

**To:** Kent Flood Risk Management Committee – 9<sup>th</sup> March 2022

**From:** Rebecca Spore, Director of Infrastructure, Strategic and Corporate Services

**Subject:** Storms Eunice and Franklin 18<sup>th</sup> – 21<sup>st</sup> February 2022

**Classification:** Unrestricted

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**Summary:** This report describes the impacts upon Kent’s communities, infrastructure and natural environment arising from named Storms Eunice and Franklin. Local preparation, response and recovery are also addressed, alongside the structured debrief framework that will ensure lessons are learned and assimilated into county council and partner policy and practice.

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## **1. Background**

1.1 The period between the 18<sup>th</sup> and 21<sup>st</sup> February 2022 saw the county battered by two damaging named storms:<sup>1</sup>

- **Storm Eunice** struck on Friday 18<sup>th</sup> and was the first-ever Red Severe Weather Warning issued by the Met Office for Southeast England. Wind speeds of 77mph were recorded at Langdon Bay and Manston, and significant damage to trees and structures contributed to the widespread and prolonged disruption of local transport, electricity, water, and information communications technology (ICT) networks.
- **Storm Franklin** was active between Sunday 20<sup>th</sup> and Monday 21<sup>st</sup> with wind speeds of 62 mph recorded at Manston. This storm saw the Met Office issue a Yellow Severe Weather Warning, compounded damage to trees and structures, disrupted recovery operations and drove a North Sea storm surge which resulted in localised tidal flooding impacts.

1.2 The threat and risk to Kent associated with Storm Eunice was starkly framed by Met Office colleagues’ comparisons between the forecast Storm Eunice and the destructive power of the Burns’ Day storm of 25<sup>th</sup> – 26<sup>th</sup> January 1990. It is also worthy of note that Storm Dudley preceded Storm Eunice, arriving in the British Isles on 16<sup>th</sup> February, but having far less of an impact on Kent.

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<sup>1</sup> Please see appendix 1

## **2. Preparation**

- 2.1 Early intelligence on the coming storm was received by the County Council and our Kent Resilience Forum (KRF) partners on Monday 14<sup>th</sup> February, in the form of a Yellow Met Office Severe Weather Warning for high winds, forecast to arrive on Friday 18<sup>th</sup>. This Warning was upgraded to Amber on Wednesday 16<sup>th</sup> and ultimately to Red, at 03:50 on Friday 18<sup>th</sup>. KCC Communications issued five media updates following the initial forecast of stormy weather on 14<sup>th</sup> February. These updates served to warn and inform, and summarise partner agency roles and responsibilities, to help keep communities safe.
- 2.2 Equipped with this vital early warning, the County Council convened the first in a series of multiagency SWAG (Severe Weather Advisory Group) meetings on Tuesday 15<sup>th</sup> February, chaired initially by Pauline Harmer, KCC Highways Senior Duty Officer. The KRF Severe Weather Framework confirms county council responsibility for chairing and providing secretariat for this group whenever a significant storm is forecast - for flooding the Environment Agency (EA) performs these roles.
- 2.3 The SWAG continued to meet daily to coordinate KRF partners' contingencies for the arrival of the storm until Thursday 17<sup>th</sup> when the group was upgraded to a Tactical Coordinating Group (TCG) and meeting frequency increased to twice daily. The TCG was chaired by Toby Howe, KCC Highways Senior Duty Officer, with secretariat provided by the County Council's Resilience and Emergency Planning Service. Media and communications activity for the forecast severe weather was also led and coordinated by KCC.
- 2.4 Preparations by KRF partners, including the emergency services, local authorities, NHS, EA, utilities, ports, and other transport providers, all supported by the SWAG and TCG, included rostering of additional personnel, pre-positioning of equipment, and ensuring appropriate public and stakeholder warning and informing messaging. The County Emergency Centre at Invicta House, County Hall was opened early on the morning of Friday 18<sup>th</sup> to support command and control, including oversight of business continuity impacts upon KCC services, buildings, ICT, and other infrastructure.

## **3. Impact and Response**

- 3.1 The initial local impacts of Storm Eunice began late on Thursday 17<sup>th</sup> into the morning of Friday 18<sup>th</sup>, with isolated power outages reported from some rural locations, including Stile Bridge at Linton on the Low Weald, where UK Power Networks (UKPN) intervened quickly to restore supply. The QEII Bridge at the Dartford Crossing was closed from 05:00 on Friday morning, with southbound traffic diverted through the east bore tunnel, and reduced speed limits imposed

on trains. Around Kent's coastline, shipping made for anchorages in sheltered coastal waters.

- 3.2 However, the full force of the storm struck from around 10:00, when damage to trees and structures such as scaffolding, hoardings and roofs, and high-sided vehicles began to be widely reported. The risk posed by wind-blown debris led to the suspension of higher-risk services, including household waste sites and some refuse collection rounds. Ferry services at Port of Dover were also suspended at this time, resulting in congestion in and around Dover which was carefully managed due to the risk to high-sided vehicles from strong winds.
- 3.3 The ferocity of Storm Eunice at its height was such that operations to clear the transport network and undertake utility repairs were temporarily suspended. Rail services, including Eurotunnel, also effectively ceased in the County, with fallen trees and other debris blocking lines and commuters stranded at stations across Kent and London.
- 3.4 The damaging wind speeds associated with Storm Eunice gradually weakened from around 15:00 on the afternoon of Friday 17<sup>th</sup>, enabling an assessment of damage and mobilisation of resources to restore transport, power, and other critical infrastructure.
- 3.5 Local impacts included the evacuation of residential and commercial properties at risk from structural damage and unsafe trees, some 71,000 properties and much critical infrastructure was affected by power outages, including several water treatment and pumping stations. Identifying and providing appropriate support for vulnerable people and communities without power and often water supply, was a key priority. Residential care, children's and respite care centres, alongside accommodation for unaccompanied asylum-seeking children and Afghan refugees, were amongst the locations affected by outages. The County Council initiated and chaired a Vulnerable People and Communities Cell to support necessary identification and outreach.
- 3.6 This period of respite was short-lived, as strong gusts and squally rain associated with Storm Franklin arrived through the afternoon of Sunday 20<sup>th</sup> and into Monday 21<sup>st</sup>. Further damage to trees and other structures occurred and clean-up and utility restoration activity was disrupted.
- 3.7 However, the most significant impact upon the county from Storm Franklin related to the storm surge it drove into the southern North Sea. The Thames Barrier was closed, and tidal flooding occurred at locations along the North Kent coast during the afternoon of Monday 21<sup>st</sup>, including at Gravesend, Chatham, Gillingham, Faversham and the Isle of Sheppey. Inundation of commercial premises and trapped vehicles necessitated water rescue interventions by Kent

Fire and Rescue Service. EA modelling had struggled with the complexity of the prevailing storm conditions and as a result Flood Warnings were not issued until some flood impacts were already being felt.

- 3.8 The scale of the local response required during Storms Eunice and Franklin was unprecedented, with Kent Highways receiving 3,262 enquiries from the public and stakeholders, including 1,233 emergency alerts (such as debris on A roads), 661 reports of dangerous trees and 160 contacts regarding drainage matters. Kent Highways had more than 50 crews involved in clean-up operations, supported by Kent Voluntary Sector Emergency Group (KVSEG) partners, including SE 4x4, and undertook proactive inspections of tree safety along major routes. KCC Resilience and Emergency Planning Service also received 70 alerts to individual emergency situations developing across the county between the 18<sup>th</sup> and 21<sup>st</sup> February.

#### **4. Recovery, Clean-up and Lessons Learned**

- 4.1 Restoration of power, water and ICT and the clearing of unsafe trees and wind-blown debris from the local road and rail network continued into Wednesday 23<sup>rd</sup>, with some more complex impacts taking well beyond this date to fully resolve. Making safe, isolating power supply, and ensuring appropriate security provision for damaged buildings has been another priority for local partners.
- 4.2 A key concern arising from the storms is the risk from rogue traders looking to profit from others' misfortune. To counter rogue trader activity, helpful hints have been posted across partners' social media and other briefings, while KCC Trading Standards has provided interviews on local media. Advice on making insurance claims has also been shared by the Association of British Insurers, which includes keeping any emergency repair receipts and not automatically throwing away damaged items.
- 4.3 Though detailed figures have yet to be fully calculated, the cost to KCC and its partners for preparation, response and recovery to these damaging storms will be significant. All costs accrued, whether that be in relation to staff resources, materials, and contractors, will be borne by individual organisations. The Severe Weather Impacts Monitoring System (SWIMS) will assist with the collation of these costs by the County Council and our partners.
- 4.4 The Department of Levelling Up, Housing and Communities (DLUHC) administers the Bellwin Scheme of Emergency Financial Assistance to support emergency response activity. However, there is no automatic entitlement to financial assistance under this scheme. Ministers are empowered by section 155 of the Local Government and Housing Act 1989 to decide whether to activate the scheme after considering the circumstances of each individual

case. In cases where criteria of the scheme are met, the grant is normally payable to authorities at 85% of eligible costs incurred above a threshold set for each authority (for KCC this remains £1,764,324). The Bellwin scheme is intended to reimburse the cost of local authority actions taken in the immediate phase of an emergency, not those taken as part of the recovery. It appears unlikely that costs to the County Council arising from the response to Storms Eunice and Franklin will reach this threshold.

- 4.5 As both frequency and intensity of severe weather events accelerate, managing resultant cumulative budgetary impacts will likely become an increasingly significant element of financial planning and climate change adaptation work.
- 4.6 Kent County Council undertook its own internal debrief to capture lessons learned from the storms on 1<sup>st</sup> March and a multiagency KRF debrief is scheduled for 10<sup>th</sup> March.

## **5. Recommendations**

- 5.1 That Members note the report and contribute to lessons learned through oversight and debate.

## **6. Contact Details**

**Report Author:** Tony Harwood (Resilience and Emergency Planning Manager), Infrastructure, Strategic and Corporate Services, tel. 03000 413 386, e-mail [tony.harwood@kent.gov.uk](mailto:tony.harwood@kent.gov.uk)

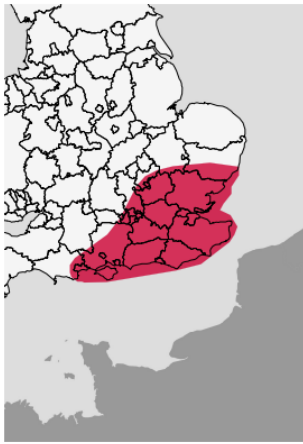
**Relevant Director:** Rebecca Spore (Director of Infrastructure), Strategic and Corporate Services tel. 03000 412 064, email [rebecca.spore@kent.gov.uk](mailto:rebecca.spore@kent.gov.uk)

# Appendix 1: Met Office Forecasts and Speeds for Storms Eunice and Franklin

## Storm Eunice 18<sup>th</sup> February

**Red warning Wind**

Between **10:00 Fri 18 Feb 2022** and **15:00 Fri 18 Feb 2022**




**Storm Eunice causing significant disruption and dangerous conditions due to extremely strong winds on Friday**

**What to expect**

- Flying debris resulting in danger to life
- Damage to buildings and homes, with roofs blown off and power lines brought down
- Roads, bridges and railway lines closed, with delays and cancellations to bus, train, ferry services and flights
- Power cuts affecting other services, such as mobile phone coverage
- Large waves and beach material being thrown onto coastal roads, sea fronts and homes

**Further details**

Extremely strong west to southwesterly winds will develop mid morning on Friday, transferring eastwards across southern and southeast England through the middle of the day then slowly easing from the west during the afternoon. Gusts of 60-70 mph are likely widely, perhaps briefly 80 mph in a few places, mainly on English Channel coasts.



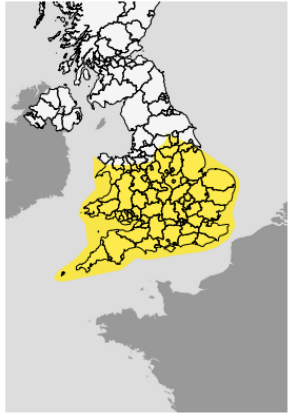
High likelihood of high impacts

**Storm Eunice saw the first ever Red wind warning issued for south-east England**  
**Max wind speed: 77mph at Langdon Bay & Manston**

## Storm Franklin 20<sup>th</sup> – 21<sup>st</sup> February

**Yellow warning Wind**

Between **12:00 Sun 20 Feb 2022** and **15:00 Mon 21 Feb 2022**



**Further periods of strong winds are expected across much of England and Wales on Sunday and Monday which may cause some disruption.**


**What to expect**

- Some delays to road, rail, and ferry transport are likely.
- Delays or restrictions for high-sided vehicles on exposed routes and bridges likely.
- It's likely that some coastal routes, sea fronts and coastal communities will be affected by spray and/or large waves.
- Some damage to infrastructure and trees/branches is possible, especially where made more vulnerable by Storm Eunice.
- Power outages are possible, and efforts to restore power to areas which have had interrupted supply in the wake of Storm Eunice are likely to be hampered.

**Further details**

Winds are likely to strengthen across England and Wales ahead of a band of rain, which itself will turn increasingly squally, as it moves southeast on Sunday afternoon. Gusts of 55-60 mph are expected widely around south and west facing coasts, some of which may be more vulnerable than usual in the aftermath of Storm Eunice. Some places inland may see similar strength gusts, and on the squally rain band itself, gusts potentially as high as 70 mph.

Blustery showers will follow with further gusts of 60-70 mph mainly confined to coastal areas in the west during Sunday evening.



Medium likelihood of low impacts

**Max wind speed: 62mph at Manston**