

Monitoring the Impacts of Severe Weather

Full Report for 2019

SWIMS Summary 2019



Torrington Road Bridge Footpath in Ashford.
November 2019. Image by Glyn Davies.

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Introduction

The Severe Weather Impacts Monitoring System (SWIMS)¹ is a decision-support tool that can be used by any public service provider in Kent and Medway to capture the impacts of severe weather events on their service. The evidence-base collected can be used to better prepare their service for the future. This report summarises the impacts of severe weather on a number of public service providers in Kent and Medway during 2019, from data collected and recorded by services through SWIMS .

Summary of 2019	Costs
Events Logged	4
Cost to Service	£1325
Impact in Days	41
Buildings Affected	137
Staff affected ²	6
Calls Received	227
Residents Affected	0
Cost to Residents	£1000
Services Recording	14

Table 1 SWIMS Summary 2019

2019 SWIMS Events Overview

During 2019, there were 4 severe weather events logged (1 Low Temperature, 1 Heatwave and 2 Storms and Gales). Kent experienced an extended period of cold weather between 22nd and 31st January; the minimum temperature recorded was -4.9°C, 9.9°C lower than the 5°C average Kent temperature for January. The Met Office released a cold weather alert on the 31st January

¹ All data and figures in this report are based on actual and available data collected and recorded through the swims System as of 3rd March 2020

² Staff days are based on the average working day of 7.5 hours, week as 5 days and month as 20 days.

predicting a 90% chance of snow for the South East of England. Snow cover of 1-3cm was predicted for higher ground in the South East, 1cm was recorded at Manston Weather Station. This extended period of cold weather had minimal impacts across the county. However, as a result of the cold weather, power outages, disruption to internet access, and damage to property were reported, temporarily suspending some services in Kent.

Following on from this cold weather period, Kent experienced very wet weather in mid-June as a low-pressure system and associated fronts brought widespread and slow-moving heavy rainfall. The Met Office released an Amber warning for rain with flooding expected for the South East. The greatest amount of rainfall recorded in Kent during this period was at Enysford where 112.3mm between 10th – 13th June was recorded. Kent experienced damage to property and localised flooding as a result of the wet weather with some organisations receiving high call volumes from the public in relation to the weather.

Succeeding the heavy rainfall in June, Kent experienced a short but exceptional heatwave between 22nd – 26th July, with recorded daily maximum temperatures of 38.4°C in Faversham on 25th July³. During this period Faversham lost its title of holding the all-time UK highest temperature record to Cambridge. Faversham's recorded temperature on 25th July was only 0.3°C lower than Cambridge's record setting temperature of 38.7°C and is still 16.4°C higher than the average July monthly maximum temperature for the South East⁴. A summary of the events and costs recorded in 2019 is in table 2.

Summary of SWIMS Events logged and recorded costs in 2019		
22 – 23 January	Low Temperature	£0
10 – 11 June	Storms and Gales	£1250
22 – 26 July	Heatwave	£75
19 December – 1 January 2020	Storms and Gales	£1000
		Total: £2,325

Table 2 Summary of events and costs for 2019

Key Impacts

Calls – Between 18:00 and 01:00 on 10th June 2019, Kent Fire and Rescue Service received 154 calls for aid, of which 121 were directly related to the heavy rainfall. As a result of the calls Kent Fire and Rescue Service resources were mobilised to 40 incidents across the county. The areas that were most affected by the flooding were West Kingsdown, Vigo Village and Snodland, with Kent Fire and Rescue Service called to assist a stranded member of the public in West Kingsdown. Kent police received 73 calls relating to severe weather events for the same period of which all were related to surface water flooding, property and land damage. The calls received by Kent Police were mainly reporting incidents in Medway, Gravesend, Maidstone, Tonbridge, Tunbridge Wells and the strategic road network.

Property - In total 137 buildings were affected as a result of severe weather in 2019. Kent County Council experienced damage to properties throughout the year, with Tonbridge Adult Education Centre temporarily unable to use some units and classrooms due to roof leaks and flooded carpets and Gravesend Adult Education Centre experiencing a roof collapse and flooded corridors. In

³ [Met Office. July 2019. Record Breaking Heat-Wave.](#)

⁴ [Met Office. UK Climate Averages.](#)

addition, Folkestone Library experienced problems associated with water ingress leading to lift only access to the 11th floor of the Library and no first-floor access. The road into Ashford Highways Depot was also made inaccessible by flooding from the River Stour. Total repair costs for Kent County Council were approximately £1,075. Tonbridge and Malling Borough Council reported flooding of a residential buildings underground carpark which resulted in contractors having to jet wash the area to remove debris at a cost of £1000 to residents.

Disruption to Delivery – Multiple services were disrupted a result of severe weather affecting the county. Dover District Council experienced failure of multiple internal software systems as a result of heat overload during the heatwave in July. The systems were in the data centre at Thanet District Council and were brought back online within 24 hours. Kent County Council's Community Learning and Skills Service had to temporarily suspend and relocate classes at Tonbridge, Gillingham and Gravesend Adult Education Centres as a result of flood damage to classrooms. In addition, Tonbridge Adult Education Centre experienced a loss of internet access in January which resulted in a classroom unit being unusable. The loss of internet access was caused by too many temporary heaters being used as a result of heating loss in one block which caused a power outage that cut off power for 24 hours until the main fuse could be replaced by a contractor.

Furthermore, during the heatwave in July students from the Tonbridge Adult Education Centre had to sit exams in unventilated rooms due to the windows being unable to open. Community Learning and Skills used rooms from the University of Kent as a result. One member of staff from Public Protection fainted due to the heat and was sent home for the day. Additional staff covered her tasks, so service provision was not affected.

Kent County Council's Community Warden Service reduced the number of staff out engaging with Communities during the July Heatwave due to the high temperatures and possible health impacts to staff members.

Transport - During the 22-26 July heatwave, Dover Harbour Board experienced hydraulic oil overheating in one of the ferry berths due to high temperatures. As a result of this some ferries were moved in other available berths to reduce impact on passengers and sailings.

Customer Service – As a result of the heatwave in July, Dover District Council experienced IT system failures, in addition to the disruption to service delivery this caused, customer service was also affected due to public facing systems being down including those for planning applications and other online forms. Folkestone Library had to open late for one day as a member of staff's journey was disrupted due to flooding.

Known Financial Costs

Severe weather events during 2019 saw financial impacts on Kent's services and residents totalling £2,325⁵ reported through SWIMS. Documented costs incurred by SWIMS users included:

- Kent County Council's Community Learning and Skills Service incurred £1,075 of costs for repairs and maintenance to several Adult Education and Community Learning and Skills Centres across the county. Repairs included replacing carpets and repairing ceilings due to flood damage.

⁵ All figures reported are based on available data recorded on the system as of 3rd March 2020

- Swale Borough Council's Property Service incurred £250 of costs to repair a building roof and clean the affected area after flooding caused a roof leak.
- Tonbridge and Malling's Planning, Transport and Leisure team stated residents of the Waterside Reach Apartment block incurred costs of £1000 for jet washing and removal of debris from the undercroft carpark after groundwater the Christmas Flooding in December.

It is important to note that the financial costs of the severe weather events in 2019 are significantly underestimated, especially with the inclusion of the effects of the Christmas Floods in December. Of the 146 services registered on the system, only 14 services recorded impacts across the year.

Reputational Impacts

Both positive and negative reputational impacts were recorded in 2019. These are summarised below. Overall, there were more positive reputational impacts recorded on SWIMS than there were negative.

Negative Reputational Impacts

- Kent County Council's Community Learning and Skills services reported that they were unable to maintain normal service delivery during some periods, as a result of flooding throughout the year.

Positive Reputational Impacts

- Swale Borough Council received a positive response from service users for ensuring services continued to operate without problems during the low temperature event in January. In addition, a reported roof leak due to heavy rainfall was attended and fixed within 4 hours of it being reported to the Property Service.
- Kent Fire and Rescue Service was praised for its response to flooding in June. 121 calls for aid were received in a 6-hour period, all of which were attended to by staff members leading to personnel being mobilised to 40 events across the county.
- Throughout the Heatwave in July, Swale Borough Council utilised their social media presence to provide updates to residents and service users with advice on staying cool and keeping hydrated in the hot weather, gaining a positive response from the tourism and business communities in the borough.

Key Responses

Along with their impacts, SWIMS users also recorded how they responded to the severe weather events. A summary of these responses is below.

Development of Monitoring Process – As a result of flooding in December 2019 and subsequent damage to a residential underground carpark, Tonbridge and Malling Borough Council developed a monitoring process which included pressure washing the affected area, forming a residents association, promoting Floodline sign-up with residents and identifying potential site Flood Warden's for the affected building.

Repairs and Maintenance – Gravesend Adult Education Centre experienced issues with leaks throughout the building and damage to the roof, leading to ceiling collapse. This led to

staff members and service users not being able to access classrooms. The water damage spoiled the carpets, which had to be cleaned and, in some areas, replaced. In addition, in the Tunbridge Wells Adult Education Centre water from a blocked gutter ran through the ceiling for 4 hours leading to guttering repairs and unblocking taking place.

Issue warnings and Advice – During the July heatwave event, Swale Borough Council utilised their social media channels to offer warnings and advice to the tourism and business communities in the borough. Advice focused on how to keep cool and stay hydrated during the period of high temperatures.

Key Considerations for the Future

From the data collected and recorded in SWIMS from the events of 2019, there are several considerations for SWIMS users to increase their resilience to severe weather.

Data gaps: There are continued data gaps in the information entered onto the system, during 2019 only 14 services entered data from 8 different organisations. Moving forward, financial information should be captured by all services to improve the evidence base to support future planning and budgeting for severe weather, as well as supporting funding or reimbursement claims. Following a data review in 2018, it is advised that 'No Direct Impact' incidents should be amended to include a description of why this was the case - because of the services business continuity planning/resilience planning, or if they were not impacted because their service was not in the area. For more information on completing data entry comprehensively, please contact the SWIMS team.

Critical Infrastructure: A need to review critical infrastructure (property) which, if left vulnerable, can affect a wide variety of services and service users for varying degrees of time. Kent County Council properties continue to cost the Council a large sum of money to repair, and there is a need to review the resilience of these buildings to future proof them against more frequent severe weather events (e.g. more regular maintenance of drains/guttering, replacement or strengthening of property infrastructure).

Messaging: The public messaging via different channels highlighted by Swale Borough Council demonstrates the positive effects that proactive communications can have in safeguarding residents and customers. Collaborative working between services should be increased to ensure messages are reaching the people who need it most.

Health: Services should capture impacts on the health and wellbeing of staff and residents.