

KENT FLOOD RISK MANAGEMENT COMMITTEE

Monday, 16th November, 2015

2.00 pm

Council Chamber, Sessions House, County Hall,
Maidstone





AGENDA

KENT FLOOD RISK MANAGEMENT COMMITTEE

Monday, 16th November, 2015, 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 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. Membership

To note that Mr A Terry has replaced Mr J Elenor as a Member of the Committee.

2. Substitutes
3. Declarations of Members' Interest relating to items on today's agenda
4. Minutes of the meeting on 20 July 2015 (Pages 5 - 12)
5. Dates of meetings in 2016
Tuesday, 8 March 2016
Monday, 18 July 2016
Monday, 14 November 2016
6. Presentations
 - (a) Flood Wardens : Cark Lewis (Tonbridge Flood Wardens Group) and Tim Norton (Environment Agency)
 - (b) Kent Search and Rescue: Stuart Kenny (Water Lead Officer)
 - (c) Kent 4 x 4: Steve Short (Chairman)
7. Oral report on the Kent Resilience Forum Annual Severe Weather Exercise - Paul Flaherty, Kent Fire and Rescue
8. Environment Agency and Met Office Alerts and Warnings and KCC flood response activity since the last meeting (Pages 13 - 16)
9. Other items which the Chairman decides are Urgent

EXEMPT ITEMS

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

At the end of the public session, Members of the Committee should remain in the meeting room for 20 minutes for summing up

Peter Sass
Head of Democratic Services
03000 416647

Friday, 6 November 2015

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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 Monday, 20 July 2015.

PRESENT: Mr M J Harrison (Chairman), Mr A H T Bowles, Ms C J Cribbon (Substitute for Dr M R Eddy), Mr L B Ridings, MBE, Mr R J Parry (Substitute for Mrs P A V Stockell), Mr A Terry (Substitute for Mr J Elenor), Mr M J Vye, Mrs J Blanford (Ashford BC), Mr J Scholey (Sevenoaks DC), Ms C Stewart (Tunbridge Wells BC), 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)

UNRESTRICTED ITEMS**7. Membership**
(Item 1)

- (1) The Committee noted the appointment of Mr J Elenor in place of D Baker.
- (2) The Committee noted that Ms C Stewart was the new representative of Tunbridge Wells BC in place of Mr D Elliott.

8. Minutes of the meeting on 10 March 2015
(Item 4)

RESOLVED that the Minutes of the meeting held on 10 March 2015 are correctly recorded and that they be signed by the Chairman.

9. Presentation by Mr Paul Cobbing - Chief Executive of the National Flood Forum
(Item 5)

- (1) Mr Paul Cobbing from the National Flood Forum (NFF) began his presentation by saying that his background was in Environmental Management and that he had also worked for the Government Office for the West Midlands and DEFRA. He had been working on behalf of the NFF for the last four years.
- (2) Mr Cobbing said that the greatest impact that flooding had on individual people was the distress that it caused rather than the actual physical loss (the effect of which could be mitigated to some extent by Insurers).

(3) Mr Cobbing then said that the NFF was a national charity with 13 employees. More than 200 community groups were affiliated to this organisation which ran many dozens of projects throughout the UK.

(4) The NFF had been formed in 2002 in response to the major flooding events of 1998 and 2000. It had gone through a series of different stages. Initially, it had mainly involved various community groups to talk to one another. It had then become a campaigning organisation which made representations to Government, insurance companies and others. This role had been supplemented by aim of enabling communities to work together to achieve practical goals.

(5) Mr Cobbing then set out the three functions of the NFF. These were: helping people to prepare for flooding; helping people to recover their lives after flooding; and campaigning and working to put flood risk communities at the centre of policy making and operational delivery. This built upon strong relationships built up with DEFRA, the Environment Agency, insurers and others.

(7) Mr Cobbing said that NFF had a special role to play because people accepted that they were independent. This meant that they could engage with people who were angry and upset in a way which more traditional agencies were unable to do. He gave as an example, a community in Staffordshire which had been at odds with the Government and other agencies for 15 years. There were some 15 developers and the NFF had successfully been able to encourage the community to engage with both them and government departments in a practical and positive way.

(8) Mr Cobbing moved on to describe the “Ladder of Engagement” (set out in one of the presentation slides) for working with communities. The highest priority within this model was “Citizen Control.” The NFF aimed to achieve this on every occasion. Every community that was affected by or at risk of flooding needed to become empowered to take the lead. It was the NFF’s aim to ensure that this was the case and to provide support.

(9) The NFF had a major role to play after flood events. They had undertaken this role in West Sussex, Hull, Cumbria, Sheffield, Surrey and in many other places. The NFF had learned many lessons as a result of these experiences. An example of this was that communities’ needs were very different a week after a flooding event than during the first three or four days. Insurance was often the most significant priority a week or two after the event. The NFF was able to use the strong links it had established with the insurance industry to help overcome difficulties people experienced. The same results could be achieved in accommodation terms because of the NFF’s links with the providers.

(10) Mr Cobbing said that the NFF would usually spend some 18 months working with a flood – affected community, supporting it by utilising the links it had built up with all the relevant agencies to facilitate recovery.

(11) The NFF also worked with the Gold and Silver Commands, advising them on how to work with particular communities. This would include work on reviews in the aftermath of a flooding event.

(12) The Chairman noted that the slide of the Campaign Trailer contained an Environment Agency logo. He asked whether this led the community to conclude that

the NFF was actually a part of that agency. Mr Cobbing replied that this particular logo had been the subject of serious discussion and negotiation. The Environment Agency had funded the mobile office, so the question had been how to include its logo on the trailer without leading the community (which considered that the EA was not being particularly helpful) to believe that the NFF was not independent. He agreed that this was a very serious point.

(13) Mr Cobbing continued by saying that the NFF never walked away from an issue once it had been raised. It always saw it through to its conclusion. This led to other issues being raised with them which the other agencies were unaware of. Examples of this had occurred in Surrey where the NFF had been able to pick up health issues as well as identify the problem that a number of people had been unable to insure their properties, despite being initially unwilling to say that this was the case.

(14) Mr Cobbing turned to the question of preparation for flooding, which was another aspect of the NFF's work. Very often, there was no local flood group. The NFF would help set one up and also advise on the best way to organise and deal with the issues. This could include facilitating discussions within a community about areas of disagreement over what the actual flooding issues were. It was also crucial to ensure that even the least articulate and most vulnerable had a voice which was heard.

(15) NFF's role as a facilitator of discussions between Flood Action Groups on the one hand and agencies/authorities on the other was undertaken with the overall goal in mind of reducing flood risk. To this end, it would produce an action plan which would lead to meetings identifying the various tasks which needed to be undertaken and the timeframe for them.

(16) Mr Cobbing said that the NFF had been trialling various types of Plans. These included Resilience Plans, Incident Plans and Recovery Plans. A community-led approach was also vital for household and business property level protection schemes. Any such scheme that was not community-led ran the risk of either being impractical to implement or of not meeting the community's needs.

(17) It was also important to identify and all the important intervention mechanisms and to utilise as many of them as possible in order to manage the risk in the most effective way. A lot of work was undertaken with various agencies such as Age Concern and the Rowntree Foundation to identify those areas most *vulnerable* to a flooding event. This did not necessarily have to be those areas which were more likely to flood; rather it was those communities at risk which would suffer the most in the event of a flooding event.

(18) Mr Cobbing said that the NFF had been involved with the Defra Flooding Resilience Community Pathfinder which had just finished. The NFF had been involved in 8 of the 13 projects. This had been a great opportunity to test new ideas in a variety of local communities, some of which had been flooded and others which had not.

(19) Mr Cobbing then said that he had personally been involved over the past four years in actively working on flood risk insurance for households, negotiating with the Government and the insurance industry to try to solve the problem that ½ m

households had difficulties getting flooding insurance. This could be because they were deemed to be too high risk, because the premiums were too high or because they were worthless when an event actually occurred.

(20) Mr Cobbing also stated that a major problem with the government's current strategy for flood risk management was that there were still 200,000 homes at risk of significant flooding even after 50 years of investment in flood defences. The NFF had a role to play in facilitating discussion on how to deal with the problem that there currently were so many places which would never have the right flood protection measures installed because they were too small to be a priority or because the scheme itself would be too expensive in comparison to the number of people and properties it was designed to protect.

(21) Mr Cobbing said that there were many initiatives which could be taken by various government departments which could help alleviate the risks of flooding. For example, a number of counties did not ascribe a significant role to the Fire and Rescue Service. Kent, on the other hand, had done so very successfully. The government strongly advocated shared best practice, which, if implemented, would enable these counties to follow Kent's lead. Another example was that care homes and small businesses had to have a fire certificate but did not need to have any plans or practice to deal with a flooding event, even though flooding was statistically far more likely to occur than a fire.

(22) Mr Cobbing concluded his presentation by saying that you could not build flood defences everywhere, but you could work with every community to increase its flood resilience.

(23) Mr Harwood responded to a question from the Chairman by saying that the Kent Resilience Forum was in discussions with the NFF over joint working. He was particularly interested in the NFF's Flood risk and incident management matrix which identified the symbiosis between different interventions. It would be very wrong to think in silos instead of working across agencies and disciplines. Work was also being undertaken with the Local Government Information Unit to look at resilient communities in their wider sense so that all decision-making within the County Council could be consistently informed.

(24) Ms Stewart asked which level of Local Government usually initiated work with the NFF. Mr Cobbing replied that working with communities was often initiated on a sub-parish level. Once this had happened, the NFF would work at all levels. An example of this was that, having identified the most vulnerable communities in the county, the NFF was now discussing with Surrey CC how best to translate Recovery into Resilience. In West Sussex, meanwhile, recovery from the 2012 floods had led to the establishment of a network of groups which were helping and learning from one another by sharing good practice. Two representatives of that network were now sitting on the County's Strategic Flood Risk Management Boards.

(25) Mr Vye said that he had attended a meeting of his local Flood Management Group where a lot of concern had been expressed that EA maps were not always accurate in terms of the mitigation of flood risk. Both the Co-op and NFU had been praised for their insurance approach unlike other insurers. He asked whether the NFF could act as an adviser in this respect.

(26) Mr Cobbing replied that the NFF did have interesting discussions with the EA about its flood maps and was involved in joint working to improve the position. Some of the larger insurance companies had far more sophisticated modelling systems than the EA based on a combination of model data and their own claims data. Other companies either used the EA maps or simply based their decisions on post codes.

(27) Mr Cobbing continued that the NFF ran an advice line which covered a range of flooding issues, including advice on which insurance company was likely to provide the best policy at any given point.

(28) Ms Cribbon said that a major concern was the number of homes which were purchased without the buyer being informed that it was in a flood risk area. Mr Cobbing replied that the current guidance from the Council of Mortgage Lenders to solicitors was that they should research on flooding. This advice might, however, change. The NFF had made its views well known on this subject and would continue to lobby hard against any change.

(29) Mr Dobson said that planning authorities needed to ensure that they took flooding risk into account when deciding whether to permit developments. He gave as an example a housing estate which had been built in Hildenborough on a flood plain which flooded every time the river broke its banks.

(30) Mrs Brown said that her parish was affiliated to the NFF which had undertaken a work on their behalf. She confirmed that the NFF was and was also seen to be fully independent. They provided very helpful advice and support which was very gratefully appreciated.

(31) RESOLVED that Mr Cobbing be thanked for his presentation and that the crucial role of the NFF in working with flood-affected communities be noted.

10. Flood Risk to Communities

(Item 6)

(1) Mr Tant introduced the report by explaining that KCC as the Lead Local Flood Authority had a statutory duty to produce a Flood Risk Management Strategy. Despite the implications of its title, this Strategy provided a high level strategy for local flood risk rather than an overview of all forms of flood risk in the Kentish Districts. Local feedback had identified that there was a need to produce a document for each District that would provide a local overview. This had been reinforced by the number of people who had contacted KCC during the flooding events asking for an explanation of what the particular flooding issues were in their communities, as well as how these issues were being tackled and who was responsible for ensuring that this was done.

(2) Mr Tant continued by saying that the Environment Agency had prepared some local documents entitled "Communities at Risk." These had been produced for two local areas in Kent and had mainly consisted of mapping data (including identification of properties which were at risk of flooding. The information in these documents had been limited to flooding that was the responsibility of the EA to manage.

(3) The intention behind the production of the “Flood Risk to Communities” documents was to cover all forms of flood risk, including areas covered by the EA, KCC, the sewage undertakers and the Highways Authority. The documents would also cover lines of responsibility during emergencies and any local plans produced to manage risk. It aimed to provide an overview of all the local flooding issues, and signposting where further, more detailed information could be obtained.

(4) Mr Tant’s report had included the final version of *Flood Risk to Communities: Canterbury*. Two more such documents (Tonbridge and Malling and Maidstone) were in the process of being finalised. He was now seeking feedback in terms of whether these documents were useful and helpful. If the responses proved positive, he would aim to continue with this work until the whole county was covered. He asked whether the Committee Members could give their comments on this basis rather than identifying any inaccuracies, which could be notified to him outside the meeting.

(5) The Chairman commented that he had personally found the document to be very helpful, as it had gathered all the necessary information into one easy-to-read document which answered all the questions that people might have.

(6) Mr Bowles commented that he had found the information contained within the Canterbury document to be extremely interesting and that it would serve as a reference point for a great deal of work rather than being something that was read once and then forgotten. He considered it essential that feedback was sought from outside the meeting as it was possible that Committee Members would have a different perspective than the public at large.

(7) Mr Flaherty said that from Kent Fire and Rescue’s perspective the document was very useful as it informed the public in a straightforward manner about the all the local plans and strategies as well as who had responsibility for them.

(8) Mr Tant confirmed that consultation had already taken place with all the partner agencies and that it was now intended to seek the views of the District and Parish Councils before deciding whether to go any further. It was currently only available in the agenda papers for this meeting, but would soon be made more public.

(9) Mr Vye suggested that the document could contain examples of best practice by, for example, explaining that a number of parishes had employed Flood Wardens and found their contributions very helpful. Mr Tant replied that he agreed that Flood Wardens should be included in the document. He did not believe that this should involve going into a great deal of detail, but that it would be more appropriate to explain where good guidance on their role and usefulness could be found.

(10) Mr Tant replied to a comment by Mr Parry by agreeing that there was a strong possibility that each District would be asking for a document for their area to be produced more quickly than was practical. He added that the reason that Canterbury had been the first to be chosen was because of the severe flooding which had taken place in 2013/14 and because it was the only District to feature all forms of flood risk. He informed the Committee that, if it was decided to go ahead, he expected that all the documents would be completed by the end of the financial year 2015/16.

(11) Mr Pearman (Deputy Cabinet Member for Environment and Transportation) said that he considered the document to be excellent. It would serve as the foundation for the Plan which would deliver the response to a flooding situation. It was an opportunity to encourage the Districts to produce their Emergency Plans in response.

(12) Mr Pearman then referred to a new document produced by Kathryn Lewis (Drainage and Flood Manager) which dealt in detail with riparian responsibilities. It would be useful if the Flood Risk to Communities documents could refer to it.

(13) The Chairman suggested that some Flood Wardens could be invited to attend the next meeting in order to share their perspectives and experiences with the Committee. This would include the training they had received, the amount of time that they could devote to this role, and whether there was anything that the Committee could do to assist them. The same invitation could be extended to volunteers from Kent Lowland Rescue.

(14) RESOLVED that:-

- (a) the draft *Flood Risk to Communities: Canterbury* be noted together with the favourable response received from Members of the Committee; and
- (b) an invitation be extended to representative Flood Wardens from Kent Lowland Rescue to address the next meeting of the Committee.

11. Environment Agency and Met Office Warnings and Alerts since the last meeting
(Item 7)

(1) Mr Harwood introduced his standing report by informing the Committee that there had been very little flooding since the previous meeting. The EA Warnings that had been received had been in respect of the spring tides in March 2015. .

(2) Mr Harwood then said that September 2015 would experience the maximum tidal range in the natural 19 year astronomical tidal cycle. The tides in September would be the highest seen in a long time, not just because of the tidal cycle but also because of glacio-hydro isostatic rebound and climate change (whose effects were leading to rising sea levels). Consequently, there was significant planning underway to ensure that the coastal communities were resilient.

(3) Mr Harwood continued by saying that a multi-agency workshop had taken place in June to consider potential evacuation issues in Romney Marsh in the event of a major coastal flooding event.

(4) RESOLVED that the level of alerts received since the last meeting of the Committee be noted, together with the need to maintain vigilance in respect of the anticipated high tides in September 2015.

12. Subterranean Water Infiltration in Sandwich

(Item)

(1) The Chairman reported correspondence from Mr Michael Holloway from Dover DC and Sandwich TC drawing attention to the infiltration of subterranean water into two properties in Strand Street, Sandwich and into the garden of the King's Lodge, which was a historic dwelling. This correspondence also raised concern that this may have been caused by the flood defence work recently undertaken by the Environment Agency.

(2) The Committee agreed that Mr Holloway's correspondence would be forwarded to the Cabinet Member for Environment and Transportation for his response.

(3) Mr Ridings said that other properties along Strand Street had not been affected and that it appeared that this was happening intermittently, possibly as a result of some part of the subterranean drainage going into the Stour being blocked up by the sheeting that had been installed.

(4) RESOLVED that:-

- (a) the correspondence from Mr Holloway in respect of subterranean water infiltration in two properties in The Strand and the King's Lodge in Sandwich be noted with concern; and
- (b) the correspondence be forwarded to the Cabinet Member for Environment and Transport for further action.

To: Kent Flood Risk Management Committee – 20th November 2015

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 KCC flood response activity since the last meeting of the Committee on 20th July 2015. 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, infra-structure 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.

1.3 More precisely geographically focused Flood Warning Service zones were introduced by the Environment Agency on 29th October 2014. This change was informed by lessons learned from the flooding events experienced across Kent during winter 2013/14, and has undoubtedly enhanced the effectiveness of this service.

2. Latest situation

2.1 Met Office data indicates that last August was the wettest experienced in south-east England since 1977. Resultant surface water flooding led to property damage in a number of locations across Kent, including New Romney on the 13th, the Pantiles, Silverdale and the train station at Tunbridge Wells on the 24th and Allenby Avenue in Deal on the 25th. Kent County Council is currently undertaking a detailed investigation into the nature and impact of the flooding in Tunbridge Wells. By contrast, both September and October 2015 have been notably dry months. However, September 2015 experienced the maximum tidal range in the natural 19 year astronomical tide cycle, resulting in 11 coastal flood alerts and operation of

the Thames Barrier. A surface water flooding event occurred in Albert Road, Deal on 22nd September thought to be linked to a malfunction at a local pumping station, with Southern Water currently investigating this incident.

2.2 Since 20th July 2015 a total of 20 Environment Agency flood alerts were issued, dividing almost equally between tidal and fluvial (river) locations¹.

2.3 A total of 7 yellow Severe Weather Alerts and Warnings have been issued for heavy rain and the risk of surface water flooding since the last meeting².

2.4 The Thames Barrier was closed on 4 occasions, for both test (3) and operational (1) reasons.

3. Next Steps

3.1 The autumn and winter period brings with it an increased risk of flooding. Long range forecasts suggest that weather conditions are likely to remain mild and unsettled in the period up to Christmas, underlining the need for continued vigilance by Kent County Council, our partners and residents.

3.2 The greatest risk of tidal flooding is experienced between November and March, when storms can coincide with high tides. Key dates for such high tides are the 26th and 27th November, 13th and 14th December, 26th and 27th December, 13th and 14th January and 26th January³.

3.3 Members will continue to be regularly updated on flood alerts, severe weather warnings, operational response and significant flood events across Kent.

4. Recommendations

4.1 That Members:

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

Tony Harwood, Resilience and Emergencies Manager, Growth Environment and Transport 07850 907286 / tony.harwood@kent.gov.uk

Background documents: None

¹ please see appendix 1

² please see appendix 2

³ please see appendix 3

Appendix 1: Environment Agency Flood Alerts and Warnings issued since 20th July 2015

Flood Zone	Date issued	Status
Rivers on the Isle of Sheppey	24/07/2015	
Plenty, Swalecliffe and West Brooks Area	24/07/2015	Alert
New Romney Sewer Arm Area	13/08/2015	Alert
Upper River Stour Area	13/08/2015	Alert
Plenty, Swalecliffe and West Brooks Area	24/08/2015	Alert
Rivers on the Isle of Sheppey	24/08/2015	Alert
Coast from Pegwell Bay to Deal including the Tidal Stour	31/08/2015	Alert
Sandgate to Dungeness	31/08/2015	Alert
Fairlight to Dungeness including the Tidal Rother	31/08/2015	Alert
Coast from Sandgate to Dungeness	31/08/2015	Alert
Isle of Sheppey and Coast from Kemsley to Seasalter	31/08/2015	Alert
Coast from Whitstable to Margate	31/08/2015	Alert
Tidal Medway, Medway Estuary and Isle of Grain	31/08/2015	Alert
Coast from Dartford to Allhallows	31/08/2015	Alert
Coast from Sandgate to Dungeness	01/09/2015	Alert
Coast from Sandgate to Dungeness	14/09/2015	Alert
Coast from Fairlight to Dungeness including the Tidal Rother	14/09/2015	Alert
Upper River Stour area	22/09/2015	Alert
Plenty, Swalecliffe and West Brooks	22/09/2015	Alert
Lower River Medway Area	22/09/2015	Alert

Appendix 2: Met Office Severe Weather Flood Alerts and Warnings issued since 10th March 2015

Met Office Alerts and Warnings	Date issued	Status
Yellow Alert of Rain and Wind for London & South East England	24/07/2015	Alert
Yellow Warning of Rain for London and South East England	24/08/2015	Warning
Yellow Warning of Rain for London and South East England	25/08/2015	Warning
Yellow Warning of Rain for London and South East England	27/08/2015	Warning
Yellow Warning of Rain for London and South East England	28/08/2015	Warning
Yellow Warning of Rain for London & South East England	22/09/2015	Warning
Yellow Warning of Rain for London & South East England	02/10/2015	Warning

Briefing



Peak Astronomical Spring Tides

The following table indicates the peak astronomical Spring tides up to the 26 January 2014.

A Spring tide is the greatest difference between the high and low water. The peak spring tide is when levels will be at their highest. Tides will be high for 2-3 days before and after each peak spring tide.

Tide levels can be influence by differences in air pressures, creating positive or negative surges. Surge activity is not included in an astronomical forecast.

In addition the impact of wind speed and direction is not included in an astronomical forecast.

All data is presented in Ordnance Datum. To compare Ordnance Datum with local or Chart Datum, for Dover add 3.67m and for Sheerness add 2.90m.

Date of Astronomical Peak	Dover (m AOD)	Sheerness (m AOD)
26/11/2015 10:43	3.34	
27/11/2015 13:09		3.2
13/12/2015 01:18		2.86
14/12/2015 00:00	3.00	
26/12/2015 23:45	3.12	
27/12/2015 13:42		3.01
13/01/2016 00:47	3.18	
14/01/2016 00:00		3.01
26/01/2016 00:07	3.08	
26/01/2016 14:07		2.88