

KENT FLOOD RISK MANAGEMENT COMMITTEE

Wednesday, 9th November, 2022

2.00 pm

**Council Chamber, Sessions House, County Hall,
Maidstone**





AGENDA

KENT FLOOD RISK MANAGEMENT COMMITTEE

Wednesday, 9th November, 2022, at 2.00 pm Ask for: **Matt Dentten**

Council Chamber, Sessions House, County Hall, Maidstone Telephone **03000 414534**

Membership (7)

Conservative (5): Mr A R Hills (Chairman), Mr N J Collor, Ms M McArthur,
Mr A Weatherhead and Ms L Wright

Labour (1): Mr B H Lewis

Liberal Democrat (1): Mr M J Sole

UNRESTRICTED ITEMS

(During these items the meeting is likely to be open to the public)

1. Introduction/Webcast announcement
2. Apologies and Substitutes
3. Declarations of Interest
4. Minutes of the meeting held on 5 July 2022 (Pages 1 - 4)
5. Storm Overflows, Pollution and Pathfinder Projects - Presentation by Southern Water
6. Highways Drainage Systems - Presentation by KCC Highways
7. Sea Defence and Low Carbon Solutions - Presentation by the Environment Agency
8. Environment Agency and Met Office Alerts and Warnings and KCC severe weather response activity (Pages 5 - 12)
9. Other items which the Chairman decides are Urgent

EXEMPT ITEMS

(At the time of preparing the agenda there were no exempt items. During any such items which may arise the meeting is likely NOT to be open to the public)

Benjamin Watts
General Counsel
03000 416814

Tuesday, 1 November 2022

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KENT COUNTY COUNCIL

KENT FLOOD RISK MANAGEMENT COMMITTEE

MINUTES of a meeting of the Kent Flood Risk Management Committee held in the Council Chamber, Sessions House, County Hall, Maidstone on Tuesday, 5 July 2022.

PRESENT: Mr A R Hills (Chairman), Ms M Dawkins, Mr M Dendor, Ms M McArthur, Mr M J Sole, Mr A Weatherhead, Mr S McGregor (Sevenoaks DC), Mr G Brooker (Kent Fire and Rescue) and Mr C Mackonochie (KALC)

ALSO PRESENT: Mr M Hood

IN ATTENDANCE: Mr M Tant (Flood and Water Manager), Mr T Harwood (Resilience and Emergency Planning Manager), Miss K Reynolds (Democratic Services Officer) and Mr G Romagnuolo (Research Officer - Overview and Scrutiny), Mr D Murphy (Southern Water) and Mr B Thompson (Natural England)

UNRESTRICTED ITEMS

9. Membership
(Item 3)

RESOLVED to note that Mr Andy Weatherhead had replaced Mrs Lottie Parfitt-Reid as a member of the committee.

10. Declarations of Interest by Members in items on the Agenda
(Item 4)

There were no declarations of interest.

11. Minutes of the meeting held on 9 March 2022
(Item 5)

RESOLVED that the minutes of the meeting of the Kent Flood Risk Management Committee held on 9 March 2022 are correctly recorded and that they be signed by the chairman.

12. Catchment Management Farming - Presentation by Natural England
(Item 6)

(1) Mr Ben Thompson from Natural England gave a presentation. The slides can be viewed on the KCC website page for this meeting. Mr Thompson began his presentation by saying that restoration practices had positive impacts on natural flood management.

(2) Mr Thompson described the roles and structure of the Farm Advice Team at Natural England. He highlighted the two strands of work delivered by the Farm Advisors: Land Management Advice and Catchment Sensitive Farming. It was

said that this work was expanding in Kent due to an uplift in funding from the Department for Environment, Food and Rural Affairs (Defra).

(3) Mr Thompson provided an overview of the Marden Project area as an example of delivering holistic natural farm management potential through Farm Advice work. He highlighted the work undertaken to restore soil quality and improve the percentage of soil organic matter. This was said to improve water infiltration rates and capacity for natural flood management. The Farm Advice work included the restoration of species rich grassland, establishment of flower rich margins and winter bird plots with no herbicides or pesticides.

(4) In response to questions from Members it was said that:

- (i) There were financial incentives for farmers to enter into a five-year agreement with Natural England.
- (ii) A priority farm list had been developed based on water quality assessments. This informed decisions to target specific farms through the Catchment Management Farming scheme. It was also said that Natural England engage with farmers who express interest in the scheme.
- (iii) On-farm meetings and demonstrations were found to be the most successful promotion activities for the benefits of these farming methods. Having one-to-one advisors on site during these meetings was considered a key way to develop connections with farmers.

(5) RESOLVED to note the content of the presentation.

13. Drainage and Wastewater Management Plans - Presentation by Southern Water (Item 7)

(1) Mr David Murphy from Southern Water gave a presentation. The slides can be viewed on the KCC website page for this meeting.

(2) Mr Murphy said that the Drainage and Wastewater Management plans had been finalised since the November meeting of the Kent Flood Risk Management Committee. He said that these plans were informed by the risks associated with the current drainage and wastewater management systems and accounted for long-term challenges such as climate change, population growth, environmental capacity, and affordability.

(3) Mr Murphy said that Southern Water's modelling suggested that the number of homes at risk of sewer flooding could double by 2050. The end-of-pipe solutions included underground storage tanks placed at strategic locations. However, these were only effective at the local level. Therefore, there was a requirement for strategic, system-wide investments into Southern Water infrastructure. Mr Murphy said that these investments included optimising existing infrastructure through the use of smart technology and improving customer awareness of the correct disposal of products that cause blockages.

(4) Mr Murphy also said that installing sustainable drainage systems was a viable catchment-based solution to sewer flooding and storm overflows. He

emphasised the necessity of improving water run-off systems in new housing stock through green roofs, permeable paving and wetlands.

(5) Mr Murphy encouraged Members to respond to the public consultation on the Southern Water's Regional (Level 1) Drainage and Wastewater Management Plan available at: <https://www.southernwater.co.uk/dwmp>. The public consultation ran from Monday 13 June through to Monday 5 September 2022.

(6) In response to questions from Members it was said that:

- (i) Southern Water was not a statutory consultee on planning applications. However, they had issued a sustainable development policy highlighting the issues of rainwater run-off management. Mr Murphy said that collective power through collaboration with various stakeholders, including local planning authorities, could improve drainage and wastewater management in the urban environment.
- (ii) Improving the capture and usage of rainwater was important for reducing the proportion of rainwater flow in combined sewers. Additionally, reducing the rainwater in the system would decrease the carbon and energy costs involved in water treatment because the biological treatment processes worked more efficiently on concentrated wastewater. However, Mr Murphy said that Southern Water acknowledged the challenge of encouraging retrofitting in older housing stock to achieve this improved rainwater management.

(7) RESOLVED to note the content of the presentation.

14. Highways Maintenance Update for Winter 2021/22 - Presentation
(Item 8)

This agenda item was deferred to a future Kent Flood Risk Management Committee meeting.

15. Introduction to the work of the KCC Sustainable Drainage Team - Presentation
(Item 9)

This agenda item was deferred to a future Kent Flood Risk Management Committee meeting.

16. Environment Agency and Met Office Alerts and Warnings and KCC severe weather response activity
(Item 10)

(1) Mr Tony Harwood introduced the report which provided an update on the current water situation, weather statistics, Environment Agency (EA) and Met Office Warnings, and flood response activity since the last meeting of the Committee on 9th March 2022.

(2) It was highlighted that Kent had experienced another unusually dry March and April in 2022, following a similar pattern to that established in 2020 and 2021. There were no flood alerts or warning issued by the EA since the last meeting

of the Committee. This contrasted with the 11 flood alerts in the corresponding period in 2021.

- (3) In response to questions from Members it was stated that there were annual tetrad surveys being undertaken in east, mid and west Kent to establish the impact of climatic and disease stresses on native tree species. The Committee was assured that tree species indigenous to Kent were in fact resilient to the warmer climates of southern Europe.
- (4) RESOLVED to note the warnings received since the last meeting of the Committee; and contribute to planning and response policy and practice through oversight and debate.

To: Kent Flood Risk Management Committee – 9th November 2022

From: Rebecca Spore, Director of Infrastructure, Deputy Chief Executive's Department

Subject: Environment Agency and Met Office Alerts and Warnings and KCC severe weather response activity.

Classification: Unrestricted

Summary: To update Kent Flood Risk Management Committee on the current water situation, weather statistics, Environment Agency and Met Office Warnings, and flood response activity since the last meeting of the Committee on 5th July 2022.

1. Background

- 1.1 This report is the latest of the regular updates to the Committee addressing the current water situation and severe weather and flood response activity.
- 1.2 The KCC Resilience and Emergency Planning Service Duty Emergency Planning Officer (DEPO) and Contact Point receive Environment Agency (EA) and Met Office alerts and warnings regarding severe weather on a 24/7 basis. Any site-specific severe weather impacts are notified to the DEPO by the emergency services and other resilience partners, with reports from the public received by Contact Point and passed on to the DEPO and/or Kent Highways. DEPO further initiates multiagency reporting using the County Council's innovative Severe Weather Impacts System (SWIMS) to capture resources and costs arising from severe weather incidents.
- 1.3 Some 85,500 residential and commercial addresses across Kent are located within areas identified as at risk from fluvial (river) or tidal (coastal) flooding. Where possible, flood vulnerable properties are offered a Flood Warning Service by the EA. Early warning of flood risk to communities (including areas outside of floodplains) is delivered through Flood Guidance Statements, Severe Weather Warnings and mobilisation of the Kent Resilience Forum (KRF) Severe Weather Advisory Group (SWAG).

2. Kent water situation and weather statistics

- 2.1 Kent experienced an unusually dry spring in 2022, following a pattern established in 2020 and 2021, with this trend continuing into the summer. July saw the lowest monthly rainfall total on record for the county at just 11% of long-term average.¹ The month also witnessed record breaking temperatures,

¹ Please see appendix 1

exceeding 39 C in parts of the county, with an overall mean maximum temperature +2.8 C above the long-term average. The Met Office issued unprecedented Red Severe Weather and Level 4 Health Health Warnings on 15th July.

- 2.2 July's hot weather triggered widespread and sometimes prolonged water outages, which resulted from increased household demand, ground settlement and subsidence damaging pipework and associated technical faults impacting pumps and other infrastructure. Kent County Council worked proactively with the water utilities, Kent Districts and other partners establishing and chairing multiagency emergency management structures and ensuring affected communities, and especially potentially vulnerable individuals and groups, gained access to showers and bottled water, alongside other appropriate support interventions
- 2.3 Vegetation and crop fires also proliferated as temperatures rose and the county's landscape became tinder dry. Kent Fire and Rescue responded to more than 400 such fires in July. Some of the most significant conflagrations were seen in the Dartford area on the afternoon of 19th July, where more than 150 firefighters tackled vegetation fires in record-breaking heat. Road closures, public warning and informing campaigns, evacuation of at risk residential and commercial neighbourhoods and movement of livestock and horses to safer areas all added to the scale and complexity of the local fire-fighting response.
- 2.4 August was another hot and dry month, with a rainfall total in Kent equating to 54% of the long-term average and a mean temperature +3.1 C above the norm. It also saw the National Drought Group declare official drought conditions across parts of England, including Kent, on the 12th of that month. 'Temporary Use Bans' were introduced by South East Water on 12th and by Thames Water on 24th August.
- 2.5 In contrast, September was a wetter than average month and saw rainfall totals at 153% of long-term average, with temperatures +0.4% above the norm.
- 2.6 October has seen a return to unseasonably dry and warm weather conditions, with rainfall just 64% of the average and temperatures +2.6 C above the long-term figure for this month. However, October did see a number of storms accompanied by intense rainfall events, which resulted in localised highway and surface water flooding. On the morning of 20th October, torrential rain saw a recurrence of sewage pollution that affected a key pedestrian route for local schools and rail stations in Maidstone town centre.
- 2.7 The latest data available from the Environment Agency indicates that local river flows have recovered to some extent from the paucity of rainfall in the spring and summer months. The Rother and Upper Stour (predominantly rainfall fed)

have **normal** and **below normal** flows respectively. Rivers supported by chalk groundwater have **below normal** flows (the Darent, Great Stour and Dour). Navigation has now returned to normal self-service lock operation at all locks on Kent rivers. Further, long-awaited Allington Sluice gate repairs on the River Medway have now begun, after being on hold over the summer to reduce water loss.

- 2.8 Autumn has seen a reduction in the number of reports of fish kills and algal blooms/crashes in Kent's rivers, streams and other water bodies, exacerbated by prevailing low flows and reduced dilution of pollutants. The ecology of Kent's rivers, streams, ponds and other wetlands will inevitably take time to recover something approaching their former biodiversity following the current drought event.
- 2.9 Groundwater levels are generally much lower than is normal for November. Levels continue to **fall** at most key indicator sites, although some sites are now showing signs of stabilisation and recovery. Levels in the Chalk aquifers vary largely, ranging from **exceptionally low** to **normal**, while levels in the Lower Greensand aquifers are **below normal**. Abstraction licence constraints for agriculture and other groundwater users remain active across all Kent catchments. Targeted Environment Agency enforcement visits continue, with 32 drought-related visits in recent weeks.
- 2.10 Levels at Bough Beech and Bewl reservoirs are currently **notably low** and **below normal** respectively.
- 2.11 Nine flood alerts were issued by the EA since the last meeting of the Committee (four fluvial and five coastal)². This contrasts with 43 flood alerts and one warnings (26 fluvial and 18 coastal) in the corresponding period in 2021.
- 2.12 The Met Office issued 31 weather warnings covering Kent between June and October 2022 (21 yellow warnings and one amber warning for thunderstorms, four amber warnings and one red for extreme heat, three yellow warnings for rain and one yellow warning for wind).³ This contrasts with 41 Met Office weather warnings 2021 (11 yellow warnings and one amber warning for thunderstorms, 15 yellow warnings and one amber for rain, three yellow warnings for rain, two yellow warnings for wind and rain and one yellow warning for fog) in the corresponding period last year.
- 2.13 The Thames Barrier was closed on three occasions since the last meeting of the Committee in July (all for test purposes).³ The figure for the corresponding period last year was four (three for flood defence and one for test purposes).

² Please see appendix 2

³ Please see appendix 3

³ Please see appendix 4

3. Outlook

- 3.1 The Met Office three month outlook summary indicates a 25% chance that November to January will be cooler than average, a 60% chance that it will be near average and a 15% chance that it will be milder than average. In terms of rainfall, the summary indicates a 25% chance the season will be drier than average, 65% chance that it will be near average and a 10% chance it will be wetter than average. Stormy conditions, and impacts from high winds, are less likely than normal.⁴
- 3.2 The EA continuously runs surge forecasts, informed by astronomical tide calculations. If a risk of coastal flooding is forecast, then this information is communicated to partners. Indeed, the next notably high equinoctial spring tides, with a corresponding elevated risk of coastal flooding, if in combination with high winds, are forecast for 7th to 9th and 24th to 26th November and 24th to 26th December. However, coastal flooding can still occur outside of high spring tides, as a consequence of a storm or breach of defences.
- 3.3 To support local contingency planning for flood response, Exercise Manu took place on 4th November and tested the county council's recently updated Flood Response Emergency Plan.
- 3.4 Kent Flood Risk Management Committee will continue to receive regular updates on water resources, flood alerts, weather warnings and response.

4. Recommendations

- 4.1 The Committee is asked to note the warnings received since the last meeting of the Committee; and contribute to planning and response policy and practice through oversight and debate.

5. Contact Details

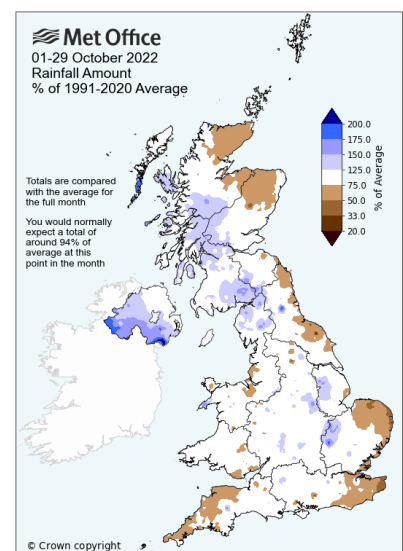
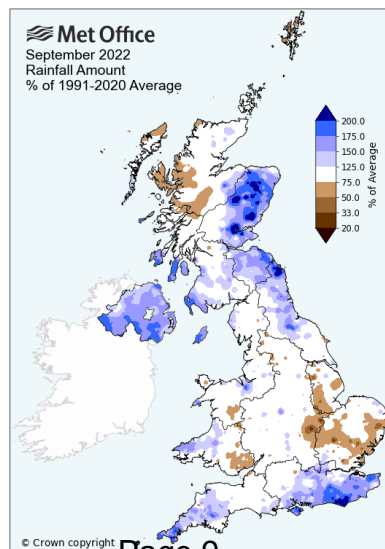
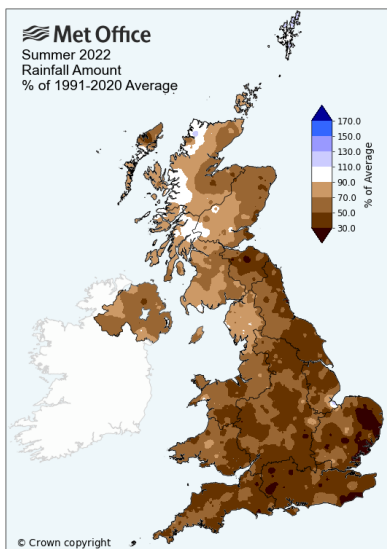
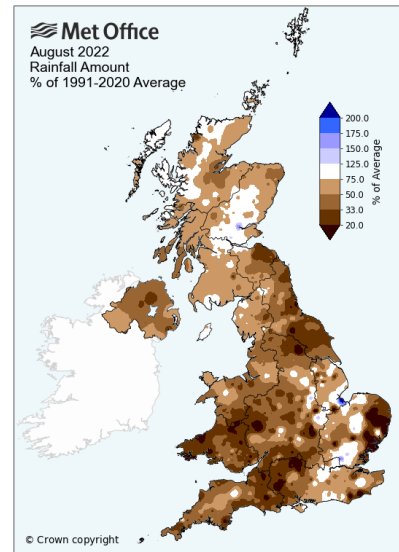
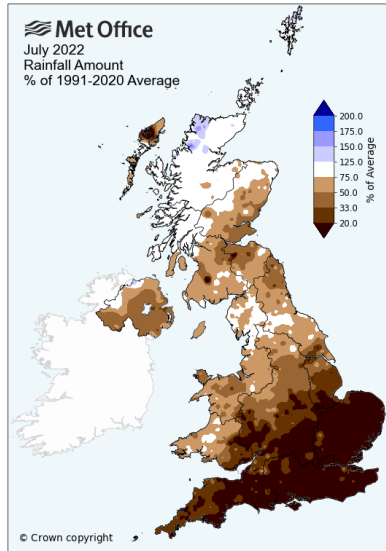
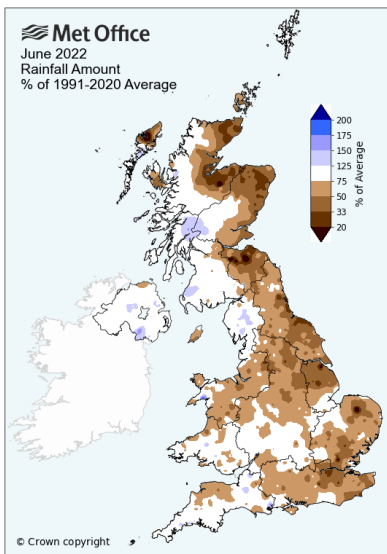
Report Author: Tony Harwood (Resilience and Emergency Planning Manager), Infrastructure, Deputy Chief Executive's Department, tel. 03000 413 386, e-mail tony.harwood@kent.gov.uk

Relevant Director: Rebecca Spore (Director of Infrastructure), Deputy Chief Executive's Department tel. 03000 412 064, email rebecca.spore@kent.gov.uk

⁴ Please see appendix 5

Appendix 1: Kent Rainfall Statistics – June to October 2022

| Month | Rain | Mean Max Temp |
|-------------------------|------------|---------------|
| June | 51% | +0.9 C |
| July | 11% | +2.8 C |
| August | 54% | +3.1 C |
| September | 153% | +0.4 C |
| October (1-29) | 64% | +2.6 C |
| Summer (Jun-Aug) | 40% | +2.3 C |



Appendix 2: EA Flood Alerts and Warnings issued since 5th July 2022

| Date issued | Flood Zone | Status |
|-------------|-----------------------------------------------------------------------------------|--------|
| 18/08/2022 | Shuttle and Cray | Alert |
| 25/08/2022 | Shuttle and Cray | Alert |
| 09/09/2022 | Shuttle and Cray | Alert |
| 10/09/2022 | Lower Stour | Alert |
| 13/09/2022 | Coast from St Margaret's at Cliffe to Sandgate | Alert |
| 13/09/2022 | Coast from Ramsgate to Kingsdown | Alert |
| 13/09/2022 | Isle of Sheppey and Coast from Kemsley to Seasalter | Alert |
| 24/09/2022 | Tidal Thames riverside from Dartford Creek and The Mardyke to the Thames Barrier. | Alert |
| 11/10/2022 | Isle of Sheppey and Coast from Kemsley to Seasalter | Alert |

Appendix 3: Met Office Severe Weather Warnings - June to November 2022

| Weather Element | Number of Warnings | No of Different Events | Dates covered by Events |
|-----------------|--------------------|------------------------|----------------------------------------------------------------------------------------------------------------------------|
| Thunderstorm | 22 | 14 | June: 03-05, 23 July: 20 August: 15-18 (Amber on 17 th), 24 September: 04-06, 08-09 October: 23-24 |
| Extreme Heat | 5 | 2 | July: Amber 16-19, Red 17-19 August: Amber 10-14 |
| Rain | 3 | 2 | September: 23-24 October / November: 31-01 |
| Wind | 1 | 1 | 1 November |

Appendix 4: Environment Agency Thames Barrier closures since 5th July 2022

| Thames Barrier closures | Date | Status |
|-------------------------|------------|--------|
| Thames Barrier closed | 18/07/2022 | Test |
| Thames Barrier closed | 18/08/2022 | Test |
| Thames Barrier closed | 24/09/2022 | Test |

Appendix 5 – 3 month outlook – November to January

Temperature: Precipitation:



Wind:



Summary:

- The likelihood of a colder 3 month period overall is slightly greater than normal
- There is a reduced chance of wet conditions and impacts from heavy rainfall
- Chances of dry conditions are greater than normal
- Stormy conditions and impacts from high winds are less likely than normal

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