A GUIDE TO THE UK ALERTING SYSTEM

Climate related alerts issued by UK agencies.

By Barry Gooch

Future
Flood
Resilience
Group

The wooden footbridge on The Green at Grove displaced by the 22 July 2007 summer storm

CONTENTS

SUMMARY OF HOW TO GET ALERTS

Weather Alerts:
By email: https://service.govdelivery.com/accounts/UKMETOFFICE/subscriber/new
By X: https://x.com/metoffice
Mobile Phone App available: YES

UK Emergency Alerts:
Automatically received by Mobile phones

Named Storms:
By Facebook: https://www.facebook.com/metoffice
By X: https://x.com/metoffice
Website: https://weather.metoffice.gov.uk/warnings-and-advice/uk-storm-centre/index

Flood Alerts:
By email: https://www.gov.uk/sign-up-for-flood-warnings
By X: https://x.com/EnvAgency
Mobile Phone App available: YES

UK Health Security Agency:
By Website: https://www.gov.uk/government/organisations/uk-health-security-agency
By Website: https://www.metoffice.gov.uk
Mobile Phone App available: YES

Pollen Alerts:
By Website: https://weather.metoffice.gov.uk/warnings-and-advice/seasonal-advice/pollen-forecast#?date=2025-08-12
Mobile Phone App available: YES

Drought Plans:
By Website: https://www.thameswater.co.uk/help/water-supply-and-drought-update
Vulnerable Persons Registration Form:
https://www.thames-psr.org/#:~:text=Use%20our%20online%20form%20to%20register%20for%20priority,get%20extra%20help%20when%20you%20need%20it%20most.

FOREWARD

Our climate is becoming less predictable with more extreme weather events; This makes it more important than ever that you understand the various climate related alerts designed to keep you and your community safe.

UK agencies issue several types of climate related alerts each with its own categorisation system. This report identifies the main climate related alerts, explains the circumstances behind each, and gives information required to help understand what they really mean.

Please do subscribe to relevant alerts, and feel free to post a copy of this document on your organisations website to encourage others to take the alerts.

WEATHER WARNINGS

ISSUED BY: **The MET OFFICE** - The National Severe Weather Warning Service (NSWWS)

ALERTS AVAILABILITY:

By email: https://service.govdelivery.com/accounts/UKMETOFFICE/subscriber/new
By X: https://x.com/metoffice
Mobile Phone App available: YES

BACKGROUND

Following the Great Storm of 1987, the Met Office set up The National Severe Weather Warning Service (NSWWS) staffed by meteorologists who monitor the weather and issue warnings when certain weather thresholds, or levels, are reached.

Based on feedback from service users, from 2011 the NSWWS moved to an impact-based warning service using a **color-coded warning system**—**Yellow, Amber, Red**—based on both the **likelihood** and **impact** of weather events.

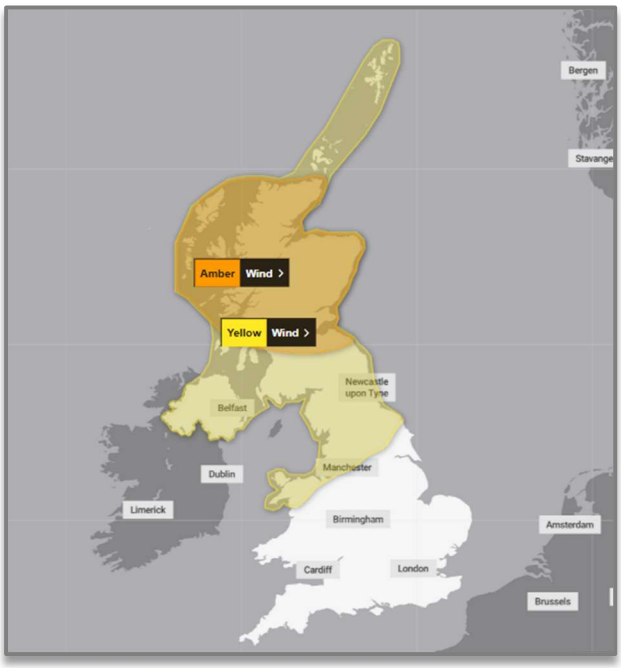
ABOUT THE ALERTS

Each warning is issued up to seven days before the weather event is due with details as follows:

- a short **weather headline**, which states what weather type, is forecast,
- a **'What to expect'** section, detailing the types of impact expected and an indication of how likely those impacts are,
- a **'What should I do**' section, linking to advice and guidance about how to stay safe in severe weather, and
- a **'Further details'** section, providing additional information on the forecast weather.

The information accompanying each warning is usually complemented with a map showing the general areas that will are forecast to be impacted.

To supplement the warning the Met Office post video content with a meteorologist presenting the details of the weather warning across media.



Yellow and Amber Warnings for Storm Floris 04.08.2025

UK Met Office National Severe Weather Warning Service Categories

CATEGORY	DESCRIPTION	INFORMATION	WEATHER TYPE
YELLOW **"Be Aware"**	Weather could cause **some disruption** to travel, daily life, or pose **a low-level risk** to health and property.	• **Impact**: Low to moderate • **Likelihood**: Low to high (depending on forecast confidence) • **Advice**: Check travel plans, follow local news, prepare for minor disruptions.	• **Rain -** Risk of flooding in low-lying areas, spray on roads, and disruption to travel. • **Thunderstorms -** Potential for heavy rain, lightning, hail, and local flooding. • **Wind -** Disruption to travel, bridge closures, falling branches, and minor structural damage. • **Snow -** Risk of difficult travel conditions, especially on untreated roads and rail. • **Ice -** Slippery surfaces causing travel delays and increased accident risk. • **Fog -** Poor visibility can affect road, rail, and air transport. • **Extreme Heat** (seasonal) - Health risks to vulnerable groups and strain on infrastructure (e.g. power, water). • **Extreme Cold -** Potential health impact, especially for elderly or vulnerable people.
AMBER **"Be prepared"**	There is an **increased likelihood** of severe weather **causing disruption** to daily life, with **potential risk to life and property**	• **Impact**: Medium to high • **Likelihood**: Medium to high • **Advice**: Be prepared – take steps to protect yourself and your property.	• **Rain - Likely** flooding of homes and businesses; dangerous driving conditions; disruption to infrastructure (transport, utilities). • **Thunderstorms -** Frequent lightning, large hail, intense rainfall; flash flooding and damage to property possible. • **Wind -** Risk of flying debris, fallen trees, damaged buildings; road/bridge closures, power cuts, transport disruption. • **Snow -** Widespread travel disruption; risk of stranded vehicles or people; damage to infrastructure and increased isolation in rural areas. • **Ice -** Risk of serious travel accidents; power outages or disruption to essential services. • **Fog -** Significantly reduced visibility, affecting road, rail, and air transport. • **Extreme Heat -** Danger to health (especially elderly, children, those with conditions); water supply strain, infrastructure stress, transport disruptions. • **Extreme Cold -** Health risks, frost damage, increased demand for heating; risk of black ice and travel disruption.
RED **"Take action"**	There is a **very high risk** of: Widespread damage; Serious disruption; And **potential loss of life**. Red warnings only when **confidence is high** in a **high-impact** event.	• **Impact**: Very high/catastrophic • **Likelihood**: High • **Advice**: Take immediate action to protect life and property. Avoid travel if possible. Follow emergency services' advice.	• **Rain -** Severe and widespread flooding; Evacuations likely; Major transport and power disruption • **Thunderstorms -** Life-threatening flash floods; Dangerous lightning, destructive hail, structural damage • **Wind -** Structural collapse possible; Flying debris, danger to life; Major travel shutdowns (air, rail, bridges) • **Snow -** Deep snow leading to stranded communities; Risk to life from exposure; Widespread power loss and transport failure • **Ice -** Extremely dangerous travel conditions; High accident risk; Long-lasting effects on roads and infrastructure • **Extreme Heat -** Serious health risks, especially to vulnerable people; Wildfires possible; Transport and power network strain or failure • **Extreme Cold -** Life-threatening cold conditions; Risk of hypothermia, isolation; Infrastructure strain (e.g., heating, water supply) • **Fog -** Very rare for red, but could be issued if visibility causes catastrophic transport risks (e.g., multi-vehicle motorway pileups)

UK EMERGENCY ALERTS

ISSUED BY: **Overseen by the Cabinet Office.**

ALERT AVAILABILITY:

By Mobile Phone: automatically sent

BACKGROUND

Officially launched in 2023, the Cabinet Office oversees the UK Emergency Alerts system, but messages can be triggered by other government departments or agencies, such as:

- The **Met Office** (for severe weather alerts)
- The **Environment Agency** (for flooding)
- The **police or other emergency services** (for threats to life like terrorism or major incidents)

Alerts are sent to **compatible 4G and 5G mobile phones** using a technology called **cell broadcast** — which means they don't rely on SMS or individual phone numbers.

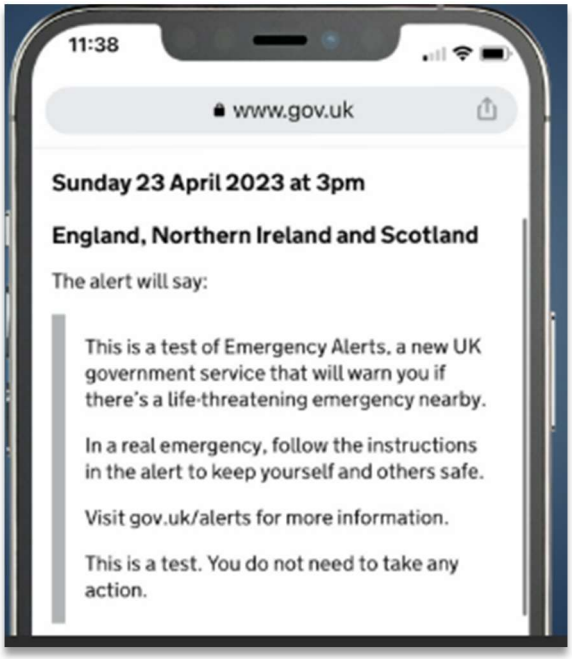
You may get alerts about any type of life-threatening emergency, such as:

- wildfires
- severe flooding, or
- extreme storms.

You'll get alerts based on your current location - not where you live or work. You do not need to turn on location services to receive alerts.

The alert will be a **loud siren-like sound**, a **vibration**, and a message on your phone screen which will last for about 10 seconds. An alert will include a phone number or a link to the GOV.UK website for more information.

For those with a vision or hearing impairment, audio and vibration attention signals will let the person know there is an emergency alert if accessibility notifications have been enabled on their mobile phone or tablet.



Example Emergency Alert Text

NAMED STORMS

ISSUED BY: **Compiled jointly between Met Éireann, the Met Office and KNMI (The Dutch national weather forecasting service).**

ALERT AVAILABILITY:

By Facebook: https://www.facebook.com/metoffice
By X: https://x.com/metoffice
Website: https://weather.metoffice.gov.uk/warnings-and-advice/uk-storm-centre/index

BACKGROUND

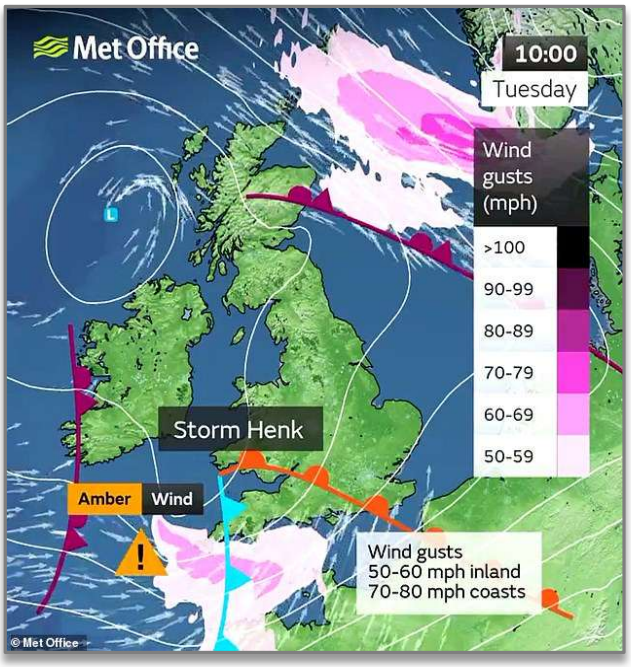
The U.S. National Hurricane Center officially began naming hurricanes after women in 1953, alternating with male names from 1979 when the World Meteorological Organization and the National Hurricane Center worked together to create a rotating list of names for storms in the Atlantic.

The Met Office began to name storms in 2015 from when they have released a new list of names each year. The list runs from early September to late August the following year, to coincide with the start of autumn and the end of summer, when there is a likelihood of low-pressure systems and the potential for named storms increases.

The decision to name storms was part of a collaborative effort among the **UK Met Office**, **Met Éireann** (Ireland's meteorological service), and the **Royal Netherlands Meteorological Institute**, to raise awareness and improve public safety. The initiative was inspired by the success of naming storms in the U.S. and Australia.

Not all storms are named. In the UK a storm will be named when it has the potential to cause disruption or damage which could result in an amber or red warning SEE WEATHER WARNINGS [ABOVE].

Storms will usually be named based on the impacts from the wind but also include the impacts of rain and snow.



STORM HENK weather chart Met Office 2 January 2024

FLOOD ALERTS

ISSUED BY: **The Environment Agency**

ALERTS AVAILABILITY:
By email: https://www.gov.uk/sign-up-for-flood-warnings
By X: https://x.com/EnvAgency
Mobile Phone App available: YES

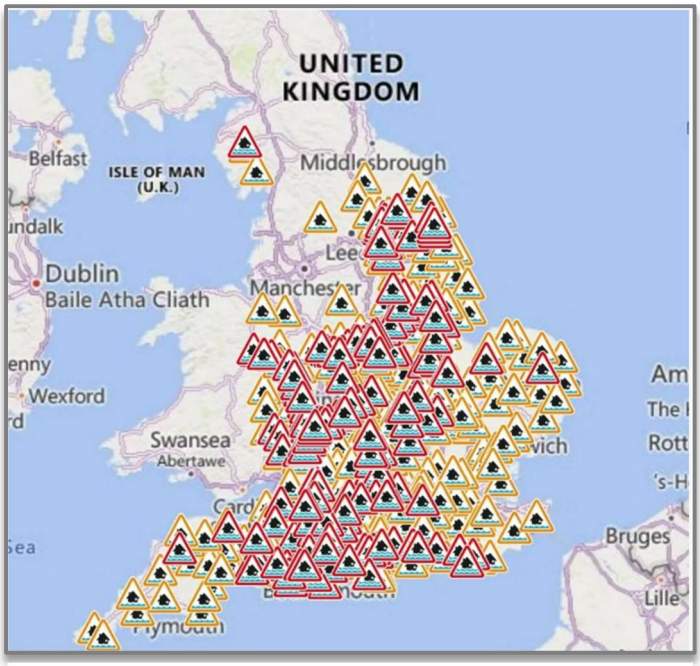
BACKGROUND

The Environment Agency's Flood Warning System officially began on 1 September 1996, when they took over primary responsibility for issuing flood warnings across England and Wales, transferring this role from the police.

Floodline was introduced in 1999 by the Environment Agency in England and Wales. A telephone-only system where people could call to check if their area was at risk. Early flood warning systems were developed using rainfall data, river gauges, and basic forecasting models.

The UK Environment Agency began issuing flood alerts (as part of its flood warning system) on 26 January 2006, when the system officially went live.

The current system of Flood Alerts began in 2010.



Flood Alerts issued by the Environment Agency 4th January 2024

UK Environment Agency Flood Alert Categories

SYMBOL	CATEGORY	DESCRIPTION
 A black house with 1 wavy line of water covering the bottom of it, within an orange triangle.	**FLOOD ALERT** (flooding possible prepare now)	**Issued between 2 and 12 hours before flooding during waking hours if possible.** If a flood alert is issued, you should: • be ready to follow your flood plan • have insurance documents and any medications ready • avoid walking, cycling or driving through any flood water • move any livestock and farming equipment away from areas likely to flood
 A black house with 2 wavy lines of water covering the bottom of it, within a red triangle.	**FLOOD WARNING** (flooding is expected so you should act now)	**Issued 30 minutes to 2 hours before flooding.** If a flood warning is issued, you should: • protect yourself and your loved ones • move your loved ones, pets and valuables to a safe place • move to higher ground or the upper floor of a building • turn off the gas, electricity and water in your home if it's safe • put flood protection equipment in place • do as the emergency services tell you • help others if it's safe to do so
 A red house with 3 wavy lines of water covering the bottom of it, within a red triangle.	**SEVERE FLOOD WARNING** (danger to life & significant disruption. Act now)	**Issued when flooding threatens life and communities.** If a severe warning is issued, you should: • stay in a safe place • be ready to evacuate your home • do as the emergency services tell you • call 999 if you are in immediate danger • if you are caught in a flash flood move to higher ground or the upper floor of a building if it's safe

HEAT-HEALTH ALERTS

ISSUED BY: **The UK Health Security Agency & Met Office**

ALERTS AVAILABILITY:

By Website: https://www.gov.uk/government/organisations/uk-health-security-agency
By Website: https://www.metoffice.gov.uk
Mobile Phone App available: YES

BACKGROUND

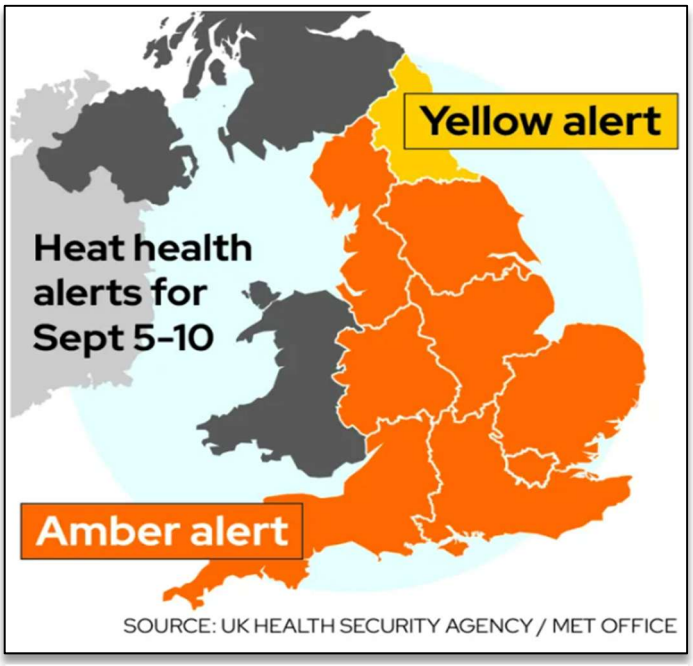
The UK's heat-health alert system was developed in response to the 2003 European heatwave which caused over 2,000 excess deaths in the UK. The event exposed the need for better early warning systems to protect vulnerable populations during extreme heat.

In June 2023, the UK Health Security Agency (UKHSA) and Met Office moved to a new, impact-based Heat-Health Alert system which runs throughout the year instead of seasonally and focuses more on health impacts rather than just temperature thresholds.

These are alerts issued in partnership with the Met Office to help healthcare professionals, emergency responders, and the public prepare for periods of extreme heat. They form part of the Heatwave Plan for England and aim to reduce health risks from heatwaves.

Vulnerable groups that should be supported are deemed to include:

- Older adults (especially 65+)
- Babies and young children
- People with chronic health conditions
- Those who are socially isolated
- Outdoor workers or athletes
- People living in top-floor flats or poorly ventilated homes



A typical UK Health Security Agency/Met Office Alert

The UKHSA and Met Office continuously monitor temperature forecasts and when thresholds for daytime and nighttime temperatures are forecasted to be reached or exceeded, a dynamic risk assessment is conducted. Based on this assessment, the appropriate alert level is issued and communicated.

The thresholds that trigger heat-health alerts vary by region and represent sustained thresholds typically over two or more days.

TYPICAL TEMPERATURE THRESHOLDS

REGION	DAYTIME THRESHOLD (°C)	NIGHTTIME THRESHOLD (°C)
London	32°C	18°C
Southeast England	31°C	16°C
Southwest England	30°C	15°C
East of England	30°C	15°C
Midlands	30°C	15°C
Northwest England	30°C	15°C
Northeast England	28°C	15°C
Yorkshire & Humber	29°C	15°C
Wales	30°C	15°C

UK Health Security Agency & Met Office Heat-Health Alert Categories

CATEGORY	DESCRIPTION	ADVICE
GREEN (summer preparedness)	No alert will be issued as the conditions are likely to have minimal impact on health. Organisations should ensure they have plans in place and are prepared to respond should the alert level be raised.	1. **Stay Informed** 2. **Plan Ahead** 3. **Be Heat-Aware** 4. **Check on Others**
YELLOW (Response)	The heat is unlikely to impact most people; Particularly vulnerable (E.g. the elderly with health conditions and the infirm) are likely to struggle to cope requiring action within the health and social care sector.	**Check in regularly** – Family, friends, neighbours who are older or have health conditions may need help. **Ensure medications are stored correctly** – Some medicines can be affected by heat. **Know the symptoms of heat exhaustion** – These include dizziness, headache, excessive sweating, and nausea. **FOR BABIES** • Keep babies in shaded or cool areas • Ensure regular fluids (milk, water depending on age) • Never leave children in parked cars – temperatures can rise dangerously fast
AMBER (enhanced response)	The whole health service is expected to be impacted, with potential risk to the population and non-health sectors beginning to observe impacts, requiring a coordinated response.	**1. Keep Cool Indoors** • Close curtains or blinds on sun-facing windows during the day and open windows at night to allow cooler air in. • Use fans or a cool damp cloth to help regulate body temperature. • Spend time in cooler spaces, e.g. public buildings with AC (libraries, shopping centres). **2. Stay Hydrated** • Drink plenty of fluids, even if you don't feel thirsty. • Avoid excess alcohol or caffeine – they can dehydrate you. • Eat lighter, water-rich foods (e.g. fruit, salads). **3. Avoid the Heat** • Stay out of the sun during 11am–3pm, the hottest part of the day. • If outside, seek shade, wear a wide-brimmed hat, and use high-factor sunscreen (SPF 30+) and wear loose, light-coloured clothing. 4. **Care for Vulnerable People** • Check in regularly on elderly neighbours, friends or relatives. • Make sure babies and young children are not overheating, especially in prams or cars. • Move people to cooler rooms and ensure they are drinking enough water.
RED (emergency response)	A significant risk to life for the health population. Severe impacts would be expected across all sectors with a coordinated response essential	**1. Stay Indoors as Much as Possible** • Avoid going outside during peak heat (11am–6pm). • Stay in the coolest room in your home – usually the ground floor or shaded areas. Use fans, cool damp cloths, or cold showers to reduce body temperature. **2. Hydrate Constantly** • Drink **water regularly**, even if you're not thirsty. • Avoid alcohol, caffeine, and sugary drinks. • Eat **cool, light meals** that are easy to digest. **3. Keep Your Home Cool** • Close blinds and curtains during the day, especially on sun-facing windows and ventilate only at night when temperatures drop. • Turn off non-essential electrical items that produce heat. **4. Look After Vulnerable People** • Check on elderly relatives, neighbours, and people with long-term illnesses multiple times a day. • Ensure children, babies, and people with disabilities are kept cool and hydrated. • Be especially vigilant for signs of heat exhaustion or heatstroke.

POLLEN ALERTS

ISSUED BY: **The Met Office**

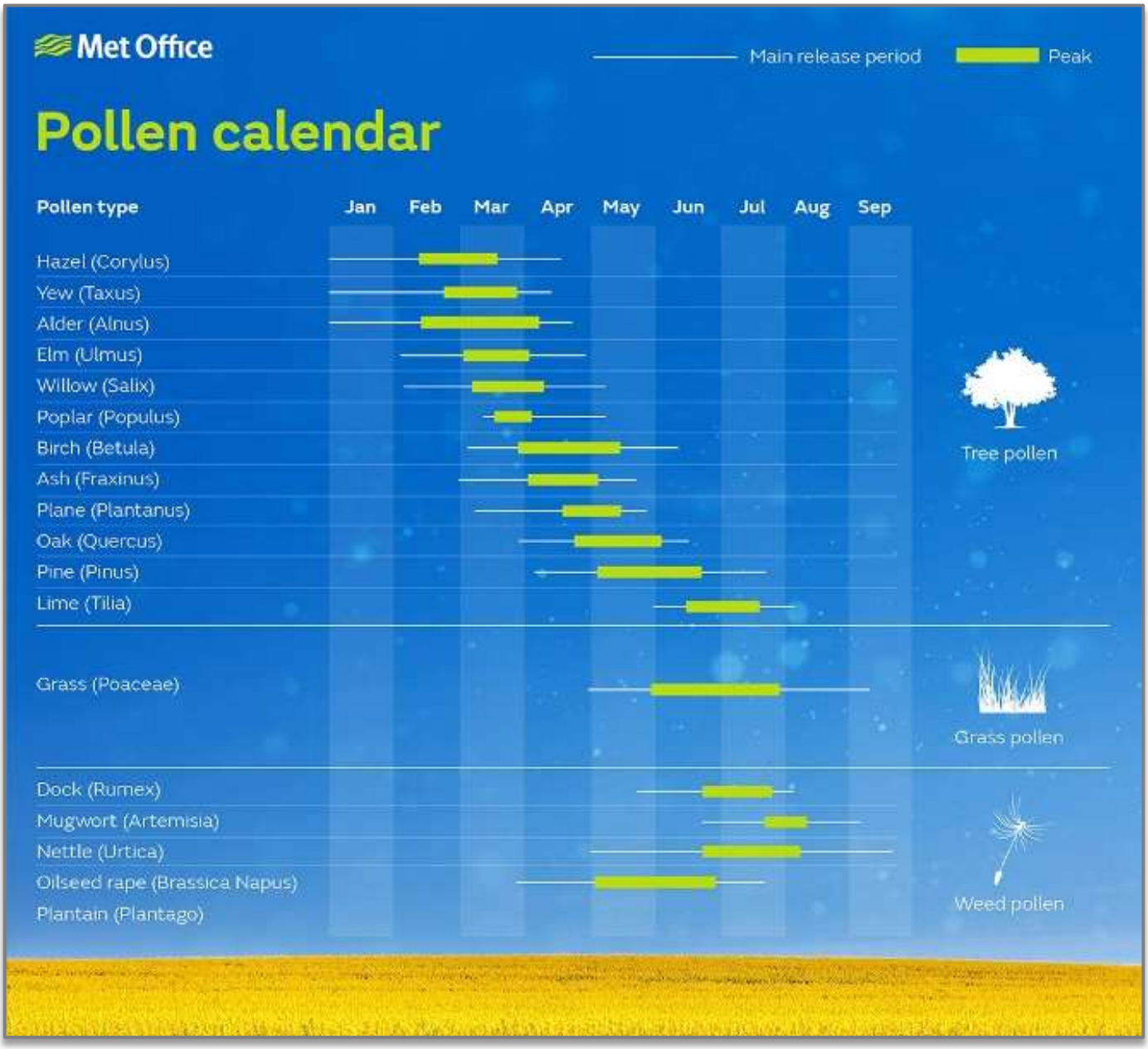
ALERTS AVAILABILITY:

By Website: https://weather.metoffice.gov.uk/warnings-and-advice/seasonal-advice/pollen-forecast#?date=2025-08-12

Mobile Phone App available: YES

BACKGROUND

One in five people in the UK suffer from hay fever. Since 2011 the Met Office have been providing a nationwide 5-day pollen forecast for the UK that displays current pollen levels (Low, Moderate, etc.) for various types like grass, tree, and weeds helping sufferers to plan activities around potential triggers.



Pollen counts are measured in grains per cubic metre over a 24 hour period.
Typical thresholds:

- **Grass pollen**: 50–150 grains/m³ is considered **high**.
- **Birch pollen**: 81–200 grains/m³ is considered **high**

DROUGHT PLANS

ISSUED BY: Thames Water

INFORMATION AVAILABILITY:

By Website: https://www.thameswater.co.uk/help/water-supply-and-drought-update

BACKGROUND

All water companies are required by the Government to produce a drought plan, which is reviewed and updated every five years.

Thames Water's drought plan is based on their levels of service to customers that set out how often, and to what extent, customers should expect restrictions on their water usage.

Typically, a drought plan will have escalating levels with actions that the company will take at each level. Thames Water's drought plan defines a phased response:

1. **Normal Conditions:** No restrictions, but ongoing conservation campaigns.
2. **Drought Watch:** Heightened monitoring with targeted leakage and reservoir management.
3. **Drought Warning:** Preparatory restrictions on non-essential licensed abstractions.
4. **Drought Action:** Voluntary customer appeals and potential non-essential use bans on large landscapes.
5. **Temporary Use Ban (Level 2):** Compulsory ban on domestic hosepipe usage when stock indicators fall below red alert lines.
6. **Drought Emergency (Level 3):** Severe measures such as standpipes and rota cuts if supplies become critical. A Temporary Use Ban (TUB) is triggered when reservoir storage or river flows dip below the company's predefined thresholds after accounting for rainfall forecasts and demand projections.

The drought plan requires the water company to make sure they support all vulnerable customers during a drought, for example by prioritising care homes and supplies to hospitals.

Thames Water publishes a Vulnerability Strategy that sets out who they will consider to be vulnerable along with the circumstances surrounding the support that they provide.

The **Vulnerability Strategy** can be found here: https://www.thameswater.co.uk/media-library/aiajcxp5/vulnerability-strategy.pdf and it defines 'vulnerability' as follows:

> *'Our definition of vulnerability is – the need for extra help - occurs when a customer may not have reasonable opportunity to access and receive an inclusive, safe service from Thames Water, resulting in a permanent or temporary detrimental impact on their well-being, finances, health or any combination.'*

To register yourself or someone else as vulnerable use the online form which can be found here: https://www.thames-psr.org/#:~:text=Use%20our%20online%20form%20to%20register%20for%20priority,get%20extra%20help%20when%20you%20need%20it%20most.

Thames Water Drought Plan		
LEVEL	**DESCRIPTION**	**THAMES WATER ACTION**
1	**Impending drought Frequency:** once every 5 years on average	Begin an awareness campaign – typically via radio, newspapers, social media and other online channels – to tell customers about an impending drought, let them know how serious it is and ask them to use water sparingly. We'll work with a wide range of organisations to spread the message, including water retailers. The campaign will be continued throughout the drought.
2	**Early stages of a drought Frequency:** once every 10 years on average	• Step up the awareness campaign and encourage customers to reduce their water use through advice and installing water efficiency gadgets in customers' homes. • Restrict the use of sprinklers and hosepipes in and around the home for uses including watering gardens, topping up ponds, filling paddling and swimming pools, cleaning cars – this is referred to as a Temporary Use Ban. Some vulnerable customers, such as blue badge holders, would be granted exemptions.
3	**Severe drought Frequency:** once every 20 years on average	• Restrict non-essential water use. This would affect businesses and restrict activities such as cleaning windows at industrial plants and suppressing dust on construction sites. The government would have to grant a Drought Order to allow us to introduce these restrictions. We'd notify customers at least ten weeks before introducing these measures. • Apply to the Environment Agency for Drought Permits to allow us to take more water from certain sources.
MORE BEFORE 4	**Additional measures for the most serious droughts Frequency:** once every 50 to 100 years on average	Step up actions to reduce demand and provide additional supplies to try to avoid reaching emergency restrictions (Level 4). Actions would include: • Widespread communications asking customers to make significant reductions in their water use, aiming for around 80-100 litres/person/day. (On average our customers use around 140 litres/person/day) • Bring online additional supply, such as emergency raw water pipeline transfers, temporary desalination units and alternative sources for non-potable use.
4	**Extreme drought** We plan never to reach this level, which would involve a drought worse than any on record (since 1920).	Extreme measures to reduce water use, such as rota cuts (when water usage is restricted at certain periods of time) and standpipes in the street for customers to collect water. This would have a massive impact on society and the economy, and the government would need to grant an Emergency Drought Order.