areas, development should be made safe for its lifetime without increasing flood risk elsewhere, and buildings and their surroundings should be constructed to avoid being flooded (e.g., by raising above the design flood level). Flood resistance and resilience measures should not, however, be used to justify development in inappropriate locations, or development which harms the character of the landscape, as set out in Planning Practice Guidance
- 7.5 Where site-specific flood risk assessments are required, they should consider all current and future sources of flooding and the impacts of climate change. Typical allowances for climate change are found in EA guidance.

What does the policy aim for?

- 7.6 Alongside the national policy requirements, the policy expects all relevant new development to incorporate SuDS.

What are SuDS?

- 7.7 SuDS are an approach to managing surface water (rainfall runoff) which mimic the natural processes of attenuation, infiltration and evapotranspiration. SuDS comprise a sequence of management practices, control structures and strategies which are designed to drain surface water efficiently and sustainably, whilst also minimising pollution and managing the impact on the water quality of local water bodies. SuDS provide a wide range of opportunities to enhance the biodiversity, landscape and amenity value of a site ensuring that multiple benefits of the surface water drainage strategy are fully realised.
- 7.8 Applicants are encouraged to review the Staffordshire SuDS handbook prior to submitting an application. Any planning application must be accompanied by the SUDS handbook checklist.³
- 7.9 For smaller developments:
- Rainwater attenuation
 - Raised sockets and electricals
 - Flood Damage resistant materials
 - Permeable paving
 - Green roofs and walls

8. Renewable and Low Carbon Energy

What does the policy aim for?

³<https://www.staffordshire.gov.uk/environment/Flood-Risk-Management/Documents/SuDS-Handbook.pdf>

- 8.1 Renewable and low carbon energy networks allow for the decarbonisation of domestic energy use by reducing reliance on fossil fuels, and extracting energy from sources such as the sun, air and waste. These community and micro generation opportunities reduce CO2 emissions, and also can mean savings on energy bills.
- 8.2 The policy is positively worded towards renewable energies however the guidance below sets out some considerations for applicants:
- 8.3 District heat networks – District heating is the supply of heat to a number of buildings from a central heat source (energy centre) through a network of insulated pipes and heat exchangers. Where possible, homes and buildings should connect to an existing or planned local carbon district heat network. One of the main constraints to district heating is the need to identify a sufficient heat demand density. District heating schemes are however more viable in new developments due to the lower cost of civil works on new sites. Depending on the heat source technology, this can be a carbon efficient means of energy supply, compared to individual heating systems. The most efficient heat source technologies include combined heat and power engines (CHP), biomass boilers or heat pumps. District heating is beneficial for new development sites and in areas where there is a high energy demand.
- 8.4 Consideration needs to be given to the installation of the pipe networks and the potential impact on local landscape and biodiversity.

Renewable Energy

- 8.5 ESBC Strategic Policy 28 sets out requirements for renewable and low carbon energy generation. Detailed Policy 2 requires new development to incorporate a high standard of sustainable construction in new development. Greater contributions to climate change mitigation are expected for major and strategic development. **If sustainable construction and energy usage during construction and operation is not demonstrated, off-site contributions can be required.**
- 8.6 Solar technologies - Solar technologies such as photovoltaic (PV) panels and solar thermal units can be easily installed on new and existing buildings, though care must be taken to minimize their visual impact. PV panels produce electricity from sunlight and can either be mounted or integrated into the roofs or façades of buildings or used freestanding on the ground (e.g., PV farms). Solar thermal units heat liquid which is transferred to a building's hot water system using a heat exchanger.
- 8.7 Heat pumps – A heat pump transfers energy in the form of heat from one place to another. This can be from either the air, ground or water. Air Source Heat Pumps require a heat exchanger to be located on the outside of a building. This will need to be carefully considered in terms of impact on listed buildings and conservation areas, and also impact of noise on neighbours. Ground Source Heat Pumps require pipes to be buried horizontally or vertically in the ground by at least 2m.
- 8.8 Any negative impacts on visual impact, local landscape and biodiversity must be adequately mitigated when planning to use ground source heat pumps. Water Source Heat Pumps are less common but can obtain

heat energy from the bottom of a pond or reservoir. Again, the impacts on biodiversity need to be carefully considered.

- 8.9 Wind turbines – Wind turbines use the wind to rotate blades and generate electricity and usually comprise a tower, blades, a generator and a transformer. Small-scale turbines can be mounted to new and existing buildings. Consideration should be given to available wind speed and direction, as well as impacts in terms of noise, trees, local ecology and impact on local landscape and historic environment.
- 8.10 Hydropower – Hydropower is energy harnessed from falling or fast-flowing water. Opportunities exist wherever a stream runs down a hillside, a river passes over a waterfall or weir, or a reservoir discharge back into the river. Careful consideration should be given to the impact of a hydropower development on the local landscape, ecology and historic environment.
- 8.11 Biomass boilers – Biomass boilers and wood fuelled heating systems use logs, woodchip and wood pellets as a fuel alternative to oil and gas. Consideration needs to be given to potential disturbance to protected species (e.g. bats in chimneys/roofs), the impact of chimneys or flues, type of flue, any restrictions in terms of smokefree zones, storage of fuel, and the impact on local air quality.
- 8.12 Anaerobic digestion – Anaerobic digestion is the process where natural matter (e.g. agricultural manure and crops) decomposes in a sealed tank to produce biofuel which can then be used as a fuel for heating or to generate electricity. Key considerations are access, storage of natural matter, and the potential for impacts on landscape, ecology and the historic environment.

9. Sustainable Travel and Active Travel

- 9.1 The Local Plan aims to see developments link to sustainable transport links, green infrastructure and walking and cycling opportunities.
- 9.2 Nationally there is a move towards 20-minute neighbourhoods especially since the COVID-19 pandemic put a spotlight on the importance of the liveability, recreation opportunities and active travel potential to work and amenity locations in local areas.

How can this be achieved?

- 9.3 Applicants are encouraged to consider whether the location and design of a scheme will allow people to meet their everyday needs within a 20-minute walk or cycle. This emphasises a hierarchy of transport types, prioritising walking and cycling and other forms of active travel.
- 9.4 Developing schemes in such a way presents multiple benefits including boosting local economies, improving people's health and wellbeing, increasing social connections in communities, and tackling climate change.
- 9.5 This can be achieved by considering the following:
 - Incorporate traffic tree or traffic calmed routes

- Avoiding the need for traditional traffic engineering measures by drawing inspiration from narrow, terraced and attractive streets
 - Constrained street widths consistent with Manual for Streets.
 - Short street lengths, responding to changes in building line.
 - Reduced forward visibility through arrangement of streets.
 - Visual narrowing of carriageways through edge treatments.
 - Buildings close to footway, without large setbacks.
 - Avoiding cul-de-sacs and providing well connected and legible streets with designs that respond to their function.
 - Providing car clubs and reduced levels of car parking in locations where car ownership may be low, and public transport opportunities can be maximised
 - Incorporating 'no-through streets' for cars in residential areas, with prioritised access for people walking and cycling
 - Providing dedicated traffic-free walk and cycle routes to key destinations such as schools, shops and leisure facilities
 - Providing safe, secure and convenient cycle parking in residential development, as well as in key destinations
 - Particular consideration should be given to the need for secure storage of electric bikes and charging points
 - Supporting enhanced bus frequencies and off-site priority measures, such as priority at signals and bus lanes, from day one of occupation.
 - Delivering bus priority within sites, and work with bus operators to ensure the geometry of routes is suitable and stops are well located and designed
- 9.6 All of the above should be undertaken with a view to ensuring that both crime and the fear of crime is designed out as much as possible, to ensure that walking and cycling are safe and enjoyable.

10. Design of new build

- 10.1 In October 2019, the Government proposed changes¹⁴ to Building Regulations in order to make progress towards meeting the 2025 Future Homes Standard and the UK's 2050 net zero target.
- 10.2 The proposals would require homes built from 2020 to produce 20-31% less carbon dioxide than a home built to the 2013 Part L Building Regulations and for homes built from 2025 to require around 75-80% less carbon dioxide emissions than 2013 Part L.
- 10.3 Until the Future Homes Standard is introduced, applicants are encouraged to consider a number of energy efficient measures that will contribute towards meeting carbon emission targets.

- 10.4 One option is securing a BREAM 'Good' or 'Excellent' rating for new development.
- 10.5 Similarly, Modern Methods of Construction (MMC) could be utilised for some new builds where appropriate. Using pre-fabricated parts and a modular design, often including timber framing, reduces construction time and can enhance the sustainability of development.
- 10.6 Principles of low carbon design:

RIBA in their technical guide Principles of Low Carbon Design and Refurbishment⁴ set out some basic principles for low carbon energy design. These are:

- Understand energy use in the building type

It is vital to understand the likely breakdown of energy use for a building, both by fuel type and end use. This allows design to minimize the most significant sources of emissions. The pattern of energy use, not just annual totals, is important when considering integrating renewable energy technologies
- Use the form and fabric of the building to do the work

New buildings should minimize demand for use of services such as heat and lighting. Low carbon buildings should exploit useful solar and internal heat gains (from people, equipment, etc.) to satisfy as much of the heat demand as possible, but exclude unwanted solar gains when they may lead to overheating
- Focus on insulation and air tightness

To do this it is important to understand the heating and cooling balance of the building. Generally, the design of a dwelling will focus on keeping heat in and making use of heat gains, while the design of an office will focus on keeping the building cool, especially in summer.
- Use high efficiency building services with low carbon fuels

The remaining energy demand should be met with fuels that are the most carbon efficient (for example reducing the need for gas boilers) and ensure that heating controls are as responsive as possible.
- Use renewable energy systems

Low carbon buildings should draw on renewable energy sources wherever feasible and cost effective to provide heat and power

⁴ [RIBA 2030 Climate Challenge resources](#)

within the building.

- **Manage energy within the building**

Low carbon design is not enough, low carbon operation is also needed. New development should ensure appropriate metering and energy management systems are in place, and that the occupants are well-informed about how the building and its services are intended to be used.

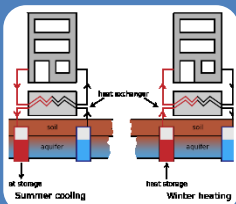
11. The energy hierarchy

11.1 The Energy Hierarchy is a way of looking at energy solutions, prioritised to assist progress towards more sustainable options. Wherever possible development should look to solve issues from the top of the hierarchy, rather than steps further down, which have more impact on climate change.



Energy Saving

- Design to reduce consumption
- Switch off to eliminate waste



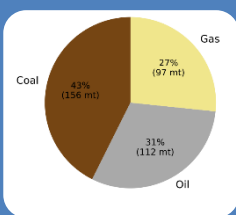
Energy Efficiency

- Design to reduce heat loss and maximise solar gain where possible
- Better appliances lower energy loss



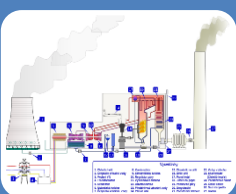
Renewables

- Design building services to use renewable technology such as ground source heat pumps and solar



Low emission

- Use the lowest carbon energy sources for building energy requirements
- Consider carbon capture potential



Conventional

- Sources of last resort
- Offset to compensate

12. Key local plan policies

STRATEGIC POLICY 28

Renewable and Low Carbon Energy Generation

The Council will promote and encourage all technologies and types of renewable and low-carbon energy generation, appropriate to the location in the Borough. This includes schemes that:

- form part of proposed new developments (including stand-alone schemes);
- are incorporated into existing developments; and
- are community-led initiatives.

The Borough Council will encourage technologies that provide the greatest renewable energy generation and carbon savings, whilst recognising the need to balance adverse impacts and location restrictions.

The Borough Council will prepare a Supplementary Planning Document with advice on the types of renewable energy technology and low carbon design that may be most appropriate in the different types of location in the Borough.

Opportunities where development can draw its energy supply from decentralised, renewable or low carbon energy supply systems and for co-locating potential heat customers will be encouraged.

To encourage the development of local wood fuel markets, which will, in turn, make it more viable for the woodlands of The National Forest to be brought into management, the Council will support the development of wood fuel systems which take advantage of the abundance of local woodland thinnings. Applicants will be expected to demonstrate that fuel is being sourced as locally as possible to the installation with an expectation that fuel is to be sourced from within The National Forest.

Renewable and Low-Carbon energy generation applications will be approved if their impacts are (or can be made) acceptable. Therefore all applications are subject to the following considerations:

- the degree to which the scale and nature of a proposal reflects the capacity and sensitivity of the landscape, townscape, natural, historical and cultural features and areas to accommodate the development
- the degree to which the developer has demonstrated any wider environmental, economic, and social benefits of a scheme as well as to how any adverse impacts have been minimised (e.g. visual intrusion, noise or odour). This includes wider benefits arising from clean energy supply, reductions in greenhouse gas and other

polluting emissions, and contributions towards meeting national targets for use of renewable energy sources

- the proximity to, and impact on, transport infrastructure and the local highway network
- the impact on designated sites of European, national, regional and local biodiversity and geological importance
- the impact on relevant heritage assets
- the impact on residential amenity

In assessing whether or not adverse impacts are satisfactorily addressed, the Council will also take into account cumulative impacts.

DETAILED POLICY 2

Designing in Sustainable Construction

The Council actively encourages the design and delivery of low carbon buildings and will permit energy improvements to existing buildings subject to the other policies in this Plan, particularly protecting the amenity of neighbours.

It is expected that development will:

- follow the energy hierarchy of designing out energy demand from the outset, incorporating energy efficiency measures and introducing low carbon energy supply,
- incorporate the best environmental practice and construction techniques in line with the Governments zero carbon buildings policy
- use appropriate materials, form, orientation and layout of buildings to maximise the benefits of passive solar heating, cooling, lighting and natural ventilation;
- incorporate facilities to minimise the use of water and the creation of waste, and which maximise opportunities for recycling;
- incorporate ecologically sensitive design and features for biodiversity early on within a development scheme, following guidance in 'Biodiversity by Design' or future revisions;
- where appropriate prepare Site Waste Management Plans to ensure that at least 25% of the total minerals used derive from recycled and reused content;

- aim to reduce predicted carbon emissions through the generation of decentralised and renewable or low carbon energy generation where practicable;
- where on site renewable or low carbon energy generation is not practical, a contribution towards an off-site renewable energy or carbon reduction scheme will be acceptable;

In developments large enough to make such systems feasible, the viability of decentralised energy systems such as combined heat and power and community heating systems based on renewable and low-carbon energy should be explored. District or shared energy schemes between neighbouring developments, new or existing, will be considered positively.

Where a planning application is submitted that involves an extension to an existing building, or the demolition and re-building of an existing building, the Council will expect those requirements above that are appropriate to the scale of development to be met where it is feasible and reasonable to do so.