

HAMPSHIRE COUNTY COUNCIL**Decision Report**

Decision Maker:	Executive Member for Economy, Transport and Environment
Date:	9 September 2014
Title:	Response to the Flood Investigation in Buckskin, Basingstoke
Reference:	6037
Report From:	Director of Economy, Transport and Environment

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1. Executive Summary

- 1.1 This paper seeks approval to take forward the actions and recommendations within the Flood Investigation report into the flooding that occurred in the Buckskin area of Basingstoke between 7 February 2014 and the end of March 2014.
- 1.2 This paper provides background information on the findings, and actions, of the Section 19 Flood investigation report (available at : <http://www3.hants.gov.uk/flooding/hampshireflooding/floodinginvestigations.htm>) into the flooding experienced in Buckskin in early 2014. A summary of the actions based on the Section 19 Flood investigation report and knowledge from the response and recovery operations is provided in Appendix 1.

2. Contextual information

- 2.1 Following the flooding incidents in Buckskin between 7 February and end of March 2014, Hampshire County Council as the Lead Local Flood Authority (LLFA) conducted an investigation in accordance with Section 19 of the Flood and Water Management Act (FWMA) 2010.
- 2.2 As the County Council was one of the emergency responders during the flood events, a consultant, CH2MHILL, was commissioned to carry out the investigation on behalf of Hampshire, providing an independent examination of the incidents.
- 2.3 During the flood event the area of Buckskin in Basingstoke was affected by significant levels of flooding from multiple sources; fluvial, surface, foul and groundwater combined to flood the areas surrounding the Ridgeway Centre, Grampian Way and Basingstoke Golf Centre. A chronology of the event is provided below:

- The flooding incident began on the 7th February 2014. The flooding was first noticed in the highway by the low lying properties on Sperrin Close. By the 8th February (first recorded occurrences of property flooding) the flood had spread to Bodmin Close and the southeast end of Exmoor Close. Flooding was also experienced at the north east end of Antrim Close on 8 February. The flooding continued to flow down to the north east end of Exmoor Close on 11th and 12th February.
 - On 14 February, the day upon which heavy storm events were recorded throughout Hampshire, the flooded area increased dramatically to include the southeast end of Antrim Close and Quantock Close. Whilst daily rainfall data suggests only 18 mm of rain fell in Basingstoke on that day, 15 minute rainfall data suggests there were intense storms at 13:30 and 17:45. (2.2mm and 2.4mm in 15 minutes respectively) These intense storms were confirmed in anecdotal evidence received from Basingstoke and Deane Borough Council.
 - Water continued to flow down the valley reaching Prescelly Close on 19-22nd February. Here the flow was obstructed by the footbridge embankment adjacent to Grampian Way.
 - From Basingstoke and Deane Borough Council records, flooding at the Basingstoke Golf Centre began on 16th February.
 - On 24th February following the implementation of the pumping from the golf centre car park to the head waters of the River Loddon, water levels began to fall in this area. Once pumping had ceased, the water levels began to increase again and dropped of their own accord on 6th March.
 - The water levels fell dramatically on 6th March 2014. During those few days it was reported that Thames Water jetted the foul sewer from the manhole on the Basingstoke Golf Centre access road (M/H 0802) upstream to the manhole at southern junction of Grampian Way and Buckskin Lane (M/H 7204). In addition to this, South East Water resumed extraction from the West Ham Park (West) and West Ham Park (Central) boreholes, which are 300 m and 600 m away from the flooded area respectively.
 - The water levels in the rest of Buckskin continued to fall throughout March and the area began to dry up in early April. It was noted that the Environment Agency groundwater flood alert was no longer in force from 16th April 2014.
- 2.4 Evidence obtained through questionnaires circulated to residents by the consultants as part of the Section 19 Investigation secured direct evidence of 45 properties reported as flooded (36 internally and 9 externally). Based on flood incident maps, however, it is estimated that as many as 88 properties could have been flooded. Of the 45 documented cases; 36 were known to have been affected by foul water flooding.
- 2.5 The foul water flooding suggests that the foul sewer network was unable to cope with the inundation from the groundwater and surface water flooding. Flood water also threatened an electricity sub-station which serves a significant proportion of the Basingstoke area; this was kept operational through temporary flood defences.

- 2.6 Rising groundwater is thought to have activated a dormant spring which exacerbated the situation, and also caused the surface water drainage (formed of soakaways) to cease functioning. Surface water then drained north-east along a historic watercourse to low lying areas. Basingstoke and Deane Borough Council set up and maintained a "Tankering" operation throughout the flood incident.
- 2.7 A complex multi agency over-pumping trial was implemented in March which took water from an area by the Golf Club, and pumped it over 1 mile to the effective headwaters of the River Loddon. Before a wider application was implemented, the floods began to subside. There were objections from Wokingham Borough Council about the over-pumping on the basis it raised river levels downstream.

3. Funding for flood risk management works

- 3.1 Currently the main sources of funding for flood risk management schemes are the Flood Defence Grant in Aid (FDGiA) and the Local Levy. The FDGiA is administered by the Environment Agency on behalf of Defra and schemes are judged in relation to cost/benefit and contributions from partners, which are required in all schemes. The allocation of Local Levy funding is decided by the Regional Flood and Coastal Committees (RFCCs).
- 3.2 The Buckskin area has been allocated Local Levy funding of £50,000 which will be used to contribute to undertaking feasibility and technical assessments. These assessments will support any business cases to take forward options for further work and bids for funding.
- 3.3 The County Council is taking forward a Hampshire-wide programme of early actions which were agreed at the July 2014 decision day of the Executive Member for Economy, Transport and Environment - 'Response to the Flood Investigation in Romsey and Sub-Catchment Flood Risk Management'.

4. Consultation and Equalities

- 4.1 Local residents and other risk management authorities were consulted as part of the Section 19 investigation. This was primarily to obtain information and records of the flooding, to establish the timeline of events during the flooding and what actions were taken.
- 4.2 The results of the information gathered have been included throughout the Section 19 Report. Details of this consultation are provided within Appendix 2.

5. Future direction

- 5.1 In order to take forward the findings of the report the County Council, as LLFA, will need to work closely with flood risk management authorities, and other interested parties. Therefore a multi-agency group has been established to achieve this. This includes Hampshire County Council as Highway Authority, Lead Local Flood Authority and Emergency Planning; Basingstoke and Deane Borough Council, Thames Water, Environment

Agency, Sovereign Housing, and South-East Water. The findings and outcome of this work will be reported back to the Executive Member for Economy, Transport and Environment in due course.

- 5.2 It is recommended that a member steering group is established to include both district and county representation to oversee the proposals and support the multi-agency group as any proposals develop.
- 5.3 This work should incorporate the findings of the Section 19 Flood investigation report for Bucksland and identify priority actions and measures for early intervention alongside the wider programme of early action.

6. Recommendations

- 6.1. That the Executive Member for Economy, Transport and Environment approves the list of recommended actions in Appendix 1 and that the County Council acts as the lead to co-ordinate a multi-agency group to identify and look to obtain funding for these recommendations.
- 6.2. That a member steering group is established to oversee the proposals as they develop, to include both district and county representatives.

CORPORATE OR LEGAL INFORMATION:**Links to the Corporate Strategy**

Hampshire safer and more secure for all:	Yes
Corporate Improvement plan link number (if appropriate):	
Maximising well-being:	Yes
Corporate Improvement plan link number (if appropriate):	
Enhancing our quality of place:	Yes
Corporate Improvement plan link number (if appropriate):	

Other Significant Links

Links to previous Member decisions:		
<u>Title</u> Response to the Flood Investigation in Romsey and Sub-Catchment Flood Risk Management	<u>Reference</u> 5957	<u>Date</u> 11 th July 2014
Direct links to specific legislation or Government Directives		
<u>Title</u> Flood and Water Management Act 2010	<u>Date</u> April 2010	

Section 100 D - Local Government Act 1972 - background documents

The following documents discuss facts or matters on which this report, or an important part of it, is based and have been relied upon to a material extent in the preparation of this report. (NB: the list excludes published works and any documents which disclose exempt or confidential information as defined in the Act.)

<u>Document</u>	<u>Location</u>
Section 19 Buckskin Flood Investigation 2014	http://www3.hants.gov.uk/flooding/hampshireflooding/floodinginvestigations.htm

IMPACT ASSESSMENTS:

1. Equality Duty

1.1. The County Council has a duty under Section 149 of the Equality Act 2010 ('the Act') to have due regard in the exercise of its functions to the need to:

- Eliminate discrimination, harassment and victimisation and any other conduct prohibited under the Act;
- Advance equality of opportunity between persons who share a relevant protected characteristic (age, disability, gender reassignment, pregnancy and maternity, race, religion or belief, gender and sexual orientation) and those who do not share it;
- Foster good relations between persons who share a relevant protected characteristic and persons who do not share it.

Due regard in this context involves having due regard in particular to:

- a) The need to remove or minimise disadvantages suffered by persons sharing a relevant characteristic connected to that characteristic;
- b) Take steps to meet the needs of persons sharing a relevant protected characteristic different from the needs of persons who do not share it;
- c) Encourage persons sharing a relevant protected characteristic to participate in public life or in any other activity which participation by such persons is disproportionately low.

1.2. Equalities Impact Assessment:

The report seeks approval to take forward options to reduce flood risk management in consultation with other authorities and those affected. Consideration has been given to the impacts of the various options identified, and no adverse effects on residents with protected characteristics have been identified. The options should facilitate better flood risk management for all affected residents.

2. Impact on Crime and Disorder:

The recommendations in this report are unlikely to have any direct impact on crime and disorder, but may indirectly reduce the risk of home burglary and looting when areas are evacuated as a result of flooding.

3. Climate Change:

The recommendations in this report are unlikely to have a significant impact on the carbon footprint or energy consumption of the County Council.

Climate change is likely to increase the risk of future flooding and flood risk. By undertaking the recommendations in this report Hampshire's communities will be better prepared and more resilient to future flooding as a result of climate change.

<i>Number</i>	Task	Description	Timeframe	Lead Authority
1	Set up a multi-agency group & a Member steering group	The multi-agency group will identify recommendations and potential funding streams to take forward the recommendations. The Member steering group will oversee the work, this group will comprise the County Council, District Council, local and district members and the other risk management Authorities	Short term	HCC
2	Monitor groundwater levels	Investigate the potential use of the existing boreholes/abstraction to monitor the groundwater levels and link these to the emergency response plan	medium term	EA/BDBC/HCC/SEW
3	Ditch and pipe maintenance	Investigate the maintenance of the ditch and surface water pipe network within the Buckskin area. Take enforcement action where required	short-term	HCC/BDBC/Sovereign Housing/ TW
4	Enhanced groundwater abstraction	Investigate the use of abstraction at the existing boreholes/abstraction points to maintain groundwater levels	medium to long term	South East Water
5	Drainage of the highways	Investigate and accurately map the location and functioning of the existing highway drainage system within the Buckskin area and undertake maintenance as required	medium to long term	HCC
6	Foul Water network	Investigate and remediation where required of the foul water network, in particular the potential for groundwater ingress into sewers and from overland flow. Including the production of an inundation plan for the long term and actions that can be taken in an emergency to reduce inflow into sewers	short to long term	Thames Water
7	Grampian Way Sewer	Ensure that this sewer is on a regular maintenance schedule and continue to jet when required	short-term	Thames Water
8	West Ham borehole electricity substation	Investigate the resilience of this substation and provide this as required. Produce and improvement plan of actions to achieve this.	medium-term	SSE
9	Overland flow path routing	Investigate the potential for an overland flow route to be established that allows the water above ground to be routed to an appropriate location. Potential for funding bid for FDGiA and is linked to the general ditch/pipe maintenance as the whole surface water network	long-term	HCC/EA/BDBC
10	Community flood risk plan	Produce a multi-agency flood risk plan to be better prepared for any future flooding event, and understand the actions required at the appropriate times	Short-term to long-term	HCC/BDBC/EA/Sovereign Housing/Thames Water

<i>Number</i>	Task	Description	Timeframe	Lead Authority
11	Individual Property Resilience	Investigate the opportunities for individual property resilience from surface flows and backing up of pipes.	Short	Sovereign,
12	Define ground water retention	Define height of ground water as winter approaches and identify resultant flood risk posed by the retained volumes.	Short	Environment Agency

Summary of Consultation

In order to gather additional information about the extents of the flooding incidents and the properties affected, a series of questionnaires were sent out to residents in the areas affected by flooding by Hampshire County Council. The questionnaires were tailored to the scheme objective needs to identify the timeline of flooding and mechanisms that caused the events. In addition, a public consultation event was held at the Ridgeway centre, Buckskin on the 9 May 2014 to supplement the information received in the questionnaires.

The questionnaires were sent to the study area. The questionnaires were intended to support this investigation and can support any investigations or flood alleviation scheme in the future. Although some of the responses may be swayed by opinion, they still represent a valuable source of information particularly in building up an evidence base of properties that were affected by flooding.

There was a positive and detailed response from the residents of Buckskin. The key information received is listed in the table below:

Summary of questionnaire responses

Number of questionnaire responses	62
Number of properties reported to have flooded	45
Number of properties reported to have flooded internally	36
Number of properties reported to have flooded externally	9
Number of vulnerable individuals affected by flooding	31
Average depth of flooding (from the database of properties flooded)	174mm
Number of properties foul water flooding was experienced at	36

As part of this investigation, relevant Risk Management Authorities (RMAs) were consulted in order to provide information on their emergency measures. Responses were received from the Environment Agency (the EA), Thames Water (TW) and Basingstoke & Deane Borough Council (BDBC), Hampshire County Council Highways, Hampshire Fire and Rescue, and Scottish and Southern Energy (SSE).

Consultation sought to establish the nature of actions taken by each authority in order to create an integrated record of the response to the incident.