



**South Staffordshire Council**

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Local Plan Review

# **Publication Plan**

# **Sustainable Construction & Renewable Energy Topic Paper**

**November 2022**

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## 1. Introduction

- 1.1 The Council declared a climate emergency in 2019 following a 2018 report by the Intergovernmental Panel on Climate Change (IPCC), which warned of the devastating consequences of a global temperature rise of more than 1.5 degrees Celsius above pre-industrial levels. The more recent February 2022 IPCC report<sup>1</sup> indicates that any more delay in action to reduce emissions “will miss a brief and rapidly closing window of opportunity to secure a liveable and sustainable future”. The IPCC indicates that this means crop failures, risks to water security, increased heat deaths and risks to people, economies and infrastructures due to coastal and inland flooding for the European continent.
- 1.2 To avoid the worst effects of climate change, the IPCC findings indicate that worldwide emissions must peak no later than 2025, with rapid and deep reductions in emissions required by 2030<sup>2</sup>. These conclusions represent the scientific consensus on climate change and its implications for policy makers, presenting the moderated conclusions of hundreds of leading climate scientists from around the world.
- 1.3 Recognising the need to secure a liveable and sustainable future for its residents, the Council has made climate change one of its key priorities in the Local Plan Review. This topic paper will summarise the Council’s position on climate change mitigation and adaptation within the Local Plan Review. It will set out the existing local and national policy background to the Council’s position, how the Local Plan Review to date has sought to address these issues and will set out policy responses to be included within the Local Plan Review Publication Plan (Reg 19) to address these points.

## 2. Existing Local Plan policies on climate change

- 2.1 Both the Council’s existing 2012 Core Strategy DPD and 2018 Site Allocations DPD contain policies which seek to mitigate and adapt to the impacts of climate change. These are set out below:

Existing policy	Summary of key requirements
<i>Core Strategy 2012 DPD</i>	
Core Policy 3: Sustainable Development and Climate Change	The policy contains broad summaries of the Council’s stance on a number of climate related matters, including previously developed land, sustainable transport, energy efficiency, flexible and adaptable building design, minimising and managing waste, protecting and enhancing natural assets, guiding development away from areas of flood risk, SuDS, pollution prevention and

<sup>1</sup> IPCC Climate Change 2022 – Impacts, Adaptation and Vulnerability: Summary for Policymakers, paragraph D.5.3

<sup>2</sup> IPCC Climate Change 2022 - Mitigation of Climate Change: Summary for Policymakers, paragraph C.1

	mineral resources. Specific policy standards were not set within the Core Policy for these matters.
Policy EQ5: Sustainable Resources and Energy Efficiency	This set minimum and maximum reductions in regulated carbon emissions for new build dwellings, aligning to then predicted changes in building regulations. Non-residential development is expected to achieve BREEAM 'Excellent' standard. Minimum proportions of low and zero carbon energy generation are to be delivered on new residential and non-residential buildings.
Policy EQ6: Renewable Energy	An overall target of delivering 9.6% of South Staffordshire's energy demand through renewable sources. Criteria-based policies were established for biomass and wind energy developments. This included suitable geographical areas of opportunity for wind development being set out, but with allowances for wind outside of these geographical areas where sites could demonstrate conformity with the criteria used to establish the wind areas of search in Policy EQ6.
<i>Site Allocations 2018 DPD</i>	
Policy SAD9: Key Development Requirements	This set out the District's requirements for Sustainable Drainage Systems (SuDS), including reference to the Lead Local Flood Authority's design requirements for such schemes.

- 2.2 These policies have been used to guide development management decisions in the District since the Core Strategy's adoption in 2012. However, subsequent changes to national policy have superseded certain elements of these existing policies.
- 2.3 Firstly, the Government issued a Written Ministerial Statement (WMS) in March 2014 responding to the Housing Standards Review consultation. The WMS proposed to wind down the Code for Sustainable Homes and consolidate many of the standards in the Building Regulations. This was followed by a further WMS supporting the Deregulation Act in March 2015, which made clear that the Government intended that planning authorities should only use national standards not locally derived standards. Accordingly, the elements of Policy EQ5 relating to residential energy efficiency were treated as desirable standards rather than strict policy requirements, with lesser standards being acceptable.
- 2.4 Whilst Policy EQ6 identified areas suitable for large-scale wind energy within the district and set a target of 20.8GWh of energy to be generated by wind by 2020, to date wind schemes in the District only generate 8.6GWh of energy<sup>3</sup>. There is only one operational large scale wind scheme within the district (at Rodbaston College), which pre-dated the adoption of the Core Strategy in 2012. Equally, since the Core Strategy's adoption no new large-scale wind schemes have been consented in the district.

<sup>3</sup> Table 4.3 of the Climate Change Adaptation & Mitigation – Baseline Report 2020

Recent academic research<sup>4</sup> suggests that at a national scale government funding cuts for onshore wind and additional planning policy restrictions introduced through a 2015 Written Ministerial Statement<sup>5</sup> led to a 97% fall in planning applications for onshore wind. Therefore, it is likely that these national policy changes, combined with the limited areas explicitly identified for wind in the district, have contributed to the failure to deliver the required amount of renewable energy generation from this source.

### 3. Considering climate change in the Local Plan Review process to date

3.1 Although the Council has only proposed full development management policies in the Regulation 19 Publication Plan, climate change has informed the previous consultation stages undertaken as part of the Local Plan Review. The relevant consultation stages, and key ways in which climate change mitigation and adaptation informed these stages, is set out below.

#### Issues and Options (2018)

3.2 The Issues and Options document was published for consultation in October 2018. It sought views on key strategic issues to be addressed in a local plan review for the period from 2018 – 2037, including evidence that may be required, potential policy options to be explored and levels of housing and employment growth that may be accommodated within the district. As part of this exercise, six broad development typologies for accommodating housing growth and five different housing growth targets were tested through the Sustainability Appraisal process. Summaries of key Sustainability Appraisal findings under these key areas are set out below.

Residential growth levels tested	
Growth option	Sustainability Appraisal conclusions on climate change mitigation and adaptation
<b>Option A:</b> 5,130 dwellings	<b>Major negative</b> effect predicted due to the growth scenario accommodating significant numbers of new persons who would cumulatively generate 105,165 tonnes CO2 annually.
<b>Option B:</b> 7,030 dwellings	<b>Major negative</b> effect predicted due to the growth scenario accommodating significant numbers of new persons who would cumulatively generate 144,115 tonnes CO2 annually.
<b>Option C (Preferred approach):</b> 9,130 dwellings	<b>Major negative</b> effect predicted due to the growth scenario accommodating significant numbers of new persons who would cumulatively generate 187,165 tonnes CO2 annually.

<sup>4</sup> Windemer, R. (2022). The impact of the 2015 onshore wind policy change for local planning authorities in England: Preliminary survey results. ESRC

<sup>5</sup> [1-DCLG-Planning.pdf \(parliament.uk\)](https://www.parliament.uk/document/1-DCLG-Planning.pdf)

<b>Option D:</b> 17,130 dwellings	<b>Major negative</b> effect predicted due to the growth scenario accommodating significant numbers of new persons who would cumulatively generate 351,165 tonnes CO2 annually.
<b>Option E:</b> 25,130 dwellings	<b>Major negative</b> effect predicted due to the growth scenario accommodating significant numbers of new persons who would cumulatively generate 515,165 tonnes CO2 annually.

3.3 This indicated that all new residential growth was likely to have a significant negative impact on carbon emissions due to the carbon footprint of individual households, with this effect worsening the greater number of dwellings that were built in the district.

<b>Residential growth typologies tested</b>	
<i>Growth option</i>	<i>Sustainability Appraisal conclusions on climate change mitigation and adaptation</i>
<b>Option A:</b> Rural housing growth focused on the district's larger and better connected villages	<b>Minor positive</b> impacts predicted under climate change mitigation due to growth option locating new residents near to public transport links, reducing car dependency and associated GHG emissions. <b>Minor negative</b> impacts predicted under climate change adaptation criteria due to flood risk issues in Penkridge and Great Wyrley.
<b>Option B:</b> Rural housing growth dispersed across all settlements with a basic level of service provision within the District	<b>Minor negative</b> impacts predicted under climate change mitigation due to greater proportion of residents being unable to access frequent public transport. <b>Minor negative</b> impacts predicted under climate change adaptation, whilst noting that greater number of smaller sites would allow more opportunities to direct development away from areas of flooding.
<b>Option C:</b> Small-scale urban extensions on the fringe of neighbouring urban areas	<b>Minor positive</b> impacts predicted under climate change mitigation due to growth option locating new residents near to public transport links, reducing car dependency and associated GHG emissions. <b>Minor positive</b> impacts predicted under climate change adaptation, as this spatial strategy would allow plan to direct development away from areas of flooding.
<b>Option D:</b> Larger urban extensions on the fringe of neighbouring urban areas	<b>Minor positive</b> impacts predicted under climate change mitigation due to growth option locating new residents near to public transport links, whilst noting that rail access is poorer in the south of the District. Most employment-led areas explored under this option (especially around i54) have good public transport links. <b>Minor positive</b> impacts predicted under climate change adaptation, as this spatial strategy would allow plan to direct development away from areas of flooding.
<b>Option E:</b> New freestanding settlements away from	<b>Minor negative</b> impacts predicted under climate change mitigation due to construction of an entirely new settlement at a previously undeveloped location would result in a net increase

the existing villages/urban areas	in carbon footprint in the local area in relation to current levels. <b>Minor positive</b> impacts predicted under climate change adaptation, as this the construction of a new settlement would allow flood risk to be managed in a comprehensive way with areas of green and blue infrastructure.
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3.4 In summary, testing of these options suggested that better climate change mitigation outcomes could be realised by expanding the district’s larger villages or by locating growth next to adjacent urban areas, due to the better public transport links in these locations. Climate change adaptation varied across the district, but the appraisal suggested that consideration would need to be given to flood risk in some larger villages if growth was to be located in these areas.

3.5 Consultation responses received to the consultation offered a variety of views on the level of housing growth proposed, with local residents and community groups broadly tending to support either Option A or B, whilst development industry representatives tended to favour increasing growth above the level proposed in Option C, although neither group tended to raise climate change as a key reason for either viewpoint. There was a general consensus within the development industry that the likely levels of housing growth required to be accommodated through the plan would need a combination of different residential growth typologies, rather than one single approach.

**Spatial Housing Strategy and Infrastructure Delivery (2019)**

3.6 The Spatial Housing Strategy and Infrastructure Delivery document was published for consultation in October 2019. Acknowledging that the level of growth preferred by the Council was unlikely to be delivered on one residential growth typology, this consultation sought views on different spatial strategy options for distributing the Council’s preferred level of housing growth across a variety of locations within the district. As part of this, key positives and negatives of each option (including some relevant to climate issues) were assessed. Each spatial option was also subject to Sustainability Appraisal, which included consideration of climate change mitigation and adaptation.

3.7 Assessment of the different spatial included considering their alignment with the findings of the 2018 Sustainability Appraisal (including in relation to climate change) and the options access to employment via sustainable transport means. Key findings from this are set out below:

<i>Spatial Housing Strategy Option</i>	<i>Key positives and negatives relating to climate change</i>
<b>A:</b> Maximise Open Countryside release	<ul style="list-style-type: none"> <li>- Does not align well to the 2018 Sustainability Appraisal, as growth is focused away from most Tier 1 and 2 villages, with large-scale growth made at a Tier 3 village instead (Wheaton Aston).</li> </ul>
<b>B:</b> Prioritising Green Belt land release in areas of lesser Green Belt harm	<ul style="list-style-type: none"> <li>- Delivers significant growth adjacent to Tier 1 settlements, which have greater levels of access to services and employment than other rural settlements</li> <li>- Aligns growth with areas well served by public transport (Tier 1 settlements and urban extensions adjacent to neighbouring towns and cities)</li> <li>- Does not reflect the 2018 Sustainability Appraisal in rural settlements, as growth is more evenly spread across Tier 1-4 settlements</li> </ul>
<b>C:</b> Carry forward existing Core Strategy strategic approach to distribution	<ul style="list-style-type: none"> <li>- Delivers significant growth adjacent to Tier 1 settlements, which have greater levels of access to services and employment than other rural settlements</li> <li>- Partially aligns growth with areas best served by public transport (Tier 1 settlements)</li> <li>- Does not align well with 2018 Sustainability Appraisal, as it prioritises significant levels of growth to Tier 3 settlements, whilst no growth is delivered in more sustainable urban extensions to neighbouring towns and cities.</li> </ul>
<b>D:</b> Maximising sites in areas identified in the GBHMA Strategic Growth Study	<ul style="list-style-type: none"> <li>- Closely aligns growth to areas of the district with greater levels of access to services and employment (north of the Black Country, Tier 1 settlements, the A449 corridor)</li> <li>- Aligns well with the 2018 Sustainability Appraisal, by focusing more additional growth in Tier 1 and 2 settlements and urban extensions</li> <li>- Aligns growth with areas best served by public transport (Tier 1 settlements and urban extensions)</li> </ul>
<b>E:</b> Addressing local affordability issues and settlements with the greatest needs	<ul style="list-style-type: none"> <li>- Delivers significant growth adjacent to the northern edge of the Black Country, which has greater levels of access to services and employment</li> <li>- Partially reflects the 2018 Sustainability Appraisal, by focusing more additional growth to urban extensions</li> <li>- Partially aligns growth with areas best served by public transport (urban extensions to neighbouring towns and cities)</li> </ul>
<b>F:</b> Giving first consideration to Green Belt land which is previously developed or well-served by public transport	<ul style="list-style-type: none"> <li>- Closely aligns growth to areas of the district with greater levels of access to services and employment (north of the Black Country, Tier 1 settlements, the A449 corridor)</li> <li>- Aligns well with the 2018 Sustainability Appraisal, by focusing more additional growth in Tier 1 and 2 settlements and urban extensions</li> </ul>



	<ul style="list-style-type: none"> <li>- Fully aligns growth with locations best served by public transport (Tier 1 settlements and extensions to adjacent towns and cities)</li> </ul>
<p><b>G (Preferred Option):</b> Infrastructure-led development with a garden village area of search beyond the plan period</p>	<ul style="list-style-type: none"> <li>- Closely aligns growth to areas of the district with greater levels of access to services and employment (north of the Black Country, majority of Tier 1 settlements, the A449 corridor)</li> <li>- Aligns well with the 2018 Sustainability Appraisal, by focusing more additional growth in Tier 1 and 2 settlements, urban extensions and a potential new settlement area of search</li> <li>- Aligns growth with areas well served by public transport (Tier 1 settlements and urban extensions adjacent to neighbouring towns and cities)</li> </ul>

3.8 The above shows that the spatial options which tended to focus greater levels of growth on Tier 1 & 2 settlements and areas adjacent to neighbouring urban towns and cities tend to have better access to services, facilities and sustainable transport. This is also reflected in better performing options aligning well with Sustainability Appraisal outcomes from the 2018 Issues and Options consultation. This means that Options D, F & G better align with opportunities to mitigate climate change through non-car based transport and better reflect the better performing options in the 2018 Sustainability Appraisal. These spatial distribution scenarios were also subject to their own Sustainability Appraisal in 2019, which concluded that all spatial options would result in major negative impacts on climate change mitigation and adaptation. This was for similar reasons for the major negatives identified against residential growth options in the 2018 Sustainability Appraisal, although Options D-G did have more positive impacts under the transport and accessibility criteria.

### Preferred Options (2021)

3.9 Building on the previous two consultations, the Preferred Options consultation identified preferred site allocations to meet the district’s housing, employment and gypsy and traveller growth needs. The document also included policy directions of travel for future development management policies.

3.10 The sustainability appraisal supporting the 2021 Preferred Options document concluded that climate change mitigation and GHG reduction measures was a cross-cutting theme across the document, noting the following policies specifically:

**Policy DS3** sets out the spatial strategy for the district. By directing development towards Tier 1 settlements and the urban edge of existing larger towns outside the district, this policy would be likely to facilitate more sustainable communities, by locating residents in closer proximity to services, facilities and public transport,

including railway stations. The use of the private cars and associated fossil fuel consumption is identified as one of the district's larger contributors to carbon emissions.

**Policy HC12** sets out parking standards and the requirement for new dwellings to deliver electric vehicle charging points and new commercial development to 20% of parking spaces with charging points.

**Policy HC19** sets out wider green infrastructure principles to achieve multifunctional green infrastructure. Green infrastructure can serve to mitigate the effects of climate change through carbon sequestration in soils and vegetation and the shading/cooling effects of trees and vegetation.

**Policy EC1** 'Sustainable Economic Growth' sets out the broad requirements in relation to economic development. Part of this policy will be to promote active travel measures and the creation/enhancement of multifunctional green spaces and the enhancement of the Green Infrastructure Network.

**Policies EC6 and EC7** seek to maintain the vitality of village centres in existing settlements and in doing so may reduce the need for residents to travel by car to access facilities.

**Policy EC11** sets out the Council's approach to sustainable transport, through a wide range of measures including strengthening bus and rail services and their connections, encouraging walking and cycling, the Park and Ride initiative at Cross Green and improving availability of electric vehicle charging points.

**Policy NB1** relates to protecting, enhancing and expanding natural assets. Vegetation provides several ecosystem services, including carbon storage as well as cooling/shading effects.

**Policy NB5** will specifically address renewable and low carbon energy generation, including the policy provisions relating to solar, wind and biomass energy schemes.

**Policy NB6** sets out energy and water efficiency in new developments including the requirement for all major residential development to achieve a 31% carbon reduction improvement upon the requirements within Building Regulations Part L and all major commercial development to achieve BREEM Excellent or Outstanding.

## Summary

3.11 The above demonstrates how the Council has considered climate change to date in preparing its local plan, primarily through considering the level growth provided, its spatial distribution throughout the district and wider holistic policy directions of travel set out at the Preferred Options stage. To date, efforts to limit the amount of new emissions generated over the plan period have primarily focused on limiting the amount of new development and focusing any development to areas well served by services and facilities, particularly public transport, in an effort to minimise trip distances and shift these towards more sustainable modes.

3.12 Despite efforts to date to locate development in sustainable locations, it is clear that the development of around 9,000 dwellings during the plan period will still generate around 187,000 tonnes of CO<sup>2</sup> each year (around a 20% increase)<sup>6</sup> based upon new household's annual energy use. It is therefore imperative that the Council creates development management policies that reduce and decarbonise the energy demands from new development as rapidly and effectively as possible. To address this the remainder of this topic paper focuses on evidence and policy justifications for the emerging sustainable construction and renewable energy generation policies set out in the South Staffordshire Local Plan 2018 – 2039.

#### 4. National policy and legislative context for sustainable construction and renewable energy

##### **Climate Change Act 2008 and the Planning and Energy Act 2008**

- 4.1 The UK government has a legally binding target to deliver a 100% reduction in UK emissions by 2050, relative to 1990 base levels for carbon dioxide emissions and other greenhouse gases. This is set out in the 2008 Climate Change Act (as amended in June 2019). This act also establishes powers to set interim carbon budgets and an independent body (the Committee of Climate Change) to give progress reports and advice to the government in connection with setting and achieving the carbon budgets necessary to achieve the overall net zero target. Where relevant to the local plan process, key findings from the Committee of Climate Change are set out later in this topic paper.
- 4.2 In addition to these wider legislative powers set out above, the Planning and Energy Act 2008 also provides local authorities with powers to set standards imposing reasonable requirements on new developments with regards to their use of renewable energy and energy efficiency standards which exceed the building regulations. In 2015 the government proposed amendments to this which would have removed the ability to set higher energy efficiency standards (through the Deregulation Act 2015). However, the relevant amendments to this legislation were never given Royal Assent and a [recent government consultation response](#) to the Future Homes Standard consultation in 2021 confirmed that these amendments would not be made.
- 4.3 Despite attempts in a 2015 Written Ministerial Statement to avoid standards being set which exceeded the Code for Sustainable Homes Level 4, the consultation response also acknowledged that authorities had continued to set policies which exceeded this requirement. The government's response recognised that all levels of government

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<sup>6</sup> Para 3.6.4 of the Sustainability Appraisal of the South Staffordshire - Local Plan Review Issues and Options September 2018

have a role to play in meeting the net zero target and that local authorities can drive local progress towards national climate change commitments that maximises the benefits to the communities they serve.

### Government Carbon Budgets

4.4 The government is required to publish [carbon budgets](#) every 5 years under the provisions in the Climate Change Act 2008. These set out legally binding trajectories for emission reductions over time to meet the 2008 Climate Change Act’s end goal of reducing greenhouse gas emissions by 100% by 2050 when compared to 1990 levels. Summaries of carbon budgets published to date are set out below. These budgets do not specify a specific reduction in carbon emissions required from the planning sector. However, it is clear that drastic reductions in carbon emissions are required within the plan period proposed in the Local Plan (up to 2039).

UK Carbon Budget	Reduction in GHG emissions below 1990 levels
1 <sup>st</sup> Carbon budget (2008-12)	25%
2 <sup>nd</sup> Carbon budget (2013-17)	31%
3 <sup>rd</sup> Carbon budget (2018-22)	37% by 2020
4 <sup>th</sup> Carbon budget (2023-27)	51% by 2025
5 <sup>th</sup> Carbon budget (2028-32)	57% by 2030
6 <sup>th</sup> Carbon budget (2033-37)	78% by 2035

### National Planning Policy Framework 2021 (NPPF)

4.5 Addressing climate change is a key priority for the planning system and is a key thread running throughout the NPPF.

4.6 For plan-making, the presumption in favour of sustainable development in paragraph 11 of the NPPF also requires (amongst other matters) that all plans should promote a sustainable pattern of development which aligns growth and infrastructure and mitigates climate change and adapts to its effects.

4.7 The core principles of the NPPF’s approach to climate change are set out in paragraph 152, which states that the planning system should shape places in ways that:

- Contribute to radical reductions in GHG emissions

- Minimise vulnerability and improve resilience
- Encourage the reuse of existing resources, including the conversion of existing buildings
- Support renewable and low carbon energy and associated infrastructure

4.8 NPPF paragraph 153 also requires plans to take a proactive approach to both mitigating and adapting to climate change, requiring policies to support appropriate measures to ensure the future resilience of communities and infrastructure to climate change impacts.

4.9 When planning for new development, paragraph 154(b) also requires that this is done in ways that can help to reduce greenhouse gas emissions, including through design, whilst stating that local requirements for the sustainability of buildings should reflect the Government's policy for national technical standards.

## 5. Key national evidence and strategies for sustainable construction and renewable energy

### ***The Future Homes Standard and 2022 Building Regulation updates***

5.1 The government has recently introduced updates to Part L of the Building Regulations in June 2022. These now ensure that all new residential dwellings will deliver around a 30% reduction in carbon emissions when compared with the 2013 Building Regulations Part L, whilst introducing a Target Primary Energy Rate to regulate the energy sources used in new development.

5.2 These regulations represent interim updates designed to be a stepping-stone towards more ambitious updates to the Building Regulations proposed through the introduction of the Future Homes Standard. This is the government's future standard for achieving 'zero carbon ready' homes, meaning homes which achieve at least a 75% reduction in carbon emissions against Building Regulations Part L 2013 with low carbon heating and high fabric efficiency, allowing them to become zero carbon as the electricity grid decarbonises. The proposed Future Homes Standard also indicates that the government would retain a Fabric Energy Efficiency Standard metric, recognising the need to ensure a fabric first approach to reducing carbon emissions.

5.3 The government's 2021 consultation response to the Future Homes Standard consultation indicated that the Future Homes Standard would be introduced in 2025. It also stated that the government would continue to allow local planning authorities to set local energy efficiency standards for new homes that go above the Building Regulations Part L, recognising the unique role local authorities can play in driving local progress towards national climate commitments.

**HM Government - Net Zero Strategy: Build Back Greener (October 2021)**

- 5.4 The government's Net Zero Strategy draws together a number of policy directions which aim to deliver the government's net zero ambition by 2050.
- 5.5 For the power sector the strategy aims for all electricity to come from low carbon sources by 2035, offering incentives for wind and solar through the Contracts for Difference scheme and aiming to ensure the planning system can support the deployment of low carbon infrastructure. This included a stated target of 40GW of offshore wind power by 2030, alongside a sustained increase in the deployment of onshore wind and solar in the 2020s and beyond.
- 5.6 For heat and buildings, the strategy aims to phase out new and replacement gas boilers by 2035, restating the commitment to support 600,000 installations of heat pumps per year by 2028 and proposing potential EPC improvements for new homes and privately rented homes, as well as commercial and industrial buildings by set dates between 2028 and 2035. This included a commitment to introduce regulations from 2025 through the Future Homes Standard to improve energy efficiency and low carbon heating, with interim measures to be introduced from 2022 through building regulations.
- 5.7 For transport, the strategy restated the government ambition to end the sale of new petrol and diesel cars and vans from 2030, requiring all new cars and vans to be zero emission at the tailpipe from 2035. £2 billion investment in cycling and walking to support provision of segregated cycle lanes and low-traffic neighbourhoods are proposed, with an aim of half of all journeys in towns and cities being cycled or walked by 2030 and an overall increase in the share of journeys taken by public transport, cycling and walking.
- 5.8 Under natural resources, the strategy pledged to treble woodland creation within the current parliament whilst restating the commitment through the Environment Act to provide for Local Nature Recovery Strategies to map proposals for improving or creating habitat for nature and wider environmental benefits.

**HM Government – British Energy Security Strategy April 2022**

- 5.9 This recently released strategy set out the government's response to the spike in demand for energy in the wake of the COVID19 pandemic and the Russian invasion of Ukraine. It included updated targets and future policy directions for the government on key energy sectors, including renewable energy provision.
- 5.10 For offshore wind the strategy increased the government's target for the sector to 50GW by 2030. The strategy recognised that onshore wind is one of the cheapest forms of renewable power but clarified that the government did not intend to

introduce wholesale changes to planning regulations for onshore wind. However, the strategy did propose a consultation on developing local partnerships for a limited number of supportive communities who may wish to host onshore wind in return for benefits including reduced energy bills. For solar energy the strategy targeted a five-fold increase in deployment by 2035, alongside proposals to strengthen policy support for solar schemes on non-protected land. Support was also given for solar co-located with other uses, including agriculture, onshore wind and storage.

### **Climate Change Committee (CCC) - Progress in reducing emissions: 2021 Report to Parliament**

5.11 The latest statutory progress report published by the CCC in 2021 examines the government's progress against its balanced net zero pathway. This concludes that in many cases, policy proposals have not caught up with the government's strategic ambitions to deliver decarbonisation.

5.12 The Climate Change Committee's (CCC) June 2021 report concludes that a variety of sectors relevant to planning are amongst those where policy implementation from government is at risk of falling behind. These are set out in full in Appendix 1. Specifically, the government's proposed policy approaches to surface transport and building standards are at significant risk of failing to meet the required net zero pathway. Key risks are summarised below.

#### Buildings

5.13 The report indicates that energy efficiency standards on new residential buildings are at significant risk due to legislation to implement the Future Homes Standard not being planned until 2024, despite heat pump uptake being needed to significantly increase from 2021 onwards. Similar risks were highlighted for non-residential buildings and behaviour change, noting limited coverage in government policy proposals and little evidence that government ambitions for these reductions translating into reduced energy demand at present.

5.14 Policy for implementing energy efficiency and low carbon heat in existing residential homes was also highlighted as clearly falling behind the required pathway targets, with number of stated heat pump installations (600,000 per year by 2028) and installations of loft and solid wall installations lagging far behind the rates needed. This finding is also supported by the findings of a recent cross-party House of Commons Committee report<sup>7</sup>. This noted that previous CCC correspondence had advised the government to set a full definition of the Future Homes Standard in 2020 and introduce legislation before 2024. Whilst government strategies have been

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<sup>7</sup> [Building to net zero: costing carbon in construction - First Report of Session 2022–23](#): Environmental Audit Committee May 2022

published since the CCC 2021 report's release, none have proposed measures to increase the rate of heat pump installations or bring forward the implementation of the Future Homes Standard, despite the risks set out in the CCC report.

#### Surface transport

- 5.15 The report indicates that the confirmation of a 2030 phase-out date for petrol and diesel sales in a welcome step, but that policy is still lacking for how to deliver it. Government focus on reducing the need to travel and increasing car occupancy is lacking, with substantial road-building investment continuing and car demand increasing.

#### **Government response to the Climate Change Committee (CCC) Progress in Reducing Emissions - 2021 Report to Parliament**

- 5.16 In response to the statutory progress report of the CCC the government [published a response](#) to the recommended actions and challenges in that work. The response included the following key points relevant to new building standards, energy generation and surface transport:

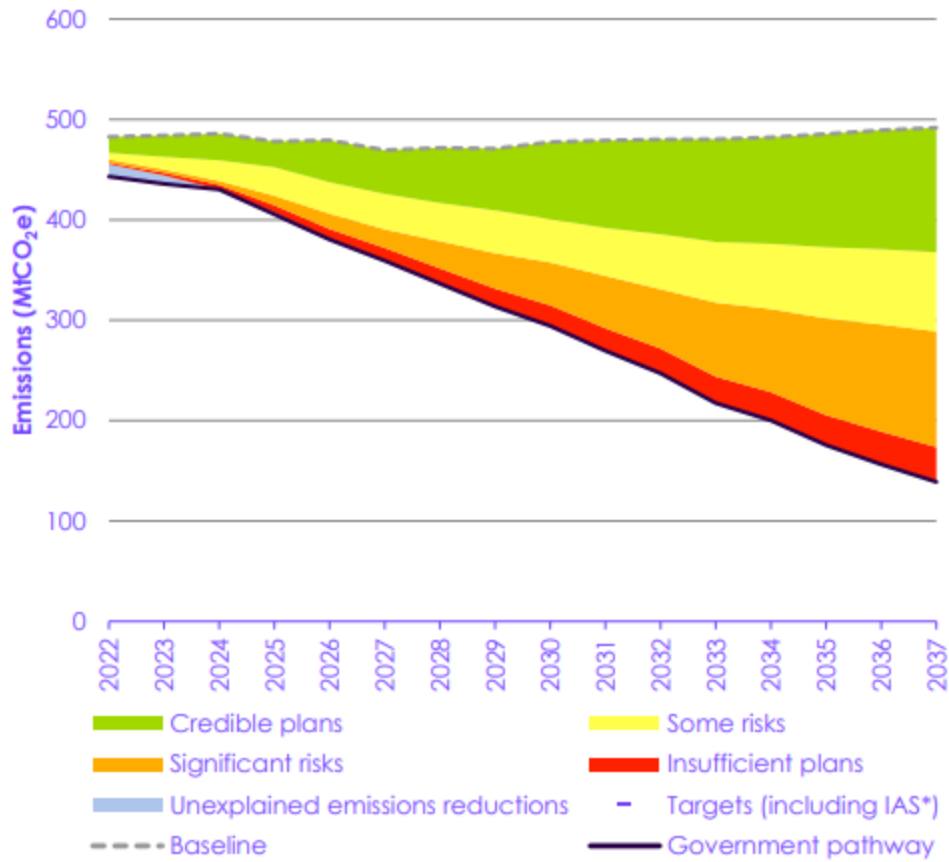
- A commitment to longer-term work to consider the future of energy efficient buildings beyond the Future Homes Standard and Future Buildings Standard, considering embodied carbon
- Commitments for growth in offshore wind, supported by similarly ambitious deployment of locally supported onshore wind and solar
- Re-highlighting commitments to continue progress on public transport through the Bus Back Better and Great British Railways: Williams-Shapps Plan for Rail strategies
- Re-highlighting support for active travel investment through the Transport Decarbonisation Plan and £2 billion investment in active travel through the Gear Change strategy

#### **Climate Change Committee (CCC) - Progress in reducing emissions: 2022 Report to Parliament**

- 5.17 The Climate Change Committee's (CCC) June 2022 report goes further than the previous 2021 report, highlighting that over half of the emissions required by the government's current policy measures either had delivery risks, significant risks of falling behind or were either completely missing or currently clearly inadequate for the level of emissions reductions required. This situation is summarised in the figure below:



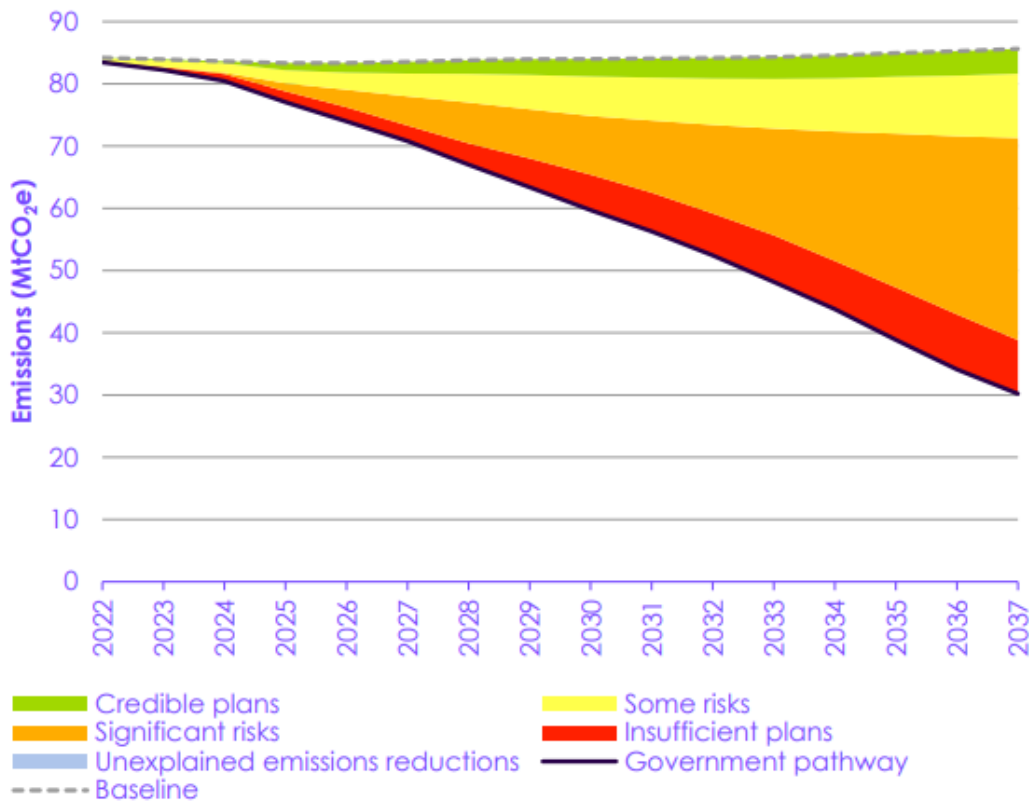
Figure 1: Assessment of current government policies and plans for carbon reduction



Source: Progress in reducing emissions - 2022 Report to Parliament (Climate Change Committee June 2022)

5.18 The June 2022 report was even more critical when looking at the predicted carbon reductions required from the government’s building policies, indicating that only a tiny proportion of the government’s policies for carbon reduction in buildings were supported by credible plans for delivery. This is shown in the figure below.

Figure 2: Assessment of current government policies and plans for carbon reduction in buildings



Source: Progress in reducing emissions - 2022 Report to Parliament (Climate Change Committee June 2022)

5.19 The June 2022 report indicated that ensuring new homes produce no direct emissions and are coupled with high levels of fabric efficiency would be an essential step that the government would have to take. However, it highlighted that despite this the UK continues to build new homes to standards which do not align with the Net Zero target. The report also raised doubts from the CCC that the interim building standards introduced in 2022 would drive sufficient change in the new build sector prior to 2025, as these standards could be met without low-carbon heat, adding to the stock of boilers which would need to be retrofitted in future.

**A home for all within planetary boundaries: Pathways for meeting England’s housing needs without transgressing national climate and biodiversity goals 2022<sup>8</sup>**

5.20 Supporting the findings of the Climate Change Committee, [recent academic research](#) showed that the emissions of existing homes combined the government’s 300,000

<sup>8</sup> [A home for all within planetary boundaries: Pathways for meeting England's housing needs without transgressing national climate and biodiversity goals - ScienceDirect](#)

homes per year policy would, on their own, cause England's cumulative carbon budget to breach an amount consistent with limiting global warming to 1.5C by 2050. This assumed new housing is not fully decarbonised<sup>9</sup> until 2050 and retrofit rates succeed in halving operational emissions of the existing stock by 2050.

- 5.21 Whilst the majority of these emissions arise from operational emissions associated with existing properties, a significant proportion still results from the embodied and operational emissions of newbuild properties. A key recommendation of the paper is therefore that government should ensure that all new builds achieve net zero operational emissions and minimise embodied emissions as soon as possible. It notes that current government policy is only to achieve 'zero carbon ready' homes by 2025 and that similar goals had been previously set and scrapped by governments.

## **6. Local evidence for sustainable construction and renewable energy**

- 6.1 The following section sets out the proposed policy approaches relevant to climate change in the Local Plan Review by topic area, focusing on those directly seeking to mitigate and adapt to the impacts of climate change. It sets out local evidence relevant to each topic area, drawing this together with relevant national government policy and wider evidence, before proposing policy approaches that best respond to the collated evidence and the district's local circumstances.
- 6.2 The majority of the local evidence set out below draws from the Staffordshire Climate Change Adaptation & Mitigation - Baseline Report ('the Staffordshire Baseline Report') and Staffordshire Climate Change Adaptation & Mitigation - Final Report ('the Staffordshire Final Report'). These reports were jointly commissioned by the Council in 2020 with other Staffordshire authorities. They examined the sources of greenhouse gas emissions within Staffordshire and individual local authorities, before setting out policy options to be considered through local plan preparation to address climate change mitigation and adaptation.

### Carbon reduction standards for new buildings

- 6.3 Residential dwellings are one of the major drivers of CO2 emissions in the district, contributing 23% of Scope 1, 2 & 3 emissions in the district. By far the biggest generator of residential emissions is the natural gas used to heat residential buildings followed by electricity use and then Scope 3 emissions<sup>10</sup>. Analysis in the study showed that, with all other variables being held constant, new development using roughly the same amount of gas and electricity as existing buildings would result in a 5% increase in Scope 1 & 2 emissions within the district.

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<sup>9</sup> Including lifecycle emissions

<sup>10</sup> Figure 6-26 of Staffordshire Climate Change Adaptation & Mitigation - Baseline Report

- 6.4 Even if the Future Homes Standard were implemented, there would still be a slight increase in emissions<sup>11</sup> by 2050 resulting from new development. The Final Study noted that, based on 2017 CO2 emissions, the entire carbon budget for the West Midlands would be used up in the next 7 years (from the date of publication). It also found that the lifetime emissions over 60 years of a house built with a gas boiler in 2020 and then retrofitted with a heat pump in 2030 would likely be three times higher than if a heat pump was fitted at the outset in 2020<sup>12</sup>.
- 6.5 The Final Study also identified non-residential (i.e. institutional, industrial and commercial) buildings as equally significant drivers of CO2 emissions in the District, contributing 24% of Scope 1, 2 & 3 emissions<sup>13</sup>. Emissions primarily arise from significant natural gas and electricity use, with some petrol and diesel use in institutional buildings and significant Scope 3 emissions across all building types.
- 6.6 The evidence base highlighted research which indicates that there is generally a performance gap between the modelled and post-construction emissions of both domestic and non-domestic buildings, which could lead final emissions to be 2-4 times higher than modelled outcomes if not addressed through post-construction monitoring<sup>14</sup>.
- 6.7 In addition to CO2 emissions arising from the operation of buildings (measured as 'regulated' and 'unregulated' emissions), the Final Study also highlights significant carbon emissions arising from the production, manufacture, construction, maintenance, repair and demolition of buildings. These typically account for anywhere between 30-70% of a building's total CO2 emissions<sup>15</sup>, depending on building typology. Therefore, if local plan policies only seek to address emissions associated with the operation of buildings once built, they will fail to address (in most cases) the majority of CO2 emissions associated with new development.
- 6.8 This finding in local evidence is also supported by the findings of a recent cross-party House of Commons Committee report<sup>16</sup>. This committee found that Whole-Life Carbon (WLC) assessments needed to be urgently adopted to achieve the government's net zero ambitions, noting that the UK was lagging behind many comparator authorities in Europe in adopting such measures. The committee also heard evidence that significant lifecycle carbon savings could be achieved without increases in building cost if assessed properly at an early stage during a project's design and that the more routine WLC assessments became, the more standard

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<sup>11</sup> 3.4.2 of Staffordshire Climate Change Adaptation & Mitigation - Baseline Report

<sup>12</sup> 3.1.1.1 of Staffordshire Climate Change Adaptation & Mitigation - Final Report

<sup>13</sup> Figure 6-26 of Staffordshire Climate Change Adaptation & Mitigation - Baseline Report

<sup>14</sup> 3.1.1.3 of Staffordshire Climate Change Adaptation & Mitigation - Final Report

<sup>15</sup> 3.1.1.3 of Staffordshire Climate Change Adaptation & Mitigation - Final Report

<sup>16</sup> [Building to net zero: costing carbon in construction - First Report of Session 2022-23](#); Environmental Audit Committee May 2022

solutions could be deployed to enable assessments to be completed more quickly and efficiently. This led to the committee recommending that the government introduce mandatory WLC assessments no later than December 2023 for buildings above a gross internal area of 1000m<sup>2</sup>, or which create more than 10 dwellings. Whilst it indicated this should be done primarily through Building Regulations and the NPPF, it also indicated that local authorities should be encouraged and supported to include this requirement within their Local Plans ahead of the introduction of national planning requirements.

6.9 To respond to the need to reduce carbon emissions in new buildings, the Final Study recommended that local authorities should look to set the highest level of building performance standards that can be achieved as soon as possible, whilst looking for opportunities to improve performance in the existing building stock. This urgent stance reflects the findings of the Climate Change Committee's (CCC) June 2021 and June 2022 report, which both indicate the CCC's concerns that the government's intended timescales for introducing the Future Homes standard risk falling behind the emissions reduction trajectory necessary to achieve the government's net zero ambitions (see above).

6.10 Recognising the pressing need to reduce as fully as possible new build housing's operational emissions, the Final Study provided summary options which it recommends could be used by local authorities to go above building regulations. These included:

- Require 19% reduction in emissions vs 2013 Building Regulations Part L\*
- Net zero regulated carbon emissions
- Net zero regulated and unregulated carbon emissions
- Encourage Passivhaus certification
- BREEAM 'Excellent' or 'Outstanding' rating for non-domestic buildings
- Require monitoring and reporting on operational energy use and/or CO<sub>2</sub> emissions
- Require Lifecycle Carbon Assessments, requiring minimisation of embodied carbon
- Include targets for operational energy use and/or CO<sub>2</sub> emissions

*\*now superseded by more recent 2022 changes to Building Regulations*

6.11 The Final Study also acknowledges that, in some cases, it may not be feasible to fully achieve the level of carbon reduction proposed through onsite measures and that a carbon offsetting fund may be required to achieve the level of carbon reductions required by new development. The study assumed that all local authorities would set a target of net zero regulated emissions, recognising that most Councils in Staffordshire had voted to declare climate emergencies, and estimated costs associated with achieving regulated net zero through this method above anticipated increases in Building Regulation standards. Recognising the significant shortfall in

renewable energy supply vs demand currently existing in Staffordshire, the Final Report indicates it is critical to increase decentralised renewable energy generation and/or battery storage from all new developments and that all new developments should be required to include onsite renewables and/or battery storage (with or without a specified proportion of energy from LZC)<sup>17</sup>.

- 6.12 Indicative costings at the time of the study indicated that the fund could generate approximately £910,000 per annum<sup>18</sup> towards energy efficiency measures in South Staffordshire based on a carbon cost of £60 per tonne of CO<sub>2</sub> and assuming that no further improvements in onsite measures are used to achieve net zero above the interim 2022 Building Regulations. This carbon cost is based on figures used in the historic London Plan, set using Treasury Green Book prices at the time, although the Final Study notes that a higher figure could be used for carbon offsetting and elsewhere cautions against setting an offsetting price that is low enough to disincentivise on-site renewable technologies<sup>19</sup>.
- 6.13 Research<sup>20</sup> conducted on the £60 per dwelling figure in 2019 also indicates that in reality it is not sufficient to encourage developers to prioritise onsite measures (e.g. solar PV), which can instead creating a perverse incentive for developers to pay the offsetting sum instead. This has led to the current London Plan proposing a £95 per tonne CO<sub>2</sub> figure, which this research indicates is anticipated to be sufficient to incentivise onsite measures using the carbon factors in SAP 2012. However, once updated carbon factors associated with SAP10 are introduced, the same research indicates that a cost of £300-400 per tonne CO<sub>2</sub> may be necessary to make onsite measures more attractive to developers<sup>21</sup>. Recently, Treasury Green Book prices have also been significantly revised<sup>22</sup>, leading to substantially higher costs per tonne CO<sub>2</sub>, which currently stands at £248 per tonne of CO<sub>2</sub> in 2022<sup>23</sup> and will continue to increase over time.

#### Water efficiency standards for new dwellings

- 6.14 Climate change is not a local issue and at a national level the need to adopt increased water efficiency standards (amongst other measures) is recognised by the

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<sup>17</sup> 4.1.5.1 of Staffordshire Climate Change Adaptation & Mitigation - Final Report

<sup>18</sup> Table 3.3 of Staffordshire Climate Change Adaptation & Mitigation - Final Report

<sup>19</sup> 4.1.5.1 of Staffordshire Climate Change Adaptation & Mitigation - Final Report

<sup>20</sup> West of England Carbon Reduction Requirement Study - Carbon offsetting in the West of England (April 2019)

<sup>21</sup> Page 25 - West of England Carbon Reduction Requirement Study - Carbon offsetting in the West of England (April 2019)

<sup>22</sup> <https://www.gov.uk/government/publications/valuing-greenhouse-gas-emissions-in-policy-appraisal/valuation-of-greenhouse-gas-emissions-for-policy-appraisal-and-evaluation>

<sup>23</sup> <https://www.gov.uk/government/publications/valuing-greenhouse-gas-emissions-in-policy-appraisal/valuation-of-greenhouse-gas-emissions-for-policy-appraisal-and-evaluation>

Environment Agency. In a speech in 2019<sup>24</sup>, the head of the Environment Agency warned that within the next 20/25 years it was anticipated that the country would reach the ‘jaws of death’ – the point at which water supply would not be enough to meet the country’s needs. A key measure the speech highlighted to avoid this from happening was to aim for much higher levels of water efficiency, highlighting a standard of 100 litres per person per day. A later Environment Agency speech from 2021<sup>25</sup> highlighted that water companies endorsed a target of 110 litres of water per person per day at a national level, indicating that there is a need to achieve a standard equivalent to the ‘optional’ Building Regulations Part G across the country.

- 6.15 At a local level, the Final Study recognises that there are CO2 emissions associated with the treatment and supply of water and that its availability will become a more pressing issue over time due to the pressures climate change will create on water supply<sup>26</sup>. Given the likely increases in water stress under future climate change projections, the Final Study recommended that local plans across Staffordshire should require all new residential development to meet the water efficiency requirements in Building Regulations Part G (110 litres of water per person per day) as a minimum.
- 6.16 Correspondence with the Environment Agency and Severn Trent Water officers in the preparation of the local plan has also indicated that both bodies support the need for South Staffordshire to adopt the higher water efficiency standard of 110 litres per person per day. Indeed, Severn Trent Water currently offer financial incentives for housebuilders to go beyond this standard within their region, targeting a rate of 100 litres per person per day<sup>27</sup>. This pressing local need is further reinforced by the Environment Agency’s 2021 areas of water stress classification, which identified the regions served by Severn Trent Water and South Staffordshire Water as being within serious water stress (the highest level of water stress under the classification)<sup>28</sup>.

### Renewable Energy

- 6.17 South Staffordshire currently has a total generation of 36,227 MWh/year from renewable and low carbon energy, with a total of 57.2 MW low or zero carbon electricity capacity installed as at the end of 2018. In terms of total generation, the two biggest sources of renewable and low carbon energy are solar photovoltaics (18,283 MWh/year), followed by onshore wind (8,659 MWh/year)<sup>29</sup>. Currently there is only one large scale wind turbine installation in South Staffordshire (Rodbaston

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<sup>24</sup> <https://www.gov.uk/government/speeches/escaping-the-jaws-of-death-ensuring-enough-water-in-2050>

<sup>25</sup> <https://www.gov.uk/government/speeches/drought-risk-in-the-anthropocene-from-the-jaws-of-death-to-the-waters-of-life>

<sup>26</sup> 3.1.3.4 of Staffordshire Climate Change Adaptation & Mitigation - Final Report

<sup>27</sup> <https://www.stwater.co.uk/building-and-developing/regulations-and-forms/application-forms-and-guidance/infrastructure-charges/>

<sup>28</sup> <https://www.gov.uk/government/publications/water-stressed-areas-2021-classification>

<sup>29</sup> Table 4.9 of Staffordshire Climate Change Adaptation & Mitigation - Baseline Report

College) and three large scale solar farms (Jaguar Land Rover, Barr Farm and Land East of Lawn Lane)<sup>30</sup>.

- 6.18 Within the wider County, the level of current renewable energy generation is equivalent to only 10% of Staffordshire’s electricity demand. Theoretically, meeting 100% of Staffordshire’s current electricity needs would require between 4,874ha and 20,000ha of land being given over to solar farms and/or wind turbines<sup>31</sup>. This evidences the significant gap between electricity demand and renewable energy infrastructure in the district, which is only set to get more acute as electric vehicle infrastructure and non-fossil fuel heating become more common and electricity demand increases. Reflecting this and the geographically constrained nature of some local authorities<sup>32</sup>, the Final Report recommends that, when planning for large-scale renewables, Staffordshire local authorities should consider the need to meet energy demands within their own area as well as the energy demands of neighbouring areas<sup>33</sup>.
- 6.19 Recognising the substantial shortfalls existing between supply and demand, the Final Report recommended that decentralised renewable energy generation and/or battery storage should be increased from all new developments<sup>34</sup>. It also recommended increasing support for low and zero carbon energy generation across the district and in particular increasing support for onshore wind generation<sup>35</sup>, proposing a range of policy options that could be considered to deliver this:
1. Designate the entire area as being ‘strategically suitable’ for wind energy;
  2. As above, but create exceptions for specific areas or sites;
  3. Designate specific sites for wind energy development;
  4. Do not designate specific sites, leaving this to the Neighbourhood Planning process;
- or
5. Do not designate specific sites and clarify that wind is not suitable.
- 6.20 The Final Report recommended that the whole area should be identified as strategically suitable for wind energy subject to acceptability criteria (i.e. Option 1), given the need for a significant step-change in renewable energy generation whilst also recognising the need for local criteria for acceptability. This recognised that there is no technical basis for the current levels of restriction on wind development in Staffordshire and that there is considerable wind resource across the County<sup>36</sup>. It also

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<sup>30</sup> Table 4.4 of Staffordshire Climate Change Adaptation & Mitigation - Baseline Report

<sup>31</sup> 4.1.3.1 of Staffordshire Climate Change Adaptation & Mitigation - Final Report

<sup>32</sup> For example, there is relatively limited land in Cannock Chase and Tamworth as they are small and relatively built up areas

<sup>33</sup> 4.1.5.4 of Staffordshire Climate Change Adaptation & Mitigation - Final Report

<sup>34</sup> 4.1.5.1 of Staffordshire Climate Change Adaptation & Mitigation - Final Report

<sup>35</sup> 4.1.5.2 of Staffordshire Climate Change Adaptation & Mitigation - Final Report

<sup>36</sup> Page 5 of Staffordshire Climate Change Adaptation & Mitigation - Final Report



reflects the fact that previous climate change evidence base studies in the County had set an overly restrictive set of criteria limiting wind development to certain areas which were not reflective of the actual feasibility or suitability of specific areas for wind<sup>37</sup>.

- 6.21 Batteries are also acknowledged in the evidence base as a key component in supporting the transition to a zero carbon grid. This is because of the intermittent nature of renewable supply and the need to ensure that sufficient supply is stored for peak periods, avoiding shortages of supply against demand. The Final Report anticipates that large-scale battery systems will become an essential part of energy generation infrastructure and that this should be noted by local authorities<sup>38</sup>.
- 6.22 Biomass had been historically supported as a fuel source in Staffordshire's previous climate change evidence base. However, the Final Report reviewed this position in light of more recent national evidence and came to the conclusion that local support for biomass energy should be reviewed in light of concerns around sustainable sourcing and air quality impacts. Specifically, recommendations of the Climate Change Committee indicated that without improved governance, biomass could be worse for the climate than using fossil fuels<sup>39</sup>. Given this context, the Final Report recommended that biomass combustion technologies should not be adopted in a widespread manner in Staffordshire and that a more appropriate use of biomass may be as a carbon sink in construction. The Final Report indicated that the most appropriate source of biomass as fuel is likely to be where there is an existing source of waste biomass, but only where waste reduction measures are also in place. An example of this would be anaerobic digestion plants that are co-located with agricultural facilities that have a high energy demand<sup>40</sup>.

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<sup>37</sup> 4.1.2.1 of Staffordshire Climate Change Adaptation & Mitigation - Final Report

<sup>38</sup> 4.1.4.2 of Staffordshire Climate Change Adaptation & Mitigation - Final Report

<sup>39</sup> Committee on Climate Change, 'Biomass in a Low Carbon Economy' (2018). Available at: <https://www.theccc.org.uk/wpcontent/uploads/2018/11/Biomass-in-a-low-carbon-economy-CCC-2018.pdf>

<sup>40</sup> 4.1.2.10 of Staffordshire Climate Change Adaptation & Mitigation - Final Report

## Summary of key conclusions from local and national evidence

### Sustainable construction

- Multiple reports from the Climate Change Committee and a cross party report from the Environmental Audit Committee indicate the government's intended date for implementing the Future Home Standard (2025) must be brought forward and that additional policies are required to address lifecycle emissions
- The Climate Change Committee and independent academic research both suggest that the government's current policy trajectory for decarbonising new build housing stock is insufficient both in terms of failing to incentivise non-fossil fuel heating quickly enough and in terms of meeting the 1.5C warming limit necessary to avoid the worst effects of climate change
- Local Staffordshire-wide evidence suggests that Councils should be setting a zero carbon homes policy and should address lifecycle emissions and known performance gap issues in new policy
- The Environment Agency have consistently stated an enhanced water efficiency standard is required at a national level and have identified South Staffordshire as an area of severe water stress
- Local Staffordshire-wide evidence and discussions with Severn Trent Water and the Environment Agency all support the need for an enhanced water efficiency standard

### Renewable energy

- Government net zero and energy strategies require a sustained increase in the deployment of both onshore wind and solar in the 2020s and beyond, setting a target for a five-fold increase in the deployment of solar energy by 2035
- Local Staffordshire-wide evidence indicates that decarbonising Staffordshire's electricity grid would require at least a ten fold increase in renewable energy generation, which would primarily be made up of increases in solar and wind technologies
- Local evidence recommends that in-principle support is given across all areas of Staffordshire for renewable energy schemes, including onshore wind, and that decentralised renewable energy supply should be sought from all new developments

## 7. Proposed policy approaches in the Local Plan Review Publication Plan

### Sustainable Construction

- 7.1 The NPPF requires the planning system to shape places in a way which contributes to radical reductions in greenhouse gas emissions. Local evidence suggests that residential buildings are one of the district's largest sources of emissions, and as the overwhelming majority of development in the Local Plan Review is for residential

purposes, failure to set appropriately stringent standards could lead to significant increases in emissions in the future.

- 7.2 Planning Practice Guidance includes a requirement that local plan standards should not exceed Code for Sustainable Homes level 4 standards (equivalent to a 19% reduction in CO<sub>2</sub> emissions vs 2013 Part L). This guidance was based on a stance set out in a 2015 Written Ministerial Statement.
- 7.3 However, since this guidance was introduced two subsequent NPPF updates (2019 and 2021) have occurred, neither of which have restated this requirement for dwelling standards not to exceed Code for Sustainable Homes level 4, which has already been superseded by building regulation updates in 2022. Despite planning to supersede Code for Sustainable Homes Level 4 in 2022 Part L Building Regulation updates, the government has nonetheless confirmed that it will not enact powers to limit Council's abilities to exceed the building regulation Part L standards. This implicitly suggests that it is acceptable for local authorities to exceed the carbon reduction standards set out in current Building Regulations, and indeed many local authorities have already had policies in excess of Code for Sustainable Homes Level 4 found sound and adopted in plans<sup>41</sup>.
- 7.4 The national government has also declared a Climate Emergency and a legally binding deadline for reaching net zero by 2050 since the PPG paragraph limiting Council's to Code for Sustainable Homes Level 4 was introduced and this paragraph does not appear to have been altered to reflect this commitment. This is despite more recent evidence from the Climate Change Committee's 2021 and 2022 reports suggesting that there is a significant risk that the implementation of the Future Homes Standard in 2025 will fall behind the emissions pathway needed to achieve net zero by 2050. This is supported by academic research regarding the government's wider housing policy. There is also clear evidence and recommendations in the Staffordshire Climate Change Study 2020 that supports South Staffordshire going beyond the energy efficiency standards set out in the Building Regulations and which encourages all developments to provide onsite renewable generation given the very significant shortfall in renewable supply vs grid demand in Staffordshire.
- 7.5 Taking all of this together, there is a clear and compelling case for the Local Plan Review to set carbon reduction standards for new dwellings that go beyond the building regulations and the current trajectory for implementing the government's

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<sup>41</sup> The Code for Sustainable Homes level 4 implies around a 19% reduction in carbon emissions against the 2013 Building Regulations. In contrast, the adopted 2019 Reading Local Plan Policy H5 requires all major new build residential development to be designed to achieve zero carbon homes (i.e. a 100% reduction). Policy SI 2 of the adopted London Plan 2021 requires major development to be net-zero carbon, with at least 35% of this reduction achieved on site and 10% to be done through energy efficiency measures. The Oxford Local Plan 2016-2036 requires at least a 40% reduction in carbon emissions against the 2013 Building Regulations through on-site renewables and/or energy efficiency measures.

Future Homes Standard. The Staffordshire Climate Change Study 2020 provides a range of options, including standards which consider unregulated emissions and operational energy use targets. The Council considers that a proportionate response is to set a target for all residential development of net zero regulated carbon for new residential development. This will be delivered through the following policy:

### **Policy NB6 – Sustainable construction**

#### Residential development carbon reduction and water efficiency standards

New development of one or more new dwellings must achieve net zero regulated carbon emissions. In achieving this all schemes must demonstrate application of the energy hierarchy through submission of an energy statement showing compliance with all of the following:

**(a)** A minimum 63% reduction in carbon emissions is achieved by on-site measures compared to the relevant baseline rates set by Building Regulations Part L 2021. In achieving this, schemes must demonstrate at least a 10% improvement on the Part L 2021 Target for Fabric Energy Efficiency and must not include fossil fuel-based heating systems or be connected to the gas grid.

**(b)** Once minimum improvements in fabric efficiency and carbon reduction in (a) are delivered, additional on-site renewable energy generation must be provided, or connections made to on or near site renewable/low-carbon community energy generation and storage networks. Any such measures must be sufficient to achieve at least zero regulated carbon across the scheme and schemes should also look for opportunities to go beyond this standard where feasible. If full compliance is not achieved proposals must demonstrate how such technologies have been provided to the greatest extent feasible.

**(c)** For major developments, any remaining residual regulated carbon emissions which demonstrably cannot be addressed via on or near site renewable technologies must be offset. Offsetting will only be considered an acceptable alternative to renewable energy generation in meeting net zero carbon requirements if it can be demonstrated that the necessary emission reductions achieved via renewable energy generation are demonstrably unfeasible. Offsetting will be delivered via an in lieu financial contribution to the District Council's carbon offsetting fund and/or at the Council's discretion, a verified local off-site offsetting scheme which is guaranteed and meets relevant national and industry standards. Any offsetting sum must reflect 30 years of residual emissions arising from the development. The carbon offset price is the latest central figure from the nationally recognised non-traded valuation of carbon, set through the Treasury Green Book.

All residential schemes' energy statements must also show compliance with a water efficiency standard of 110 litres/person/day. Water reuse and recycling and rainwater harvesting should be incorporated wherever feasible to reduce demand on mains water supply, subject to viability.

#### Non-residential development carbon reduction standards

New development of 1,000sqm or more of new non-residential floorspace should demonstrate application of the energy hierarchy through submission of an energy statement which meets all of the following:

**(a)** Demonstrates compliance with the latest BREEAM 'Excellent' standard as a minimum, targeting compliance with BREEAM 'Outstanding' wherever possible;

**(b)** Whilst achieving compliance with the standards in (a), priority must be given to maximising credits achieved under BREEAM criteria Ene01 in all cases;

**(c)** Demonstrates the fullest viable use of onsite renewable energy generation measures to meet operational energy demand from the scheme.

#### Embodied carbon and closing the performance gap

All major development must also demonstrate in the energy statement how the embodied carbon of the proposed materials to be used in the development has been considered and reduced where possible, including with regard to the type, life cycle and source of materials to be used. Proposals for development of 50 dwellings or more or 5,000sqm or more of new non-residential floorspace must be accompanied by a nationally recognised Whole Life Carbon Assessment and demonstrate actions to reduce life-cycle carbon emissions.

For all major residential and non-residential developments, applicants must also implement a recognised quality regime that ensures the 'as built' performance (energy use, carbon emissions, indoor air quality, and overheating risk) matches the calculated design performance of dwellings as specified above. This will be secured via planning conditions. Developers must ensure that a recognised monitoring regime is put in place to allow the assessment of energy use, indoor air quality, and overheating risk for 10% of the proposed dwellings for the first five years of their occupancy, and ensure that the information recovered is provided to the applicable occupiers and the planning authority.

#### Retrofit

Proposals which would result in considerable improvements to the energy efficiency, carbon emissions and/or general suitability, condition and longevity of existing buildings will be supported, with significant weight attributed to those benefits.

7.6 For residential developments, the proposed policy approach exceeds the standards proposed in the Preferred Options 2021 consultation. This recognises that the previous standards would fail to exceed the Building Regulations to any meaningful extent. It also reflects the national evidence summarised above which suggests there is an urgent need to increase carbon reductions and non-fossil fuel heating in new developments and acknowledges that the government has continued to confirm local authorities' abilities to continue to exceed standards set in Building Regulations.

7.7 This standard set in the policy aims to deliver net zero regulated emissions across all new dwellings. This aligns with one of the recommended approaches in the

Staffordshire Climate Change Study 2020 and targets more ambitious carbon reduction standards towards the greatest source of new allocations in the Local Plan Review (i.e. new residential dwellings). The policy is designed to prioritise onsite measures that follow the energy hierarchy by first reducing demand to the fullest extent possible through high levels of fabric efficiency and non-fossil fuel heating, then delivering on or near site renewable sources and only allowing offsetting once these other avenues have been fully explored and are shown to not be feasible.

- 7.8 To deliver this a minimum reduction of 63% reduction in carbon emissions against 2021 Building Regulations Part L needs to be achieved via on-site measures, to ensure that new dwellings achieve similar on-site reductions equivalent to the upcoming Future Homes Standard as a minimum. To avoid the risk of new dwellings achieving these carbon reductions without genuine improvements to the energy efficiency of dwellings (against 2022 Part L) a minimum uplift of 10% against the Target Fabric Energy Efficiency Rate set by Part L 2021 has been proposed. This reflects the anticipated uplift between the 2022 Part L and the 2025 Future Homes Standard. The introduction of this additional measure is designed to ensure that developers do not achieve the minimum carbon reduction required without further improvements to a building's fabric efficiency (e.g. U values, airtightness). This risk was recognised by the government in their 2021 response to the Future Homes Standard consultation, where the Fabric Energy Efficiency Standard was retained as a key metric, so it is important that any local plan policy on this reflects a similar fabric-first approach to effectively reduce emissions from new homes.
- 7.9 The choice to focus solely on regulated emissions of new dwellings rather than all operational emissions reflects both the need to balance development viability with new policy standards and the fact that regulated emissions are measured through a widely understood metric (the Standard Assessment Procedure). The use of such a widely used and nationally recognised measure allows greater clarity and certainty for all developers applying the policy and aligns with the intentions of the Planning and Energy Act 2008, which required energy efficiency standards exceeding Building Regulations to be set with reference to national guidance.
- 7.10 It is recognised that some Councils<sup>42</sup> are proposing more ambitious carbon reduction standards that respond to the need to reduce both regulated and unregulated emissions in order to deliver truly net zero development. There is also a longer term ambition from the government to expand the Future Homes Standard to incorporate operational emissions and embodied carbon, although no proposals or clear timescales are currently in place to achieve this. The Council will monitor the progress of carbon reduction targets and metrics around the country and may consider setting higher emission reduction targets through early reviews of the Local Plan or separate

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<sup>42</sup> For example, the emerging Greater Cambridge Local Plan and the Cornwall Climate Emergency DPD

DPDs if there is a compelling case that higher standards are needed and are more feasible in the district in future.

- 7.11 With non-residential dwellings, the proposed approach to set a minimum BREEAM standard of 'Excellent' reflects the recommendations of the Staffordshire Climate Change Study 2020, which proposed this as a minimum standard and stressed the importance of maximising credits under BREEAM criteria Ene01<sup>43</sup> in achieving this, recognising that BREEAM is a wholistic assessment procedure covering numerous areas, many of which have limited direct relevance to carbon reduction. This recommendation has been reflected in the policy, recognising the benefits of using a nationally recognised assessment framework for non-domestic buildings that is commonly used in local plans throughout the country and has been historically used to assess proposals in the district.
- 7.12 A requirement for whole lifecycle assessments of embodied carbon has been included for both residential and non-residential schemes. Recognising the complex and comprehensive nature of such assessments, these have only been required on larger schemes, ensuring that small developments less able to access the expertise required to undertake such assessments are not disadvantaged. This balances the importance of emissions reductions with the need to encourage delivery on small housing sites (<1 hectare) and to support growth in the SME sector.
- 7.13 At this stage the policy primarily focuses on requiring calculation and reporting of embodied carbon without setting specific reduction targets for this source of emissions. This acknowledges that there is less consistent widespread use of whole lifecycle assessments in the development sector at this point in time, meaning that there is no nationally defined target for reducing embodied carbon associated with new development and limiting the usefulness of a consistent target set in planning policy. This position will be reconsidered either in early reviews of the Local Plan Review or separate DPDs as national work on embodied carbon progresses and emerging best practice regarding emission reductions may be expanded upon in an SPD to support the Local Plan.
- 7.14 Carbon offsetting has been proposed for residential schemes to ensure that residential development can achieve net zero regulated carbon in instances where addressing all remaining regulated emissions through on and near site renewable energy sources is not feasible (e.g. due to a buildings orientation and roof space being unable to accommodate sufficient solar PV). This reflects the recommendations of the Staffordshire Climate Change Study 2020, which indicates that there are numerous

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<sup>43</sup> Reduction of energy use and carbon emissions

opportunities to reduce carbon emissions using funds obtained through a carbon offsetting scheme.

- 7.15 The policy requires a 30 year period to be used for carbon offsetting as is common across many other local authorities. Prices are proposed to follow the nationally set price of carbon from the Treasury Green Book, which currently stands at £248 per tonne of CO<sub>2</sub> in 2022 and is projected to increase in future years. The use of this nationally set price ensures clarity for developers and reflects the latest evidence on carbon prices at a national level. Whilst significantly higher than prices currently set out in some other existing local plans<sup>44</sup>, these existing local plans do not reflect recent changes to the methodology for national carbon pricing in 2021. It is also important to avoid disincentivising on-site renewable energy generation by making offsetting a significantly cheaper alternative to on-site measures. Research highlighted above indicates current carbon prices used in other local plans will disincentivise on-site measures once the carbon factors in SAP10 are introduced, so it is important that the proposed policy does not set carbon prices so low as to create a similar situation in South Staffordshire.
- 7.16 Recognising that the performance gap is a significant issue for all new buildings, requirements for major developments to monitor post-completion building performance and report these to the Council have been introduced, focusing on key criteria likely to affect buildings' ability to mitigate and adapt to climate change (energy use, carbon emissions, indoor air quality, and overheating risk).
- 7.17 Water efficiency and conservation measures have also been included as part of wider measures to reduce emissions from new construction and to adapt to the effects of climate change. This approach recognises the district's location within an area of severe water stress, the recommendations of the Council's evidence base, the Environment Agency and Severn Trent Water's support for such measures to be included within the plan and the demonstrable national need for all areas to adopt such measures to avoid severe water stress by the end of the plan period. These have been based on the optional technical standards for water efficiency set out in the Planning Practice Guidance, recognising the need to adopt these where higher standards are sought.

#### Renewable energy projects

- 7.18 Taking all national and local evidence together, there is a clear and compelling case for the Local Plan Review to review its renewable energy generation policies, particularly to encourage wind and solar where appropriate, to ensure they support a genuine

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<sup>44</sup> E.g. £95 per tonne of CO<sub>2</sub> in the London Plan



step-change in supply within the wider Staffordshire area. The Council considers that a proportionate response is to revise the policy as follows:

### **Policy NB5 - Renewable and low carbon energy generation**

The development of renewable or sustainable energy technologies and complementary infrastructure will be supported throughout the District, subject to conformity with other local plan policies. Such technologies include solar, wind, district heating, hydroelectricity, ground source heat and complementary battery storage schemes. In considering the impacts of a scheme the cumulative impact of the proposed development will be considered along with other planned, committed or completed development.

In addition to conformity with other local plan policies, solar energy proposals must also demonstrate that:

- (a)** That the use of agricultural land is necessary and no alternative available and suitable previously developed site within the District can accommodate a scheme of similar scale. The area of search considered should have regard to a viable connection (in distance) to the National Grid;
- (b)** If (a) is satisfied but the scheme is on Best and Most Versatile Agricultural Land, that there are no alternative sites on lower grade agricultural land that could accommodate the scheme; and
- (c)** That the proposal has considered opportunities for continued agricultural use (where feasible) and will maximise biodiversity benefits around arrays.

In the case of wind energy proposals, the whole of the District is designated as an area of search suitable for wind energy development. In addition to conformity with other local plan policies, wind proposals must also demonstrate that:

- (a)** The development does not create a potential hazard to the public, including users of highways, footpaths, bridleways or other public rights of way;
- (b)** The development does not interfere with telecommunication paths or air traffic services including those associated with the military;
- (c)** They do not have an overshadowing or overbearing effect on nearby habitations;
- (d)** The development avoids or adequately mitigates shadow, flicker, noise and any other adverse impact on amenity; and
- (e)** Following consultation, it can be demonstrated that the planning impacts identified by affected local communities have been fully addressed.

Within the District's Green Belt, elements of many renewable energy schemes may comprise inappropriate development and in all such cases schemes must demonstrate very special circumstances in order to be granted permission. Benefits of schemes relevant in considering whether very special circumstances exist may include (but are not limited to) the wider environmental benefits associated with increased production of energy from renewable sources.

7.19 Government strategies highlighted earlier in this paper set out the need for a rapid change in renewable energy supply, indicating that the grid will need to be

decarbonised by 2035 and that significant growth in onshore wind and solar will be parts of the overall strategy necessary to achieve this. Equally, the Staffordshire Climate Change Study 2020 highlights the need to facilitate a rapid step-change in renewable supply, highlighting wind and solar as two key technologies that would be technically deliverable within the County to achieve this. With this background in mind the policy has been written to make it clear that the Council will encourage renewable energy schemes across the district where appropriate and has provided key criteria to direct the schemes with the greatest potential to reduce the district's grid emissions (i.e. wind and solar). This responds to the recommendations of the Staffordshire Climate Change Study 2020, specifically those regarding the area of search suitable for wind energy.

- 7.20 The criteria for solar proposals acknowledge that the majority of the district is classified as Best and Most Versatile Agricultural Land<sup>45</sup> and seek to encourage schemes towards either previously developed land or areas of lower agricultural land classification where possible. This responds to the significant land-take of solar schemes and the need to protect the district's agricultural land resource as far as possible. It also seeks to maximise biodiversity benefits on new solar sites, recognising that these schemes present unique opportunities to deliver higher levels of biodiversity enhancement. The criteria for wind proposals seek to mitigate the specific amenity and safety impacts raised by wind turbines, ensuring that schemes consider these specific impacts at an early stage. The policy also highlights the need to fully address the concerns of the local community in any proposed scheme, recognising the government's emphasis on the need to achieve community support for wind turbines.

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<sup>45</sup> <http://publications.naturalengland.org.uk/publication/130044?category=5954148537204736>

## Glossary

**Climate Change Committee** – An independent, statutory body established under the Climate Change Act 2008 whose purpose is to advise the UK and devolved governments on emissions targets and to report to Parliament on progress made in reducing greenhouse gas emissions and preparing for and adapting to the impacts of climate change.

**Embodied carbon/lifecycle emissions** – The carbon emissions associated with the extraction and processing of materials and the energy and water consumption used by the factory in producing products and constructing the building. It also includes the ‘in-use’ stage (maintenance, replacement, and emissions associated with refrigerant leakage) and ‘end of life’ stage (demolition, disassembly, and disposal of any parts of product or building) and any transportation relating to the above.

**Fossil fuel** - A natural fuel such as petroleum, coal or gas, formed in the geological past from the remains of living organisms. The burning of fossil fuels by humans is the largest source of emissions of carbon dioxide, which is one of the greenhouse gases that allows radiative forcing and contributes to global warming.

**Offsetting** - Offsetting is the process of compensating for the remaining carbon emissions balance by contributing, usually financially, towards solutions to reduce emissions elsewhere.

**Performance gap** - This term refers to the discrepancy between energy predictions at design stage, compared to in-use energy consumption of buildings.

**Regulated carbon emissions** – Emissions measured through the Building Regulations Standard Assessment Procedure, which are typically associated with a building’s fixed installations for heating, hot water, cooling, ventilation, and lighting systems.

**Renewable energy** - Renewable energy technologies use natural energy sources to generate electricity and/or heating/cooling. Sources include solar, wind, wave, marine, hydro, etc..

**Unregulated carbon emissions** – Emissions generated by a building that are outside of the scope of Building Regulations, e.g. through use of energy associated with equipment such as fridges, washing machines, TVs, computers, lifts, and cooking.

**Whole Life Carbon Assessment** – A full assessment of the carbon emissions resulting from the materials, construction and the use of a building over its entire life, including its demolition and disposal.

## Appendix 1: Government ambitions and policy progress evaluated in Climate Change Committee (CCC): Progress in reducing emissions - 2021 Report to Parliament

The below tables summarise key areas of the latest CCC report on government progress to reduce greenhouse gas emissions. Key sectors relevant to the planning system (e.g. surface transport, buildings, electricity supply) are summarised.

<b>Surface transport</b>			
Abatement source	Ambition	Policy progress	Rationale
Zero-emission cars	Potentially on track	Some action but risk of falling behind	The confirmation of a 2030 phase-out date is a welcome step, but policy is lacking for how to deliver it. The market share of new battery electric cars reached 6.5% in 2020, up substantially from 1.6% in 2019.
Demand-side behaviour change and modal shift	Some action but risk of falling behind	Some action but risk of falling behind	Despite the recent ‘Gear Change’ and ‘Bus Back Better’ strategies, Government focus on reducing the need to travel and increasing car occupancy is lacking. Substantial road-building investment continues and car demand is increasing.
<b>Buildings</b>			
Abatement source	Ambition	Policy progress	Rationale
Residential – low carbon heat in existing homes	Some action but risk of falling behind	Falling behind	UK Government has only set a clear fossil phase-out ambition for homes off the gas grid i.e. 15% of all homes. 600,000 heat pumps a year committed to by 2028, which is below the 900,000 required in the CCC pathway. Insufficient financial support planned for heat pumps or low-carbon heat networks.
Residential – energy efficiency and low-carbon heat in new homes	Potentially on track	Some action but risk of falling behind	Uplifts in buildings standards announced, but ambition lags for energy efficiency and airtightness, and legislation is not planned until 2024. Risks policy design may not drive heat pump uptake needed from 2021 – heat pumps were installed in 5% of new homes in 2020, far behind the 20% level required by 2021 in the CCC pathway.
Residential – energy efficiency	Potentially on track	Falling behind	Success contingent on a comprehensive framework of standards, Energy Performance Certificates and Standard

in existing homes			Assessment Procedure (SAP) being made fit for purpose to drive the right measures, and on a successor to the Green Homes Grant. Installations of loft and solid wall insulation are only a third of the rate needed by 2021 in the CCC pathway.
Non-residential – energy efficiency and behaviour change	Fully on track	Some action but risk of falling behind	Commitments of 20% efficiency savings in business and 50% reduction of public emissions by 2032 are in line with the CCC pathway. Policy proposals only cover private-rented and larger buildings to date and there is little evidence for reduced energy demand at present.
<b>Electricity supply</b>			
Abatement source	Ambition	Policy progress	Rationale
Offshore wind	Fully on track	Fully on track	The Government’s 40 GW target for 2030 is stretching, and Contracts for Difference (CfDs) have been working well to deliver capacity, though clarity is needed on the auction schedule and pathway of volumes to be procured to 2030.
Other renewables	Some action but risk of falling behind	Fully on track	While onshore wind and solar are now eligible for CfDs, there is no clear medium- to long-term ambition. CfDs are a proven policy for delivering new capacity, but clarity is needed on the auction schedule and pathway of volumes to be procured to 2030.
Nuclear	Some action but risk of falling behind	Some action but risk of falling behind	Government has made a commitment for at least one further plant and recognises the potential for advanced nuclear innovation. The CCC pathway assumes two large-scale plants are operational by the mid-2030s. Further clarity is needed on contracting models, and deployment of already contracted capacity is falling behind schedule.
Dispatchable low-carbon generation	Some action but risk of falling behind	Some action but risk of falling behind	Government has committed to deliver at least one Power CCS project by 2030 but there is no equivalent for hydrogen, both of which fall short of the CCC pathway. No commercial deployment but trials are underway globally.

Source: Progress in reducing emissions - 2021 Report to Parliament (Climate Change Committee June 2021)