ACKNOWLEDGEMENTS

UKGBC PROJECT TEAM
LEAD AUTHORS
Philip Box
Hannah Giddings

WITH THANKS TO OUR RESILIENCE AND NATURE PROGRAMME PARTNERS:

BURO HAPPOld
HOARE LEA
Hydrock
JLL
December 2023 marks a pivotal moment in the global fight against climate change, as the international community gathers for COP28. While the built environment has focused efforts on reducing greenhouse gas emissions, it has overlooked the role our infrastructure, housing and urban environments can play in climate adaptation action.

The design and management of our built environment is not only integral to the immediate well-being of communities, but it also remains significant untapped as a pivotal catalyst for building long-term resilience to climate-related hazards.

In the UK, addressing the impacts of climate change, and enhancing our adaptation strategies, has been rising up the Government’s agenda. The third National Adaptation Programme (NAP3) represents a significant step towards strengthening the nation’s resilience. This five-year strategy outlines the intended policies for adaptation action in the UK, aiming to ensure the safety and well-being of its citizens and the protection of its critical infrastructure.

However, UKGBC’s analysis of the NAP3 reveals that there is still much work to be done. We have deemed a substantial portion of the policies as either red or amber – signifying that these policies are either missing, flawed, or have provided inadequate adaptation plans. These classifications serve as a stark reminder that – despite the Government’s recognition of the pressing need for adaptation - the execution and implementation of effective policies are lagging behind. There is a critical need to urgently rectify these shortcomings, as climate-related risks continue to escalate, and conditions once considered ‘extreme’ have become the new-normal.

It is within this context that UKGBC has embarked on its Climate Resilience Roadmap project. This industry-led initiative aims to fill the gaps in policy and action necessary to achieve a climate-resilient built environment by 2050. The Resilience Roadmap serves as an essential platform for the industry to highlight the critical policy changes required to bolster resilience in the face of climate-related challenges. The industry recognises the need for a unified, well-coordinated effort to bring about the changes needed to achieve climate resilience, and it is stepping up to help shape the future of the built environment in the UK. Rather than creating barriers or burdens for the sector, more clear and consistent policy is essential in order to drive green investment, support innovation, and avoid a tidal wave of stranded assets.

We hope this report serves as a call for swift and decisive action – the challenges of climate adaptation are growing, but so too is the potential for change. As COP28 convenes to discuss the future of our planet, we must recognise the pivotal role of the built environment in our journey towards a more climate-resilient future. This is a moment that demands collective action, ambition, and a commitment to creating a sustainable and resilient future for all.
### Contents and Executive Summary

<table>
<thead>
<tr>
<th>Page</th>
<th>Sections</th>
<th>Executive Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>1 WATER EFFICIENCY</td>
<td>Plans to introduce measures such as a new water efficiency label and consider adding water efficiency into the EPC are welcome. However, we still await much of the detail on key areas such as planning policy, retrofit, and guidance on 'water positive' development. Proposals to reform Building Regulations are currently insufficiently ambitious, and must be made commensurate with the scale of the predicted scarcity challenge.</td>
</tr>
<tr>
<td>8</td>
<td>(A) EXISTING BUILD</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>(B) NEW BUILD</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>2 OVERHEATING</td>
<td>Whilst measures to introduce regulation on tackling overheating in new homes buildings is welcome, several key policy elements are missing. This includes measures to comprehensively retrofit the UK’s existing buildings to withstand extreme temperatures, tackle overheating in commercial buildings, and to address localised overheating risk through the planning system.</td>
</tr>
<tr>
<td>12</td>
<td>(A) EXISTING BUILD</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>(B) NEW BUILD</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>3 FLOODING &amp; COASTAL EROSION</td>
<td>The Government has made welcome commitments to updating several key data resources on flooding and coastal erosion, to mandate sustainable drainage systems (SuDs) in England in new development, and provide significant conventional flood and erosion protection investment. However, how key datasets and management plans will be effectively translated into clear policy requirements remains unclear. Key areas such as Building Regulations and retrofit have no comprehensive proposals. Meanwhile planning policy, although improving, remains beset with loopholes.</td>
</tr>
<tr>
<td>19</td>
<td>(A) EXISTING BUILD</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>(B) NEW BUILD</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>4 OTHER: WIND AND WILDFIRES</td>
<td>Currently, there are no substantive proposals to comprehensively address wider climate risks to the built environment in key areas, such as wildfires and extreme wind. Whilst we welcome plans for further research, this must be connected to clear plans for policy initiatives to address the impacts of these risks.</td>
</tr>
<tr>
<td>24</td>
<td>(A) EXISTING BUILD</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>(B) NEW BUILD</td>
<td></td>
</tr>
</tbody>
</table>
## RAG CRITERIA

### RAG CRITERIA KEY:

- **Red**: Most of the Government’s proposals or plans for an area are not in line with our recommendations. Or that there are significant flaws, which mean that current plans would fail to deliver progress towards (or actively hinder) UKGBC’s milestones for the sector.

  - The structure or approach of proposals, in their current form, may be fundamentally inadequate, or actively at odds with achieving our desired sustainability outcomes.

- **Yellow**: We recognise that progress has been made in a policy area, and that the proposals brought forward by the Government are a positive, but insufficient, step towards achieving what is required for the sector.

  - We may partially support the direction of key polices and the content of a range of proposals. However, these would not be sufficient in their current form to align with UKGBC milestones, recommendations, and goals for the sector without significant alterations.

  - Proposals brought forward would form a workable baseline in terms of amendments and changes to promote our objectives. Equally, they would also not have glaring omissions or contain ideas which would fundamentally harm or compromise progress.

- **Green**: UKGBC largely supports the direction of policy in an area. It is either broadly in line with our recommendations or principally compatible.
Our climate is changing, rapidly and dangerously. The UK is already experiencing more intense and frequent extreme events – caused by hotter, drier summers and wetter, windier winters. It is simply too late to focus solely on mitigating our impact on the climate by reducing emissions – we have to adapt to the changes that are already with us – and which will continue to intensify. Of the eight priority climate risks that should be tackled in the next two years, the risks to human health, wellbeing, and productivity related to buildings were identified as amongst the most urgent to address and most severe.

Whilst the UK has a policy framework for emissions reduction and planning for climate risks set out in the Climate Change Act 2008, according to the CCC, adaptation remains “the Cinderella of climate change, still sitting in rags by the stove”. The Committee goes on to say adaptation is “under-resourced, underfunded and often ignored”.

The Government’s third UK Climate Change Risk Assessment acknowledges that “the evidence shows that we must do more to build climate change into any decisions that have long-term effects, such as in new housing or infrastructure, to avoid often costly remedial actions in the future”. The CCC advice on the third UK Climate Change Risk Assessment concluded that progress with adaptation policy and implementation is “not keeping up with the rate of increase in climate risk and that the risks to all aspects of life in the UK have increased over the last 5 years”. The CCC’s ‘Progress in Adapting to Climate Change Report’ (2023) also found that “while the recognition of a changing climate within planning and policy is increasing, with some policy in most areas, it is clear that the current approach to adaptation policy is not leading to delivery on the ground and significant policy gaps remain”.

The Government has recently taken steps intended to address these gaps, including the publication of the Third National Adaptation Plan (NAP3), alongside other recent initiatives and strategies such as the Plan for Water, and introducing Part O of Building Regulations on overheating in new homes. This scorecard assesses progress over the past year. It compares the policies that have been announced or are in delivery against a comprehensive set of policy recommendations made by UKGBC. This will form a springboard for further policy work as part of the UKGBC’s Climate Resilience Roadmap, which will update and refine these policy recommendations in-line with achieving key sector wide targets.

This analysis has been produced to help the Government to understand industry’s concern at the lack of progress and understand where the opportunities lie for the year ahead. We hope it offers a way forward and inspires enthusiasm for grasping the economic and wider societal opportunities associated with success in this mission. It can also serve as a useful practical tool for businesses in their own engagement with government officials and ministers.
## Water Efficiency

### Risks:

**H10** – Risks to water quality and household water supplies (Defra);

### Summary and Analysis

Plans to introduce measures such as a new water efficiency label and consider adding water efficiency into the EPC are welcome. However, we still await much of the detail, including on key areas such as planning policy, retrofit, and guidance on ‘water positive’ development. Proposals on building regulations are currently insufficiently ambitious and must be made commensurate with the scale of the predicted scarcity challenge.

### UK Government Policies and Announcements

<table>
<thead>
<tr>
<th>UKGBC Recommendations</th>
<th>UKGBC Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General</strong></td>
<td></td>
</tr>
<tr>
<td>Defra will review water companies Drought Plans every five years. The next review will be in 2026.</td>
<td>UKGBC welcomes the commitment for Drought Plans to be reviewed every five years. However, these must be translated into the planning system in order to mitigate potential water shortages associated with development. Water companies should be given statutory consultee status on major planning applications. Greater powers should be given to Catchment Partnerships to ensure holistic consideration of flooding and drainage issues as part of the planning process.</td>
</tr>
<tr>
<td>Defra will implement the actions set out in the Plan for Water in order to achieve the statutory water demand target to mitigate the impacts of climate change on water supplies by 2037/38.</td>
<td>Individual policy components explored and analysed below.</td>
</tr>
<tr>
<td>The Cabinet Office will support the development of the UK Resilience Academy to increase provision of professional training to businesses on resilience, including resilience to climate change risks. The academy will be built out of the Emergency Planning College and will act as a one-stop learning and development hub for resilience.</td>
<td>We welcome plans to develop a resilience academy to increase the provision of professional training to businesses on climate resilience. However, a key knowledge gap that exists in the sector is the lack of clarity on both adaptation and resilience measurement and targets, in relation to the built environment. To facilitate the necessary awareness of climate resilience – and associated risk management – across the built environment businesses, a core component of the work of the Academy must relate learning and awareness surrounding risk measurement and targets. This should be both at the built asset level and neighbourhood/development planning scale.</td>
</tr>
</tbody>
</table>
## 1 WATER EFFICIENCY

<table>
<thead>
<tr>
<th><strong>UK GOVERNMENT POLICIES AND ANNOUNCEMENTS</strong></th>
<th><strong>UKGBC RECOMMENDATIONS</strong></th>
<th><strong>UKGBC ASSESSMENT</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1A) EXISTING BUILD</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Introduce a new water label (fixtures and fittings), aiming to lay secondary legislation in 2024 to implement the scheme in 2025.</td>
<td>• The Government should introduce a mandatory water label for fixtures and fittings.</td>
<td>UKGBC has long supported the introduction of a mandatory water label for fixtures and fittings.</td>
</tr>
<tr>
<td>Explore whether improved water efficiency standards can be included in the Decent Homes Standards.</td>
<td>• Water efficiency should be included in the Decent Homes Standards</td>
<td>UKGBC would support inclusion of water efficiency standards in the Decent Homes Standard, and the broader application of the standard to development built under Permitted Development Rights (PDR). However, historically the requirements of the standard, particularly on energy efficiency, have been lower than those already in Building Regulations.</td>
</tr>
<tr>
<td>Work with Ofwat to ensure the water industry can play a central role in <strong>retrofitting water efficient products</strong> in households, businesses, charities, and the public sector.</td>
<td>• Water efficiency must be integrated into a fully funded, comprehensive, national retrofit strategy.</td>
<td>Whilst initial steps to consider the role of water efficiency retrofit are welcome, the Government is still missing a comprehensive, fully funded national plan to retrofit the nation’s homes. This must be addressed urgently.</td>
</tr>
<tr>
<td>Work across government to integrate water efficiency into energy efficiency advice and retrofit programmes. Use the updated <strong>water-energy-carbon model</strong> to inform joint advice and retrofit programmes led by government or industry.</td>
<td>• The Government should consult on the incorporation of water efficiency measures into the EPC and subsequently incorporate these on a mandatory basis, whenever an EPC is required.</td>
<td>UKGBC has long supported the inclusion of water scarcity and efficiency information within the EPC as a vital measure, credited notably for improving consumer awareness, to encourage water efficiency.</td>
</tr>
<tr>
<td>Review the inclusion of water scarcity information within <strong>Energy Performance Certificates</strong> for buildings.</td>
<td>• The Government should consult on the incorporation of water efficiency measures into the EPC and subsequently incorporate these on a mandatory basis, whenever an EPC is required.</td>
<td>UKGBC has long supported the inclusion of water scarcity and efficiency information within the EPC as a vital measure, credited notably for improving consumer awareness, to encourage water efficiency.</td>
</tr>
<tr>
<td>UK GOVERNMENT POLICIES AND ANNOUNCEMENTS</td>
<td>UKGBC RECOMMENDATIONS</td>
<td>UKGBC ASSESSMENT</td>
</tr>
<tr>
<td>-----------------------------------------</td>
<td>-----------------------</td>
<td>------------------</td>
</tr>
<tr>
<td><strong>1B) NEW BUILD</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Enable innovative water efficiency approaches</strong> in buildings, including technologies and approaches to funding and maintenance.</td>
<td>UKGBC support encouraging new technologies, and funds to reduce cost (e.g. greywater recycling/water storage)</td>
<td>UKGBC supports measures to encourage water efficiency technologies, these will be a vital component of ensuring development is sustainable in areas of water stress. However, current proposals on how these approaches will be ‘enabled’ and costs reduced lack detail. Plans to encourage adoption and scale up deployment at scale will be essential to reduce costs.</td>
</tr>
<tr>
<td><strong>‘Review’ water efficiency options in planning.</strong></td>
<td>Local authorities in water stressed areas should retain discretion to ask for higher, pre-set standards through a Building Regulations Optional Requirement, with exploration of going beyond 110 litres per person per day (lpppd). National planning policy reform should further incentivise, encourage, and support the use of rainwater harvesting and greywater reuse technologies. Local authorities must be equipped to ensure that they can consider water stress areas and up to date data in their local plan making and development decision making processes. Water stress/pressure must be a key consideration in the soundness and sustainability testing for local plans. Ambitious local authorities should look to set rainwater harvesting and grey water reuse requirements through supplementary planning documents or design codes. National planning policy &amp; enforcement should be strengthened, including through local planning authority capacity, data, resourcing and expertise. The resourcing and capacity of the Environment Agency should be strengthened and supported to intervene on flood-related matters.</td>
<td>As highlighted in UKGBC’s recent response to the Government’s consultation on planning policy in the context of the Levelling Up and Regeneration Bill, whilst we welcome the proposed opportunity with the upcoming NPPF review, it is vital the Government brings forward substantive proposals to action recommendations made by UKGBC, and others, in response to the initial consultation.</td>
</tr>
</tbody>
</table>
### NEW BUILDINGS (CONTINUED)

<table>
<thead>
<tr>
<th>UK GOVERNMENT POLICIES AND ANNOUNCEMENTS</th>
<th>UKGBC RECOMMENDATIONS</th>
<th>UKGBC ASSESSMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>105 litres per person per day</strong></td>
<td>To ensure any land allocations do not contribute negatively to the climate resilience of a locality, greater powers should be given to Catchment Partnerships to ensure holistic consideration of flooding and drainage issues as part of the planning process. These bodies should act as a statutory consultee to the planning process and ensure that flooding and drainage issues are considered holistically across the catchment.</td>
<td>Whilst we welcome plans to develop guidance on water positive or net zero water developments, the devil will be in the detail. The Government should work closely with experts across the breadth of the industry to ensure this guidance is rigorous, and ultimately translated into clear, actionable requirements.</td>
</tr>
<tr>
<td><strong>100 litres per person per day</strong></td>
<td>Water companies should be given statutory consultee status for ‘major’ development to enable them to comment on the suitability of SuDS schemes and work with developers to adopt a wider range of SuDS components.</td>
<td></td>
</tr>
</tbody>
</table>

- Develop clear guidance on ‘water positive’ or ‘net zero water’ developments.

- The Government should work with the industry to develop a clear definition of ‘water positive’ development, alongside associated policy/regulation to encourage compliant developments. This should emphasise the use of nature-based solutions where possible.

- Consider mandating a new minimum water efficiency standard for new homes in England of **105 litres per person per day** and **100 litres per person per day** where there is a clear local need, such as in areas of serious water stress.

  Review the Building Regulations 2010, and the water efficiency, water recycling and drainage standards (regulation 36 and Part G2, H1, H2, H3 of Schedule 1), considering industry competence and skills.

- The UKGBC 5 key tests for the Future Homes Standard briefing paper recommends Part G of Building Regulations is updated to use a ‘fittings-based’ approach only, underpinned by a mandatory water label at the point of sale, linked to minimum standards for fixtures, fittings, and water using products. Minimum product standards should be set to achieve targets of 95 lpppd in the Future Homes Standard (2025) initially and be tightened over time to achieve 75 lpppd by 2030, as per the RIBA 2030 Climate Challenge.

- Whilst we welcome plans to tighten Building Regulations on water efficiency, these proposals do not go far enough in line with our recommendations.
RISKS:
H1 – Risks to health and wellbeing from high temperatures (DLUHC);
H2 – Opportunities for health and wellbeing from high temperatures (DHSC)
H6 – Risks and opportunities from summer and winter household energy demand (DESNZ)

SUMMARY AND ANALYSIS

Whilst regulation to tackle overheating in new homes is welcome, several key policy elements are missing. These include measures to comprehensively retrofit the UK existing buildings to withstand extreme temperatures, tackle overheating in commercial buildings, and how to address localised overheating risk through the planning system.

UK GOVERNMENT POLICIES AND ANNOUNCEMENTS

UKGBC RECOMMENDATIONS

UKGBC ASSESSMENT

2A) EXISTING BUILDINGS

DESNZ will develop measures that deliver the government’s effort to deliver net zero retrofit to existing homes and non-domestic buildings and will retrofit existing buildings alongside net zero commitments in ways that appropriately consider how to minimise climate risks to buildings, such as from overheating.

DESNZ require that measures installed under current Government schemes must be carried out by a Trustmark registered and, where appropriate, Publicly Available Specification (PAS). PAS 2035/2030 have recently undergone a revision to ensure these remain fit for purpose. The latest changes concluded in September 2023, with BSI publishing PAS 2035/2030:2023. The guidance and requirements for climate resilience and adaptation in retrofit have been strengthened. Future revisions of the PAS2035/2030 will continue to consider climate change adaptation and resilience.

The Government must introduce a fully-funded national retrofit strategy that delivers holistic retrofit across tenures to improve Britain’s domestic housing stock.

Home retrofit should be undertaken / led by qualified retrofit coordinators and assessors, developing whole house retrofit plans that take a holistic approach including adaptation. Government must help fund the training of retrofit coordinators or enable local authorities to do so.

Whole house retrofit plans and coordinators must address key adaptation concerns.

UKGBC has commissioned further modelling, to assess the UK’s building stock in relation to key climate risks, as part of the Resilience Roadmap project, which will allow for a more comprehensive assessment of any associated funding gaps.

Whilst we welcome plans to consider adaptation in retrofit, train additional installers and insist on Trademark/PAS standards and qualifications, the Government is yet to bring forward a credible, robust, fully funded retrofit strategy and associated components, that will deliver a holistic approach to both climate mitigation and adaptation.

Further detail is needed on what measures and funding will be introduced, including to address the skills and delivery gap identified.
The Government launched a £9.2 million Home Decarbonisation Skills Training Competition in 2022 to fund a range of suppliers to deliver accredited training.

The Green Home Finance Accelerator programme was launched in October 2022. This made up to £20m available to develop innovative green finance products and services aiming to help homeowners meet the upfront costs of decarbonising their homes and improving thermal comfort. 26 projects have been awarded £4.1m grant funding to undertake six months of Discovery Phase activity. The Government aims to announce which projects have been successful in securing further grant funding in the New Year for a 15 month pilot phase to commence in 2024.

Establishing the Building Safety Regulator with statutory responsibility of overseeing safety and standards of all buildings, including consideration of the resilience of buildings to climate risks.

- Following the outcome of the Hackitt Review, the government must reform and introduce a more comprehensive building safety regime in order to oversee standards quality and enforcement across the built environment. This must encompass key occupant health and safety risks associated with climate change.

We welcome plans for the Building Safety Regulator to encompass climate risks, however, this must be comprehensive, and cover all identified sources of risk, not just overheating.

DLUHC will use recommendations from the Housing Health and Safety Rating System review to support the effective enforcement of quality and safety standards in all tenures of residential accommodation, including standards related to excess heat. The next steps will support delivery on a commitment to halve non-decent rented homes by 2030.

The Government have committed to introduce a legally binding Decent Homes Standard to the private rented sector for the first time.

- As part of the pathway to applying the Decent Homes Standard to the private rental sector (PRS), the government must integrate robust overheating mitigation requirements into the Housing Health and Safety Rating System used to assess the seriousness of hazardous conditions (one element of the Decent Homes Standard).

We welcome plans to expand the Decent Homes Standard, and review and the Housing Health and Safety Rating System to encompass overheating. However, elements of this have been less ambitious than building regulations. Proposals must ensure that the Decent Homes Standard is comprehensive and ambitious, covering all key climate risks. The results of the consultation on introducing the Decent Homes Standard in the PRS are still pending, and should be brought forward.
### DLUHC, DESNZ, DHSC and UKHSA will commission research to close evidence gaps between 2023 and 2028 identifying the buildings most vulnerable to extreme heat and where these are located, as well as appropriate adaptation solutions. This will include:

- The Climate Services for a Net-Zero resilient world (CS-N0W) programme which will report by 2025 on modelled overheating scenarios in existing homes including adaptation measures required to retrofit existing building stock. This will be done in addition to work to understand how much energy would be required to cool buildings under different future climate and retrofit scenarios.
- A study on the impact of retrofits on overheating in existing homes using the Energy Follow-Up Survey data will be reporting in early 2024 and will provide evidence on the impact energy efficiency retrofits will have on overheating risk in the short to medium term.
- Further research into the most vulnerable building tenures, dwelling types, locations or groups from extreme heat.
- Maintaining close links with academic and other studies, e.g. membership of advisory boards, sponsorship of PhDs.

### The Government must ensure up-to-date data is available on localised overheating risk (including for, and factored in to, planning) and underpins Dynamic Thermal Modelling e.g., London TM 49 weather data uses more up to date figures than TM 59.

### Whilst further research on overheating evidence gaps is welcome, it is essential that subsequent policy and substantive measures are implemented to address the risks identified.
## 2 OVERHEATING

### 2A) EXISTING BUILDINGS (CONTINUED)

**UKHSAA** will increase the awareness of the public to the potential risks posed by high temperatures and associated indoor air quality.

- The Government must conduct a national adaptation awareness campaign to make the general public aware of key climate risks in relation to the built environment and how to mitigate them.
- The Government must support this campaign through associated policy interventions designed to ensure accessible information is available to the public regarding the risks associated with climate change at the property level, including EPC reform, new home information packs etc.

Whilst pledges to raise awareness of resilience is welcomed, the associated detail of related focus areas is currently lacking. Any action in this area should include specific information on how to adapt / enable buildings and environments to reduce risk (i.e., closing blinds / not opening windows when the outside temperature is higher than internal).

**DLUHC** is currently maximising the amount of green space available by supporting 85 local authorities in their efforts to create and refurbish parks in deprived areas as part of the Levelling-up Parks Fund.

See planning.

### 2B) NEW BUILDINGS

**Building Regulations:** Approved Document O was added to the buildings regulations in December 2021 and took effect in June 2022 in England. DLUHC will also keep Approved Document O under review.

The CS-N0W dynamic modelling study of future overheating risk will likely be published by start of 2024 and will inform the development of a tool in 2024 to enable local authorities to understand overheating risk in their area.

- The Government should allow the dynamic thermal modelling approach to be implemented outside London.
- Local authorities should be able to require the TM59* approach. TM 59 should be used for domestic developments and TM 52* should be used for non-domestic developments.
- Part O should be extended to cover new non-domestic properties and extensions to existing buildings.

*TM52 and TM59 are technical memoranda produced by CIBSE which set out a standardised methodology for assessing overheating risk in buildings and homes respectively.

Whilst we welcome the introduction of Part O and action to address overheating in new buildings through Building Regulations, current requirements should be strengthened and updated to address current deficiencies, such as limitations on the use of the dynamic thermal modelling approach. Part O only requires current climate scenarios be used (in the dynamic method), meaning that buildings are not being properly assessed for their whole lifespan.
Planning: The Government has pledged a comprehensive update to the National Planning Policy Framework (NPPF) in England, to make sure the planning system “contributes to climate change mitigation and adaptation as fully as possible”, with an initial consultation suggesting a number of interventions running from December 2022 to March 2023, with further steps due in Autumn 2023.

- **A clear legal duty** must be introduced in primary legislation to align the planning system with the Climate Change Act, including its obligations on adaptation. National planning policy must subsequently be strengthened, to clearly define adaptation & resilience in relation to development and set more stringent requirements, for example on green infrastructure provision through developing local greening factors.
- The Government should review planning policy to specifically encourage enhancements and design measures intended to address overheating, including a presumption in favour of interventions such as awnings, shutters, and heat pumps that cool (i.e. removing noise restrictions).
- The Government must implement the ‘cooling hierarchy’ through national planning policy (see the Nature Recovery and Climate Resilience playbook), and take further steps to address the urban heat island effect through requirements to develop local greening factors, based on a national model, and consult on further measures to secure additional local green infrastructure.
- The Government should consult on measures and further planning polices to enhance neighbourhood level green infrastructure, in order to combat overheating. This should include the introduction of local greening factors, to be introduced through planning policy, and developing Natural England’s GI standards into clear, national planning policy requirements.

Currently, the planning system fails to comprehensively address variable, localised overheating risk to buildings and infrastructure. New national planning policies are required to encourage both neighbourhood level and property level solutions. A strengthened legal duty in primary legislation is also necessary, in order to ensure climate adaptation is given sufficient weighting in planning. The NPPF review promised in autumn 2023 must bring forward more ambitious polices on climate adaptation in planning. To fail to do so would be a significant missed opportunity.
2  OVERHEATING

**UK GOVERNMENT POLICIES AND ANNOUNCEMENTS**  

**UKGBC RECOMMENDATIONS**  

**UKGBC ASSESSMENT**

### 2B) NEW BUILDINGS (CONTINUED)

- The Government must embed an environmental net gain approach in the planning system, with climate adaptation and resilience enhancement as key elements of the ‘gains’ and ecosystem services to be delivered.
- The Government must review retrofit constraints in planning for historic built assets, to ensure appropriate mitigation and adaptation measures can be installed quickly.
- Local planning authorities should be required to set tree canopy cover targets in local planning policies, aiming for around 25%.

**Non-Domestic:** For non-residential buildings, overheating is generally managed through established strategies, including mechanical ventilation and air conditioning, which are covered by the existing Approved Documents.

- Part O should be extended to cover new non-domestic and extensions to existing buildings.

**Current proposals are insufficient and do not comprehensively address overheating risk in non-domestic buildings. As temperatures continue to rise, reliance on mechanical ventilation and air conditioning will only add to our energy demand and make it more challenging to reach our net zero goals.**
3 FLOODING AND COASTAL EROSION

RISKS:
H3 – Risks to people, communities, and buildings from flooding (DEFRA)
H4 – Risks to the viability of coastal communities from sea level rise (DEFRA and DLUHC)
B2 – Risks to business locations and infrastructure from coastal change (DBT)
B1 – Risks to business sites from flooding (DBT)

SUMMARY AND ANALYSIS
The Government has made welcome commitments to updating several key data resources on flooding and coastal erosion, to mandate sustainable drainage systems (SuDs) in England in new development and provide significant conventional flood and erosion protection investment. However, how key datasets and management plans will be effectively translated into clear policy requirements remains unclear. Key areas such as Building Regulations and retrofit have no comprehensive proposals. Meanwhile planning policy, although improving, remains beset with loopholes.

UK GOVERNMENT POLICIES AND ANNOUNCEMENTS

Better protect communities across England through a £5.2 billion investment in flood and coastal erosion schemes

Updating Shoreline Management Plans (SMPs) by the end of 2024

UKGBC RECOMMENDATIONS

UKGBC has commissioned further modelling to assess the UK’s building stock in relation to key climate risks, as part of the Resilience Roadmap project, which will allow for a more comprehensive assessment of any associated funding gaps.

• The Government must develop key principles in national planning policy that can be used as a benchmark against which local policies and actions – including planning policies and regeneration proposals – can be tested and aligned with Shoreline Management Plans.

UKGBC ASSESSMENT

Whilst we welcome plans to update shoreline management plans by the end of 2024, further work is required to ensure that these are sufficiently reflected in both local and national planning policy, and decision making.

UKGBC ASSESSMENT

MEDIA CRE
<table>
<thead>
<tr>
<th>UK GOVERNMENT POLICIES AND ANNOUNCEMENTS</th>
<th>UKGBC RECOMMENDATIONS</th>
<th>UKGBC ASSESSMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GENERAL (CONTINUED)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deliver the National Flood and Coastal Erosion Risk Management Strategy Roadmap to 2026</td>
<td>The Environment Agency must incorporate surface water flood risk into the digital Flood Map for Planning. This will help local planning authorities and developers better mitigate the surface water flood risks from new development.</td>
<td>We welcome the continued commitment to deliver the National Flood and Coastal Erosion Risk Management Strategy Roadmap to 2026 and support many of the recommendations within. However, as well as simply ensuring these aims are delivered, additional policy, funding and interventions will be needed to ensure they fully achieve their desired objectives. This includes notably translating associated data, standards, guidance, and best practice into firm requirements in planning policy and Building Regulations.</td>
</tr>
<tr>
<td></td>
<td>The Government must ensure up-to-date comprehensive climate risk data is available to help inform spatial planning, and that the policies and actions in Local Flood Risk Management Strategies and Shoreline Management Plans are reflected in planning.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Planning authorities must be supported and resourced to improve climate resilience related skills, awareness, and capacity.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Work related to establishing a Certified Competent Property Flood Resilience Practitioner Scheme and new framework of property flood resilience suppliers to ensure that products are tested to Kitemark standards, must be embedded across government procurement and retrofit policy.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The Government should continue to prioritise nature-based solutions to address flood risk, scale-up direct funding, and bring forward the policy of environmental net gain.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>We welcome plans to review the tools that coastal erosion risk management authorities (RMAs) use to manage the coast, however we await the full details of how this will impact sustainable development.</td>
<td></td>
</tr>
<tr>
<td>Defra will review the tools that coastal erosion risk management authorities (RMAs) use to manage the coast and explore the availability of products or services which support coastal transition and manage coastal erosion risk by the end of 2024.</td>
<td>The Government must ensure up-to-date data and modelling is used to inform development.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## 3. Flooding and Coastal Erosion

### 3A) Existing Buildings

<table>
<thead>
<tr>
<th>UK Government Policies and Announcements</th>
<th>UKGBC Recommendations</th>
<th>UKGBC Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Defra and the Environment Agency</strong> will <strong>double the number of government funded projects which include nature-based solutions</strong> (NBS) by 2027 to reduce flood and coastal erosion risk. In September 2023 the Environment Agency and Defra announced £25 million funding for improving flood resilience through a new <strong>Natural Flood Management (NFM) programme</strong>, aiming to help meet the target for 260 NFM projects in 2021-2027.</td>
<td><strong>UKGBC supports and encourages the use of multifunctional nature based solutions in development and design. These should follow best practice principles outlined.</strong></td>
<td><strong>We are pleased to see the Government increase investment in nature-based solutions to reduce flood and coastal erosion risk. However, the funding allocated to date through associated initiatives such as the <strong>Natural flood management programme</strong>, and the number of proposed projects which integrate nature-based solutions, remains low. These should also follow best practice and deliver multifunctional solutions that deliver other ecosystem services and wider enhancements.</strong></td>
</tr>
<tr>
<td><strong>DBT will survey businesses</strong> to provide better information on businesses’ readiness to address climate risk – including flood and coastal erosion risk.</td>
<td><strong>The government must develop and communicate: clear metrics, guidance, and targets for the built environment and associated businesses in relation to key climate risks.</strong></td>
<td><strong>Whilst we welcome further information gathering, it is vital that this research is linked to clear policy outcomes and intentions, such as plans to retrofit existing buildings and business premises.</strong></td>
</tr>
</tbody>
</table>
| **Defra will continue to support affordable flood insurance through the Flood Re Scheme** through the NAP3 implementation period to 2028 and beyond. **Flood Re have committed to exploring the concept of a ‘Flood Performance Certificate’ in their transition plan.** | **Plans must be brought forward to retrofit properties currently or due to be at risk of flooding.**  
**Comprehensive national and local retrofit strategies** must address flood risk and resilience where applicable.  
**Robust Flood Performance Certification, integrating a full consideration of flood risk and resilience factors, risks, and measures, should be developed to inform retrofit and new build.** | **Plans to continue to support FloodRE scheme to 2028 and beyond are welcome. However, securing a viable plan for the long-term, beyond the planned coverage period, is essential. Flood performance standards and certification will be essential to ensure quality control across retrofit initiatives and new build, and ensure properties are truly resilient to the full range of risks. We welcome FloodRe’s intentions in this area, but this will need government support in policy over the longer term to ensure mass-adoption. A National Retrofit Strategy or local retrofit initiatives should encompass flood resilience where appropriate.** |
### 3A) EXISTING BUILDINGS (CONTINUED)

<table>
<thead>
<tr>
<th>UK GOVERNMENT POLICIES AND ANNOUNCEMENTS</th>
<th>UKGBC RECOMMENDATIONS</th>
<th>UKGBC ASSESSMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Environment Agency will develop <strong>updated investment scenarios by 2025</strong> to inform future policy and investment choices on flood and coastal erosion risk management.</td>
<td>UKGBC has commissioned further modelling to assess the UK’s building stock in relation to key climate risks, as part of the Resilience Roadmap project, which will allow for a more comprehensive assessment of any associated funding gaps.</td>
<td>Defra and the Environment Agency will <strong>invest £200 million in the Flood and Coastal Innovation Fund</strong> to test innovative practical resilience actions and develop new ways of planning for the long term by 2027.</td>
</tr>
</tbody>
</table>
## FLOODING AND COASTAL EROSION

### NEW BUILDINGS (CONTINUED)

<table>
<thead>
<tr>
<th>UK GOVERNMENT POLICIES AND ANNOUNCEMENTS</th>
<th>UKGBC RECOMMENDATIONS</th>
<th>UKGBC ASSESSMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Building regulations – no current proposals</strong></td>
<td>Part C of Building Regulations should require all properties at risk of flooding to include property flood resilience measures, prioritising nature-based solutions, specified and installed in accordance with the CIRIA Code of Practice for property flood resilience.</td>
<td>The Government is yet to introduce any requirements in Building Regulations in England for properties to be flood resilient (as is the case in Scotland).</td>
</tr>
<tr>
<td><strong>Review national planning policy</strong> to ensure it is sufficiently robust to keep future developments safe from floods and to not increase risk elsewhere.</td>
<td>A Clear Legal Duty (see above)</td>
<td>Whilst planning guidance on flooding and coastal change and flood resistance/resilience, has recently been updated, and the NPPF covers flooding in detail through the sequential test and flood risk assessment procedures, development continues to occur in areas of high flood risk. Greater enforcement, reinforcement, and weighting of current planning policy is essential, and current loopholes need to be closed.</td>
</tr>
<tr>
<td></td>
<td>There is currently a lack of relevant subsurface knowledge, policy, and guidance regarding groundwater, which means that surface water modelling, used by insurers and lenders, involves a high level of uncertainty. The ‘Ground conditions and pollution’ section of the NPPF focuses on land contamination and land instability only.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The Government should work with the Geospatial Commission and the National Infrastructure Commission to integrate robust consideration of subsurface/drainage asset data into planning. The NPPF should set out national guidance principles for subsurface planning, including a connection to surface planning.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The Government should consult on stronger planning policies and guidance for adapting to anticipated coastal change; requirements for more robust site specific flood risk assessments and mitigation measures for development at risk of any source of current and future flooding; and national policies to safeguard land provision for future flood defences.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Proposals to discourage the sale and installation of artificial grass for domestic properties and other landscaping purposes, should be consulted on, including a potential ban, financial disincentives, or strict planning permission requirements.</td>
<td></td>
</tr>
</tbody>
</table>
### 3B) New Buildings (Continued)

- The Environment Agency will **update the National Flood Risk Assessment by 2024** to provide better data and information to support flood risk mapping, improved ways of measuring changes in risk, as well as future investment choices. It aims to significantly improve understanding of surface water flood risk and will be available as open data.

  - **The Environment Agency will update the National Flood Risk Assessment by 2024** to provide better data and information to support flood risk mapping, improved ways of measuring changes in risk, as well as future investment choices. It aims to significantly improve understanding of surface water flood risk and will be available as open data.

- The new National Flood Risk Assessment (NaFRA2) will provide a wide range of more accurate data, covering risk from rivers, the sea and surface water. This is likely to inform future changes to the Flood Map for Planning.

- Defra and the Environment Agency are also **improving flood forecasting capabilities** in higher-risk areas. This will include identifying feasible and realistic improvements to the forecasting capability for surface water flooding through a ‘testbed’ approach using the Met Office systems by December 2023.

- **Defra will reform local flood risk management planning by 2026.** This will enable every area in England to have a more strategic and comprehensive plan to manage flood risk.

  - **The Government need to ensure up-to-date data is available for planning, assessing present and future risks – The EA ‘Flood Map for Planning’ should be expanded to include all current and future sources of flood risk and to assist with application of the Sequential Test and site-specific flood risk assessment.**

  - **We welcome commitments to update national flood risk assessment data and improve forecasting capabilities.**

  - **It is imperative that up-to-date data is available to inform planning, including all present and future risks.**

  - **We await the details of the intended update and how better data can be reflected and embedded in policy and development requirements.**

- **Local flood risk management plans and related strategies must be informed by up-to-date and futureproof data. This must be translated into clear development requirements through the planning system in order to ensure flood resilience is delivered.**

- **Local authority scale flood management plans and activities must be properly resourced.**

  - **We welcome the commitment to reform the flood risk management system, but we await the full details. In addition, it is vital that local authority scale flood management plans and activities are properly resourced, to ensure they can deliver effectively.**
### New Buildings (continued)

**Defra** will **make sustainable drainage systems mandatory in new developments by 2024**, subject to final decisions on scope, threshold and process once a full regulatory impact assessment has been completed.  

<table>
<thead>
<tr>
<th>UKGBC Recommendations</th>
<th>UKGBC Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schedule 3 should be consulted on and enacted as soon as possible, with the consultation published in 2023.</td>
<td>Plans to make sustainable drainage systems mandatory in new developments in England by 2024 are welcome. The Government should bring forward the consultation as soon as possible.</td>
</tr>
<tr>
<td>The government must ensure up to date data is available to local planning authorities, and sufficiently weighted, to ensure climate resilience is correctly fed into planning.</td>
<td>We welcome plans to update the National Coastal Erosion Risk Map, up-to-date data is essential for informing sustainable development, and the review must be comprehensive.</td>
</tr>
</tbody>
</table>

**The Environment Agency** will **update the National Coastal Erosion Risk Map** and its assessment of properties and infrastructure at risk from erosion in a changing climate by the end of 2023.

The government must ensure up to date data is available to local planning authorities, and sufficiently weighted, to ensure climate resilience is correctly fed into planning.
## 4 OTHER: WIND AND WILDFIRES

**RISKS:**

H5 – Risks to building fabric (DESNZ AND DLUHC)

### SUMMARY AND ANALYSIS

Currently, there are no substantive proposals to comprehensively address wider climate risks to the built environment in key areas, such as wildfires and extreme wind. Whilst we welcome plans for further research, this must be connected to drive policy initiatives designed to address the impacts of these risks.

### UK GOVERNMENT POLICIES AND ANNOUNCEMENTS

DESNZ is managing research on mapping out climate risks relevant to buildings at local scale including extreme wind and wind-driven rain to highlight areas where specific building types may be at greater risk of damage.

A detailed risk assessment for the UK’s existing building stock’s exposure to damage from 2080 climate hazards by 2028 using a programme of research. Research will be carried out from 2023 to 2028, gathering evidence to enable this risk assessment, with outputs delivered throughout this period.

A study mapping Future Wind Driven Rain exposure under 2°C and 4°C warming scenarios will report by the end of 2023 and will support a review of guidance to ensure building fabric is well adapted. This data will be made publicly available via the interactive Met Office Climate Portal.

### UKGBC RECOMMENDATIONS

- Data on wildfire and other extreme weather risks should be integrated into the planning system via local adaption strategies, drawing on data sets such as the Natural Hazard Partnership’s Daily Hazard Assessment of elevated wildfire conditions and Fire Severity Index (FSI) from the Met Office.

### UKGBC ASSESSMENT

Whilst we welcome plans for further research on wider climate risks, including future wind driven rain, this must be linked to a clear pathway for integrating these comprehensively into policy and regulation, such as through consideration in the planning system.
## 4 OTHER: WIND AND WILDFIRES

<table>
<thead>
<tr>
<th>UK GOVERNMENT POLICIES AND ANNOUNCEMENTS</th>
<th>UKGBC RECOMMENDATIONS</th>
<th>UKGBC ASSESSMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The Building Safety Regulator</strong> will have a statutory role in overseeing the safety and standards of all buildings, including the resilience of buildings to climate risks**</td>
<td>• Following the outcome of the Hackitt Review, the government must reform and introduce a more comprehensive building safety regime in order to oversee standards quality and enforcement across buildings the built environment. This must encompass key occupant health and safety risks associated with climate change. **</td>
<td>Whilst we welcome plans for a building safety regulator to include climate resilience risks, it is vital that detail of the Regulators remit includes the full range of risks and related data.</td>
</tr>
<tr>
<td>Department for Business and Trade (DBT) will ensure climate risk to building fabric is being considered in work to support sustainable construction standards and guidelines through the NAP3 implementation period from 2023 to 2028.</td>
<td></td>
<td>We would welcome work to ensure climate risk to building fabric is considered in relation to sustainable construction standards and guidelines, but await further details.</td>
</tr>
<tr>
<td>DESNZ require that measures installed under current Government schemes must be carried out by a Trustmark registered tradesperson and, where appropriate, Publicly Available Specification (PAS).</td>
<td></td>
<td>We welcome requirements that measures installed under Government programmes must be carried out by Trustmark registered tradesperson and, where appropriate, Publicly Available Specification (PAS).</td>
</tr>
</tbody>
</table>
UK GREEN BUILDING COUNCIL
THE BUILDING CENTRE
26 STORE STREET
LONDON WC1E 7BT
INFO@UKGBC.ORG

The voice of our sustainable built environment