

HAMPSHIRE COUNTY COUNCIL, NEW FOREST NATIONAL PARK AUTHORITY, PORTSMOUTH CITY COUNCIL, SOUTH DOWNS NATIONAL PARK AUTHORITY & SOUTHAMPTON CITY COUNCIL

# Hampshire Minerals & Waste Plan: Partial Update

## Climate Change Topic Paper

October 2023



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## Non-technical Summary

1. Hampshire County Council, Portsmouth City Council, Southampton City Council, the New Forest National Park Authority and the South Downs National Park Authority (collectively referred to as the 'Hampshire Authorities') are working together to prepare a partial update to the Hampshire Minerals & Waste Plan (adopted 2013).
2. This Topic Paper has been prepared in response to the declaration of a national climate change emergency by Government in 2019 and those declared locally by the Hampshire Authorities. Its objective is to provide evidence and a narrative to demonstrate the reasonable need for revisions to Policy 2: Climate change - mitigation and adaption, as part of the partial update.
3. Climate change is a critical issue facing the Hampshire Authorities, reflected by their climate change responses. The UK, as a whole, has a target to be carbon neutral by 2050 as enacted in law through the Climate Change Act 2008 (2050 Target Amendment) Order 2019 and the Plan needs to support this legal objective. Indeed, the evidence, guidance, and context presented in this Paper confirms the vital importance and significance of climate change for the Plan.
4. This paper sets out the legislative and policy background to climate change, the national and local climate change contexts, the way climate change is monitored and the contribution that minerals and waste activities make to climate change.
5. Furthermore, this Paper sets out a range of climate change mitigation and adaption opportunities for minerals and waste developments. The importance and significance of climate change, the contribution of minerals and waste development to it, and the range of associated legislation, strategies and polices requiring net zero emissions, confirms that those mitigation and adaption measures are necessary and viable.
6. As part of the iterative nature of the preparation of this Topic Paper, it's content has been used to inform the preparation of the Proposed Submission Plan. In addition, a number of specific recommendations for improvements to Policy 2: Climate change – mitigation and adaption are included. These recommendations have led to a number of positive improvements to Policy 2 and other related development management policies in the Proposed Submission Plan, as summarised in Section 7, below.

# 1. Introduction

- 1.1 Hampshire County Council, Portsmouth City Council, Southampton City Council, the New Forest National Park Authority and the South Downs National Park Authority (collectively referred to as the 'Hampshire Authorities') are working together to prepare a partial update to the Hampshire Minerals & Waste Plan (adopted 2013).
- 1.2 To support the preparation of the partial update, a number of Topic Papers have been prepared to provide more detailed information on key issues affecting the delivery of the Plan.
- 1.3 This Topic Paper has been prepared in response to the declaration of a national climate change emergency by Government in 2019 and those declared locally by the Hampshire Authorities. Its objective is to provide evidence and a narrative to demonstrate the reasonable need for revisions to Policy 2: Climate change - mitigation and adaptation.
- 1.4 Climate change is a critical issue facing the Hampshire Authorities, reflected by their climate change responses. The UK, as a whole, has a target to be carbon neutral by 2050 as enacted in law through the Climate Change Act 2008 (2050 Target Amendment) Order 2019<sup>1</sup> and the Plan needs to support this legal objective.
- 1.5 Minerals are important natural resources which make an essential contribution to Hampshire's economy, prosperity, and quality of life. It is essential that there is a steady and adequate supply of material to provide for infrastructure, development and goods that local communities, industry and the economy requires. This provision must follow the principles of sustainable development. The extraction of minerals from the land has a fundamental role to play in meeting Hampshire's need for aggregates.
- 1.6 The Office for National Statistics highlighted that in 2018, the quarrying and mining industries were one of the industries with the highest greenhouse emissions (alongside agriculture and energy supply)<sup>2</sup>, although it should be noted that this data is now 5 years old. Its high contribution is principally from site operation, as the UK Minerals Strategy<sup>3</sup> suggests that there is a relatively small carbon footprint associated with minerals development (construction) but recognises there is still a need for investment and innovation in reducing impacts.
- 1.7 There are a variety of waste management facilities and technologies, each with different locational requirements and range of potential impacts. If left unmanaged, waste can have a number of environmental, amenity and health impacts that are undesirable. Waste also comprises significant embedded resources and by utilising appropriate technologies, many of these resources can be retrieved and reused, thereby reducing the need for raw materials. As such, an array of legislation exists to

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<sup>1</sup> Climate Change Act 2008 - <https://www.legislation.gov.uk/ukdsi/2019/9780111187654>

<sup>2</sup> Greenhouse gas emissions intensity, UK: 2018 estimates (Office for National Statistics) - <https://www.ons.gov.uk/economy/environmentalaccounts/bulletins/greenhousegasintensityprovisionalestimatesuk/2018provisionalestimates>

<sup>3</sup> UK Minerals Strategy (2018) - [https://ukmineralsforum.org.uk/downloads/UK\\_Minerals\\_Strategy\\_2018.pdf](https://ukmineralsforum.org.uk/downloads/UK_Minerals_Strategy_2018.pdf)

control how waste is managed and national policy seeks to improve the sustainability of waste management.

- 1.8 Driving waste up the ‘waste hierarchy’ and using circular economy approaches to reduce our consumption, both in materials and the energy to produce and process those materials, is critical in reducing our impact on climate change and achieving carbon net zero.
- 1.9 Minerals and waste development can be a significant source of greenhouse gas (GHG) emissions. Minerals and waste operations have the potential to contribute to the effects of climate change and this is explored further in Section 6. However, minerals and waste planning policy and decision-making can make a significant contribution to reducing levels of GHG emissions by influencing the spatial distribution, design, scale and performance of new minerals and waste development.
- 1.10 Up to date plans are critical for Planning Authorities to enable the right development, in the right location, at the right time, and therefore reduce the risk of planning applications being determined at appeal. The partial update of the Hampshire Minerals and Waste Plan, therefore, provides an opportunity to ensure that the Plan addresses the issue of climate change and ensure that the Policies contained within it help the drive towards a net zero carbon economy in accordance with local and national strategies and policies.
- 1.11 The paper is organised into the following sections:
- Section 2: Legislation and Policy Context;
  - Section 3: Climate Change: National Context;
  - Section 4: Climate Change: Local Context;
  - Section 5: Climate Change Monitoring;
  - Section 6: Minerals and Waste and Climate Change; and
  - Section 7: Conclusion and policy recommendations.
- 1.12 Climate change is also considered in other documents supporting the preparation of the Hampshire Minerals and Waste Plan: Partial Update, most notably, the Sustainability Appraisal (incorporating Strategic Environmental Assessment)<sup>4</sup> and the Site Restoration Topic Paper<sup>5</sup>. All supporting documents can be found on the dedicated Hampshire Minerals and Waste Plan website<sup>6</sup>.

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<sup>4</sup> Hampshire Minerals and Waste Plan Partial Update: Sustainability Appraisal (incorporating Strategic Environmental Assessment) - <https://www.hants.gov.uk/landplanningandenvironment/strategic-planning/hampshire-minerals-waste-plan/minerals-waste-plan-partial-update-consultation/hmwp-partial-update>

<sup>5</sup> Hampshire Minerals and Waste Plan Partial Update: Site Restoration Topic Paper - <https://www.hants.gov.uk/landplanningandenvironment/strategic-planning/hampshire-minerals-waste-plan/minerals-waste-plan-partial-update-consultation/hmwp-partial-update>

<sup>6</sup> Hampshire Minerals and Waste Plan website - <https://www.hants.gov.uk/landplanningandenvironment/strategic-planning/hampshire-minerals-waste-plan>.

## 2. Legislation and Policy Context

### Planning and Compulsory Purchase Act 2004

- 2.1 Section 19(1A) of the Planning and Compulsory Purchase Act 2004<sup>7</sup> (as amended) requires local planning authorities to include in their Local Plans *'policies designed to secure that the development and use of land in the local planning authority's area contribute to the mitigation of, and adaptation to, climate change.'*

### Climate Change Act

- 2.2 The Climate Change Act 2008<sup>8</sup> established the framework for the UK to achieve its long-term goal of reducing greenhouse gas emissions and to ensure steps are taken towards adapting to the impact of climate change. On 27 June 2019 the UK government amended the Climate Change Act, through the Climate Change Act 2008 (2050 Target Amendment) Order 2019<sup>9</sup>, and set a legally binding target to achieve net zero greenhouse gas emissions (Net Zero) from across the UK by 2050.

### National Planning Policy

- 2.3 The National Planning Policy Framework (NPPF)<sup>10</sup> sets out the Government's planning policies for England, including for minerals planning, and how it expects these to be applied. The NPPF is a material planning consideration and must be taken into account when planning applications are being determined. Minerals and waste local plans need to be in compliance with it.
- 2.4 The NPPF seeks to ensure that there is an adequate and steady supply of aggregate to provide the infrastructure, buildings and goods that society, industry and the economy needs, but that this provision is made in accordance with the principles of sustainable development.
- 2.5 The National Planning Policy for Waste (NPPW)<sup>11</sup> sets out the Government's detailed planning policies for waste in England and how it expects these to be applied. The NPPW is similarly a material planning consideration.
- 2.6 Both the NPPF and NPPW are supplemented by Planning Practice Guidance (PPG)<sup>12</sup>, which provides planners and others involved in the development process, guidance on

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<sup>7</sup> Planning and Compulsory Purchase Act 2004 - <http://www.legislation.gov.uk/ukpga/2004/5/section/19>

<sup>8</sup> Climate Change Act 2008 - <http://www.legislation.gov.uk/ukpga/2008/27/contents>

<sup>9</sup> Climate Change Act 2008 (2050 Target Amendment) Order 2019 - <https://www.legislation.gov.uk/ukdsi/2019/9780111187654>

<sup>10</sup> National Planning Policy Framework (NPPF) 2023 - [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1182995/NPPF\\_Sept\\_23.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1182995/NPPF_Sept_23.pdf)

<sup>11</sup> National Planning Policy for Waste (NPPW) - [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/364759/141015\\_National\\_Planning\\_Policy\\_for\\_Waste.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/364759/141015_National_Planning_Policy_for_Waste.pdf)

<sup>12</sup> Planning Practice Guidance (PPG) - <https://www.gov.uk/government/collections/planning-practice-guidance>

how the requirements of the NPPF and NPPW can be met. PPG is kept under review and is revised and updated as necessary as a 'live' online resource.

- 2.7 Paragraph 7 of the NPPF states that *'The purpose of the planning system is to contribute to the achievement of sustainable development. At a very high level, the objective of sustainable development can be summarised as meeting the needs of the present without compromising the ability of future generations to meet their own needs.'*
- 2.8 Paragraph 9 states that *'Planning policies and decisions should play an active role in guiding development towards sustainable solutions, but in doing so should take local circumstances into account, to reflect the character, needs and opportunities of each area.'*
- 2.9 Paragraph 10 states *'So that sustainable development is pursued in a positive way, at the heart of the Framework is a presumption in favour of sustainable development.'*
- 2.10 Paragraph 20 states that strategic policies should make sufficient provision for *'planning measures to address climate change mitigation and adaptation'*.
- 2.11 Section 14 specifically addresses meeting the challenge of climate change, flooding and coastal change. Paragraph 152 states that the *'planning system should support the transition to a low carbon future in a changing climate, taking full account of flood risk and coastal change. It should help to: shape places in ways that contribute to radical reductions in greenhouse gas emissions, minimise vulnerability and improve resilience; encourage the reuse of existing resources, including the conversion of existing buildings; and support renewable and low carbon energy and associated infrastructure.'*
- 2.12 Paragraph 153 and footnote 53 further requires that plans *'take a proactive approach to mitigating and adapting to climate change, taking into account the long-term implications for flood risk, coastal change, water supply, biodiversity and landscapes, and the risk of overheating from rising temperatures'* in line with the objectives and provisions of the Climate Change Act 2008. *'Policies should support appropriate measures to ensure the future resilience of communities and infrastructure to climate change impacts, such as providing space for physical protection measures, or making provision for the possible future relocation of vulnerable development and infrastructure.'*
- 2.13 Paragraph 154 requires new development to *'be planned for in ways that:*
  - a) *avoid increased vulnerability to the range of impacts arising from climate change. When new development is brought forward in areas which are vulnerable, care should be taken to ensure that risks can be managed through suitable adaptation measures, including through the planning of green infrastructure; and*
  - b) *can help to reduce greenhouse gas emissions, such as through its location, orientation and design. Any local requirements for the sustainability of buildings should reflect the Government's policy for national technical standards.'*

## National Planning Policy Guidance

- 2.14 Planning Practice Guidance (PPG) highlights the importance of climate change in planning, noting<sup>13</sup>:  
*‘Addressing climate change is one of the core land use planning principles which the National Planning Policy Framework expects to underpin both plan-making and decision-taking. To be found sound, Local Plans will need to reflect this principle and enable the delivery of sustainable development in accordance with the policies in the National Planning Policy Framework. These include the requirements for local authorities to adopt proactive strategies to mitigate and adapt to climate change in line with the provisions and objectives of the Climate Change Act 2008, and co-operate to deliver strategic priorities which include climate change.’*
- 2.15 *‘In addition to the statutory requirement to take the Framework into account in the preparation of Local Plans, there is a statutory duty on local planning authorities to include policies in their Local Plan designed to tackle climate change and its impacts. This complements the sustainable development duty on plan-makers and the expectation that neighbourhood plans will contribute to the achievement of sustainable development. The National Planning Policy Framework emphasises that responding to climate change is central to the economic, social and environmental dimensions of sustainable development.’*
- 2.16 PPG outlines how aggregate supply is managed nationally through the Managed Aggregate Supply System (MASS) which requires mineral planning authorities to make an appropriate contribution nationally as well as locally whilst controlling environmental damage to an acceptable level.

## Other Relevant National Planning Policy

- 2.17 The **UK Resources and Waste Strategy** was issued in December 2018, and states:  
*‘Our strategy sets out how we will preserve our stock of material resources by minimising waste, promoting resource efficiency and moving towards a circular economy. At the same time we will minimise the damage caused to our natural environment by reducing and managing waste safely and carefully, and by tackling waste crime. It combines actions we will take now with firm commitments for the coming years and gives a clear longer-term policy direction in line with our 25 Year Environment Plan. This is our blueprint for eliminating avoidable plastic waste over the lifetime of the 25 Year Plan, doubling resource productivity, and eliminating avoidable waste of all kinds by 2050.’<sup>14</sup>*
- 2.18 The **25 Year Environment Plan**<sup>15</sup> includes the goal of mitigating and adapting to climate change by:
- *‘continuing to cut greenhouse gas emissions including from land use, land use change, the agriculture and waste sectors and the use of fluorinated gases;*

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<sup>13</sup> PPG - Paragraph: 001 Reference ID: 6-001-20140306 - <https://www.gov.uk/guidance/climate-change>

<sup>14</sup> Resources and waste strategy: at a glance - <https://www.gov.uk/government/publications/resources-and-waste-strategy-for-england/resources-and-waste-strategy-at-a-glance>

<sup>15</sup> 25 Year Environment Plan - <https://www.gov.uk/government/publications/25-year-environment-plan>



- *making sure that all policies, programmes and investment decisions take into account the possible extent of climate change this century; and*
- *implementing a sustainable and effective second National Adaptation Programme*<sup>16</sup>

2.19 The commitment to ensuring all policies, programmes and investment decisions take into account climate change is enshrined in law by the **Environment Act 2021**<sup>17</sup>. The Environment Act includes legislation to:

- reach net-zero carbon emissions by 2050;
- require biodiversity net gain;
- progress resource and waste management;
- improve clean air; and
- ensure water sustainability.

2.20 The Environment Act will have significant implications for minerals and waste planning and associated industries.

### Net Zero National Planning Policy

2.21 A number of government policy documents have been published regarding the aim to reach Net Zero.

2.22 In October 2021, the government published a policy paper termed Net Zero Strategy: Build Back Greener, which states that: *'we are clear that we do need to reduce our reliance on hydrocarbons as swiftly as possible. The best way to protect British businesses and consumers from volatile international fossil fuel markets is to get our economy off hydrocarbons.'*<sup>18</sup>

2.23 The progress on the Net Zero Strategy was reviewed, with the report published in September 2022<sup>19</sup>, noting that:

- *'Coal demand peaks this decade, natural gas by 2030, and oil by the mid-2030s. This isn't enough to avoid severe climate impacts, but it is progress from where we were a few years ago. Stronger policies can steepen the decline.'*
- *'However, in the short term we still need oil and gas to secure our energy independence and as transition fuels towards 2050. We will continue to be dependent on gas and its wholesale price for multiple years, including for heating buildings and marginal production within the power sector.'*
- *'A more ambitious approach to managing waste and encouraging re-use and recycling could decrease emissions and provide significant economic opportunity. UK policy on this issue has been too slow and is failing to grasp these opportunities.'*

<sup>16</sup> 25 Year Environment Plan summary of targets - <https://www.gov.uk/government/publications/25-year-environment-plan/25-year-environment-plan-our-targets-at-a-glance>

<sup>17</sup> Environment Act 2021 - <https://www.legislation.gov.uk/ukpga/2021/30/contents/enacted>

<sup>18</sup> Net Zero Strategy: Build Back greener - <https://www.gov.uk/government/publications/net-zero-strategy>

<sup>19</sup> Mission Zero: Independent Review of Net Zero - <https://www.gov.uk/government/publications/review-of-net-zero>

- *'How the UK handles things we no longer need is a crucial issue for achieving net zero. Waste and wastewater together accounted for 4.2% of UK greenhouse gas emissions in 2019; much of these come from methane emitted by biodegradable waste breaking down either in landfill or during wastewater treatment.'*

2.24 The Powering Up Britain policies<sup>20</sup> published in March 2023, include the Powering Up Britain: Net Zero Growth Plan<sup>21</sup>, which notes that *'In 2021, industry emissions were around 76 MtCO<sub>2</sub>e [million tonnes CO<sub>2</sub> equivalent] making up around 17% of total UK net GHG emissions (including international aviation and shipping). The largest emissions sources include manufacturing and construction (e.g. iron and steel, chemical, cement), oil refineries and industrial non-road mobile machinery.'*

2.25 In the context of oil and gas emissions it is important to note the role that the North Sea Transition Authority plays (formerly Oil and Gas Authority), as it retains responsibility for onshore licensing. However, many of the actions and targets towards meeting Net Zero (such as Climate Change Checkpoints in licensing) only relate to offshore production<sup>22</sup>.

## Further Resources

2.26 Further resources that may be useful in developing local policy to address climate change within a local authority area include:

- Environment Agency Climate Impact Tools<sup>23</sup> - provides a simple description of current and potential future challenges and provides more information on a large range of climate impacts, including cascading risks to the environment, society, and infrastructure.
- Climate Change Adaptation Manual<sup>24</sup> - provides information on climate change adaptation for the natural environment. It considers the potential impacts of climate change on individual priority habitats and outlines possible adaptation responses, including a Landscape Scale Adaptation Assessment Method.
- National Biodiversity Climate Change Vulnerability Model<sup>25</sup> - mapping tool that helps identify areas likely to be more vulnerable to climate change impacts.
- Carbon Storage and Sequestration by Habitat<sup>26</sup> - summarises the carbon storage and sequestration rates of different semi-natural habitats that can inform the design of nature-based solutions to achieve climate mitigation and adaptation.

<sup>20</sup> Powering Up Britain - <https://www.gov.uk/government/publications/powering-up-britain>

<sup>21</sup> Powering Up Britain: Net Zero growth Plan - [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1147457/powering-up-britain-net-zero-growth-plan.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1147457/powering-up-britain-net-zero-growth-plan.pdf)

<sup>22</sup> North Sea transition Authority - <https://www.nstauthority.co.uk/exploration-production/onshore/>

<sup>23</sup> LIT16801 (October 2023) - <https://www.gov.uk/government/publications/climate-impacts-tool>

<sup>24</sup> NE751 - <https://publications.naturalengland.org.uk/publication/5679197848862720>

<sup>25</sup> NERR054 - <https://publications.naturalengland.org.uk/publication/5069081749225472>

<sup>26</sup> NERR094 (2021) - <https://publications.naturalengland.org.uk/publication/5419124441481216>

- Nature Networks Evidence Handbook<sup>27</sup> - identifies the principles of nature network design including for carbon capture, flood management and ecological resilience.
- Government Climate Change Guidance<sup>28</sup> - guidance from the Environment Agency on integrating climate change adaptation into a management system under an environmental permit.
- Government Guidance on Adapting to Climate Change<sup>29</sup> – industry sector examples from the Environment Agency, to use in climate change risk assessment, to feed into management systems.

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<sup>27</sup> NERR081 - <https://publications.naturalengland.org.uk/publication/6105140258144256>

<sup>28</sup> Climate change guidance, Environment Agency - <https://www.gov.uk/guidance/climate-change-risk-assessment-and-adaptation-planning-in-your-management-system#why-you-need-to-plan-for-climate-change-impacts>

<sup>29</sup> Adapting to Climate Change, Environment Agency - <https://www.gov.uk/government/publications/adapting-to-climate-change-industry-sector-examples-for-your-risk-assessment>

### 3. Climate Change: National Context

- 3.1 The UK Government states that there is clear evidence that *'Climate change is happening and is due to human activity, this includes global warming and greater risk of flooding, droughts and heat waves.'*<sup>30</sup> Rising temperatures are already affecting the Earth and, in the UK, all ten of the warmest years on record have occurred since 1990, with the top nine occurring since 2002. *'Along with warming at the Earth's surface, many other changes in the climate are occurring:*
- *warming oceans;*
  - *melting polar ice and glaciers;*
  - *rising sea levels; and*
  - *more extreme weather events.'*<sup>31</sup>
- 3.2 The cause of this climate change is *'rising levels of carbon dioxide and other greenhouse gases, such as methane, in the atmosphere create a 'greenhouse effect', trapping the Sun's energy and causing the Earth, and in particular the oceans, to warm. Heating of the oceans accounts for over nine-tenths of the trapped energy. Scientists have known about this greenhouse effect since the 19th Century.*
- 3.3 *The higher the amounts of greenhouse gases in the atmosphere, the warmer the Earth becomes. Recent climate change is happening largely as a result of this warming, with smaller contributions from natural influences like variations in the Sun's output.'*<sup>32</sup>
- 3.4 *'Carbon dioxide levels have increased by about 45% since before the industrial revolution. Other greenhouse gases have increased by similarly large amounts. All the evidence shows that this increase in greenhouse gases is almost entirely due to human activity. The increase is mainly caused by:*
- *burning of fossil fuels for energy;*
  - *agriculture and deforestation; and*
  - *the manufacture of cement, chemicals and metals.*
- 3.5 *About 43% of the carbon dioxide produced goes into the atmosphere, and the rest is absorbed by plants and the oceans. Deforestation reduces the number of trees absorbing carbon dioxide and releases the carbon contained in those trees back into the atmosphere.'*<sup>33</sup>
- 3.6 *'The government have identified that action must be taken to prevent temperatures rising uncontrollably. At the Paris climate conference (COP21) in December 2015, 195 countries adopted the first-ever universal global climate deal that is due to come into force in 2020. The agreement sets out a global action plan to put the world on track to avoid dangerous climate change by limiting global warming to well below 2°C above pre-industrial levels and pursue efforts towards limiting to 1.5°C. The country commitments we have seen so far represent a dramatic improvement on 'business as usual' emissions projections. But these commitments are predicted to give rise to global*

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<sup>30</sup> Guidance: Climate Change Explained - <https://www.gov.uk/guidance/climate-change-explained>.

<sup>31</sup> Ibid.

<sup>32</sup> Ibid.

<sup>33</sup> Ibid.

*temperature increases of around 3°C. Further urgent action is needed therefore to put us on track to well below 2°C.*<sup>34</sup>

- 3.7 On 27 June 2019 the UK government amended the Climate Change Act and set a legally binding target to achieve net zero greenhouse gas emissions from across the UK economy by 2050<sup>35</sup>. This will require significant and immediate action in society in the way we operate and develop. Minerals and waste development and the Plans that control them need to take a proactive approach to mitigating and adapting to climate change.
- 3.8 Government guidance notes that *'It makes good economic sense to take action now to drastically cut greenhouse gas emissions. If we delay acting on emissions, it will only mean more radical intervention in the future at greater cost, and larger impacts on society. Taking action now can also help to achieve long-term, sustainable economic growth from a low-carbon economy.'*<sup>36</sup>

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<sup>34</sup> Guidance: Climate Change Explained - <https://www.gov.uk/guidance/climate-change-explained>

<sup>35</sup> UK net zero emission law - <https://www.gov.uk/government/news/uk-becomes-first-major-economy-to-pass-net-zero-emissions-law>

<sup>36</sup> Guidance: Climate Change Explained - <https://www.gov.uk/guidance/climate-change-explained>

## 4. Climate Change: Local Context

4.1 The Plan area has fairly typical CO<sub>2</sub> emissions per capita, and contribution to climate change, when compared to the south east region and the UK as a whole<sup>37</sup>. The latest (UKCP18)<sup>38</sup> projections confirm that the UK is likely to experience:

- hotter, drier summers;
- warmer, wetter winters;
- sea level rises; and
- more weather extremes.

4.2 The Plan area is vulnerable to climate change and may experience all of the impacts listed above. This could affect minerals and waste operations and development in the following ways:

- Climate change may impact the way waste is managed in the future. For example, rising temperatures may result in an increase in odours and pest problems and increases in precipitation may impact run off and leachate from waste sites potentially causing contamination.
- Climate change may also impact the type of waste being produced, for example, if homes are flooded, subsequent waste from flooded homes could overwhelm capacity for recycling and landfill.
- Vegetation growth may be impacted by climate change and change the nature and volumes of green waste produced.
- Mineral extraction activities can be vulnerable to flood events, overwhelming the capacity to dewater quarries and constrain minerals supply.
- Climate change may affect the availability of water, currently used by the minerals and waste industries for dust suppression and materials cleaning.
- Climate change may increase the likelihood of disease epidemics/pandemics, which could affect the minerals supply chain or waste management processing through staffing issues, as well as the behavioural patterns of the wider population.
- Climate change policies may affect the cost of minerals and waste operations. An example of this would be the modification or replacement of HGV fleets with the phasing out of diesel vehicles as part of a wider move to eliminate fossil fuel use in the industries.
- Public opinion and behaviour change around climate change may influence the minerals and waste industries. Examples include changes in consumer consumption and waste habits, changing preference for particular construction materials, or reduced acceptance of HGV use or quarrying.
- Climate change may reduce available land for excavation and development, raising land costs and putting pressure on these types of land use; and

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<sup>37</sup> Hampshire Minerals and Waste Plan Partial Update: Sustainability Appraisal (incorporating Strategic Environmental Assessment): Updated Baseline Report (June 2023) - <https://www.hants.gov.uk/landplanningandenvironment/strategic-planning/hampshire-minerals-waste-plan/minerals-waste-plan-partial-update-consultation/hmwp-partial-update>

<sup>38</sup> Climate change projections (UKCP18) - <https://catalogue.ceda.ac.uk/uuid/c700e47ca45d4c43b213fe879863d589>

- Climate change is influencing the approach to the restoration of temporary minerals developments<sup>39</sup>.
- 4.3 Minerals and waste development schemes, therefore, need to consider the risk of climate change and respond accordingly in their design and operation.

## Hampshire Authorities Action on Climate Change

- 4.4 Most of the Hampshire Authorities and district and borough local planning authorities within the Plan area have declared climate emergencies and have prepared associated strategies and action plans. These strategies/plans set out policies, objectives and actions to achieve net zero carbon by target dates prescribed by each authority and implement climate change mitigation and adaption measures.
- 4.5 The Vision of Hampshire County Council's Climate Change Strategy 2020-2025<sup>40</sup> is: *'Recognising the changing climate as the biggest threat, a well-adapted and resilient Hampshire will be essential to ensure that Hampshire's economy, environment, and society continues to thrive and prosper'*. Its policy is to: *'Develop and promote a focus on embedding climate resilience and mitigation across key policies and sectors, working with communities across Hampshire'*. The strategy covers Hampshire County Council's administrative area, and the County Council is also working closely with Hampshire District and Borough Councils, the Isle of Wight Council and adjacent authorities on a pan-Hampshire response to climate change.
- 4.6 Hampshire County Council has set a target to be carbon neutral by 2050, in line with national government and set a target to build resilience to the impacts of a two-degree Celsius rise in temperature.
- 4.7 The South Downs National Park Climate Change Adaption Plan<sup>41</sup> provides an assessment of the current and predicted impacts of climate change in relation to the National Park's purposes and statutory functions; provides an assessment of the risks and opportunities this presents to the assets of the National Park and the business of the Authority; and presents an action plan that includes proposals for adaptation responses that adequately address the risks presented by climate change.
- 4.8 The Southampton City Council Green City Plan 2030<sup>42</sup> seeks to make the operations of Southampton City Council achieve net-zero carbon by 2030. Its vision is to: *'create a cleaner, greener, healthier and more sustainable city. Southampton will be a better place for present and future generations that is prepared for the challenges presented*

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<sup>39</sup> Hampshire Minerals and Waste Plan Partial Update: Site Restoration Topic Paper (October 2023) - <https://www.hants.gov.uk/landplanningandenvironment/strategic-planning/hampshire-minerals-waste-plan/minerals-waste-plan-partial-update-consultation/hmwp-partial-update>

<sup>40</sup> Hampshire Climate Change Strategy (2020-2025) - <https://www.hants.gov.uk/landplanningandenvironment/environment/climatechange>

<sup>41</sup> South Downs National Park Climate Change Adaption Plan - <https://www.southdowns.gov.uk/sdnpa-climate-change-adaptation-plan/>

<sup>42</sup> The Green City Plan 2030 - <https://www.southampton.gov.uk/our-green-city/council-commitments/plan-2030/>

*by climate change. We will achieve this by ensuring we are ambitious, lead by example and set ourselves challenging goals'*. The council's plans include:

- Reviewing carbon reduction policy to help reach their goal of being carbon neutral.
- Reinvigorate the energy improvement programme across the council's commercial property with a new Clean Growth Fund.
- Introduce a council fleet renewal scheme to increase the numbers of zero or low emission vehicles.
- Identify areas for new electric vehicle charging units across the city, working with partners to create plans for on-street residential charging units.
- Support partners across the city to review current activity with the aim of reducing carbon footprint and impact on the local environment.

4.9 Portsmouth City Council's target is for carbon neutrality across its operations by 2030. The Portsmouth Climate Change Strategy<sup>43</sup> is a multi-agency strategy produced by Portsmouth Sustainability Action Group in partnership with Portsmouth City Council. The strategy focuses on actions to tackle the causes of climate change (mitigation) along with actions to prepare us for the effects (adaptation). The strategy provides an overview of climate change and how it will impact Portsmouth and then explains each priority in more detail. Some actions will work towards more than one of the four priorities in this strategy and will also contribute to other strategies in the city such as the Obesity Strategy and Air Quality Strategy. Many of the priorities of the city's climate change strategy will also be reflected in Portsmouth City Council's Regeneration Strategy.

4.10 New Forest National Park Authority is working with its partners towards the National Park being 'net zero with nature' by 2050<sup>44</sup>, This is being done in three ways:

- Helping the New Forest to adapt to the climate and nature emergency through restoring, creating and managing habitats and making wildlife areas more resilient (adaptation).
- Reducing its own carbon footprint (mitigation).
- Encouraging behaviour change among its communities and visitors (education).

Net zero is achieved when any harmful greenhouse gas emissions are balanced by an equivalent amount being absorbed by the atmosphere and landscape. The National Park will do this through nature-based solutions such as wetland restoration and low carbon farming practices.

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<sup>43</sup> Portsmouth Climate Change Strategy - <https://www.portsmouth.gov.uk/wp-content/uploads/2020/05/development-and-planning-portsmouth-climate-change-strategy.pdf>

<sup>44</sup> New Forest National Park Net zero with nature programme - <https://www.newforestnpa.gov.uk/conservation/climate-and-nature-emergency/net-zero-with-nature/>



## 5. Climate Change Monitoring

5.1 There are a number of national climate change monitoring programmes<sup>45</sup>. The list below highlights a number of these:

- The Committee on Climate Change (CCC) reports on UK carbon budgets, by sector, and reductions that need to be achieved of the UK is to meet its carbon target of net zero by 2050. This includes historical and projected (up until 2035) GHG emissions by UK industrial sector: power, industry, buildings, transport, agriculture, land use and waste. Decarbonisation projections of the UK's electricity and gas network are also reported.
- The Department for Business, Energy and Industrial Strategy regularly reports on UK energy and emissions projections by source: agriculture, business, energy supply, industrial processes, land use change, public, residential, transport and waste management. Currently, GHG emissions reach back to 1990 and project into the future up until 2035.
- The Department for Business, Energy & Industrial Strategy also reports on GHG emissions from a geographical perspective, by UK local authority. Current and historic emissions are available which may be used to establish current baseline emissions.
- The UK government implemented the Streamlined Energy and Carbon Reporting (SECR) policy on 1 April 2019. This requires businesses in scope (an estimated 11,900 companies) to produce an annual report disclosing their energy and carbon emissions. The methodology used for this must be disclosed and although no methodology is prescribed, it must be robust, transparent and widely accepted.

5.2 In order to monitor the impact of climate change policies, strategies and action plans it is important to establish the baseline from which changes will occur. At the time of writing, there are few examples of GHG assessments for development proposals. This highlights an issue around the current absence of baseline data for GHG for minerals and waste development to be assessed from. It is therefore important for businesses to gather this information to establish the baseline, as well as to develop their GHG accounting.

5.3 The importance of monitoring and establishing the baseline in relation to the development of Local Plans is a requirement, outlined clearly in the Town & Country Planning Association's Guide for Local Authorities on planning for climate change<sup>46</sup>. *'Local planning authorities are bound by the legal duty set out in Section 19 of the 2004 Planning and Compulsory Purchase Act, as amended by the 2008 Planning Act, to ensure that, taken as whole, plan policy contributes to the mitigation of, and adaptation*

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<sup>45</sup> IEMA EIA guide to Assessing Greenhouse Gas Emissions and Evaluating their Significance, Appendix A – Stakeholder list and data sources: <https://www.iema.net/preview-document/assessing-greenhouse-gas-emissions-and-evaluating-their-significance>

<sup>46</sup> Rising to the challenge: A guide to Local Authorities on planning for climate change (TCPA/RTPI, 2018): <https://www.rtpi.org.uk/media/3568/rising-to-the-climate-crisis-1.pdf>

*to, climate change<sup>47</sup>. This powerful outcome-focused duty on local planning clearly signals the priority to be given to climate change in plan-making. In discharging this duty, local authorities should consider paragraph 149 of the NPPF and ensure that policies and decisions are in line with the objectives and provisions of the Climate Change Act 2008 (Section 1) (discussed below) and support the National Adaptation Programme. For the sake of clarity, this means that local plans should be able to demonstrate how policy contributes to the Climate Change Act target regime, and this, in turn, means understanding both the baseline carbon dioxide emissions and then the actions needed to reduce emissions over time – which, in turn, means that annual monitoring reports should contain ongoing assessments of carbon performance against the Climate Change Act target.'*

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<sup>47</sup> Section 19 of the 2004 Planning and Compulsory Purchase Act, as amended by Section 182 of the Planning Act 2008 (available at <https://www.legislation.gov.uk/ukpga/2008/29/section/182>), states: 'Development plan documents must (taken as a whole) include policies designed to secure that the development and use of land in the local planning authority's area contribute to the mitigation of, and adaptation to, climate change.'

## 6. Minerals and Waste and Climate Change

### How Minerals and Waste operations contribute to Climate Change

- 6.1. Sand and gravel are the main economically viable mineral deposits in the Plan area. Sand and gravel are comprised of both sharp sand and gravel, and soft sand, which are extracted for different uses.
- 6.2. The minerals industry contributes to climate change in direct and secondary ways. Direct contribution is predominately through the use of fossil fuel HGVs, plant and machinery, with carbon cost per tonne of mineral increasing with travel miles to market. Inert waste used for site restoration is also typically transported by HGV. Secondary contributions derive from the way in which the minerals are used and how efficiently they are used. Waste policy should drive recycling and reuse and the concept of circular economy is driving the case for recycled and secondary aggregates.
- 6.3. According to the Minerals Products Association (MPA), recycled and secondary aggregates constituted 28% of total aggregate supply in 2020, a leading position internationally<sup>48</sup>. However, the MPA takes the view that this proportion of the market is a maximum, which, if true, means that any future savings will need to be sought elsewhere. The construction industry is the main user of aggregates, and this industry has highly embedded 'traditional' practices with high consumption of aggregate derived materials (concrete, bricks, tiles, cement, sand, gravel, etc). It has been historically reluctant to adopt alternative methods, such as modern methods of construction<sup>49</sup>, to reduce mineral consumption and carbon impact.
- 6.4. Restoration of mineral extraction sites can make a positive contribution to our response to climate change. This may be in the form of mitigation, particularly carbon capture through tree planting, wetland development and other forms of habitat creation, and adaption, particularly in the form of reducing flood risk. A considerable amount of carbon is stored in soils, particularly in wet organic soils (such as peat) present in the UK. Restoration of degraded soils or conversion of arable land to grassland can increase the land's capacity to capture carbon dioxide from the air. Furthermore, areas adjacent to rivers can be enhanced in their ability to protect against floods<sup>50</sup>.
- 6.5. Waste sites exist throughout the Plan area. The waste industry's contribution to climate change is intrinsically linked to consumption, waste generation and the practices of the general population. The waste industry seeks to respond to the demands of the population, as well as government policy and guidance. Changes in how waste is

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<sup>48</sup> The Contribution of Recycled and Secondary Materials to Total Aggregate Supply in Great Britain – 2020 Estimates (MPA, 2022):

[https://mineralproducts.org/MPA/media/root/Publications/2022/Contribution\\_of\\_Recycled\\_and\\_Secondary\\_Materials\\_to\\_Total\\_Aggs\\_Supply\\_in\\_GB\\_2022.pdf](https://mineralproducts.org/MPA/media/root/Publications/2022/Contribution_of_Recycled_and_Secondary_Materials_to_Total_Aggs_Supply_in_GB_2022.pdf)

<sup>49</sup> Town and county planning association (TCPA), guide to modern methods of construction:

<https://www.tcpa.org.uk/tcpa-practical-guides-guide-12-modern-methods-of-construction>

<sup>50</sup> Soil, land and climate change (European Environment Agency, 2019) - <https://www.eea.europa.eu/signals-archived/signals-2019-content-list/articles/soil-land-and-climate-change>

collected, handled, treated and ultimately disposed of, can have significantly different impacts on greenhouse gas emission.

- 6.6. The waste management sector is estimated to have been responsible for 5% of UK greenhouse gas emissions in 2018, with 92% of those emissions coming from methane, mainly from landfill sites<sup>51</sup>.
- 6.7. The Resources and Waste Strategy (2018) and the Environment Act (2021) will dramatically reshape the waste industry and include policy and legislation to improve resource management and reduce waste generated by the population. This includes circular economy principles, and the polluter pays principle.

### **Measures to reduce contributions to Climate Change, and contribute to Climate Change mitigation and adaptation**

- 6.8. Based on modelling by the Intergovernmental Panel on Climate Change (IPCC) '*Reaching net zero CO<sub>2</sub> or GHG emissions primarily requires deep and rapid reductions in gross emissions of CO<sub>2</sub>, as well as substantial reductions of non-CO<sub>2</sub> GHG emissions*' and that reaching net-zero will require '*transitioning from fossil fuels without carbon capture and storage (CCS) to very low- or zero-carbon energy sources, such as renewables or fossil fuels with CCS, demand-side measures and improving efficiency, reducing non-CO<sub>2</sub> GHG emissions, and CDR [carbon dioxide removal]*'.<sup>52</sup>
- 6.9. Many of the measures that could be taken to reduce the contribution that the minerals and waste industries make to climate change are changes that need to occur in wider society and, as such, are outside of the scope of influence of these industries. However, there are measures that can be taken through minerals and waste planning and by the minerals and waste industries that reduce contributions to climate change and contribute to climate change mitigation and adaptation.
- 6.10. Minerals are typically heavy and bulky materials that can only be extracted where they are found. However, a number of mitigation measures can be taken to reduce the mineral industry's contribution to climate change, which include:
  - reducing emissions created by minerals transport by minimising HGV movements, using less polluting vehicles, reducing the use of fossil fuel powered vehicles, double loading HGVs (minerals out, inert fill in) and avoiding transport by road where possible (i.e. water, rail or use of conveyors);
  - reducing consumption of primary minerals by increasing the use of recycled and secondary aggregates;
  - lowering the total consumption of aggregates and other minerals;
  - adopting alternative construction methods, such as modern methods of construction (MMC);

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<sup>51</sup> Department for Business, Energy & Industrial Strategy, 2018 UK Greenhouse Gas Emissions - [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/862887/2018\\_Final\\_greenhouse\\_gas\\_emissions\\_statistical\\_release.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/862887/2018_Final_greenhouse_gas_emissions_statistical_release.pdf)

<sup>52</sup> IPCC, 2023, Summary for Policymakers In Climate Change 2023: Synthesis Report - [https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC\\_AR6\\_SYR\\_SPM.pdf](https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_SPM.pdf)

- using efficient construction methods, including more sustainable use of resources through the use of recycled and secondary aggregates in construction;
- reducing the rate of buildings demolition and increasing the rate of buildings refurbishment<sup>53</sup>;
- energy efficient minerals developments and operations;
- reducing the use of fossil fuel powered plant and machinery;
- reducing water consumption on site, for example by employing alternative methods of dust suppression;
- exploiting opportunities for water storage in flood zones (e.g. mineral extraction voids);
- increasing renewable energy use and generation on sites;
- appropriate choice of afteruse for the restoration of quarries sites;
- opportunities for increasing long-term floodplain storage to reduce flood risk, when sites are restored;
- application of nature-based solutions such as expansion of tree and woodland cover, restoration and creation of priority habitats, natural floodplain management, retrofitting blue and green infrastructure, re-wilding and vegetation carbon capture around sites and when sites are restored;
- opportunities for enhancing ecological networks and carbon sequestration during site operation and when sites are restored;
- supplying aggregates for use in flood and coastal defences;
- providing high quality development design; and
- adopting circular economy principles.

6.11 A number of mitigation measures can be taken to reduce the waste industry's contribution to climate change, which include:

- reducing emissions created by waste transport by locating development close to supply and markets, minimising HGV movements, using less polluting vehicles, reducing the use of fossil fuel powered vehicles, ensuring HGVs travel at full capacity to minimise number of vehicle trips and avoiding transport by road where possible (i.e. water, rail or use of conveyors).
- driving waste processing and associated activities up the waste hierarchy;
- reducing greenhouse gas emissions by diverting biodegradable waste from landfill;
- improving public sorting of waste;
- improving design for waste in general development, e.g., housing;
- providing a national and locally designed waste infrastructure network;
- reducing consumption – including manufacturing creating less waste;
- appropriate choice of afteruse for the restoration of landfill sites;
- adopting a more sustainable use of resources through the use of recycled materials and secondary aggregates in construction;
- reducing the rate of buildings demolition and increasing the rate of buildings refurbishment<sup>54</sup>;

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<sup>53</sup> Climate Change: MPs say building demolitions must be reduced (BBC News Article) -

<https://www.bbc.co.uk/news/science-environment-61580979>

<sup>54</sup> Ibid.

- exploiting the potential for carbon capture, including ensuring facilities can easily be retrofitted with carbon capture technology in the future;
- application of nature-based solutions such as expansion of tree and woodland cover, restoration and creation of priority habitats, re-wilding and vegetation carbon capture around sites and when sites are restored;
- increasing renewable energy use and generation on waste sites;
- generating renewable energy (heat and power) from energy recovery facilities, e.g., using anaerobic digestion, pyrolysis and other technologies;
- increasing the energy efficiency of waste developments and operations;
- reducing the use of fossil fuel powered plant and machinery;
- reducing water consumption on site;
- providing high quality development design;
- adopting the polluter pays principle; and
- adopting circular economy principles – e.g., use of reusable products.

## Assessing Minerals and Waste proposals

- 6.12 Initial site suitability assessment both at the strategic and project stages must assess for presence of carbon rich soil types, such as peat soils, as well as habitats and species particularly vulnerable to the impacts of climate change. Consideration must be given to how the Plan or project can reduce these vulnerabilities and avoid or minimise the release of soil carbon.
- 6.13 There are a number of detrimental Green House Gases (GHGs) that are emitted by development. Significant GHGs include carbon dioxide, methane, nitrous oxide and the four fluorinated gases.
- 6.14 GHG assessments for proposed developments is an emerging consultation specialism. There is a growing requirement for GHG assessments and climate change impact assessments in planning, particularly for planning applications subject to the Environmental Impact Assessment (EIA) Regulations. Due to the absence of GHG baseline data, developers will need to rely on wider industry examples and carbon data sources, such as those described in the Royal Institute of Chartered Surveyors' (RICS) 'Whole life carbon assessment for the built environment UK professional statement' document<sup>55</sup>.
- 6.15 IEMA (Institute of Environmental Management and Assessment) has produced an EIA guide to Assessing Greenhouse Gas Emissions and Evaluating their Significance<sup>56</sup>. It advocates a 'good practice' approach where GHG emissions are always considered and reported but at varying degrees of detail depending on the EIA project. This is important to build up sufficient knowledge and understanding of how to effectively

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<sup>55</sup> RICS Whole life carbon assessment for the built environment:

<https://www.rics.org/profession-standards/rics-standards-and-guidance/sector-standards/construction-standards/whole-life-carbon-assessment>

<sup>56</sup> IEMA EIA guide to Assessing Greenhouse Gas Emissions and Evaluating their Significance -

<https://www.iema.net/preview-document/assessing-greenhouse-gas-emissions-and-evaluating-their-significance>

assess GHG emissions. A focus on proportionate assessment is also important to avoid undue burden.

- 6.16 It is taken as a requirement of the climate change response that GHG assessment is required for all minerals and waste development proposals to demonstrate their accordance. Therefore, in the context of the IEMA guidance, GHG assessment is scoped into all applications, including EIA applications. This need is reinforced by the three over-arching principles relevant to considering significance, listed below.
- 6.17 All assessment methodologies require the reference point of a baseline against which the new project is compared. The goal of the baseline is to be able to assess and report the net GHG impact of the proposed development.
- 6.18 There are many different assessment methods available and the IEMA guidance does not set a given methodology, but rather provides a list of relevant methods. Given the wide variation in development, one specific approach could be inappropriate in method and proportion.
- 6.19 The IEMA guidance states that all GHG emissions are significant. This significance and therefore action to address GHG emissions are set out in three over-arching principles:
1. *'The GHG emissions from all projects will contribute to climate change; the largest interrelated cumulative environmental effect.'*
  2. *'The consequences of a changing climate have the potential to lead to significant environmental effects on all topics in the EIA Directive – e.g. Population, Fauna, Soil, etc.'*
  3. *'GHG emissions have a combined environmental effect that is approaching a scientifically defined environmental limit, as such any GHG emissions or reductions from a project might be considered to be significant.'*<sup>57</sup>
- 6.20 Once level of significance is established, mitigation for GHG emissions should be set out. Carbon mitigation can best be achieved by taking a planned and focused approach that follows the principles of a carbon management hierarchy; first avoiding or reducing emissions where practical, before suggesting offset or sequester strategies beyond this. An example list of carbon mitigation interventions includes:
- energy demand and use management;
  - energy efficiency;
  - technology or process improvements;
  - GHG capture and storage in, typically, a GHG reservoir;
  - management of transport and travel demands;
  - fuel switching or substation; and
  - afforestation.
- 6.21 IEMA also provides a useful structure for working through and identifying potential opportunities and interventions to mitigate against GHG emissions. IEMA has a GHG

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<sup>57</sup> The third principle is related to the IPCC carbon budget definition which states that to remain below a 2°C threshold (the level defined as dangerous climate change impacts), global GHG emissions must remain within 1000 billion tonnes.

hierarchy<sup>58</sup> that proposes the structure of avoid, reduce, substitute and compensate. An IEMA variation of these steps from their EIA guide to ‘Assessing Greenhouse Gas Emissions and Evaluating their Significance’ is set out below:

1. Do not build: evaluate the basic need for the project and explore alternative approaches to achieve the desired outcome(s).
2. Build less: realise potential for re-using and/ or refurbishing existing assets to reduce the extent of new construction required.
3. Design clever: apply low carbon solutions (including technologies, materials and products) to minimise resource consumption during the construction, operation, user’s use of the project, and at end-of-life.
4. Construct efficiently: use techniques (e.g., during construction and operation) that reduce resource consumption over the life cycle of the project; and
5. Offset and sequester: as a complementary strategy to the above, adopt off-site or on-site means to offset and/or sequester GHG emissions to compensate for GHG emissions arising from the project.

6.22 The RICS ‘Whole life carbon assessment for the built environment UK professional statement’ document<sup>59</sup>, provides the requirements and supporting guidance for conducting whole life carbon assessments for construction projects in line with EN 15978: 2011, the standards framework for appraising the environmental impacts of the built environment.

6.23 RTPI/TCPA Guidance<sup>60</sup> outlines that fossil fuel extraction ‘*can have no medium- or long-term role in energy generation or industrial processes*’ if the UK is to meet its ambitions. It states that the ‘*Sixth Carbon Budget provides for a limited short-term role, but this does not normally require the consenting of any new mineral extraction*’. The Guidance includes the following principles:

- ‘*In planning for any form of fossil fuel extraction, local planning authorities must ensure that all greenhouse gas emissions from the extraction and consumption are aligned with the objectives and provisions of the Climate Change Act 2008 and any locally determined climate targets. If there is any uncertainty, a precautionary approach should be applied.*
- ‘*When considering applications for fossil fuel extraction, local planning authorities should adopt a presumption against approval unless there are exceptional demonstrable reasons why the application should be approved.*’

6.24 The issue of climate change and ‘downstream’ impacts on climate change has been the subject of recent case law regarding an oil and gas proposal in Surrey<sup>61</sup>. The Court of Appeal rejected a claim that it was unlawful for Surrey County Council, as mineral planning authority, not to require the environmental impact assessment (EIA) for a

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<sup>58</sup> IEMA (2014) Position Statement on Climate Change and Energy - <https://www.iema.net/climate-emergency/position-statement>

<sup>59</sup> RICS Whole life carbon assessment for the built environment: <https://www.rics.org/profession-standards/rics-standards-and-guidance/sector-standards/construction-standards/whole-life-carbon-assessment>

<sup>60</sup> The climate crisis – a guide for local authorities on planning for climate change (RTPI/TCPA, Oct 2021): <https://www.tcpa.org.uk/planning-for-climate-change>

<sup>61</sup> *Finch On Behalf of the Weald Action Group, R (On the Application Of) v Surrey County Council & Ors* [2022] - <https://www.bailii.org/ew/cases/EWCA/Civ/2022/187.html>



project of crude oil extraction for commercial purposes to include an assessment of the impacts of greenhouse gas emissions resulting from the eventual use of the refined products of that oil as fuel. However, it went on to conclude that *'Whether the downstream greenhouse gas emissions were or were not to be regarded as indirect effects of the project was a question of judgment for [the Local Authority]'*.

- 6.25 Furthermore, the appellant did claim some reward in that they considered that the case did result in a *'Court of Appeal authority that, when decision-makers come to consider granting planning permission for fossil fuel projects, they may be required by the law to assess the greenhouse gas emissions from the use of the extracted oil, coal or gas'*.
- 6.26 Criteria for fossil fuel extraction may represent a particular tension in the Plan due to national policy that advocates for net zero and that seeks to promote domestic oil and gas supply. The NPPF currently states that *'Minerals planning authorities should: a) when planning for on-shore oil and gas development, clearly distinguish between, and plan positively for, the three phases of development (exploration, appraisal and production), whilst ensuring appropriate monitoring and site restoration is provided for;*<sup>62</sup>, so the Plan is required to adopt this approach in order to be found sound, as it must be in compliance with national policy. However, this makes it all the more important that these facilities consider their potential impacts on climate change.
- 6.27 Another key minerals and waste development with potential impacts on climate change is energy from waste plants. As they come at the bottom of the circular economy approach, representing a permanent loss of resources and effectively convert carbon-based matter into energy and byproducts with the potential to contribute to climate change, there is particular need to ensure these facilities are in-line with climate change requirements. In the most recent report to Parliament by the CCC<sup>63</sup>, it was noted that *'Energy from Waste (EfW) emissions are already higher than the Government's CBDP anticipates and EfW capacity is set to increase in the coming years. A comprehensive systems-approach to control and reduce EfW emissions is urgently needed, including clarity on carbon pricing. We recommend a moratorium on additional EfW capacity until a review of capacity requirements has been completed and an updated assessment of residual waste treatment capacity requirements published.'*

## Monitoring Minerals and Waste proposals

- 6.28 The RTPI/TCPA Guidance highlights that Annual Monitoring Reports should contain assessments of carbon performance<sup>64</sup>. Reducing carbon emissions by 2050 is relevant to the discharge of the duty on planning authorities to shape policy which reduced carbon emissions. Therefore, *'planning authorities will need a clear grasp of their areas' baseline emissions, and their policies should support 'radical' reductions in carbon dioxide emissions'*.

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<sup>62</sup> National Planning Policy framework (NPPF) 2023 -

[https://assets.publishing.service.gov.uk/media/64f991c99ee0f2000fb7c001/NPPF\\_Sept\\_23.pdf](https://assets.publishing.service.gov.uk/media/64f991c99ee0f2000fb7c001/NPPF_Sept_23.pdf)

<sup>63</sup> Climate Change Committee, Progress in reducing emissions 2023 Report to Parliament, June 2023 -

<https://www.theccc.org.uk/wp-content/uploads/2023/06/Progress-in-reducing-UK-emissions-2023-Report-to-Parliament.pdf>

<sup>64</sup> The climate crisis – a guide for local authorities on planning for climate change (RTPI/TCPA, Oct 2021) -

<https://www.rtpi.org.uk/practice/2021/october/the-climate-crisis/>

- 6.29 There are growing requirements for organisations to monitor their GHG emissions and therefore demonstrate their contribution to reducing impact on climate change, as per the examples given in Section 5. With respect to minerals and waste development, in order for the Plan to demonstrate it is achieving its objectives to meet net-zero GHG emissions, the Minerals and Waste Planning Authorities will require regular performance data from minerals and waste activities.
- 6.30 The UK Government's SECR (referred to Section 5) uses a measure of assessment and monitoring of a carbon intensity ratio; the value of kilograms of CO<sub>2</sub> equivalent per tonne of product. This can be applied to both the minerals industry and the contribution from the management of waste. This figure allows comparison between different proposals and quarries.
- 6.31 Another example is the European Investment Bank. They screen all projects for their climate change impacts and refer to the International Financial Institution's (IFI's) framework to Greenhouse Gas Accounting and approaches to GHG accounting for energy efficiency and GHG assessment in the transport sector<sup>65</sup>. The European Investment Bank is also carrying out a carbon footprint exercise.
- 6.32 There are, therefore, established and other emerging methods on how to monitor climate change impact for developments which are applicable to the minerals and waste industries.

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<sup>65</sup> EIB GHG for Project Accounting - <https://www.eib.org/en/publications/20220215-eib-project-carbon-footprint-methodologies>

## 7. Conclusion

- 7.1 Evidence, guidance, and context provided in this Topic Paper demonstrates the vital importance and significance of climate change for the Plan.
- 7.2 There are a range of climate change mitigation and adaptation opportunities for minerals and waste developments. The importance and significance of climate change, the contribution of minerals and waste development to it, and the range of associated legislation, strategies and policies requiring net zero emissions, confirms that those mitigation and adaptation measures are necessary and viable.
- 7.3 This Paper outlines climate change assessment methodologies and guidance currently available in the UK and demonstrates its application for minerals and waste development. It is considered, therefore, that there is sufficient information and support to enable minerals and waste developers to submit proportionate climate change assessments and accord with proposed *Policy 2: Climate change – mitigation and adaptation*, without this being unreasonably onerous. Furthermore, these assessments can be the basis for making decisions on the most appropriate climate change mitigation and adaptation opportunities for each development.
- 7.4 The current adopted Policy seeks to minimise impacts on the causes of climate change and, where applicable, suggests minerals and waste development should reduce vulnerability and provide resilience to climate change.
- 7.5 However, the need to reach net zero by 2050 requires the Plan to demonstrate that it will help to achieve this and the provisions of the Climate Change Act.

### Recommendations

- 7.6 As part of the iterative nature of the preparation of this Topic Paper, the following recommendations were included in the August 2022 version of this document and submitted as part of the Regulation 18 Draft Plan Consultation that ran from November 2022 to 31 January 2023.
- 7.7 It is recommended that changes are made to Policy 2 to strengthen its purpose and ensure that it is enabling its implementation and monitoring.
- 7.8 It is also recommended that the Plan requires all minerals and waste development proposals to be supported by a Climate Change Assessment. This assessment can include an appropriate methodology for the monitoring of climate impact, including GHG emissions. This will allow the Minerals and Waste Planning Authorities to monitor, and if required, enforce Policy 2 and demonstrate the implementation and success of the mitigation and adaptation measures incorporated in that development.
- 7.9 The Climate Change Assessment shall include how the development proposal encourages the wider sustainable use of resources, how the development itself makes efficient use of resources (e.g. through sustainable construction techniques, the use of

renewable energy and design that minimises resource and energy use), and how it makes its proportional contribution to reducing GHG emissions and mitigation and adaptation to climate change. In supporting climate change mitigation and adaptation, the policies listed in paragraph 7.11, will need to be taken into account as part of the Climate Change Assessment.

- 7.10 The Climate Change Assessment is required to define:
- the current carbon baseline at the site;
  - the method for measuring carbon emissions associated with the development for the total life of the proposal (including restoration); and
  - a commitment to supply the data to the relevant Authority for reporting in the Authority Monitoring Report.
- 7.11 The Climate Change Assessment will also need to demonstrate commitment and, at least, initial methodology for submission of data to the Minerals and Waste Planning Authority by the developer. This will allow monitoring of the development's ongoing commitment and contribution to climate change response. This enables the planning authority to monitor and enforce minerals and waste developments, as well as demonstrate compliance with climate change policies and the contribution to climate change response and net-zero emissions the Plan is making. This supports the proactive approach to mitigating and adapting to climate change required of the Plan by the NPPF and the Climate Change Act 2008 (as amended).
- 7.12 Climate change is a cross-cutting issue; Development Management Policies 3-14 will support the delivery of climate change mitigation and adaptation, and this should be recognised in the Plan.
- 7.13 In addition, a number of the Plan policies promote development proposals, and these will need to be signposted to Policy 2 to ensure there is clear recognition for the need for a Climate Change Assessment. Extraction of oil and gas may also need to give consideration to GHG emissions generated from its use (downstream effects) in addition to its extraction.
- 7.14 Finally, the impact of waste policies on climate change needs to be considered in line with ambitions to move to a circular economy model, where both the material and energy contained in potential waste are recovered either through various processes or avoiding the waste production altogether. Supporting the Waste Hierarchy will be of key importance in making sure that waste policies align with climate change objectives.

### **Application of the Recommendations**

- 7.15 The Draft Plan made amendments to Policy 2 in line with the above recommendations and the proposed submission Plan has made further changes. These are set out below.
- 7.16 Policy 2 (adopted HMWP, 2013)  
*'Policy 2: Climate change - mitigation and adaptation  
Minerals and waste development should minimise their impact on the causes of climate change.'*

*Where applicable, minerals and waste development should reduce vulnerability and provide resilience to impacts of climate change by:*

- a. being located and designed to help reduce greenhouse gas emissions and the more sustainable use of resources; or*
- b. developing energy recovery facilities and to facilitate low carbon technologies; and*
- c. avoiding areas of vulnerability to climate change and flood risk or otherwise incorporate adaptation measures.'*

7.17 Policy 2 (Draft Plan, 2022)

*“Policy 2: Climate change – mitigation and adaptation*

*Minerals and waste development will be supported that:*

- a. contributes towards mitigating the causes of climate change by:*
  - i. Being located and designed to encourage the sustainable use of resources; and*
  - ii. Reducing greenhouse gas emissions, where applicable; and/or*
  - iii. Facilitating low carbon technologies; and*
- b. reduces vulnerability and provides resilience to the impacts of climate change through location and design and the incorporation of adaptation measures.*

*Minerals and waste development proposals should be supported by a Climate Change Assessment which demonstrates how these opportunities have been considered, and where appropriate, incorporated.”*

7.18 Policy 2 (Proposed Submission Plan, 2023)

*‘Policy 2: Climate change – mitigation and adaptation*

*Minerals and waste development will be supported where it enables the transition to carbon neutrality by 2050 by:*

- a. contributing towards mitigating the causes of climate change by:*
  - i. Being located and designed to encourage the sustainable use of resources; and*
  - ii. Reducing greenhouse gas emissions, where possible; and*
  - iii. Facilitating low carbon technologies; and*
- b. reducing vulnerability and providing resilience to the impacts of climate change through location and design and the incorporation of adaptation measures.*

*Minerals and waste development proposals must be supported by a Climate Change Assessment which demonstrates how they will contribute to the transition to carbon neutrality. This should include how climate change adaptation and mitigation measures and opportunities have been identified, considered, and (where appropriate) incorporated.’*

7.19 As the above demonstrates, Policy 2 was strengthened from the adopted Plan to the Draft Plan version by specifically supporting development that addresses climate

change (causes and impacts). It also introduced the requirement for a Climate Change Assessment.

- 7.20 Policy 2 was then further strengthened from the Draft Plan to the Proposed Submission Plan by changing *'should be supported by a Climate Change assessment'* to *'Must be supported by a Climate Change Assessment'*. Additionally, text was inserted to specify that *"Minerals and waste development will be supported where it enables the transition to carbon neutrality by 2050"*. The transition to carbon neutrality requirement is in line with the governments Net Zero strategy and is an ambitious target that will require strong and immediate action to achieve. This also fits in with the role of the Plan, which is to set the policy for minerals and waste development and support the transition to Net Zero that these developments can enable.
- 7.21 The additional supporting text in Policy 2 further highlights the requirements that stem from a carbon neutrality by 2050 approach: *'Minerals and waste proposals will need to demonstrate in their Climate Change Assessments how the development will reduce its carbon emissions over time and enable the transition to carbon neutrality by 2050. This will need to be proportional to the scale of carbon emissions the development is likely to cause. Therefore, energy developments such as oil and gas or energy from waste will have to provide a significant justification taking into account the life of the development (see 'Oil and gas development' and 'Energy recovery development' for more detail).'*
- 7.22 Policy 9 (Protection of soils) and Policy 10 (Restoration of minerals and waste developments) have both had their climate change aspects strengthened. These policies now stress the importance of soils to adaption to and mitigation of climate change; and the opportunities that arise from restoration in this area as well. The two policies are also closely linked, as the type of restoration envisaged can impact both on the protection of soils and on climate change factors.
- 7.23 The Draft Plan also made amendments to the supporting text of Policy 24 (Oil and gas development). In the Draft Plan, the following text was added: *'A key environmental consideration that applies to oil and gas development will be the contribution that fossil fuels make to climate change and the impacts of climate change. Hydrocarbons are used in a number of applications and carbon emissions that arise from any one of these uses would differ greatly, dependent upon the efficiency of that user and the carbon capture solutions employed. It is expected that these potential downstream environmental impacts of the development are fully assessed, either separately or as part of an Environmental Assessment.'* As current legal judgements have determined that it is the Local Authority's responsibility to determine whether downstream effects should be considered, this text sets out that the Hampshire Authorities approach will be to expect this kind of assessment.
- 7.24 Following the Draft Plan consultation, the proposed submission Plan also includes the following supporting text: *'The existing oil and gas sites and infrastructure may offer opportunities in the future to help deliver and contribute to a net zero carbon future. Existing operators and the trade association are working with downstream companies to see how existing sites and infrastructure may be used to meet this target – whilst at*

*the current time assisting in delivering hydrocarbons required as part of a dependable energy mix during this transition period.'* Together with the requirement from Policy 2 to work towards carbon neutrality in 2050, this poses a significant requirement on oil and gas sites to demonstrate their role in achieving this target.

## Glossary and Abbreviations

### **Adaptation**

Climate change adaptation helps individuals, communities, organisations and natural systems deal with those consequences of climate change that cannot be avoided. It involves taking practical actions to manage risks from climate impacts, protect communities and strengthen the resilience of the economy.

### **Carbon Dioxide (CO<sub>2</sub>)**

Carbon dioxide is a chemical compound composed of one carbon and two oxygen atoms. It is often referred to by its formula CO<sub>2</sub>. It is present in the Earth's atmosphere at a low concentration and acts as a greenhouse gas. It is a major component of the carbon cycle.

### **Circular economy**

A circular economy is an alternative to a traditional linear economy (make, use, dispose) in which we keep resources in use for as long as possible, extract the maximum value from them whilst in use, then recover and regenerate products and materials at the end of each service life.

### **Climate change**

A change in global or regional climate patterns, in particular a change apparent from the mid to late 20th century onwards and attributed largely to the increased levels of atmospheric carbon dioxide produced by the use of fossil fuels.

### **Climate Change Emergency**

A climate emergency declaration or declaring a climate emergency is an action taken by governments and scientists to acknowledge humanity is in a climate emergency.

### **Committee on Climate Change (CCC)**

Provides independent advice to government on building a low-carbon economy and preparing for climate change.

### **Emissions**

An amount of something, especially a gas, that harms the environment, that is sent out into the air.

### **Environmental Impact Assessment (EIA)**

The assessment of the environmental consequences of a plan, policy, program, or actual projects prior to the decision to move forward with the proposed action.

### **European Investment Bank**

The European Investment Bank is one of the world's main financiers of climate action.

### **Greenhouse Gases (GHG)**

A greenhouse gas is a gas that absorbs and emits radiant energy within the thermal infrared range. Greenhouse gases cause the greenhouse effect on planets. The primary greenhouse gases in Earth's atmosphere are water vapor, carbon dioxide, methane, nitrous oxide, and ozone.

### **Heavy Goods Vehicle (HGV)**

A vehicle that is over 3,500kg unladen weight and used for carrying goods.

### **Inert Landfill**

One of the three classifications of landfills made by the Landfill Directive, taking inert waste.

**Institute of Environmental Management and Assessment (IEMA)** An international membership organisation, committed to global sustainability.



**Low carbon technologies**

Technologies that produce power with substantially lower amounts of carbon dioxide emissions than is emitted from conventional fossil fuel power generation. It includes technologies such as wind power, solar power, hydropower and nuclear power.

**Managed Aggregate Supply System (MASS)**

The underpinning concept behind the Managed Aggregate Supply System is that Mineral Planning Authorities which have adequate resources of aggregates make an appropriate contribution to national as well as local supply, while making allowance for the need to reduce environmental damage to an acceptable level.

**Minerals and Waste Planning Authorities (MWPA)**

The local planning authorities (County and Unitary Councils, and National Park Authorities) responsible for minerals and waste planning.

**Minerals Products Association (MPA)**

The Mineral Products Association is the United Kingdom trade association for the aggregates, asphalt, cement, concrete, dimension stone, lime, mortar, and silica sand industries.

**Mitigation**

The reduction of something harmful or the reduction of its harmful effects.

**Modern Methods of Construction (MMC)**

Modern Methods of Construction is a wide ranging term, embracing a range of offsite manufacturing and onsite techniques that provide alternatives to traditional house building. MMC ranges from whole homes being constructed from factory-built volumetric modules, through to the use of innovative techniques for laying concrete blockwork onsite.

**National Planning Policy Framework (NPPF)**

This document sets out the Government's planning policies for England and how these should be applied. It provides a framework within which locally-prepared plans for housing and other development can be produced.

**National Planning Policy for Waste (NPPW)**

This document sets out the Government's detailed waste planning policies. It should be read in conjunction with the National Planning Policy Framework.

**Net zero**

Refers to achieving carbon neutrality by balancing carbon emissions with carbon removal or simply eliminating carbon emissions altogether.

**Planning Practice Guidance (PPG)**

A web-based resource which brings together planning guidance on various topics into one place. It was launched in March 2014 and coincided with the cancelling of the majority of Government Circulars which had previously given guidance on many aspects of planning.

**Renewable energy**

Renewable energy is energy that is collected from renewable resources, which are naturally replenished on a human timescale, such as sunlight, wind, rain, tides, waves, and geothermal heat.

**Royal Institute of Chartered Surveyors (RICS)**

A professional body for qualifications and standards in land, property, infrastructure and construction.

**Streamlined Energy and Carbon Reports (SECR)**

The SECR scheme was launched in April 2019. It requires organisations to report energy and carbon emissions in their annual report.

**Waste hierarchy**

The waste hierarchy is a simple ranking system used for the different waste management options according to which is the best for the environment. The most preferred option is to *prevent* waste, then *reuse, recycle and recover*, to the least preferred choice - *disposal*.

**Whole life carbon assessment**

Identifies the overall carbon emitted from all the construction materials that make up a structure and the operational emissions in the day-to-day running of a building over its entire life.

A summary of this document can be made available in large print, in Braille or audio cassette. Copies in other languages may also be obtained. Please contact the Minerals and Waste Policy Team at Hampshire County Council by email [HMWP.consult@hants.gov.uk](mailto:HMWP.consult@hants.gov.uk) or by visiting [hants.gov.uk](http://hants.gov.uk).