

West Yorkshire Climate Risk Assessment

Kick-off Webinar

5 August 2026



West
Yorkshire
Combined
Authority

Tracy
Brabin
Mayor of
West Yorkshire



CAG
CONSULTANTS

Agenda

Welcome and housekeeping

Climate Change in West Yorkshire

Introducing the Climate Risk
Assessment

Feedback

Next Steps

Who are CAG Consultants?

CAG is a cooperative partnership of consultants working on environmental projects. We work primarily on climate action (adaptation and decarbonisation). Our areas of expertise are:

- Research
- Monitoring and evaluation
- Climate strategy & risk assessment
- Engagement
- Economic analysis



Housekeeping

The webinar will be recorded and shared with everyone who registered

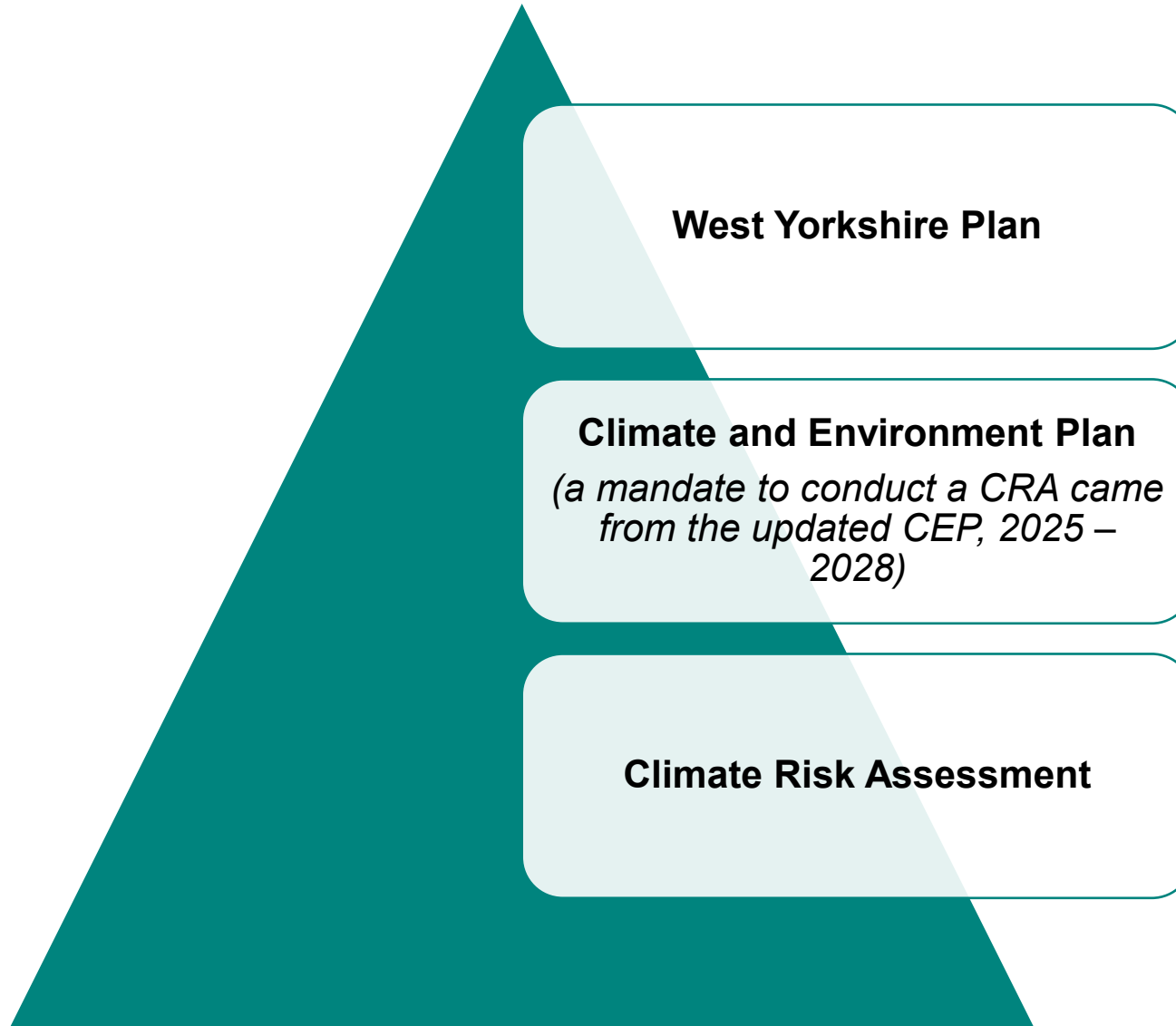
- Questions in the chat please (there's no Q&A)
- Keep microphones muted



Why now?

- Climate change is becoming a more pervasive problem, with greater impacts.
- We don't have locally-applicable, readable data for the West Yorkshire region that shows us in detail the risks that climate change will bring.
- Without knowing what these risks are, we can't plan effectively, meaning investment either slows, or we invest in inappropriate measures.
- Our partners are also facing the same issue – to have the best, and most positive impact, we all need this information.
- Climate risks disproportionately affects people, especially low-income households, who face exposure to climate impacts – we want to an inclusive and fair West Yorkshire for all.
- Risks from climate change also pose a significant threat to our economy.

Alignment with other policies/strategies in West Yorkshire



The Climate Risk Assessment will provide an evidence base for a range of plans/strategies, including:

- Local Growth Plan
- Local Transport Plan
- Emerging Spatial Development Strategy and Infrastructure Strategy
- Local Nature Recovery Strategy
- Emerging approach to integrated water management

Our ambition for a climate-ready West Yorkshire

- The climate risk assessment aligns with Mission 4 of the West Yorkshire Plan: a sustainable West Yorkshire but also underpins all others.
- We are committed to building resilience to future climatic changes and to creating a sustainable, nature-rich and climate ready region.
- The assessment will provide crucial information on risks and likelihood, areas at risk and areas of action, and costs of adaptive action.
- This information will provide an evidence base for all future policy making and project development.
- We are at crunch point for adaptation, and investment needs to be targeted and successful.
- At a West Yorkshire level, this will underpin environmental projects as well as feeding into wider policy development such as mass transit, bus franchising, planning, housing and utilities.

Climate Change in West Yorkshire



Local Authority Climate Service

Welcome to the Met Office's climate service for Local Authorities in the UK.

This site provides tools and resources that have been specifically designed for Local Authorities to help you better understand climate change in your local area and support your adaptation journey.

This information may be useful for others, not just Local Authorities. It is free and available for all. This is a Beta service and will be developed further.



[Explore the Climate of
your Local Authority](#)



[How to Assess your
Climate Risk](#)



[How to Take Action](#)



[FAQ and Version History](#)



2. Warming levels

Instead of considering future climate change during specific time periods (e.g. decades), some of the datasets on the portal are calculated at various levels of global warming relative to the pre-industrial (1850-1900) period. The world has already warmed by around 1.1°C (between 1850-1900 and 2011-2020). The warming level datasets allow for the exploration of greater levels of warming.

The global warming levels available in this dataset are 1.5°C, 2°C, 2.5°C, 3°C and 4°C. The data at each warming level was calculated using a 21 year period. These 21 year periods are calculated by taking 10 years either side of the first year at which the global warming level is reached. This time will be different for different model ensemble members.

We cannot provide a precise likelihood for particular emission scenarios being followed in the real world future. However, we do note that RCP8.5 corresponds to emissions considerably above those expected with current international policy agreements. The results are expressed for several global warming levels because we do not yet know which level will be reached in the real climate as it will depend on future greenhouse emission choices and the sensitivity of the climate system, which is uncertain. Estimates based on the assumption of current international agreements on greenhouse gas emissions suggest a median warming level in the region of 2.4-2.8°C, but it could either be higher or lower than this level.

The warming level datasets on the portal are grouped into three categories:

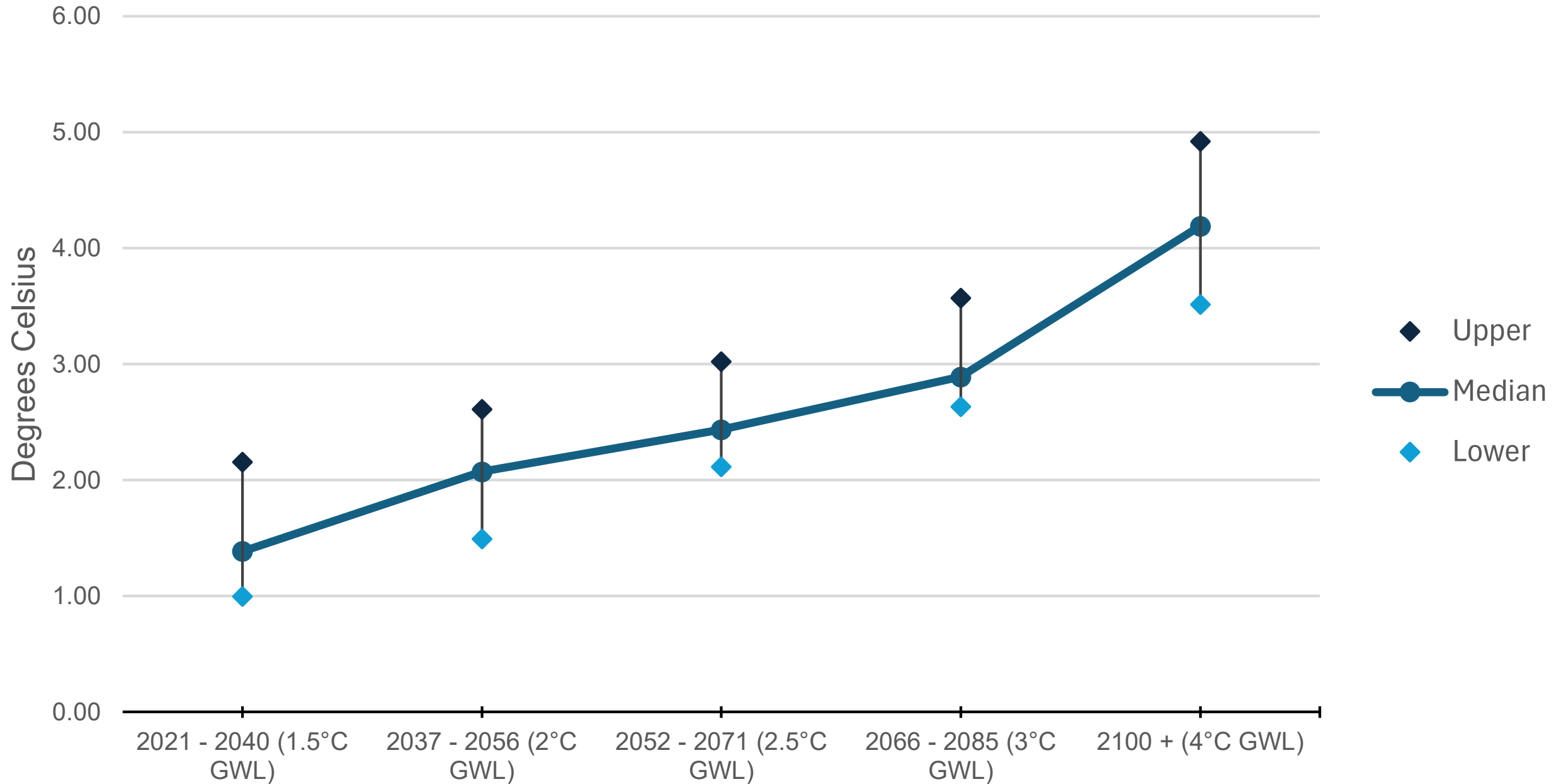
1. Annual counts of days above a threshold temperature for key variables.
2. Annual degree days
3. Changes in precipitation and surface temperature compared to a baseline.

For each category, the counts or changes are calculated from the UKCP18 regional projections (12km resolution) using the RCP8.5 high emission scenario. Three values ('upper', 'median', and 'lower') have been calculated for each grid cell for each warming level.

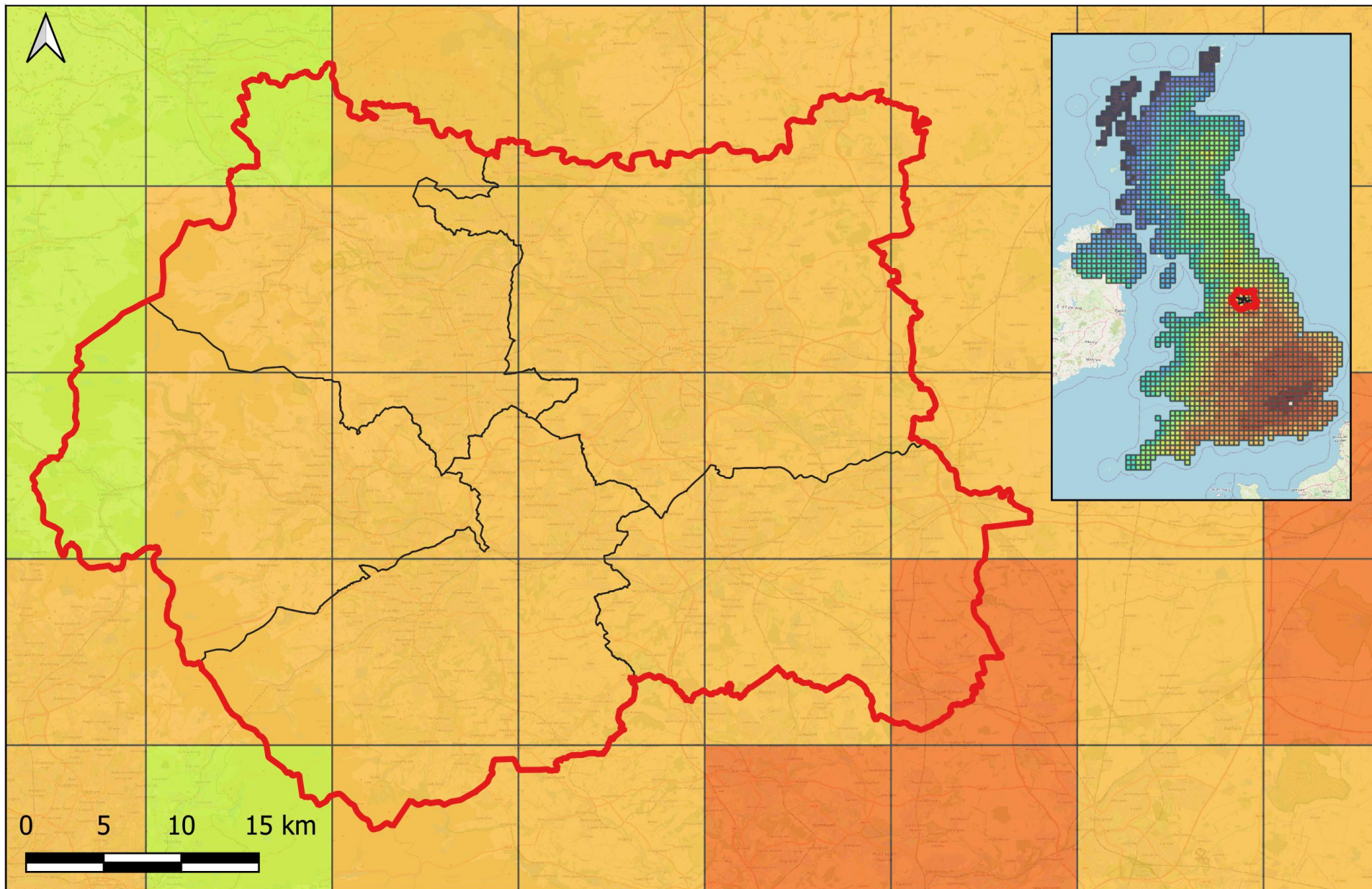
Examples of some of the warming level datasets available in the portal:

Dataset	Threshold	Impact relevance
Annual count of tropical nights	Daily minimum temperature above 20°C	Increased heat related illnesses, hospital admission or death for vulnerable people. Increased heat stress: it is important the body has time to recover from high daytime

West Yorkshire Summer Average Temperature Change - Projections (12km)



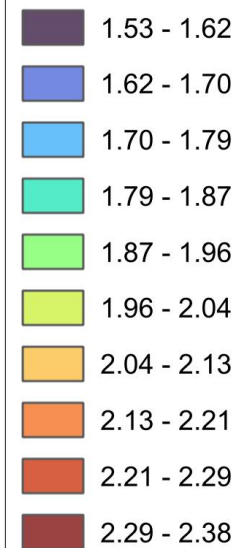
Summer Average Temperature Change (°C)



Legend

Met Data Projections

Summer Average Temperature Change (°C)



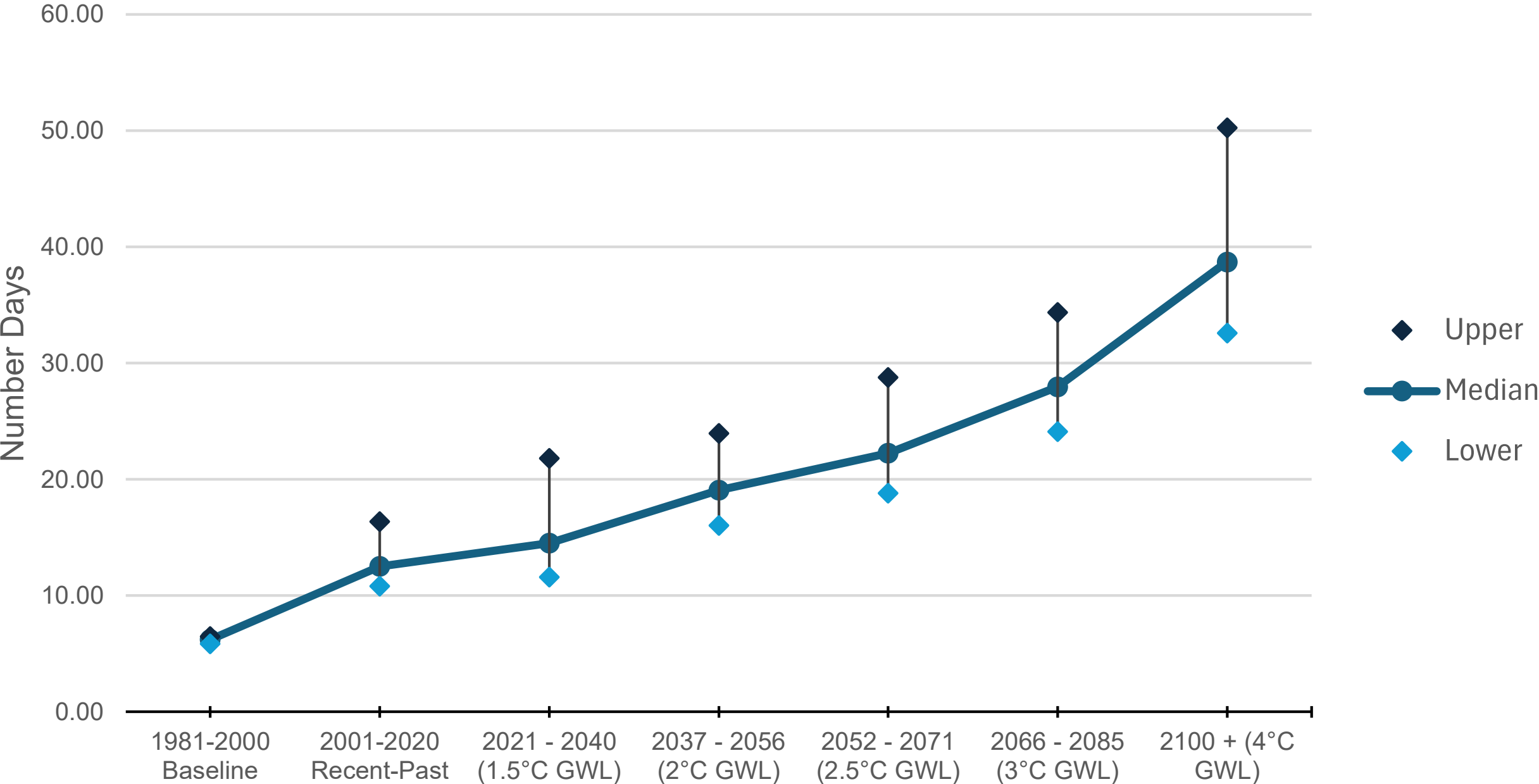
OpenStreetMap

Global Warming Level 2°C Median

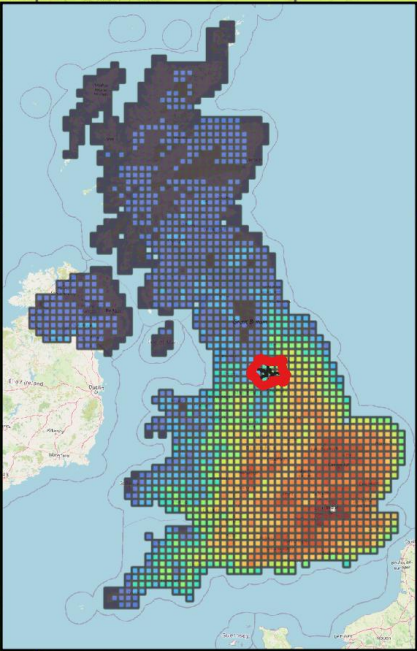
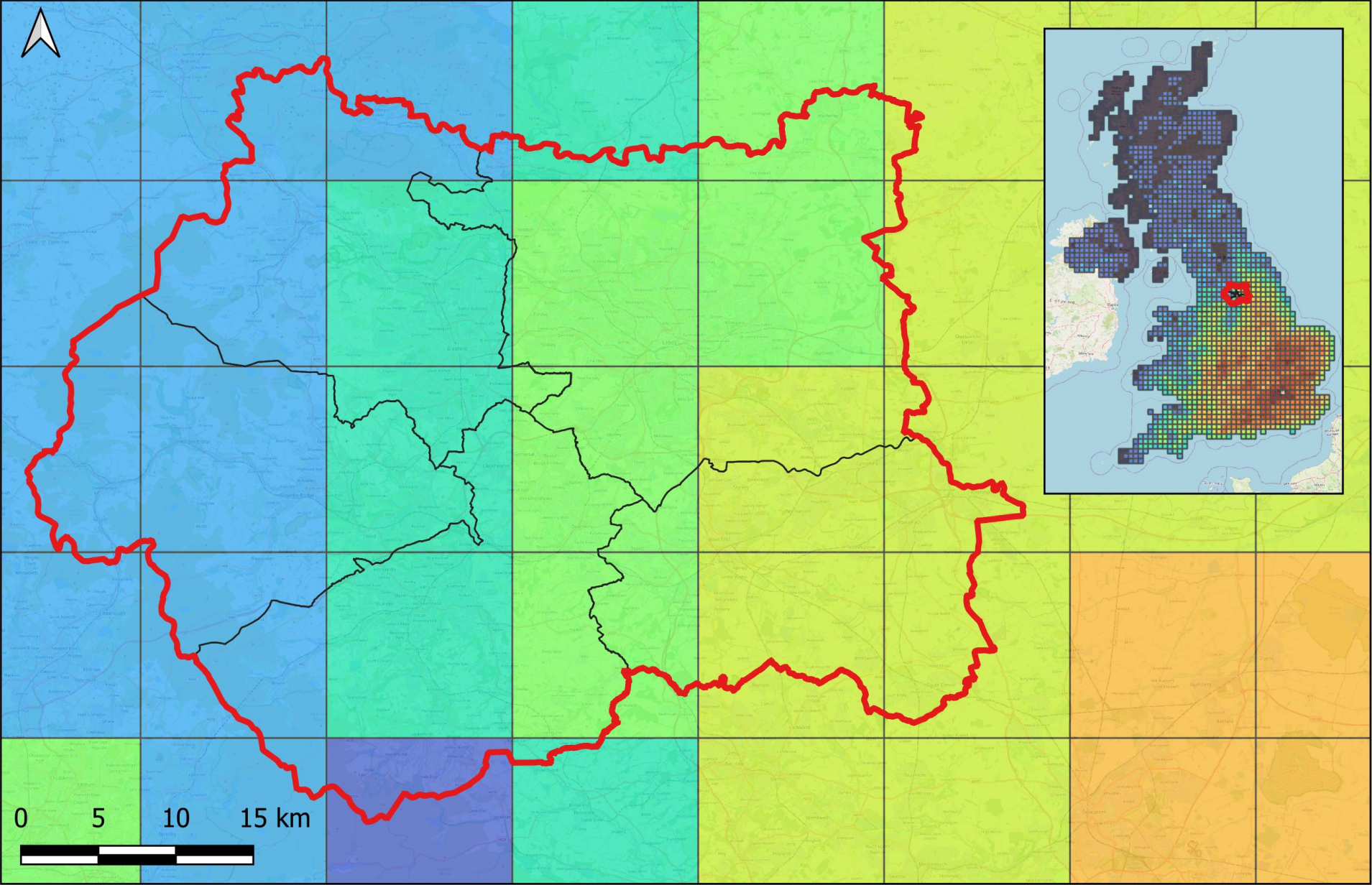
Scale 1:400000

Date: 2026-07-30

West Yorkshire Annual Count of Summer Days - Projections (12km)



Annual Count of Summer Days (Days)



Legend

Met Data Projections

Annual Count of Summer Days (Days)

- 0.00 - 5.13
- 5.13 - 10.25
- 10.25 - 15.38
- 15.38 - 20.50
- 20.50 - 25.63
- 25.63 - 30.76
- 30.76 - 35.88
- 35.88 - 41.01
- 41.01 - 46.14
- 46.14 - 51.26

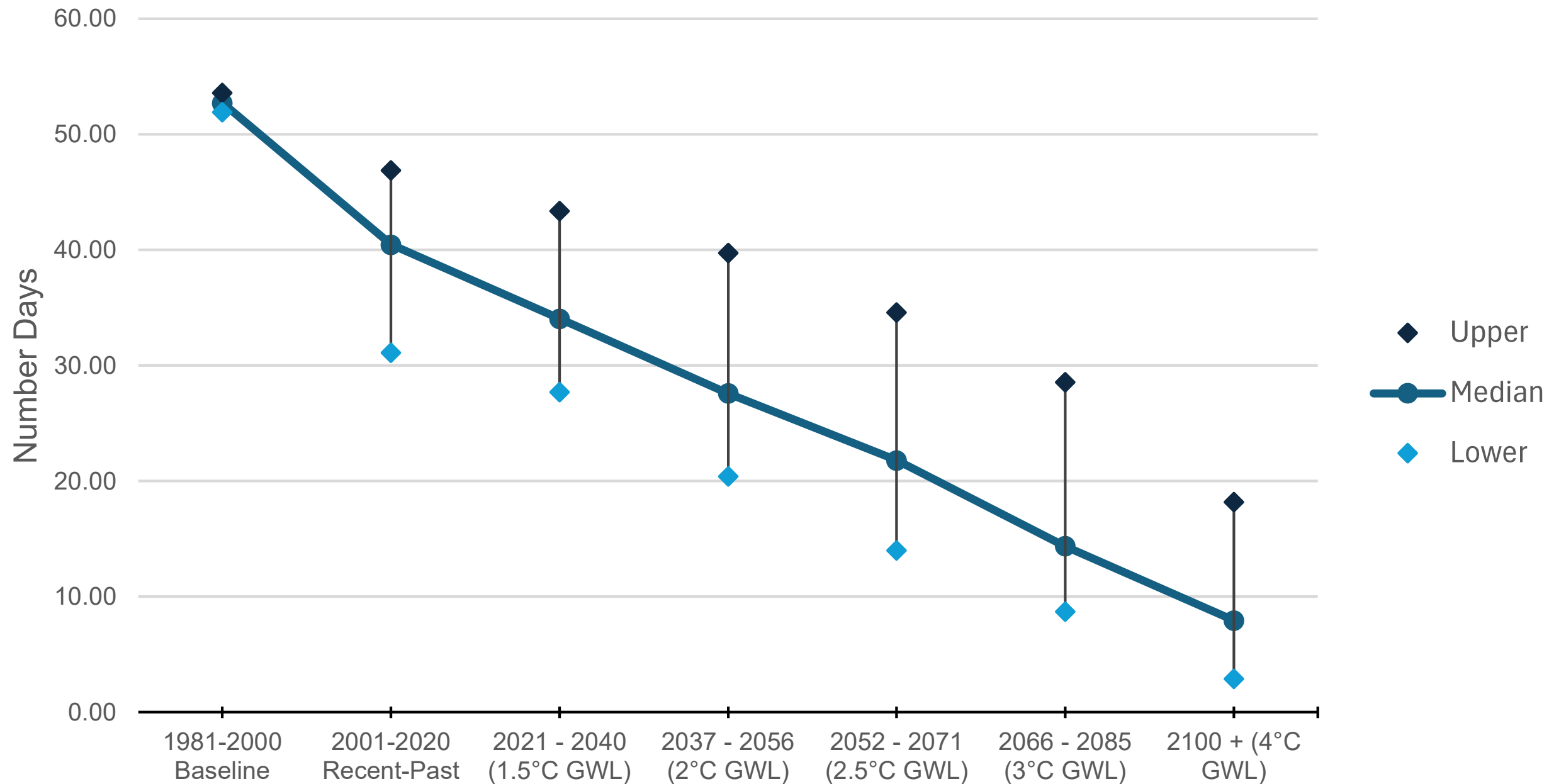
OpenStreetMap

Global Warming Level 2°C Median

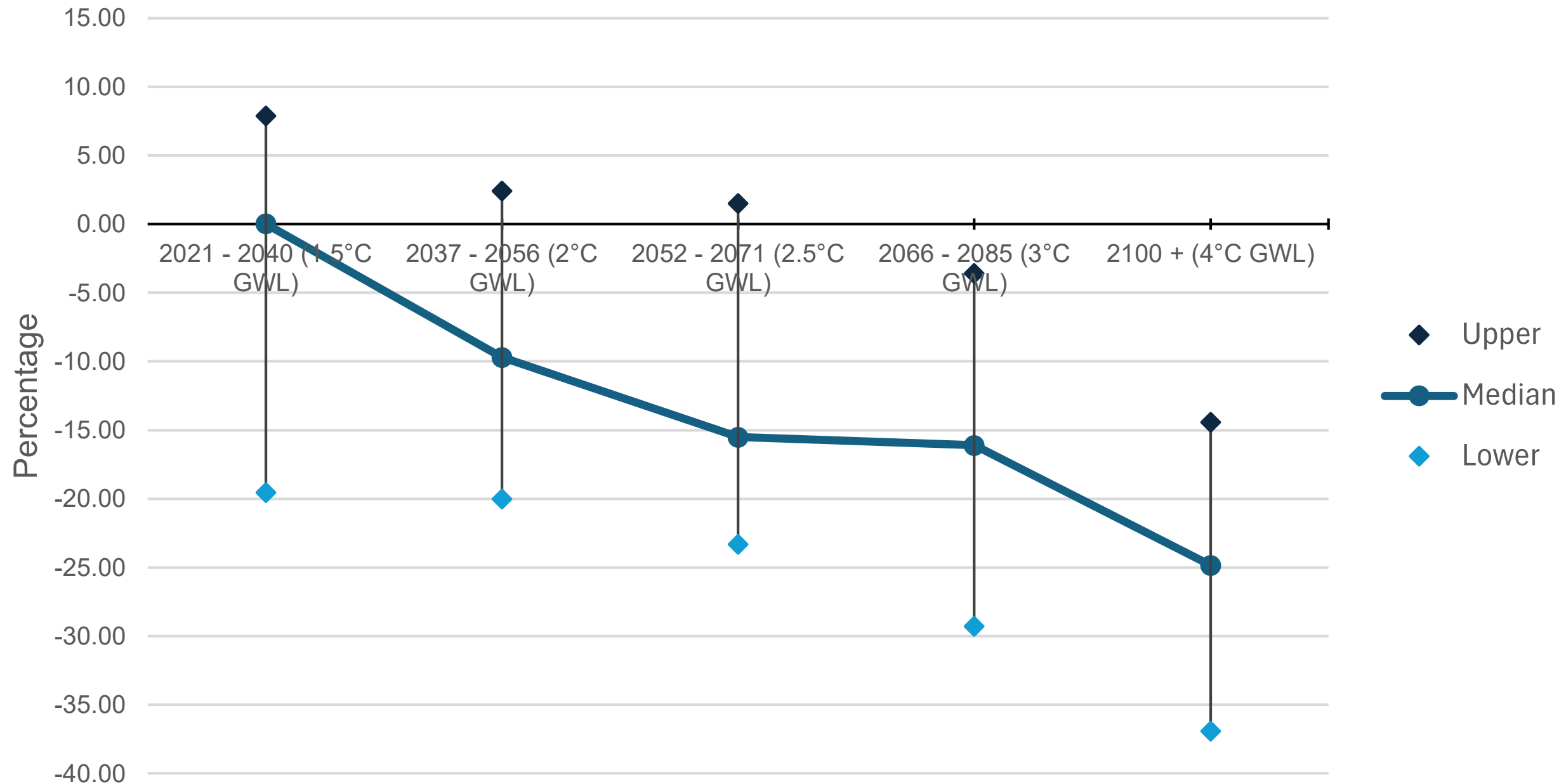
Scale 1:400000

Date: 2026-07-30

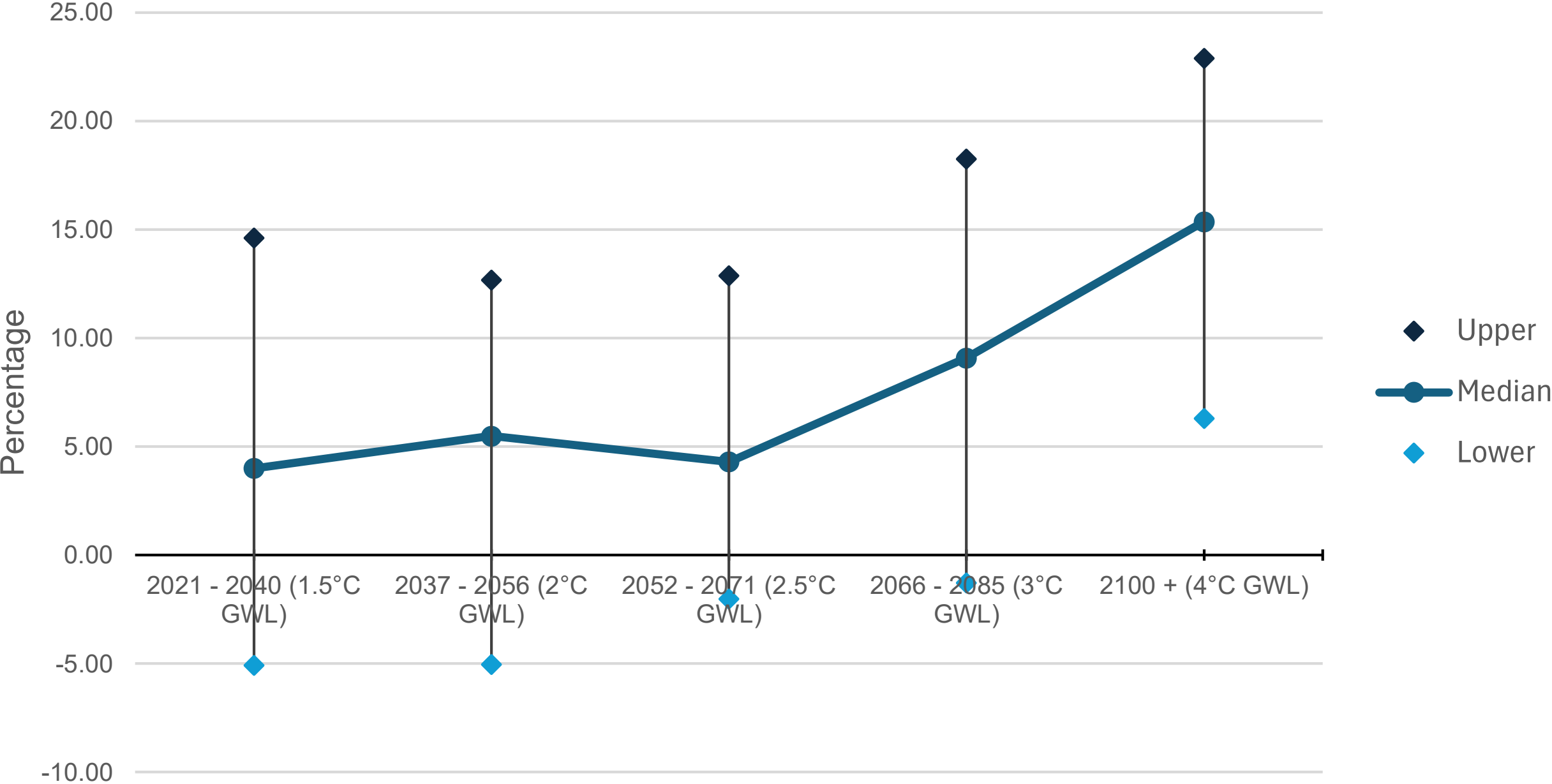
West Yorkshire Annual Count of Frost Days - Projections (12km)



West Yorkshire Summer Precipitation Change - Projections (12km)



West Yorkshire Winter Precipitation Change - Projections (12km)



Main trends



Increasing overall temperatures



Drier summers



Wetter winters

Weather

UK weather: Four flood alerts in place for Leeds and West Yorkshire as Storm Chandra hits county



D For you



Home

News

Sport

Weather

iPlayer

NEWS

Home | UK | World | Business | Culture | Politics | Health | Tech | InDepth | BBC Verify | Climate

England | Local News

Drought declared across Yorkshire



DONATE TO BYLINES

HOME NEWS POLITICS OPINION SOCIETY BUSINESS REGION

Home > News > Environment

Report shows UK nature bears the brunt of chaotic climate

Yorkshire Wildlife Trust warns government is shockingly underprepared to deal with accelerating threat



by Yorkshire Bylines — 02-10-2025 17:16 in Environment, Region Reading Time: 6 mins read

AA



University of
HUDDERSFIELD
Inspiring global professionals

Study International Global Research Business Stud

News > 2025 > September > New research to examine how flooding affects the mental health of communities

Research examines mental health impact of those affected by flooding



Which type of organisation do you represent?



**West
Yorkshire
Combined
Authority**

Climate Change
Risk and
Vulnerability
Assessment



menti.com
3922 3510

Agenda

Welcome

Climate Change in West Yorkshire

Introducing the Climate Risk
Assessment

Feedback

Next Steps

Climate risk & vulnerability assessment

01

Start with the CCRA4 risk & opportunity long-list

Refine, combine, reframe or disaggregate with WYCA and key stakeholders.

02

Set the climate-hazard context for the whole assessment

GWL scenarios mapped to planning horizons • extreme heat • rainfall & flooding • drought • storms.

03

Assess each risk through three linked components

EXPOSURE + **SENSITIVITY** – **ADAPTIVE CAPACITY** = **VULNERABILITY**

04

Prioritise

HIGHEST VULNERABILITY

Outcome: a transparent, locally grounded evidence base for WYCA planning, investment and adaptation decisions.

Define risk and opportunities

- CCRA 4 as the basis
- Grouped by sector
 - Health and Wellbeing
 - Built Environment
 - Land, Nature, and Food
 - Infrastructure
 - Economy
- Short-list and update



Health and Wellbeing

Risks to people from heat

Risks to people from extreme weather, excluding heat

Risks to people from changes in air quality

Risks to people from climate-sensitive infectious diseases

Risks to food safety and nutrition

Risks to health and social care delivery

Risks to buildings and communities from heat

Risks to buildings and communities from flooding

Built Environment

Risks to buildings and communities from heat

Risks to buildings and communities from flooding

Risks to buildings and communities from coastal change

Risks to buildings and communities, excluding from heat, flooding and coastal change

Risks to indoor environmental quality

Risks to cultural heritage and landscapes

Risks to facilities delivering public services, excluding health and social care

Risks to local resilience planning and emergency service response capabilities

Risks to households from changing energy demand

Infrastructure

Risks to the delivery of infrastructure services from interdependencies with other infrastructure systems

Risks to electricity generation

Risks to electricity transmission and distribution systems

Risks to fuel supply systems

Risks to road transport systems

Risks to rail transport systems

Risks to aviation and maritime transport systems

Risks to digital and communications systems

Risks to water supply and wastewater systems

Risks to waste management systems, excluding wastewater systems

Economy

Risks to UK Macroeconomic performance and stability

Risks to domestic and overseas physical assets of UK businesses

Risks to domestic and international supply chains and resource inputs of UK businesses

Risks to the productivity and availability of labour in the UK

Risks to financial institutions and the financial system

Risks to public finances

Risks to household finances

Opportunities to UK businesses and financial institutions from delivering adaptation goods and services

Nature

Risks to terrestrial and coastal ecosystems

Risks to freshwater ecosystems

Risks to marine ecosystems

Risks to soil ecosystems

Risks to natural carbon stores and sequestration

Risks to agriculture

Risks to fisheries and aquaculture

Risks to forestry

Opportunities for agriculture, forestry, fisheries, and aquaculture

Risks to food security



Climate vulnerability assessment

- 01 Start with the CCRA4 risk & opportunity long-list**
Refine, combine, reframe or disaggregate with WYCA and key stakeholders.

- 02 Set the climate-hazard context for the whole assessment**
GWL scenarios mapped to planning horizons • extreme heat • rainfall & flooding • drought • storms.

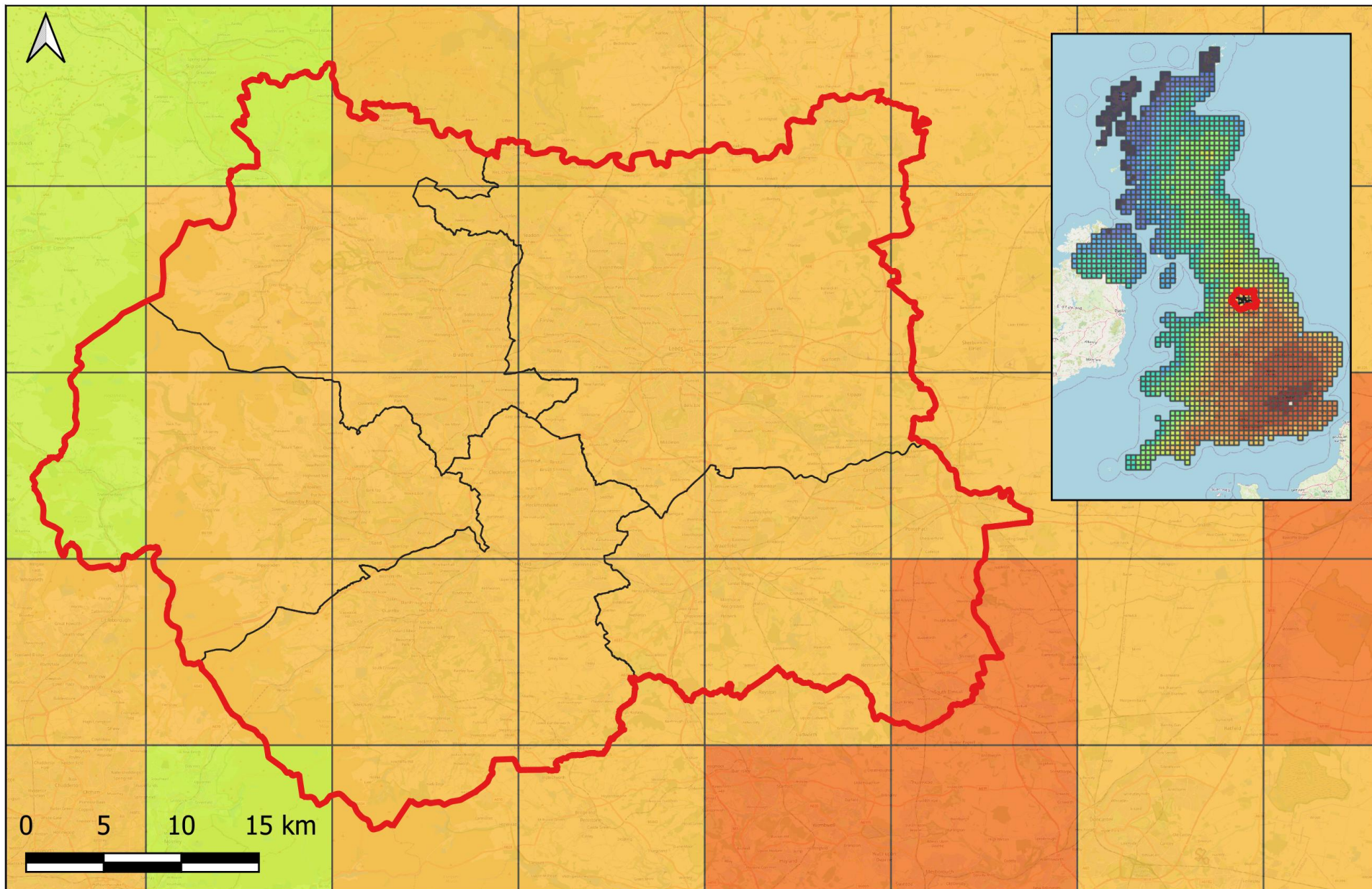
- 03 Assess each risk through three linked components**

$$\text{EXPOSURE} + \text{SENSITIVITY} - \text{ADAPTIVE CAPACITY} = \text{VULNERABILITY}$$

- 04 Prioritise** **HIGHEST VULNERABILITY**

Outcome: a transparent, locally grounded evidence base for WYCA planning, investment and adaptation decisions.

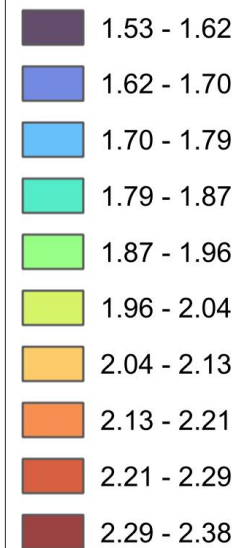
Summer Average Temperature Change (°C)



Legend

Met Data Projections

Summer Average Temperature Change (°C)



OpenStreetMap

Global Warming Level 2°C Median

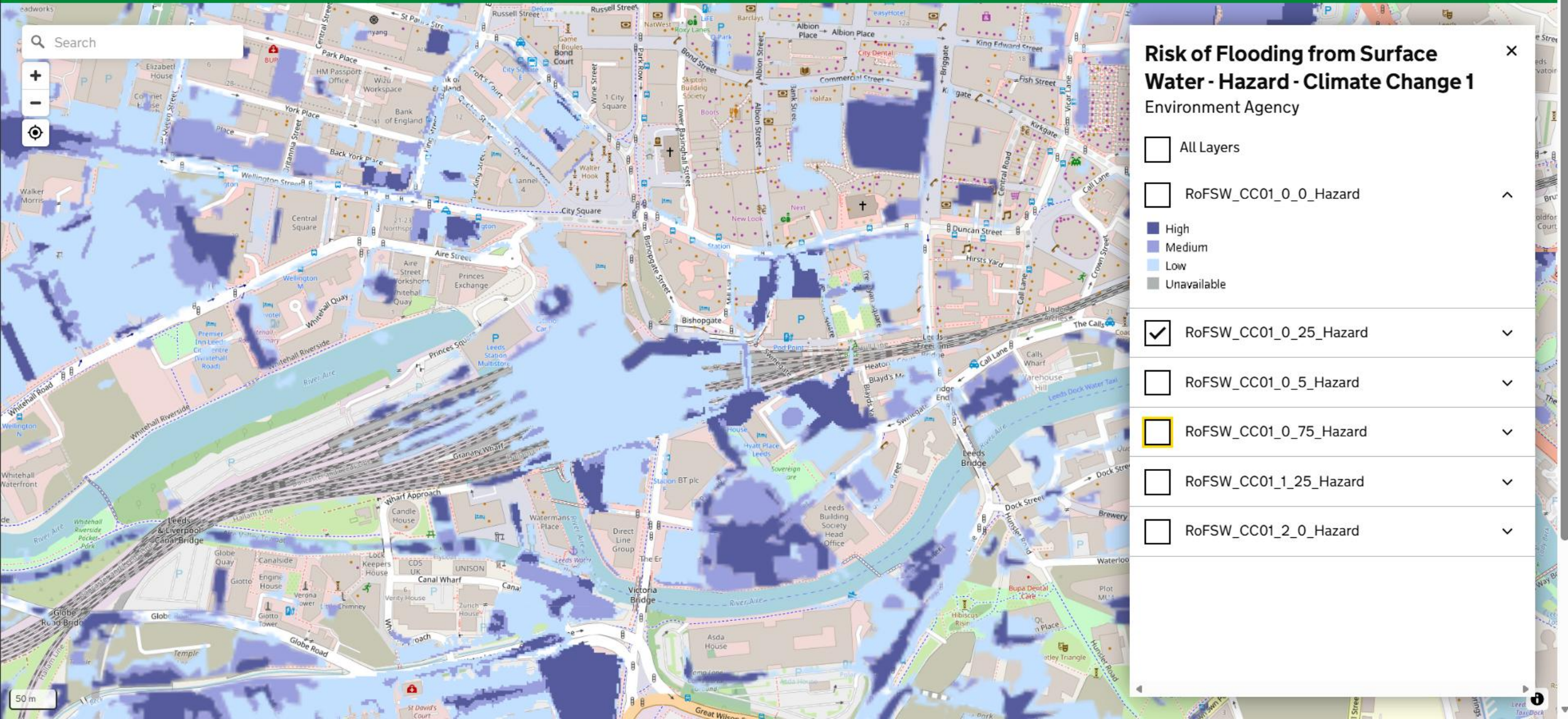
Scale 1:400000

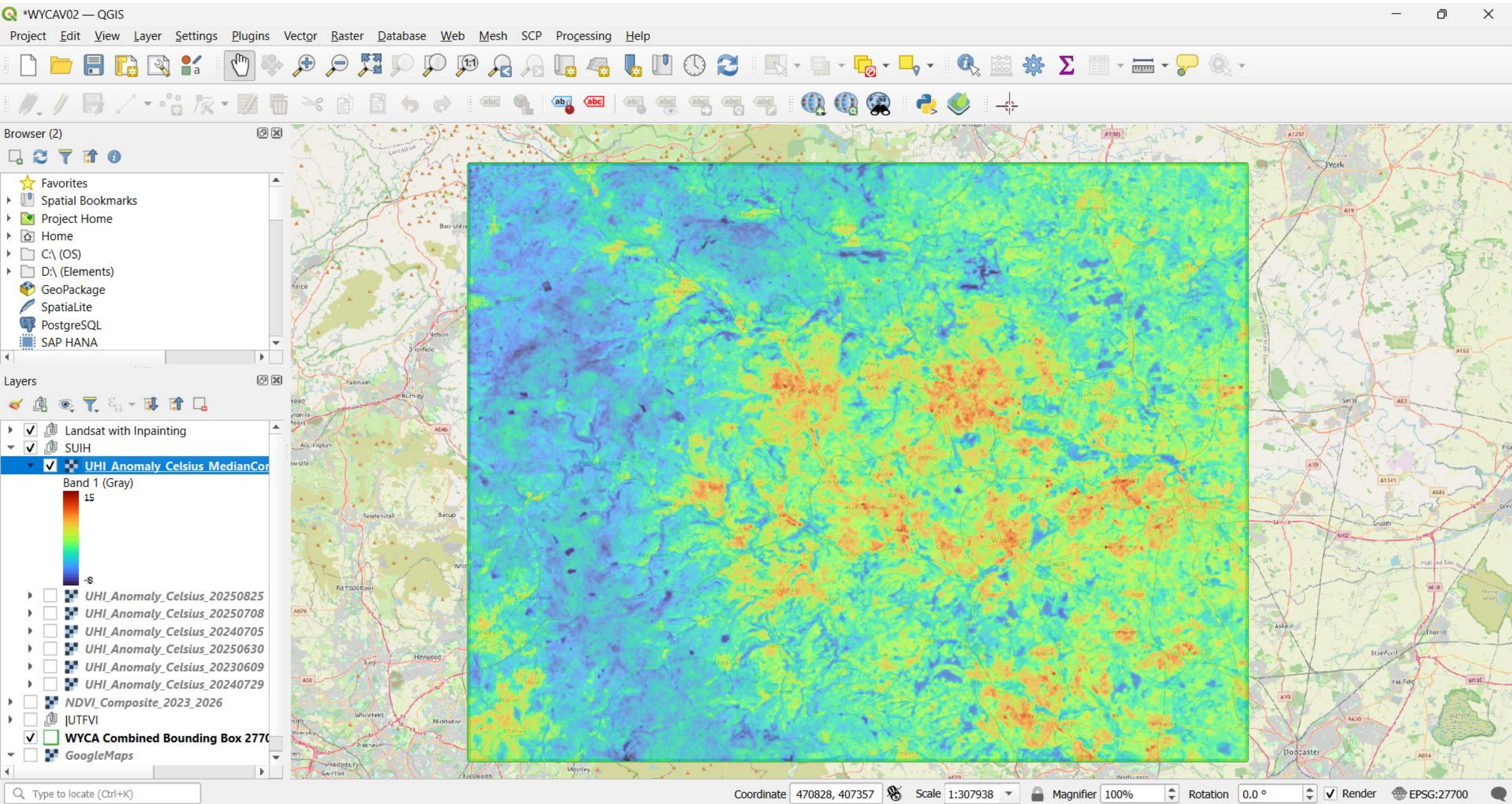
Date: 2026-07-30



Defra OGC preview

[Layers](#) [Download](#)





Climate vulnerability assessment

- 01 Start with the CCRA4 risk & opportunity long-list**
Refine, combine, reframe or disaggregate with WYCA and key stakeholders.
-

- 02 Set the climate-hazard context for the whole assessment**
GWL scenarios mapped to planning horizons • extreme heat • rainfall & flooding • drought • storms.
-

- 03 Assess each risk through three linked components**

EXPOSURE + **SENSITIVITY** – **ADAPTIVE CAPACITY** = **VULNERABILITY**

- 04 Prioritise** **HIGHEST VULNERABILITY**

Outcome: a transparent, locally grounded evidence base for WYCA planning, investment and adaptation decisions.

Health and Wellbeing

Risks to people from heat

Risks to people from extreme weather, excluding heat

Risks to people from changes in air quality

Risks to people from climate-sensitive infectious diseases

Risks to food safety and nutrition

Risks to health and social care delivery

Risks to buildings and communities from heat

Risks to buildings and communities from flooding

Built Environment

Risks to buildings and communities from heat

Risks to buildings and communities from flooding

Risks to buildings and communities from coastal change

Risks to buildings and communities, excluding from heat, flooding and coastal change

Risks to indoor environmental quality

Risks to cultural heritage and landscapes

Risks to facilities delivering public services, excluding health and social care

Risks to local resilience planning and emergency service response capabilities

Risks to households from changing energy demand

Climate vulnerability assessment

- 01 Start with the CCRA4 risk & opportunity long-list**
Refine, combine, reframe or disaggregate with WYCA and key stakeholders.
-

- 02 Set the climate-hazard context for the whole assessment**
GWL scenarios mapped to planning horizons • extreme heat • rainfall & flooding • drought • storms.
-

- 03 Assess each risk through three linked components**

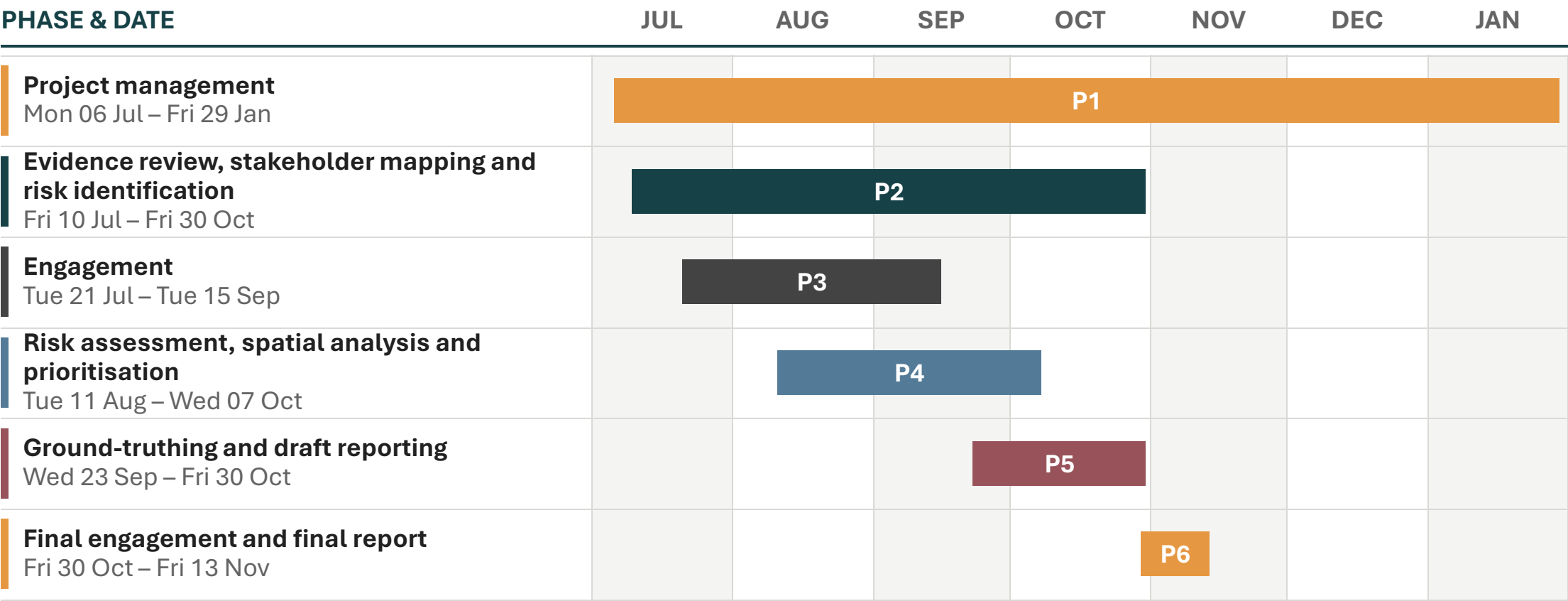
$$\text{EXPOSURE} + \text{SENSITIVITY} - \text{ADAPTIVE CAPACITY} = \text{VULNERABILITY}$$

- 04 Prioritise**

HIGHEST VULNERABILITY

Outcome: a transparent, locally grounded evidence base for WYCA planning, investment and adaptation decisions.

Workplan



How to get involved?



West Yorkshire Combined Authority

Climate Change Risk and Vulnerability Assessment

About the project

We are working with West Yorkshire Combined Authority to understand how climate change could affect people, places, nature, infrastructure and services across West Yorkshire. The project will look at the main climate risks and opportunities facing the region, including issues such as flooding, heat, storms and changing weather patterns. It will bring together evidence, local knowledge and mapping to help the region plan ahead, protect communities, and make better decisions about how to adapt to a changing climate.

Kick-off Webinar

Join us for the launch of the West Yorkshire Climate Risk Assessment. This online event will introduce the project, explain how the assessment will be carried out, and give organisations an early opportunity to help



Get Involved

Why your evidence matters

We are assessing climate risks and opportunities across West Yorkshire and need the most complete evidence base possible. Much of the key data (e.g. on vulnerability, exposure, impacts, assets, and planned investment) sits with external organisations and people like yourself. Using your existing evidence will help us build on previous work, avoid duplication, and add the depth needed to assess risks accurately.

Types of evidence we're looking for

Evidence — Climate-related data, research, or plans your organisation has produced: resilience plans, asset upgrades, and major development or investment plans that affect vulnerability to climate risks.

[Submit your evidence](#)

Lived experience — Personal, community, or place-based accounts of how climate impacts and extreme weather have affected you or your area.

[Submit your lived experience](#)

Please share your evidence by **Friday 14th September**.

If you're unsure whether your data is relevant, or have any questions, contact us at hq@cagconsult.co.uk.

Confidential information



2. If other, please specify

Enter your answer

3. Can you provide a hyperlink to the evidence you are sharing? *

- ☐ Yes - hyperlink to be provided in response to next question
- ☐ Yes - I will email over documents and/or photographs to hq@cagconsult.co.uk
- ☐ No - I cannot provide any evidence

4. If you answered Yes - hyperlink to be provided, please add the hyperlink(s) here *

Enter your answer

5. May we use this evidence in reports and communications? *

- ☐ Yes
- ☐ No

3. What type of climate story do you want to share? E.g. does it relate to flooding, extreme heat, wildfire, storms/wind, landslides , drought, or something else? *

Enter your answer

4. Timescale: over what period of time did you or your community experience this climate impact? *

Enter your answer

5. Where did this happen? Please enter a postcode, street name plus settlement (or community) area, landmark or place. *

Enter your answer

6. What were the consequences for you and/or your community? (E.g. health impacts, financial costs, environmental damage, school closure, business interruption, damage to buildings etc) *

Enter your answer

7. How severe would you describe the impact to be (5* = very severe) *

How to get involved?



Discussion

Menti polls:

- What evidence or datasets should we consider?
- Which communities are currently most affected?

Please share via the chat:

- Are there any community/business/public events happening between now and mid September that we could piggy back on or where the form to share lived experience could be shared?
- What key stakeholders we should be engaging with – organisations or individuals.



menti.com
3922 3510

Please get in touch

Derek Morgan & Ailsa Gibson

- hq@cagconsult.co.uk
- <https://cagconsultants.co.uk/wyca>

WYCA Climate Risk and Vulnerability Assessment

West Yorkshire
Combined Authority

West Yorkshire Combined Authority

Climate Change Risk and Vulnerability Assessment

