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Royal Town Planning Institute

# PLACE-BASED APPROACHES TO CLIMATE CHANGE

Opportunities for collaboration  
in Local Authorities

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# The Royal Town Planning Institute (RTPI)

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## About this paper

This paper advocates for a place-based approach to the climate and ecological emergency, exploring how in house collaborative working across local authority departments deliver place-based approaches to the climate emergency. A particular focus is given to joint working between planners and climate and sustainability officers to demonstrate how a consideration of climate change can be mainstreamed in planning and vice versa. The report reflects briefly on the ongoing challenges in delivering place-based climate action.

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# Executive Summary

In our 2020 report ‘Strategic Planning for Climate Resilience’<sup>1</sup> we highlighted the crucial role of Combined Authorities and Local Authorities in delivering a cross sector approach to climate adaptation which recognises the importance of cross-border collaboration. This research paper will focus on the importance of a ‘place-based’ approach to climate change, this time exploring how collaborative working between in house specialists in local authorities can mainstream climate action within planning and vice versa. The research will pay particular attention to collaboration between planners and climate and sustainability officers but recognises that this working relationship exists within the context of cross departmental collaboration to address climate change in a holistic way.

The report explores how embedding planning and climate change in a place-based approach can help Local Authorities achieve the recommendations set by the CCC in their report ‘Local Authorities and the Sixth Carbon Budget’<sup>2</sup>.

The report is based on virtual interviews with climate and sustainability officers and planners in Local Authorities across the UK and desk based research. The research highlights both the scale of the challenge but also provides positive examples of the progress that is being made.

The research suggests that while there are significant opportunities for joint working between planning officers and climate and sustainability colleagues, there is also a skills and knowledge gap within the planning profession that needs to be addressed so planners can play a leading role in the place-based response to the climate and ecological emergency from within local authorities.

The case studies in this research focus on examples of local strategies and interventions to tackle climate change, and signpost the important co-benefits such as improving biodiversity.

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<sup>1</sup> RTPI (2020) ‘[Strategic Planning for Climate Resilience](http://bit.ly/3asIRJC)’, available here: <http://bit.ly/3asIRJC>

<sup>2</sup> CCC (2020), [Local Authorities and the Sixth Carbon Budget](https://bit.ly/3cFiaUR), available here: <https://bit.ly/3cFiaUR>

# 1. The Climate and Ecological Emergency

## A Changing Climate

Climate change is one of the biggest challenges facing our society. The UN Paris agreement, adopted in 2015, sets out to limit warming to less than 2 degrees temperature increase above pre-industrial levels. However, the latest science warns that we should be aiming to keep warming below 1.5 degrees if we are to avoid the worst climate impacts.<sup>3</sup>

The potential changes for the UK until 2100 are illustrated by the UK Climate Projections 2018<sup>4</sup>. These show that the UK is projected to see increasing summer temperatures, more extreme weather and rising sea levels. The high emissions scenario (which closely parallels the current global emissions trajectory) shows:

- Summer temperatures could be up to 5.4°C hotter by 2070, while winters could be up to 4.2°C warmer.
- Sea levels in London could rise by up to 1.15 metres by 2100.
- Average summer rainfall could decrease by up to 47 per cent by 2070, while there could be up to 35 per cent more precipitation in winter.

As well as a climate emergency, we are also in the middle of an ecological emergency. Both are connected and should be tackled together. Climate change has exacerbated the impact of habit loss and the fragmentation of biodiversity.

The UN's fifth Global Biodiversity Outlook Report provides an overview on the current global state of nature. Published in September 2020, the latest report brought into stark reality the fact that the past ten years have been a lost decade for preventing biodiversity loss.<sup>5</sup> According to the report, none of the 20 'Aichi' biodiversity targets agreed in Japan in 2010 have been fully achieved. The same month in the UK, the Environment Agency revealed the poor state of English rivers with just 14% being classed as of 'good' 'ecological standard' and none of good 'chemical standard' due to pollution from sewage, chemicals and agriculture.<sup>6</sup> The RSPB's 2019 State of Nature Report revealed an ongoing loss of species in the UK, for example more than 40 million birds have disappeared from UK skies since

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<sup>3</sup> RTPI and TCPA (2018) [Rising To The Climate Crisis – A Guide For Local Authorities On Planning For Climate Change](http://bit.ly/3scvm91), Available here: <http://bit.ly/3scvm91>

<sup>4</sup> UK Met Office, [UK Climate Projections \(UKCP\)](http://bit.ly/3nApkv8), Available here: <http://bit.ly/3nApkv8>

<sup>5</sup> UNEP (2020), [The Global Biodiversity Outlook 5](http://bit.ly/2YPNMPb), Available here: <http://bit.ly/2YPNMPb>

<sup>6</sup> The Environment Agency, [Catchment Data Explorer](http://bit.ly/2YIPhih), available here: <http://bit.ly/2YIPhih>

1970<sup>7</sup> and estimates suggest that the UK has only half of its natural biodiversity left, putting it in the bottom 10% of all countries globally.<sup>8</sup>

As nature continues to be depleted, 'carbon sinks' such as forests and peatlands become degraded and start releasing carbon back into the atmosphere. Rapid climate change disrupts the delicate balance of the biosphere and can push certain earth systems such as retreat of ice sheets or coral dieback into abrupt or irreversible change.<sup>9</sup> Many ecosystems, from tropical forests to coral reefs, have already been degraded beyond repair, or are at imminent risk of 'tipping points'.<sup>10</sup>

However, introducing nature-based solutions such as ecosystem based adaptation and mitigation and green and blue infrastructure in addition to improving agricultural methods and environmental stewardship have the potential to provide up to 30% of the greenhouse gas mitigation required until 2030 to keep global warming to less than 2 degrees.<sup>11</sup>

## A Changing Social and Political Climate

2019 was recorded as the second hottest year on record (2016 was the hottest).<sup>12</sup> It was also a time of growing civil unrest on climate change with people taking to the streets in 'global climate strikes'.

In the UK, Extinction Rebellion began direct, disruptive action as a protest against the lack of action on climate change. A growing awareness of climate change was also reflected in election campaigns with the first ever televised debate between party leaders dedicated solely to their policies on climate change.<sup>13</sup>

In response to growing pressure, the Scottish and Welsh Government's declared a 'Climate Emergency', followed by the UK parliament.

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<sup>7</sup> Royal Society for the Protection of Birds (RSPB) (2019), [State of Nature Report](#), available here:

<http://bit.ly/3oMvTeV>

<sup>8</sup> PREDICTS, [Local Biodiversity Intactness Index](#), available here: <http://bit.ly/3oM2qld>

<sup>9</sup> Carbon Brief (2020), [Explainer: Nine 'tipping points' that could be triggered by climate change](#), accessed 3 January 2021, available here: <http://bit.ly/2YIJycb>

<sup>10</sup> HM Treasury (2021), [The Economics of Biodiversity: The Dasgupta Review](#), available here:

<http://bit.ly/3pRMdfF>

<sup>11</sup> Kooijman, E.D.; McQuaid, S.; Rhodes, M.-L.; Collier, M.J.; Pilla, F. [Innovating with Nature: From Nature-Based Solutions to Nature-Based Enterprises](#). Sustainability 2021, 13, 1263. Accessed February 4 2021.

[doi.org/10.3390/su13031263](https://doi.org/10.3390/su13031263)

<sup>12</sup> National Oceanic and Atmospheric Administration (NOAA) (2020), [2019 was 2nd-hottest year on record for Earth say NOAA, NASA](#), accessed 16 December 2020, available here: <http://bit.ly/2O6fghD>

<sup>13</sup> WILLIS, REBECCA. [Too Hot to Handle?: The Democratic Challenge of Climate Change](#). Bristol, UK; Chicago, IL, USA: Bristol University Press, 2020. Accessed February 4, 2021. doi:10.2307/j.ctvz938kb

In June 2019, parliament passed legislation requiring the government to reduce the UK's net emissions of greenhouse gases by 100% relative to 1990 levels by 2050.<sup>14</sup> The Scottish Government has set a target of reaching net zero emissions by 2045.<sup>15</sup> Currently there is no specific Northern Ireland climate change legislation. However, since December 2020, discussion has been under way regarding the development of policy proposals for a Northern Ireland specific Climate Change Bill and Northern Ireland have now also committed to introducing binding legislation and have been advised by the Committee on Climate Change (CCC) in the Sixth Carbon Budget<sup>16</sup> to cut emissions by at least 82% by 2050 to help the UK meet the net zero target. The Welsh Government have welcomed advice by the CCC that a net zero target by 2050 is also credible for Wales.<sup>17</sup>

To set out a pathway to reaching net zero, carbon budgets were introduced under the 2008 Climate Change Act. Each budget covers a five year time frame and sets a limit on emissions for that period, which should not be exceeded if we are to meet the 2050 target. The carbon budgets are set by Parliament on the advice of the CCC. So far, six carbon budgets have been set, with the sixth budget (announced in December 2020) being the first to be in line with a new net zero target.<sup>18</sup> After being adopted by central government, the budgets are expected to cascade down to Local Authorities to ensure their plans and policies reflect the budget. The Tyndall Centre for Climate Change Research have developed an online tool, allowing Local Authorities to calculate their own 'science-based' local carbon budgets. The Tyndall Centre targets are aligned with The Paris Agreement and equate to an average of 12-14% annual reduction in emissions for the majority of places in the UK.<sup>19</sup>

While the challenges and solutions to tackling greenhouse gas emissions are broadly similar across the UK, the policy levers needed to tackle climate change are fully or partially devolved across Scotland, Wales and Northern Ireland including in key areas such as encouraging active travel and public transport, providing infrastructure for electric vehicles and improving the energy efficiency of buildings and heating homes off the grid. Around a fifth of the UK's emissions come from Scotland, Wales and Northern Ireland and they have

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<sup>14</sup> UK Parliament House of Commons Library (2019), Research Briefing, [Net Zero in the UK](https://www.parliament.uk/research-briefings/cobrep/09427), available here: <http://bit.ly/3bslqCh>

<sup>15</sup> Scottish Government, Energy and Climate Change (2019), [Reaching net zero](https://www.gov.scot/publications/energy-climate-change-2019/pages/10-reaching-net-zero.aspx), available here: <http://bit.ly/3rrjFtX>

<sup>16</sup> Committee on Climate Change (CCC) (2020), [Sixth Carbon Budget](https://www.ccc.org.uk/analysis-and-scenarios/sixth-carbon-budget), available here: <http://bit.ly/3scW7tS>

<sup>17</sup> Welsh Government (2020), Press Release, [Welsh Government welcomes advice of Climate Change Committee to set a net zero target for Wales – but “everyone needs to play their part” to respond to the climate and nature emergency](https://www.gov.wales/news-and-articles/press-releases/welsh-government-welcomes-advice-of-climate-change-committee-to-set-a-net-zero-target-for-wales-but-everyone-needs-to-play-their-part-to-respond-to-the-climate-and-nature-emergency), accessed 3 January 2021, available here: <http://bit.ly/3saWSDM>

<sup>18</sup> London School of Economics (LSE) (2020), [Explainers: What are Britain's Carbon Budgets?](https://www.lse.ac.uk/PolicyInsights/articles/2020/12/01/explainers-what-are-britains-carbon-budgets/), accessed 16 December 2020, available here: <http://bit.ly/2LiUWsd>

<sup>19</sup> RTPi (2021), [Net Zero Transport](https://www.rtpi.org.uk/news/net-zero-transport), available here: <http://bit.ly/3daHZfs>

an integral role to play in delivering the sixth carbon budget through setting ambitious policies, tailored to local needs.<sup>20</sup>

The UK has met the first and second carbon budgets and are on track to meet the third taking us to 2022, however the UK's current policies and consumption of fossil fuels mean we are not on track to meet the fourth or fifth carbon budgets taking us to 2032. The Sixth Carbon Budget has yet to be legislated for.<sup>21</sup>

2020 surpassed 2019 as the second hottest year on record.<sup>22</sup> It was also a year which saw wildfires on an unprecedented scale from Australia to California to remote parts of the Arctic with their severity and frequency exacerbated by climate change.<sup>23</sup> The Covid-19 pandemic and the Black Lives Matter movement of 2020 has also highlighted the racism and inequality that is rooted in our current places and systems resulting in people experiencing shocks differently according to socio-economic status, race, age, culture and health, with disadvantaged places and communities being disproportionately more vulnerable.<sup>24</sup>

2021 must be the year we 'build back better', delivering a sustainable, green and inclusive recovery. As our campaign 'Plan the World We Need' highlights, planners and the planning profession will have a key role to play and centering climate justice within the profession is crucial.<sup>25</sup>

With the UK hosting COP26 in November 2021, the UK Government will be keen to showcase progress and best practice from across the UK in our drive to reach net zero, roll out adaptation measures and improve biodiversity.

This research paper provides examples of place-based approaches to climate change in Local Authorities and how collaborative working between planning and climate and sustainability officers in local authorities can promote joined up thinking, mainstreaming a consideration of climate change into planning and vice versa. The case studies focus on examples of local strategies and interventions to tackle climate change, and signpost the important co-benefits such as improving biodiversity.<sup>26</sup>

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<sup>20</sup> CCC (2020), [Sixth Carbon Budget](http://bit.ly/3scW7tS), available here: <http://bit.ly/3scW7tS>

<sup>21</sup> Committee on Climate Change, [Advice on reducing the UK's emissions](https://bit.ly/3q7bQZG), available here: <https://bit.ly/3q7bQZG>

<sup>22</sup> NOAA (2021), [2020 was Earth's 2nd-hottest year, just behind 2016](http://bit.ly/3axexNX), accessed 4 February, available here: <http://bit.ly/3axexNX>,

<sup>23</sup> Physics Today (2020), [What caused Australia's disastrous wildfires? It's complicated](https://bit.ly/2MTMY9o), accessed 2 November 2020, available here: <https://bit.ly/2MTMY9o>

<sup>24</sup> RTPi (2020), [Plan the World We Need](http://bit.ly/3i2aLzn), available here: <http://bit.ly/3i2aLzn>

<sup>25</sup> RTPi (2020), [Five Reasons for Climate Justice in Spatial Planning](http://bit.ly/2ZvpdaP), available here: <http://bit.ly/2ZvpdaP>

<sup>26</sup> DEFRA (2020), [UK Natural Capital Committee State of Natural Capital](http://bit.ly/37tPISx), available here: <http://bit.ly/37tPISx>



## 2. Planning and Climate Change

### National Planning Policy and Climate Change

National planning policy in each UK nation sets out the expectation that the planning system should deliver development that mitigates climate change, adapts to its impacts and improves biodiversity.

In England, Section 19(1A) of the Planning and Compulsory Purchase Act 2004 places a legal duty on local authorities to ensure climate mitigation and adaptation are integrated across all local planning policy.<sup>27</sup> The National Planning Policy Framework (revised in 2019) places a greater emphasis on future development and now states that plans should “*pro-actively shape places in a way that contributes to radical reductions in greenhouse gas emissions, minimises vulnerability and improves resilience*” as well as “*making provision for the possible future relocation of vulnerable infrastructure and development*”. It also sets out an expectation that local authorities should adopt measures in line with the 2008 Climate Change Act.<sup>28</sup> In 2021, further revisions to the NPPF have been proposed with paragraph 14 stating “*all plans should promote a sustainable pattern of development that seeks to: meet the development needs of their area; align growth and infrastructure; improve the environment; mitigate climate change (including by making effective use of land in urban areas) and adapt to its effects*”<sup>29</sup>. This has the potential to be a large hook for requiring local plans to demonstrate a settlement pattern compatible with net zero.

In 2021, the 11th edition of ‘Future Wales- the national plan 2040’<sup>30</sup> and the 11<sup>th</sup> edition of Planning Policy Wales (PPW)<sup>31</sup> were published. Future Wales is at the top tier of the planning framework in Wales, providing a national spatial development plan setting out where Wales should focus development over the next 20 years to address key national priorities through the planning system including achieving decarbonisation and climate resilience and developing strong ecosystems. Future Wales has strong links with PPW which is the land use planning policy document for Wales. Both documents make clear that the planning system plays a key role in responding to the climate and ecological emergency. There is also an expectation that the planning system delivers the wellbeing principles set out in The Wellbeing of Future Generations (Wales) Act (2015) including tackling the climate emergency.<sup>32</sup>

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<sup>27</sup> RTPI, TCPA and Client Earth (2019), [Law and Policy Briefing](http://bit.ly/3scvm91), available here: <http://bit.ly/3scvm91>

<sup>28</sup> MHCLG, [National Planning Policy Framework](http://bit.ly/3ayHmtp) (updated February 2019), available here: <http://bit.ly/3ayHmtp>

<sup>29</sup> MCHLG, [National Planning Policy Framework and National Model Design Code: consultation proposals](http://bit.ly/2Z8bqH2) (2021), available here: <http://bit.ly/2Z8bqH2>

<sup>30</sup> Welsh Government (2021), [Future Wales- the national plan 2040](http://bit.ly/2PCDpx3), available here: <http://bit.ly/2PCDpx3>

<sup>31</sup> Welsh Government, [Planning Policy Wales](https://bit.ly/3cHJW34), available here: <https://bit.ly/3cHJW34>

<sup>32</sup> Future Generations Commissioner for Wales, [Land use planning and place-making](http://bit.ly/3oNP9bV), available here: <http://bit.ly/3oNP9bV>

Northern Ireland's Strategic Planning Policy Statement was published in September 2015. The SPPS provides a strategic planning policy framework for the reformed two-tier planning system which became operational on 1 April 2015. The policy applies to the whole of Northern Ireland. The document states that there is a "need to reduce emissions of greenhouse gases that contribute to climate change and to respond to the impacts brought about by climate change."<sup>33</sup>

In Scotland, the fourth National Planning Framework (NPF4) has an overarching goal of addressing climate change with the main outcomes of the framework focusing on delivering net zero emissions, resilient communities, a wellbeing economy, and "better, greener places".<sup>34</sup> The Government have clarified the importance of climate change in the accompanying position statement, making clear that "some significant choices" will have to be made in order to deliver Scotland's target of net zero emissions by 2045.<sup>35</sup>

Despite a clear message on the need for climate adaptation and mitigation, the tension that exists within national planning policy between economic growth and achieving housing targets and delivering low-carbon, resilient development can lead to difficulty delivering ambitious local climate action.<sup>36</sup> The CCC has recommended that a review be carried out to identify competing and contradictory priorities.<sup>37</sup>

## Local Planning Authorities and Climate Change

Local Authorities and planners have joined many others in calling for a sustainable, inclusive and resilient recovery from the pandemic. This involves supporting the economic recovery while tackling inequality, accelerating progress towards net zero carbon, building resilience and reversing habitat and biodiversity loss.<sup>38</sup>

The Climate Change Act does not give Local Authorities targets, duties or resources to act on climate change<sup>39</sup> however they are expected to respond and have a dual responsibility to deliver climate action both across their own estate (assets owned by the council) and the wider local authority area. The CCC estimate that local authorities are directly responsible for 2-5% of emissions<sup>40</sup>, while estimates of the percentage of indirect emissions Local

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<sup>33</sup> Department for Infrastructure (2015), [The Strategic Planning Policy Statement](#), available here:

<http://bit.ly/2MssF3c>

<sup>34</sup> LDCG (2020), [Fourth National Planning Framework Position Statement](#), available here: <http://bit.ly/3tIO12N>

<sup>35</sup> Pinsent Masons (2020), [Scottish planning framework to focus on addressing climate change](#), accessed 16 December 2020, available here: <http://bit.ly/2NY32HG>

<sup>36</sup> RTPI (2019) [Planning for Smart Energy](#), available here: <http://bit.ly/3rqgnao>

<sup>37</sup> CCC (2020), [Sixth Carbon Budget](#), available here: <http://bit.ly/3scW7tS>

<sup>38</sup> RTPI (2020) [Planning for Post-Covid Cities](#), available here: <http://bit.ly/2NYkyvp>

<sup>39</sup> WILLIS, REBECCA. [Too Hot to Handle?: The Democratic Challenge of Climate Change](#). Bristol, UK; Chicago, IL, USA: Bristol University Press, 2020. Accessed February 4, 2021. doi:10.2307/j.ctvz938kb

<sup>40</sup> CCC (2020), [Local Authorities and the Sixth Carbon Budget](#), available here: <https://bit.ly/3cFiaUR>

Authorities have control of vary from 40 to 80% of UK emissions.<sup>41</sup> Local Authorities have a unique role to play in delivering emissions reductions and many of the changes we need to make require extensive action form Local Authorities.

As of October 2020, over 300 Local Authorities had declared climate emergencies, and many are now in the process of developing plans to deliver against ambitious Net Zero targets.<sup>42</sup> Amid the growing pressure on local governments to declare a climate emergency and the current shortfall in robust and ambitious planning policy, Client Earth have written to 100 authorities warning that they will violate their legal obligations and risk legal challenge if they do not introduce proper climate change plans.<sup>43</sup>

## What Does the Committee on Climate Change Recommend?

In order to clarify the role of Local Authorities and align national, regional and local delivery of climate action, the CCC have recommended that the Government engage with Local Authorities to ensure that a 'Net Zero Delivery Framework' is part of any upcoming Net Zero Strategy.<sup>44</sup> This will help ensure that Local Authorities can take an ambitious, place-based, action, identifying the most effective local solutions and engaging the local community. As the CCC outline "This will ensure that policy aims and outcomes could be delivered in the most effective and appropriate way at the local level and deliver the greatest co-benefits to the local economy, jobs, health and environment."<sup>45</sup>

Rather than set binding carbon targets for Local Authorities the CCC recommend that local authorities develop Net Zero action plans for their own areas and work in partnership to reduce emissions as a range of factors affect the ability of local authorities to control emissions. In their report 'Local Authorities and the Sixth Carbon Budget'<sup>46</sup> the CCC set out a role for Local Authorities in delivering climate action alongside a set of recommendations. These include:

- Develop Net Zero or Climate Action Plans with delivery projects
- Monitor and report on progress in reducing emissions
- Conduct policy and service reviews
- Implement training and capacity building
- Develop capacity to innovate and scale up

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<sup>41</sup> Green Alliance (2020), The local climate challenge: a new partnership approach, available here:

<http://bit.ly/39Q3nVg>

<sup>42</sup> CCC (2020), [Local Authorities and the Sixth Carbon Budget](https://bit.ly/3cFiaUR), available here: <https://bit.ly/3cFiaUR>

<sup>43</sup> Client Earth (2019), Press Release, [Lawyers put local authorities on notice over climate action](http://bit.ly/2YTU98V), available here:

<http://bit.ly/2YTU98V>

<sup>44</sup> CCC (2020), [Local Authorities and the Sixth Carbon Budget](https://bit.ly/3cFiaUR), available here: <https://bit.ly/3cFiaUR>

<sup>45</sup> Ibid. p.8

<sup>46</sup> Ibid.

- Collaborate with neighbouring and cross-tier local authorities and other key delivery bodies on strategies and plans
- Communicate and engage with local communities, businesses and partners on Net Zero

As recognised in the CCC’s report, key to achieving these recommendations is a place-based approach and partnership working- both externally with public and private bodies but also internally, across departments. The next section of this research report will focus on how internal partnership working in local authorities can help deliver these recommendations in a joined up way which embed an early consideration of climate change and nature-based solutions into development decisions.

## The Need for Collaboration

Central to achieving robust local paths to resilience and decarbonisation is a holistic approach. This should be driven by effective partnership working, skills and information sharing, meaningful community engagement and a thorough understanding of spatial opportunities and constraints across sectors. This means cross departmental collaboration, across specialisms and a shift from thinking about climate change *within* specialisms to integrating a response *across* specialisms and developing the in-house resources of Local Authorities to respond. For context, the different specialisms involved in planning for climate change within a local authority are outlined in the table below.

**Table 1: Council department’s and their climate change responsibilities**

Council Department	Climate Change Responsibilities
Climate Change	Develop and monitor carbon mitigation and adaptation strategies; report on carbon reduction targets; undertake climate change risk assessments.
Strategic Planning and Plan-Making	Include climate adaptation and mitigation policies in local plans such as setting energy efficiency standards for new homes which go beyond part L and integrating land use planning with planning for low carbon energy and transport; align local plans with carbon budgets and set out how the local area will adapt to impacts of climate change in line with predicted changes; Combined Authorities and County Councils can influence emissions through wider spatial planning policies and guidance such as Spatial Frameworks or Spatial Development Strategies.
Development Management	Engage with developers to deliver sustainable buildings which comply with climate adaptation and mitigation policies set out in the local plan; make development decisions in line with the emissions reductions set for the area and give weight to greenhouse gas emissions as a material consideration, avoid adding to the vulnerability of existing or proposed developments;

	<p>maximise opportunities from new development to enhance resilience against extreme weather; increase urban green space; give priority to the use of SuDs and green and blue infrastructure, protect and promote tree cover; require Biodiversity Net Gain; support sustainable waste management and sustainable transport.</p>
<b>Regeneration &amp; Growth Teams</b>	<p>Those who lead regeneration projects in local authorities have to show leadership in ensuring that Council owned schemes reflect the aims and ambitions of local climate action plans, including through masterplans and policies on regeneration areas. Heritage and conservation assets require specialist skills to futureproof them in light of the climate crisis but can also be good case studies for collaborative innovative working.</p>
<b>Highways and Transport Planning</b>	<p>Deliver highway and street improvements that prioritise walking, cycling and public transport; implement Air Quality Management Areas; Clean Air Zones, impose speed limits (e.g. 20 mph zones); traffic violations; parking charges including workplace parking levy; restrict traffic in certain areas or at certain times (Traffic Regulation Orders*); taxi licensing – which can be used to support electric taxis and private hire vehicles; potential to re-regulate buses.</p> <p>Highways functions such as tree maintenance; street trees; verge and grass cutting; parks and leisure services and supporting the delivery of any Tree/Woodland/Green Infrastructure Strategy.</p>
<b>Housing</b>	<p>New housing: Enforce Building Regulations through Building Control, the council can become a developer, delivering its own affordable housing to high sustainability standards.</p> <p>Existing housing: Install energy efficiency and low carbon-heating in buildings within the council's estate. Links to retrofitting of existing stock through carbon offset policy mechanisms.</p>
<b>Parks and Landscape</b>	<p>Tree &amp; woodland planting and nature recovery strategies to inform biodiversity net gain, sustainable drainage activities as well as carbon offset opportunities.</p>
<b>Environmental Health</b>	<p>Help ensure minimum energy efficiency standards are met in housing, promote physical activity through active travel, address health implications of rising temperatures, monitor food security and quality, help control pollution and improve air quality</p>
<b>Waste Collection and Disposal</b>	<p>Implement increased recycling rates through consistent recycling collections and weekly separate food waste collections. Promote the waste hierarchy; reduction, reuse, recycling, composting before incineration or landfill.</p>

<b>Public Health / Clinical Commissioning Group</b>	Provide health data and evidence to support the need to address the climate and ecological crises for human health and social equity reasons.
<b>Social Care</b>	Support vulnerable communities through economic, social and climate changes and work with colleagues to ensure social care services are planned with an awareness of climate change and its impacts.
<b>Borough Treasurer / Finance Department</b>	Financial decisions across the Council need to be informed by considerations of the climate and ecological crises. Links to Council estates, infrastructure projects, housing stock and wider financial decision making.
<b>Procurement</b>	Think ahead to ensure emissions are locked out rather than locked in at procurement stage. For example procure electric or hydrogen fuelled waste and recycling vehicles and introduce a zero waste procurement policy that bans single-use plastics, excess packaging, specifies recycled content, favours appliances and goods that are repairable and recyclable
<b>Democratic Services / Elected Members</b>	Political decision making, including planning committee Members, need to reflect local climate and ecological action planning in their decisions.

Planning plays an essential role, with its ability to integrate energy, transport and land use planning, encourage sustainable travel, develop the best local solutions to low carbon energy, deliver well located and energy efficient housing, guide investment in integrated blue and green infrastructure and coordinate strategic resilience to the impacts of climate change. Planners can also help ensure that climate mitigation and adaptation strategies align with the local development visions for the area, national policies and the UN Sustainable Development Goals, helping to maximize co-benefits and prioritise a consideration of the impact on vulnerable groups.

It is no surprise that spatial planning is recognised by the CCC as one of the biggest opportunities that Local Authorities have to deliver net zero, yet it continues to be undermined by viability and an overwhelming focus on housing numbers rather than building sustainable homes in the right location. While the examples presented in this research highlight opportunities within Local Authorities to collaborate to deliver place-based solutions, this must be supported by robust national policy which aligns with our legal duty to reach net zero and a programme of upskilling and resourcing. There is also a significant role for external partnership working and support by the private sector.

Responsibility for climate action should not sit within one particular professional specialism or council department and while planners play a crucial role, they cannot deliver climate action in isolation from other council departments with climate change responsibilities. Reaching local targets on climate and ecological action will require a holistic understanding of the challenges and a joint approach to policy areas which have previously been managed

separately. This will require systems thinking and a place-based, cross-sector approach which draws on multiple skills and agendas to deliver the best solutions for people and place.

## 3. A Place-Based Approach to Climate Change

### A Place-Based Systems Approach

In 2020, The Council for Science and Technology advised the prime minister that we needed a ‘whole systems’ approach to the climate challenge. A ‘whole systems’ approach promotes an understanding of the interactions between different parts of the system, and how these can combine to affect the desired outcome. A whole systems approach;

*“Encourages evidence gathering that draws upon the widest, most diverse and critical perspectives leading to a ‘bigger picture’ view of the policy problem and how it might be tackled... Systems practice represents a new way of understanding and approaching the complexity of how technology, infrastructure, economics, governance and, crucially, individual and social behaviours and attitudes shape the world around us, including driving unsustainable emissions”<sup>47</sup>*

A place-based systems approach would align local development frameworks and local plans with the national sustainability agenda, create mechanisms which enable planning across local authority boundaries, level up by addressing regional disparities in productivity and access to social infrastructure, provide technical and financial support to planners in local authorities to address internal barriers to delivery, harness the power of data sharing to promote access to information about the planning process such as platforms for digital collaboration and engagement<sup>48</sup>

Among other things, a place-based systems approach creates a system which complements and contextualises input from subject experts tackling an issue such as climate change or biodiversity loss from a sectoral perspective. For example, planners work with sustainability and climate officers as well as transport planners and highway teams, in-house energy and ecologists, tree officers, flood officers, and housing officers among others. This can be a useful starting point for creating shared visions and ensuring better coordination of delivery, probing, learning and honing in on potential solutions in a way that gives due attention to the relevant perspectives.<sup>49</sup>

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<sup>47</sup> Royal Academy of Engineering, [Net Zero: A systems perspective on the climate challenge](https://bit.ly/3oOvNTX), p.6, available here: <https://bit.ly/3oOvNTX>

<sup>48</sup> Royal Academy of Engineering, [Sustainable living places – a systems perspective on planning, housing and infrastructure](https://bit.ly/3p7bUI5), available here: <https://bit.ly/3p7bUI5>

<sup>49</sup> Royal Academy of Engineering, [Sustainable living places – a systems perspective on planning, housing and infrastructure](https://bit.ly/3p7bUI5), available here: <https://bit.ly/3p7bUI5>

While today we advocate for a place-based systems approach in response to climate change, Geddes envisioned a similar holistic understanding of place during another phase of substantial change and innovation in our history; the industrial revolution.<sup>50</sup> Geddes understood our places not as mechanical systems to be managed and ordered from above but as organisms, inextricably tied up and shaped by the natural world. He advocated for a bottom up approach, giving communities a key role in decision-making. He recognised that physical places were continuously being shaped by interactions with the natural world, land use, transport, human behaviour and social processes tied to both global, regional and local scales. Over a century ago, Geddes said;

*“Our greatest need today is to see life as whole, to see its many sides in their proper relations; but we must have a practical as well as a philosophical interest in such an integrated view of life”*<sup>51</sup>

Adopting a place-based systems approach to the climate emergency will require collaboration across the sustainability and planning professions and a flexible approach of experimenting, learning, innovating and adapting common to systems thinking to our constantly evolving places. There is no silver bullet or quick fix to the complex challenge of climate change but the below case studies highlight how collaboration across disciplines can develop place-based strategies.

#### **An International Case Study: Gemeente<sup>52</sup> Amsterdam “The Amsterdam Doughnut”**

A practical example of place-based systems thinking is Kate Raworth’s “Doughnut Economics”. This doughnut of social and planetary boundaries sets out a model of development where cities and people thrive in balance with the planet. Aligned with the UN Sustainable Development Goals the inner circle of the doughnut represents the minimum standards required for a “good life” including housing, energy, education, income, health care and gender equality. The outer circle represents the planetary boundaries, based on earth systems science, which we cannot cross if we want to avoid catastrophic climate and ecological impacts. The space between the two rings represents the space in which we need to live to ensure both the needs of people and the planet are being met.<sup>53</sup>

During the first wave of the Covid-19 pandemic in April, this global concept was turned into a tool which can be used by local government planners and sustainability

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<sup>50</sup> Bally, M., & Marshall, S. (2009). Centenary Paper: The Evolution of Cities: Geddes, Abercrombie and the New Physicalism. *The Town Planning Review*, 80(6), 551-574. Retrieved February 5, 2021, from <http://www.jstor.org/stable/40541539>

<sup>51</sup> P. Mariet, *Pioneer of Sociology: The Life and Letters of Patrick Geddes*, (London, 1957) p. 12

<sup>52</sup> City Government of Amsterdam

<sup>53</sup> Kate Raworth, [What on Earth is the Doughnut?](#), accessed 5 February 2021, available here:

<https://bit.ly/39SdTeO>



professionals to drive a holistic, place-based approach to decision making which considers the best outcomes for both people and the planet. The City of Amsterdam has been the first local Government in the world to officially adopt this model as a starting point for public policy decisions.<sup>54</sup> The doughnut has been downscaled to produce '[The Amsterdam Doughnut](#)'<sup>55</sup> – a strategic framework and policy tool. This can be used to make development decisions which allow Amsterdam's residents to live well between social and planetary boundaries.

Planners and sustainability professionals are working together using the strategy to deliver the new 'Strandeiland' (Beach Island) development. The new development will consist of six new islands, Part of the IJburg neighbourhood of reclaimed islands. The sand to build the islands will be brought by boats powered by low emission fuel. The foundations of the development are being laid in such a way to both protect wildlife and protect local residents against further sea level rise. When finished, the development will produce zero emissions while prioritising both social housing and access to nature. The city government have also introduced requirements for the circular use of materials in all city owned buildings.<sup>56</sup>

The city councils in Copenhagen, Brussels, Dunedin, and Nanaimo have plans to adopt the doughnut economics approach.<sup>57</sup> In the UK, Cornwall Council have also used Kate Raworth's doughnut economics to develop a decision making wheel and a set of climate change principles which are embedded into their draft Climate Emergency Development Plan (See case study in section 4).

While the majority of local cities and places in the UK have not adopted a model of doughnut economics, there are examples of where planning and sustainability colleagues are working together in local authorities to develop strategies and action plans which prioritise a place-based approach where people thrive within social and planetary boundaries. These are discussed below.

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<sup>54</sup> The Guardian (2020), [Amsterdam to embrace 'doughnut' model to mend post virus economy](#), accessed February 5 2021, available here: <http://bit.ly/2LmAZkh>

<sup>55</sup> Circle Economy, [The Amsterdam City Doughnut: A tool for transformation action](#), accessed February 5 2021, available here: <http://bit.ly/3oYmFMQ>

<sup>56</sup> Time (2021), [Amsterdam Is Embracing a Radical New Economic Theory to Help Save the Environment. Could It Also Replace Capitalism?](#), accessed 5 February 2021, available here: <http://bit.ly/2LmC9fD>

<sup>57</sup> Ibid.

## 4. UK Case Studies

While the challenges facing a Local Authority will vary, the below provides some case study examples of collaborative working between climate and sustainability officers and planners within Local Authorities to embed a consideration of planning within the council's wider climate action plans and vice versa; a consideration of climate change within local planning policy.

Through interviews with climate and sustainability officers and planners across Local Authorities, this research paper aims to provide examples across stages of the planning process where planners and climate change and sustainability officers can work together to deliver place-based solutions which achieve the best outcomes for people and place. The case studies cover low carbon design, energy and transport, tree planting, green infrastructure, climate adaptation and wider green recovery and climate implementation plans. The following key areas have been identified as points in the planning process where planners can work with climate and sustainability officers to align planning and climate change;

- Aligning wider council climate actions plans with planning
- Feeding in to local plan process
- Gathering evidence to inform policy development
- Developing Supplementary Planning Guidance
- Supporting pre-application discussions
- Providing comments on planning applications
- Monitoring the performance of plans and policies over time
- Siting low carbon infrastructure
- Post Covid-19 recovery planning
- Providing informal training and changing conversations

### Aligning Climate and Ecological Action Plans with Spatial Planning

**Case Study: Glasgow City Council Climate Emergency Implementation Plan<sup>58</sup>**

**Target: Carbon Neutral by 2030**

In May 2019 Glasgow City Council declared a climate and ecological emergency. Following this, a report was produced with the input of external stakeholders making 61 recommendations for the city to achieve carbon neutrality by 2030. The spatial planning manager at Glasgow City Council recognised that planning would be key to delivering these recommendations with many needing to be written into spatial planning policy or reflected within the decisions of development management officers.

In order to ensure that the 61 recommendations were embedded within planning and there was no duplication of efforts between the planning and sustainability teams, the spatial

<sup>58</sup> Glasgow City Council, [Climate Emergency Implementation Plan](https://bit.ly/3rjI3P4), available here: <https://bit.ly/3rjI3P4>

planning manager set up a Climate Liaison Group with colleagues from roads, environment health and energy, planning, housing regeneration, economy, property management and transport to unpick the 61 recommendations and write a Climate Emergency Implementation Plan and a Delivery Plan.

The climate implementation plan is the product of the planning and sustainability teams within the council working together to ensure climate action is delivered in a coordinated way which maximizes outcomes for people and place. The Implementation plan which was developed through cross- departmental collaboration reaches beyond the traditional performance monitoring approaches of the public sector and engages other sectors and communities in a meaningful conversations about progress and what it means for the city and its people. The plan also fosters a sense of common purpose and provides common points of reference when addressing the various actions required to deal with the climate emergency.

Climate Justice is placed front and centre with the plan being based on two fundamental principles:

- That actions to address the climate crisis must not further disadvantage people and communities who already experience significant inequalities.
- That actions to create a safer and more sustainable city should also be aimed at building a just and more equal city

The plan is also aligned to the UN Sustainable Development Goals.

The plan helps pave the way for further integration of energy planning, land-use planning, housing planning, and mobility planning.

### Case Study: DRAFT Cornwall Council Climate Emergency Development Plan<sup>59</sup>

#### Target: Carbon Neutral by 2030

While there is already a local plan in place which contains policies to support climate change, the council itself has recognised that *“this is not enough”*. The Climate Emergency Development Plan has therefore been produced to strengthen these policies and add new ones.

The policies have been developed through an extensive engagement process (it is also subject to the existing sustainability appraisal (SA) and habitats regulation assessment (HRA). They are in-line with government legislation to protect the environment. The plan acts as a framework in planning for climate change that can be echoed within Neighbourhood Development Plans, further guidance has been developed by the Neighbourhood Plan team to aid groups.

The plan is based on a set of ‘Climate Change Principles’ outlined on p.19. In addition, the policies have been tested against Cornwall’s decision making wheel, which is derived from Kate Raworth’s “Doughnut Economics”. The policies map also identifies areas suitable for renewable energy and identifies Nature Recovery Networks.

<sup>59</sup> Cornwall Council, [Climate Emergency Development Plan](http://bit.ly/3tu6eev), available here: <http://bit.ly/3tu6eev>

Key policies in the plan cover the below:

- **Town Centre**; proposed policies encourage changing the use of buildings and support public transport and cycling infrastructures and green spaces
- **Renewable energy**; proposed policies recognise the massive increase in electricity from renewable sources that will be required. Policies support setting targets for the amount of renewable power generated, large scale solar panel installations, supporting power and storage from wind turbines, and promoting Smart grid technology to support the electricity network in the South West.
- **Natural Climate Solutions**; proposed policies require development to deliver green infrastructure which is accessible for all and incorporates sustainable drainage and create habitat networks within the site which effectively link to networks beyond the site. For all major applications a Biodiversity Net Gain calculation will be carried out to ensure Biodiversity Net Gain is provided on site, or, as a last resort, offsite, as part of a formal offsetting scheme. For smaller sites a 'Green Points' system is proposed to deliver biodiversity in a simpler way. Development is also expected to contribute to the Nature Recovery Network
- **Energy and Sustainable Construction**; a consideration of tackling fuel poverty is at the heart of emerging policy on this. The council states they are currently awaiting the outcome of the Government's consultation on the future homes standard before setting policy.
- **Transport**; proposed policies ensure new development has access to public transport and include as many safe walking and cycling routes as possible. Policies support a good mix of houses, schools, business and local services. Proposed policy supports the roll out of charging points for electric vehicles and cycle parking and sheltered storage for people who live in flats.
- **Community resilience (coastal change and flood management)**; proposed policies ensure development is in the right location (not too close to the sea, beach or cliff edge), requiring developers to carry out surveys to ensure they are not building in a flood prone area and demonstrate that any new buildings will not cause damage to existing development and make natural climate solutions a priority for developers.
- **Agriculture and Rural Issues**; proposed policies ensure that eco-system services continue to support the wider community and that land improvements help towards the aim of carbon neutrality by restoring wild nature to create habitat, wetlands and improving soil. Proposed policies also aim to reduce rural travel demand by bringing shops and employment back to villages.
- **One Planet Development/ Alternative Living**; these proposed policies are based on the Welsh 'One Planet Development' policy. Proposed policies help support self-sufficient lifestyles and move away from national and local policy against development in the open countryside.

There is a recognition throughout the plan that while a key component, planning alone will not solve the climate crisis and local authorities do not have direct control over the emissions coming from their local area. It will require behaviour change from people across society and government to set ambitious and joined up policy which provides a

robust framework for local authority to demand improved sustainability standards from the development industry.

As well as ensuring planning policy and local plans reflect the climate and ecological emergency, Cornwall Council have used climate friendly planning to reduce emissions across wider programmes, policies, procurement and supply chains. This includes ensuring that Section 106 and CIL payments are focused on mitigation which promotes low carbon living.

The council are currently asking for comments on the evidence and draft policies in the Climate Emergency Development Plan.

### Case Study: Belfast City Council: Belfast One Million Trees<sup>60</sup>

#### Target: Plant one million native trees across Belfast by 2035

To support climate adaptation across the city and make a substantial contribution to the Department of Agriculture, Environment and Rural Affairs' Northern Ireland-wide Forest of our Future initiative, Belfast City Council have announced plans to plant one million native trees across Belfast by 2035. By planting one million trees, the city aims to reduce carbon, improve air quality, reduce flooding, increase urban cooling, support and enhance biodiversity and improve physical and mental health and wellbeing. The project has been inspired by an idea from the Belfast Metropolitan Residents Group and it is a collaboration between public, private and voluntary sector partners.

Planners have advised on how to realise the multiple benefits of tree planting through the site identification assessment process – this is in line with the Council's Green & Blue Infrastructure Plan produced by the Planning Service and adopted by the Council early 2020. This is also in line with emerging new planning policies in the Council's draft Local Development Plan, which will see a significant focus on green and blue infrastructure as part of new development requirements. Planners, including the Council's Tree Officers, are helping to maximise the benefits of new tree planting, such as helping to identify potential planting sites that may assist in addressing air quality, flood risk and other environmental issues or health, deprivation and wellbeing issues. They have considerable experience in dealing with trees and landscaping issues in the planning remit and understand the issues and concerns that the public and local communities might have on the details of tree planting proposals.

In Northern Ireland, planning powers were transferred to local councils in 2015 with each council responsible for the preparation of a new Local Development Plan. Once adopted, Belfast City Council's new Local Development Plan policies will further enhance the importance of trees in the new development, generally seeking a net gain. This will contribute to achieving the million target over time.

The Resilience Unit within Belfast City Council has responsibility for development of the Belfast Climate Plan, the 'Assessment' and 'Ambitions' sections of which, were published in December 2020. The Belfast Resilience Strategy/Climate Plan references the Local Development Plan as one of the key programmes of work in the city. Members of the Resilience Unit have contributed to discussions on supplementary planning guidance and work closely with members of the Planning Department to ensure work streams are aligned.

<sup>60</sup> Belfast City Council, [One Million Trees](http://bit.ly/3awdkrq), available here: <http://bit.ly/3awdkrq>

An internal working group has been formed at Belfast City Council with colleagues from planning, biodiversity, parks and open spaces, estates, regeneration, smart city and culture to further explore how the council will be involved with the project.

A short animation and more information on the project is available [here](#).

## Gathering Evidence to Inform Policy Development

### Case Study: Falkirk Council: Local Climate Impacts Profile (LCIP)<sup>61</sup>

The Development Plan Team and Environment Team assisted the Climate Change Team within Falkirk Council with the Local Climate Impacts profile (LCLIP). Research for the 2020 Local Climate Impacts Profile was carried out by the Climate Change team to help the Council make informed decisions to adapt successfully to the changing climate. Planning and Environment Officers were interviewed as part of council-wide collaboration in its preparation, explaining how Planning and Environment assist with climate change adaptation. Key areas of discussion (within the broader context of- and in relation to- relevant policies, targets, mechanisms, opportunities, barriers, and priorities) were:

- Flood risk management and implications of increasing flood risk such as reduction in suitable land available for development (also involving the Flooding Team),
- The impact of climate change on species and ecosystems
- The use of nature based solutions in both flood risk management and to provide other forms of adaptation to climate change such as cooling and shading during periods of hot weather and seeking to protect and support habitat and species reliant upon it (as each are affected by climate change),
- Risks and opportunities around community food growing,
- Resilience of the built environment to flooding and extreme weather,
- Reducing weather related transport disruption through transport planning (the Sustainable Transport team were also consulted),
- The environmental impact of adaptation measures (most specifically with regards to the Grangemouth Flood Protection Scheme),
- The implications of climate change for renewable energy generation,
- Community involvement and consultation on issues relating to land use planning where climate change adaptation is a relevant consideration.

It was helpful for planners to be able to explain how decisions are made regarding land use and how the decision making process is informed by parallel regulatory processes such as SEA or flood risk management.

## Developing Supplementary Planning Guidance

Climate and sustainability officers and planners within councils can collaborate to broker information which exists across multiple documents and between climate and planning policy environments, to produce supplementary guidance which sets out in a clear and simple way, what is expected from development to meet certain climate adaptation and mitigation requirements while also supporting healthy and inclusive communities.

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<sup>61</sup> Falkirk Council, [Local Climate Impact Profile](https://bit.ly/3pG6QKT), available here: <https://bit.ly/3pG6QKT>

Over the past few years, there has been increasing use of Supplementary Planning Guidance (SPG) to help Local Planning Authorities deliver climate action, particularly delivering sustainable housing through design. The timeframes for local plans are often at odds with the urgency required to deal with the climate emergency, SPG enables Local Authorities to have the flexibility to be more responsive to climate change. In addition, these documents are a way of allowing local authorities to set design standards which go beyond those required nationally. SPG's also offer a way of providing clarity both to developers and planning officers on what a planning application should contain with respect to the expected environmental standards, and what pre-application discussions need to be had. The SPG also allows local authorities to set locally specific ambitious yet realistic standards and raises awareness of the councils approach to planning and climate change.

Developing policy and guidance and revising training is the beginning of the principle. The upcoming years of enacting and using the policy in everyday decision making will be where a lot of learning takes place.

**Case Study: Greater Cambridge Shared Planning Service Sustainable Design and Construction Supplementary Planning Guidance (SPG)<sup>62</sup>**

**Target: Net Zero by 2050**

In January 2020, South Cambridgeshire District Council and Cambridge City Council adopted the above SPG to provide guidance on existing adopted policies and set out the standards required to meet the objectives of the Cambridge and South Cambridgeshire Local Plans as sustainably as possible. The guidance seeks to assist both applicants and planners in understanding the early stage design considerations which should be taken into account to reduce the environmental impact of new homes. The guidance includes criteria and checklists which enables applicants to demonstrate how they have considered specific design guidance on issues such as carbon and energy reduction, water conservation, biodiversity, reduction of light and noise pollution, flood reduction, sustainable drainage methods, heritage assets conservation, design principles supporting walkable and inclusive communities.

To support understanding of the SPD, sustainability officers ran a series of webinars to planning colleagues to raise awareness and understanding of delivering environmentally friendly design through planning.

**Case Study: The London Borough of Haringey draft technical guidance on overheating**

**Climate Target: Net Zero by 2041**

Sustainability officers at Haringey Council produced informal draft technical guidance on overheating for both developers and planning officers. It was designed to assist their understanding of what is required to demonstrate that new domestic development minimises the risk from overheating. The guidance sets out information on why reducing overheating is important, a summary of the planning application requirements, measures which may impact overheating, what mitigation measures can be taken and what should

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<sup>62</sup> Greater Cambridge Shared Planning Service, [Sustainable Design and Construction Supplementary Planning Document](https://bit.ly/3clYT4F), available here: <https://bit.ly/3clYT4F>

be included within an Overheating Strategy. The document helps overcome information constraints by providing quick and easy to understand technical information to development management planners and prompts a dialogue between project teams, with disciplines including architecture, building services engineers, acoustics, and environmental health, among others. The draft guidance is also intended to inform and support the forthcoming New Local Plan policy on overheating.

**Training:** During Summer 2020, two training sessions were delivered by the Carbon Management Team to Development Management, Planning Policy, Enforcement, Housing and Regeneration colleagues. These sessions, on low-carbon developments and overheating, were aimed to help upskill officers and provided a forum to discuss officers' experiences and get feedback. Officers have since helped champion the need for robust, zero-carbon developments that minimise the risk of overheating.

**Implementation:** Haringey's Housing team has been ambitious with delivering their new homes programme. The team has embedded the informal draft overheating guidance into their processes, modelling all schemes – apart from houses – on their overheating risk in the 2020s, 2050s and 2080s weather files for central London. This has enabled the team to deliver the developments that include mitigation measures for more extreme weather scenarios. The resilience of developments has also increased, allowing design teams to ensure plans are future proofed and can accommodate the proposed retrofit plans that will help the buildings adapt to climate change. With in-house officers using the draft overheating guidance, it has been possible to challenge private developers to improve their schemes too.

## Implementing and Monitoring Policies

Climate and sustainability officers can work with development management planners in local authorities to support the implementation of low carbon and renewable energy policies such as those relating to sustainable design standards, policies on district heat networks, and the installation of renewable energy.

### Case Study: Stockport Council Implementing low carbon and renewable energy policy

#### Climate Target: Net Zero by 2038

Since the adoption of Stockport Council's Core Strategy in 2011, a climate and sustainability officer has worked with development management planners to identify opportunities for renewable and low carbon in new development, maximise opportunities for district heating and support community owned energy. Key areas of joint working were:

**Training:** a series of training sessions were developed to assist Planning Officers and applicants with tackling this new area of policy reflecting the steep learning curve that everyone faced. This consisted of twelve free half day training sessions prior to policy adoption. These were delivered in December 2010 and January 2011 across a variety of days and times to facilitate attendance. The training took place at ECTA who are a local training company offering plumbing and heating engineering training, including courses on renewable energy technologies. The company have a demonstration room of technologies with heat pumps, solar and wind technologies on display. They also offered bespoke facilities for delivering a half day of free training on the policies, the technologies, existing free resources and how to write an energy statement. For the initial round of training, overall the highest represented of the audience were public sector planners and local authority colleagues (53%). However there was still a healthy interest from the private



design and construction sector (31%). 16% were from other areas such as support agencies on low carbon and some environmental charities. The second set of six dates saw the private sector as the highest presence (34 of the 42 organisations attending).

**Guidance:** Alongside the training, guidance materials were prepared to help planning applicants to address the policies. All of these materials are available on the Council's website [here](#)<sup>63</sup>. A Low Carbon Design Guidance document and some sample energy statements for different scales of development were quickly prepared and loaded to the Council's website. These guide applicants through the processes of considering the policies and addressing them through an energy statement. This can be a separate document or part of the Design & Access Statement. The 2011 evidence study included information for a Guide to Technology Costs document to assist developers with assessing the financial viability of technologies for their planned development.

There is a District Heating Feasibility Guidance document for considering district heating together with some case studies of how to assess sites. There is also a link to the energy checklist (which includes guidance on completion) for the SD2 policy on improving existing dwellings as part of a householder application for extension of a dwelling.

These guidance documents have been updated where national legislative changes have occurred or where new evidence or information has come to light. The sample energy statements make use of Energy Saving Trust information on renewable energy and this is updated regularly in the draft statement. Removal of the Feed in Tariff and power company funding for home energy improvement were also reflected in updates to guidance on the energy statement and the energy checklist.

**Comments on planning applications:** The climate and sustainability officer also supports development management officers on applications, providing advice to applicants on undertaking an energy statement, a proof reading service and, in the case of smaller scale development, can draft an energy statement for the applicant to consider submitting. In addition two planning conditions have been created to support last minute commenting where the Planning Authority can require submission of an energy statement and/or proof of consideration of targets, where relevant, prior to commencement of the development. A standard set of comments helps to manage this workload and an example of comments, a blank energy statement and the draft conditions are included in the appendix to this research (See Appendix A).

**Pre-application discussions:** The climate/sustainability officer has also; advised on policy requirements and where changes to design could help achieve a range of benefits; advised the Planning Officer of the benefits of truly sustainably designed developments, helping the Officer to make a judgement of the development in terms of carbon emissions and, depending on the stage of design, promoted the sustainable design and construction approach, especially relaying the financial benefits of early consideration of this approach in the project timeline.

**Monitoring and Evaluation:** Since before Core Strategy adoption work took place to monitor the implementation of the carbon reduction and sustainability related policies in the Core Strategy. A full report on carbon policy implementation is available in the [2016/17](#)

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<sup>63</sup> Stockport Metropolitan Borough Council, [Guidance on energy statements](#), accessed February 5<sup>th</sup>, available here: <http://bit.ly/3ttZ9ui>

[AMR](#)<sup>64</sup> in the Monitoring of Policy Performance section on Overarching Principles (page 33 onwards). This includes a full register of low and zero carbon technology installations in the Borough that required planning permission. In 2018/19 reporting year a [living wall](#) was installed on the Mailbox development on the A6 in Stockport – the largest total area of living wall in the north of England<sup>65</sup>

## Siting Low Carbon Infrastructure

### Case Study: Nottingham City Council Electric Bus Project

#### Target: Carbon Neutral by 2028

In 2012 Nottingham City Council commenced a six year project to convert the whole of its tendered 'Linkbus' fleet to fully electric buses. The project has been delivered in close partnership with Nottingham Community Transport, following award of operating tenders.

The project has the following main objectives – to cut operating costs, improve air quality, lower carbon emissions and reduce noise pollution. Nottingham is a compact accessible city with excellent bus network coverage and long operating hours to match its 24/7 expanding economy. Virtually all routes terminate in the heart of the city centre, using around 100 bus stops on streets with high pedestrian activity. There are many residential, health and educational buildings very close to major bus routes. As such it is important that the buses in Nottingham have both low exhaust emissions and are as quiet as possible. Electric buses are much quieter in operation than diesel and have less ground borne vibration, benefitting pedestrians, residents, passengers and drivers.

**Stage One- midibuses:** For the first stage of the project 45 Optare EV midibuses were purchased, replacing existing Optare diesel buses of a similar size, over a three year period. These have a range of around 70 miles and run on services where a single daytime rapid charge can be timetabled – usually during the driver lunchtime break. They also require overnight trickle charging. These buses have been utilised on a mix of low and high frequency routes, with seven 50kw rapid charging points at four locations, (including a central bus station and park and ride site).

**Stage Two – saloons:** The second stage of the project focused on the two main park and ride services to the city centre: These have long operating hours (up to 18 hours per day), high daily mileage (up to 180 miles) and require larger capacity buses to cope with peak demand. With the support of the Council's own procurement and legal teams, following an open tender process, thirteen saloons (12m EBus) were purchased from, each with two battery packs. These are able to operate for the full daily timetable without in service daytime charging. These services have since been commercialised, now operated by Nottingham City Transport with gas powered double decker buses. The City's electric buses transferred to the MediLink service that connects the Queens Drive Park and Ride site with two main hospitals.

**Stage Three – charging network expansion:** The charging was increased using the Office for Low Emission Vehicles Low Emission Bus Scheme Grant (LEBS), with plans for

<sup>64</sup> Stockport Metropolitan Borough Council, [Authority's Monitoring Report](#), accessed February 5 2021, available here: <http://bit.ly/3tp38sh>

<sup>65</sup> Rise Homes, [The Mailbox](#), accessed February 5 2021, available here: <https://bit.ly/3pU8uJl>

an expansion in current facilities, along with the installation of a network of rapid chargers for electric bus use at strategic points around the city. City planning officers advised on permitted development and on the siting of equipment

**Eco Expressway** - In October 2016 the City Council commenced construction of an 'Eco Expressway' to the east of the City Centre. The schemes was developed by the Council's transport planning team and implemented using the in-house highways contractor. This Expressway comprises 5km of priority bus lanes to improve journey times and reliability for bus services. Uniquely the priority lanes are also open for use by any Ultra Low Emission Vehicle (ULEV) in order to stimulate the wider uptake of ULEVs within Nottingham.

## Post Covid-19 Recovery Planning

The aftermath of the pandemic has resulted in calls among national and local government as well as the public for a 'green recovery'. The pandemic has provided local authorities with an opportunity to refresh and take stock of their approach to delivering sustainable development from delivering low carbon energy and storage, retrofitting the road network for electric vehicles and improving sustainable travel options, setting high standards for energy efficiency home and providing financial support to vulnerable households. Many of the required changes will need to be reflected in consistent and joined up strategies across the council and reflected in planning policy and plans and a clear understanding of what a 'green recovery' means locally.

Planning officers are well placed to work with sustainability professionals on the councils green recovery plans, bringing a holistic understanding of place-based sustainable development, a strong focus on climate justice in the built environment, strategic and joined up thinking and stakeholder engagement.

### Case Study: London Borough of Bromley Green Recovery Working Group

#### Target: Net Zero by 2029

To help ensure that the council is delivering a green recovery through the services they provide, The London Borough of Bromley has set up a Green Recovery Working Group, with officers representing services across the council including planning and climate change. Planners have a crucial role in the delivering sustainable development and good planning is critical to achieving a resilient and equitable green recovery.

The aim of the working group is provide a forum for partnership working and a sense of shared purpose and responsibility in delivering a green recovery from Covid-19. This working group will provide planning officers and climate officers a chance to look over planning policy and guidelines and ensure standards are appropriately stringent, particularly with regard to carbon reduction. It will also act as a platform to discuss policies in the new London Plan in relation to delivering a green recovery in the London Borough of Bromley. The working group will also help join up development strategies from across different council departments to help ensure officers from across the council are working towards a common set of established goals and have a consistent approach to decision making. Planners will have a key role to play here in helping to ensure that any new

policies, guidance or standards that are developed are consistent and that climate officers and planners have a consistent approach in using any new standards.

## Reflections

As highlighted above, there are multiple opportunities for partnership working between planning and sustainability officers to achieve a place-based approach to climate action and it is encouraging to see growing numbers of Local Authorities developing climate action plans. However, there are still challenges and barriers to overcome in delivering place-based climate action and it will be interesting to see how Local Authorities with ambitious draft local plans tackling climate change will have their position and evidence bases tested at plan examination stage.

The holistic nature of the challenge and the responsibility for climate action across departments brings the challenge of ensuring a consistent approach to decision making amid the large volume of changing information and policy documents which set out approaches for planning and climate change. The transition period between the adoption of higher standards applied to upcoming development and the existing standards applied to applications currently going through the system or to appeal must be carefully managed.

The CCC's report 'Local Authorities and the Sixth Carbon Budget' made clear that across Local Authorities, staff must be carbon literate. It is encouraging that nearly 200 local authorities have undertaken carbon literacy training.<sup>66</sup> It is particularly important for planning officers to receive this training given the huge potential and ability of the planning system to deliver climate action. While there have been some examples of sustainability officers within Local Authorities delivering this training limited time and resources within Local Authorities mean the task of training and raising awareness cannot fall solely to the climate professionals within a Local Authority and there needs to a greater focus placed on improving the carbon literacy of the planning profession through education and CPD requirements and apprenticeships developing low carbon skills. Sufficient funding and resourcing and a strategic approach to addressing the skills gap is required.

Some of the areas suggested where planners could be upskilled included; carbon budgets, emerging technologies which can deliver climate adaptation and mitigation, the basics of how carbon emissions from developments are calculated, how to mitigate against overheating, sustainable design, GIS and data analytics and adaptation of existing assets and infrastructure.

Viability continues to be an issue across plans and policies with cost being a large barrier to including low and zero carbon technologies in developments. Whereas large scale developers have the capacity to obtain skills and knowledge around the financial benefits of sustainable design, smaller scale developers often lack this capacity. There was a suggestion that improving the skills for designers and developers in marketing sustainable and low carbon design for sale could help overcome this financial barrier. Specifically this could address understanding that a perceived uplift in build cost through low carbon design

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<sup>66</sup> CCC (2020), [Local Authorities and the Sixth Carbon Budget](https://bit.ly/3cFiaUR), available here: <https://bit.ly/3cFiaUR>

and technologies can be offset in an uplift in sale or rental values for buildings and annual running cost savings can be reflected in marketing materials.

The large and sweeping shifts in low carbon technologies available pose a challenge for professionals across the built environment to keep pace with this. The rise of electric vehicles and associated infrastructure will be a particular challenge for planners.

## Conclusion

The responsibility for delivering climate action cannot fall solely on a single council department or groups of officers. Working across departments is essential. It is clear that if the internal expertise exists within Local Authorities, there are a number of clear opportunities for planning officers to work with sustainability and climate officers to test and share ideas and develop coordinated strategies that maximize co-benefits and provide joined up, long term visions for the transition which maximise environmental and social benefits.

The examples used in this research are all locally developed, rather than a more top-down, coordinated approach from Government highlighting the importance of giving local authorities the flexibility to do what works best for their places and communities.

However, while partnerships within Local Authorities can go some way in delivering the recommended approach of the CCC for Local Authorities, this place-based action must be supported by national policy, coordination and resourcing from Government. A decade of austerity has impacted the ability of Local Authorities to lead the delivery of climate action and many currently do not have the internal expertise to deliver the scale of action required. In the absence of a clear net zero strategy from Government which sets out the role of local authorities, the current approach to delivering climate action is dependent on the Local Authority.

We have called for investment of £67 million over four years would deliver the equivalent of 1 FTE planner to work exclusively on climate proofing policy and development management in each local authority. All local authorities should be able to explain how their planning policy is consistent with Net Zero targets.

The Government's upcoming Net Zero Strategy should make clear the role of local authorities and any future planning reforms should provide the framework we need to adapt and mitigate to climate change and support nature recovery. This can only be done through partnership working; both within councils, between councils, with industry specialists and the development industry and with Government setting clear long term policies and investment to underpin climate action.

## Appendix A

### **Email comment to Planning Officers**

Standard email comment text for small scale developments that have not submitted an energy statement:

All new development is required to submit an energy statement showing evidence of full consideration of all low / zero carbon (LZCs) technologies including specific evidence such as site relevant

constraints and estimated technology costs. I am unable to find evidence of an energy statement in the paperwork submitted for this application.

In order to assist with this, I have endeavoured to draft an appropriate energy statement (attached) based on the submitted paperwork. This statement does not commit the applicant to any use of renewable energy technologies but does provide appropriate assessment of the LZCs as required by Stockport's Core Strategy Policy SD3, taking account of technologies for their technical feasibility (pertinent to the site) and, where relevant, their financial viability (evidence of costs). If the applicant is happy with the content of the attached document, then I would suggest they submit it as a policy compliant energy statement or make appropriate changes if other activities are planned that are not recorded in submitted paper work.

It should be noted that the attached document provides a basic desk-based feasibility assessment for the development. Any options identified within the document should be checked with an appropriate installer for technical accuracy if they are of interest. Such installers can be researched using the site post code to search on the following website:

[www.microgenerationcertification.org/consumers/installer-search](http://www.microgenerationcertification.org/consumers/installer-search)

The running costs of the property would be reduced such that the cost of installing such technologies could be offset in an appropriate uplift in sale value which could be marketed to potential buyers – free guidance on marketing a low carbon home is also attached. This would ensure that these properties contribute to the [GM Zero Carbon target for 2038](#) and prevent costly retrofit of the property in the future – another positive marketing factor for the development.

Any queries on the draft energy statement can be addressed to [angie.jukes@stockport.gov.uk](mailto:angie.jukes@stockport.gov.uk). The proposed approach for this development will minimise the need for expensive retrofit of buildings and energy systems in the coming years as Greater Manchester moves to [Zero Carbon by 2038](#).

#### **Energy Statement Template – small scale developments**

Blank energy Statement which can be adapted to each application as required:

*Energy Statement*

Case Ref No: DC0

Site Address:

Site & Building Footprints: site area m<sup>2</sup>

Proposal: single dwelling

#### *Targets*

The development is for a single dwelling and does not trigger Stockport's carbon reduction policy target thresholds.

#### *Energy and Design Considerations*

The dwelling will be built to the minimum current Part L Building Regulations.

#### *Low & Zero Carbon Technologies*

The following technologies have been considered for inclusion in the development and the detailed findings are reflected in the table below.

Based on the following assessment it is considered that none of the technically feasible technologies are financially viable in terms of the project going forward.

<b>Technology</b>	<b><a href="#">Technical Feasibility</a></b>	<b><a href="#">Carbon Savings</a></b>	<b><a href="#">Estimated Costs</a></b>	<b><a href="#">Financial Viability</a></b>
Solar photovoltaics	Any roof aspect from east to west through the south facing could support solar technologies.	A 4kwp system would save around 1,670 kg of CO <sub>2</sub> / year per dwelling.	Average cost for such a system is upwards of £5K per dwelling.	Minimum potential fuel cost saving of around £70 / year which could be reflected in sale price.

<b>Technology</b>	<b><u>Technical Feasibility</u></b>	<b><u>Carbon Savings</u></b>	<b><u>Estimated Costs</u></b>	<b><u>Financial Viability</u></b>
Wind	Average wind speeds on the site according to the <a href="#">Rensmart</a> Wind Speed Database are 4.5 metres/second	To be technically feasible local average wind speeds need to be a minimum of 4 m/s therefore this site is feasible for wind.  6kw turbine saves around 5.2 tonnes / annum.	Costs start at £2K for roof mounted 1kw turbines up to between £23K and £34K for a 6kw pole mounted.  Annual maintenance checks are between £100-£200.	Minimum potential fuel cost saving for a 6kw is around £250 / year which could be reflected in the sale price.
Micro Hydro	There is no capacity for micro hydro on this site since there is no local water course.	N/A	N/A	N/A
District Heating	Stockport Council informed that there are no existing or planned district heating networks to facilitate connection at this stage.	N/A	N/A	N/A
Solar Hot Water	Any roof aspect from east to west through the south facing could support solar technologies.	Around 270 kg of CO <sub>2</sub> / year per dwelling.	£3-5K per dwelling	Minimum potential fuel cost saving of around £60 / year per dwelling which could be reflected in the sale price.
Heat Pumps	GSHP: the site has area* to lay horizontal coils for heating and cooling. However efficiencies would be reduced if connected to a traditional heating system  ASHP: potential connection to intended wet system but efficiency would be low	GSHP: 2,100 to 3,300 kg CO <sub>2</sub> / year per dwelling  ASHP: 1,700 to 2,700 kg CO <sub>2</sub> / year per dwelling.	GSHP @ £13-20K per dwelling  ASHP: £7-11K / dwelling	GSHP: minimum fuel cost saving of £440 / year per dwelling  ASHP: minimum fuel saving of £335 / year per dwelling which could be reflected in the sale price.
Biomass	A Smoke Control Zone appropriate biomass pellet boiler could be installed to service a	Minimum carbon saving 3,400 kg CO <sub>2</sub> / year per dwelling	Pellet stove @ £4,300 per dwelling – Log	Minimum fuel cost savings of between £205 to £225 / year

<b>Technology</b>	<b><u>Technical Feasibility</u></b>	<b><u>Carbon Savings</u></b>	<b><u>Estimated Costs</u></b>	<b><u>Financial Viability</u></b>
	traditional wet heating system. There is space for fuel storage and access for delivery.		stove less than half this.  Pellet boiler with auto feed between £9-21K per dwelling	which could be reflected in the sale price.

\* GSHP land availability calculation:

Site area minus UK average house footprint (80m<sup>2</sup>)

300m<sup>2</sup> – 80m<sup>2</sup> = 220m<sup>2</sup> (average 3 bed house requires a minimum of [100m<sup>2</sup>](#) for horizontal coil system)

### **Planning Conditions Text**

Energy Statement Condition:

Before the development is commenced a policy compliant energy statement, in line with Council guidance, detailing consideration of low / zero carbon technologies for their technical feasibility and, where relevant, their financial viability shall be submitted to and approved in writing by the Local Planning Authority.

Reason - In the interests of evidencing policy compliance in terms of consideration of carbon emissions on site as required by Core Strategy Policy SD3.

Carbon Reduction Target Condition:

Before the development is commenced details of the percentage carbon savings (as required by Core Strategy Policy SD3) to be achieved on the development, including details of the methodology that will achieve the target should be submitted to and approved in writing by the Local Planning Authority.

Reason - In the interests of evidencing policy compliance in terms of achieving carbon emission targets on site as required by Core Strategy Policy SD.





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