

## December 2022

The averaging period used for the following assessment was 1991-2020.

**This month was colder than average overall, the only month in 2022 for which this was the case, with a very cold and frosty spell until the 17th only being partly offset by milder weather thereafter. Rainfall was limited during the cold spell, but from the 18th there was much more rain, bringing the total rainfall for the month almost up to the long-term monthly average. Sunshine was above average for most parts of the country.**

The provisional UK mean temperature was 2.9 °C, which is 1.3 °C below the long-term average, and this was the UK's coldest December since 2010. Minimum temperatures were around 2 °C below average in some parts of England and Wales. Rainfall was slightly below average overall, most especially for western Scotland, Northern Ireland and central parts of England, although parts of eastern Scotland and southern England were rather wet. The UK as a whole had 87% of average rainfall. Sunshine was broadly above average in all areas except the far north and east, with an overall sunshine figure of 116% of average.

The UK monthly extremes were as follows: A maximum temperature of 15.9 °C was recorded at Prestatyn and Hawarden (both Clwyd) on the 19th. A minimum temperature of -17.3 °C was recorded at Braemar (Aberdeenshire) on the 13th. In the 24 hours ending 0900 UTC on the 19th, 150.6 mm of rain fell at White Barrow (Devon). A wind gust of 71 knots (82 mph) was recorded at Capel Curig (Gwynedd) on the 19th. A snow depth of 15 cm was recorded at Loch Glascarnoch (Ross & Cromarty) on the 15th.

### Weather impacts

An extended cold spell, most intense between the 6th and the 17th, saw various snow/ice events. Rather milder, more unsettled conditions thereafter saw rain becoming the main hazard, although snow and ice continued at times in Scotland. Wintry shower activity occasionally extended further south, with heavy snow showers causing travel disruption across northern parts of Devon and Cornwall on the morning of the 10th, resulting in numerous traffic accidents and several road closures. Then on the afternoon of the 11th and into the evening an area of heavy snowfall developed over parts of SE England and London, with more than 10 cm of fresh snow unofficially recorded in parts of Kent and widespread transport disruption ensuing: the M25 in Essex was closed for several hours and multiple snow-related accidents were reported from the M20 and M2 across Kent, while gritting/ploughing vehicles became stuck in stationary traffic and unable to operate. Temporary runway closures were reported at Gatwick and Stansted airports to enable snow to be cleared.

Further north, during the 12th heavy wet snowfall, combined with strong winds, caused significant accretion and resulting damage to power transmission cables, especially across Shetland, with some 3,800 properties losing power at one stage. Numerous cars became stranded on the Scottish mainland road network, with power/phone outages leading to radar failure at Sumburgh Airport, in turn delaying the arrival of power engineers attending to the damaged transmission lines. Heavy snow fell on the morning of the 16th across central Scotland, with several roads closed including the A83, A85 and M90. Glasgow Airport suffered delays and cancellations, whilst later that day over 50 people were stranded on the A85 near Crianlarich where a rest centre was hastily convened for the overnight period.

The weekend of the 17th/18th saw the cold spell finally relent, and on the 18th much of the Pennines, North Yorkshire, Cumbria and Northumberland saw freezing rain amid the transition to much milder conditions, although the precipitation proved light and fragmented, with impacts

limited to just one or two icy roads across N Yorkshire. However, the rapid temperature rise by the 19th caused many burst water pipes and mains, notably in the area served by Welsh Water. In Gloucester a burst water main caused road flooding, and the Gloucestershire Royal Hospital had to use its own water reserves after the main supply was cut.

The weather became very unsettled during the closing days of the month, as the cumulative effect of several days' successive rainfall began to be felt across Scotland especially, causing rising river levels. In the wake of the rain, with numerous flood warnings issued, landslips closed the West Coast Main Line between Lockerbie and Carstairs, with the Edinburgh to Aberdeen line similarly disrupted in Fife. The River Nith in Dumfries overtopped its banks on the afternoon of the 30th, with property and surface water flooding arising in the centre of Dumfries, while elsewhere sections of both the M9 and M74 were closed due to flooding. On the same day Northern Ireland suffered widespread road flooding, especially across County Down.

## **England diary of highlights**

**The first half of the month was very cold and settled, with sunshine at times and little rain, and there were some hard frosts. After mid-month milder air took over and brought regular falls of rain.**

The mean temperature for the month was provisionally 1.3 °C below normal, with minima up to 2 °C below normal in some areas. After the dry first half, the second half was much wetter, giving a monthly total of 97% of average, with central areas driest and southern coastal areas wettest relative to average. Most areas saw plenty of sunshine for the time of year, with 117% of average.

### **1st to 7th**

Much of the country was cloudy on the 1st, with mist and fog for many parts, persisting all day in places, but some brightness along the south coast, and a few showers for the south-east. Fog across many areas on the 2nd was very slow to clear for some, and central and southern areas were frosty, then generally cloudy, with patchy rain in northern, central and eastern counties, but some sunshine in the south-west. The 3rd brought frequent showers to eastern coastal areas, with all areas staying mainly cloudy. After localised frost, the 4th was generally cloudy with frequent showers in north-eastern counties and patchy rain in a few western areas. The 5th continued mostly cloudy and cold, with showers for most central and eastern counties. There were showers again along the east coast on the 6th, and also one or two in the south-west for a time, but cloud broke in some central and southern parts allowing a few sunny spells. Most areas started fine on the 7th, after a frost especially towards the west, but showers, wintry at times, plagued the east coast through the day.

### **8th to 17th**

The 8th started with widespread frost, with wintry showers skirting the east coast at times, rain showers for the south-west, and long spells of sunshine everywhere else, Yeovilton (Somerset) sunniest with 7.4 hours. Another widespread frost on the 9th led into a generally sunny day, with isolated wintry showers along the east coast and through the Cheshire Gap. Widespread frost again on the 10th was moderate in places, with fog over parts of Lincolnshire and East Anglia persisting all day, sunshine for central and southern counties, but some wintry showers in parts of the north and the south-west. The south-east had the hardest frost on the 11th, with fog for many but especially the East Midlands, East Anglia and the south-east, slow to clear in places; showers, wintry at times, locally heavy and thundery, became more prolonged especially in south-eastern counties through the afternoon. After another hard frost, the 12th saw freezing fog over many areas, persisting all day in a few places, a cold and mainly cloudy day with showers around some coasts, temperatures at Wallington (Northumberland) struggling to -5.9 °C, and 9 cm of snow lying at Cambridge Botanic Garden and Buntingford (Hertfordshire). Only the far south-west escaped a

frost on the 13th, with patchy freezing fog for central and northern counties, most places staying dry, but rain over the south-west, falling as sleet or snow over the moors. The 14th was broadly similar, with some freezing fog patches in central and south-eastern parts, snow showers on the east coast, and patchy rain in the far south-west. Another keen frost saw temperatures down to -12.9 °C at Benson (Oxfordshire) early on the 15th, which became generally sunny but with wintry showers brushing the north-east coast at times. After another widespread frost on the 16th, it was fine, with sunshine for some areas, but a few wintry showers in the north-west. The 17th was frosty for central and southern counties, and rather cloudy, with a few showers for the south-west in the morning, and a band of rain, sleet and snow persisting across the north.

### **18th to 31st**

Frost was less severe on the 18th, with rain, sleet and snow already across the west spreading across to all parts by lunchtime, turning heavier and persistent in central and southern counties through the afternoon, White Barrow (Devon) recording 150.6 mm. The 19th was wet and windy but mild, showers or longer spells of rain affecting all parts, heaviest and most persistent over the south, and temperatures at both Nantwich Reaseheath Hall (Cheshire) and Bude (Cornwall) reaching 15.1 °C. It continued mild into the 20th with East Malling (Kent) not falling below 11.7 °C, patchy fog for parts of the south-west, and sunshine for many, but scattered showers in some northern and western counties. Rain over the south on the 21st cleared away in the afternoon, many other areas staying bright, but with showers in the north. Mist and fog for central and southern counties on the 22nd was slow to clear in some places, then most areas were cloudy with showers or longer spells of rain, heaviest and most persistent in the north, with another significant area of rain along the south coast for a time from late morning. Central parts began foggy on the 23rd, while rain, already over the south, spread north-eastwards through the day, reaching northern parts by early evening, clearing from the south but with a few showers developing there. The 24th was fine for many, but showers developed over north-western counties and along the south coast. Christmas Day brought showers or spells of rain for most places, heaviest and most frequent across the south. The 26th was colder and brighter, but with some showers in western areas. The 27th started cold in a few places, but it turned wet everywhere through the day with some persistent and locally heavy rain. Rain over central and south-western counties early on the 28th reached all parts by late morning, clearing away from the west through the afternoon with scattered showers to follow. The 29th saw some sunshine and scattered showers, becoming windy in some areas with winds gusting to 77 mph at Needles (Wight). Rain in the south-west on the 30th spread quickly north-eastwards to all areas by mid-morning, clearing by early afternoon except from the north, but it remained generally cloudy with patchy rain in places. The 31st was dull and wet across the country, with rain for all parts, more showery in the north, but widespread, locally heavy and persistent in the south.

### **Wales diary of highlights**

**Much of the first half of the month was increasingly cold and frosty, but from the 18th it became much milder. There was little rain during the cold spell, but the second half of the month was much wetter.**

Mean temperatures for the month were 1.4 °C below the long-term average, and minima were 2 °C below average in places. Rainfall was 94% of average, with central parts rather drier than average. Sunshine was generally abundant, with 124% of average overall.

### **1st to 8th**

The 1st was cloudy in the east, with mist and fog persisting for most of the day in places, but central and western areas had some good sunny spells. After a chilly start for many on the 2nd with frost and fog, the fog persisting all day for some, it became generally cloudy through the day, with one or two showers for the north in the afternoon. The next few days continued settled and

cold, mainly cloudy on the 3rd but with sunny intervals in places and isolated showers. The 4th was generally cloudy with showers in places. There were further scattered showers on the 5th. Some sunny intervals were seen on the 6th, with only isolated showers. It was frosty away from coasts early on the 7th, then sunny in the east, cloudy further west with coastal showers. The 8th started frosty again except near coasts, then showers, wintry at times, skirted the west coast, and a few sunny intervals further east.

### **9th to 17th**

Frosts were widespread and severe for the next several nights. The 9th was generally sunny, with wintry showers for northern and western coasts. Showers on the 10th were wintry and more widespread, heaviest and most frequent in the north. The 11th was generally cloudy with isolated wintry showers, the best of any sunshine down the west coast, and Corgam (Dyfed) reported 3 cm of lying snow. The 12th was frosty with some patchy freezing fog too, becoming sunny in the west but cloudier in the east. There was some patchy freezing fog on the 13th, mainly in the north, the day remaining cloudy but dry. The 14th was dry and mainly sunny, Corgam (Dyfed) still reporting 3 cm of lying snow, and cold with a maximum at Libanus (Powys) of only -3.0 °C. After another widespread frost, temperatures at Sennybridge (Powys) falling to -12.1 °C, the 15th was largely sunny, Tenby (Dyfed) recording 7.2 hours of sunshine. The 16th was mostly sunny too, but with a few wintry showers for the north-west. It was less cold on the 17th, generally cloudy, and persistent rain arrived across the north, sleet or snow over higher ground, with wintry showers for central parts.

### **18th to 31st**

Eastern parts started frosty once more on the 18th, but it soon became wet with persistent rain, sleet and snow for all parts, Treherbert (Mid-Glamorgan) wettest with 87.4 mm. The 19th was wet and windy but very mild, with spells of rain affecting all parts throughout the day, Capel Curig (Gwynedd) recording gusts to 82 mph and temperatures at Hawarden and Prestatyn (both Clwyd) reaching 15.9 °C. It was much brighter with scattered showers on the 20th. Remnants of rain cleared from the south during the morning of the 21st, followed by sunshine and scattered showers. Spells of showery rain during the 22nd tended to fizzle out through the day. Rain over central and southern parts on the 23rd soon spread north to remaining areas, becoming heavy in places, but cleared northwards with showers following through the afternoon. There was sunshine on the 24th, with any showers well scattered. Showers in places on Christmas Day were heavy and prolonged in places, with isolated thunderstorms in the north. Showers were well scattered on the 26th, with sunshine between. The 27th brought widespread and occasionally heavy rain. Further widespread rain fell on the 28th, the heaviest of this clearing eastwards by early afternoon to allow generally drier and brighter conditions with showers. There were further showers on the 29th. Widespread and at times heavy rain soon cleared away on the 30th, then it remained generally cloudy with patchy rain or scattered showers. After a minimum no lower than 10.4 °C at Tenby (Dyfed), the 31st was generally dull and wet with rain, heavy and persistent at times, in all areas.

## **Scotland diary of highlights**

**The month started rather mild but soon became colder, with some severe frosts towards mid-month. It then became much milder and unsettled from the 18th, with most of the month's rain falling in the final fortnight.**

Provisional monthly mean temperatures were 1.4 °C below average, with this being the coldest December since 2010. Rainfall was below average on the western side, and slightly above average near the east coast, giving 79% of average overall. It was sunnier than average in the west and south-west, with an overall figure of 105% of average.

## **1st to 7th**

The 1st was generally overcast, with mist and fog for some central and southern areas, persisting all day in places, and rain in central and northern counties. Overnight temperatures on the 2nd at Harris Quidnish (Western Isles) and Poolewe (Ross & Cromarty) did not drop below 10.5 °C, then the day was mild, dull and misty, any fog clearing by lunchtime, with patchy rain for many areas but mainly dry in the south. Rain persisted over the north and west on the 3rd, with showers elsewhere. After a frost in the north on the 4th, the west stayed fine while frequent showers swept in off the North Sea for eastern and central parts. The 5th was mostly cloudy, after another frosty start for the north, with showers continuing along North Sea coasts, but brighter in the far west with Tiree (Argyll) recording 6.4 hours of sunshine. Central and southern parts were fine on the 6th after a frosty start, but other areas had frequent showers, wintry over higher ground. Southern areas started frosty on the 7th then became sunny, but the north and east were cloudy with frequent wintry showers.

## **8th to 16th**

This period was particularly cold with some severe frosts. Only the far north-east escaped a frost on the 8th, with snow showers, merging at times into longer periods of snow, persisting around western, northern, and eastern coasts, isolated thunderstorms over parts of Aberdeenshire in the morning, and some brightness elsewhere. The 9th was similar, cold and fine over central and southern parts, with snow showers elsewhere. Frost was quite severe in the south early on the 10th with temperatures falling below -9.0 °C in places, and widespread wintry showers became heaviest and most frequent over the north-east. The 11th began with fog over the Borders, and coastal areas had another day of wintry showers. Frost on the 12th was compounded by some freezing fog patches around the Borders, slow to clear in some spots, and the day was generally dry and bright but cold with wintry showers skirting many coasts through the day, the maximum at Braemar (Aberdeenshire) only -9.3 °C. Shetland started rather milder on the 13th, but frost was again severe elsewhere, Braemar (Aberdeenshire) falling to -17.3 °C, then the north saw outbreaks of showery snowfall, while the southern half was brighter with Charterhall (Berwickshire) recording 6.4 hours of sunshine. Snow showers continued over the north on the 14th. Snow showers merged into longer periods of snow in the north on the 15th, with wintry showers around coasts, Loch Glascarnoch (Ross & Cromarty) reporting 15cm of lying snow, while other areas were dry and sunny. The 16th was again fine and bright in the south, but wet for central and north-western parts with some prolonged periods of rain, sleet and snow.

## **17th to 26th**

The 17th began milder away from the north, and was dry but cloudy in the south, with showers, often wintry, or longer spells of rain, sleet or snow, for central and northern parts. The north and east started frosty once again on the 18th, while rain, sleet and snow spread from the south-west from mid-morning to reach all areas by dusk. The 19th was wet and windy and much milder, with spells of rain for all parts, heaviest and most persistent over the west, and temperatures at Edinburgh Gogarbank reached 14.5 °C. All areas were showery on the 20th, especially over the north and west with isolated thunderstorms. There were further spells of rain and sleet for all parts on the 21st, again heaviest and most frequent towards the north-west. The 22nd was cloudy, with numerous showers over the north and east, and some scattered showers for the south at times. Central parts started chilly with patchy fog on the 23rd, with showers for eastern and northern areas, then rain spread from the south from midday, reaching central counties by evening. Christmas Eve and Christmas Day were predominantly wet and windy, central and northern areas being wettest on the 24th ahead of heavy and persistent rain spreading into south-western counties during the afternoon, then on the 25th rain was heaviest and most frequent in the south and west. Some eastern parts were sunny on the 26th, but showers elsewhere were heaviest and most frequent in the north and west, wintry at times with isolated thunderstorms, and it was windy especially in the north with Baltasound (Shetland) recording gusts to 71 mph.

## **27th to 31st**

Rain reached the west early on the 27th and spread eastwards, becoming occasionally heavy, with snow over higher ground, then turning showery through the afternoon. After a dry start on the 28th, rain spread from the south-west from mid-morning, becoming heavy at times and covering all areas by mid-afternoon. The morning of the 29th saw showers for the central belt and drier conditions elsewhere, but spells of rain developed in the west and spread east through the afternoon to reach all but the north-east by dusk, Barwillanty House (Kirkcudbrightshire) measuring 62.0 mm. Widespread, locally heavy and persistent rain, with snow for the north, moved erratically eastwards on the 30th, turning more showery into the afternoon but continuing for much of the day. The 31st began dry, bright and frosty for central and northern parts, with rain for the far north lasting for most of the day but turning showery later, and rain over the Borders becoming heavier and more persistent into the afternoon.

## **Northern Ireland diary of highlights**

**The month was colder than average overall, with an increasingly cold spell until the 17th followed by rather milder conditions. The cold weather brought little rain, but it was rather wetter in the latter two weeks.**

The mean temperature for the month was 1.3 °C below average. Most of the Province was rather dry, with 74% of average rainfall, and sunshine totals amounted to 134% of average, the south being sunniest relative to normal.

### **1st to 7th**

After a mild night, Murlough and Killowen (both Down) getting no lower than 9.5 °C, the 1st continued mild and generally cloudy with patchy light rain in places. The 2nd was similar, with patchy light rain mainly near coasts, but a few sunny spells in the far south. Rain was persistent over the far west on the 3rd, with isolated showers elsewhere. The 4th was brighter, any showers mostly in the south. There were scattered showers on the 5th and 6th, the latter being generally more cloudy. Some areas began frosty on the 7th, which was a cloudy day with scattered showers, some wintry.

### **8th to 17th**

Temperatures dropped markedly during this period. Showers were wintry at times on the 8th, but died out to leave a sunny afternoon. The 9th saw some freezing fog patches in the west, slow to clear, then some sunshine, Katesbridge (Down) sunniest with 6.4 hours, but with wintry showers in the north. It began cold and clear on the 10th, which was another bright day with scattered wintry showers, and the 11th was a very similar day. There was some patchy freezing fog on the 12th, lasting all day in some spots, otherwise generally dry and cold but with wintry showers skirting the east coast occasionally through the day, and temperatures at Castlederg (Tyrone) and Thomastown (Fermanagh) struggling to only -2.2 °C. The 13th was again mostly fine and very cold, with scattered wintry showers. Temperatures at Castlederg (Tyrone) fell to -9.7 °C early on the 14th, which was mainly sunny with the odd wintry shower. The 15th brought sunshine and wintry showers, with Trassey (Down) and Lough Fea (Londonderry) both reporting 4 cm of lying snow. The 16th was sunny in the south, but cloudier in the north with wintry showers. The 17th was again fine and sunny for many, but with a few showers for the north, still with 4 cm of lying snow at Trassey.

### **18th to 31st**

It was much milder on the 18th, Magilligan (Londonderry) reaching 13.9 °C, but also cloudy, wet and windy with rain crossing all of the Province, clearing away by early evening, Magilligan also windiest with gusts to 56 mph. The 19th was mild and wet too, with rain affecting all parts through the day, clearing away after dark, Magilligan again reaching 13.9 °C. The 20th was brighter with

scattered showers. The 21st was blustery, with showers, heaviest and most frequent over the north and west, and gusts to 56 mph at Ballypatrick (Antrim). Remnants of overnight rain cleared the south-east early on the 22nd, then it was generally cloudy, with just isolated showers in the west. The 23rd started dry, with some mist and fog for central parts, but rain spread northwards through the morning, becoming locally heavy, then clearing from the south during the afternoon with scattered showers developing. After a dry start, showery rain, some of it heavy, developed over western areas from mid-morning, and over southern and eastern counties during the afternoon, with isolated thunderstorms. Christmas Day was wet and windy, with showers during the morning and rain spreading from the west during the afternoon, becoming widespread and heavy at times. There was some sunshine on the 26th, but also blustery, locally heavy and prolonged showers, wintry at times and with isolated thunderstorms. Widespread rain cleared away eastwards during the morning of the 27th, followed by showers or patchy rain. A wet morning on the 28th, with widespread and occasionally heavy rain, was followed by drier weather in the afternoon with scattered showers. The 29th saw widespread, occasionally heavy and prolonged showers in the morning, but became much drier and brighter in the afternoon with only isolated showers, Trassey (Down) having recorded 60.3 mm by then. Heavy overnight rain cleared away during the morning of the 30th, then the afternoon was brighter with only scattered showers. It was generally dull and wet on the 31st with prolonged periods of rain everywhere, heavy at times.