

<b>Title of Report</b>	<b>LOCAL PLAN REVIEW - RENEWABLE AND LOW CARBON ENERGY</b>	
<b>Presented by</b>	Councillor Robert Ashman Portfolio Holder for Planning and Infrastructure	
<b>Background Papers</b>	<a href="#">National Planning Policy Framework</a>	<b>Public Report:</b> Yes
	<a href="#">National Planning Practice Guidance</a> <a href="#">Zero Carbon Roadmap</a> <a href="#">Renewable and Low Carbon Energy Study</a> <a href="#">LPC Report 31 March 2021</a>	<b>Key Decision:</b> Yes
<b>Financial Implications</b>	The cost of the study is met from existing budgets which are reviewed as part of the annual budget setting process.	
	<b>Signed off by the Section 151 Officer:</b> Yes	
<b>Legal Implications</b>	None from the specific content of this report. In due course the planning policy implications of any climate change evidence will be incorporated in a consultation document for the Substantive Local Plan Review. The Local Plan Review process as a whole must accord with the legal requirements set out in legislation and guidance.	
	<b>Signed off by the Monitoring Officer:</b> Yes	
<b>Staffing and Corporate Implications</b>	None identified	
	<b>Signed off by the Head of Paid Service:</b> Yes	
<b>Purpose of Report</b>	This report sets out potential policy options for climate change issues as part of the Local Plan Review with a view to testing these through the next stage of consultation.	
<b>Recommendations</b>	<b>(I) THAT THE COMMITTEE: AGREES FOR INCLUSION IN THE NEXT CONSULTATION STAGE OF THE LOCAL PLAN THE POTENTIAL POLICY OPTIONS FOR A) RENEWABLE ENERGY, B) REDUCING CARBON EMISSIONS AND C) WATER EFFICIENCY AS SET OUT IN APPENDICES 1, 2 AND 3 OF THIS REPORT</b>	

## 1. BACKGROUND

- 1.1 Members will recall that the 31 March 2021 meeting of this committee considered a report in respect of the findings from the Renewable and Low Carbon Energy study which had been commissioned to support the preparation of the Local Plan. This is referred to in this report as the AECOM study.
- 1.2 The report noted that:

- The study supported the targets for renewable energy set out in the council's Zero Carbon Roadmap;
- At the present time heat pumps offer the best opportunity to decarbonise heat supply in the district;
- Future policies and guidance should follow the energy hierarchy.

1.3 The report also noted that a further report would be brought to this committee setting out some possible policy options.

1.4 Officers from the Planning Policy Team have worked together with the council's Climate Change Programme Manager in order to ensure the policy options proposed for the Local Plan are aligned with the Zero Carbon Roadmap.

1.5 It has long been recognised that new development has an impact upon the environment, whether that be localised (e.g., air quality in the vicinity of a site) or wider (e.g., carbon emissions adding to the impact of climate change worldwide).

1.6 In terms of climate change, carbon emissions are the most significant issue that needs to be addressed. The UK Green Building Council notes that:

*"The building and construction sector is crucial in the race to keep carbon emissions below dangerous levels for our planet. Globally, buildings consume 36% of energy produced, and are responsible for 39% of global carbon emissions, making them the largest contributing sector to climate change".*

1.7 This threat is recognised in the National Planning Policy Framework (NPPF) which sets out that Strategic Policies in Local Plans:

*"should set out an overall strategy for the pattern scale and quality of development, and make sufficient provision for:*

*...planning measures to address climate change mitigation and adaptation."*

1.8 Therefore, it is clear that the Local Plan has a key role to play in seeking to minimise the impact arising from new development. The issue of the development strategy to be pursued through the Local Plan will be the subject of future reports to this Committee. This report focusses upon the mitigation of climate change.

1.9 The government has set ambitious carbon reduction targets. However, the reality is that not all aspects of national policy are currently aligned or clear. For example, the national planning policy context over recent years has been confused in terms of whether Local Authorities can or cannot specify higher energy performance standards than those mandated by Building Regulations. As set out later in this report, legislation was passed in 2008 which indicated that the government was going to prohibit local planning authorities setting higher standards as part of their local plans. However, more recently the government has suggested this will now not be enacted.

1.10 A further area of potential conflict within national policy relates to the issue of viability. It is important to note at the outset that many of these policy options will potentially add to the cost of new developments. The NPPF is clear that policies in local plans should not *"undermine the deliverability of the plan"*. The local plan will need to be subject to a viability assessment the purpose of which (according to the National Planning Practice Guidance) is to *"not compromise sustainable development but should be used to ensure that policies are realistic, and that the total cumulative cost of all relevant policies will not undermine deliverability of the plan"*. It should be noted, therefore that any preferred options may need to be amended at a later date in the plan preparation process to take account of viability issues.

- 1.11 Therefore, any action proposed by this Council has to be seen within the wider national (and international) context which will require a consistent and exerted approach from government to achieve its ambitious aims.
- 1.12 In addition, it should be noted that all policies in the Local Plan will be subject to a Sustainability Appraisal (SA) which could result in changes. It will also be necessary to ensure that different policies in the plan are as consistent with each other as they can be. For example, there are potential conflicts between the aspirations on climate change and the conservation of historic assets. Therefore, when drafting policies these will need to strike a balance between CO2 reduction and preserving the heritage significance of these assets. This may result in some further changes to those policies outlined at Appendix 1 of this report.
- 1.13 There are other climate change related issues which are included in the AECOM study that will need addressing, these include Electric Vehicle (EV) charging points and cycling and walking. Further reports will be brought to future meetings of this Committee that will consider these issues.

## 2. OUTLINE OF THE REPORT

- 2.1 This report is largely concerned with ensuring that new development incorporates appropriate measures to mitigate the impact of climate change or to adapt to it. Annex 2 of the NPPF defines climate change adaptation and mitigation as:

**Climate change adaptation:** Adjustments made to natural or human systems in response to the actual or anticipated impacts of climate change, to mitigate harm or exploit beneficial opportunities.

**Climate change mitigation:** Action to reduce the impact of human activity on the climate system, primarily through reducing greenhouse gas emissions.

- 2.2 This report takes the findings of the AECOM study, combined with advice from bodies such as the UK Green Building Council, and sets out some possible options that the Local Plan can take.
- 2.3 To achieve net zero carbon the Good Homes Alliance (an alliance of architects, planners, developers, universities, local authorities, urban designers, consultants and building professionals), identify two key factors which need to be addressed as part of new development: energy efficiency and renewable energy generation. However, there are other factors which can be addressed. In particular, this report considers the following matters in addition to energy efficiency and renewable energy:
- Embedded or lifetime carbon;
  - How new development can demonstrate that it is addressing climate change;
  - The role of carbon offsetting;
  - Overheating;
  - Water efficiency;
- 2.4 The majority of these fall broadly under the mitigation heading. Other aspects of the Local Plan, for example policies regarding flooding and provision of open space and green infrastructure as part of new development or measures to improve water efficiency will fall under the adaptation heading and will be considered in due course.
- 2.5 For each of these headings the report sets out some options and suggests which of these might be most appropriate for the Council to pursue with the intention that these options will be taken forward as part of the next consultation on the Local Plan.
- 2.6 An issue which needs to be considered is whether policies should apply to all developments irrespective of scale or just those above a certain threshold. On the one hand, it can be argued that all developments should be subject to the same policy

requirements in order to ensure that climate change issues are properly addressed. However, the incorporation of measures and the need to demonstrate compliance entails a cost to a developer.

- 2.7 A key element of government policy is to provide support for small and medium sized builders. One way to do this is to minimise the burden on such developers. As part of its response to the covid-19 pandemic, the government advised local authorities to seek to reduce the burden on small and medium sized builders by taking a more flexible approach to payments due in connection with S106 Agreements. Small and medium builders were defined as those having a turnover of up to £45m. Therefore, one option would to restrict certain policy requirements so that they did not apply to such builders.
- 2.8 The government has also sought to support smaller developers through the NPPF which requires that 10% of all housing requirements should take place on sites of less than 1ha (which equates to about 30 dwellings). The argument for this is that small and medium builders are more likely to develop such smaller sites than the large builders are. This could, therefore, be another way of minimising the impact on small and medium developers.
- 2.9 Both of these potential thresholds have their merits, although there is no guarantee that a small builder would only build sites of less than 30 dwellings or conversely that a large developer would not build sites of less than 30 dwellings. Therefore, to ensure that any policies which seek to minimise the impact upon small and medium builders are restricted to such developers, it is suggested that a major residential developments be defined as :
- those of 1ha or more or 30 or more dwellings and not developed by a small to medium sized builder, defined as those having a turnover of up to £45m
- 2.10 No similar distinction is provided in respect of employment land. However, the Council uses a threshold of more than 0.25ha or 500 sq m floorspace when assessing sites for inclusion in the Council's SHELAA and so these could be applied to non-residential development.
- 2.11 Therefore, for non-residential developments a major site would be defined as:
- those sites of at least 0.25ha or 500 sq metres floorspace

### **3. RENEWABLE ENERGY**

- 3.1 Energy consumption which is based on carbon from new development must be reduced in order to meet zero carbon targets. This means that demand will need to be sourced from renewable forms of energy.
- 3.2 Policy Cc1 in the adopted Local Plan is concerned with renewable energy and sets out a range of criteria that planning applications must meet for renewable energy installations to be supported. This is principally concerned with proposals for wind turbines. Policy Cc1 does not establish a target for the amount of energy to be provided from renewable energy sources as there was a lack of any evidence regarding potential at that time.
- 3.3 Since the adoption of the Local Plan the NPPF has been updated and in relation to renewable energy it states that the planning system should:

*"...support the transition to a low carbon future in a changing climate...and support renewable and low carbon energy and associated infrastructure".*

*"To help increase the use and supply of renewable and low carbon energy and heat, plans should:*

a) provide a positive strategy for energy from these sources, that maximises the potential for suitable development, while ensuring that adverse impacts are addressed satisfactorily (including cumulative landscape and visual impacts);

b) consider identifying suitable areas for renewable and low carbon energy sources, and supporting infrastructure, where this would help secure their development; and

c) identify opportunities for development to draw its energy supply from decentralised, renewable or low carbon energy supply systems and for collocating potential heat customers and suppliers”.

3.4 Furthermore, the council declared a Climate Change Emergency (25<sup>th</sup> June 2019) which sets out the council’s commitment to support the Governments net zero target to 2050 and its aim to achieve carbon neutrality for the council’s own emissions by 2030. It is clear, therefore, that the Local Plan will need to do much more than is currently the case.

3.5 The AECOM study identifies that in terms of renewable energy that the main opportunities for NWLDC going forward will be, wind energy, solar and heat pumps. It also notes that these are well-established technologies that currently represent the most cost-effective solutions for generating renewable electricity in the UK.

### **Wind Energy**

3.6 The provision of energy from wind was the subject of a Written Ministerial Statement (WMS) (HCWS42) of 18 June 2015. This introduced new considerations to be applied to proposed onshore wind energy development so that “*local people have the final say on wind farm applications*”. When determining planning applications for wind energy development involving one or more wind turbines, local planning authorities should only grant planning permission if:

- The development site is in an area identified as suitable for wind energy development in a local or neighbourhood plan; and
- Following consultation, it can be demonstrated that the planning impacts identified by affected local communities have been fully addressed and therefore the proposal has their backing.

3.7 In terms of the above WMS, the District Council has identified potential areas that are suitable for wind energy on the Wind Energy Opportunities Maps (2016) that accompany the adopted Local Plan. The AECOM study considers it is appropriate to continue to use the 2016 Wind Energy Study Maps and, as such, the AECOM Study utilises the maps to inform their analysis of future renewable energy opportunities. The current Local Plan Policy Cc1 addresses the second bullet point requirement of the WMS.

3.8 The potential for wind energy is most likely to be realised from wind farms or single large-scale turbines in rural areas (for example, the wind turbines at Farm Town and Heather), although this is largely dependent on commercial interest and viability. There is less scope in built up areas for wind energy generation and therefore it is reasonable to anticipate that it is unlikely that new development would include wind energy generation proposals.

### **Solar Energy**

3.9 In terms of solar energy generation, the AECOM study confirms that Photovoltaic (PV) farms are among the most cost-effective ways of generating renewable electricity and can be installed more flexibly than many other LZC technologies, and that they should be considered a key opportunity that can provide renewable energy for North West Leicestershire at a strategic scale.

- 3.10 The AECOM Study identifies that there is significant potential for both building-integrated and standalone PV installations within NWLDC. Roof-mounted PV is not the cheapest way to generate renewable electricity. However, it should be understood as a key opportunity for North West Leicestershire, both because it arguably has a smaller visual impact on the wider landscape than large-scale PV or wind turbines, and because the total amount of roof space, considered cumulatively, is relatively large (based on the current number of existing buildings and Local Plan development projections). Large non-domestic buildings, such as those that contain industrial facilities, can provide significant opportunities for installing roof-mounted solar energy technologies.
- 3.11 There is greater potential for solar energy generation on individual buildings compared to wind energy generation.

### **What might a renewable energy generation target be?**

- 3.12 The Zero Carbon Roadmap identifies the following targets:

**Solar** - Set a formal target for solar capacity in NWL from 89MW today to at least 140MW by 2050 in the Local Plan.

**Wind** - Set a formal target for wind capacity in NWL from 3MW today to at least 75MW by 2050 in the Local Plan.

- 3.13 These targets have been confirmed by the AECOM study as being achievable.
- 3.14 There is no base date in the Roadmap for when such targets should be set. However, the Action Plan that accompanies the Roadmap identifies that the above targets should be actioned within the next 3 years.
- 3.15 The baseline figures included in the Roadmap of the existing provision of wind and solar renewable installations (89MW of solar capacity and 3MW of wind capacity) have not yet been corroborated by the authors of the Roadmap. Therefore, the baseline figures of existing provision referred to above are taken from the AECOM study which provides slightly different provision figures of 81.4MW of solar energy and 3.3MW of wind energy based on published national data sources.
- 3.16 The targets will need to be pro rated to be consistent with the plan period. As the Roadmap was adopted in 2020, the pro-rated targets from 2020 to 2039 would be.
- Solar target would equate to 37.11MW from 2020 to 2039.
  - Wind target would equate to 45.41MW from 2020 to 2039.

### A higher target?

- 3.17 The AECOM study identifies that based on work carried out by the Centre for sustainable Energy and SQW in 2011 (The 'Low Carbon Energy Opportunities Heat Mapping for Local Planning Areas Across the East Midlands: Final Report') and using rules of thumb set out by the then Department for Energy and climate Change in 2010, that the Roadmap targets could be theoretically exceeded.
- 3.18 The AECOM Study advises that this does not mean that it would be desirable, practical, or financially viable to deliver this amount of wind energy– only that there is, in principle, enough physical and spatial resource in the District to do so.
- 3.19 A higher target could be to achieve the targets in the roadmap by 2039 (rather than by 2050):
- Solar target would be to increase solar capacity to at least 58.60MW by 2039.
  - Wind target would be to increase wind capacity to at least 71.70MW by 2039.

A lower target?

- 3.20 Although the AECOM Study identifies that the Roadmap targets for solar and wind energy generation are achievable it is also appropriate, at this stage, to consider setting lower targets than those set out in the Roadmap due to potential viability issues and to provide a reasonable alternative in terms of the SA process.
- 3.21 The targets below have been calculated by adding 10 years onto the target date of 2050 (so to 2060) and pro rata the requirements for the plan period from there.
- Solar target would be to increase solar capacity to at least 27.84MW by 2039.
  - Wind target would be to increase wind capacity to at least 34.06MW by 2039.

**Policy Options**

- 3.22 Having regard to the above the following policy options are put forward.

***Option 1 – to not include a solar and wind energy generation target.***

***Option 2 – solar and wind energy targets as set out in the adopted Zero Carbon Roadmap.***

***Option 3 – solar and wind energy targets higher than in the Roadmap.***

***Option 4 – solar and wind energy targets lower than in the Roadmap.***

- 3.23 A summary assessment of the advantages/disadvantages of these options is set out in the following table.

<b>ADVANTAGES</b>	<b>DISADVANTAGES</b>
<b><i>Option 1 - to not include a solar and wind energy generation target</i></b>	
<ul style="list-style-type: none"> <li>• Simple approach</li> </ul>	<ul style="list-style-type: none"> <li>• Would make it less likely that the zero-carbon target could be achieved</li> </ul>
<b><i>Option 2 – Solar and wind energy targets as set out in the adopted Zero Carbon Roadmap</i></b>	
<ul style="list-style-type: none"> <li>• Provides clarity for all users of the plan about the criteria that will apply</li> <li>• Roadmap targets have been independently corroborated by AECOM who agree they are achievable</li> </ul>	<ul style="list-style-type: none"> <li>• Will need to monitor provision</li> </ul>
<b><i>Option 3 – Solar and wind energy targets higher than in the Roadmap</i></b>	
<ul style="list-style-type: none"> <li>• Provides clarity for all users of the plan about the criteria that will apply</li> <li>• Proactive approach to renewable energy in order to achieve 2050 zero carbon target and to respond to NWLDC declared climate emergency.</li> </ul>	<ul style="list-style-type: none"> <li>• Will need to monitor provision</li> </ul>
<b><i>Option 4 – solar and wind energy targets lower than in the Roadmap</i></b>	
<ul style="list-style-type: none"> <li>• Lower target more likely to be met</li> </ul>	<ul style="list-style-type: none"> <li>• Would make it less likely that the zero carbon target could be achieved</li> <li>• Will need to monitor provision</li> </ul>

- 3.24 It is considered that option 2 – *Solar and wind energy targets as set out in the adopted Zero Carbon Roadmap* - would be the most preferred option as these targets have been identified as achievable in the AECOM Study.
- 3.25 An illustration of what a policy might look like is set out at Appendix 1 of this report. For Members benefit, those parts in Appendix 1 that are underlined would be additional to policy CC1 of the adopted Local plan.

#### 4. ENERGY EFFICIENCY

- 4.1 The adopted Local Plan does not include a policy relating to energy efficiency. This was primarily because the Planning and Energy Act 2008 had proposed that local authorities would no longer be able to set energy efficiency standards above the national building regulations. Since the adoption of the Local Plan, the government, in their 2019 Spring Statement, committed that (by 2025) it would introduce a Future Homes Standard (FHS) which would require new build homes to be future-proofed with low carbon heating and world-leading levels of energy efficiency.

##### Energy Hierarchy

- 4.2 The energy hierarchy is used to guide and prioritise the steps which should be taken to minimise energy use and reducing associated Green House Gas emissions. These steps are sometimes shown as:

**BE LEAN** – take steps to reduce energy consumption through improved fabric efficiency and low energy use lighting

**BE CLEAN** – Seek to maximise efficiency of delivery of space heating requirements, such as communal boilers or district heat networks

**BE GREEN** – Generate heat and electrical energy on-site and renewably to further reduce the developments carbon impact.

- 4.3 In the case of new buildings, energy issues should be given consideration at an early stage of design (ideally at project inception) to enable the best technical and economic solutions to be achieved, including the determination of the physical form and characteristics of the building.
- 4.4 This is also known as a 'fabric first' approach to building design which involves maximising the performance of the components and materials that make up the building fabric itself.
- 4.5 The UK Green Building Council note that “...*optimising the efficiency of the building fabric is the starting-point for the whole net zero journey. We should not be designing and building homes that will need retrofitting in the future*”.
- 4.6 Buildings designed and constructed using a fabric first approach aim to minimise the need for energy consumption through methods such as:
- Maximising air-tightness
  - Increased levels of insulation
  - Optimising solar gain through the provision of openings and shading
  - Optimising natural ventilation
  - Using the thermal mass of the building fabric
- 4.7 Focusing on the building fabric is generally considered to be more sustainable than relying on energy saving products, or renewable technologies, which can be expensive and may or may not be used efficiently by occupants.
- 4.8 The energy hierarchy and fabric first approach are referred to in the policy wording set out in Appendix 2 of this report.

## The Future Homes Standard

- 4.9 Under the FHS, new buildings would be required to meet significantly higher targets for energy efficiency and carbon savings. The government's 2019 consultation on Part L of the Building Regulations and the FHS highlighted the government's intention to:

*"introduce in 2020 a meaningful but achievable uplift to energy efficiency standards as a stepping stone to the [2025] Future Homes Standard".*

- 4.10 The Government consulted on two possible uplifts for 2020:

- Option 1: 20% reduction in carbon emissions compared to the current standard for an average home built to Building Regulations 2013 Part L requirements.
- Option 2: 31% reduction in carbon emissions compared to the current standard for an average home built to Building Regulations 2013 Part L requirements.

- 4.11 As part of the FHS Consultation the Government confirmed that a 19-20% CO<sub>2</sub> reduction is viable on a national scale, it is the less ambitious of the two targets proposed within the FHS consultation. Option 2 – the 31% reduction – was the Government's preferred option, on the basis that, amongst other things, it would deliver more carbon savings.

- 4.12 In January 2021, the Government published its response to the FHS consultation. This reconfirmed the FHS and made it clear that it will not come into force until 2025. In addition, the 31% reduction was confirmed as the Government's intended interim uplift to Building Regulations – it will be regulated for in late 2021 and will come into effect in 2022.

- 4.13 The Government has also confirmed that:

*'To provide some certainty in the immediate term, the Government will not amend the Planning & Energy Act 2008, which means that local planning authorities will retain powers to set local energy efficiency standards for new homes.'*

- 4.14 The AECOM study states that NWLDC should aim to set the highest standards for energy and CO<sub>2</sub> performance that can reasonably and viably be implemented, both for new and existing buildings. This is crucial in order to achieve the decarbonisation target.

- 4.15 For new buildings, there is precedent to set a 19-20% CO<sub>2</sub> reduction target above Part L 2013, and the Government's FHS Consultation confirms that this is viable on a national scale. However, this may soon be superseded by Building Regulations as the Government is proposing a 31% CO<sub>2</sub> reduction target for new homes and is consulting on a 22-27% CO<sub>2</sub> reduction target for non-domestic buildings.

- 4.16 The AECOM study suggests that an even higher target could potentially be set, which could include a requirement for any residual emissions to be offset via developer contributions.

- 4.17 Having regard to the above the following policy options are put forward.

**Option 1 – to not include an energy efficiency target.** There would be no additional policy relating to energy efficiency nor an energy efficiency target.

**Option 2 – require an energy efficiency target of 31% (to be required on adoption of the Local Plan or when updated building regulations come into force, whichever is the earliest).** This would require the Local Plan to include the FHS target of 31% but with an immediate start (i.e., before 2025).

**Option 3 – energy efficiency target higher than 31%.** The AECOM study suggests that an even higher target could potentially be set, or the policy could be worded so that the

target is set to increase over time which could include a requirement for any residual emissions to be offset via developer contributions.

**Option 4 – energy efficiency target lower than 31%.** In terms of lower target, the figure of a 19-20% reduction, Option 1 of the government FHS consultation, could be used. This would be the less ambitious of the two targets proposed within the FHS consultation, but the Government has confirmed that this is a viable reduction on a national scale. A number of Local Authorities have set a 19-20% target to apply to all new developments so there is ample precedent for setting a target at this level. However, it would need to be recognised that this target may soon be superseded by changes to national regulations.

4.18 The potential advantages and disadvantages of the different approaches are set out in the table below.

ADVANTAGES	DISADVANTAGES
<b>Option 1 – to not include an energy efficiency target.</b>	
<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Does not respond to Council's climate change emergency declaration</li> <li>• The plan would not be planning positively to government energy efficiency requirements</li> </ul>
<b>Option 2 - Require an energy efficiency target of 31% (to be required on adoption of the Local Plan or when updated building regulations come into force, whichever is the earliest).</b>	
<ul style="list-style-type: none"> <li>• Proactive and requires energy efficiency measures to be addressed immediately.</li> <li>• Positively responds to council's climate change emergency declaration</li> </ul>	<ul style="list-style-type: none"> <li>• Requires earlier action than government requirement</li> </ul>
<b>Option 3 –Energy efficiency target higher than 31%</b>	
<ul style="list-style-type: none"> <li>• Proactive approach</li> <li>• Positively responds to council's climate change emergency declaration</li> </ul>	<ul style="list-style-type: none"> <li>• Higher than government requirements</li> </ul>
<b>Option 4 – Energy efficiency target lower than 31%</b>	
<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Lower than government target – may soon be superseded by a higher target.</li> <li>• Does not proactively respond to council's climate change emergency declaration</li> </ul>

4.19 It is considered that option 2 – *an energy efficiency target of 31% (to be required immediately)* - would be the most pragmatic option and consistent with the AECOM study which states that:

*“NWLDC should...look to set the highest level of building performance standards for new buildings that can reasonably be implemented and should do so as soon as possible”.*

4.20 The response from the government on its FHS consultation identified the governments preferred option was for a 31% reduction. The 31% reduction was confirmed as the Government's intended interim uplift to Building Regulations which will come into effect in 2022.

4.21 An illustration of what a policy might look like is set out at Appendix 2 of this report.

## 5. REDUCING CARBON

### Embodied carbon/lifetime emissions

- 5.1 To help ensure that the targets for energy efficiency are met, it will be necessary for new developments to address issues in respect of what is referred to as Embodied Carbon. This is the carbon associated with both building materials and the construction and maintenance of a building throughout its whole lifecycle.
- 5.2 The current Local Plan includes (in Policy D1) a requirement that:
- “(5) New development should have regard to sustainable design and construction methods”.*
- However, there are no specific requirements beyond this.
- 5.3 The UK Green Building Council note that:
- “As Building Regulations start to reduce operational emissions from buildings towards zero, embodied carbon emissions can be as much as 50% of total emissions over a building’s lifetime. Despite this, there is nothing in national policy that currently requires embodied carbon emissions to be measured, let alone reduced. Most embodied carbon emissions occur near the start of a building project, so local authorities have an important role to play in filling the gap left by national policy by setting their own requirements”.*
- 5.4 The AECOM Study states that to reach Net Zero it will be necessary to implement policies that address a broader range of emissions that occur over the building’s lifecycle, at all stages of the supply chain.
- 5.5 The AECOM Study identifies that one way of addressing this would be for NWLDC to require applicants to undertake a lifecycle carbon assessment (LCA) or otherwise demonstrate that they have taken steps to minimise lifecycle emissions. LCAs involve a holistic assessment of both operational and non-operational / embodied emissions. LCA is a multi-step procedure through the life stages of a building. Later sections of the report address how this would be done.
- 5.6 The AECOM study recommends that future policy wording and /or supplementary planning guidance should encourage developers to undertake independent pre-demolition audits to identify opportunities for reusing or recycling any existing materials, either onsite or offsite.
- 5.7 However, it also notes that carrying out a full Whole Life Carbon analysis will incur significant design team fees which may be prohibitive in the context of minor developments, so this type of policy might be restricted to major developments (as defined in paragraph 2.7 of this report). However, NWLDC could consider requesting that applicants for minor applications complete a simpler checklist to demonstrate that they have given due consideration to this topic.
- 5.8 Having regard to the above the following policy options are put forward.
- Option 1 – to not include a policy requirement to require applicants to undertake a Lifecycle Carbon Assessment.***
- Option 2 – include a policy requirement for all developments to undertake a Lifecycle Carbon Assessment.***
- Option 3 – include a policy requirement for major developments to undertake a Lifecycle Carbon Assessment and minor developments to use a simple checklist to demonstrate that Lifecycle Carbon has been considered.***
- 5.9 Paragraphs 2.7 and 2.9 of this report sets out the proposed site size thresholds.

- 5.10 The potential advantages and disadvantages of the different approaches are set out in the table below.

ADVANTAGES	DISADVANTAGES
<b><i>Option 1 – to not include a policy requirement to require applicants to undertake a Lifecycle Carbon Assessment</i></b>	
<ul style="list-style-type: none"> <li>No national policy to require embodied emissions to be measured</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
<b><i>Option 2 – include policy requirement for all developments to undertake a Lifecycle Carbon Assessment</i></b>	
<ul style="list-style-type: none"> <li>It signals that the council sees this as an important issue and one which applicants should actively consider as they are preparing planning applications.</li> </ul>	<ul style="list-style-type: none"> <li>Cost to applicants, in particular to smaller developers.</li> <li>Need for training of Development Management Officers</li> <li>Additional burden for officers to check assessments</li> </ul>
<b><i>Option 3 - include policy requirement for major developments to undertake a Lifecycle Carbon Assessment and minor developments to use a simple checklist to demonstrate that Lifecycle Carbon has been considered.</i></b>	
<ul style="list-style-type: none"> <li>It signals that the council sees this as an important issue and one which applicants should actively consider as they are preparing planning applications.</li> <li>Reduces potential costs for small developments</li> </ul>	<ul style="list-style-type: none"> <li>Cost to applicants</li> <li>Need for training of Development Management Officers</li> <li>Additional burden for officers to check a checklist</li> </ul>

- 5.11 Of the options, option 3 – *include policy requirement for major developments to undertake a Lifecycle Carbon Assessment and smaller developments to use a simple checklist to demonstrate that Lifecycle Carbon has been considered* – is the preferred option.
- 5.12 An illustration of what a policy might look like is set out at Appendix 2 of this report.

### **Overheating**

- 5.13 Overheating relates primarily to domestic properties and the UK Green Building Council identify that “*there is strong evidence that excessive or prolonged high temperatures in homes can have severe consequences for occupants*”. With summer temperatures predicted to rise between 2 and 4 degrees by 2050 it poses an increased risk to the vulnerable of suffering from severe heat stress.
- 5.14 At the individual building level, the geometry, orientation and form of buildings can have a significant impact on overheating risk. Also, increasing levels of building airtightness and fabric efficiency require greater focus on the risk of overheating and strategies to mitigate this. The UK Green Building Council identify that it is not a choice between the two and that it is reasonable to expect efficient, low carbon homes which also minimise risks posed by overheating.
- 5.15 National planning policy in the NPPF states that:
- “Plans should take a proactive approach to mitigating and adapting to climate change, taking into account the long-term implications for...the risk of overheating from rising temperatures.”*
- 5.16 AECOM identify that at an individual building level, the priority should be to minimise unwanted heat gains before considering alternative cooling strategies. There is currently text in the Local Plan and Good Design SPD that refers to measures that can be used to reduce overheating, however, the AECOM Study recommends that NWLDC should also consider:

- Requiring developments to follow a ‘Cooling Hierarchy’ that prioritises passive cooling measures. This could be demonstrated e.g., through the Design and Access Statement currently required by Policy D1 of the adopted Local plan.
- Encouraging all schemes to consider overheating risk at an early stage, and to undertake a full appraisal if this indicates a high risk of overheating. Major developments should be required to undertake a full overheating risk assessment as standard. There are industry recognised assessments such as The Good Homes Alliance Domestic Overheating Checklist in the ‘Energy Assessment Guidance’ (2020).

5.17 The Government recognise the significance of overheating. In its response to the Future Homes Standard consultation the Government has set out proposals for requiring modelling of overheating risk in residential properties or for meeting pre-defined parameters for maximum glazing areas and window/shading design characteristics, as part of the proposed 2021 update to Part L of Building Regulations for New Homes.

5.18 Having regard to the above the following policy options are put forward.

***Option 1 – no change to the Local Plan***

***Option 2 – include a policy to require all developments to address potential overheating.***

***Option 3 – include a policy to require major developments to address overheating through an industry recognised assessment and minor developments to use a simple checklist to demonstrate that the risk of overheating has been considered.***

5.19 Paragraph 2.7 of this report sets out the proposed site size thresholds.

5.20 The potential advantages and disadvantages of the different approaches are set out in the table below.

ADVANTAGES	DISADVANTAGES
<b><i>Option 1 – no change to the Local Plan</i></b>	
<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Does not respond to Council’s climate change emergency declaration.</li> <li>• the plan would not be planning positively to government requirement for plans to take a proactive approach to the risk of overheating</li> </ul>
<b><i>Option 2 - include a policy to require applicants for major developments to address potential overheating.</i></b>	
<ul style="list-style-type: none"> <li>• Responds to requirements in NPPF for strategic policies to provision for plans to take a proactive approach to the risk of overheating</li> </ul>	<ul style="list-style-type: none"> <li>• Additional requirements for applicants</li> <li>• Potential viability issues</li> <li>• Additional burden for officers to check a as part of planning applications</li> </ul>
<b><i>Option 3 – include a policy to require major developments to address overheating through an industry recognised assessment and minor developments to use a simple checklist to demonstrate that the risk of overheating has been considered.</i></b>	
<ul style="list-style-type: none"> <li>• Responds to requirements in NPPF for strategic policies to provision for plans to take a proactive approach to the risk of overheating</li> </ul>	<ul style="list-style-type: none"> <li>• Additional requirements for applicants</li> <li>• Potential viability issues</li> <li>• Additional burden for officers to check a as part of planning applications</li> </ul>

5.21 Of the options, option 3 — *include a policy to require major developments to address overheating through an industry recognised assessment and minor developments to use*

*a simple checklist to demonstrate that the risk of overheating has been considered - is the preferred option.*

- 5.22 An illustration of what a policy might look like is set out at Appendix 2 of this report.

**Demonstrating that new development is addressing climate change**

- 5.23 Mandatory standards for energy use and CO2 emissions are set out in Part L of the Building Regulations. These are progressively updated and, despite the current policy uncertainty, will generally include more ambitious standards over time as the UK moves towards a Net Zero economy. In addition, there are various voluntary industry standards and assessment methods that set higher targets. These include, for instance, the Building Research Establishment Environmental Assessment Method (BREEAM), which sets out a range of holistic environmental measures that can be implemented when designing non-residential buildings, and the Home Quality Mark (HQM) which is relevant to domestic buildings.
- 5.24 Requiring developments to incorporate appropriate measures is only part of the solution. It is important that when making decisions about proposed developments that the Council has confidence that what is proposed will help to address the issues. One way to do this is through the use of recognised standards and assessment methods.
- 5.25 The AECOM Study identifies that the District Council could consider requiring or encouraging developers to meet some of these higher standards as part of a future Local Plan policy. This is an approach that has been widely adopted elsewhere in the UK. The use of BREEAM and HQM standards can help deliver buildings where energy efficiency is a key driver for the design and where as-built performance is more likely to align with the design intent.
- 5.26 AECOM identify that it is often the case that Local Authorities will only set BREEAM / HQM requirements for major developments, or certain types of schemes that are known to have fewer technical and viability constraints (e.g., large developments on greenfield sites). However, this would mean that not all developments are required to demonstrate how they would comply with any requirements.
- 5.27 If any of the above standards were to be introduced in North West Leicestershire this would need to be tested through the normal Local Plan viability and consultation process. It should also be noted that the requirement for developments to be accompanied by an assessment will have resource implications for the Council as there will need to be a process for reviewing any submitted assessments and officers will require training in their use.
- 5.28 Having regard to the above the following policy options are put forward.

***Option 1 – no change to the Local Plan***

***Option 2 – include policy to require applicants for all developments to undertake a recognised industry assessment - HQM for domestic properties and BREEAM for non-residential properties.***

***Option 3 - Include a policy to require applicants proposing major developments to undertake a recognised industry assessment - HQM for domestic properties and BREEAM for non-residential properties.***

- 5.29 Paragraphs 2.7 and 2.9 of this report sets out the proposed site size thresholds.
- 5.30 The potential advantages and disadvantages of the different approaches are set out in the table below.

ADVANTAGES	DISADVANTAGES
<b>Option 1 – No change to the Local Plan</b>	
<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Not requiring specific assessment tools could result in confusion and inconsistency of approach</li> </ul>
<b>Option 2 – include policy to require applicants for all developments to undertake a recognised industry assessment - HQM for domestic properties and BREEAM for non-residential properties</b>	
<ul style="list-style-type: none"> <li>• It signals that the council sees this as an important issue and one which applicants should actively consider as they are preparing planning applications.</li> <li>• Requiring recognised assessment tools should ensure consistent approach and be easier to monitor</li> </ul>	<ul style="list-style-type: none"> <li>• Additional costs to developers could result in potential viability issues</li> </ul>
<b>Option 3 - Include a policy to require applicants proposing major developments to undertake a recognised industry assessment - HQM for domestic properties and BREEAM for non-residential properties</b>	
<ul style="list-style-type: none"> <li>• It signals that the council sees this as an important issue and one which applications for major development should actively consider as they are preparing planning applications.</li> <li>• Requiring recognised assessment tools should ensure consistent approach and be easier to monitor</li> </ul>	<ul style="list-style-type: none"> <li>• Additional costs to developers could result in potential viability issues</li> <li>• Not all developments would be required to produce an assessment, so there is no guarantee that developments will help to meet energy efficiency targets</li> </ul>

5.31 Of the options, option 3 – *Include a policy to require applicants proposing major developments to undertake a recognised industry assessment - HQM for domestic properties and BREEAM for non-residential properties* – is the preferred option.

5.32 An illustration of what a policy might look like is set out at Appendix 2 of this report.

#### **The role of a carbon offsetting fund**

5.33 ‘Carbon offsetting’ refers to compensating for carbon dioxide (CO<sub>2</sub>) or other greenhouse gas (GHG) emissions in one area by taking actions that reduce emissions elsewhere.

5.34 Depending on the type of development in question, it may not be feasible to deliver the requisite level of CO<sub>2</sub> emissions reduction onsite. In this instance, an option available to the Council is to allow developers to make a financial contribution towards a carbon offset fund. The money can then be used to pay for interventions off site that would result in an equivalent amount of CO<sub>2</sub> being avoided (e.g., through energy efficiency measures or LZC projects) or removed from the atmosphere (e.g., through afforestation).

5.35 The AECOM Study identifies the following opportunities for potential carbon offsetting projects in North West Leicestershire:

- Energy efficiency measures in the local building stock;
- Projects that help to shift towards the use of sustainable transport;
- Local renewable energy projects; and
- Tree planting and other forms of land management to promote carbon sequestration.

5.36 Any projects would need to align with defined carbon reduction priorities for the District.

- 5.37 When developing a strategy for carbon offsetting, the most important guiding principle is that **it should be a last resort where other opportunities for reducing direct and indirect CO2 emissions have been prioritised before agreeing to a commuted sum.**
- 5.38 It should be noted that the main mechanism for Local Authorities to collect carbon offsetting payments is usually via an S106 agreement. This is an area that would potentially be impacted by the proposed changes to the planning system that were set out in the Government's recently published white paper, 'Planning for the Future.' If the proposed changes were introduced – which is not certain to occur – the District Council might not be able to implement a Carbon Offset Fund.
- 5.39 Having regard to the above the following policy options are put forward.

***Option 1 – not to include provision for a Carbon offsetting fund***

***Option 2 – include a policy requirement to require applicants, where all other opportunities for on-site CO2 reductions have been explored and as a last resort, to contribute to a carbon offset fund***

- 5.40 The potential advantages and disadvantages of the different approaches are set out in the table below.

ADVANTAGES	DISADVANTAGES
<b><i>Option 1 – not to include provision for a Carbon offsetting fund</i></b>	
<ul style="list-style-type: none"> <li>No additional resource implications for the Council</li> </ul>	<ul style="list-style-type: none"> <li>Would mean that not all developments could achieve targets</li> </ul>
<b><i>Option 2 – include a policy requirement to require applicants, where all other opportunities for on-site Co2 reductions have been explored and as a last resort, to contribute to a carbon offset fund</i></b>	
<ul style="list-style-type: none"> <li>It signals that the council sees this as an important issue and one which applicants should actively consider as they are preparing planning applications.</li> </ul>	<ul style="list-style-type: none"> <li>Potential viability issues</li> <li>The potential time and cost to the Council of setting up and administering an offset fund could be quite significant</li> </ul>

- 5.41 The potential for setting up a carbon-offset fund is something which officers are seeking some additional external advice on. It is important to understand the amount of time and work that is involved in setting up an offset fund before any specific decisions are made. However, at this time it is considered appropriate to include this as an option.

## **6 IMPROVING WATER EFFICIENCY**

- 6.1 The AECOM Study identifies that North West Leicestershire – like much of the nation – is classified as an area with 'moderate' water stress. It is important to conserve water, partly due to the CO2 emissions associated with its treatment and supply, but also because climate change is expected to affect water availability.
- 6.2 The adopted 2017 Local Plan, which includes policies and guidance in respect of matters associated with flooding and sought to encourage the use of Sustainable Urban Drainage Systems (SUDS) as a way to control rainwater flows from developments. These existing policies will be reviewed in due course.
- 6.3 The AECOM Study identifies that going forward, those policies could potentially be strengthened to include more specific water use requirements. Part G of the Building Regulations require new build homes to have a predicted water consumption of less than 125 litres per person per day. A more ambitious target of no more than 105 litres per person per day is suggested in the AECOM study, which is consistent with the previous Code for sustainable Homes.

6.4 Based on the above, the following options are put forward:

**Option 1 – no change to current Local Plan Policy Cc3**

**Option 2 – require a standard of no more than 105 litres of water to be used per person per day**

6.5 The potential advantages and disadvantages of the different approaches are set out in the table below.

ADVANTAGES	DISADVANTAGES
<b>Option 1 – no change to current Local Plan Policy Cc3</b>	
•	• No water usage standards would be set
<b>Option 2 – require a standard of no more than 105 litres of water to be used per person per day</b>	
• Responds to the need to conserve water	• Additional requirements for applicants • Additional requirements for DC officers

6.6 Of the options, option 2 – *require a standard of no more than 105 litres of water to be used per person per day* – is the preferred option. However, it should be noted that this may be an issue in the catchment of the River Mease Special Area of Conservation if it was to result in less flows in the river as this could then impact upon the species for which the river is designated. This is a matter which will need to be discussed with the Environment Agency and Natural England.

6.7 An illustration of what a policy might look like is set out at Appendix 3 of this report.

## 7 NEXT STEPS

7.1 It is recommended that the options are included in the next public consultation for the Local Plan Review. Options will also be tested through the Sustainability Appraisal/Strategic Environmental Assessment and Viability Assessment processes.

<b>Policies and other considerations, as appropriate</b>	
Council Priorities:	Developing a clean and green district
Policy Considerations:	None
Safeguarding:	No issues identified
Equalities/Diversity:	An Equalities Impact Assessment of the Local Plan review will be undertaken as part of the Sustainability Appraisal.
Customer Impact:	No issues identified
Economic and Social Impact:	No issues identified at this stage
Environment and Climate Change:	The decision itself will have no specific impact. The Substantive Local Plan Review as a whole will deliver positive environmental and climate change benefits, and these will be recognised through the Sustainability Appraisal.
Consultation/Community Engagement:	None
Risks:	A risk assessment of the review has been undertaken and is reviewed at the officer Project Board meetings.
Officer Contact	Emma Trilk Senior Planning Officer 01530 454726 <a href="mailto:emma.trilk@nwleicestershire.gov.uk">emma.trilk@nwleicestershire.gov.uk</a>

## POTENTIAL POLICY WORDING – RENEWABLE ENERGY

The Council will aim to achieve the following renewable energy generation targets by 2039:

- 37.11 MW of energy generated by solar energy generation
- 45.41MW of energy generated by wind energy generation

To achieve this:

- (1) The council will support renewable energy developments that are appropriate to their setting and make a positive contribution towards increasing the levels of renewable and low carbon energy generation in the district.
- (2) Planning applications for renewable energy including any new grid connection lines and any ancillary infrastructure and buildings associated with the development will be supported where:
  - (a) There is no unacceptable impact on residential amenity in terms of noise, shadow flicker, vibration, topple distance and visual dominance; and
  - (b) There is no adverse impact on the landscape character taking account of the special qualities set out within the individual National Character Areas; and
  - (c) All impacts on biodiversity have been adequately mitigated or enhanced; and
  - (d) Heritage assets and their settings are conserved or enhanced; and
  - (e) Proposals take account of the cumulative effect that would result from the proposal in conjunction with permitted and existing renewable energy schemes; and
  - (f) Proposals are accompanied by details to demonstrate how the site will be decommissioned to ensure the restoration of the site following cessation; and
  - (g) Proposals for large-scale renewable energy should demonstrate that the economic, social and environmental benefits are for those communities closest to the proposed facility.
- (3) In addition to the above considerations, proposals for wind energy developments will be supported where:
  - (a) The site lies within the 'Area Identified as potentially suitable for large or small scale turbines' as defined on the policies map; and
  - (b) It can be demonstrated there is support from the local community or is set out within an area defined as being suitable for wind energy development within and adopted Neighbourhood Plan; and
  - (c) All impacts on air traffic safety and radar and communications have been assessed and consulted upon.
- (4) In terms of proposals for solar energy developments including both mounted and standalone ground mounted installations and extensions or repowering of solar extensions, preference will be for sites which are focussed on previously developed land away from the best and most versatile agricultural land unless

exceptionally justified.

We will consider the preparation of a Supplementary Planning Document to provide further guidance on this issue.

## POTENTIAL POLICY WORDING- REDUCING CARBON EMISSIONS

Development is required to achieve net zero carbon to contribute to the Council's aim for a carbon neutral district by 2050. To achieve this, all new development will be required to:

- (1) Reduce carbon dioxide emissions by following the steps in the energy hierarchy, within the design of new buildings by prioritising fabric first in the following sequence:
  - a) Energy reduction through 'smart' heating and lighting, behavioural changes, and use of passive design measures; then,
  - b) Energy efficiency through better insulation and efficient appliances; then,
  - c) Renewable energy of heat and electricity from solar, wind, biomass, hydro and geothermal sources; then
  - d) Low carbon energy including the use of heat pumps, Combined Heat and Power and Combined Cooling Heat and Power systems; then
  - e) Conventional energy.
- (2) Achieve a 31% reduction in regulated CO<sub>2</sub> emissions against the Dwelling Emission Rate (DER) against the Target Emission Rate (TER) based on the 2013 Edition of the 2010 Building Regulations (Part L) (or future equivalent legislation). This reduction is to be secured through on-site renewable and other low carbon technologies and/or energy efficiency measures.
- (3) demonstrate actions taken to reduce embodied carbon and maximise opportunities for reuse of materials
- (4) demonstrate how development proposals have considered overheating risk at an early stage and followed the cooling hierarchy.
- (5) be designed to ensure that the proposed heating systems can be easily replaced with heat pumps or other low carbon energy systems at a later date, including the installation of the necessary infrastructure to facilitate future installation.

(Major) Residential proposals will be required to use the Homes Quality Mark scheme to show compliance with the above.

(Minor) Residential proposals will be required to submit a statement demonstrating how they satisfy requirements 1 to 5 above

Development proposals for non-residential development should demonstrate how they achieve BREEAM 'excellent'.

Where the use of onsite renewables to match the total energy consumption is demonstrated not to be technically feasible or economically viable, renewable energy generation should be maximised as much as possible; a financial contribution must be made to the Council's carbon offset fund to enable residual carbon emissions to be offset by other local initiatives.

**POTENTIAL POLICY WORDING- WATER EFFICIENCY**

All development proposals should seek to reduce the use of mains water through adoption of water saving measures (e.g., smart meters), fittings and appliances. Refurbishment schemes will be expected to retrofit such measures.

- Domestic developments should be designed to achieve a maximum of 105 litres per person per day, in line with the Optional Standard of Building Regulations Part G.
- Non-domestic developments should be designed to achieve the maximum available credits under BREEAM Wat 01 or an equivalent best practice standard.

All proposals are required to incorporate rainwater harvesting systems, and should consider utilising alternative sources of water, such as greywater recycling, and (where relevant) water efficient methods of irrigation methods and land use practices.

Where such measures are proposed, the Design and Access Statement should set out how they will be integrated with broader measures such as landscaping designs, Sustainable Urban Design Statement, and the provision of green / blue infrastructure, to reduce demands on the public water supply.