



West Midlands Climate Change Adaptation Plan

Briefing webinar

27 January 2022

- We are the sustainability adviser for leaders of the West Midlands.
- Not-for-profit company working across all sectors.
- Our vision: That the West Midlands is leading in contributing to the national target of net zero greenhouse gas emissions by 2050 whilst addressing health inequality and driving inclusive growth.
- We coordinate and monitor the only existing regional Sustainability Roadmap; a framework to 2030
- We support our members and other local stakeholders to implement these changes by enabling them to demonstrate innovation and leadership and provide opportunities to collaborate and celebrate success.



- 14:00 **Welcome and introduction**
SWM
- 14:05 **The national context: Independent Assessment of UK Climate Risk**
Climate Change Committee
- 14:20 **The local context: Why the Environment Agency supported this plan**
Environment Agency
- 14:35 **West Midlands Climate Change Adaptation Plan overview and priorities**
SWM
- 15:05 **Q&A**
- 15:30 **Close**

General logistics

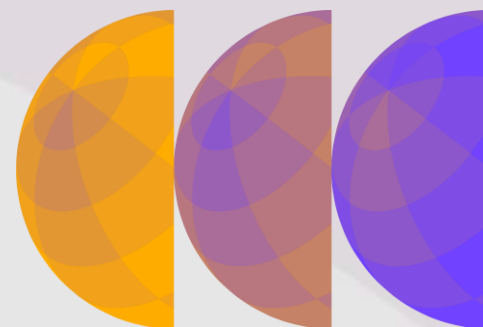
- Please mute yourselves during the presentations.
- Please update your display to show your name and organisation using the three dots in the top right-hand corner.
- Turn off any other streaming/webinar programmes (e.g. Teams) to improve connectivity
- If you have any connection issues, contact nathaniel.weaver@swm.org.uk or send a DM to him in the Zoom chat

Q&A

- We will not be answering questions until the Q&A session.
- Please feel free to use the chat function to ask questions; we will collate these for the Q&A session.
- You will also be able to use the raise hand function at the Q&A session.



UK CLIMATE
 **RISK**



Climate
Change
Committee

The national context: Independent Assessment of UK Climate Risk

Richard Millar, Climate Change Committee



**Environment
Agency**

**The local context: Why the Environment Agency
supported this plan**

Clare Dinnis, Environment Agency

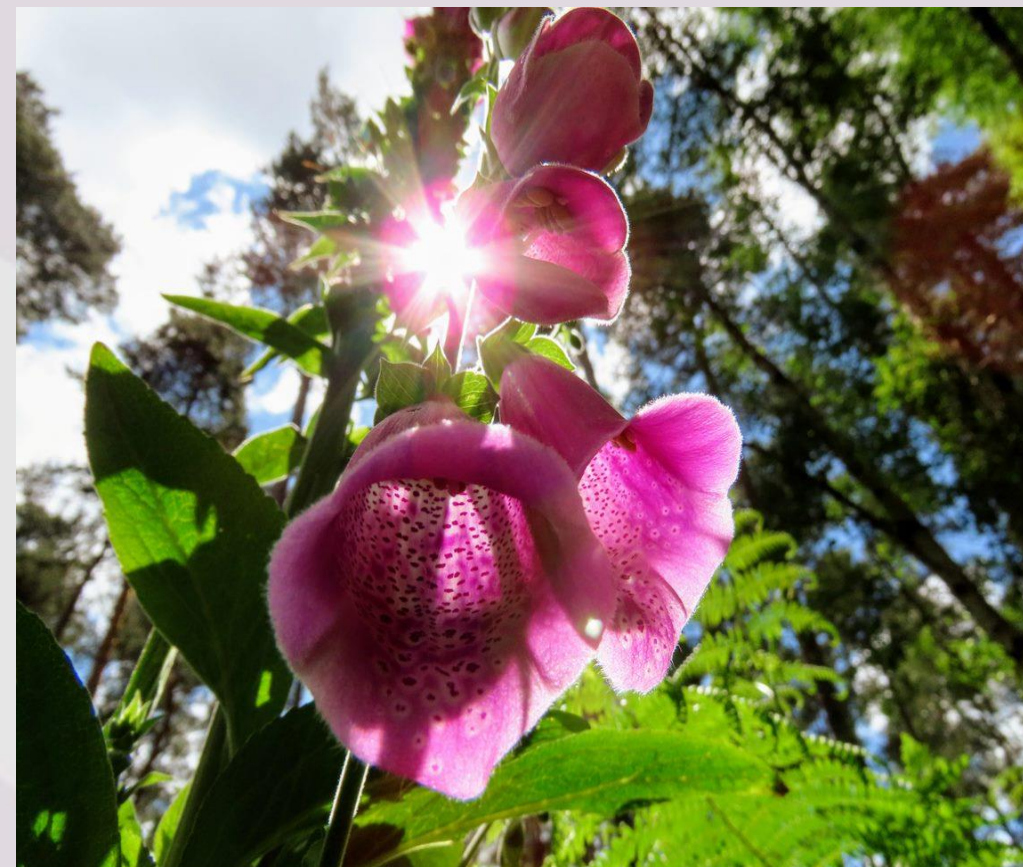


West Midlands Climate Change Adaptation Plan

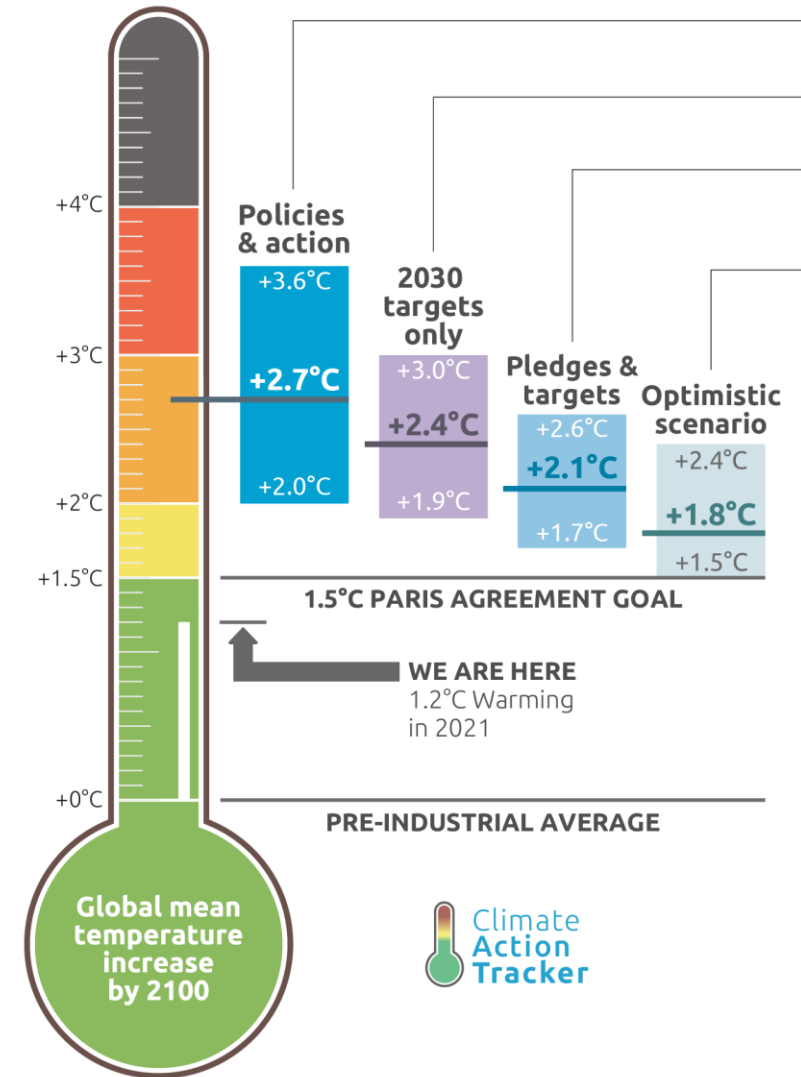
Overview and priorities

Alan Carr, Sustainability West Midlands

- **Overarching objective:** achieve a comprehensive understanding of the risks and opportunities associated with Climate Change for the West Midlands and produce an Adaptation Plan.
- The Adaptation Plan includes a high-level overview of actions that local and national decision makers and practitioners can consider for implementation.
- Our role is to:
 - Catalyse the required response to climate change risk in the region by producing a set of clear actions.
- Your role is to:
 - Consider what actions are relevant to your organisation and what role you can play to make the West Midlands more prepared for climate change.












- Regardless of our efforts to achieve Net Zero, we are still going to see our climate change.
- Implications will include more intense heatwaves, more frequent and severe flooding, longer, drier spells and more extreme weather.
- This will have implications for the West Midlands people, services, infrastructure, businesses and natural environment.
- Indeed, impacts are already being felt...



- Alongside the Adaptation Plan, we have also [published a report](#) showing how our local authorities are progressing on sustainability, against each of the areas of our Roadmap
- It shows progress on climate adaptation is the **lowest...**



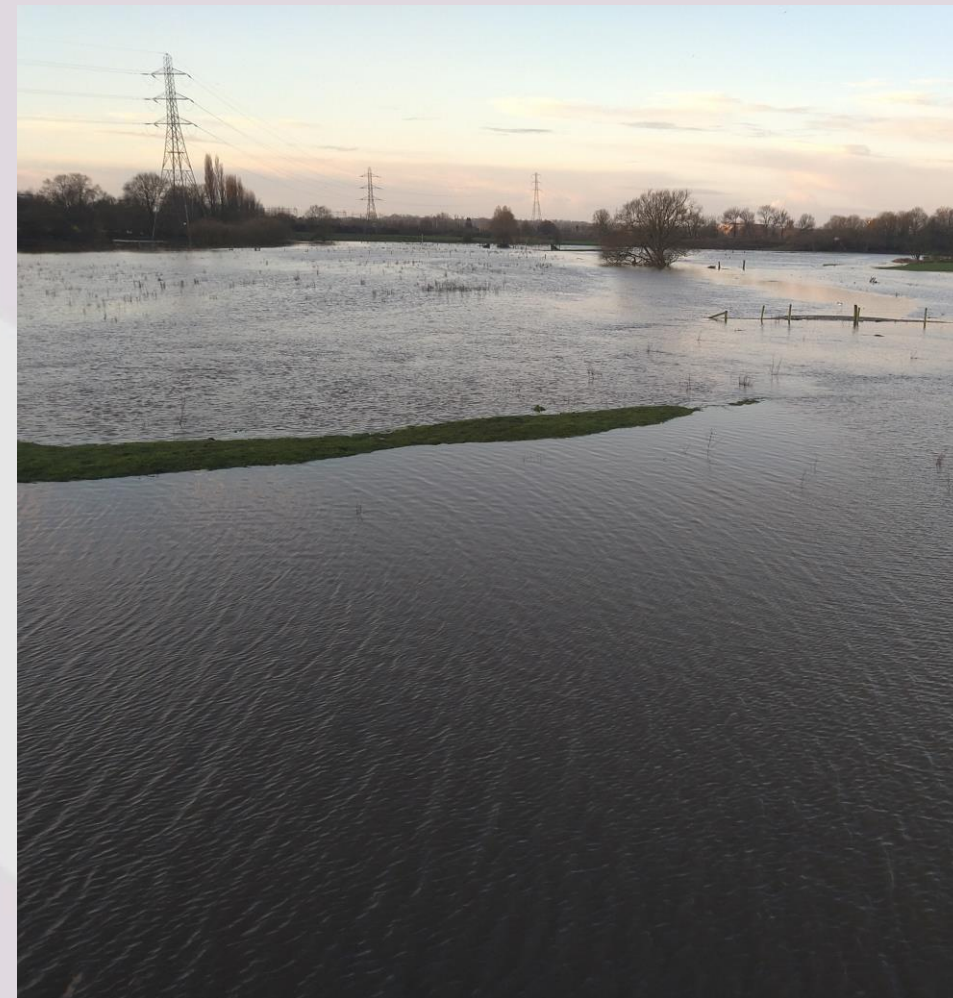
Roadmap symbol	Average % score	Rank
	56.0	1
	52.9	2
	50.0	3
	49.2	4
	48.4	5
	46.8	6
AVERAGE	46.5	SCORE
Various	46.5	7
	44.2	8
	40.3	9
	33.1	10



	2050s RCP2.6 (50th percentile)	2050s RCP6.0 (50th percentile)	2080s RCP2.6 (50th percentile)	2080s RCP6.0 (50th percentile)
Mean Annual Temperature	+1.2°C	+1.2°C	+1.3°C	+2.4°C
Mean Winter Temperature	+1.1°C	+1.1°C	+1.2°C	+2.0°C
Mean Summer Temperature	+1.7°C	+1.5°C	+1.9°C	+3.2°C
Mean Summer Precipitation	-15%	-15%	-19%	-26%
Mean Winter Precipitation	+6%	+5%	+9%	+14%

Source: UKCP18. Baseline = 1981-2000.

- Utilisation of the Independent Assessment of UK Climate Risk resources and intelligence (England assessment).
 - Added in four extra risks based on expertise
 - Removed marine/coastal risks
- Stakeholder engagement – focused workshops to gain insight from experts on the local adaptation picture
 - Seven thematic workshops
 - One workshop for local authorities
- Review of commitments made by organisations bound by the Adaptation Reporting Power
 - These commitments are not included in the Action Plan
- Brief desk-based review
 - LA benchmark
 - Existing adaptation plans
 - Good practice from other UK locations



Category	Description
More action needed	<p>New, stronger or different Government action, whether policies, implementation activities or enabling environment for adaptation, over and above those already planned, are beneficial in the next five years to reduce climate risks or take advantage of opportunities. This will include different responses according to the nature of the risks and the type of adaptation:</p> <ul style="list-style-type: none"> • Addressing current and near-term risks or opportunities with low and no-regret options (implementing activities or building capacity). • Integrating climate change in near-term decisions with a long life-time or lock-in. • Early adaptation for decisions with long lead-times or where early planning is needed as part of adaptive management.
Further investigation	<p>On the basis of available information, it is not known if more action is needed or not. More evidence is urgently needed to fill significant gaps or reduce the uncertainty in the current level of understanding in order to assess the need for additional action.</p>
Sustain current action	<p>Current or planned levels of activity are appropriate, but continued implementation of these policies or plans is needed to ensure that the risk or opportunity continues to be managed in the future.</p>
Watching brief	<p>The evidence in these areas should be kept under review, with continuous monitoring of risk levels and adaptation activity (or the potential for opportunities and adaptation) so that further action can be taken if necessary.</p>

West Midlands risks to the natural environment

Risk or Opportunity	Risk code	Receptor	Nature of risk/opportunity	Urgency score
Natural Environment and Assets				
RISK	NR1	Terrestrial species and habitats	Changing climatic conditions and extreme events, including temperature change, water scarcity, flooding, wind, and altered hydrology (including water scarcity and flooding)	More action needed
RISK	NR2	Terrestrial species and habitats	Pests, pathogens and invasive species as a result of climatic changes	More action needed
RISK	NR3	Terrestrial species, habitats and landscapes	Wildfires causing destruction to habitats, lowlands, upland peatlands and carbon stores	Further investigation
RISK	NR4	Soils	Changing climatic conditions, including seasonal aridity and wetness	More action needed
RISK	NR5	Agriculture	Pests, pathogens and invasive species as a result of climatic changes	More action needed
RISK	NR6	Forestry	Pests, pathogens and invasive species as a result of climatic changes	More action needed
RISK	NR7	Freshwater species and habitats	Changing climatic conditions and extreme events, including higher water temperatures, flooding, water scarcity and phenological shifts	More action needed
RISK	NR8	Freshwater species and habitats	Pests, pathogens and invasive species as a result of climatic changes	More action needed
RISK & OPPORTUNITY	NRO9	Estuarine species and habitats	More frequent estuarine flooding, changes in salinity and impacts on species migration	Further investigation
RISK & OPPORTUNITY	NRO10	Natural carbon stores, carbon sequestration and greenhouse gas (GHG) emissions	Changing climatic conditions, including temperature change and water scarcity causing destruction and release of locked-in carbon	More action needed
RISK & OPPORTUNITY	NRO11	Agricultural and forestry productivity	Extreme events and changing climatic conditions (including temperature change, water scarcity, wildfire, flooding, wind)	More action needed
RISK & OPPORTUNITY	NRO12	Landscape character	Extreme events and changing climatic conditions (including temperature change, water scarcity, wildfire, flooding, wind)	Further investigation
OPPORTUNITY	NO13	Terrestrial species and habitats	New species colonisations as a result of climatic changes	Further investigation
OPPORTUNITY	NO14	Agricultural and forestry productivity	New/alternative species becoming suitable as a result of climatic changes	Further investigation
OPPORTUNITY	NO15	Freshwater species and habitats	New species colonisations as a result of climatic changes	Sustain current action

Infrastructure				
RISK	IR1	Infrastructure networks (water, energy, transport, ICT)	Cascading failure of the infrastructure network; failure of one system leading to multiple failures in others as a result of more extreme weather	More action needed
RISK	IR2	Infrastructure networks and services	More frequent and extensive river, surface water and groundwater flooding	More action needed
RISK	IR3	Transport networks	Greater incidence of slope and embankment failure as a result of climatic changes	More action needed
RISK	IR4	Transport	Greater incidence of high and low temperature extremes, high winds and lightning as a result of climatic changes	More action needed
RISK	IR5	Bridges and pipelines	More frequent flooding and severe erosion	Further investigation
RISK	IR6	Energy	Greater incidence of high and low temperature extremes, high winds and lightning as a result of climatic changes	Further investigation
RISK	IR7	Hydroelectric generation	More frequent and extreme low or high river flows as a result of climatic changes	Further investigation
RISK	IR8	Energy generation	Reduced water availability for generation plants as a result of climatic changes	Further investigation
RISK	IR9	Public water supplies	Reduced water availability as a result of climatic changes	More action needed
RISK	IR10	Subterranean and surface infrastructure (cables, pipes etc)	Greater incidence of subsidence as a result of climatic changes	Further investigation
RISK	IR11	Digital infrastructure, telecoms and ICT	Greater incidence of high and low temperature extremes, high winds and lightning as a result of climatic changes	Further investigation

West Midlands risks to health, communities and the built environment

Health, Communities and the Built Environment

RISK	HR1	Health and wellbeing	Greater incidence of high temperatures resulting in heat related health problems	More action needed
RISK	HR2	Health and wellbeing	Widening health inequalities as a result of greater climate disadvantage due to more extreme weather	Further investigation
RISK	HR3	Health and wellbeing	Changes in indoor and outdoor air quality driven by climate changes	Further investigation
RISK	HR4	Health	Greater incidence of vector-borne disease as a result of climatic changes	More action needed
RISK	HR5	Health	Poor water quality and household water supply interruptions as a result of climatic changes	Further investigation
RISK	HR6	Food safety and food security	Higher temperatures (affecting food safety) and extreme weather (affecting food security) as a result of climatic changes	Further investigation
RISK	HR7	People, communities and buildings	Greater frequency and extent of flooding as a result of climatic changes	More action needed
RISK	HR8	Health and social care delivery	Greater incidence of extreme weather affecting service delivery	More action needed
RISK	HR9	Education and prison services	Greater incidence of extreme weather affecting service delivery and building function	More action needed
RISK	HR10	Building fabric	Potential damage caused by moisture, wind and driving rain	Further investigation
RISK	HR11	Cultural heritage	Negative impacts due to changes in temperature, precipitation, groundwater, landscape change	More action needed
RISK & OPPORTUNITY	HRO12	Household energy demand	Summer and winter temperature changes potentially reducing heating need but increasing cooling need	More action needed
OPPORTUNITY	HO13	Health and wellbeing	Drier, warmer summers leading to more opportunities to use outdoor spaces	Further investigation

West Midlands risks to business and industry

Business and Industry				
RISK	BR1	Flooding of business sites	More frequent and extensive river, surface water and groundwater flooding	More action needed
RISK	BR2	Flooding of industrial sites	More frequent and extensive river, surface water and groundwater flooding leading to a greater water pollution risk	Further investigation
RISK	BR3	Business production processes	Water scarcity as a result of climatic changes	Further investigation
RISK	BR4	Business access to finance, investment and insurance	Greater incidence of extreme weather leading to disruption	Sustain current action
RISK	BR5	Disruption to business supply chains and distribution networks	Greater incidence of extreme weather in the UK and abroad leading to disruption	More action needed
RISK	BR6	Reduced employee productivity in businesses	Greater incidence of infrastructure disruption as a result of climatic changes and higher temperatures in working environments	Further investigation
OPPORTUNITY	BO7	Changes in demand for goods and services	Long term climate change effects	Further investigation

UK risks from international dimensions of climate change

International Dimensions

International Dimensions				
RISK	IDR1	Food availability, safety, and quality	Decreasing yields from rising temperatures, water scarcity and ocean changes globally	More action needed
RISK	IDR2	The UK's international interests and responsibilities	International violent conflict resulting from climate change overseas	More action needed
RISK	IDR3	Changes to international governance affecting the UK	Reduced international collective governance due to climate change and responses to it	More action needed
RISK	IDR4	International trade routes	Climate hazards affecting supply chains	More action needed
RISK	IDR5	Economic loss to the UK	Climate driven resource governance pressures and financial exposure	Sustain current action
RISK	IDR6	UK public health	Increase in vector borne diseases due to climate change	More action needed
RISK	IDR7	Risk multiplication to the UK	Interactions and cascades of climate risks across systems and geographies	More action needed
RISKS & OPPORTUNITIES	IDRO8	Migration to the UK and effects on the UK's interests overseas	Climate-related international human mobility	Watching brief
OPPORTUNITY	IDO9	UK food availability and exports	Increases in productivity and areas suitable for agriculture overseas as a result of climatic changes	Watching brief
OPPORTUNITY	IDO10	Increased trade for the UK	Arctic ice melt opening up new trading routes as a result of climatic changes	Watching brief

The West Midlands Action Plan does not focus on these risks/opportunities.

Prioritisation was carried out as follows:

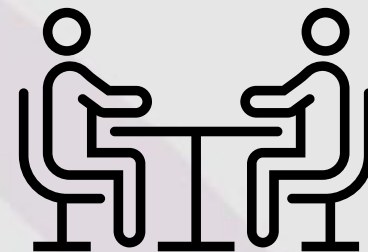
- What the risk assessment is telling us
- What the stakeholders told us
- What we know of to be already happening (activity we can build on) or not happening (gaps)



Priorities deemed VERY HIGH

Governance, reporting and monitoring

- Set up a West Midlands Climate Adaptation Working Group which will primarily aim to drive forward some of these actions and lobby national and local funders and policymakers to ensure adaptation to climate change is at the heart of all activities.
- Through the Working Group and/or its subgroups, facilitate potential partnerships and/or funding sources to take forward projects across the region and research innovative approaches to adaptation financing.
- Run an engagement programme and advice sessions for public and private sector organisations to help them develop their own climate risk assessments and adaptation plans.
- Update this plan annually to ensure actions are kept relevant and set up a monitoring process to ensure actions are being delivered with success measures identified.



Priorities deemed VERY HIGH

Natural environment and assets 1

- Capitalise on the rollout of local tree-planting programmes by ensuring that all schemes contribute to climate adaptation objectives, e.g. that they help to reduce flood risk, contribute to urban cooling etc. Potentially link with other planting initiatives and investigate rolling out the Birmingham City Council approach to strategic tree planting mapping. Utilise the Forestry Commission's [Woodland Creation Offer](#), where climate resilience is a key objective, and consult the '[Managing England's woodlands in a climate emergency](#)' publication to support informed decisions on projects.
- Use lessons learnt from urban greening programmes, such as the [Sunrise project in Stoke](#), to establish equivalent programmes in urban areas where species are at greatest risk, and ensure core objectives of these programmes include climate adaptation, e.g. flood alleviation, urban cooling etc. This could also link with urban tree planting initiatives (see above). Lessons can also be learned from the Manchester [Ignition Project](#).



Priorities deemed VERY HIGH

Natural environment and assets 2

- Use existing evidence, research, surveys and mapping to identify which West Midlands' habitats, species and crops could be most at risk of the negative impacts of new pests, pathogens or invasive, non-native species which are more likely to establish themselves as a result of climate change. If possible, obtain data from the Forestry Commission's TreeAlert system to aid this identification.
- Alongside the above, set up community-led groups who routinely monitor the areas identified as potentially being most vulnerable to pests and diseases and utilise the TreeAlert system for more systematic logging of observed impacts.
- Continue the implementation of Nature Based Solutions such as Natural Flood Management (NFM) projects in areas where they would be of most benefit, learning lessons from previous successes, but ensure all relevant partners are consulted with during the scoping stage and ensure all projects are logged on a transparent database.
- Lobby for, apply to and, if possible, establish long-term funding options for natural environment restoration programmes, such as examples listed above, that will result in a more joined up approach to projects, where regional partners can work collaboratively. Ensure that funding conditions include evidence that projects will include climate adaptation measures; this includes the forthcoming Green Grants Programme to be administered by the WMCA.



Priorities deemed VERY HIGH Infrastructure

- Ensure climate adaptation is integrated into the design and planning for new infrastructure assets (new local roads, tram, sub-stations, drainage etc.). Ensure climate change and its impacts are addressed consistently across the region to support this approach.



Priorities deemed VERY HIGH

Health, Communities and the Built Env't 1

- Conduct an assessment of all hospitals, care homes and other health centres that support vulnerable people in the West Midlands to identify which are most at risk of overheating and identify the most suitable measures to reduce overheating risk, such as implementing green infrastructure, better ventilation etc, and how these could link with potential measures to achieve Net Zero.
- Ensure NHS Trusts across the region take the opportunity of the requirement to develop new 'Green Plans' by integrating effective adaptation measures into these plans to help ensure hospitals and other NHS health settings are protected from the impacts of a future climate. Peruse the forthcoming Health and Social Care Sector Climate Change Adaptation report to ensure alignment.
- Work with all relevant partners to ensure that climate risks are addressed and considered in the commissioning and provision of all health and social care services referring to the National Planning Policy Framework (NPPF) for details on new developments and climate change.
- Ensure climate risks to health, buildings and infrastructure that affect hospitals, care homes, GPs and other health and care settings are embedded into corporate risk / business continuity plans.



Priorities deemed VERY HIGH

Health, Communities and the Built Env't 2

- Ensure planning decisions adhere to the NPPF, which states that new developments avoid flood risk in accordance with the sequential test in the NPPF and inappropriate development directed away from areas of existing or future flood risk. New developments should not cause flooding elsewhere and be resilient to the impacts of climate change.
- Continue the funding and rollout of strategic flood defence schemes and ensure that any properties that are not protected by such schemes, but that are still vulnerable to an increasing flood risk, are prioritised for property-level flood protection measures.
- Possibly linking with the above, ensure climate adaptation measures are requirement of new homes, alongside measures to achieve Net Zero. This could include in-built passive flood risk reduction measures, natural ventilation to improve thermal performance and comfort during heatwaves, natural greening, roof reflectivity, permeable paving and rainwater harvesting to reduce freshwater use. Design guidelines should be produced for large capital investment projects, setting out how to use regionally specific climate projections and adaptation options.
- Ensure home retrofit programmes that are required alongside the delivery of Net Zero targets integrate adaptation measures where possible, such as installation of water efficiency measures, shading options, better ventilation to reduce the overheating risk and to improve indoor air quality, etc.

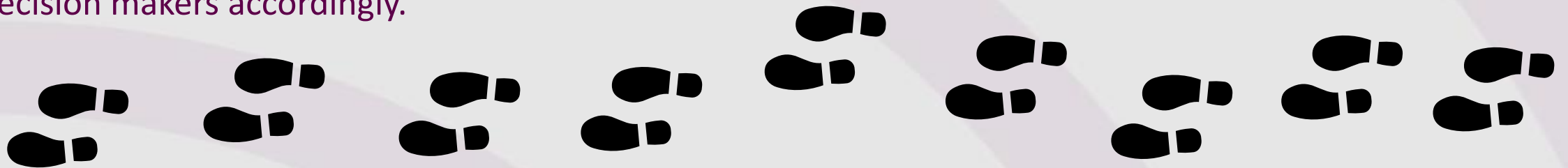


Priorities deemed **VERY HIGH** Business and industry

- Continue the funding and rollout of strategic flood defence schemes and ensure that any business premises that are not protected by such schemes, but that are still vulnerable to an increasing flood risk, are prioritised for property-level flood protection measures.
- Ensure the large-scale conversion of brownfield sites across the region integrate adaptation measures, such as natural flood alleviation, sustainable drainage systems (SuDS) and greening initiatives that benefit climate adaptation, and ensuring all new builds contain rigorous climate resilient standards. Where sites are not suitable for development, consider wetland conversion.



- Identify and implement the quick-wins included in the Action Plan. Implementing these actions while groundwork is prepared to tackle the others would be a good start.
- Following this, other actions in the plan should be prioritised depending on the urgency of action (we have suggested this in the Priority column), the resource requirements and the number of partners that would need to be engaged.
- Taking an adaptation pathways approach is recommended, as this will help to build flexibility into adaptation actions, which can help to manage the long-term and uncertain nature of climate change impacts.
- To enable any actions to be taken, an immediate priority should be in the re-establishment of a West Midlands Climate Adaptation Working Group to drive forward these actions and influence policy and decision makers accordingly.

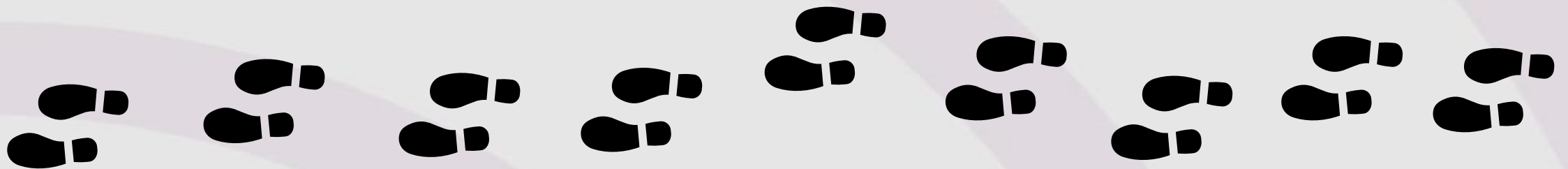


Recommended next steps 2

- Engaging with key decision makers, such as Councillors, senior leaders and the West Midlands Mayor, needs to happen quickly, to reflect the urgency of the need to adapt and to establish buy-in.
- There also needs to be engagement with key enablers of these actions, such as technical consultancies, national Government departments, local authorities, Local Resilience Forums and other bodies who influence health, natural environment and resilient infrastructure outcomes.
- A robust monitoring and evaluation process needs to be developed alongside this Plan, to ensure the actions are having the desired impact. This should sit alongside a process for reporting.

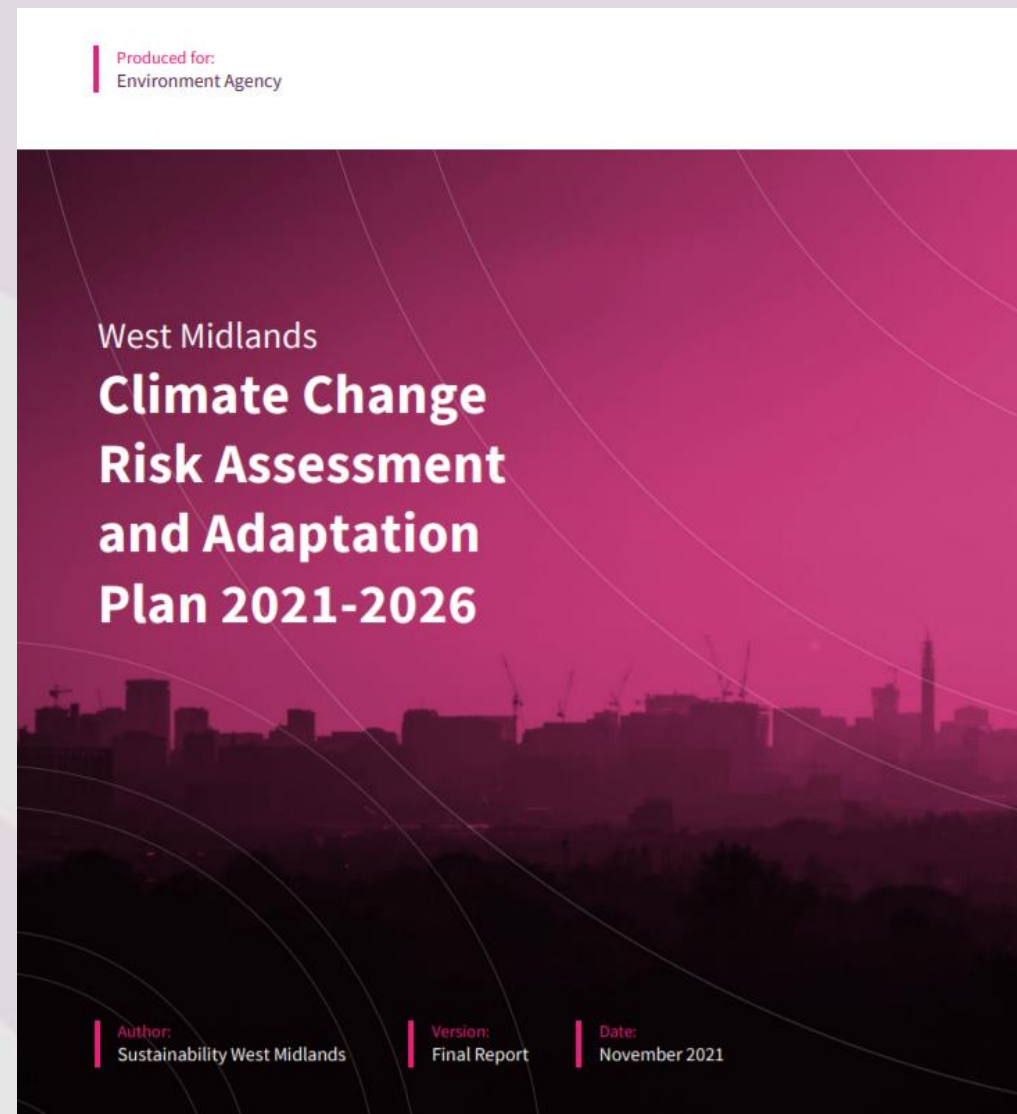


- The region is progressing on the implementation of Net Zero projects and activities. Wherever possible, adaptation measures should be integrated into these activities to double the impact of the activity whilst minimising resource requirements. This would also ensure adaptation actions do not threaten to contradict Net Zero targets, or visa-versa. The same principle applies to natural environment improvement projects.
- Funding opportunities will be crucial to the successful implementation of some of these actions. Mapping of funding opportunities and lobbying of central Government funding needs to take place hand-in-hand, to encourage appropriate investment. There also needs to be strategic use of public sector funds to lever in appropriate private sector investment.
- A final initial and quick step is to peruse the resources included in the report to enable those less familiar with climate adaptation and resilience to become more informed.



- If you could help implement or fund any of the actions, please get in touch.
- Join our soon-to-be-established WM Climate Change Adaptation Working Group if you're keen to support the implementation of some of the actions.
- Tell us about relevant activity so we can:
 - Keep the plan up to date.
 - Replicate/scale-up good practice.
- Use the WM plan to produce your own plan for your organisation/locality to identify bespoke actions – and, again, tell us about it!

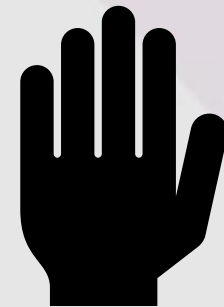
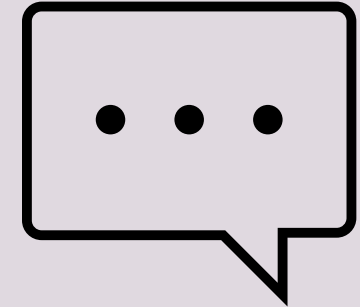
[Download the plan from here](#) to see how you can contribute.





Either:

- Use the chat, or
- Raise your hand



Alan Carr, Senior Sustainability Adviser
alan.carr@swm.org.uk

07751 933055

www.swm.org.uk

@SWMtweet

LinkedIn: Sustainability West Midlands

