

# **KENT FLOOD RISK MANAGEMENT COMMITTEE**

**Tuesday, 8th March, 2016**

**2.00 pm**

Council Chamber, Sessions House, County Hall,  
Maidstone





## **AGENDA**

### **KENT FLOOD RISK MANAGEMENT COMMITTEE**

**Tuesday, 8th March, 2016, at 2.00 pm**

Ask for: **Andrew Tait**

**Council Chamber, Sessions House, County Hall, Maidstone** Telephone **03000 416749**

*Tea/Coffee will be available 15 before the start of the meeting in the meeting room*

#### **Membership**

Conservative (4):	Mr M J Harrison (Chairman), Mr L B Ridings, MBE and Mrs P A V Stockell	Mr A H T Bowles,
UKIP (1):	Mr A Terry	
Labour (1)	Dr M R Eddy	
Liberal Democrat (1)	Mr M J Vye	

#### **UNRESTRICTED ITEMS**

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

#### **Webcasting Notice**

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1. Substitutes
2. Declarations of Members' Interest relating to items on today's agenda
3. Minutes of the meeting on 16 November 2015 (Pages 5 - 14)

4. Highway Flooding Events and Drainage Issues - Presentation by Kate Moreton (KCC Highways and Waste)
5. Local Flood Risk Management Strategy (Pages 15 - 20)
6. Environment Agency and Met Office Alerts and Warnings and KCC Flood Response activity since the last meeting (Pages 21 - 26)
7. 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)*

Peter Sass  
Head of Democratic Services  
03000 416647

**Monday, 29 February 2016**

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## KENT COUNTY COUNCIL

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### 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 Monday, 16 November 2015.

PRESENT: Mr M J Harrison (Chairman), Mr A H T Bowles, Mr J A Davies (Substitute for Mrs P A V Stockell), Dr M R Eddy, Mr P J Homewood (Substitute for Mr L B Ridings, MBE), Mr A Terry, Mr M J Vye, Mrs J Blanford (Ashford BC), Mr J Scholey (Sevenoaks DC), Mr A Hills (Shepway DC), Mr G Lewin (Swale BC), Mr H Rogers (Tonbridge and Malling BC), Ms G Brown (KALC), Mr M Dobson (Upper Medway IDB) and Mr P Flaherty (Kent Fire and Rescue)

ALSO PRESENT: Mr C R Pearman

IN ATTENDANCE: Mr M Tant (Flood Risk Manager), Mr T Harwood (Resilience and Emergencies Manager) and Mr A Tait (Democratic Services Officer)

ALSO IN ATTENDANCE: Mr T Norton, Mr C Lewis, Mr S Kenny and Mr S Short

### UNRESTRICTED ITEMS

**13. Membership**  
(Item 1)

The Committee noted the appointment of Mr A Terry in place of Mr J Elenor.

**14. Minutes of the meeting on 20 July 2015**  
(Item 4)

RESOLVED that the Minutes of the meeting held on 20 July 2015 are correctly recorded and that they be signed by the Chairman.

**15. Dates of meetings in 2016**  
(Item 5)

The Committee noted the following meeting dates for 2016:-

Tuesday, 8 March 2016;  
Monday, 18 July 2016;  
Monday, 14 November 2016.

**16. Presentations**  
(Item 6)

(1) The Chairman welcomed the four speakers to the meeting. He informed the Committee that he had attended a two day exercise arranged by the Environment Agency, informed by the winter 2013/14 storms. This had been at Endeavour House in Addington. He had requested that all Members of the Committee be invited to

attend such events in the future as it would be of great interest to observe flooding preparedness and response activities at first hand.

(2) Tim Norton (Flood Resilience Team Leader, Environment Agency) gave a presentation entitled “Community Resilience in Kent: Flood Wardens.” He said that the 2013/14 floods had convinced him that action on Flood Wardens was necessary for three reasons. The first of these had been that the response of certain communities to the flooding had not been as good as it could have been. The second was the political imperative, as there had been a widespread view that something positive needed to be done. Thirdly, there was an identified need for all agencies involved to protect their reputations. Although they had worked well in 2013/14, the publicity had often been unfairly negative. Reputational damage needed to be avoided because it could become a factor hindering the effectiveness of future flood response. The solution lay in the development of a relationship of trust within vulnerable communities.

(3) Mr Norton went on to say that work had been undertaken to identify what communities and individuals could do to manage flood risk better, by responding more quickly and efficiently. Volunteers had been given basic training to enable them to understand who did what during a flooding incident, how to stay safe during a flood and where the information would be coming from. This had been complemented by the development of a *Flood Warden Handbook*. This described their roles and potential tasks and was accompanied by a flood warden pack in the form of a rucksack containing basic kit. The work stream which sat alongside the basic training was community level emergency planning.

(4) Mr Norton showed a map which identified the areas where new flood wardens had been trained. They were scattered around the County with the highest number in Faversham and along the Stour and the Nailbourne rivers.

(5) As the programme developed, the EA had become aware of two areas which were potential “deal breakers.” The first of these was the question of who should have responsibility for the Flood Wardens. The new model identified the top tier as the Multi Agency Command and Control structure during an incident, below them were the various Tactical Co-ordinating Groups. The reporting line to the Flood Wardens themselves would go through the District and Borough Councils.

(6) The second potential deal breaker was the question of Insurance. This would be delivered through the Parish Councils or the Boroughs/Districts. All Flood Wardens were now covered, provided that they had been properly trained and were carrying out their functions in the correct manner. It was recommended that each insuring authority should carry out an annual check to ensure that the volunteer insurance cover was still there.

(7) Mr Norton identified the things that were going well. There had been a rapid response to the need for action in support of communities and volunteers; there was a mutual understanding amongst the partners which were developing Flood Warden training; sufficient funding had been secured for the purchase of basic equipment for Flood Wardens; a good level of understanding had been developed for people involved with flood wardens; Flood Wardens were now integrated into the long term strategy for building resilient communities; and nearly 200 Flood Wardens had now been through the initial training.

(8) Mr Norton then said that there were a number of questions which were still being considered or worked through. It would be necessary to provide Flood Wardens with a basic role profile which would vary for each community. It needed to be recognised that the initial set up could be resource intensive but that it represented a good investment. Ongoing investment of resources would be required. The question of Insurance should be addressed from the onset. There was also a discussion which was still to be concluded as to whether a model should be developed for each individual community or whether it should be more generic and therefore more consistent. It was likely that the answer would take the form of a happy medium. It was also a challenge when there were various agencies involved in co-ordinating a strategic response that was community focussed.

(9) Mr Norton concluded his presentation by considering the road ahead. He said that thought still needed to be given to working out how to sustain the progress made. There was a risk that if no flooding occurred for a number of years, the number of Flood Wardens could decline. The Environment Agency was therefore arranging seminars and other events in order to maintain momentum. Another matter that needed to be addressed was that the EA was not resourced to work with each community where a flood warden had been trained. It was therefore going to be a matter of prioritising which communities to work with, as well as considering how it should be resourced. Some high risk communities still did not have any Flood Wardens and consideration would need to be given to working with them. The Districts and Boroughs would need to carry out exercises to ensure that they were aware of the Flood Wardens in their areas of responsibility and that they knew how to contact them. Finally, the work done in Kent needed to be shared with others, whilst the County itself would also need to integrate best practice developed in other authorities.

(10) The Chairman said that it would be a great challenge to maintain enthusiasm amongst volunteers if there were no major incidents. He suggested that Members of the Committee could be invited to attend future Flood Warden events so that they could learn from the session whilst underlining the great appreciation that the Committee placed on the work that they were prepared to do.

(11) Mrs Brown said that in Yalding, the 33 Flood Wardens kept in touch with one another through social events that were arranged every two months. It was essential to do so rather than assume that once the Flood Wardens had been trained there was nothing further that needed to be done until a flooding event occurred.

(12) Carl Lewis identified himself as a Tonbridge Flood Warden as well as one of the two Area Flood Warden Co-Ordinators. He said that there had been no Flood Wardens in Tonbridge before the 2013/14 flooding event. Following the event and after meetings involving Sir John Stanley, MP and the Borough Council it had been decided to urgently set out to recruit people. This had been achieved through the contributions of Tom Tugendhat, MP and advertisements in the newspapers.

(13) Mr Lewis said that communication was key. This could vary from door knocking to electronic communication and from advertising EA roadshows. This enabled Flood Wardens to tell the community that their role was not limited to emergency events but that they were there to support the community throughout the entire year.

(14) Dr Eddy asked what happened in those areas where there were only one or two wardens or when they were down to half strength when a flooding event occurred. Mr Lewis replied that even teams such as his own with 12 members did not have as many Wardens as they would like. His team had a primary First Aider as well as a back-up. Whenever he personally was on holiday, there was always someone identified as cover. Difficulties were being experienced in getting new people to join the team. This was partly because those most at risk saw often saw their own properties as taking priority whilst those not in those areas were not engaged. Tonbridge and Malling BC would shortly be starting a new recruitment campaign which would include social media. Other charity groups such as the Rotary Club were also being approached to see whether they could offer support and/or become involved. They were also aiming to recruit Incident Volunteers for those who were unable to commit to becoming Flood Wardens.

(15) Mr Hills noted that there were very few Flood Wardens in some high risk areas such as Romney Marsh (where there was only one). He asked whether those Parishes with greater numbers of Flood Wardens could allocate one of them to be accountable to each Parish Council. This would enable them to disseminate information from the EA to the Parish Council.

(16) The Chairman commented that it was important for Parish Councils to maintain momentum by regularly inviting local Flood Wardens and First Responders amongst others to their meetings.

(17) Mrs Brown said that it was a good idea for Parish Councils to work together. She added that areas such as her parish of Yalding had three rivers, each of which required a different response at different times. Nevertheless, it was important for Parishes to co-ordinate the way in which information would be disseminated to all the Flood Wardens themselves. A very good example of the need for this had occurred when a power cut had taken place at the same time as a flood.

(18) Mr Stuart Kenny (Water Lead Officer, Kent Search and Rescue) said that his organisation currently had some 130 members. 2015 had been a quieter year than usual. They had received about 60 call outs in respect of vulnerable or missing persons notified by Kent Police during the year. This contrasted with the overall figure of 86 in 2014. In 2007, this figure had been 25, indicating that operational capacity was increasing from year to year. This increase resulted from ever-improving relations with Kent Police as well as a growing awareness of what Kent Search and Rescue could do. The Police Search Advisers were generally (but not always) aware of Kent Search and Rescue's presence and capacity.

(19) Much of Kent Search and Rescue's work involved physically searching for people, both in daylight and darkness. Over the years they had developed a number of teams. They had a strong Dog Team and Mountain Bike Teams. They also had developed an excellent team of qualified Bank Searchers, who were able to carry out water-based searches for people who had fallen into the river. These Bank Searchers were not permitted to put themselves at risk. Their task was to locate people and identify the correct resource to recover them safely. There were now 36 Bank Searcher teams in the UK.



(20) Kent Search and Rescue had also started a Canoe and Kayak Team (two kayaks and two canoes and 15 trained members). This Team had participated in the recent tragic search at Leybourne Lake, using all its resources to carry out bank searches, complementing the rubber inflatables and divers used by Kent Fire. The Canoe and Kayak Team could only locate people on the water surface and was not equipped or trained to search underwater. They were able to call in sonar equipment from other authorities in support of their role.

(21) Kent Search and Rescue had also put together a resource of Flood Rescue Technicians. This consisted of 25 technicians, divided into five teams, whose qualification was underwritten by DEFRA. They were able to effect rescue using a sled or inflatable in water up to 1 metre deep, travelling up to 1 metre per second. This meant that they could not deploy in circumstances such as had been seen in Yalding where the water speed had reached 20 knots.

(22) Mr Kenny said that Kent Search and Rescue had deployed during the last flood in Yalding. They had been deployed during the day to knock on doors in order to encourage people to move. By 9pm, the water levels were up to their knees and ankles, which meant that they themselves were at risk.

(23) Mr (Steve Short (Chair, South East 4x4 Response) said that his organisation had 80 members in Kent. They were all equipped with 4 wheel drives and one third of them were Water Qualified. They had been formed some ten years earlier and had developed considerable professionalism and expertise over this time.

(24) South East 4x4 Response had deployed during the 2013/14 floods in Yalding and Tonbridge. They were well aware of the strong possibility that their help might be needed again. Its members carried out various tasks such as sandbagging, evacuation, carrying food, water and medical supplies to affected places, and supporting the Community Wardens.

(25) In response to a question from Mr Bowles, Mr Short said that all vehicles registered with South East 4x4 Response had to have yellow beacons flashing on their roofs. They bore logos so that the Emergency Services knew who they were. Each member also had to wear a high viz jacket.

(26) Mr Short explained that the cost of the work of the organisation was high. If a journey was classed as humanitarian, it would be paid for by KCC. The members' time was freely given in a voluntary capacity.

(27) South East 4x4 Response could be contacted in an emergency or if people wanted to join either through their website or the Kent Resilience Team.

(28) Mr Kenny said that Kent Search and Rescue and South East 4x4 Response worked together on a regular basis. The latter organisation often transported his members and emergency equipment to wherever they needed to go. They would help get people who needed the emergency services to get to the main highway, as ambulances were not allowed to leave tarmac. In addition, they always carried Kent Search and Rescue logos when working in support of them.

(29) The Chairman suggested that the next meeting should be preceded by a visit to Kent Air Ambulance, to which all the presenting organisations could be invited to

display their equipment. Mrs Brown offered The Lees at Yalding as an alternative venue if Kent Air Ambulance could not host it. The next meeting of the Committee could also be held there.

- (30) RESOLVED that all four presenters be thanked for their presentation as well as for their organisations' enthusiasm and commitment to Flood Resilience in Kent.

**17. Oral report on the Kent Resilience Forum Annual Severe Weather Exercise - Paul Flaherty, Kent Fire and Rescue**  
*(Item 7)*

(1) Mr Flaherty reported on the second Annual Severe Weather Exercise. He said that its purpose was to ensure that all the responding agencies within the County were prepared for winter. This involved a scenario which could then be discussed and evaluated afterwards.

(2) The 2015 event had involved a scenario of widespread flooding followed by high winds and snow. Participants had included the Environment Agency and Mark Rogers from the Met Office, who had based the scenario on an actual event which had occurred twenty five years earlier. Guest speakers had also been present to set out what their agencies could contribute to assist the emergency services.

(3) The event had been very well attended, involving 80 delegates, including the Kent Resilience Forum, Chief Executives or Director level support from the Districts and KCC as well as some Member attendance. Senior Managers from responding organisations had also been involved.

(4) Mr Flaherty said that the day had been very worthwhile, and had demonstrated the preparedness of the agencies concerned. A whole range of issues had been examined, including resourcing, equipment, and command and control arrangements. The work of the Severe Weather Advisory Group had been acknowledged. It had also been an opportunity to put into practice the work which had been done with the Flood Wardens. Their role formed a key part of the response as they represented eyes and ears on the ground, knew their local areas and were familiar with the local flood plans, and were the first point of contact for the emergency services when they arrived at the scene.

(5) The recent Flood Warden Seminar had been the first of its kind. This seminar had reinforced the crucial importance of their work. Kent was extremely fortunate to have some 200 Flood Wardens who had been suitably trained. This was a higher than any other part of the UK and meant that there was effectively a Flood Warden for every Parish to be able to access. The 50 or so volunteers at Kent Fire were also trained as Flood Wardens and were available to offer support as needed.

(6) Mr Flaherty then said that the helicopter used for the exercise was one of two which would be located at Lydd and replace the RAF search and rescue capability which had formerly been located at Manston. That service had now been contracted out.

(7) Mr Flaherty went on to inform the Committee that, in addition to Kent Search and Rescue, there was another group of volunteers which provided air support (Air

Search). People had made their aircraft available, which would enable a bird's eye view to identify the extent of the flooding when it occurred. Both Kent Fire and Kent Police now had access to a drone each. It was likely that by this time in 2016 there would be a combined figure of 4 drones enabling Fire and Police to do their own reconnaissance if necessary.

(8) A prestigious national award had been presented to the Kent Volunteer Sector Emergency Group by the Emergency Planning Society in recognition of the tremendous role played by volunteers in Kent and the service that they were providing.

(9) RESOLVED that the report be noted.

**18. Environment Agency and Met Office Alerts and Warnings and KCC flood response activity since the last meeting**  
(Item 8)

(1) Mr Harwood referred to Minute 11 (3) concerning the June 20-15 multi-agency workshop to consider potential evacuation issues in Romney Marsh in the event of a major coastal flooding event. He said that this was part of a wider DEFRA East Coast flooding project: *The Use of Roads to Evacuate and Shelter People*. The report back from this project would take place on 3 December at the DEFRA Offices in Smith Square.

(2) Mr Flaherty informed the Committee that the 2016 Annual Severe Weather Exercise would be using the Romney Marsh scenario as its table top exercise.

(3) Mr Harwood referred to the Emergency Planning Society award to the Kent Voluntary Sector Emergency Group and said that it underlined the fact that volunteers were now integrally involved in so many aspects of Kent's resilience work, including flood response. They had recently been part of Exercise Beowulf on the Isle of Sheppey which had focussed on multi-agency oil pollution response.

(4) Mr Harwood informed the Committee that the total of Environment Agency flood alerts issued since July 2015 had now risen to 21 as a result of a recent event between Pegwell Bay and Deal. He warned that Kent was now just past the peak of the astronomical spring tide season and that more high tides were still expected in the coming winter period.

(5) Mr Bowles asked for the information contained in Appendix 3 of the report to be circulated to all Members and the Parishes.

(6) Mr Davies said that he was concerned about drainage infrastructure in relation to surface water flooding. He said that drains were not being cleared as often as they needed to be. In Tunbridge Wells, this matter was raised by all the Parish Councils and also by local residents. He suggested that Kent Highways, transportation and Waste should be informed of this local concern and asked to take appropriate steps to alleviate it.

(7) Mr Harwood said that he and Mr Tant were shortly due to meet the Drainage Manager to discuss winter preparedness. They would be discussing another of matters including local pumping capacity and capability.

(8) Mr Davies noted that in contrast to the Netherlands, privately owned ditches were often not maintained or even filled in. This seemed to be because the Dutch landowners had a legal responsibility to do so, unlike their UK counterparts.

(9) The Chairman replied to Mr Davies by saying that the obligation on landowners to clear ditches and drains was covered by the riparian ownership laws. He asked for an item on riparian ownership to be included on the agenda for the next meeting on March.

(10) Mr Hills said that one of the complications was that whilst Natural England was attempting to prevent over-zealous cleaning of dykes because of potential negative impacts upon wildlife, the IDBs were very supportive of doing exactly that. This meant that landowners were often not clear as to precisely what was expected of them.

(11) Dr Eddy asked whether high level water tables were expected in combination with the forecast high tides.

(12) Mr Harwood replied to Dr Eddy by saying that tide locking was potentially an issue during high tide episodes. High tides prevented ground and surface water from draining into the sea. There was also a specific urban issue where groundwater could drain into basements without anyone being aware of it. It was inevitable that water tables would rise in winter because trees and other vegetation were no longer sucking up the rainwater during the growing season. The Met Office was predicting that the weather would remain mild and unsettled at least until Christmas. This meant that there was a heightened threat of all forms of flooding, which required vigilance across the entire resilience community.

(13) Mrs Brown said that from Yalding's perspective, gullies were very well cleaned. The exception occurred when clearing them was practically problematic (including areas where parking was an issue). This would result in lengthy periods where no action to overcome the problem seemed to take place.

(14) Mr Pearman informed the Committee of a report on the drainage infrastructure which had been prepared two years earlier. This had concluded that the drainage infrastructure was not fit for purpose and had been historically under-resourced. It had identified problems with the system itself as well as the utilities which worked around the existing system.

(15) Mr Pearman continued by saying that there was no single solution to this problem. He advised that each District or Borough should have its own drainage manager, working with the Area Highways Manager, all of whom were experienced and were able to take action to overcome the problem (including full gully clearance if appropriate).

(16) Mr Pearman went on to say that he and the Highways officers had recently met to consider the problems in detail. He was very much aware that Sevenoaks was subject to flood risk. Debris within the drainage system often originated from properties further upstream. The responsibility was shared between the Parish Councils, the local landowners, the drainage engineers and the highways engineers. His own responsibility was to explain that there was no instant answer. If a problem was alleviated, it could often return very quickly. The most important thing was to

raise awareness and to ensure that people's first port of call was the local highways engineer through the Parish Councils rather than the emergency services. KCC did not have the resources to send an engineer to every blocked gully. The answer was known locally and that was where the problem-solving needed to start.

(17) Mr Dobson said that upon its creation, the Environment Agency had taken over a number of drainage responsibilities from the Internal Drainage Boards, and had returned many of them to the IDBs at a later stage due to their lack of capacity to take them on. He believed that drainage problems could be coped with more effectively if there were clear lines of responsibility focussed on a single agency.

(18) Mr Terry described the drainage problems in Vale Road in Broadstairs as an example of the immense problems when a soakaway ceased to function for an unknown reason. It had eventually emerged that many years earlier, a garage owner had poured oil through the drainage system, creating impermeable lining over the chalk walls of the soakaway. The result had been that this part of Broadstairs had been highly susceptible to flooding since just after the Second World War.

(19) Mr Tant said that heavy rainfall in August and September had caused local flooding events in parts of Kent. This had led KCC to carry out its legal duty to investigate these events, particularly in Tunbridge Wells. The findings were shortly due to be published.

(20) Mr Tant replied to a question from Mr Rogers by saying that the *Flood Risk to Communities* documents for Swale, Thanet and Sevenoaks were being prepared. The Maidstone and Tonbridge and Malling versions were due to be published shortly after some additional local consultation had taken place. The intention was that all of them would be published by the end of March 2016.

(21) Mr Bowles said that he had taken the Canterbury document to each of the Parish Council meetings in his constituency. They had all commented that a similar document for Swale would be very useful indeed.

(22) RESOLVED that the level of alerts received since the last meeting of the Committee be noted.

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**To:** Kent Flood Risk Management Committee

**From:** Michael Harrison, Chairman of the Kent Flood Risk Management Committee

**Subject:** Local Flood Risk Management Strategy

**Classification:** Unrestricted

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**Summary:**

KCC needs to prepare a new Local Flood Risk Management Strategy (Local Strategy) in 2016. This Local Strategy will build upon the work done since the previous Local Strategy that was adopted in Summer 2013.

This paper presents the draft analysis of the challenges that have been identified and will inform the development of and the draft objectives for the Local Strategy. The Local Strategy will be supported by the Flood Risk to Communities documents.

**Recommendation:**

That Members:

- Note the paper, and
- Provide comments on the draft analysis of challenges and draft objectives identified for the next Local Strategy.

**1 Introduction**

- 1.1 The Local Flood Risk Management Strategy (Local Strategy) is a requirement of the Flood and Water Management Act 2010 (the Act) for all Lead Local Flood Authorities to prepare. KCC must prepare a Local Strategy that sets out how local flood risks will be managed in the county, who will deliver them and how they will be funded.
- 1.2 Local flooding is flooding that is caused by surface runoff, ordinary watercourses and groundwater.
- 1.3 KCC adopted a Local Flood Risk Management Strategy in 2013, which can be found here: [http://www.kent.gov.uk/\\_data/assets/pdf\\_file/0016/12076/Kent-Local-Flood-Risk-Management-Strategy-Report.pdf](http://www.kent.gov.uk/_data/assets/pdf_file/0016/12076/Kent-Local-Flood-Risk-Management-Strategy-Report.pdf)
- 1.4 This strategy was originally intended to last three years and it needs to be updated in the next financial year.

**2 Approach**

- 2.1 The Act sets out the minimum that a local strategy must contain, specifically:
  - 1 The risk management authorities in the relevant area.
  - 2 The flood and coastal erosion risk management functions that may be exercised by those authorities in relation to the area.

- 3 The objectives for managing local flood risk and the measures proposed to achieve those objectives.
  - 4 How and when the measures are expected to be implemented.
  - 5 The costs and benefits of those measures, and how they are to be paid for.
  - 6 The assessment of local flood risk for the purpose of the strategy.
  - 7 How and when the strategy is to be reviewed.
  - 8 How the strategy contributes to the achievement of wider environmental objectives.
- 2.2 The previous Local Strategy was relatively long, at over 50 pages, not including appendices. It also focussed heavily on KCC's role as Lead Local Flood Authority, which was new at the time and set out a number of policies for us to deliver that role.
- 2.3 The intention with the next Local Strategy is for it to be a shorter, simpler document that focusses more on the strategic approach to local flood risk management.
- 2.4 The Local Strategy will be supported by the Flood Risk to Communities Document that set out the flood risks in each district council in Kent. The Flood Risk to Communities documents were presented at the meeting on 20 July 2015, the reports can be found here:  
<https://democracy.kent.gov.uk/documents/g5982/Public%20reports%20pack%2020th-Jul-2015%2014.00%20Kent%20Flood%20Risk%20Management%20Committee.pdf?T=10>
- 2.5 Flood Risk to Communities documents provide the information on the risk management authorities and their roles, they will also set out the flood risk in the area (which is required for the Local Strategy, parts 1, 2 and 6 in paragraph 2.1).
- 2.6 By using the Flood Risk to Communities documents in this way, the Local Strategy can be free of a lot of the text required for these sections and this information can focus on local issues. There will be a link to the Flood Risk to Communities documents in the Local Strategy.

### **3 Challenges and objectives**

- 3.1 The first Local Strategy set out the work we would do to understand the risk of local flooding in the county and was largely focussed on fact finding. This Local Strategy will build on this work and be more balanced between understanding the risks, delivering measures to reduce risks, communicating about the risks and supporting communities at risk.
- 3.2 The work we have done over the previous three years has led to progress and improvements in local flood risk management. These include the improvement in partnership working across all risk management authorities; in fact, many of the larger risk management authorities have restructured or recruited to reflect the need to work in partnership with other bodies and this approach is helping to deliver results.
- 3.3 KCC has also developed a suite of surface water management plans (SWMPs), which can be found here: <http://www.kent.gov.uk/about-the->



[council/strategies-and-policies/environment-waste-and-planning-policies/flooding-and-drainage-policies/surface-water-management-plans.](#)

These are a key source of information about local flood risks and provide evidence for the where measures are best delivered.

3.4 Further, since the flooding in 2013/14, there is now a pool of flood wardens in many of the high risk communities that will help to improve the resilience of local communities for future events.

3.5 Despite these and others successes, there remain challenges in flood risk management in Kent. The challenges that we have identified over the course of delivering the previous Local Strategy are set out in draft below in no particular order:

3.5.1 **Delivering local flood risk management works** - To date, only a small number of works to reduce local flood risk have been implemented in Kent. We have delivered measures to reduce flood risk, where improved understanding by asset owners or lack of maintenance was increasing the flood risk, but we have only delivered a small number of new flood defences to reduce local flood risk.

3.5.2 **Joint delivery of schemes** - Flood risk to a community is often caused by a combination of risks and sources and hence the solution involves more than one risk management authority. An improved understanding has developed of the objectives and statutory requirements of the different bodies; however, there is still progress to be made in turning this improved understanding into integrated solutions that are co-delivered by partners where this is appropriate.

3.5.3 **Combined sewer networks** - Many areas of Kent are drained by combined sewers (as are many areas of the UK). One of the consequences of this is that if the rain fall exceeds the capacity of the sewer, an overflow occurs and foul water is conveyed with the overflow which worsens the impact of the overflow. With the pressures of climate change, an increasing population and increasing density of urban areas, combined sewers in some areas are likely to face capacity problems.

3.5.4 **Natural flood management techniques**- There have been recent developments in the use of natural land management techniques to reduce flood risk, in particular the scheme in Belford, Northumberland. Natural flood management uses land management techniques to reduce the runoff during a rainstorm event to reduce the risk of flooding downstream, by storing, slowing and infiltrating runoff over the catchment. These techniques are relatively new and their uptake has been slow, there remains a challenge to promote the potential and deliver these types of measures in Kent.

3.5.5 **Minor developments in high risk areas** - KCC's role as a statutory consultee for surface water in planning does not include minor development. There may be areas in Kent where drainage from minor developments could pose a significant flood risk and where it would be appropriate if the drainage of such developments was subject to this consultation.

3.5.6 **SuDS adoption and maintenance** - Sustainable Drainage Systems (SuDS) are a way of managing runoff from developments that mimic

natural drainage processes so that there is no increase in flood risk downstream. The most beneficial forms of SuDS also have other benefits, such as providing amenity space and habitat. Unfortunately, the most beneficial forms of SuDS are not adopted by Water Companies (who adopt conventional drainage) and there is no other authority that has the powers necessary to adopt them and a funding mechanism to cover the costs of maintenance. This means that there is not full uptake of the most beneficial forms of SuDS in new developments.

**3.5.7 Community resilience** - Communities are at the forefront of flood risk; they are the ones that experience the flooding directly and often are the first to respond to it. Since the flooding in winter 2013/14, KCC, the EA and the districts and boroughs have trained flood wardens in many areas at risk of flooding to improve the local response to flooding. However, there is still scope to improve communities' capability to help themselves and to take action to be more resilient in the event of flooding.

**3.5.8 Local flood risk emergencies are properly planned for** - Multi-agency flood plans set out the roles and actions for emergency responders in a flooding emergency. These plans generally focus on coastal and fluvial flooding events. They do not often include local flood risks, which is appropriate in most cases; however, there may be locations where local flood risk is significant and should be included in flood plans.

**3.5.9 Understanding the full economic benefits of flood risk management** – Funding flood defence schemes usually requires partnership contributions; however, most economic assessments of flooding focus on the impact on residential properties. A better understanding of the full range of economic impacts of flooding may help to identify other impacts of flooding, such as impact on businesses, and new opportunities for funding contributions.

3.6 The Local Strategy has four draft objectives, which are:

**3.6.1 Improve understanding of flood risks**

Ensure that Risk Management of Authorities in Kent have a clear understanding of local flood risk mechanisms, risks and management opportunities, and this understanding is shared with partners to create a comprehensive picture of flood risk and how it can be managed.

**3.6.2 Reduce the risk of flooding:**

Reduce the risk of flooding on people and businesses in Kent through the delivery of flood risk management projects and programmes.

**3.6.3 Resilient planning:**

Ensure that development and spatial planning in Kent takes account of flood risk issues and plans to effectively manage any impacts and emergency flood plans have a clear understanding of local flood risks and responsibilities.

**3.6.4 Support resilient communities**

Ensure that residents and businesses of Kent have access to appropriate data and information to understand flood risk in their area, how it is managed and by whom. Empower communities and individuals to act to protect themselves from flooding through individual efforts, partnerships and joint working.

3.7 These objectives will include further priorities that will be focussed on addressing the challenges that are identified.

#### **4 Document development**

4.1 The Local Strategy is currently being drafted. We will be working with our partners in the Spring to develop the challenges and objectives and agree the strategy to address these. We are planning to issue a final draft for public consultation this Summer, with a view to it being adopted in the Autumn 2016. The intention is that this version of the Local Strategy will be reviewed in five years.

4.2 We are also developing the Flood Risk to Communities documents to sit alongside the Local Strategy. We have drafted three more Flood Risk to Communities documents and are consulting on these with our partners, and we are preparing the other six.

#### **4 Recommendations**

That Members:

- Note the paper, and
- Provide comments on the draft analysis of challenges and draft objectives identified for the next Local Strategy.

Michael Harrison, Chairman of the Kent Flood Risk Management Committee

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**To:** Kent Flood Risk Management Committee – 8<sup>th</sup> March 2016

**From:** Michael Harrison, Chairman of Kent Flood Risk Management Committee

**Subject:** Environment Agency and Met Office Alerts and Warnings and KCC flood response activity since last meeting.

**Classification:** Unrestricted

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**Summary:** To update Kent Flood Risk Management Committee on Environment Agency and Met Office Alerts and Warnings, and flood response activity and planning since the last meeting of the Committee on 20<sup>th</sup> November 2015. Members are requested to note this report.

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## 1. Background

1.1 KCC Resilience and Emergencies Unit and Contact Point receive Environment Agency Flood Alerts and Warnings and Met Office Severe Weather Alerts and Warnings by e-mail on a 24 hour basis. Potential impacts upon communities, infrastructure and the wider environment are then assessed and a response mobilised as required.

1.2 Some 70,000 properties in Kent are located within areas identified as potentially at risk of fluvial (river) or tidal flooding. Where practically possible, these properties are offered a Flood Warning Service by the Environment Agency. However, other parts of the county are also vulnerable to surface and ground water flooding. 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 Severe Weather Advisory Group.

## 2. Latest situation

2.1 Winter 2015/16 was characterised by mild day and night time temperatures, with December 2015 the warmest on record. The average December temperature for England was 9.5C, equating to 5.1C above the long-term average for the month and 2C above the record of 7.5C set in 1934. The very mild but drier than average December in the south east gave way to a still unseasonably warm but wet January. Especially significant rainfall events were experienced across the county between the 7<sup>th</sup> and 13<sup>th</sup> January, with east Kent hardest hit.

2.2 Early January saw localised surface water flood events adversely impact the operation of critical infrastructure in the county including major roads, pumping stations, waste water and gas transmission pipelines. Some 120 residential properties within the Dover and Shepway Districts were either flooded or required active interventions to prevent their inundation. Commercial premises in south east Kent ranging from a hotel, to a supermarket and residential care home were also

affected by surface water flooding. A breakdown of these impacts is appended to this report<sup>1</sup>.

2.3 As previously reported, autumn 2015 saw peak tidal ranges in the natural 19 year astronomical tide cycle, with the Kent coast still experiencing significant tidal ranges as a result. Indeed, when Storm Imogen and its associated weather fronts moved across the county between 8<sup>th</sup> and 10<sup>th</sup> February, a total of 11 tidal Flood Alerts were issued by the Environment Agency for the Kent coast. Significantly, Kent County Council mobilised and chaired a multi-agency Storm Imogen Severe Weather Advisory Group for the duration of this named storm from its County Emergency Centre at County Hall.

2.2 Since the last meeting of the Kent Flood Risk Management Committee on the 20<sup>th</sup> November 2015, a total of 54 Environment Agency flood alerts and no warnings were issued<sup>2</sup>. This compares with 50 flood alerts and 9 warnings for the same period in 2014/15.

2.3 A total of 9 yellow and one amber Met Office Severe Weather Alerts and Warnings have been issued since the last meeting<sup>3</sup>. This exceeds the 7 yellow alerts and warnings issued during the corresponding period in 2014/15.

2.4 The Thames Barrier has been closed on 3 occasions since the last meeting of this Committee in November 2015, twice for test purposes and once operationally during Storm Imogen in early February.

### **3. Next Steps**

3.1 The Kent Resilience Forum has now formally agreed that its 2016 multi-agency emergency planning exercise will comprise a coastal flooding scenario geographically focused upon the Shepway District.

3.2 Kent Resilience Forum Pan Kent Flood Group has established 3 task and finish groups, tasked respectively with: updating Kent's 13 Local Multi-agency Flood Plans and strategic Pan-Kent Flood Plan; enhancing the innovative flood warden scheme; and refreshing the county's reservoir inundation planning.

3.3 Members will continue to be regularly updated on flood alerts, severe weather warnings, operational response, and ongoing Kent Resilience Forum planning for flood preparedness and response in the county.

### **4. Recommendations**

4.1 That Members:

- Note the level of alerts and warnings received since the last meeting of the Committee; and
- Contribute any additional matters arising from debate by the Committee.

Tony Harwood, Resilience and Emergencies Manager, Growth Environment and Transport tel. 03000 413 386 e-mail [tony.harwood@kent.gov.uk](mailto:tony.harwood@kent.gov.uk)

*Background documents: None*

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<sup>1</sup> please see appendix 1

<sup>2</sup> please see appendix 2

<sup>3</sup> please see appendix 3

**Appendix 1: Briefing Note - Premises and Critical Infra-structure flooded during the January 4<sup>th</sup> - 13<sup>th</sup> 2016 rainfall events in Kent (or requiring interventions to prevent their flooding)**

**Premises flooded or requiring agency interventions to prevent internal flooding  
(Source: KFRS, KCC, Ashford BC, Dover DC, Shepway DC, Tunbridge Wells BC data)**

**120 residential properties** - breakdown by district: Shepway District Council x78, Dover District Council x31, Ashford Borough Council x6, Tunbridge Wells Borough Council x4, Canterbury City Council x1

**1 residential care home** - breakdown by district: Shepway District Council 1

**1 hotel** - breakdown by district: Dover District Council x1

**1 supermarket** - breakdown by district: Shepway District Council x1

**Highway infra-structure - Roads closed or partly closed as result of surface water flooding  
(Source: KCC data)**

A260, Denton  
A256, Whitfield  
A292 Chart Road, Ashford  
A20 Ashford Road (East of Square Hill Road junction), Maidstone  
Canterbury Road, Hawkinge  
Alkham Valley Road (between Hockley Sole and Stombers Lane), Hawkinge  
Canterbury Road junction with Church Lane, Lydden  
Canute Road, Deal  
Freemens Way, Deal  
Green Lane / Singledge Lane / Nursery Lane junction, Whitfield  
Golf Road, Deal  
Allenby Avenue, Deal  
Albert Road, Deal  
The Lane, Guston  
Meggett Lane, Alkham  
Greenwich Lane, Ewell Minnis  
Capel Street, Capel-le-Ferne  
Coldred Hill, Coldred  
Sandwich Road, Whitfield  
Staple Road, Wingham  
Woodensborough Lane, Eastry  
London Road, Temple Ewell  
Sandwich Road, Nonington  
Easole Street, Nonington  
Lenham Road (at Hill Farm culvert), Harrietsham  
Stockham Lane, Swingfield  
Penn Lane, Sundridge  
Stone Street, Stowting  
Church Lane, Lydden  
Bears Lane, Hothfield  
Brishing Lane (at Shaw Stream culvert), Maidstone  
Maidstone Bridge Gyratory underpasses

**Other infra-structure affected by surface water flooding  
(Source: SGN, and KCC data)**

**1 gas pipeline** - affecting some 400 properties in the Leigh area between 11<sup>th</sup> and 13<sup>th</sup> January

**3 pumping stations** – breakdown by district: Dover District Council x2, Shepway District Council x1

**1 waste-water pipeline** – impacting Local Nature Reserve / Local Wildlife Site in Maidstone area

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**Appendix 2: Environment Agency Flood Alerts issued since 20<sup>th</sup> November 2015**

<b>Flood Zone</b>	<b>Date issued</b>	<b>Status</b>
River Rother and its tributaries	03/01/2016	Alert
Rivers Eden, Eden Brook and Kent Ditch	03/01/2016	Alert
River Beult from Pluckley and Bethersden to Yalding	03/01/2016	Alert
Upper River Medway from Forest Row to Penshurst	03/01/2016	Alert
Great Stour from Charing Heath to the A2070	03/01/2016	Alert
Hamstreet Sewage Arm	03/01/2016	Alert
River Bourne	03/01/2016	Alert
Plenty, Swalecliffe and West Brooks	03/01/2016	Alert
River Teise from Lamberhurst to Goudhurst	03/01/2016	Alert
Middle River Medway from Penshurst to Yalding	03/01/2016	Alert
Lower River Medway from Yalding to Allington Lock	03/01/2016	Alert
River Teise and Lesser Teise from Horsemonden to Yalding	03/01/2016	Alert
River Stour from A2070 to Fordwich	03/01/2016	Alert
Upper River Stour	05/01/2016	Alert
New Romney Sewage Arm	05/01/2016	Alert
North and South Streams from Eastry to east of Sandwich	05/01/2016	Alert
Rivers on the Isle of Sheppey	05/01/2016	Alert
Plenty, Swalecliffe and West Brooks	05/01/2016	Alert
River Teise and Lesser Teise from Horsemonden to Yalding	07/01/2016	Alert
River Bourne	07/01/2016	Alert
River Rother and its tributaries	07/01/2016	Alert
Hamstreet Sewage Arm	07/01/2016	Alert
Rivers Eden, Eden Brook and Kent Ditch	07/01/2016	Alert
Lower River Medway from Yalding to Allington Lock	07/01/2016	Alert
Upper River Medway from Forest Row to Penshurst	09/01/2016	Alert
Upper River Stour	09/01/2016	Alert
River Rother and its tributaries	09/01/2016	Alert
Middle River Medway from Penshurst to Yalding	10/01/2016	Alert
Rivers on the Isle of Sheppey	10/01/2016	Alert
River Bourne	11/01/2016	Alert
Rivers Eden, Eden Brook and Kent Ditch	11/01/2016	Alert
Rivers on the Isle of Sheppey	13/01/2016	Alert
Upper River Medway from Forest Row to Penshurst	26/01/2016	Alert
River Rother and its tributaries	26/01/2016	Alert
Rivers Eden, Eden Brook and Kent Ditch	27/01/2016	Alert
Middle River Medway from Penshurst to Yalding	27/01/2016	Alert
Upper River Medway from Forest Row to Penshurst	29/01/2016	Alert
River Rother and its tributaries	29/01/2016	Alert
Rivers on the Isle of Sheppey	29/01/2016	Alert
River Darent Catchment	30/01/2016	Alert
Lower River Medway from Yalding to Allington Lock	30/01/2016	Alert
Upper River Medway from Forest Row to Penshurst	07/02/2016	Alert
River Rother and its tributaries	07/02/2016	Alert
Sandgate to Dungeness	08/02/2016	Alert
Fairlight to Dungeness including the Tidal Rother	08/02/2016	Alert
Coast from Sandgate to Dungeness	08/02/2016	Alert
Fairlight to Dungeness including the Tidal Rother	08/02/2016	Alert
Fairlight to Dungeness including the Tidal Rother	09/02/2016	Alert
Pegwell Bay to Deal including the Tidal Stour	09/02/2016	Alert
Isle of Sheppey and Coast from Kemsley to Seasalter	10/02/2016	Alert
Dartford to Allhallows	10/02/2016	Alert
Tidal Medway, Medway Estuary and Isle of Grain	10/02/2016	Alert
Tidal Medway, Medway Estuary and Isle of Grain including Aylesford	10/02/2016	Alert
Pegwell Bay to Deal including the Tidal Stour	10/02/2016	Alert



**Appendix 3: Met Office Severe Weather Alerts and Warnings issued since 20<sup>th</sup> November 2015**

<b>Met Office Alerts and Warnings</b>	<b>Date issued</b>	<b>Status</b>
Yellow Warning of Rain for London & South East England	04/01/2016	Warning
Yellow Warning of Rain for London and South East England	06/01/2016	Warning
Yellow Warning of Rain for London and South East England	09/01/2016	Warning
Yellow Warning of Rain for London and South East England	09/01/2016	Warning
Yellow Alert of Rain for London and South East England	25/01/2016	Alert
Yellow Warning of Rain for London & South East England	29/01/2016	Warning
Yellow Warning of Wind for London & South East England	06/02/2016	Warning
Yellow Warning of Wind for London & South East England	06/02/2016	Warning
Amber Warning of Wind for London & South East England	07/02/2016	Warning
Yellow Warning of Snow and Ice for London & South East England	14/02/2016	Warning

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