

UKGBC response to the UK National Resilience Strategy – Call for evidence

Introduction

The UK Green Building Council (UKGBC) is an industry network with a mission to radically improve the sustainability of the built environment, by transforming the way it is planned, designed, constructed, maintained and operated. As a charity with over 600 member organisations spanning the entire sector, we represent the voice of the industry’s current and future leaders who are striving for transformational change.

We welcome the Government’s call for evidence to inform the development of a new National Resilience Strategy, that will provide an enhanced and progressive vision for national resilience. As the impacts of climate change are increasingly felt across the UK, it is clear that the Government must take ambitious steps to enhance our national resilience plans, policies and capabilities, whilst ensuring that appropriate response structures are in place to address the significant potential disruption associated with these growing challenges.

As highlighted by the Climate Change Committee’s Third Climate Change Risk Assessment and 2021 Report to Parliament, a wide array of the UK’s social, economic and environmental goals are at risk of being undermined by a lack of resilience to the impacts of climate change, notably in the built environment. A lack of resilience in our sector will significantly impact other key areas of national resilience more broadly, including both health and economic productivity, and have significant long-term costs for the UK economy. Of the eight priority climate risks highlighted by the CCC that should be tackled in the next two years, the risks to human health, wellbeing, and productivity from increased exposure to heat in homes and other buildings were identified as amongst the most urgent to address and most severe.

We therefore strongly recommend that the National Resilience Strategy reflects the recommendations and advice of the Climate Change Committee and works urgently to support action to enhance the resilience of the built environment. Working with our members and key stakeholders across the industry, the UK Green Building Council has developed a ‘sector ambition’ intended to act as a focal point for achieving resilience across the sector.¹ We believe this represents a realistic goal for the industry and policymakers to enhance the resilience of the built environment, and we strongly recommend that the National Resilience Strategy reflects and supports the delivery of this ambition.

In order to achieve this goal, both UKGBC’s research and our members have stressed the need for the Strategy to support work to provide better information on climate risk, resilience and adaptation measurement; implement a consistent, cross-government framework of targets, incentives and reporting; and facilitate funding for direct adaptation action at a local government level. To address climate risk and resilience in the built environment, it is essential that plans focus

¹ UKGBC, *Climate resilience and embracing nature: An ambition for the built environment*, <https://www.ukgbc.org/ukgbc-work/climate-resilience-and-embracing-nature-an-ambition-for-the-built-environment%E2%80%AF/>

on the delivery of consistent, measurable outcomes that can be achieved in the next Adaptation Programme reporting period (2023–2029), to support resilient investment across the sector.

We welcome the opportunity to respond to this consultation – and below are our responses to individual questions that fall within our organisational remit.

Questions on Vision and Principles:

1. Do you agree with the proposed vision of the Resilience Strategy? Is there anything you would add, amend, or remove?

Yes.

UKGBC broadly welcomes the proposed vision of the National Resilience Strategy, including its goal to strengthen our ability to assess, understand and respond to the multiple risks we face. However, to achieve these goals, alterations should be made to reflect, and help address, the considerable impacts of climate change on national resilience.

As highlighted by the Climate Change Committee’s Third Climate Change Risk Assessment, the UK is vulnerable to a significant number of risks arising from the impacts of climate change.² Of the eight priority climate risks that should be tackled in the next two years, the risks to human health, wellbeing, and productivity from increased exposure to heat in homes and other buildings were identified as amongst the most urgent to address and most severe.³ The CCC’s report concludes that current adaptation policy and implementation has not kept pace with the rate of increase in climate risk, with disruption to all aspects of life in the UK from climate change having notably increased over the last five years. A significant number of government and societal goals therefore risk being undermined by the effects of climate change if further action is not taken to promote climate resilience, including the provision of reliable and safe supplies of food and water; infrastructure services such as transport and energy; biodiversity; public health; natural and cultural heritage.

For the National Resilience Strategy to be successful and fulfil its vision to “*make the UK the most resilient nation*”, it must include a significant focus on enhancing the UK’s resilience to the impacts of climate change. Whilst it is acknowledged that several other, existing governmental strategies, such as the current National Adaptation Programme, focus on building resilience to individual risks, the new National Resilience Strategy offers a valuable opportunity to complement these strategies by delivering a coherent, overarching, longer-term vision for national resilience that helps facilitate investment. The Strategy is also a valuable opportunity to articulate and facilitate direct steps intended to address our capability to tackle the anticipated impacts of climate change, and systemic vulnerabilities.

As highlighted by the CCC, the UK’s national adaptation plans have not, to date, clearly articulated a positive vision for a resilient UK. The next set of national adaptation plans should be inspired by a clear, cross-departmental vision for a well-adapted UK, where climate adaptation is integrated as

² Climate Change Committee, *Independent Assessment of UK Climate Risk: Advice to Government for the UK’s third Climate Change Risk Assessment (CCRA3)*, <https://www.theccc.org.uk/wp-content/uploads/2021/07/Independent-Assessment-of-UK-Climate-Risk-Advice-to-Govt-for-CCRA3-CCC.pdf> P.11

³ Climate Change Committee, *Independent Assessment of UK Climate Risk*, P.12

standard into policies and business operations, and the implications are clear for people, places and sectors throughout the UK. The National Adaptation Strategy could fulfil this role by providing a clear long-term vision for a well-adapted UK. Such a long-term vision would help provide valuable certainty in the trajectory of adaptation policy, and thereby help deliver the necessary confidence needed to facilitate the increased levels of investment required to address climate risk. In line with this aim, the UK Green Building Council has created an ambition statement for the sector, in partnership with UKGBC members and other key stakeholders from across the built environment value chain, to provide a focal point for the industry in relation to climate resilience. The ambition statement calls for:

“By 2030, all buildings and infrastructure should, throughout their lifetime, be climate resilient and maximise environmental net gains, through the prioritisation of nature-based solutions.”⁴

Through working with our members and in collaboration with key stakeholders across the sector, we believe this ambition represents a viable, achievable goal and timeframe for delivering resilience across the sector. Whilst we therefore welcome the long-term focus for the Strategy’s vision in setting an approach leading to 2030, it is also important to note that the next two years will be critical in raising the profile of adaptation in government policymaking and acting on the priorities identified in the CCC’s report in order to ensure this goal is met. We therefore strongly recommend the strategy reflect and embed the importance and value of early action in order to avoid the risk of ‘lock in’ and maximise the benefits of resilience. (See Q.2 principles).

The Strategy can also help by supporting work to provide better information on climate risks; supporting and reinforcing the coordination of local action; implementing a framework of targets, incentives and reporting; and facilitating funding for direct adaptation action. It is essential that, regarding climate risk and the built environment, plans focus on the delivery of measurable outcomes that can be achieved by the end of the next Adaptation Programme reporting period (2023 –2029).

2. Do you agree with the principles laid out for the strategy? Is there anything you would add, amend, or remove?

Yes.

We welcome the principles laid out in the Strategy, the broad approach to the risk landscape, the need for investment, and the importance of engagement, skills, empowerment, and legislation. Securing the resilience of the UK’s built environment will require significant investment and support from Government, including through putting in place supportive legislative and policy frameworks to set a clear trajectory for the sector. In particular, we strongly support the CCC’s recommendation of the need for an urgent move towards more measurable outcomes and indicators in resilience and adaptation policy.

In order to deliver the Strategy’s vision for a resilient UK, we recommend the current principles should be refined to ensure they align with, and reflect, the CCC’s ten principles for good

⁴ UKGBC, *Climate resilience and embracing nature: An ambition for the built environment*, <https://www.ukgbc.org/ukgbc-work/climate-resilience-and-embracing-nature-an-ambition-for-the-built-environment%E2%80%AF/>

adaptation.⁵ The principles already broadly reflect the recommendations of the CCC on considering interdependency, funding, addressing inequality, preparing for predicted risks and researching unpredictable events (such as temperature rise and threshold events).

However, we believe the principles should be refined further to include the benefits of early action and “avoiding lock-in”, alongside the associated opportunities for cost reduction, investment and asset longevity. Investments being made today in the built environment (e.g. new build housing) are still expected to be around in 2100. The CCC cites the current practice of building new homes without designing in adaptations to future conditions such as extreme heat as one example of ‘lock-in’.⁶ Integrating improved energy standards for climate resilience into the designs for new homes is vastly less expensive than mandating retrofit or energy upgrades later. Retrofitting higher-performing windows and shutters is around four times more expensive than including them at design stage.⁷ Likewise the costs of installing a package of passive cooling measures at the new build stage was estimated by CCC analysis to be around £2,300 for a small semi-detached house, compared to £9,200 to retrofit the same measures.⁸ If the Strategy is therefore to achieve its desired goal for national resilience, then it must recognise and promote the benefits of decisive early action across government policy to facilitate long-term resilience.

Taking early adaptation action would generate benefits from avoided damages for almost every risk associated with climate change assessed in the CCC’s Technical Report. There is a particularly strong case for the early integration of adaptation approaches and measures in three priority categories of action. Firstly ‘no-regret’ or ‘low-regret’ actions that reduce the risks associated with current climate variability, as well as building future climate resilience. These actions include reducing water use and improving passive cooling in homes, all of which are needed to address current climate risks. Secondly, integrating adaptation into near-term decisions that have long lifetimes, for example when considering major infrastructure projects, as this can reduce the risk of ‘lock-in’. And thirdly, fast-tracking flexible adaptive management activities for decisions that have long lead times or involve major future change, e.g., land use change.

Questions on Risk and Resilience:

1. Is there more that the Government can do to assess risk at the national and local levels? If so, what?

Yes.

A whole range of government and societal goals will be undermined by the effects of climate change if future climate risk and resilience are not considered at the early stages of policy-making and throughout both implementation and development. Where adaptation has been considered in government and local policy, it often lacks specific actions or underpinning impact measurement data, a key example being in planning policy. We therefore strongly support the CCC’s recommendation that the Government move quickly to support the development of key evidence-

⁵ Climate Change Committee, *Independent Assessment of UK Climate Risk*, P. 12.

⁶ Climate Change Committee, *Independent Assessment of UK Climate Risk*, P. 21, 24.

⁷ Climate Change Committee, *Independent Assessment of UK Climate Risk*, P. 24.

⁸ Climate Change Committee, *UK housing: Fit for the future?* <https://www.theccc.org.uk/wp-content/uploads/2019/02/UK-housing-Fit-for-the-future-CCC-2019.pdf> P.42

based indicators, to quantify both risk and resilience across policy-making and to ensure the right outcomes are delivered.⁹ This will be particularly valuable in relation to infrastructure and buildings, both identified as key areas at risk from the impacts of climate change and to help address key barriers in the sector to adaptation and resilience investment. UKGBC's members have strongly emphasized the value of further work to clearly quantify climate-risk, resilience and adaptation in relation to properties, businesses and investments; including data on climate resilience backed by supportive research into the effectiveness of adaptation measures and best practice. Many organisations are now reporting their climate change risks and opportunities, following the recommendations from the G20 Financial Stability Board's Task Force for Climate-related Financial Disclosures (TCFD) and further action to mandate climate-risk disclosure and measurement should be encouraged.

The CCC has expressed strong concerns that adaptation governance has weakened over the past ten years at the same time as the evidence of climate risk has grown.¹⁰ The Government clearly has an essential role to enable and enforce good adaptation planning and governance, and it can do this by providing better information on risks, supporting the coordination of local action, implementing a framework of targets, incentives and reporting, and directly funding adaptation action. It should provide a strong governance framework for adaptation to ensure that it is integrated more widely into relevant policies. This should emulate the approach that is currently emerging in relation to climate mitigation, including cross-departmental working groups, the overarching Net Zero Strategy and build a unified framework for key cross-government action on adaptation. The UK Green Building Council, working with our members and key stakeholders across the industry, has developed a 'sector ambition' intended to act as a focal point for achieving resilience across the sector.¹¹ We believe this represents a realistic goal for the industry and policymakers to enhance the resilience of the built environment, and we strongly recommend that the National Resilience Strategy reflects and supports the delivery of this ambition.

To support this ambition, the Government should implement stronger approaches to systemic risk assessments and resilience for critical infrastructure, especially where the interdependencies are so ubiquitous. At the local government level, as the Government works to reform the planning system in England, it is vital that clear standards and evidence requirements intended to measure resilience and climate risk are developed to inform the planning process for new development. Reforms to the English planning system and the development of associated data tools, metrics etc. will not only be beneficial in terms of development outcomes in England but can also serve as a useful model for informing policy development across the entirety of the UK, as has been the case with the biodiversity net gain metric and Natural England's nature-orientated data mapping work.

We welcome the Government's commitment to review aspects of the methodology that it uses to assess risk in the National Risk Register (NRR) and National Security Risk Assessment (NSRA), including how to account for interdependencies and the best time horizons over which to measure risks. Previous iterations of the NRR have only briefly considered the impacts of climate change, in

⁹ Climate Change Committee, *Progress in adapting to climate change 2021 Report to Parliament*, <https://www.theccc.org.uk/wp-content/uploads/2021/06/Progress-in-adapting-to-climate-change-2021-Report-to-Parliament.pdf> P.49.

¹⁰ Climate Change Committee, *Independent Assessment of UK Climate Risk*, P.23.

¹¹ UKGBC, *Climate resilience and embracing nature: An ambition for the built environment*, <https://www.ukgbc.org/ukgbc-work/climate-resilience-and-embracing-nature-an-ambition-for-the-built-environment%E2%80%AF/>

terms of either increasing the likelihood of specific extreme events, or by suggesting that climate change falls out of the scope of the register as a longer-term concern that is addressed by other programmes. This approach fails to match with the global trajectory of risk assessment and the principles of risk and resilience interdependency supported by the proposed National Resilience Strategy. Likewise, this approach does not reflect the widespread recognition that the impacts of climate change are already being felt today, as highlighted extensively by the CCC, as well as becoming increasingly severe in the immediate future.

As highlighted in response to Q1, the CCC has extensively documented the range and severity of climate risks the UK will face across key areas, particularly in relation to the resilience of the built environment.¹² We therefore strongly recommend that the Government update the National Risk Register to reflect the CCC's Independent Assessment of UK Climate Risk. This would allow the National Risk Register to duly reflect the wide range of risk interdependencies associated with climate change.

In addition, the CCC has highlighted concerns around the absence of a UK early warning system to consider changes arising from unpredictable climate extremes, such as shifts in the jet stream and changes in rainfall patterns, as is the case with other risk areas, or any assessment of what adaptation actions could be undertaken to reduce the resulting impacts. The CCC also recommends that the use of 'storyline' approaches or 'what if' scenarios for national risk planning would be beneficial, as this would allow for greater headroom for policies and operations to account for sudden extreme changes.¹³ UKGBC supports the latter approach suggested by the CCC in terms of integrating greater consideration and appropriate models for climate resilience into planning and policy. We strongly support the greater integration of appropriate climate risk consideration models into government guidance, particularly: *Emergency planning and preparedness: exercises and training*; *Emergency preparedness, Expectations and indicators of good practice set for category 1 and 2 responders*, and *Emergency Response and Recovery* guidance. We also recommend the Government continues to work with the Met Office and National Resilience Programme to expedite the development of further public-facing climate risk warning systems, building on the likes of the recent heatwave warnings, in order to encompass other climate impacts and ensuring a direct connection is made to climate change.

We strongly support the recognition within the proposals for the National Resilience Strategy of the importance of funding in securing a resilient future. Emerging information from adaptation finance studies highlights that to meet the adaptation finance gap, public funds will need to be scaled up and used in more strategic ways, including to mobilise private investment.¹⁴ Doing this will require the private, public and third sectors work together to design a process for mobilising public and private resources for innovation, making a broader range of financing instruments and models accessible, as well as developing long-term transformative financing solutions that are aligned to the different interests and requirements of the public and private sectors. The UK Government's Green Finance Strategy identifies climate resilience and an increase in adaptation as strategic objectives to support through green finance. However, despite this recognition, the Government

¹² Climate Change Committee, *Independent Assessment of UK Climate Risk*, P.45-51, 58-81.

¹³ Climate Change Committee, *Independent Assessment of UK Climate Risk*, P.24.

¹⁴ Climate Change Committee, *Independent Assessment of UK Climate Risk*, P.114; Paul Watkiss Associates, *Economic Implications of Climate Change for Glasgow City Region*, <http://climatereadyclide.org.uk/report-economic-financial-risk-glasgow/>

does not provide further details of funds or financial mechanisms intended to deliver these goals. There is an increasing number of options, though not yet at the scale needed to encourage the levels of adaptation required to match the scale of risk.

We strongly recommend that the Government work to develop the suggestions for new financing mechanisms or frameworks mentioned in the CCC's CCRA3 Technical Report including: conservation organisations developing finance-ready proposals for investment in biodiversity; lending, advisory services and green 'securitisation', which would help provide finance from institutional investors, and opportunities for banks as underwriters or issuers of green bonds; extending funding mechanisms that currently only focus on low carbon buildings (e.g. the smart energy programme) to include resilience, which in turn would help to boost profitability and employment in the construction and advisory services.¹⁵ The Government must ensure that local funding settlements, such as City Deals, County Deals, partnerships such as the Western Gateway and growth deals such as the Borderlands Inclusive Growth Deal, support projects and investment that enhance local climate resilience. Likewise, climate resilience must be central to the investment objectives and desired outcome criteria of the UK Infrastructure Bank, in addition to climate mitigation. The Government must draw on the successes of projects such as IGNITION, which have progressed multi-sector solutions and financial models to delivering climate resilience at scale via the use of Nature-based Solutions (NBS) and support the rollout of these models at scale.¹⁶ As IGNITION and other similarly innovative projects (such as the City Finance Lab, Connecting Nature, Grow Green, and others) have been EU-funded, the Government must consider its role as the primary financier of future resilience-focused innovation, which will be key to support the legacy of these projects and others.

2. Is there more that the Government can do to communicate about risk and risk appetite with organisations and individuals? If so, what?

Yes.

Policy Connect's *Bricks and Water* report, and associated research base, has highlighted the importance of Government policy in enabling an accessible approach to engaging with individuals and organizations on climate risk and resilience in the built environment.¹⁷ Likewise, research by the Social Market Foundation has found that understanding risk and access to information are key prerequisites for individuals taking action.¹⁸

The research by the Social Market Foundation has explored key barriers to the uptake of property flood resilience measures, and found that for individual homeowners they typically occur at key stages in the decision-making process. Firstly, motivation – households need to understand the risk of flooding to their property and acknowledge that they are responsible for protecting it. Secondly,

¹⁵ Climate Change Committee, *Independent Assessment of UK Climate Risk*, P.114.

¹⁶ IGNITION, *Investing in a Greener Greater Manchester A nature-based solutions investment guide for local authorities*, <https://www.ukgbc.org/wp-content/uploads/2021/07/Investing-in-a-Greener-Greater-Manchester-A-nature-based-solutions-investment-guide-for-local-authorities.pdf>

¹⁷ Policy Connect, *Bricks and Water: Building Resilience for England's Homes*, <https://www.policyconnect.org.uk/research/bricks-water-building-resilience-englands-homes>

¹⁸ Matthew Oakley, *Incentivising household action on flooding: options for using incentives to increase the take up of flood resilience and resistance measures*, Social Market Foundation, https://www.floodre.co.uk/wp-content/uploads/2018/03/SMF-Incentivising-household-action-on-flooding_web.pdf

the ability to access and assess information – households need clear, relevant information on the various products that are available and to be able to weigh-up the costs and benefits of installing them.¹⁹ Further research has indicated that currently only around one-third of homeowners know the flood risk of their property.²⁰ In relation to this, the Pitt Review into the 2007 summer floods recommended that flood risk should be made part of the mandatory search requirements when a home is purchased, so that the new owner is not left unaware.²¹ This information was briefly included within Home Information Packs, which were withdrawn in 2010.

Addressing these information barriers will be key if the Government is to effectively communicate about risk and risk appetite with individuals, in line with the principle outlined in the Strategy to empower individuals and communities. *Policy Connect's Bricks and Water* report highlights the value of the current EPC model, in terms of providing a clear, understandable model for conveying the relevant information, underpinned by the associated evidence and calculation methodology, to households and businesses. Likewise, EPCs currently provide a clear indicator for assessing policy progress and form the basis for several clear Government targets, which in turn provide valuable clarity for the industry.²² Work to include key resilience elements, such as water efficiency, in an EPC style system would therefore provide significant benefits for engaging with individuals, businesses and quantifying national government progress in this area.²³ Likewise the Government must ensure that efforts to promote and clearly communicate climate resilience are integrated across departments, including notably in relation to both planning reform and regulations such as the Future Home Standard, Future Buildings Standard and overheating standards.

In terms of communicating further with businesses and larger organisations around risk and resilience, new green finance initiatives, financial products and disclosure requirements have been a positive step forward in this area. However, a lack of understanding of the effectiveness of different adaptation actions in different settings, and a lack of measurement in policy, remain key barriers to the delivery of resilience at scale across both government policy and through private investment. Moves to promote and mandate reporting initiatives such as the Taskforces on Climate-Related and Nature-Related Financial Disclosure are helping to provide investors with better information and mainstream climate resilience and risk assessment. However, government still has a primary role to play in helping to integrate adaptation and resilience into the financial system, policies and existing economic plans - thereby reducing policy uncertainty - as well as the governmental role in relation to other actions which can leverage private sector investment.

One of the most significant gaps to supporting greater investment in adaptation from businesses is a lack of understanding around clearly and consistently quantifying the effectiveness of different adaptation actions in different settings. This is particularly the case in the built environment, as

¹⁹ Oakley, *Incentivising household action on flooding: options for using incentives to increase the take up of flood resilience and resistance measures*, P.9.

²⁰ Policy Connect, *Bricks and Water: Building Resilience for England's Homes*, P.31.

²¹ Sir Michael Pitt, *Learning Lessons from the 2007 Floods* [The Pitt Review] <https://webarchive.nationalarchives.gov.uk/ukgwa/20100702215619/http://archive.cabinetoffice.gov.uk/pittreview/the-pitt-review/final-report.html> P.322.

²² HM Government, *The Clean Growth Strategy Leading the way to a low carbon future*, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/700496/clean-growth-strategy-correction-april-2018.pdf P.13.

²³ For more information see: <https://www.policyconnect.org.uk/research/bricks-water-building-resilience-englands-homes>

highlighted by UKGBC members. Improved understanding of how adaptation actions can lead to risk reduction and desired policy outcomes is needed urgently, following the approach set out in the UK Government's Magenta Book (Guidance for Evaluation) and the development of key indicators to monitor change over time. We strongly recommend the Government work with the sector to develop key resilience standards and measurement indicators to support effective adaptation policy delivery.

3. How could the Government make risk assessment and data more accessible by frontline personnel in an emergency?

N/A

4. How does your organisation assess risks around unlikely or extreme events, when there is limited or no data?

N/A

5. How could the current local risk assessment process, managed through Local Resilience Forums, be strengthened to help local partners?

We welcome the review of the Civil Contingencies Act 2004 (CCA), which is scheduled for completion in March 2022. In reviewing the statutory underpinning of national resilience, it is vital that this process considers in detail the implications and cross-cutting risks to the UK from climate change, as outlined by the CCC, and also that it embeds support for associated resilience planning. As outlined by the CCC, the UK built environment is especially vulnerable to the impacts of climate change, and these risks will continue to rise alarmingly in the near future. Any consideration of the current roles and responsibilities set out in the CCA must ensure that these risks are duly considered by key local actors involved in emergency planning, prioritising local level resilience. The relevant personnel must also be supported with up-to-date guidance, training, best practice information, and adequate resources, in order to deliver effective planning and responses.

The majority of relevant guidance available for Local Resilience Forums was written nearly ten years ago (2011-13).²⁴ Since then, the hazards associated with the impacts of climate change have become increasingly apparent across the UK, and will continue to grow in severity over coming decades.²⁵ To strengthen the current local risk assessment process through Local Resilience Forums, current guidance must be comprehensively updated to reflect the risks and specific approaches required to deliver climate resilience.

Guidance on *Emergency planning and preparedness: exercises and training* should be updated to reflect the CCC's recommendations around using 'storyline' approaches or 'what if' scenarios for climate risk planning, to allow for greater headroom in policies and operations to account for

²⁴ Cabinet Office, *The role of Local Resilience Forums*, <https://www.gov.uk/guidance/local-resilience-forums-contact-details> ; Cabinet Office, *Preparation and planning for emergencies: responsibilities of responder agencies and others*, <https://www.gov.uk/guidance/preparation-and-planning-for-emergencies-responsibilities-of-responder-agencies-and-others>

²⁵ Climate Change Committee, *Independent Assessment of UK Climate Risk*, P.39-52, 63-77.

sudden extreme changes resulting from climate change.²⁶ Current *Emergency preparedness, Expectations and indicators of good practice set for category 1 and 2 responders*, and *Emergency Response and Recovery* guidance must all be comprehensively reviewed to ensure they directly address the risks, associated dangers and planning approaches needed to address the impacts of climate change.²⁷ Updates should ensure that the relevant guidance embeds a comprehensive consideration of the likely impacts and emergency situations arising as a direct result of climate change, as well as promoting effective adaptation measures which reflect the advice of the CCC.²⁸

Questions on Responsibilities and Accountability:

1. Do you think that the current division of resilience responsibilities between Central Government, the Devolved Administrations, local government and local responders is correct? If not, why?

We agree with the current division of resilience outlined in the UK's resilience model that, wherever possible:

- decisions, planning for and responsibilities before, during and after an emergency lie at the lowest appropriate level (e.g. communities, local authorities, emergency responders),
- with coordination and collaboration at the highest necessary level (e.g. UK Government).

As the scope of the Resilience Strategy encompasses an 'all-risks' approach, from national security through to all aspects of civil contingencies, the division of government responsibilities in relation to climate adaptation will be a crucial in delivering national resilience.

We welcome the recognition that local authorities must be the fundamental building block for UK resilience, and likewise, we agree with the assertion that "*it is fundamental that different levels involved in resilience-building have the tools, processes and relationships in place to work together effectively*". However, in order for this to be achieved in relation to climate resilience, it is vital that local authorities are sufficiently resourced and supported to develop both the capacity and skills required to fully incorporate climate resilience planning into their core operations, planning policies and emergency response capabilities.²⁹ Local authority resourcing and capacity is widely acknowledged as a key issue for securing resilience in the built environment, notably through the relationship with the enforcement of building regulations, as considered extensively in the Hackitt Review.³⁰ Securing the Strategy's vision for a resilient UK will require that these capacity and enforcement issues are directly addressed, with regulations tightened, both to ensure that

²⁶ Climate Change Committee, *Independent Assessment of UK Climate Risk*, P.24.

²⁷ Cabinet Office, *Emergency preparedness*, <https://www.gov.uk/government/publications/emergency-preparedness> ; Cabinet Office, *Expectations and indicators of good practice set for category 1 and 2 responders*, <https://www.gov.uk/government/publications/emergency-response-and-recovery>

²⁸ Climate Change Committee, *Independent Assessment of UK Climate Risk*, P.23-27.

²⁹ Philippa Borrowman, Ravina Singh and Roz Bulleid, *The local climate challenge A new partnership approach*, https://green-alliance.org.uk/resources/The_local_climate_challenge.pdf P.11-14.

³⁰ Dame Judith Hackitt, *Building a Safer Future Independent Review of Building Regulations and Fire Safety: Final Report*, [The Hackitt Review]

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/707785/Building_a_Safer_Future_-_web.pdf P.5, 12.

buildings are resilient to the impacts of climate change, and also that the regulations themselves are duly enforced.³¹

As the Cabinet Office continues to create the frameworks, standards and structures for national resilience, both in terms of direction-setting (working closely with No.10 and other relevant departments) and organising the structures for central decision-making, it will be crucial that these duly support and empower local authorities to take the necessary steps to deliver climate resilience at the local level. In particular, the government has a crucial role to play in developing national resilience standards that can underpin sustainable local planning across the UK, and form part of a long-term strategic policy framework that gives developers clarity around low carbon, climate-resilient, nature-friendly investment. The Government must support local authorities and work with the industry to develop robust, standardised approaches to integrating climate resilience into planning and regulations. Given the key examples of ambitious action on climate resilience planning and standards emerging at the local level, such as through IGNITION in Greater Manchester, Climate Ready Clyde and Adaption Scotland, it will also be vital that future policy frameworks retain the flexibility for local (planning) authorities to go further and innovate, in order to help develop local supply chains and innovative financial models.³²

The IGNITION project has been collaboratively governed since its inception in 2019, and brings together 12 organisations from across the public, private, and third sectors, and across combined and local scales of government. The project provides an exemplar of climate resilient, nature-positive partnership working that is driving innovation. The key outputs of the project include outlining viable mechanisms and funding models that Local Authorities and collaborators can deploy to fund resilience-enhancing green infrastructure locally, and it is vital that the Government work to help support the rollout of these models.³³ IGNITION's successes have been underpinned by EU funding (through the UIA), which further echoes the need for Government to make the resource available to enable effective agency and action by similar stakeholders in other contexts.

2. How can the UK Central Government, DAs, local and regional forms of government and local responders better collaborate on resilience?

³¹ UKGBC, *UKGBC Response to MHCLG Consultation on the Future Homes Standard*, <https://ukgbc.s3.eu-west-2.amazonaws.com/wp-content/uploads/2020/02/05150254/UKGBC-Response-to-MHCLG-Future-Homes-Standard-Consultation-FINAL.pdf> P.2, 11.

³² IGNITION, *Investing in a Greener Greater Manchester: A nature-based solutions investment guide for local authorities*, <https://www.ukgbc.org/wp-content/uploads/2021/07/Investing-in-a-Greener-Greater-Manchester-A-nature-based-solutions-investment-guide-for-local-authorities.pdf> ; IGNITION, *Nature-based solutions to the climate emergency: The benefits to business and society*, <https://www.ukgbc.org/wp-content/uploads/2020/08/Nature-based-solutions-to-the-climate-emergency.pdf> ; IGNITION, *Nature-Based Solutions Evidence Base Headline Findings Report*, https://www.greatermanchester-ca.gov.uk/media/3239/headline_findings_report_ignition_nbs_evidence_base_july_2020.pdf ; Climate Ready Clyde and Adaptation Scotland, *A changing climate for development – A toolkit for assessing climate risks for built environment and infrastructure projects*, <http://climatereadyclde.org.uk/a-changing-climate-for-development-a-toolkit-for-assessing-climate-risks-for-built-environment-and-infrastructure-projects/> ; Climate Ready Clyde, Glasgow City Region Climate Adaptation Strategy and Action Plan, <http://climatereadyclde.org.uk/gcr-adaptation-strategy-and-action-plan/>

³³ IGNITION, *Investing in a Greener Greater Manchester: A nature-based solutions investment guide for local authorities*, <https://www.ukgbc.org/wp-content/uploads/2021/07/Investing-in-a-Greener-Greater-Manchester-A-nature-based-solutions-investment-guide-for-local-authorities.pdf>

To support effective collaboration on climate resilience across government levels in the UK, the central Government has an important role in developing the effective engagement models and governance structures, policies, key tools and standards which can enable effective local and collective action to enhance resilience.

Key areas where the UK government can facilitate cooperation are planning and regulation. Although both planning and building regulations are devolved, the UK central government can play a key role through introducing leading policy models, data tools and best practice guidance, which can then subsequently help inform local planning policies across the UK. This includes developing a more strategic approach to planning that facilitates wider stakeholder engagement and cross-boundary cooperation. Examples include the current approach being taken to the Ox-Cam Arc, which has brought together a wide variety of stakeholders and authorities in order to comprehensively consider the environmental implications of the associated development plans and provide a robust evidence base.

UKGBC supports a broader approach to strategic level planning that allows for greater cross-boundary cooperation on key climate issues such as adaptation and resilience concerns.³⁴ An overarching, strategic approach to future development will be essential to deliver coordinated action in response to multiple social objectives and environmental imperatives, such as supporting nature's recovery and addressing climate resilience concerns. We welcome the model of 'Green Growth Boards', suggested by the RTPI, which would sit across local authority boundaries and would steer Local Plans to ensure alignment with other key strategies including economic growth, transport, climate and health.³⁵ Likewise we recommend greater powers should be given to Catchment Partnerships, to ensure a holistic consideration of flooding and drainage issues as part of the planning process.

As the Government considers the future of further devolution policy and funding arrangements, such as City and County Deals, as well as cross-boundary initiatives such as the Western Gateway Partnership and Borderlands Inclusive Growth Deal, it is vital that such financial settlements have the enhancement of local climate resilience as a central objective and key condition of related project investment. The aim of the National Resilience Strategy to deliver a resilient UK will be undermined if action is not taken to ensure local investment, notably through the levelling-up agenda, is aligned with the CCC's recommendations to avoid 'lock-in', in terms of delivering development and infrastructure that is not resilient to the anticipated impacts of climate change. Local funding settlements must therefore be underpinned by robust climate resilience standards to ensure the development, infrastructure and growth opportunities they deliver enhance both local and national climate resilience, and do not 'lock in' unsustainable outcomes. Furthermore, climate resilience must be central to the investment objectives and desired project outcome criteria of the UK Infrastructure Bank, in addition to its current focus on climate mitigation.

In order to facilitate this approach for effective collaboration on resilience, the central government has an important role to play in the development of both national standards and data sets which

³⁴ UKGBC, *UKGBC response to "Planning for the Future" White Paper consultation*, <https://ukgbc.s3.eu-west-2.amazonaws.com/wp-content/uploads/2020/10/05144455/UKGBC-Planning-for-the-Future-White-Paper-response.pdf> p.9.

³⁵ RTPI, *RTPI response to the Planning White Paper*, <https://www.rtpi.org.uk/consultations/2020/october/pwpconsultationresponse/>

can inform the key local policies. Government should work with the industry and relevant experts in order to craft consistent resilience standards that can apply to development and inform local planning policy. Likewise, the government should collaborate with the relevant agencies and academic research institutions in order to develop mapping tools and data sets which cover resilience concerns in relation to the built environment, building on existing models and data sets such as those for flood risk. These should be integrated into the planning process to ensure future development is underpinned by a robust evidence-base in relation to key resilience concerns, such as water use, local energy systems and overheating.

Insights from IGNITION have highlighted the crucial role of regulatory bodies (such as OFWAT) in working to support cross-sector collaboration and market innovation for resilience. Where markets and supply chains for Nature-based Solutions (NBS) to climate change are, at present, immature (such as those relating to Sustainable Drainage Systems), regulators can play a decisive role in enhancing investor confidence. Regulators can, therefore, support the creation and/or enhancement of markets for environmental benefits. In turn, they can play a central role in providing private (and public or third) sector investors with the confidence and capacity to commit to financing innovative NBS schemes at scale for resilience.³⁶

3. What role, if any, should the UK Central government have in assuring that local areas are effectively carrying out their resilience responsibilities, whilst also respecting local responsibilities?

As recommended by the CCC, the UK central government has an important role to play and ensuring local areas are carrying out their resilience responsibilities through providing clear guidance, standards, policy frameworks and metrics for measuring and delivering climate resilience in the built environment and across key local policies. This includes through local planning policy and building regulations.

The CCC has clearly stressed the importance of clear metrics and a shift towards measurable outcomes in relation to securing climate resilience and adaptation. UKGBC's research has found that a lack of regulation and clear policy trajectory are the key barriers for investment in resilience across the sector, together with a lack of knowledge regarding the most effective resilience measures and how to install them. These barriers are causing a disjointed approach to climate adaptation in the UK. Central government should therefore work with the industry and key stakeholders to develop the appropriate metrics and standards for quantifying climate resilience in the built environment and support the rollout of these standards across the country. Where planning and building regulations are devolved responsibilities, the creation of key standards and frameworks can still help inform local policy and resilience, as has been the case with the biodiversity net gain metric, which has helped inform policy and planning across the devolved nations.

The central government must therefore provide a clear legislative and policy trajectory for climate resilience and adaptation, as it has for climate mitigation through its net zero target and associated policy goals. It must also ensure key local training, skills and fiscal interventions are relevant to the

³⁶ IGNITION, *Investing in a Greener Greater Manchester: A nature-based solutions investment guide for local authorities*, <https://www.ukgbc.org/wp-content/uploads/2021/07/Investing-in-a-Greener-Greater-Manchester-A-nature-based-solutions-investment-guide-for-local-authorities.pdf>

sector successfully delivering climate resilience measures and scale. This can be further supported by centrally-led guidance and research on relevant standards and effective interventions, working together with industry bodies such as UKGBC. The current policy framework for cross-authority funding deals and investment settlements, such as the Western Gateway Partnership and Borderlands Inclusive Growth Deal, must ensure delivering climate resilience is at the heart of the associated requirements and desired outcomes.

4. What do you consider the advantages and disadvantages of the current legislative basis for resilience?

N/A

Critical National Infrastructure (CNI) owners and operators:

1. Do you think that the resilience of CNI can be further improved? If so, how? N/A

2. Do you think the introduction of appropriate statutory resilience standards would improve the security and resilience of CNI operators? Why? N/A

a. How would such standards define the necessary levels of service provision? N/A

b. Are there any risks associated with implementing such standards? N/A

3. What do you think is the most effective way to test and assure the resilience of CNI? N/A

a. To what extent do you think regulators should play a role in testing the resilience of CNI systems and operators? N/A

4. During an emergency, what do you think should be the role of the operators of CNI in ensuring continued provision of essential services (e.g. water, electricity, public transport)? N/A

a. How can the Government support CNI owners or operators during an emergency? N/A

Wider critical sectors:

5. What role, if any, does your business or sector play in national resilience?

The UK Green Building Council (UKGBC) works with key stakeholders across the built environment and now has over 600 members, representing the full value chain associated with the construction and property sectors. Our diverse membership allows us to lead on developing best practice guidance and research with leading organisations across the sector, in order to help promote sustainability across the built environment.

UKGBC's Resilience and NBS programme aims to support the delivery of our 'sector ambition' that: *By 2030, all buildings and infrastructure will, throughout their lifetime, be climate-resilient and maximise environmental net gains, through the prioritisation of Nature-based Solutions.* The key aims of our research are: to enable developers, owners, and major occupiers to adopt and achieve

more ambitious targets for Nature-based Solutions, climate resilience and environmental net gain; to increase the application of Nature-based Solutions in urban areas; and to build consensus on how to measure, report, and mitigate the physical risks from climate change to individual built assets.

6. What are the risks that your business is most concerned about?

We are most concerned about the risks to the UK's built environment, its inhabitants, and the construction and property sectors, arising from the increasingly severe impacts of climate change and biodiversity decline in the UK. As detailed by the CCC, the UK's built environment is particularly vulnerable to the impacts of climate change, which will become increasingly severe over the coming years. These vulnerabilities represent a substantial risk to inhabitants' health, national economic productivity and business investments through the possibility of stranded assets. It is therefore vital for achieving national resilience that the vulnerabilities of the sector to the impacts of climate change, are addressed, given the wide range of associated, interdependent risks.

7. What information, tools or guidance could the Government provide to help your business better assess or prepare for these types of risk?

UKGBC is currently collaborating with the construction and real estate industries to develop guidance which builds consensus on the best practice methodologies for measuring and reporting physical climate risks to built assets. The final guidance is expected January 2022 and will be fully aligned with the TCFD recommendations. UKGBC would welcome the Government's support in order to reflect the final guidance outcomes across relevant policy initiatives and regulation.

8. What is your business' approach to building resilience in any key supply chains that your business is part of?

N/A

6. How useful have vehicles such as Local Enterprise Partnerships, Growth Hubs and other local business support services been strengthening your organisations' resilience? Why?

N/A

Academic and research organisations

7. What can the Government do to make collaboration between academic and research organisations more effective?

The Government can play an important role in taking stock of good practice examples where collaboration between these stakeholders is already effective, and then provide the resources and support to enable those arrangements and dynamics to be scaled and replicated elsewhere.

For example, in Greater Manchester, projects and initiatives such as IGNITION, City Finance Lab, Grow Green, Green Growth and GHIA are all closely engaging with academic and research organisations, together with local government, businesses, regulators, agencies and delivery

partners, to help shape policy and deliver key resilience outcomes. This has largely been due to the close relationships between academic institutions and the local authorities across the region, supported through relevant project and policy-area working groups convened by the Combined Authority.

8. Are there areas where the role of research in building national resilience can be expanded?

The CCC has highlighted the lack of clear knowledge around successful adaptation measures as a clear barrier to investment.³⁷ The Government must ensure it expands its engagement with the latest climate resilience research, from both academic institutions and organisations such as UKGBC, in order to provide a robust evidence base for climate resilience measurement, indicators, policy, regulations and targets - encompassing the built environment. The IGNITION project for example has conducted an extensive review of the evidence base for the value and benefits of deploying different nature-based solutions in the built environment to enhance climate resilience.³⁸ Such research can be used and developed in order to underpin effective national tools, policies and decision-making processes, designed to ensure that the intended benefits are delivered consistently at a project level.

The Government must support research and engage with the industry in order to help address this knowledge gap and ensure robust evidence on successful adaptation measures underpins any future policy, standards, accessible tools and requirements in this area.

Questions on Community and local resilience:

1. Do you agree that everyone has a part to play in improving the UK's resilience? If not, why not?

N/A

2. Do you understand the types of emergencies that might impact you and other members of your community?

- a. **What would help you better understand the risks that could affect your community?** N/A
- b. **Do you know where to access information about emergencies that could affect you?** N/A

3. Have you considered the actions you might take to prepare for or during an emergency?

- a. **What has motivated you to plan or make preparations?** N/A
- b. **What has stopped you from planning or making preparations?** N/A
- c. **What would help you to be able to make a plan or prepare?** N/A

4. Have recent emergencies (e.g. COVID-19 pandemic, flooding, terrorist attacks) made you think differently about risks or changed the way you prepare for emergencies?

³⁷ Climate Change Committee, *Independent Assessment of UK Climate Risk*, P.26

³⁸ The IGNITION Project, <https://www.greatermanchester-ca.gov.uk/what-we-do/environment/natural-environment/ignition/>

N/A

5. Are there any barriers in accessing local volunteering schemes or finding community groups that discuss local emergency planning? If so, what are the barriers?

N/A

Questions on Investment:

1. How does your organisation invest in your approach to the risks outlined in this document? Is your investment focussed on particular stages of the risk lifecycle (for example, on prevention)?

N/A

2. Has the COVID-19 pandemic impacted the way your organisation is investing, or will invest, in preparing for these risks? If so, how?

N/A

3. Are there models of successful resilience investment? If so, to what extent could they be adopted in the UK?

The Scottish Conservation Project's £1 Billion Challenge Route Map sets out a range of innovative green finance initiatives that aim to close the gap between the need for climate and nature-positive investment, and the act of funding such interventions.³⁹ All the nine approaches stated in the Route Map could be considered across the UK, though some are more mature than others at present.

4. Are there examples of where investment (whether by the Government, by businesses or by individuals) has driven improvements in resilience?

The IGNITION project in Greater Manchester has looked to drive innovation in nature-based financing models and the scalability of resilience initiatives. The project has established a clear process for moving from the current situation, where nature-based solutions are generally financed on a site-by-site basis from statutory funding or grants, to the point where large-scale private investment could be secured to roll out NBS at scale across Greater Manchester.

The project has also contributed to the establishment of the Greater Manchester Environment Fund. This is a regional impact investment vehicle that provides a means to unite public, private, and philanthropic funding partners in order to facilitate strategic environmental investment to address the climate challenges faced by Greater Manchester.

The project aims to substantially accelerate progress towards demonstrating that NBS can generate cash flow at scale, enabling investment in it to operate as other mainstream investment markets do. In addition, the project has overseen the delivery of the University of Salford's NBS Living Lab, which acts as a demonstrator to showcase a variety of NBS climate mitigation, adaptation, and

³⁹ Natural Capital Scotland, *The £1 billion Challenge: Route Map from the Scottish Conservation Finance Project*, https://naturalcapitalscotland.com/docs/070_553_202001_1_billion_challenge_document_final_1600442580.pdf

resilience solutions. The Living Lab also produces evidence to inform investment schemes based on real-time data, raising awareness of the economic, environmental, and well-being benefits of such technologies.

Questions on Resilience in an Interconnected World:

1. Where do you see the UK's resilience strengths?

N/A

2. Are there any approaches taken by other countries to resilience that you think the UK could learn from?

N/A

3. Which of the UK's international relationships and programmes do you think are most important to the UK's resilience?

N/A

4. What international risks have the greatest impact on UK resilience?

The consequences of global climate change will have the greatest potential impact on UK resilience (see answers above).

5. How can the UK encourage international partners to build resilience to global risks?

N/A

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