

KENT FLOOD RISK MANAGEMENT COMMITTEE

Monday, 18th July, 2016

2.00 pm

Yalding Village Hall, 78 Lyngs Close, Yalding ME18 6JT





AGENDA

KENT FLOOD RISK MANAGEMENT COMMITTEE

Monday, 18th July, 2016, at 2.00 pm

Ask for: **Andrew Tait**

**Yalding Village Hall, 78 Lyngs Close, Yalding
ME18 6JT**

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 A H T Bowles,
Mr L B Ridings, MBE and Mrs P A V Stockell

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)

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1. Substitutes (Pages 5 - 6)
2. Declarations of Members' Interest relating to items on today's agenda
3. Minutes of the meeting on 8 March 2016 (Pages 7 - 16)

4. Yalding Local Flood Plan - Oral introduction by Geraldine Brown, Chairman of Yalding Parish Council
5. Presentation on Southern Water by Michael Banks
6. Exercise Surge - Oral report by Steve Scully, Kent Resilience Team
7. Environment Agency and Met Office Alerts and Warnings and KCC Flood Response activity since the last meeting (Pages 17 - 20)
8. Other Items which the Chairman decides are Urgent.

EXEMPT ITEMS

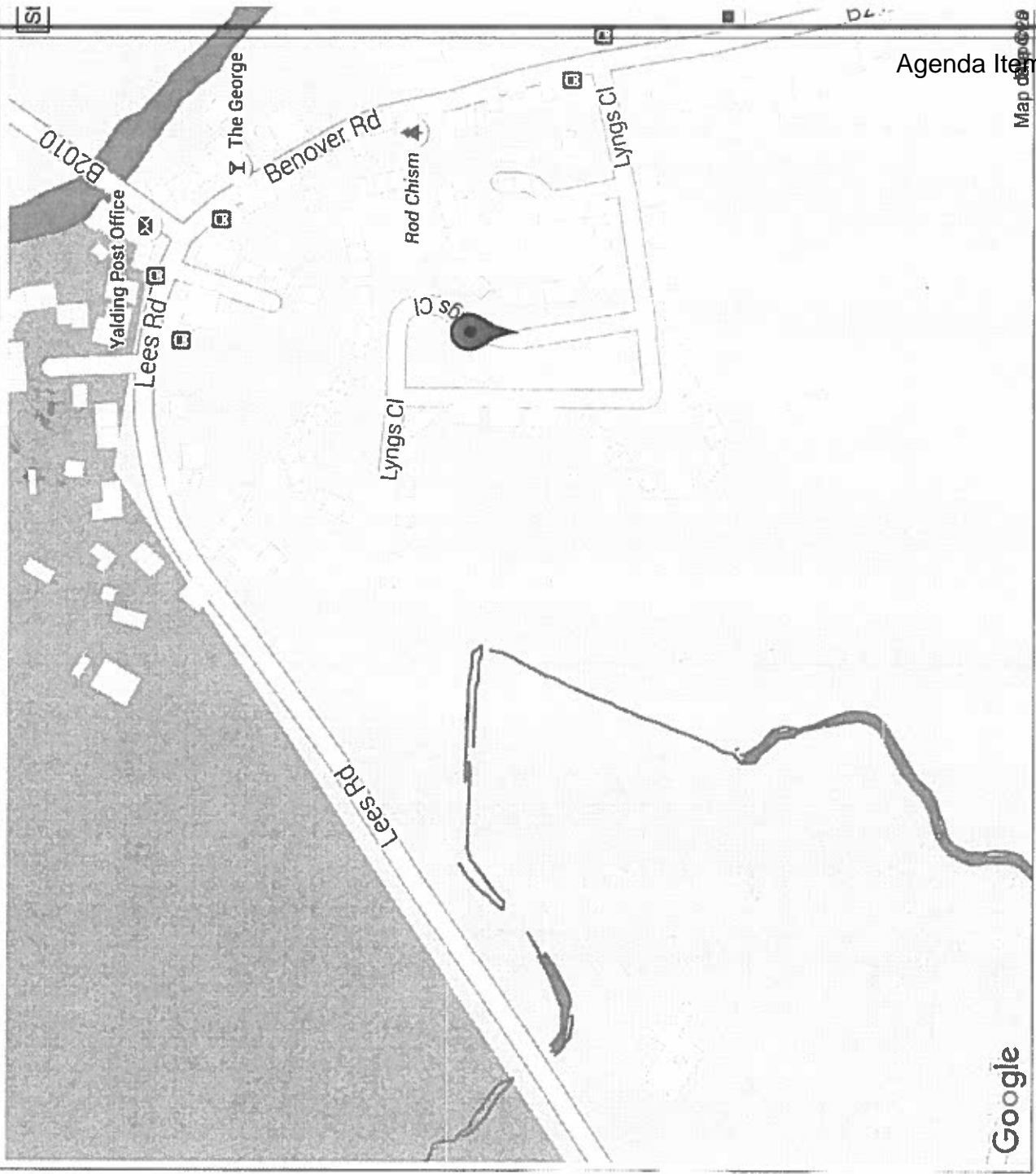
(At the time of preparing the agenda there were no exempt items. During any such items which may arise the meeting is likely NOT to be open to the public)

Peter Sass
Head of Democratic Services
03000 416647

Friday, 8 July 2016

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Venue: Yalding Village Hall, Lyngs Close, Yalding, Maidstone, Kent, ME18 6JS.



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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, 8 March 2016.

PRESENT: Mr M J Harrison (Chairman), Mr A H T Bowles, Mr I S Chittenden (Substitute for Mr M J Vye), Dr M R Eddy, Mrs P A V Stockell, Mrs J Blanford (Ashford BC), Mr P Riley (Maidstone BC), Mr A Hills (Shepway DC), Mr G Lewin (Swale BC) and Mr H Rogers (Tonbridge and Malling BC)

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

ALSO IN ATTENDANCE:

UNRESTRICTED ITEMS**1. Minutes of the meeting on 16 November 2015**

(Item 3)

(1) The Committee noted that there was no item on riparian ownership on the agenda (Minute 18 (9)). It was agreed that a report on this matter would be presented to the next meeting of the Committee.

(2) The Chairman informed the Committee of correspondence relation to Minute 12/15 (Subterranean Water Infiltration in Thanet). A local resident had disputed the accuracy of what had been stated as her property had been affected by subterranean water. This matter was now being progressed through the appropriate Cabinet member.

(3) RESOLVED that the Minutes of the meeting held on 16 November 2016 are correctly recorded and that they be signed by the Chairman.

2. Highway Flooding Events and Drainage Issues - Presentation by Katie Moreton (KCC Highways and Waste)

(Item 4)

(1) Ms Katie Moreton gave a presentation setting out an overview on service delivery and a summary of events in the financial year 2015/16. She said that some 4,500 customer enquiries had been received during this period – a reduction from 2014/15. Normally, the service would expect about 10,000 enquiries in a year of average rainfall.

(2) Ms Moreton said that the number of drainage emergencies had reduced to a figure of 467 in 2015/16. She explained that these were categorised as rainfall which had led to a risk to highways or of property flooding. Such emergencies were

responded to within two hours. The reason for this reduction was that the year had seen 750mm of rainfall which was about 90% of what could normally be expected.

(3) Ms Moreton went on to say that 37,500 gullies had been cyclically cleaned in 2015/16 out of a total of some 250,000 roadside drains. A further 3,323 targeted cleansing jobs had been completed. These consisted of multiple gullies at specific sites where the public had reported that the drains were blocked. An additional 941 investigations, repairs and improvements had been undertaken.

(4) Ms Moreton moved on to a detailed description of drainage cleansing activities. She said that all drains on main roads were cleansed on a cyclical basis every twelve months. This programme would be completed by the end of March 2016. A service-wide programme was undertaken on high speed roads. This meant that soft landscaping, pot hole fixing, barrier tensioning and street lighting teams would carry out their maintenance work together overnight.

(5) Ms Moreton said that drainage cleansing on minor roads was formerly undertaken on a cyclical basis. This had proved to be unpopular because the response to people who reported blockages was that repairs would only be carried out if there was an immediate threat to public safety. This approach had been changed in April 2014. Now, whenever an enquiry was received, it was passed to a Highways steward for inspection and an assessment, including maintenance work that might be needed in the vicinity, the work needed and the risk to safety and property. Depending on the outcome of this assessment, the necessary work could commence within two hours at the earliest or within 90 days at the latest. Once the cleansing was completed, the drainage system was tested to identify whether there were any inherent problems.

(6) Ms Moreton defined "Drainage Hotspots" as "a flood prone section of the highway network." These were areas where flooding occurred because the drains were frequently blocked. If a drainage system was seen as defective, it would not be focussed upon because repeated cleansing would not solve the problem. Prioritisation was done twice a year by analysing all the reports of flooding and those areas where Highways had attended emergencies. Presently, there were 114 hotspots in Kent which were attended to every six months. This list was sense checked by the Area Drainage Engineer and the District Manager.

(7) Ms Moreton then informed the Committee that the list of hotspots was not *automatically* added to on the request of locally elected representatives or Parish Councils as this could result in a list that became completely unmanageable. The approach to adding hotspots was county-wide and data-based and included an analysis of any area notified to Highways by representatives and Parishes.

(8) In response to a question from the Chairman, Ms Moreton confirmed that one factor that was considered when identifying hotspots was the volume of complaints received. An additional cleanse would also be done if flooding occurred after the hotspot had already been cleansed on two occasions. If, for example the additional flooding occurred at a bus stop, the cleansing would usually be undertaken within 28 days of notification rather than the maximum of 90 because of the number of people who would be affected.

(9) Ms Moreton replied to a question from Dr Eddy by saying that cleansing would normally be undertaken in November after leaf drop, and then in March or April. She then described the work that was undertaken in cyclic cleansing. The crew would lift the cover, remove the silt and debris, and then charge the drain with water in order to establish whether it was flowing. If, for some reason it proved impossible to remove the grid, this would be reported back for further work at a later stage. For all other cleansing including hotspots, the crew would also jet the connecting pipe to the main line or the soakaway. Any blockages or breakages identified in this way would be reported back and an Engineer would be asked to investigate the fault, often by sending a CCTV camera down the pipe in order to identify the cause.

(10) Ms Moreton replied to a question from Mr Hills by saying that the list of hotspots was not published because of the danger that this information could affect people's insurance. This information was given to Parish Councils on request.

(11) Drainage repairs and improvements were capital projects usually triggered by customer enquiries. Work was prioritised according to highway safety, the risk of internal property flooding, network disruption and social impact. She gave as an example of the kind of repair and improvement work that would not normally be prioritised a puddle next to a footpath where a bus might splash pedestrians. Whilst this was inconvenient for people, the current financial climate ensured that it would not meet the criteria for intervention. Areas of greater flooding (shown on the right hand side of the presentation slides) would be identified.

(12) Ms Moreton then described the Drainage Scheme for 2016/17. All the Highways Asset managers had made their bids for capital for their highway improvements budgets in December 2015. The initial drainage bid was £11.65m comprising 144 large schemes and 1,000 small reactive improvement works. The agreed budget was £3.625m which she estimated would enable 66 large schemes and some 200 small reactive improvement works to be carried out. This compared with a far smaller budget in 2015/16 of £1.65m which meant that only smaller works had been carried out during this period.

(13) Ms Moreton agreed to write to Dr Eddy in respect of drainage problems at Freemans Way in Deal. She said that at Allenby Avenue and Albert Road in Deal, KCC's drains flowed into Southern Water's waste water system. Highways and Southern Water were working together to investigate a problem with the outfall. At Green Lane and Singledge Lane in Whitfield, enquiries had been very infrequent and tended to only occur when there was heavy rainfall and water poured onto these roads off surrounding fields. As large-scale development was taking place there, the landowners would be required to manage the surface water drainage on their site in the future.

(14) Mr Chittenden asked about progress at Ashford Road in Maidstone under the road bridge. Ms Moreton replied that the drainage problem should now have been significantly reduced by the installation of a new pipe. She agreed to write to him in order to confirm.

(15) Mr Rodgers said that a recurring problem arose throughout the county when farmers cut their hedges close to the road. This often resulted in debris being washed along the gully, creating blockages. He asked what could be done to ensure that the roads were swept by the farmers after hedges were cut in order to prevent this. Ms

Moreton replied that enforcement action could be taken if someone was caught leaving a sufficient amount of debris on the highway to cause an obstruction. Usually, though Highways were only informed well after the event had occurred. This meant that their only course of action was to ask the District or Borough to sweep the debris away. It was planned to carry out some work with local farmers in 2016/17 in order to improve awareness of their responsibilities as well as the potential consequences if they did not clear up afterwards.

(16) RESOLVED that Katie Moreton be thanked for her comprehensive presentation on Highway flooding events and drainage issues.

3. Local Flood Risk Management Strategy

(Item 5)

(1) Mr Tant introduced his report by saying that one of the requirements placed on Lead Local Flood Authorities by the Flood and Water management Act 2010 was the production of a Local Flood Risk Management Strategy. This would set out the objectives and actions to manage local flood risk from surface runoff, ordinary watercourses and groundwater. Accordingly, KCC had adopted its Strategy in 2013. This had been largely strategic in its approach and had now reached the end of its life. The next Strategy now needed to be developed in response to the challenges identified through the current one.

(2) Mr Tant went on to say that the current Strategy had succeeded in establishing and clarifying the role of KCC, developing understanding and joint working with its partners such as the Environment Agency and Southern Water, improving local resilience as well as providing a methodology to identify the risks and challenges. The next Strategy's role would be to build on the work carried out so far and focus on these challenges which were set out in paragraph 3.5 of his report.

(3) Mr Tant then spoke briefly about the first challenge "delivering local flood risk management works". He said that a lot of work had been carried out to identify local flood risks, which were predominantly in urban areas. It was now important to identify the works that needed to be undertaken in response, taking into account the high costs involved in comparison to their benefits. Work to reduce risk did not necessarily involve physical maintenance. It could also mean, for example, increasing awareness within local communities so that they could manage the risks themselves.

(4) Mr Tant then said that although there had been a very great level of improvement in partnership working, this had not yet resulted in joint investigation of and investment in solving problems. If this could be achieved, it would result in greater community benefits as well as the delivery of savings.

(5) Mr Bowles asked whether there was anything further that the Committee could do in order to make flood wardens aware of the great value that was placed on their work. The Chairman replied that he intended that the next meeting of the Committee would be held in a parish and that an invitation would be given to the local flood wardens to attend. This should not be limited to those flood wardens from the parish in which the meeting was held.

(6) Mr Bowles then asked whether the parish councils should have greater representation on the Committee. Currently, there was a single representative from KALC. Greater representation might enable a greater focus on local concerns.

(7) Mr Bowles then moved on to the subject of combined sewer networks. In his view they should never have been allowed to be constructed. There were many thousands of these in Kent and on nearly every occasion where houses became afflicted with sewage problems, combined sewage networks were the cause. He asked whether there were any positive developments to report in this area.

(8) Mr Bowles then asked whether there was any progress on SuDS. He said that they were well capable of working but that there was no system or Law in place which ensured that they were installed in such a way as to ensure that they did. Mr Tant replied that the Government had chosen not to provide a legislative mechanism for SuDS. He was not aware of any intention to reconsider this position. The Water Industry was slowly moving in the direction of considering whether to establish a voluntary arrangement.

(9) In response to further comments from Members on SuDS, Mr Tant said that the Government did recognise the need to manage drainage from new developments. It was a requirement of planning law to provide a drainage scheme that did not increase runoff. The Government had chosen not to provide a formal adoption and maintenance mechanism. Southern Water could adopt conventional drainage systems, but there was no formal mechanism for it to do the same for sustainable drainage. This meant that if when developers were minded to supply sustainable drainage, it was their responsibility to find a maintenance provider. Usually this would be a maintenance company. This meant that there was an inbuilt risk associated with the maintenance arrangements as they relied on the company's continued viability.

(10) The Committee asked for a letter to be sent to all Kent MPs setting out its view that it was essential to develop a legislative framework for SuDS.

(11) Dr Eddy referred to the potential of natural flood management techniques (paragraph 3.5.4). He commented that the new Strategy should include a reference to the benefits of diversifying agricultural techniques and land management, strategically located afforestation and biodiversity enhancements. It was also important to stress the importance of new regulations surrounding paving over front gardens which increased the runoff onto roadways. It should also stress the benefits of farmers ploughing parallel to the roadway rather than up and down, which led to flooding and soil loss.

(12) Mr Bowles informed the Committee that for it was not possible for farmers to plough their fields in exactly the same direction every year. If they did so, it would lead to a ripple effect which, over time, would lead to a flat field taking a form similar in appearance to a corrugated roof.

(13) Mr Chittenden said that Maidstone BC had experienced difficulties in respect of the SuDS schemes associated with significant housing developments. He then asked whether the Strategy would address the question of how money would be obtained to deliver local flood risk management works. He referred to the money needed for a scheme at Yalding and Tonbridge where KCC had committed £17m.

Mr Tant replied that Mr Chittenden was referring to a fluvial flooding scheme which was the responsibility of the EA and was not directly related to the Strategy.

(14) Mr Tant then said that KCC had identified the funding opportunities for flood risk management works but that often the benefits did not outweigh the costs. This meant that KCC needed to either find ways to reduce the costs or seek an opportunity to co-fund.

(15) Mr Lewin said that Kent now had to prepare for an increased frequency of extreme weather events in a way that had not previously been the case. This was the reason why, in his view, SuDS had become a very important issue. He suggested that the Strategy could share examples of good practice in this regard. This could be tasked to the Kent Planning Officers' Group.

(16) Mr Tant referred to the KCC publication "Water.People.Places". This was a master planning for SuDS guide which considered different types of development and how SuDS could fit into them. It addressed different development types of local conditions and set out opportunities to deliver SuDS. This document had been widely publicised, was targeted at developers and their agents as well as Planners in Kent and was available on the KCC website. He agreed to make the link available to all Members of the Committee.

(17) Mr Tant responded to Members' questions by explaining that it was no longer legal to provide new combined sewers. The problems were posed by those which were already in existence. Whenever they over-flowed, there were additional problems beyond those that were normally associated with flooding. He identified a number of problems which were likely to intensify in the future. These were increasing growth (which would connect the combined sewers), increased densification of urban areas and increased rainfall as a result of climate change. The cost benefits of removing all combined sewer networks and replacing them with single systems was wholly unaffordable to the UK. There might, instead, be opportunities for surface water separation through alternative disposal mechanisms, particularly in new development in coastal areas and on chalk. This issue was being considered by the Water Industry and the sewage undertakers. KCC was a part of this process, which was still in its early stages.

(18) Mr Hills referred to the wetting up programme in Romney Marsh which aimed to re-establish natural habitats in the area. This goal had the potential to run counter to some tenets of flood risk management and required careful dialogue between all parties, including Natural England.

(19) Mr Tant replied to a question from Mrs Stockell by saying that KCC in its capacity as Lead Local Flood Authority (LLFA) was a statutory consultee for major applications in the County in respect of surface water management. It carried out this function with reference to non-statutory technical guidance and KCC's own policy documents. The Drainage Hierarchy permitted discharge to a combined sewer but not to a foul sewer. Although The LLFA would not routinely object to a planning proposal to discharge into a combined sewer, it would expect an assessment to be carried out with the aim of possible identification of a better option. The minimum requirement was that the developer would manage the drainage so that there was no additional runoff from the site. The developer would also need to consult with Southern Water in respect of capacity even though they were not a statutory

consultee. This was because they would have to agree the adoption regime even though by Law they could not object to the connection itself the developer would have to fund any capacity increase. If, though, the resultant capacity increase was deeper within the system, funding would be a matter for negotiation between Southern Water and the developer.

(20) The Chairman informed the Committee that Southern Water had agreed to attend the next meeting of the Committee on 18 July 2016 and said that this would be the opportunity to ask detailed questions on this subject. He suggested that they might wish to give advance notice of any such questions which could be forwarded to Southern Water by Mr Tant in advance of the meeting.

(21) RESOLVED that:-

- (a) the report be noted together with the comments on the draft analysis of challenges and draft objectives identified for the next Local Strategy;
- (b) the Chairman be requested to write to Kent MPs on the Committee's behalf setting out its view that the Government should develop a legislative framework for SuDS;
- (c) an invitation be extended to flood wardens to attend the next meeting of the Committee; and
- (d) consideration be given to the question of whether additional representation from KALC would assist the Committee in carrying out its role.

4. Environment Agency and Met Office Alerts and Warnings and KCC Flood Response activity since the last meeting

(Item 6)

(1) Mr Harwood stated that winter 2015/16 had been relatively mild with comparatively low levels of rainfall. There had, however, been a significant surface water flood event in early January geographically focussed upon the east of the County which had particularly affected Shepway and Dover Districts. Some 120 properties had either been flooded or required agency intervention to prevent them flooding.

(2) Mr Harwood then referred to Appendix 1 which set out those areas in which flooding to properties had occurred as well as roads and other infrastructure which had been affected by the January intense rainfall event. He added that KCC's partner agencies had generally been very efficient in providing the data sets required to prepare this report.

(3) Mr Harwood continued by saying that Storm Imogen and its associated weather fronts had struck between 8 and 10 February. This event had coincided with high spring tides, leading to 11 flooding alerts and an Amber Severe Weather Alert being issued by the Met Office.

(4) Mr Harwood drew attention to paragraph 3.2 of his report. He said that Kent had some 200 trained flood wardens. There were, however, some gaps in cover within hard-to-reach communities (especially urban conurbations and coastal areas). The Environment Agency and the Kent Resilience Team were working to address this issue together with other partners through community outreach work. This involved some innovative approaches such as the provision of additional equipment to flood wardens and locally delivered awareness training.

(5) Further work was currently being undertaken on off-site reservoir inundation planning in Kent. This included working with the Environment Agency to set up a specific task and finish working group.

(6) Mr Tant informed the Committee that during the 2013/14 flooding the Alkham Bourne ephemeral watercourse overflowed heavily, causing damage to culverts. Recovery Grant funding had been allocated to replace the culverts in the watercourse along the Alkham Valley Road. He agreed to provide this information in written form to Dr Eddy.

(7) Mr Luke Thompson (Environment Agency) introduced himself as the Team Leader of the Flood Resilience Team covering Kent and South London. The role of his Team was to administer the Flood Warning Service and to work with partners such as KCC to encourage local communities to become more flood-resilient. This had included the training seminar provided to flood wardens in 2015.

(8) Mr Thompson went on to set out the context to some of the statistics provided in the report. He highlighted that 2015/16 had been relatively dry in Kent and South London, particularly in comparison to the conditions faced by colleagues in the North.

(9) Mr Thompson then showed the Committee a graph demonstrating river response levels to heavy rainfall near Penshurst in the Upper Medway between 31 December 2015 and 16 January 2016. This showed river levels rising dramatically and then not falling sufficiently before the next heavy rainfall to avoid the necessity for another tidal flood warning to be issued. A similar story could be seen in Mr Thompson's second slide which showed river levels in the Upper Stour during this period.

(10) Mr Thompson's third slide showed rainfall in Folkestone during 5 January 2016. 60 mm of rain had fallen during this 24 hour period (including very sudden and dramatic rises at certain points of the day – particularly at 11 am). During that same period, Canterbury had only experienced 15mm, as shown in the fourth slide. This demonstrated the extremely localised nature of the surface water flooding which had occurred.

(11) Mr Thompson summed up by saying that a number of alerts and severe warnings had been issued but that it had been unnecessary to issue and flood warnings during the winter.

(12) Dr Eddy noted that the majority of the sites identified in Appendix 1 were in Dover District. Of these, six of these were in towns and the rest roads in rural areas.

(13) Mr Tant clarified that the majority of risk (as opposed to flooding itself) was in urban areas. Many of the incidents that had occurred were on roads, which meant

that the impact was road closure. The difficulty of funding for flood risk management works was that the majority of money that was available to tackle flood risk was aimed at reducing the risk of flooding to residential properties. The funding available to business properties was much lower.

(14) Mr Thompson said that the Environment Agency's flood alerts were reflective of very large catchments. For example, an alert in the Upper Stour area would include Ashford and the rural communities upstream of the town.

(15) Mr Tant replied to a question from Dr Eddy by saying that Dover would not appear in a Flood Warning area because there were only two rivers in the District. As a result, the risk of fluvial flooding was lower than elsewhere. The only warnings that Dover would receive would be the severe weather warnings put out by the Met Office, which covered Kent and East Sussex (Appendix 3). The Met Office would not be able to attempt to provide more localised severe weather warnings because weather patterns were not sufficiently easy to predict with such precision with present technology.

(16) RESOLVED that the level of alerts and warnings since the last meeting of the Committee be noted.

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To: Kent Flood Risk Management Committee – 18th July 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

Summary: To update Kent Flood Risk Management Committee on Environment Agency and Met Office Alerts and Warnings, and flood response activity since the last meeting of the Committee on 8th March 2016. Members are requested to note this report.

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 (SWAG) meetings.

2. Latest situation

2.1 June 2016 saw the highest rainfall totals for this month since at least 1997. An average of more than 90mm of rain fell in Kent between 1st and 27th June, double the average for the month.

2.2 Local responders, including KCC and Kent Districts, participated in 3 SWAG meetings during June and KCC also took part in 2 London SWAG meetings to ensure enhanced cross border and mutual aid planning. The Capital being especially hard hit by surface water flooding on EU Referendum day, 23rd June.

2.3 Rainfall across Kent was especially intense on Friday 17th and Saturday 25th June, with localised surface water and fluvial flooding impacts resulting. North Kent was hardest hit on the 17th and west Kent on the 25th June. Sevenoaks District bore the brunt of the June storms with more than 44 homes and businesses affected, alongside disruption to local road and rail infrastructure. Across Kent more than 149 residential and commercial properties were affected by surface flooding during June. A breakdown of these impacts by Local Authority is appended to this report¹.

¹ please see appendix 1

2.4 Since the last meeting of the Kent Flood Risk Management Committee on the 8th March 2016, a total of 31 flood alerts and 1 warning have been issued by the Environment Agency². This contrasts with 5 flood alerts and no warnings for the same period in 2015.

2.5 A total of 11 yellow and 2 amber Met Office Severe Weather Alerts and Warnings have also been issued since the last meeting³. This exceeds the 5 yellow alerts and 1 warning issued during the corresponding period last year.

2.6 The Thames Barrier has been closed on 4 occasions for test purposes since the last meeting of the Committee in March.

3. Next Steps

3.1 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

Background documents: None

² please see appendix 2

³ please see appendix 3

Appendix 1: June 2016 - premises flooded or requiring agency interventions

(Sources: Kent Fire & Rescue Service, Kent County Council, Ashford BC, Dover DC, Tonbridge and Malling BC)

Local Authority Area	Premises flooded or requiring agency interventions
Ashford Borough Council	12
Canterbury City Council	14
Dartford Borough Council	>11
Dover District Council	2
Gravesham Borough Council	>4
Medway Council	>18
Maidstone Borough Council	6
Sevenoaks District Council	>44
Shepway District Council	2
Swale Borough Council	2
Tonbridge and Malling Borough Council	>22
Thanet District Council	>13
Total	>149

Appendix 2: Environment Agency Flood Alerts issued since 8th March 2016

Flood Zone	Date issued	Status
River Rother and its tributaries	09/03/2016	Alert
Rivers Eden, Eden Brook and Kent Ditch	09/03/2016	Alert
Upper River Medway Area	09/03/2016	Alert
River Bourne Area	09/03/2016	Alert
Lower River Medway Area	09/03/2016	Alert
River Beult Area	09/03/2016	Alert
Rivers on the Isle of Sheppey	27/03/2016	Alert
Plenty, Swalecliffe and West Brooks Area	27/03/2016	Alert
Upper River Medway Area	28/03/2016	Alert
Rivers Eden and Eden Brook Area	28/03/2016	Alert
Lower River Medway Area	28/03/2016	Alert
River Teise Area	28/03/2016	Alert
River Beult Area	28/03/2016	Alert
River Bourne Area	28/03/2016	Alert
Middle River Medway Area	28/03/2016	Alert
Rivers Eden and Eden Brook Area	30/03/2016	Alert
Plenty, Swalecliffe and West Brooks Area	17/06/2016	Alert
The Pent Stream Catchment	17/06/2016	Alert
Rivers on the Isle of Sheppey	22/06/2016	Alert
The Pent Stream Catchment	22/06/2016	Alert
Rivers Eden and Eden Brook Area	22/06/2016	Alert
Darent Catchment	22/06/2016	Alert
Upper River Medway	22/06/2016	Alert
River Teise Area	22/06/2016	Alert
River Bourne Area	22/06/2016	Alert
River Rother Area	22/06/2016	Alert
Shuttle and Cray Catchments	22/06/2016	Alert
Plenty, Swalecliffe and West Brooks Area	22/06/2016	Alert
River Darent Catchment	25/06/2016	Alert
River Darent Catchment	25/06/2016	Warning
Shuttle and Cray Catchments	25/06/2016	Alert
River Bourne Area	25/06/2016	Alert

Appendix 3: Met Office Severe Weather Warnings issued since 8th March 2016

Met Office Alerts and Warnings	Date issued	Status
Yellow Warning of Fog for London & South East England	11/03/2016	Warning
Yellow Warning of Wind for London and South East England	27/03/2016	Warning
Yellow Warning of Rain for London and South East England	14/04/2016	Warning
Yellow Warning of Rain for London and South East England	15/04/2016	Warning
Yellow Warning of Rain for London and South East England	10/05/2016	Warning
Yellow Warning of Rain for London & South East England	11/05/2016	Warning
Yellow Warning of Rain for London & South East England	06/06/2016	Warning
Yellow Warning of Rain for London & South East England	16/06/2016	Warning
Yellow Warning of Rain for London & South East England	21/06/2016	Warning
Amber Warning of Rain for London & South East England	22/06/2016	Warning
Yellow Warning of Rain for London & South East England	22/06/2016	Warning
Amber Warning of Rain for London & South East England	23/06/2016	Warning
Yellow Warning of Rain for London & South East England	26/06/2016	Warning