

# **, O, I KENT COUNTY COUNCIL**

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## **KENT FLOOD RISK AND WATER MANAGEMENT COMMITTEE**

MINUTES of a meeting of the Kent Flood Risk and Water Management Committee held in the Council Chamber, Sessions House, County Hall, Maidstone on Wednesday, 5 February 2025.

PRESENT: Mr A R Hills (Chairman), Mr D L Brazier, Mr D Crow-Brown, Ms M Dawkins, Mr M A J Hood, Mrs M McArthur and Mr P Bartlett

IN ATTENDANCE: Ms P Haselhurst (Lower Medway Internal Drainage Board), Ms L Faulkner (The Environment Agency), Mr A Jeffery (Head of Resilience and Emergency Planning), Mr M Rodgers (Met Office Advisor) and Ms E Kennedy (Democratic Services Officer)

### **UNRESTRICTED ITEMS**

**1. Apologies**  
*(Item 1)*

Apologies had been received from Mr Cole for whom Mr Bartlett was present as substitute.

**2. Declarations of Interest**  
*(Item 2)*

There were no declarations of interest.

**3. Minutes of the meeting on 20 November 2024**  
*(Item 3)*

RESOLVED that the minutes of the meeting held on 20 November 2024 were a correct record and that they be signed by the Chair.

**4. The Role of Internal Drainage Boards (IDBs)**  
*(Item 4)*

*Priscilla Haselhurst, Lower Medway Internal Drainage Board, was in attendance for this item.*

1. Ms Haselhurst presented on the role of internal drainage boards.
2. In response to comments and questions from guests and Members it was said:

- a. A Member questioned whether the service was working with the water boards or any other companies, also whether there was flexibility in the government funding. Additionally, questioning whether water structure management was embedded into developer policy. Ms Haselhurst shared that the service sat on the Water Resources South East, a collaboration with water companies, which looked at funding opportunities and sharing data. There was funding to start collecting data, which was a priority for the service. Ms Haselhurst assured Members that the water structure management was embedded.
- b. When questioned to what extent the service was governed by legislation and what level of legislation changes would be needed. Ms Haselhurst explained that the Land Drainage Act was the main piece of legislation, the substantive work of collecting and analysing data regarding different ways to manage water would not require legislative change however some work would require legislative changes.
- c. A Member questioned whether internal drainage boards were statutory consultee for planning. How the service envisaged the process coming together. Ms Haselhurst explained that internal drainage boards were not a statutory consultee. It was agreed that the water service was fragmented, the service was moving towards a catchment-based approach to help sort issues.
- d. When asked what the solution to the issues present. Ms Haselhurst said funding was not the complete issue, the solution would be connecting data, there was thought to using AI to aid with this in the future.
- e. A Member questioned the involvement in internal drainage boards in ongoing discussion of water quality in Ashford. Ms Haselhurst shared that it came back to data, planning to collect high level water quality data to improve water quality across the county, confirming that this data collected would include nitrates and phosphates.
- f. When asked about communication with the Internal Drainage Boards. Ms Haselhurst explained that the transparency of Internal Drainage Boards had improved. The boards did not have the legal authority or expertise to deal with contamination, under the Land Drainage Act there were permissive powers which allowed them to do maintenance, individuals were able to contact the service with specific issues.
- g. A Member questioned if there was a map that detailed internal drainage boards. Ms Haselhurst explained that there was but the service was in the process of improving its website.

RESOLVED that the Committee note the content of the presentation.

**5. Environment Agency and Met Office Alerts and Warnings and KCC severe weather response activity**  
*(Item 7)*

*Andy Jeffery, Head of Resilience and Emergency Planning, was in attendance for this item.*

1. Mr Jeffery outlined the report.
2. In response to comments and questions from guests and Members it was said:
  - a. A Member questioned water treatment works causing power outages, requesting South East Water attend the Committee to answer for the delays in the communication of issues to residents. Mr Jeffery explained that work was being done with South East Water and other services to understand the causes of water treatment works causing power outages and whether there were any recurring issues to be addressed. Within the Kent and Medway Resilience Forum there was a Water Supply Disruption Plan and there was ongoing work with suppliers to ensure the protocol was followed.
  - b. Members agreed that South East Water should attend the Committee in the future.
3. RESOLVED that the Committee note the warnings received since the last meeting of the Committee.

**6. How the Environment Agency manage Water Quality**  
*(Item 5)*

*Lindsay Faulkner, Environment Agency, was in attendance for this item.*

1. Ms Faulkner presented on Kent flood risk resilience.
2. In response to comments and questions from guests and Members it was said:
  - a. The Chair thanked Ms Faulkner for her presentation and invited her to return to the Committee.
  - b. When asked to keep pressure up on Southern Water to ensure services were delivered. Ms Faulkner shared that there were a significant number of enforcement investigations ongoing. The Government had given the organisation an uplift in funding to increase the regulation and enforcement of water companies.
  - c. A Member questioned the impact of a lack of funding on the delivery of results by the service. Ms Faulkner explained that funding had not changed and that the treasury rules controlled the spending of funds. Ms Faulkner added that the organisation had a marine team who covered a large remit of bathing beaches. Resources were spread thinly, there was hope for additional funding following a review of the regulations.
  - d. A Member questioned whether there was guidance to give to residents on what should and should be flushed down the toilet and the link between littering and water quality. Ms Faulkner explained that the partnership with Folkstone and Hythe on communication allowed the service to develop clear communications that could be provided to

residents, this was to be sent to Members to distribute to their communities.

- e. A Member questioned whether the SWIMFO website could become more public facing and have more data available. Additionally, asking how bathing waters uses were measured. Ms Faulkner was to come back to the Committee with the information and was to feedback the need for further usability and accessibility of the SWIMFO website.
- f. A Member questioned whether there were any place on the River Medway where wild swimming was be recommended. Additionally, asking whether there were opportunities for citizen testing in the River Medway and where could results be fed back to. Furthermore, questioning where the pollution issue in Deal originated from. Ms Faulkner shared that there were surface water outfalls in Deal which the service were working to identify. Additionally, the service were researching the continuity of ground water with bathing water, adding that in an urban area, the issue would usually be localised to the bathing water location. There was a specific employee who coordinated citizen science work, Ms Faulkner was to share his contact details with Members.
- g. When asked why only certain areas were considered bathing water. Ms Faulkner explained that communities and local councils applied for this status, it was not the Environmental Agency that assigned this to areas. Ms Faulkner shared that in terms of testing water quality, funding was an issue, which was set to the statutory obligations of the service.
- h. A Member noted that Kent were good compared to European Standards, requesting that Members be sent this guidance. Additionally, asking how far the service tests the long shore drift, noting the importance of the accuracy of the results. Furthermore, questioning what classified bathing water as a risk to health. Ms Faulkner explained that the set standard for a risk to health was when a water sample entered into the 'poor' classification. Ms Faulkner offered to bring a marine scientist colleague to the Committee at a future date to advise further on the algorithm for water quality.

3. RESOLVED that the Committee note the content of the presentation.

## **7. Met Office presentation on Climate Change** *(Item 6)*

*Mark Rogers, Met Office Advisor, was in attendance for this item.*

- 1. Mr Rogers presented on climate change.
- 2. In response to comments and questions from guests and Members it was said:
  - a. Mr Rogers invited Members to attend Met Offices courses on climate change.



- b. A Member noted the risk of rising levels in sea temperatures. Mr Rodgers shared that a vast amount of CO<sub>2</sub> was absorbed by the ocean, which in turn caused increased sea levels.
  - c. A Member questioned whether Kent Flood Wardens were able to attend the training. Mr Rogers encouraged anyone to sign up for training and was to provide prospectuses that would be sent to Members.
  - d. The Chair thanked Mr Rogers for his presentation.
3. RESOLVED that the Committee note the content of the presentation.

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# Rethinking water management: Building Resilience

Priscilla Haselhurst. Clerk/Chief Officer

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Minute Item 4

# Agenda

- Overview
- Managing water across north Kent, the role of IDB's
- Funding
- Amalgamation
- The future of water level management: Why a holistic approach is needed
- Building a smart water strategy
- Introduction to 'Wise Use of Water'
- Questions

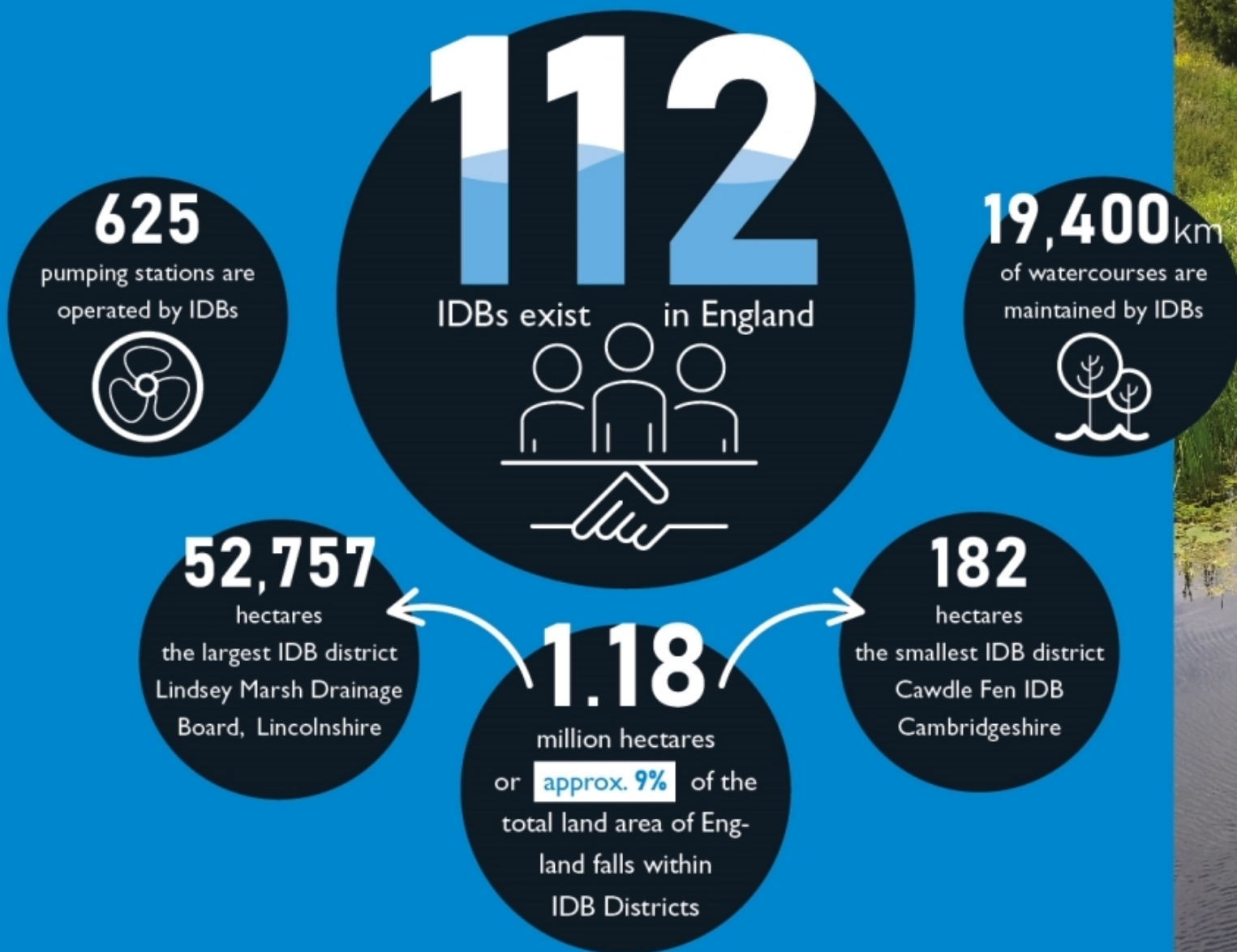


# INTERNAL DRAINAGE BOARDS (IDBs)

Figures taken from annual data returns (IDB I Forms) submitted by IDBs to Defra for the financial year 2017-18



## INTERNAL DRAINAGE BOARDS (IDBs) IN FIGURES



# Managing water across north Kent, the role of IDB's

- **Protecting communities and infrastructure:** Manage 200km of watercourses and four pumping stations to reduce flood risk for homes, business and farmland
- **Balancing flood risk, conservation and agriculture:** Work across designated landscapes to protect and enhance biodiversity
- **Support sustainable development:** Ensure planning decisions consider drainage
- **Regulate and enforce:** Manage watercourse activities and compliance
- **A collaborative, strategic approach:** Partner with KCC, EA, farmers and stakeholder groups to manage water holistically.
- **Adapting to new challenges:** Responding to climate change and funding challenges with forward thinking solutions.

# Funding



## Key Income

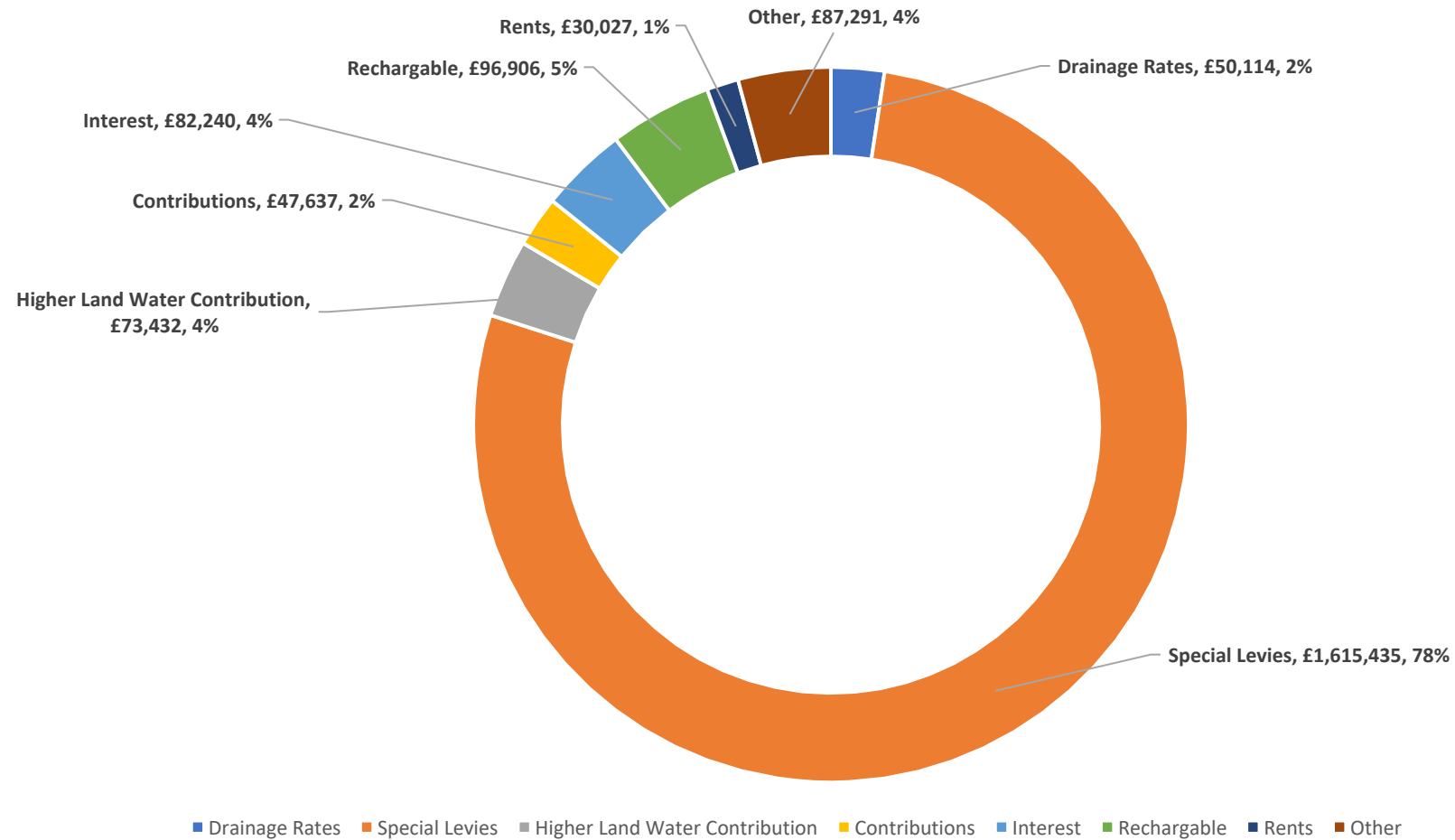
- Special Levies collected by Local Authority's
- Drainage Rates on Agricultural Landowners
- EA S57 payment

## Key Expenditure

- Watercourse maintenance
- Staffing and contractors
- Asset Management
- Water Level Management
- EA Precept
- Biodiversity

# Income

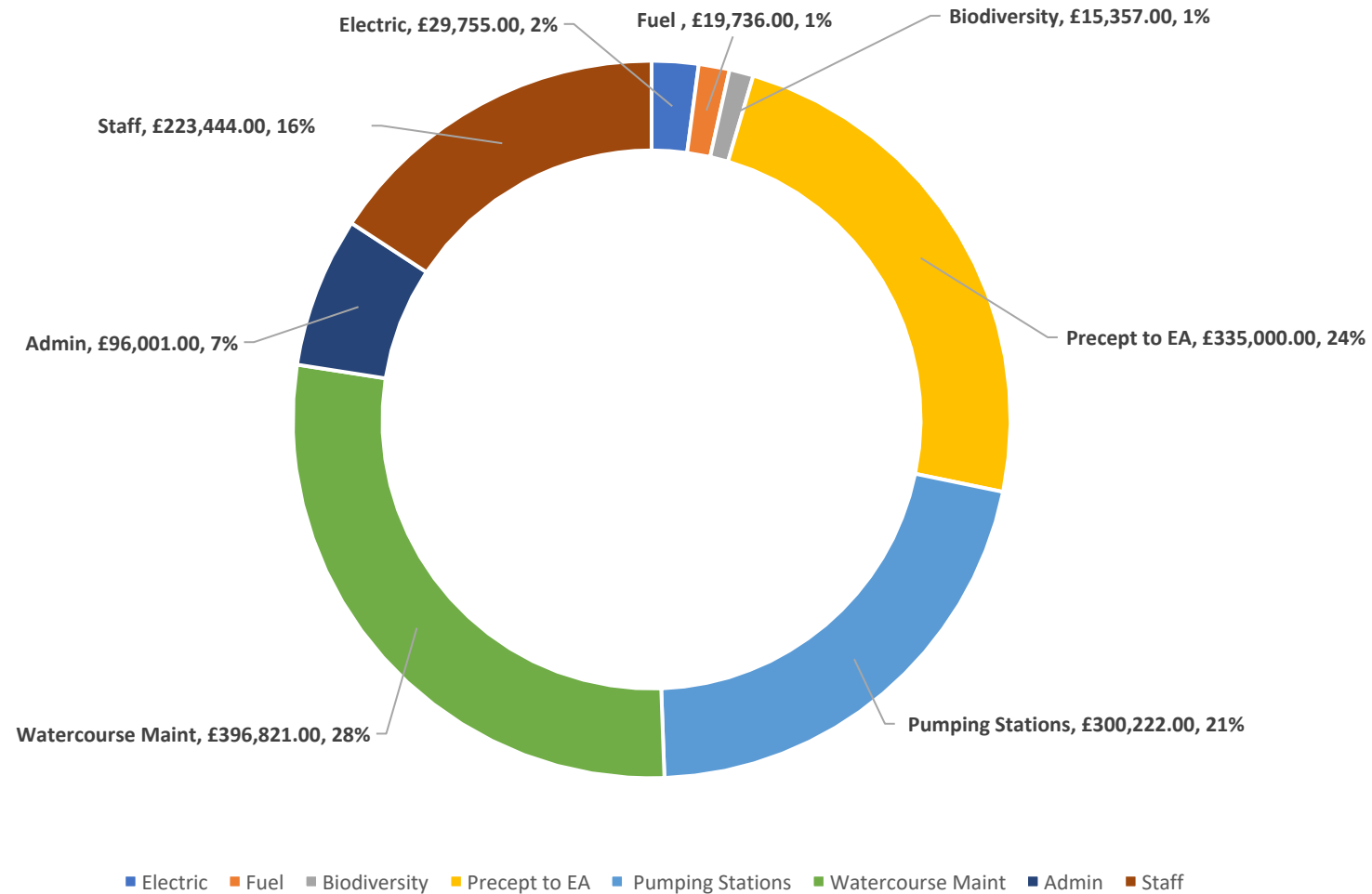
Lower Medway Internal Drainage Board Income





# Expenditure

Lower Medway Internal Drainage Board - Expenditure



# Amalgamation

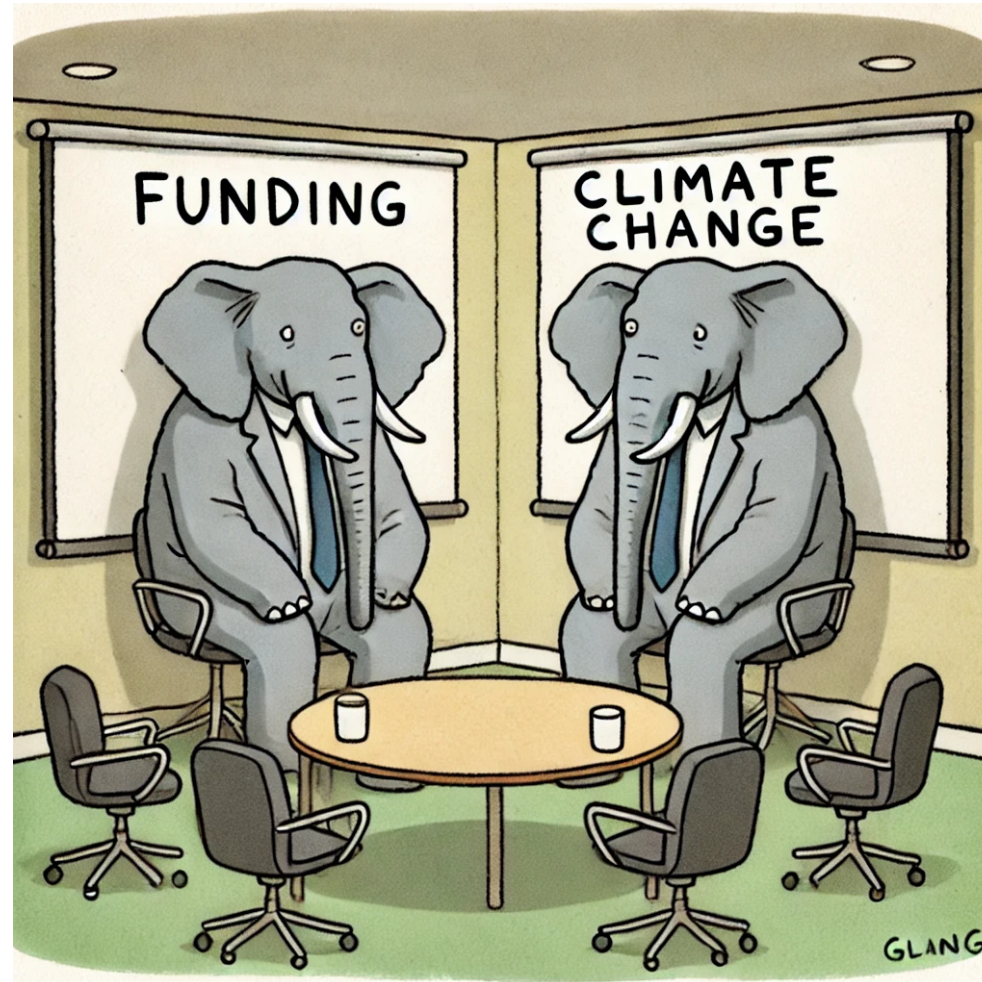
## North Kent Marshes Water Level Management Board

- Streamlines governance, reduces duplication of administrative tasks, and improves coordination across a larger area.
- Enables better financial planning, shared resources, and improved access to funding opportunities.
- Creates a unified voice for advocacy, strengthens partnerships with government and external bodies, and improves public and landowner engagement.



**North Kent  
Marshes** WLMB

# Change is the only constant



# The future of water level management: Why a holistic approach is essential

- Amalgamation streamlines governance but to truly deliver, we must rethink how we manage water
- Water management is not just about drainage – it's a resource that needs to be managed wisely
- We need smarter, multi benefit solutions that integrate flood risk, water retention and land use planning
- A smarter, integrated approach ensures long term resilience

# Water Level Management Plans

- Originally required to ensure that water levels across designated sites were managed to balance conservation objectives with other land use needs
- Existing WLMPs (1990s, MAFF guidance) no longer fit today's challenges

## **Why is this approach now outdated?**

- Climate change wasn't considered – The 1990s plans didn't account for shifting rainfall patterns, rising temperatures, or changing flood/drought cycles
- Static rather than adaptive – WLMPs were written as one-time documents rather than live strategies that can adapt to modern telemetry and real-time data
- Limited – they focused on SSSIs and designated areas, whereas today's challenges require a broader, catchment-wide approach

# The problem..

**The Problem:** Water is being lost where we need it most.

- Water is draining away through outfalls and pumps
- National funding is reduced, making flood management harder
- If we don't plan, we risk increasing costs and losing valuable water that could be stored

## What this means in practice

- We can't plan for future shortages or extreme weather
- Communities, farmers, and ecosystems will bear the consequences of poor water management
- National funding gap means infrastructure failures will only increase unless smarter solutions are found

# Why this matters to KCC?

- KCC and IDB have shared priorities for flood risk, land use, climate adaptation and community
- National funding for water management is stretched
- Fixing failing infrastructure is expensive—we can invest in solutions now or pay more later
- A strategic, proactive approach can reduce long term costs, instead of reacting to failures, we can plan more smartly
- Kent is **classified as a "Seriously Water Stressed" area** by the Environment Agency, meaning future **water shortages could impact residents, businesses, and agriculture.**

# What's at risk if we don't act?

✗ **Drought & water shortages** – Summer water scarcity threatens wildlife & farming

✗ **Flooding & missed storage** – Increasing winter rainfall wasted instead of being stored for use

✗ **Higher costs & crisis management** – Reacting to problems rather than planning ahead

✗ **Lost funding & partnerships** – No alignment with ELMS, BNG, WFD, limiting future investment

✗ Reduced community resilience



**What we need: A smarter, adaptive approach to water management**








# Solution: ‘Wise Use of Water’

## A Data-Driven, collaborative approach

- **A smarter, long-term** approach to water management—balancing flood resilience, agriculture, and the environment
- **Hydrological modelling & real-time data** – Identifying where water is lost and where it can be stored to improve drought and flood resilience
- **Stronger partnerships** – Working with RSPB, EA, KCC, WRSE, Natural England, and farming clusters to deliver a catchment-wide strategy
- **Balancing agriculture & environment** – Supporting farmers and landowners to manage water more effectively, securing food production and biodiversity
- **A proactive approach** – Instead of reacting to asset failures, we invest in prevention and long-term resilience

This supports EA’s abstraction reform, reducing unnecessary water loss and securing long-term resilience

# How KCC can support this strategy

-  Advocate for evidence-led water management in council policy
-  Collaborate on funding applications (ELMS, flood resilience funds)
-  Align strategy
-  Support cross-sector collaboration – to bring together farmers, conservation groups, developers, and water management bodies to ensure an integrated approach
-  Ensure infrastructure planning includes water resilience – Embed water management considerations in new developments and infrastructure projects to reduce future risks and costs

# A smarter future for water management

**Water is our most valuable  
resource – managing it wisely  
benefits everyone**

**Thank you! – Questions?**



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# Designated bathing waters

**Presented by Lindsay Faulkner**  
**Area Environment Manager for Kent & South London**





# What are bathing waters?

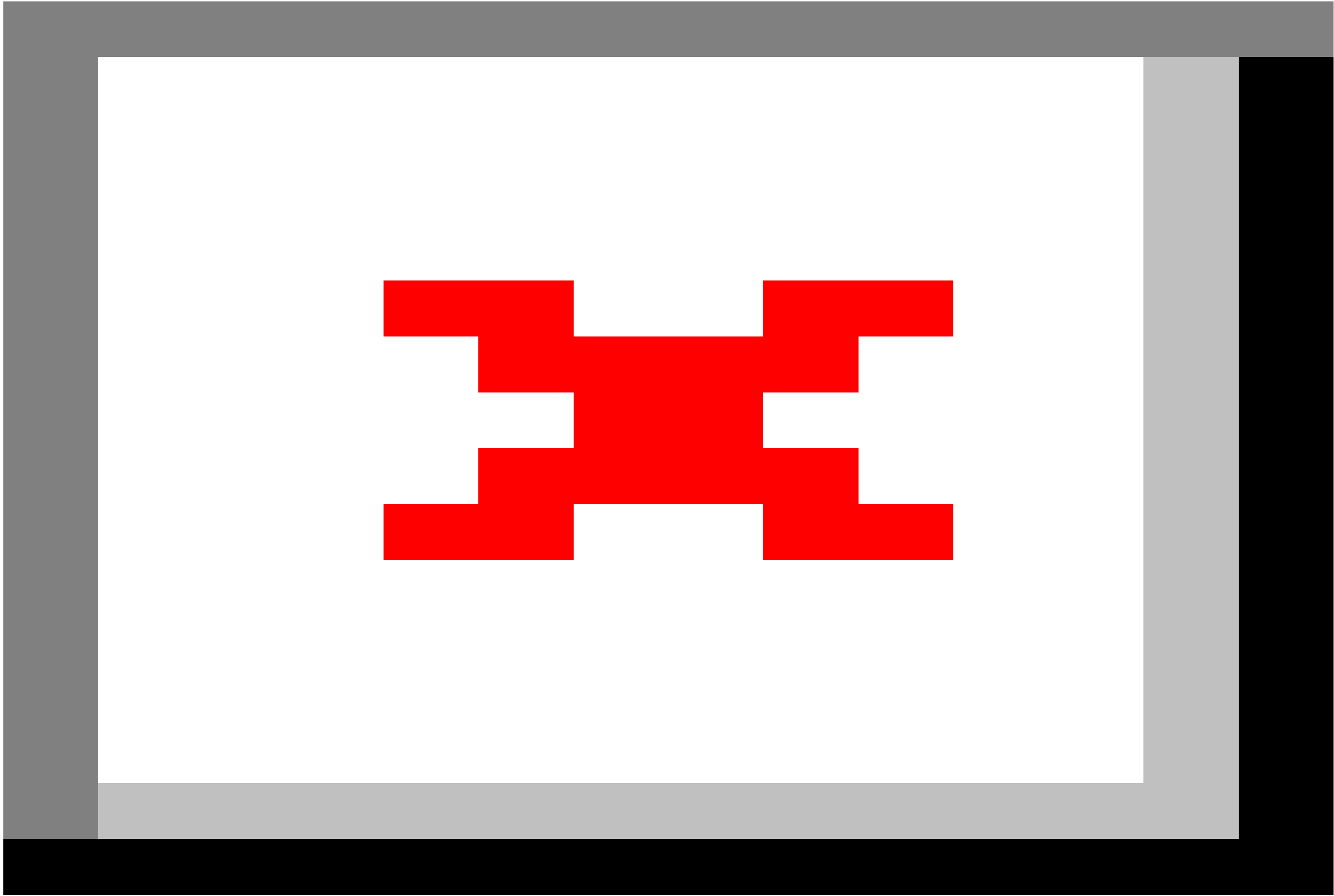
- Protected areas defined in the Bathing Water Regulations 2013
- At defined locations
- Monitored by Environment Agency
- Classifications published every year
- Duty to inform the public of results
- Not all beaches are designated



# Bathing waters in our area

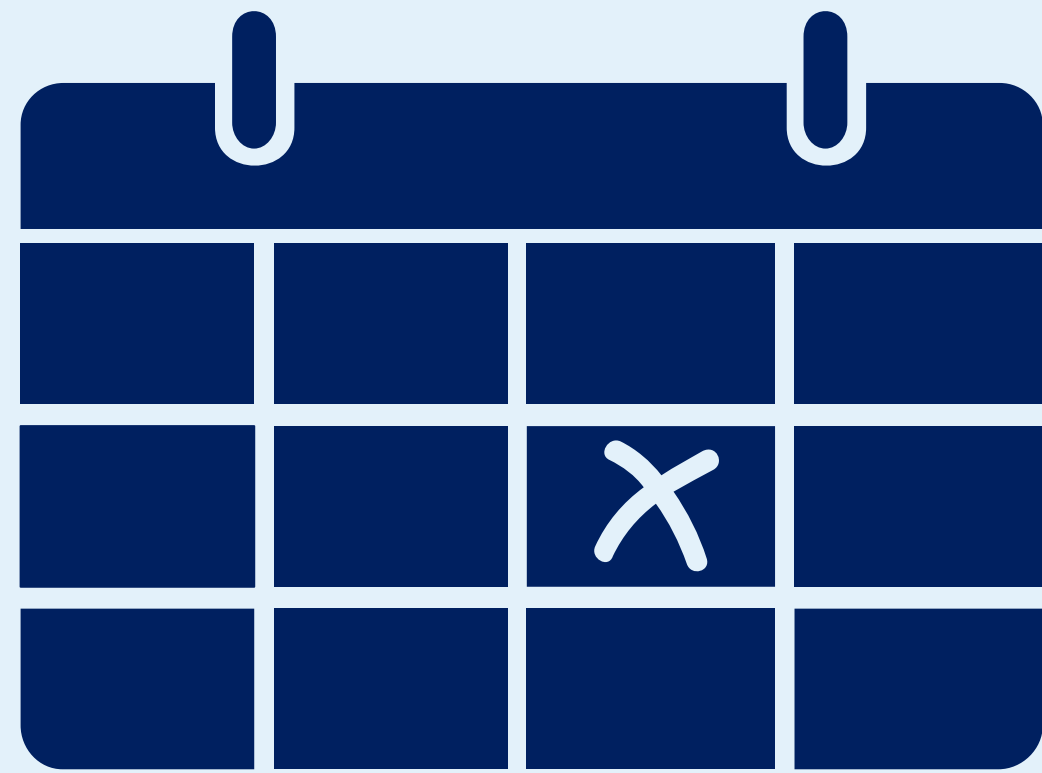


Key:  designated bathing water,  advice against bathing





# How are bathing waters monitored?



1 May and 30 September



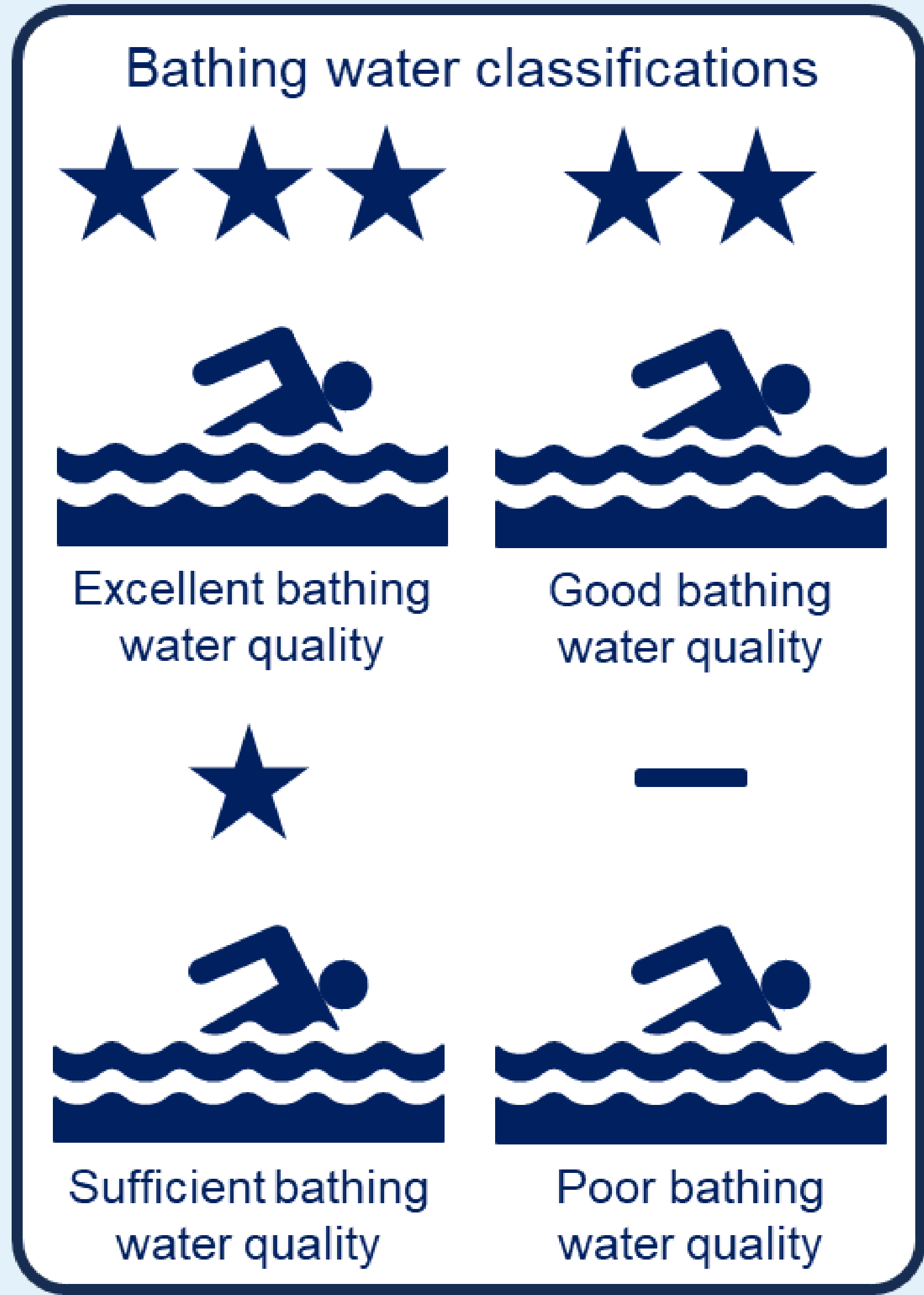
Samples analysed after 4 days



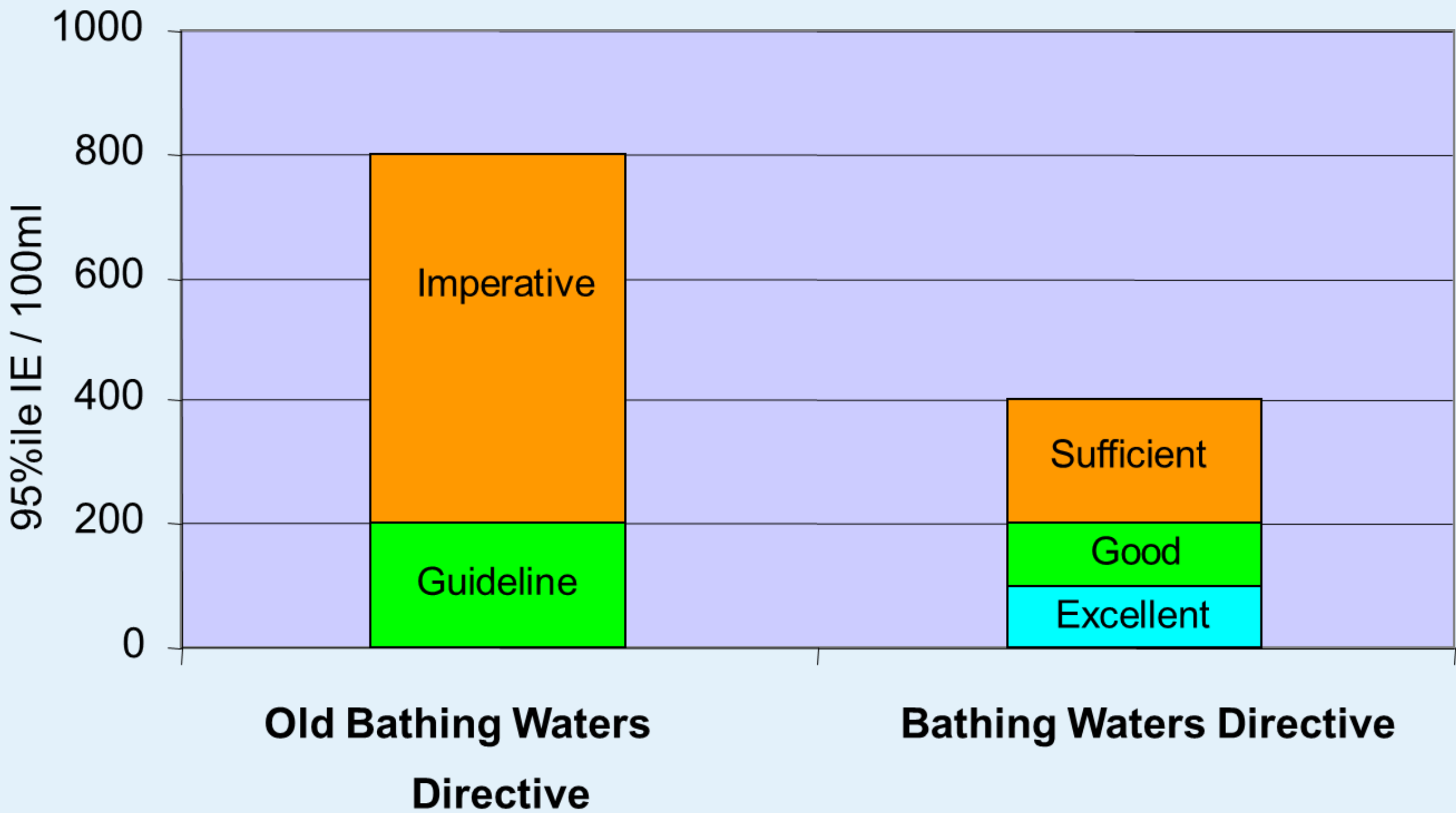
Find out more on Swimfo at <https://environment.data.gov.uk/bwq/profiles/>



# Bathing water classification



Graph, right, showing the comparison of Intestinal Enterococci classifications. Source Environment Agency 2024



Parameter	Excellent	Good	Sufficient	Poor
Intestinal Enterococci (colony forming units per 100ml)	100	200	185	>185
Escherichia coli (colony forming units per 100ml)	250	500	500	>500
Percentile	95th		90th	

Table, left, showing the Intestinal Enterococci and Escherichia coli parameters per classification. Source Environment Agency 2024



# Why do we classify bathing waters in this way?



You can also read our blog about testing at <https://environmentagency.blog.gov.uk/2024/08/07/behind-the-scenes-how-environment-agency-scientists-are-testing-bathing-water-quality/>

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# Improvements in Bathing Water Quality

## Significant Improvements Over Time:

- In the 1990s, only 28% of bathing waters met the highest standards.
- This year 85% achieved the highest standards of Good and Excellent.
- 92% met the minimum standard of Sufficient.
- More Work to Do:  
Classification results indicate areas for improvement.





# Potential Sources of pollution

## Human Sewage

- Water Company & Private discharges
- Misconnections

## Agriculture

- Runoff and discharges to groundwater

## Other

- Urban runoff
- Dogs, Birds, Litter
- Sewage from ships and boats



Images of  
examples sources  
of pollution.  
Source  
Environment  
Agency 2024





# What are we doing to improve bathing waters?

Environment Agency	Local Authorities	Southern Water
<ul style="list-style-type: none"> <li>Monitoring through statutory and investigative samples.</li> <li>Analysis of sample data alongside environmental data to help identify sources of pollution.</li> <li>Regulation of water companies, business and individuals.</li> </ul>	<ul style="list-style-type: none"> <li>Chairing Partner Steering Groups.</li> <li>Leading on Public communications and engagement/education (yellow fish campaign).</li> <li>Working with the water company on misconnections.</li> </ul>	<ul style="list-style-type: none"> <li>Integrity check of sewers</li> </ul>
<ul style="list-style-type: none"> <li>respond to, investigate and take appropriate enforcement action following pollution incidents.</li> <li>Regulation of the agricultural sector</li> </ul>	<ul style="list-style-type: none"> <li>Investigating sewage disposal from holiday lets WASC (Water and Sewerage company).</li> <li>Displaying water quality signage to inform the public.</li> </ul>	<ul style="list-style-type: none"> <li>Ensuring assets are managed to prevent pollution incident occurring.</li> <li>Ensure all discharges from outfalls are compliant with environmental permit limits.</li> <li>Investigating and remediating misconnections.</li> </ul>
<ul style="list-style-type: none"> <li>We work with community groups and partners to identify and stop sources of pollution.</li> </ul>	<ul style="list-style-type: none"> <li>Seaweed management.</li> <li>Gully Cleaning.</li> <li>Litter/dog foul management.</li> </ul>	<ul style="list-style-type: none"> <li>Establishing the potential location of unconnected properties and working with customers to become connected to the public foul sewer.</li> </ul>



# Role of Environment Agency



Our staff collecting samples and working with partners. Source Environment Agency 2024

Creating a better place for people and wildlife

Incident Hotline 0800 80 70 60



# Planned actions for 2025

- Additional monitoring in surrounding area
- Microbial Source tracking (MST) – *DNA tracing*
- Data review
- Catchment walkovers
- Continue working with partners





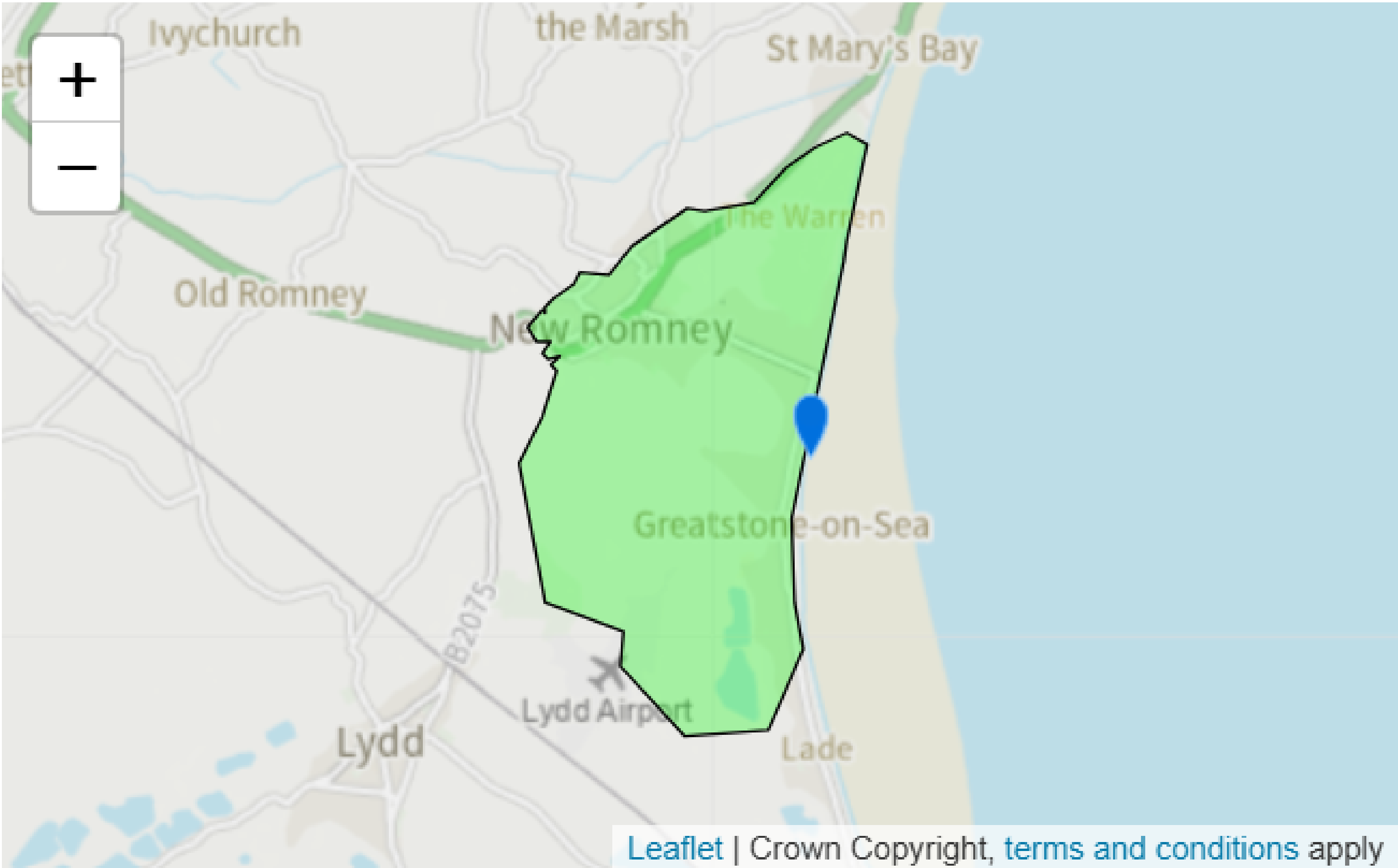
# Priority bathing waters 2025

- St Marys Bay
- Littlestone
- Dymchurch
- Deal
- Folkestone





# Littlestone bathing water

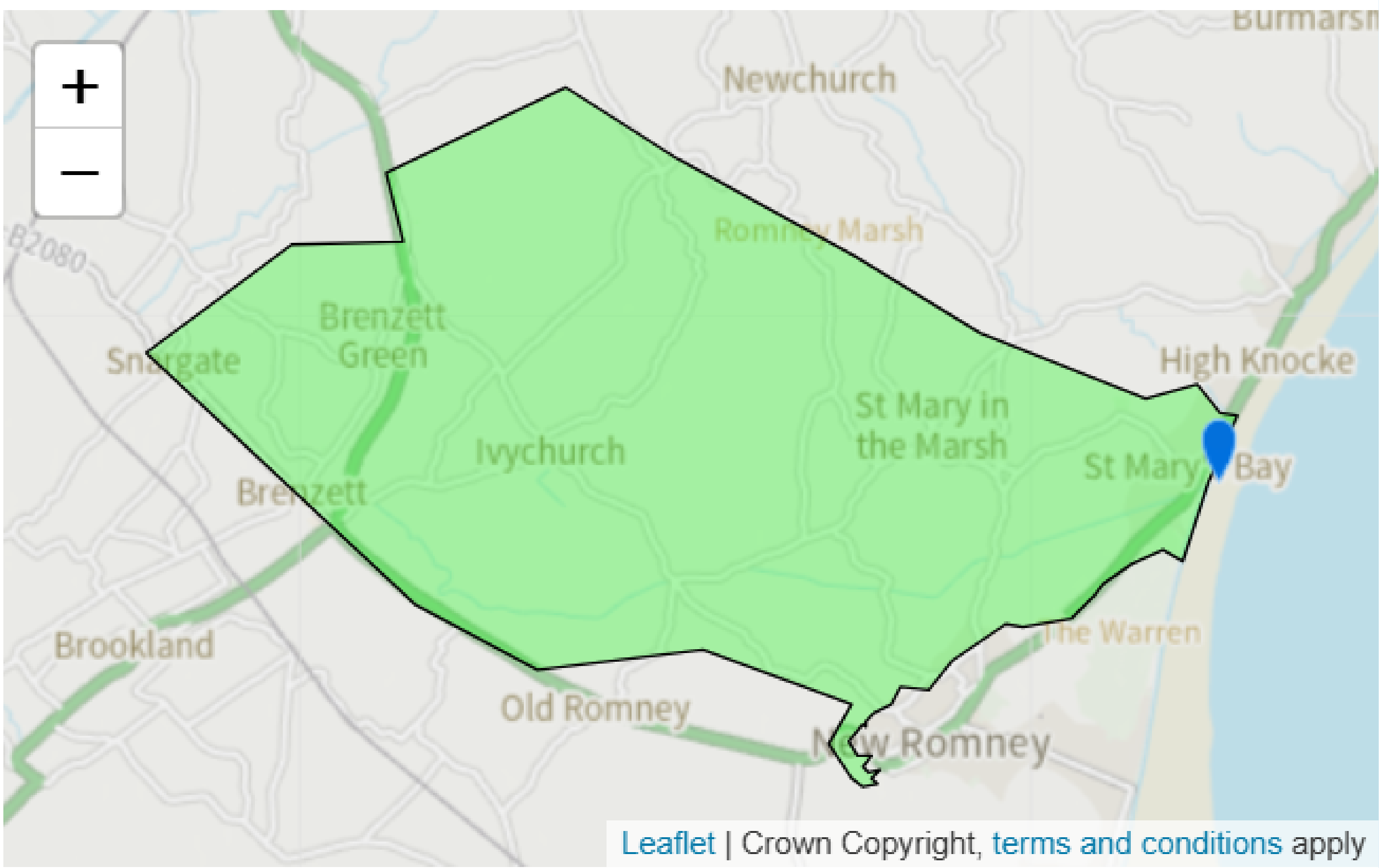


Map of Littlestone bathing water (surface water) catchment.  
Source Environment Agency 2025

Year	Classification
2002 - 2005	Sufficient
2003 - 2006	Sufficient
2004 - 2007	Poor
2005 - 2008	Sufficient
2006 - 2009	Poor
2007 - 2010	Poor
2008 - 2011	Sufficient
2009 - 2012	Sufficient
2010 - 2013	Sufficient
2011 - 2014	Good
2012 - 2015	Sufficient
2013 - 2016	Sufficient
2014 - 2017	Good
2015 - 2018	Good
2016 - 2019	Good
2017 - 2021	Good
2018 - 2022	Good
2019 - 2023	Poor
2021 - 2024	Poor



# St Marys Bay bathing water



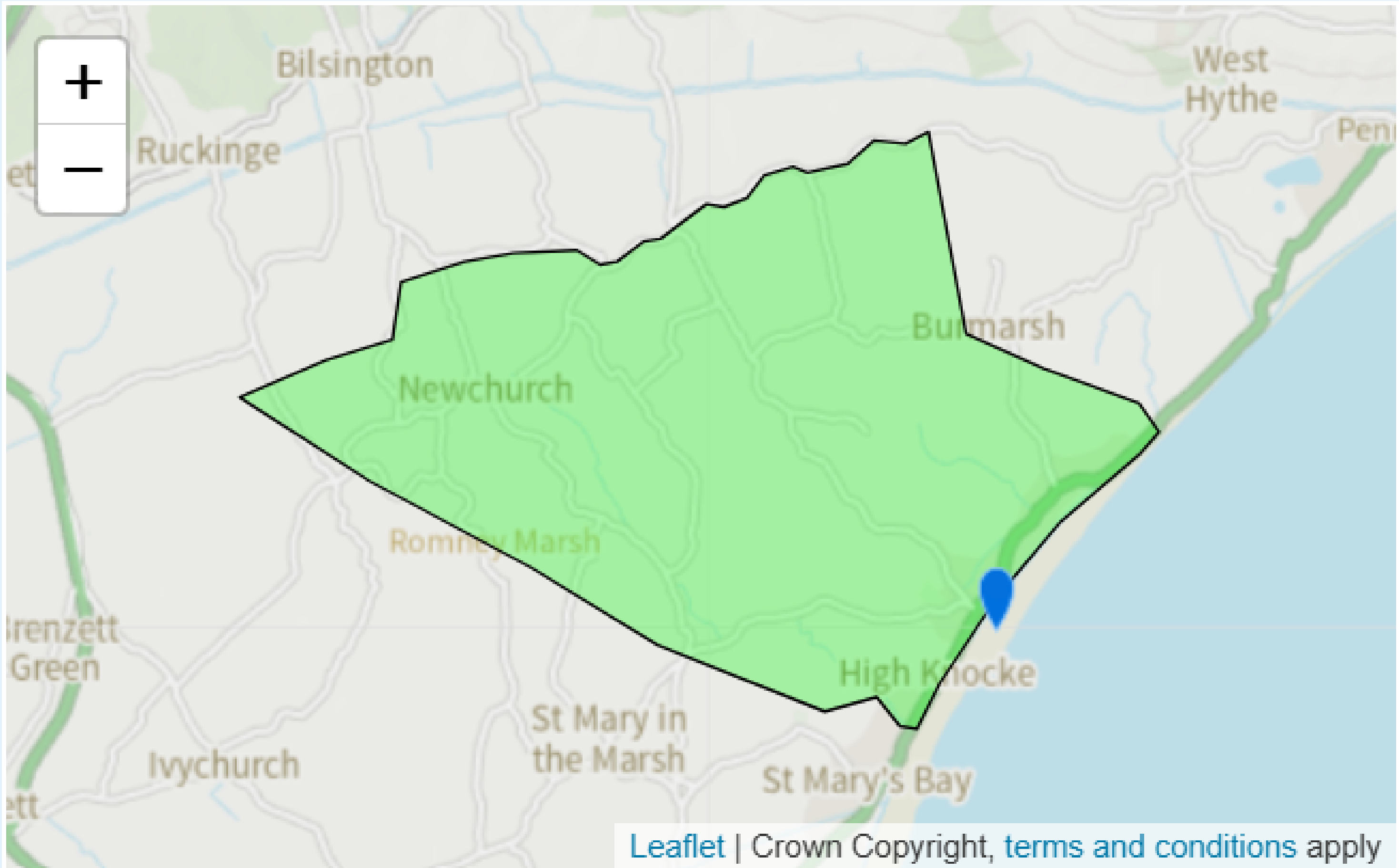
Map of St Marys Bay bathing water (surface water) catchment.  
Source Environment Agency 2025

Year	Classification
2002 - 2005	Excellent
2003 - 2006	Good
2004 - 2007	Good
2005 - 2008	Excellent
2006 - 2009	Excellent
2007 - 2010	Good
2008 - 2011	Good
2009 - 2012	Good
2010 - 2013	Good
2011 - 2014	Good
2012 - 2015	Good
2013 - 2016	Good
2014 - 2017	Good
2015 - 2018	Good
2016 - 2019	Sufficient
2017 - 2021	Sufficient
2018 - 2022	Poor
2019 - 2023	Poor
2021 - 2024	Sufficient





# Dymchurch bathing water

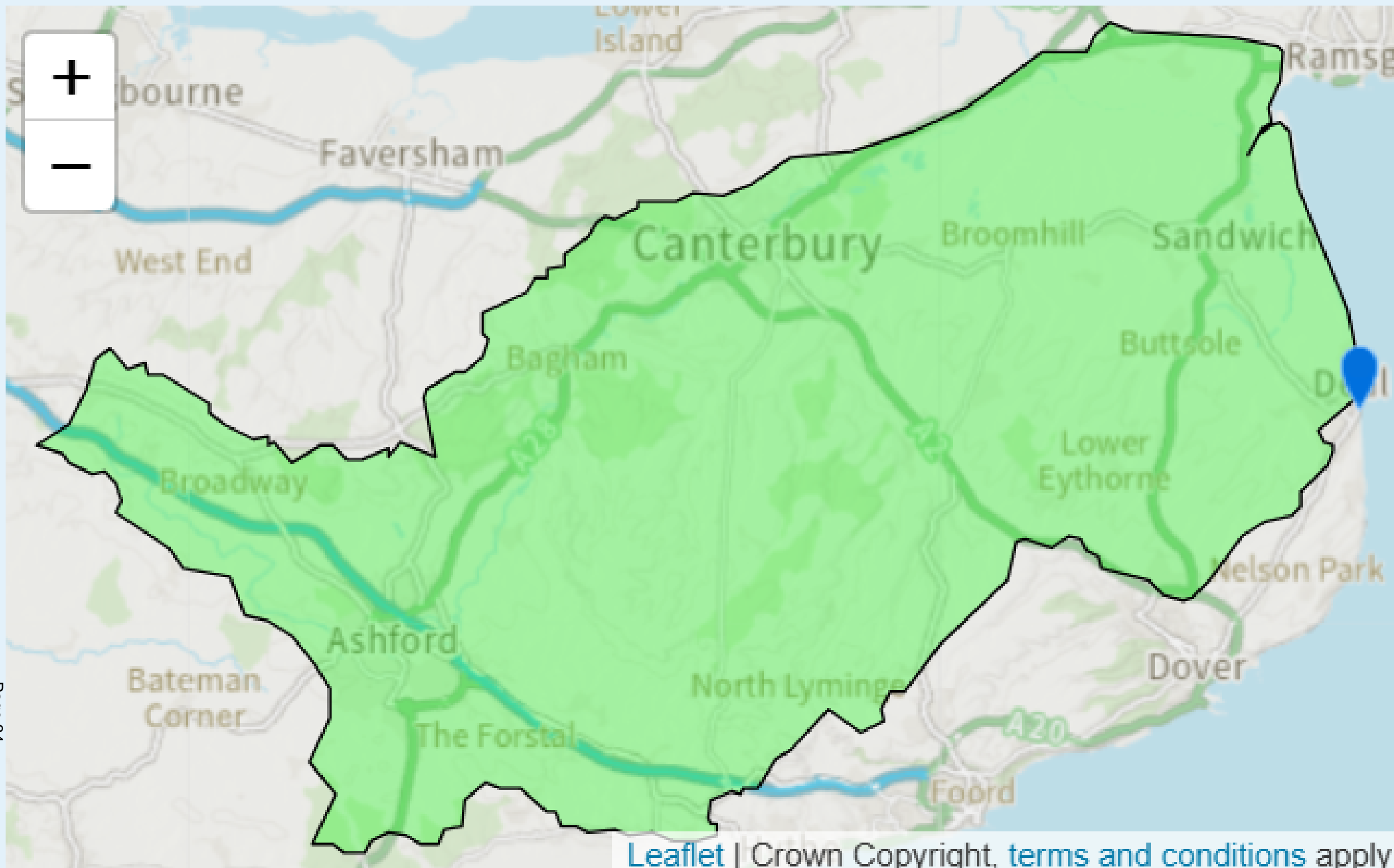


Map of Dymchurch bathing water (surface water) catchment.  
Source Environment Agency 2025



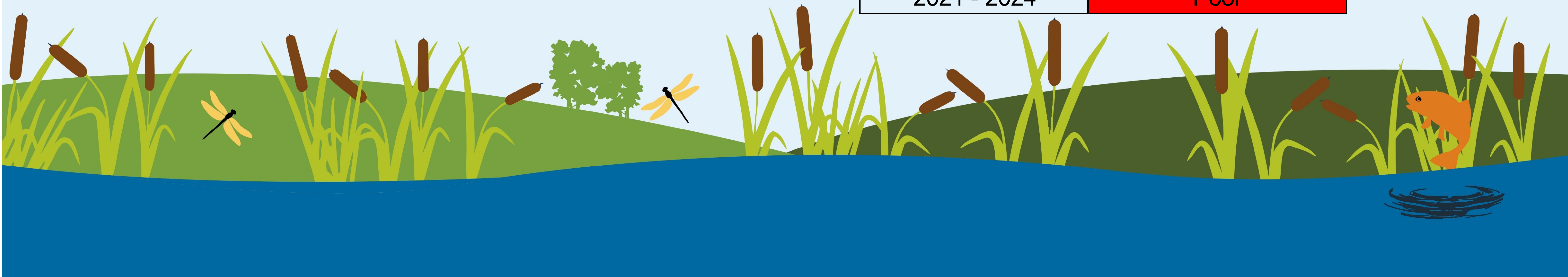


# Deal bathing water



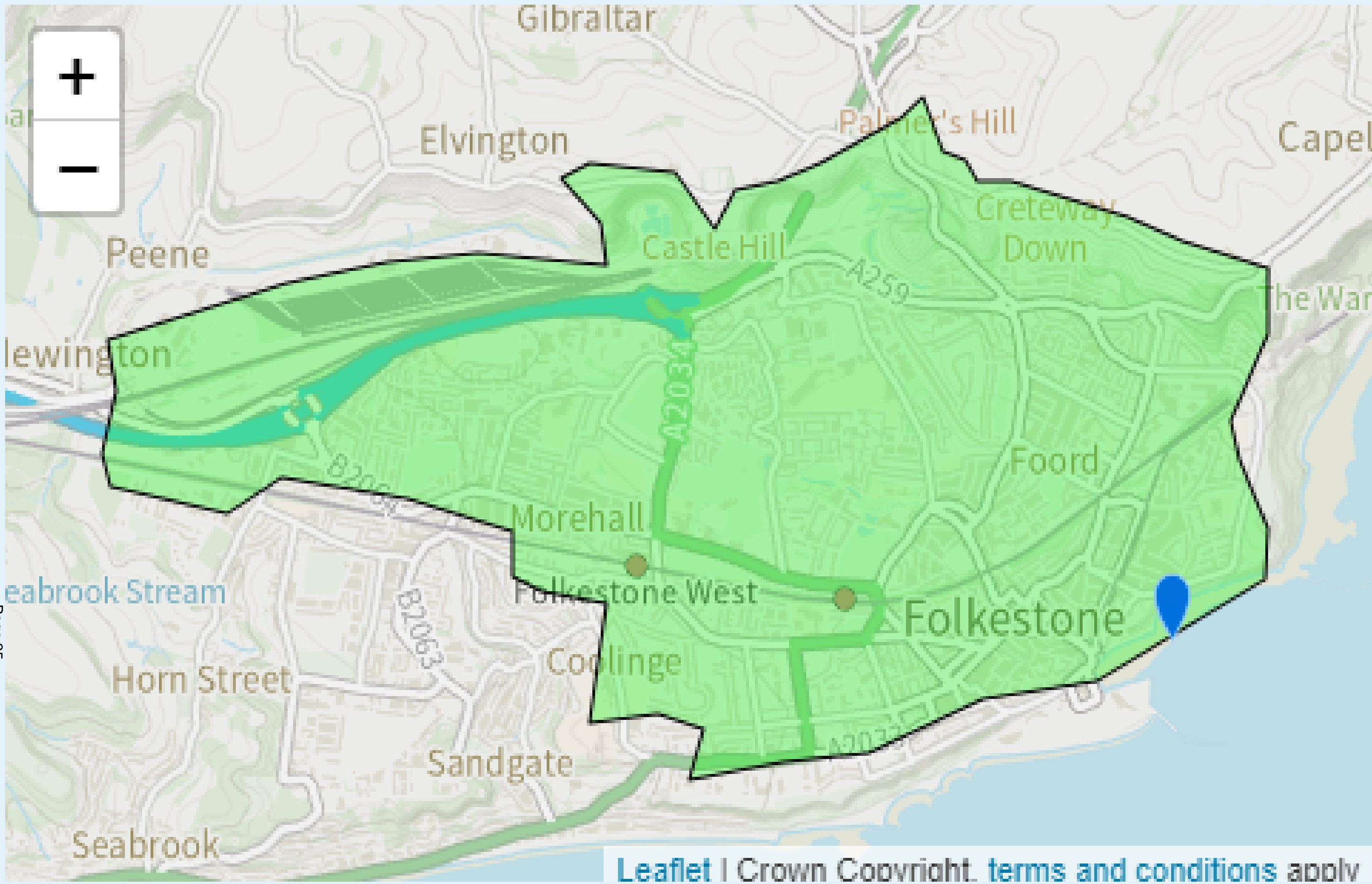
Map of Deal bathing water (surface water) catchment.  
Source Environment Agency 2025

Year	Classification
2002 - 2005	Good
2003 - 2006	Good
2004 - 2007	Good
2005 - 2008	Good
2006 - 2009	Good
2007 - 2010	Good
2008 - 2011	Good
2009 - 2012	Good
2010 - 2013	Good
2011 - 2014	Excellent
2012 - 2015	Excellent
2013 - 2016	Excellent
2014 - 2017	Excellent
2015 - 2018	Excellent
2016 - 2019	Excellent
2017 - 2021	Good
2018 - 2022	Good
2019 - 2023	Sufficient
2021 - 2024	Poor

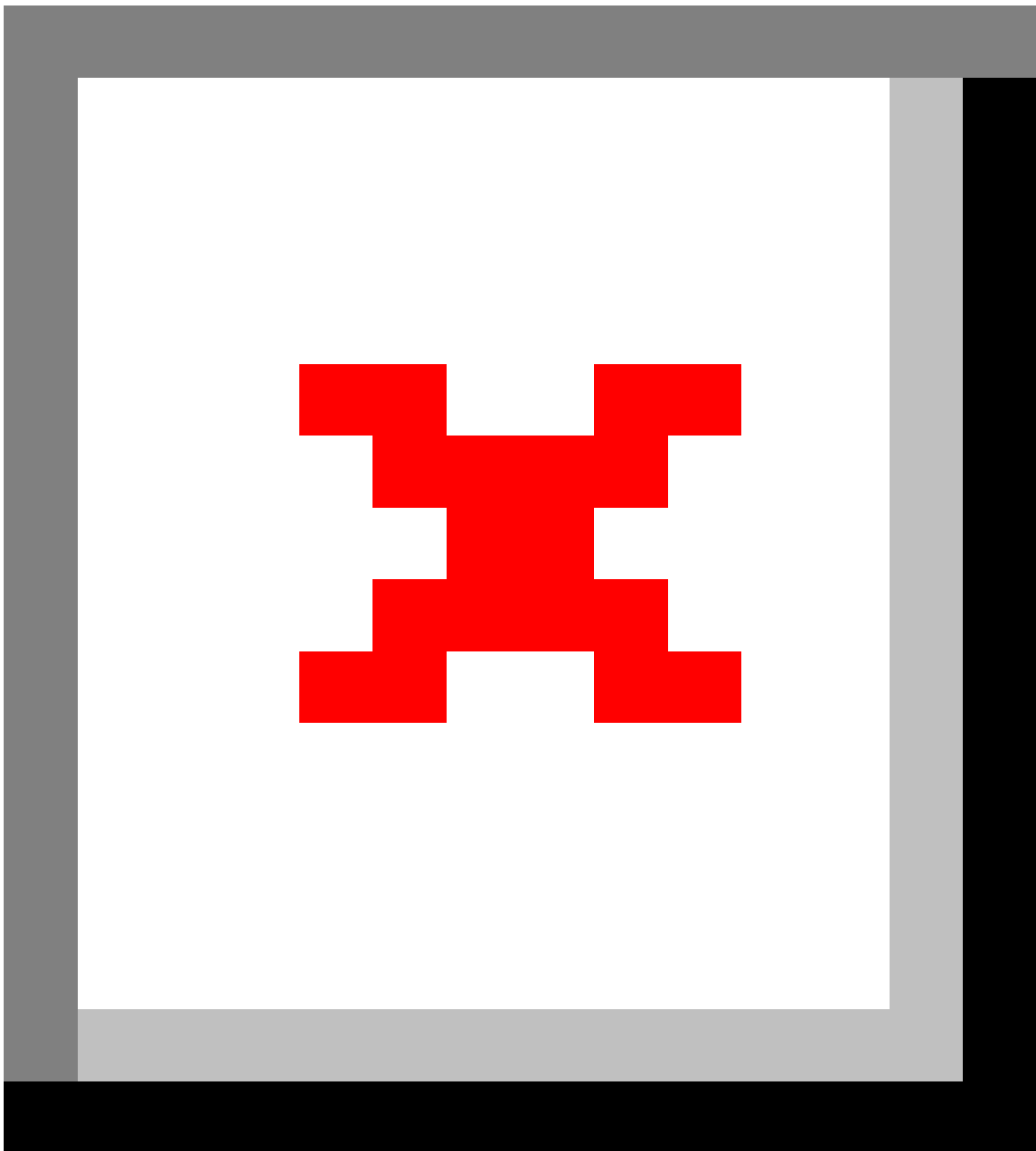




# Folkestone bathing water



Map of Folkestone bathing water (surface water) catchment.  
Source Environment Agency 2025





# What can we all do to improve water quality at all of our beaches?



Images of misconconnections. Source Environment Agency 2024



# New Bathing Waters



**Anyone can apply to designate a bathing water**

**A proposed designated bathing water must:**

- be a coastal or inland water
- have at least 100 bathers a day during the bathing season (15 May to 30 September)
- have toilet facilities bathers can use during the bathing season, within a short distance of up to about 500m from the site

**A consultation must be carried out** to get views about the proposal from as many local people, organisations & businesses as possible

**Defra ministers** will make the final decision on whether a site can be designated as a bathing water.





# More information and contacts



- Visit our new online Water Hub at <https://engageenvironmentagency.uk.engagementhq.com/hub-page/water-hub>
- Visit Swimfo at <https://environment.data.gov.uk/bwq/profiles/>
- Follow us on X at <https://x.com/EnvAgencySE>
- To report environmental incidents call our Incident Hotline 0800 807060
- To report flooding call Floodline on 0345 988 1188
- For enquiries email us at [ksle@environment-agency.gov.uk](mailto:ksle@environment-agency.gov.uk)

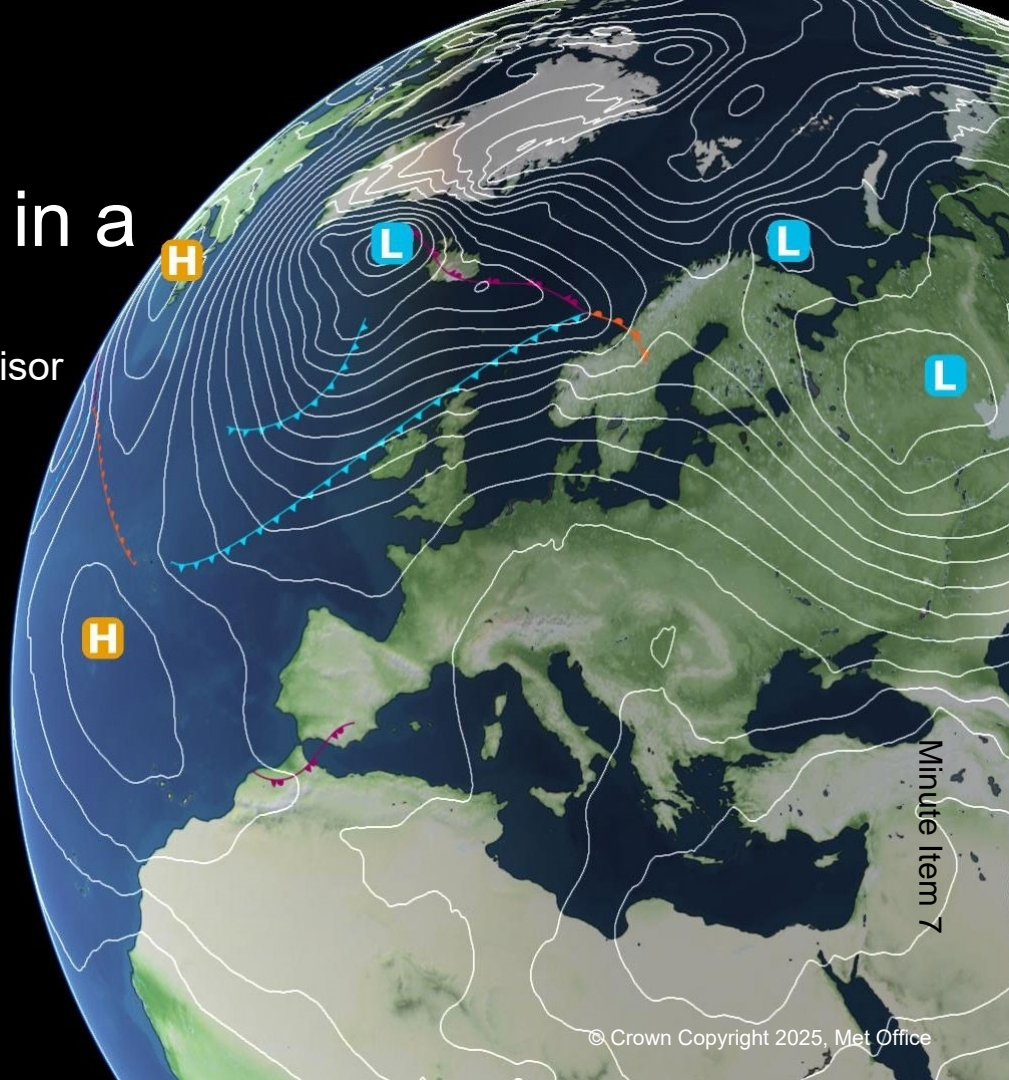
## Thank you





# Changing Weather Risks in a Warming World

Mark Rogers, Met Office Civil Contingencies Advisor



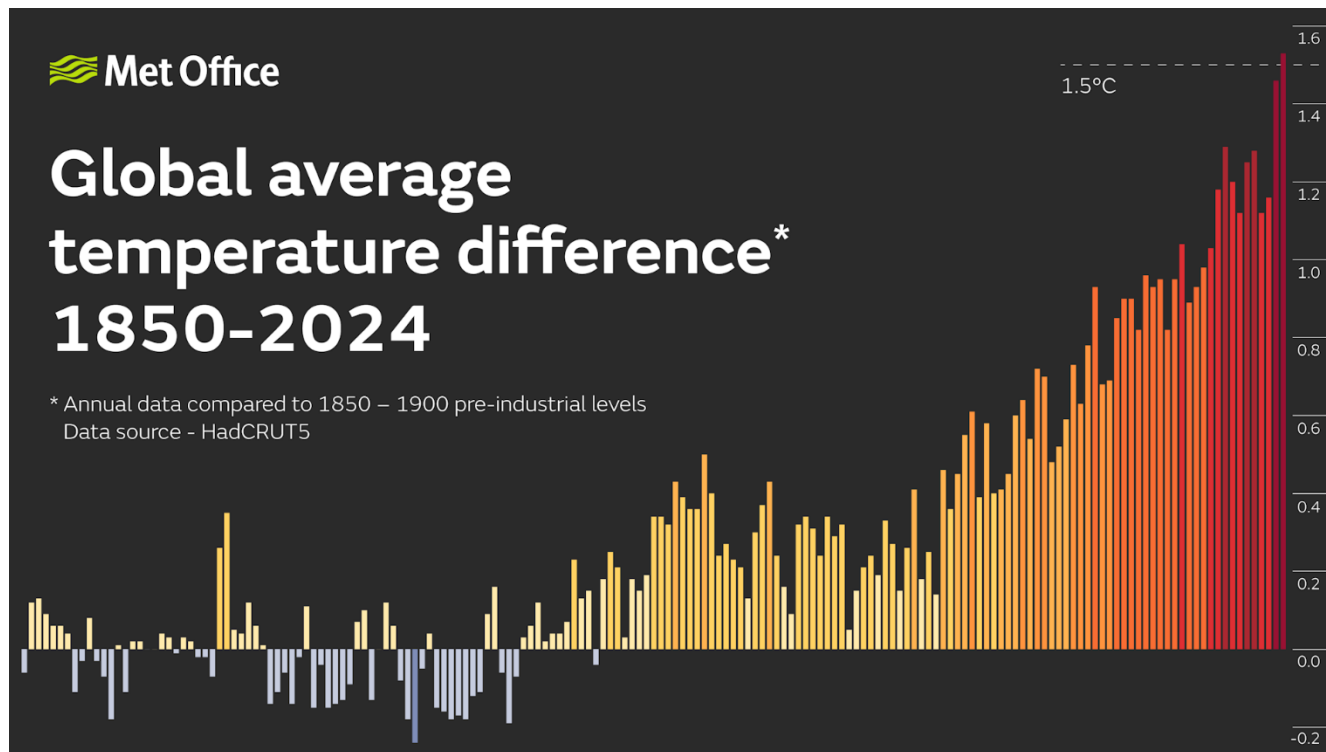
# A Changing Climate

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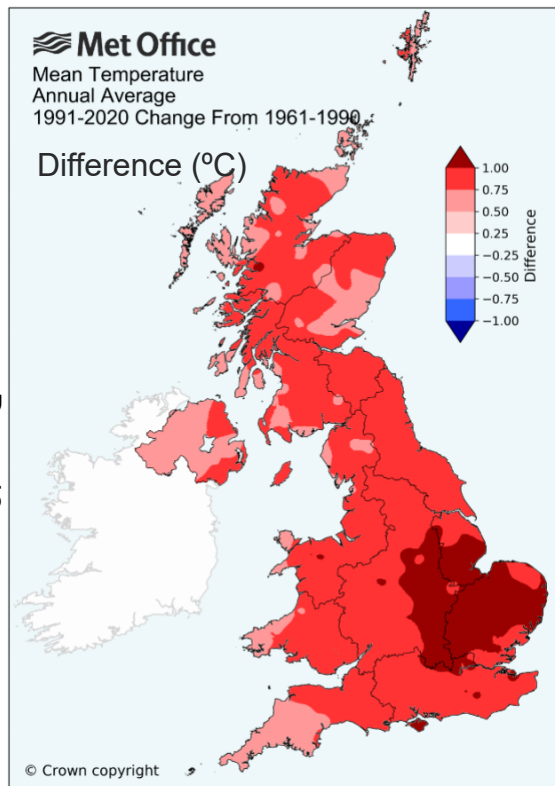
“Human-induced climate change is already affecting weather and climate extremes in every region across the globe.”

“Evidence of observed changes in extremes such as heatwaves, heavy precipitation, droughts, and tropical cyclones, and, in particular, their attribution to human influence, has strengthened since AR5.”

[IPCC AR6 WG1 SPM A3 \(2021\).](#)

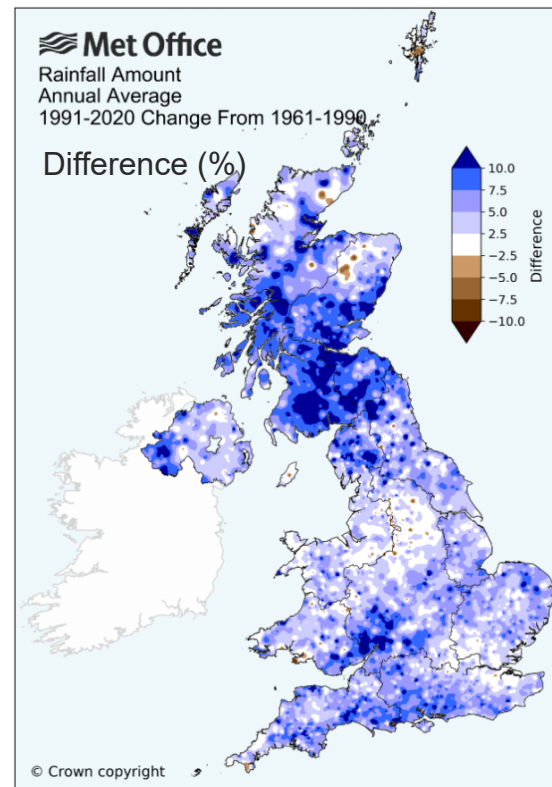


2024 was the warmest year on record globally and the first year that was likely more than 1.5°C above pre-industrial levels



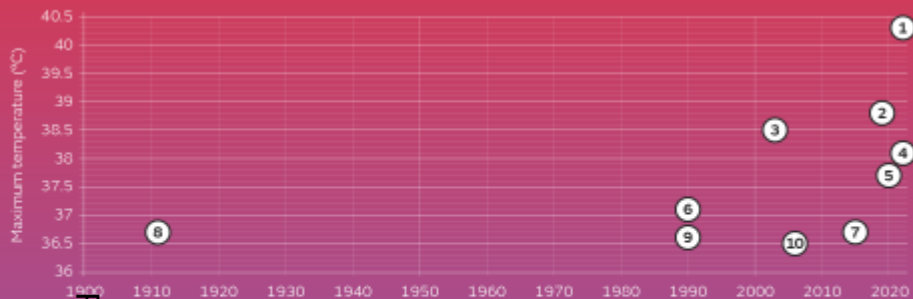
Kent = +0.96 C

1991-2020  
change from  
1961-1990



Kent = +25.8 mm (3.8%)

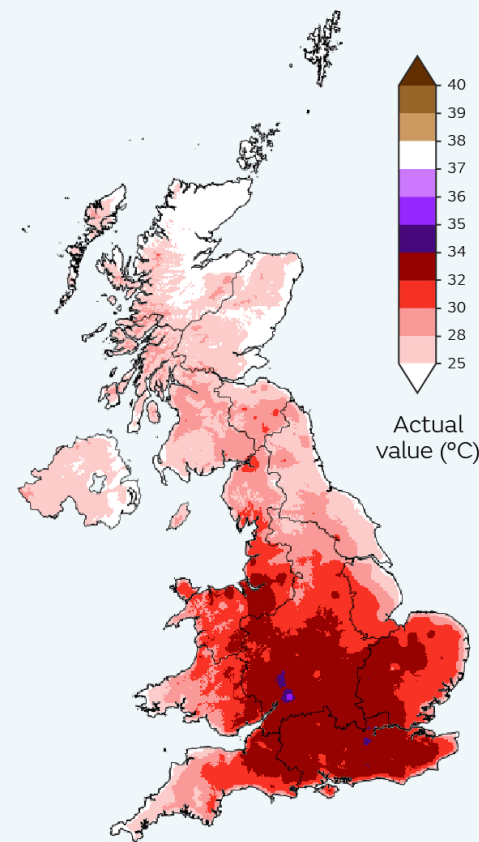
## Met Office Top ten hottest UK days on record



\* Provisional data

Maximum  
temperature

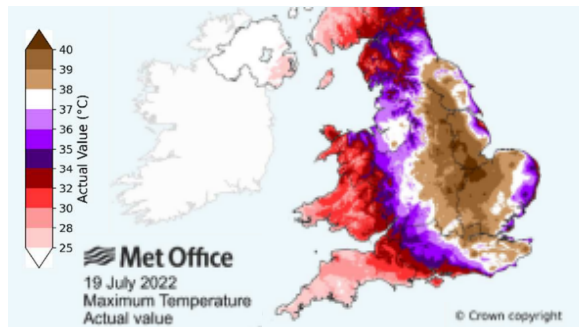
3 July  
**1976**



- A new record daily maximum temperature was reached on 19 July 2022, with **40.3°C** recorded at Coningsby, Lincolnshire, exceeding the previous record by 1.6°C.
- A total of **46 stations** across the UK exceeded the previous UK record of 38.7°C.



# Extreme events are impacting the UK



## Heatwaves

- **July 2022** UK exceeded 40°C for the first time on record in the UK.
- The **Summer 2020 heatwave** was the most significant heatwave of the last 60 years, leading to over **2500 excess deaths** across the UK
- By **2050** hot summers (like 2018) could happen **every other year**.



## Heavy rainfall

- **February 2020** was the wettest February on record
- **Storm Ciara** saw a month's worth of rain fall across parts of West Yorkshire in just 18 hours, leading to **widespread flooding**
- By **2070**, winter rainfall events, similar to these, are expected to **increase by up to 25%**



## Wildfires

- Figures suggest the number of **UK wildfires has been increasing** in recent years
- Wildfires could be **5 times more likely** by 2100 due to increases in high temperatures and low summer rainfall; conditions highly conducive to wildfires.

# UK Climate Projections (UKCP18)

## A diverse set of climate projections:

Global (60km)	Observations
Regional (12km)	Marine
Local (2.2km)	Probabilistic

## Headline results:

“a greater chance of warmer, wetter winters and hotter, drier summers”

“Sea levels have been rising and will continue to rise”



# Current risks: How will they change?

# Hot Weather / Heatwaves

## R73 – High temperatures and Heatwaves

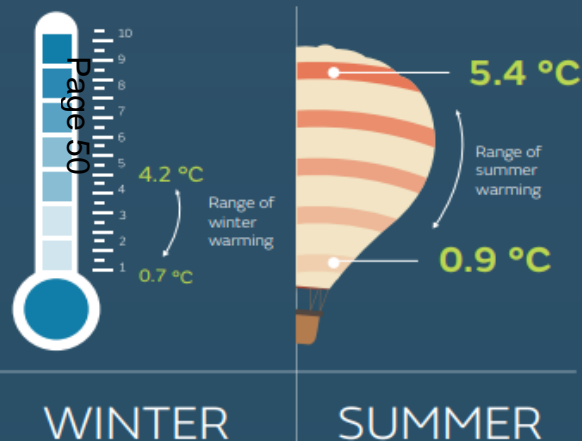
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# FUTURE TEMPERATURE CHANGE

## PROBABILISTIC PROJECTIONS

### RIISING SEASONAL TEMPERATURES\*

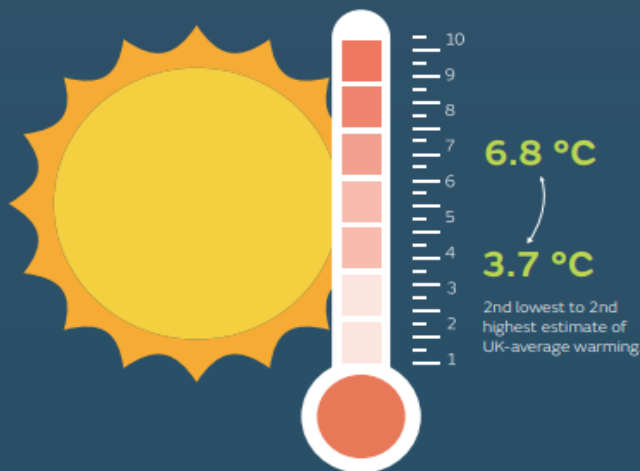
UKCP Probabilistic (25km) projections show that by 2070, the range of average seasonal temperature changes are projected to increase\*.



## UKCP LOCAL (2.2KM)

### HOT SUMMER DAYS

Temperature of hot summer days\*\*, by 2070, is projected to increase in the Local (2.2km) projections.



### THE FREQUENCY OF HOT SPELLS\*\*\* IS PROJECTED TO INCREASE

The average frequency of hot spells, locally over the southern UK for the period 1981-2000, is once every 4 years.

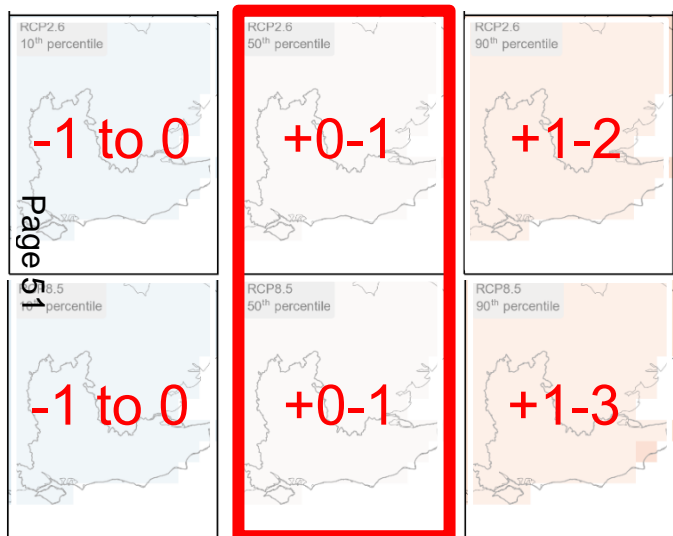




# Winter Temperatures

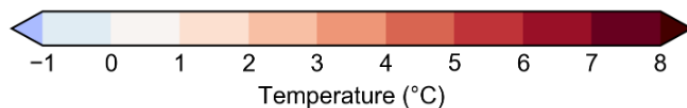
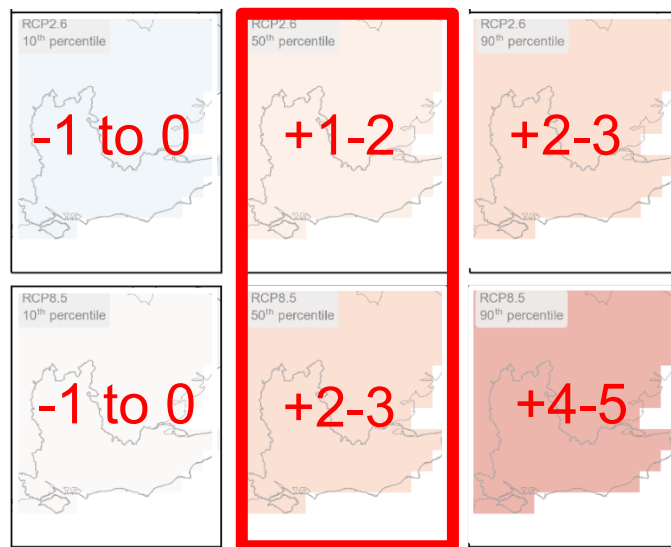
## 2020-2039

## 2060-2079



RCP2.6  
Best Case

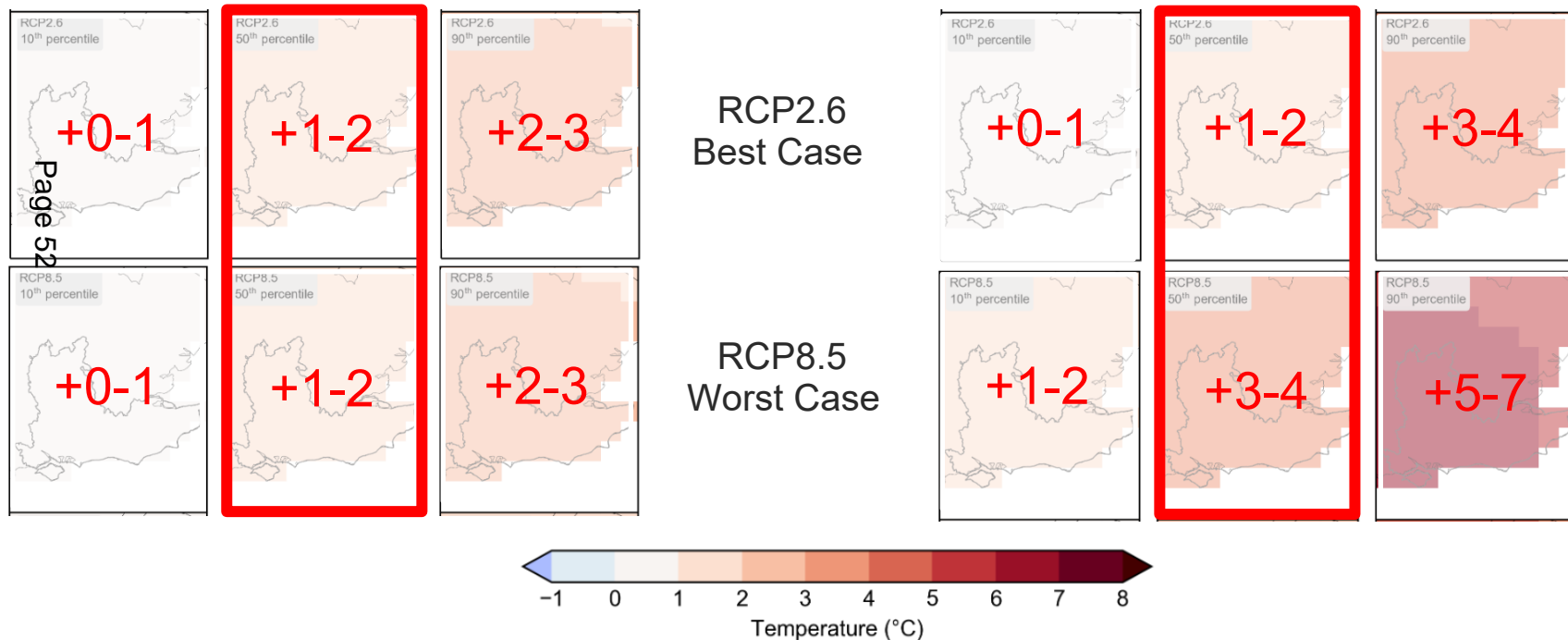
RCP8.5  
Worst Case



# Summer Temperatures

## 2020-2039

## 2060-2079



## **Higher temperatures could include an increased risk of.....**

- Excess Deaths / Health Issues
- Transport Disruption
- Water shortages / outages
- Water rescues
- Wildfires
- Drought?

# Flooding

R75a – Coastal Flooding

R75b – Fluvial Flooding

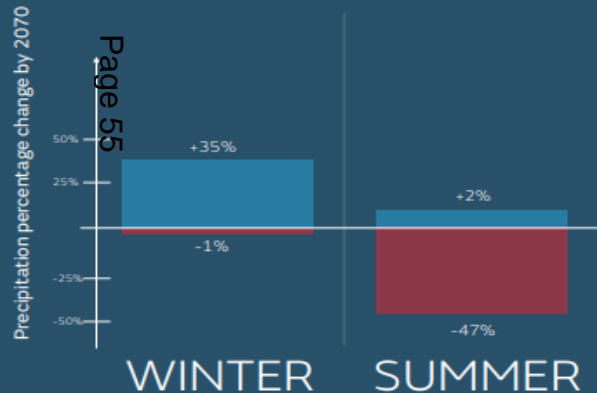
R75c – Surface water Flooding

# FUTURE PRECIPITATION CHANGE

## PROBABILISTIC PROJECTIONS

### WETTER WINTERS, DRIER SUMMERS\*

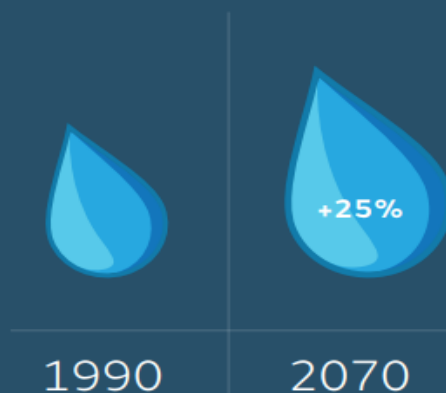
UKCP Probabilistic (25km) projections show that by 2070, under a high emission scenario, average winter precipitation is projected to increase, whilst average summer rainfall is projected to decrease.



## UKCP LOCAL (2.2KM)

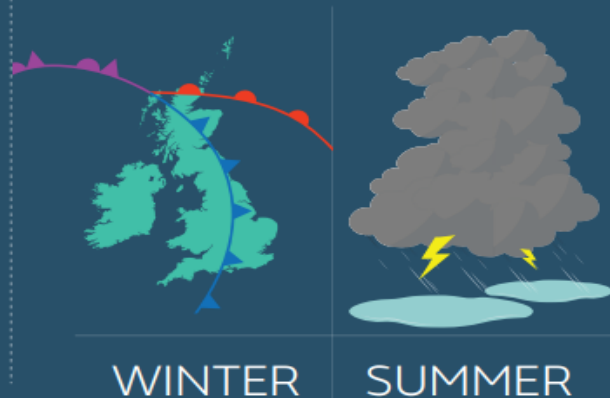
### FUTURE INCREASES IN EXTREME HOURLY RAINFALL INTENSITY

By 2070, extreme hourly rainfall intensity associated with an event that typically occurs once every two years increases by 25%.



### CHANGES IN THE TYPE OF RAINFALL

By 2070, Local (2.2km) projects more of the rain in winter will come from frontal rain events of higher intensity and in summer from short lived high intensity showers.



Department  
for Environment  
Food & Rural Affairs



Department for  
Business, Energy  
& Industrial Strategy



Met Office  
Hadley Centre



Environment  
Agency

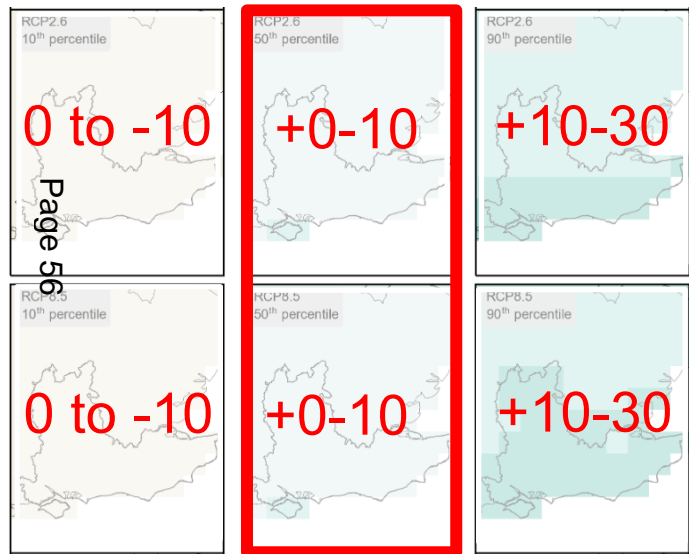
Working together on

UK Climate Projections

# Winter Precipitation

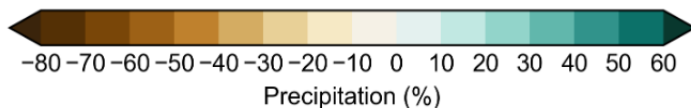
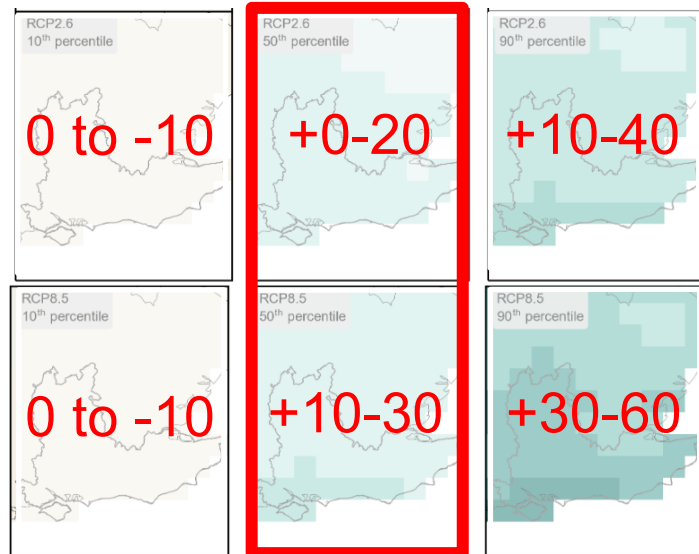
2020-2039

2060-2079



RCP2.6  
Best Case

RCP8.5  
Worst Case

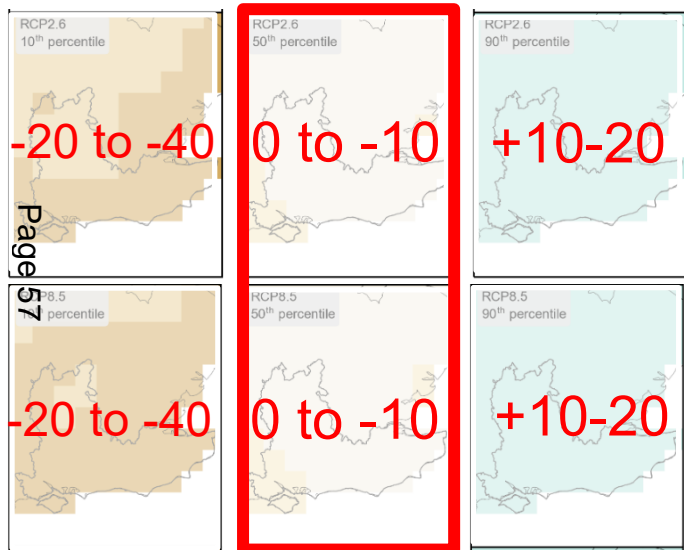




# Summer Precipitation

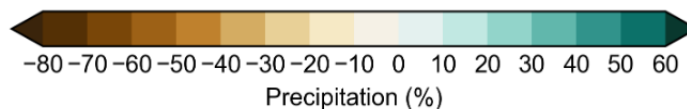
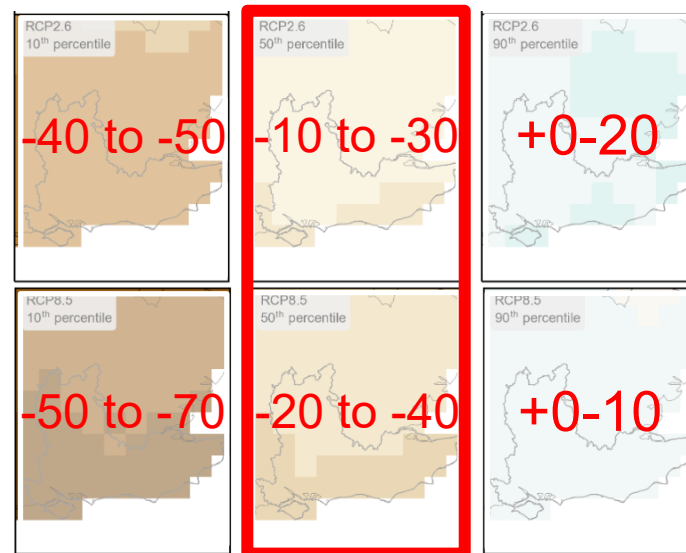
## 2020-2039

## 2060-2079



RCP2.6  
Best Case

RCP8.5  
Worst Case



## **Heavier rainfall in the future could lead to an increased risk of.....**

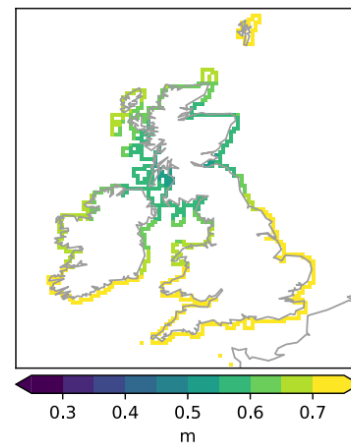
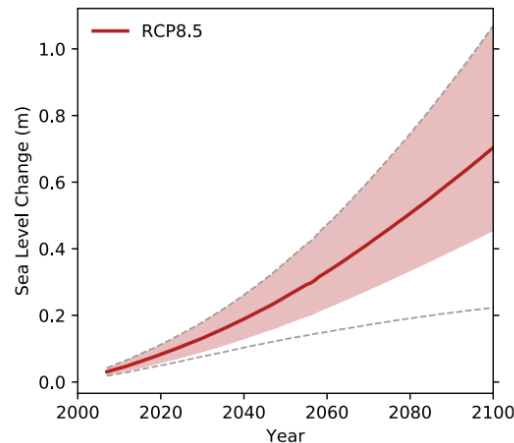
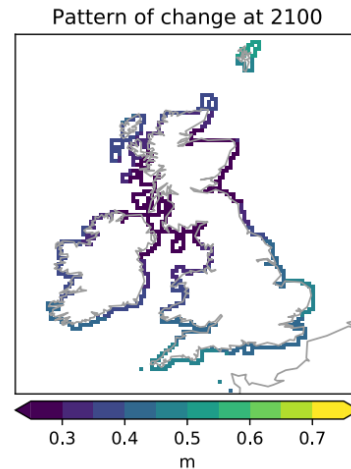
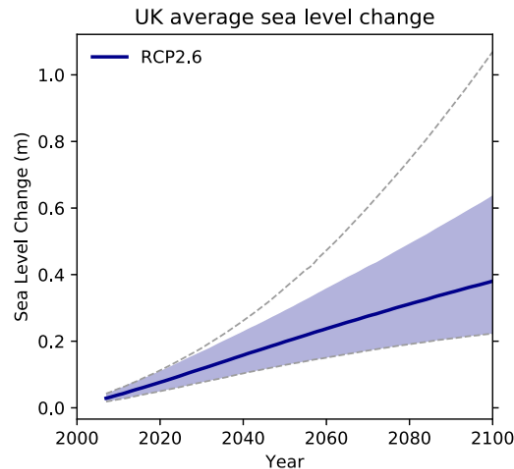
- River and groundwater flooding in the winter
- Surface water flooding in the summer

# Sea Level

# Sea level rise in the UK

- Sea levels will rise more in England/Wales than in Scotland/Northern Ireland. This is due to glacial isostatic adjustment.
- In a high emissions scenario, sea level could rise between 0.5-1.15m by 2100 in London. Under a low emission scenario this would be 0.3-0.7m\*

\* Relative to 1980-2000 average



**A rise in sea level in the future could lead to an increased risk of.....**

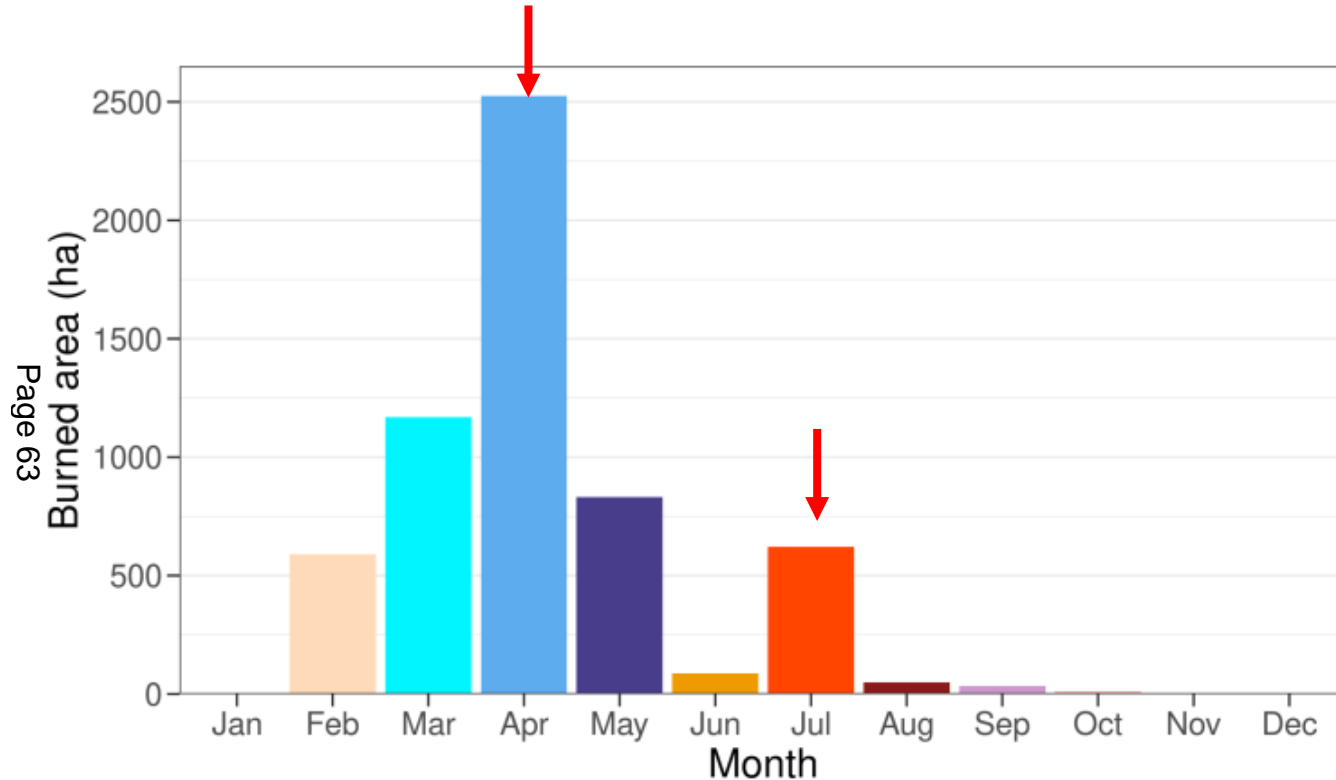
- Coastal flooding
- Coastal erosion

# Wildfire

## R66 - Wildfire

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# UK Wildfire seasons



**Monthly mean burned area (km<sup>2</sup>) for the UK from 2003 to 2020.**



# Wildfire Risk

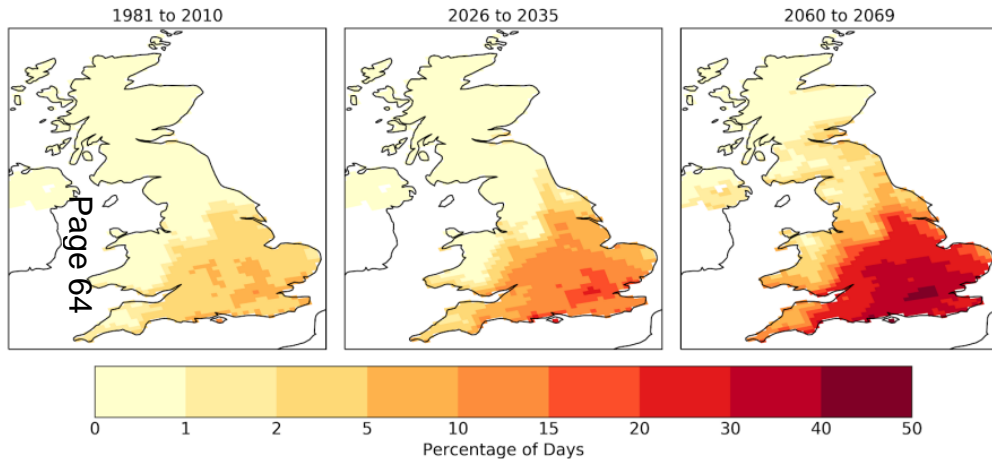


Figure D4: Annual occurrence (% of days) with Fire Weather Index (FWI) > 17.35 (Fire Danger Class 4/5) during summer (JJA) from the UKCP18 12km regional model averaged over the 12 ensemble members for a) 1981-2010 baseline period b) 2026-2035 (2 degC global warming level) and c) 2060-2069 (4 degC global warming level).

Belcher et al., (2021)

Combination of high temperatures, low humidity, low rainfall and often high winds

Wildfire risk does occur naturally but is increasing in frequency and severity due to climate change

## **A future likelihood of seeing wildfire conditions could lead to an increased risk of.....**

- Destruction of land
- Danger to buildings on the rural / urban boundary
- Poor air quality
- Impacts on FRS resources

# Storms

## R72 - Storms

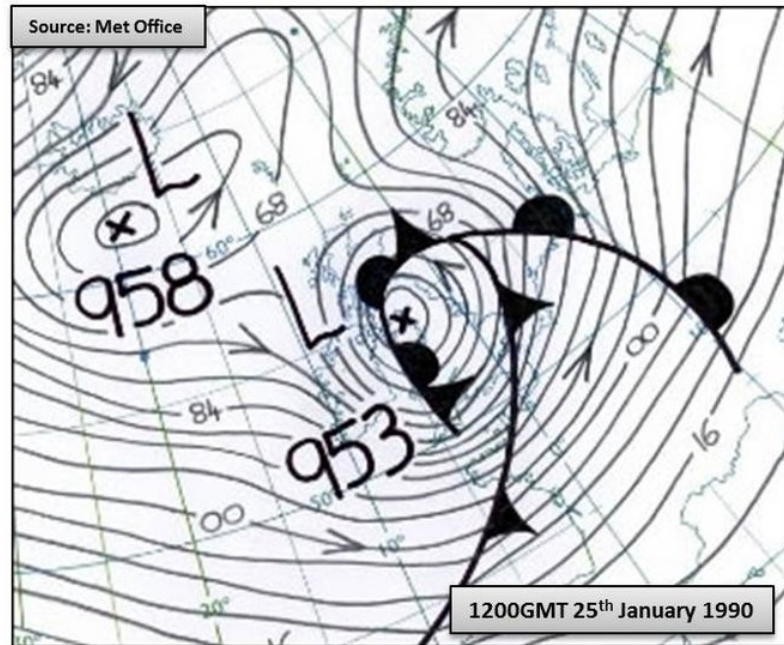
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# Storms

Deep areas of low pressure can develop in the autumn to early spring period bringing very strong winds.

The wind flows anti-clockwise around the low pressure with the strongest winds generally on the southern and western sides.

Warnings for these type of events will be issued as Wind warnings.



## **More active storms could lead to an increased risk of.....**

- Structural damage
- Environmental damage (e.g. fallen trees)
- Power outages
- Transport disruption
- Coastal flooding

# Where to access Climate projections

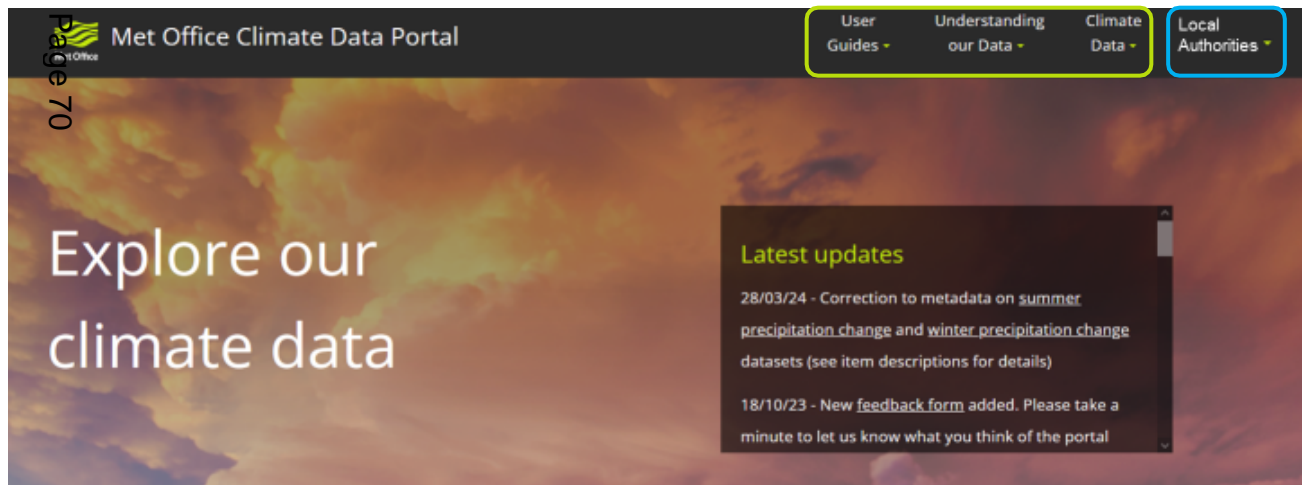


# Climate Data Portal (●CDP) Local Authority Climate Service (●LACS)

●CDP and ●LACS  
have a single point  
of entry.

The ●CDP provides  
climate data layers.

The ●LACS provides  
easy-to-access guidance  
on local climate.



# Local Authority Climate Service (●LACS)

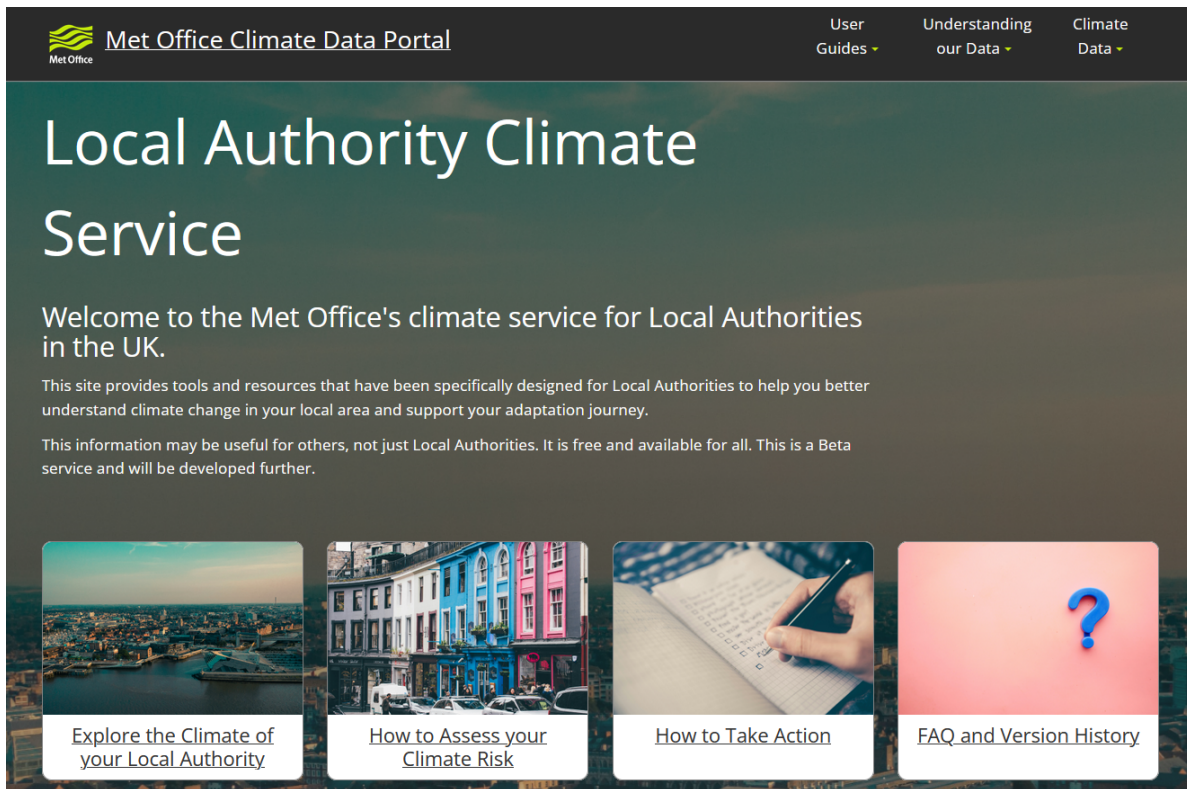
The service is intended for ...

- **Local Authority officers**
- **Councillors**
- **The public**
- **Leaders**

Invitation to feed back:

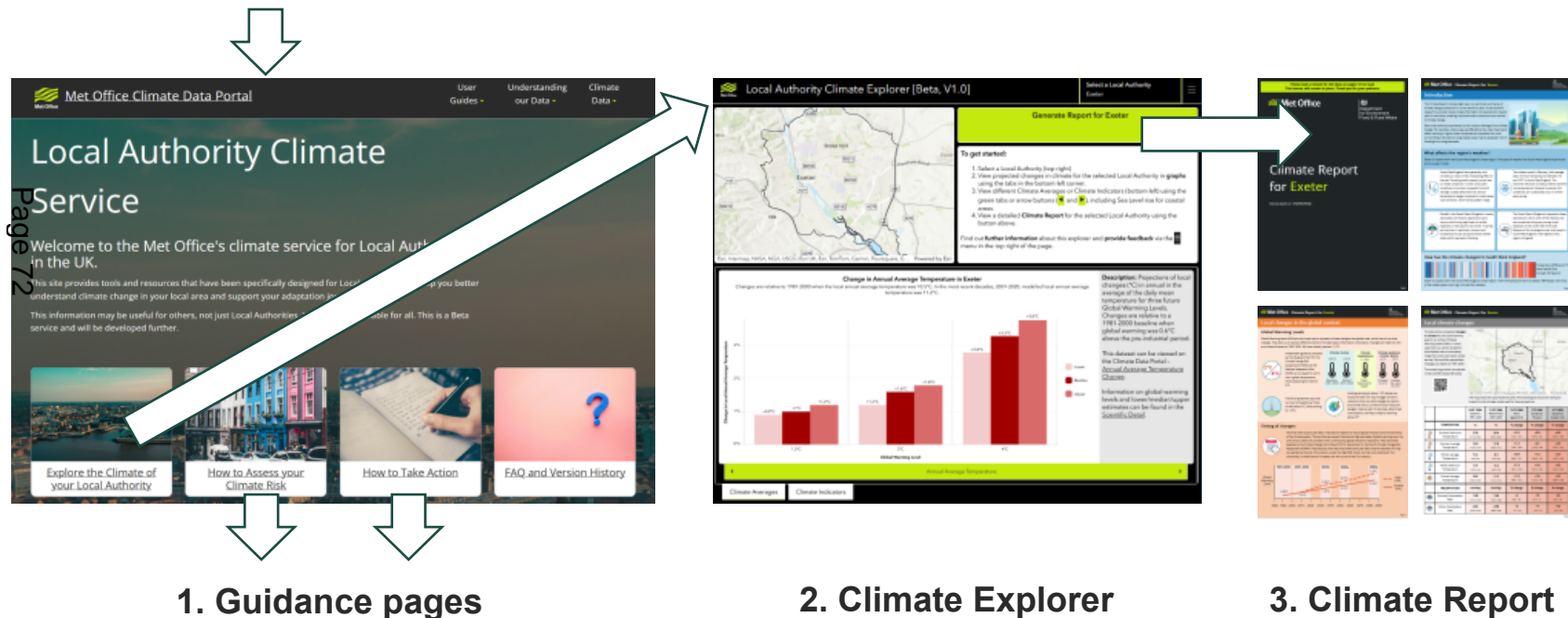
[lacs@metoffice.gov.uk](mailto:lacs@metoffice.gov.uk)

...or the feedback form ...

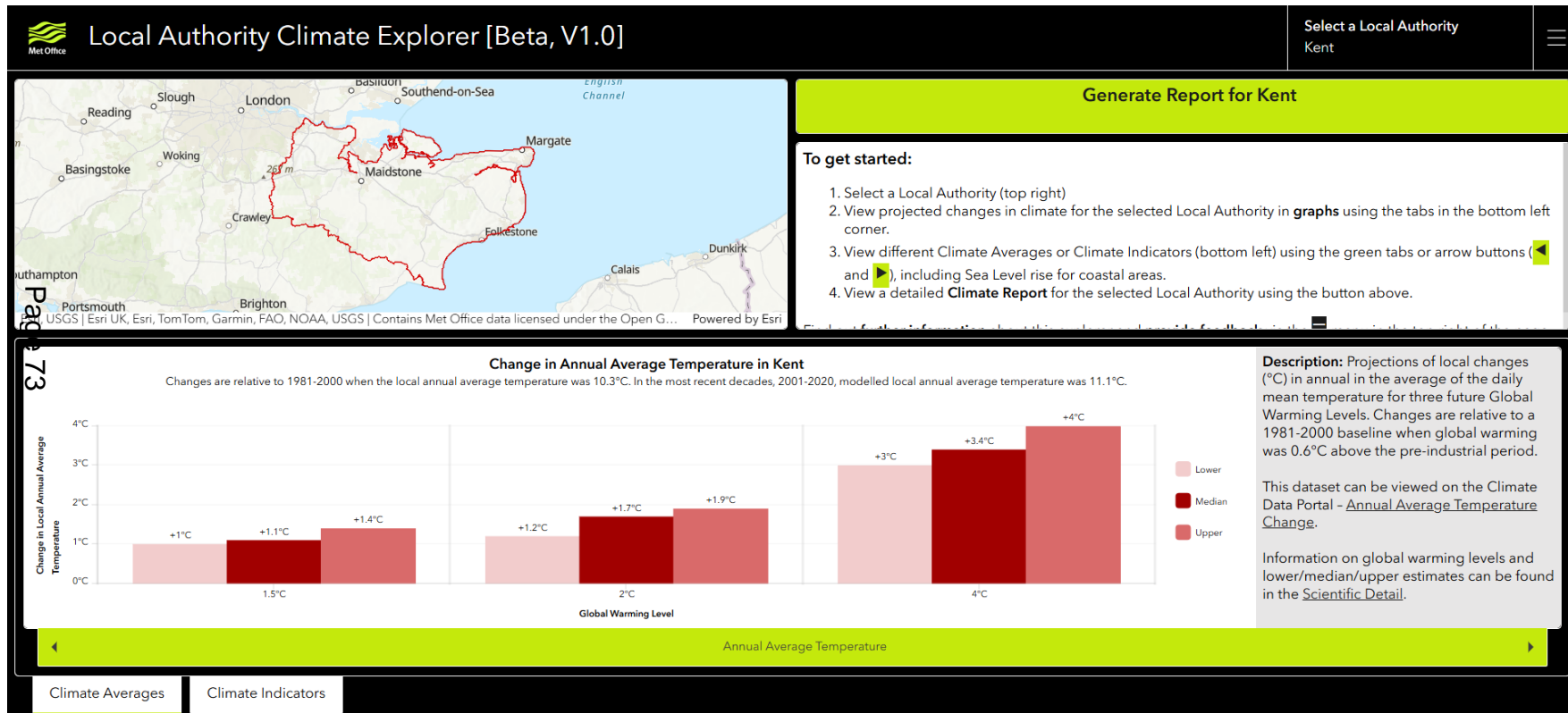
A screenshot of the Met Office Climate Data Portal website. The header features the Met Office logo and the text "Met Office Climate Data Portal" on the left, and navigation links "User Guides", "Understanding our Data", and "Climate Data" on the right. The main heading is "Local Authority Climate Service". Below this, a welcome message states: "Welcome to the Met Office's climate service for Local Authorities in the UK." This is followed by two paragraphs of text explaining the site's purpose and its availability as a beta service. At the bottom, there are four rectangular tiles with images and text: "Explore the Climate of your Local Authority" (with a cityscape image), "How to Assess your Climate Risk" (with a row of colorful houses), "How to Take Action" (with a hand writing on a notepad), and "FAQ and Version History" (with a pink background and a blue question mark).

# Local Authority Climate Service (●LACS)

The landing page for the LACS



# Local Authority Climate Explorer



# Local Authority Climate Service (●LACS)

Please wait a minute for the data on pages 5-6 to load.  
This banner will remain in place. Thank you for your patience.

Department for Environment Food & Rural Affairs

## Climate Report for Kent

Generated on: 29/01/2025

### Climate Report for Kent

#### Local climate changes

The table shows projected changes in climate for the Local Authority area for a number of Global Warming Levels (GWLs). In each case there is a central projection (the Median) and an uncertainty range (the Lower and Upper values are the 10th and 90th percentiles). Changes are relative to 1981-2010. The underlying science is explained in the Scientific Detail (QR Code).

The map shows the Local Authority area. The overlaid grid shows the 12km grid boxes from the climate model used for these projections.

	0.6°C GWL Baseline 1981-2010	1.0°C GWL Recent Past 2001-2020	1.5°C GWL Paris Agreement	2°C GWL Guidance: Prepare	4°C GWL Guidance: Assess risks
<b>TEMPERATURE</b>	°C	°C	°C change	°C change	°C change
Summer Maximum Temperature	29.2 26.0 to 36.6	31.2 28.0 to 37.7	+2.0 +1.9 to +2.7	+2.0 +1.9 to +2.6	+2.0 +1.9 to +2.7
Summer Average Temperature	16.3 16.0 to 16.3	17.5 17.2 to 17.9	+1.2 +1.3 to +1.0	+1.2 +1.0 to +1.6	+1.2 +1.1 to +1.6
Winter Average Temperature	4.7 4.7 to 4.7	5.4 5.0 to 5.7	+0.7 +0.7 to +1.0	+0.7 +0.6 to +1.7	+0.7 +0.5 to +1.6
Winter Minimum Temperature	-6.8 -7.0 to -6.6	-5.2 -6.0 to -4.2	+1.4 +1.0 to +1.7	+1.5 +1.0 to +2.2	+1.7 +1.0 to +2.7
Annual Average Temperature	10.3 10.0 to 10.3	11.1 10.8 to 11.3	+0.8 +0.8 to +1.4	+0.8 +0.7 to +1.9	+0.8 +0.6 to +2.0
<b>PRECIPITATION</b>	mm/day	mm/day	% change	% change	% change
Summer Precipitation Rate	1.56 1.06 to 1.07	1.55 1.26 to 1.76	-5 -16 to +12	-8 -20 to +8	-33 -46 to +22
Winter Precipitation Rate	2.03 2.03 to 2.04	2.09 1.96 to 2.26	+4 10 to +15	+6 11 to +17	+16 +10 to +27

### Climate Report for Kent

#### Local climate indicators

The table shows projected climate indicators for the Local Authority area for a number of Global Warming Levels. For each there are annual totals a central projection (the Median) and an uncertainty range (the Lower and Upper values are the 10th and 90th percentiles). See also the Scientific Detail (QR Code).

	0.6°C GWL Baseline 1981-2010	1.0°C GWL Recent Past 2001-2020	1.5°C GWL Paris Agreement	2°C GWL Guidance: Prepare	4°C GWL Guidance: Assess risks
<b>Summer Days*</b>	13 13 to 16	25 20 to 30	27 20 to 35	35 29 to 42	67 40 to 79
Daily maximum temperature > 25°C High daytime temperatures with health impacts for vulnerable people at risk of hospital admission or death. Transport disruption – e.g. track buckling on railways. Can also indicate periods of increased water demand.					
<b>Hot Summer Days*</b>	1 1 to 1	3 2 to 4	3 2 to 5	5 3 to 7	18 16 to 28
Daily maximum temperature > 30°C Increased heat related illnesses, hospital admissions or death. Further transport disruption – e.g. track buckling on railways, road melt. Overhead power lines become less efficient.					
<b>Extreme Summer Days*</b>	0 0 to 0	0 0 to 1	0 0 to 1	0 0 to 1	2 2 to 6
Daily maximum temperature > 35°C Increased heat related illnesses, hospital admissions or death affecting not just the vulnerable. Further transport disruption – e.g. track buckling on railways, road melt.					
<b>Tropical Nights</b>	0 0 to 0	0 0 to 1	0 0 to 1	1 0 to 1	6 5 to 7
Daily minimum temperature > 20°C Health impact due to high night-time temperatures with potential for heat stress. Vulnerable people at increased risk of hospital admission or death.					
<b>Frost Days</b>	42 42 to 42	31 26 to 36	27 20 to 36	24 19 to 30	8 6 to 16
Daily minimum temperature < 0°C Cold weather disruption due to higher than normal chance of ice and snow.					
<b>Ice Days</b>	2 2 to 2	1 1 to 2	1 0 to 1	1 0 to 2	0 0 to 0
Daily maximum temperature < 0°C More extreme than frost days, so more severe cold weather impacts.					
<b>Growing Degree Days*</b>	1,991 1,989 to 1,992	2,236 2,087 to 2,328	2,324 2,281 to 2,398	2,494 2,385 to 2,598	3,035 2,896 to 3,237
Daily mean temperature > 5.0°C Energy available for plants growth over a year. This is not a measure of season length.					
<b>Heating Degree Days*</b>	2,549 2,548 to 2,549	1,941 1,986 to 1,896	1,875 1,828 to 1,943	1,745 1,708 to 1,825	1,382 1,290 to 1,530
Daily mean temperature < 15.0°C Indicator of energy demand for heating.					
<b>Cooling Degree Days*</b>	27 26 to 27	50 40 to 62	55 48 to 73	72 59 to 88	165 140 to 215
Daily mean temperature > 22°C Indicator of energy demand for cooling.					

\* Number days above the stated temperature thresholds can occur at any time of year.  
\* Degree Days are not a number of days, but the number of degrees the daily average temperature exceeds the threshold, each day, added up over a year.



# Any Questions?

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