

Wiltshire Council

Environment Select Committee

19 September 2017

Subject: Wiltshire Local Flood Risk Management

Cabinet Member: Councillor Baroness Scott of Bybrook OBE

Portfolio Holder: Councillor Jonathon Seed – Flooding and Military Covenant

Key Decision: No

Executive Summary

Wiltshire has experienced severe flooding in previous years, especially in 2014 when over 500 properties were flooded and a number of roads had to be temporarily closed to traffic. Many communities in Wiltshire have experienced at first hand the damage, distress and disruption that flooding can cause.

The Flood and Water Management Act 2010 requires Wiltshire Council to act as Lead Local Flood Authority, and to develop a Local Flood Risk Management Strategy.

The Council's Strategic Flood Risk Management Group is chaired by Portfolio Holder, Councillor Seed, who works closely with the three Operational Flood Working Groups (OFWGs), chaired by Councillors Hewitt, Jacobs and Brown.

The OFWGs cover the north and south of the county, based broadly on river catchment areas, with a separate group for Salisbury. They usually meet every two months. The meetings are well attended, often with representatives from the Environment Agency (EA), Wessex Water, Thames Water, Highways England, Network Rail, Wiltshire Fire and Rescue, Country Land and Business Association, Canal and Waterways Trust and other organisations having an interest in flooding and drainage matters, including town and parish councils.

The groups work with local communities on initiatives to reduce flood risk, and encourage the development of local Flood Plans and the appointment of Flood Wardens. There are now 148 communities with Flood Plans and Flood Wardens across the county.

The Council's Parish Emergency Assistance Scheme (PEAS) provides sand bags and equipment to local town and parish councils so that they can store these locally, and deploy them as necessary, making them less reliant on this Council during flooding. There are 97 communities taking part in the scheme. Those communities currently without Flood Plans are being encouraged to prepare them, as a number are known to be at risk from flooding.

The Council has an ongoing programme of work to improve drainage and protect properties from flooding. A substantial amount of work to improve drainage and protect communities has been completed in the past year (see **Appendix 1**), and studies have been undertaken to provide information to support future bids for schemes.

Proposal

The Committee is requested to note that:

- (i) The Operational Flood Working Groups continue to be a successful way of working with local communities, the Environment Agency and other organisations to manage flood risk in Wiltshire.
- (ii) There are currently 148 communities with Flood Plans and Flood Wardens, with 97 communities taking part in the Council's Parish Emergency Assistance Scheme (PEAS), which provides sand bags and equipment to local town and parish councils so that they can store these locally, and deploy them as necessary.
- (iii) The Council carries out a large programme of flood alleviation and drainage projects which are managed and co-ordinated through the Operational Flood Working Groups, and bids for additional funding as opportunities arise.

Reason for Proposal

The Flood and Water Management Act 2010 requires the Council to act as Lead Local Flood Authority, to prepare a Local Flood Risk Management Strategy, and to investigate flooding.

The Council takes its responsibilities seriously with regard to flood risk management, and has set up local flood working groups, and has a significant programme of drainage improvement and flood alleviation schemes to help to manage flood risk in Wiltshire and to reduce the risk to our communities.

Alistair Cunningham
Corporate Director

Wiltshire Council

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Purpose of Report

1. To update members on progress made with regard to flood risk management since the last report to this Committee on 25 October 2016.

Relevance to the Council's Business Plan

2. The overall aim of the Council's flood risk management strategy is to support the Wiltshire Council Business Plan 2017 – 2027 priorities for growing the economy, strong communities and protecting the vulnerable. Reduced risk of floods and other threats is one of the goals of the Business Plan, which sets out what the Council will do, including:
 - Consideration in planning decisions and highways work to implement the appropriate levels of drainage;
 - Work with partners to ensure that emergency and recovery plans are in place and regularly tested;
 - Implement capital schemes to reduce the risk of flooding to properties.

Background

3. The Flood and Water Management Act 2010 requires Wiltshire Council to act as Lead Local Flood Authority (LLFA). It is also required to develop a Local Flood Risk Management Strategy (LFRMS), which it is responsible for maintaining, applying and monitoring, and ensuring that it is consistent with the National Flood and Coastal Risk Management Strategy. The Wiltshire LFRMS was previously considered by this Committee at its meeting on 27 October 2015, and no major changes are envisaged at present.
4. Wiltshire experienced severe flooding between December 2013 and March 2014, with over 500 properties flooded and a number of roads having to be closed to traffic for substantial periods. Flooding in September 2014 affected over 100 properties, and in September 2015 there were 20 properties flooded in Salisbury and the south of the county. Many communities in Wiltshire had previously been seriously affected by flooding in 2007 and in 2008. Many

communities in Wiltshire have experienced at first hand the damage, distress and disruption that flooding can cause.

5. Flood risk within Wiltshire is often a complex interaction between river, surface, ground water and sewer flooding, and the local geology is a significant factor. The northern part of the county is predominately underlain by clay, with flooding generally caused by river or excessive surface water runoff. The south of the county is characterised by underlying chalk deposits, with potential risk of ground water flooding in many areas.
6. The risk of flooding is considered to be increasing due to pressures in urban environments, and with climate change more severe rainfall events are predicted. These will create additional challenges for communities and have implications for the developed environment.

Main Considerations for the Council

Local Flood Risk Management Groups

7. The Council's strategic and operational flood groups are important elements of flood risk management in Wiltshire, and usually meet every two months. The Strategic Flood Risk Management Group is chaired by Portfolio holder, Councillor Seed, and met on 26 July 2017.
8. The Portfolio Holder works closely with the three Operational Flood Working Groups, which last year were chaired by Councillors Hewitt, Jacobs and Clewer. The Operational Flood Working Groups (OFWGs) cover the north and south of the county, based broadly on river catchment areas, with a separate group for Salisbury because of the significant flood risk in the city. Councillor Brown has now been appointed chair of the Salisbury group.
9. The OFWGs meetings are well attended, including attendance by representatives from the Environment Agency (EA), Wessex Water, Thames Water, Highways England, Wiltshire Fire and Rescue, Canal and Waterways Trust and other organisations having an interest in flooding and drainage matters, including town and parish councils.
10. The Council has a significant budget for drainage improvement and flood alleviation works, and bids for additional funding as opportunities arise. The local priorities are set by the OFWGs who co-ordinate the work with other organisations.
11. The OFWGs have continued to operate successfully and are often held up as an example of good practice by the EA and other organisations with an interest in flood risk management. Members of this committee are welcome to attend the meetings, especially if they are aware of particular flood risks in their area.

Regional Flood and Coastal Committees

12. The Wessex Regional Flood and Coastal Committee (WRFCC) is a committee established by the EA under the Flood and Water Management Act 2010 that brings together members appointed by Lead Local Flood Authorities (LLFAs)

and independent members with relevant experience. It ensures there are coherent plans for managing flood risks across catchments and encourages targeted investment. It also provides a link between the EA, LLFAs, other risk management authorities and relevant bodies to build an understanding of flood and coastal erosion risks in its area.

13. The Wiltshire Council representative on the WRFCC last year was Cllr Hewitt, supported by officers from the drainage team. A small part of Wiltshire is also in the Thames area and the Council is represented on that committee by Oxfordshire County Council. It is important that the Council is represented on these regional committees, especially in view of the funding opportunities that may arise and the potential for influencing local policies and strategies on drainage and flooding.

Drainage and Flood Alleviation Schemes

14. Fortunately, the weather during 2016/17 was generally comparatively mild, without the serious and extensive flooding incidents that had been experienced in Wiltshire in recent years. This provided the opportunity to progress drainage improvement and flood alleviation schemes which were identified as a result of the previous events. There were 39 sites implemented in 2016/17 across the county (see **Appendix 1**). These ranged from small drainage improvements to large flood alleviation schemes.
15. In addition to the schemes being implemented the Council's drainage team is working with other organisations on a number of desk top studies and investigations:
 - Corsham through to Lacock - South Brook and Hyde Mill.
 - Shaw and Whitley Melksham, including outfall into the Avon - South Brook.
 - Salisbury – full catchment study.
 - Castle Combe, Burton, Nettleton, Slaughterford – Bybrook.
 - Malmesbury - River Avon.
 - Warminster – Rivers Wylde and Were.
 - Bradford on Avon - River Avon.
 - Dauntsey - Brinkworth Brook, Avon.
 - Investigations into potential Department for Environment, Food and Rural Affairs (Defra) funded schemes are taking place at Shaw and Whitley, Nadder and Wyle chalk valley, Castle Combe, Burton and Nettleton.
16. The Council's staff have been working with the EA, Highways England and Network Rail regarding various flooding and drainage issues across the county. This has included installing telemetry equipment to measure flows at Southwick, Royal Wootton Bassett, Corsham, Whitley and Calne in order to improve the understanding of flood risk and to help develop future schemes.

17. The Council has a major programme of flood alleviation and drainage schemes with an annual budget of £1,000,000. This is significantly more than many local authorities spend on this type of work, and reflects the Council's commitment to keeping our communities safe. The Council has also been successful in bidding for funds from Defra and the EA for major schemes, most recently at Tilshead and Forest Row, Melksham.
18. In order to develop future flood alleviation schemes a high level scheme identification study is being undertaken. This assessment is being jointly funded by WRFCC Local Levy, Defra and the Council, and will help develop a prioritised programme of future schemes for consideration by the Flood Working Groups and to inform future funding bids. The Council works closely with the EA on managing flood risk, and is involved in a number of studies currently being undertaken, which it is expected will lead to successful bids for flood protection measures in the future.

Tilshead and Orcheston Flood Attenuation Scheme

19. Tilshead was badly affected by flooding in 2014 when 11 properties were flooded and in Orcheston 4 properties were affected. The A360 Devizes to Salisbury road was also badly flooded and temporary traffic lights had to be used because of flood water on the road at a number of locations.
20. There are records of flooding in Tilshead previously in 1841, 1944, 1949, 1960, 1977, 1990, 1992, 1993 and 1995. During the flooding in 2014 the Council's drainage engineer identified that a restriction in a culvert on Ministry of Defence (MOD) land could significantly reduce the volume of flood water leaving Salisbury Plain and entering Tilshead and the downstream communities.
21. Further investigation and modelling confirmed that a flood attenuation scheme would help protect the village and the main road. The scheme was developed in more detail and the business case prepared by the Council's consultants, Atkins, working with the EA and MOD. The project is estimated to cost £483,000 and was the subject of a successful bid for Defra funding supported by the EA, with a contribution from the Council's drainage budget.
22. Work is starting on site and is expected to be completed by November. However, it is weather dependent as it is necessary to ensure that the chalk is in optimum condition when used in this type of construction and the water content is an important factor.

Working with Communities

23. Although there was less flooding in 2016/17 than in recent years, it should be noted that the risk of serious flooding still remains, and it is vital to make appropriate preparations for such events. It is unlikely that the Council will be able to respond to all requests for assistance to protect properties in a major flooding event. The priority will be to keep transport links open, support the emergency services and protect critical infrastructure.

24. There is a serious risk of localised flooding incidents as a result of high intensity short duration storms. The nature of these events makes them very difficult to predict and respond to. It is important that local communities have made suitable preparations, which includes ensuring that they have the suitable plans and resources to cope with incidents.
25. There are now 148 communities in Wiltshire with Flood Plans and Flood Wardens, which is almost half of the communities, and further 5 are in development. This represents significant support from the local communities to reduce their flood risk. The value of these arrangements has been demonstrated in a number of localised events when communities were able to take immediate action to protect properties from flooding without calling on further Council resources.
26. The Parish Emergency Assistance Scheme (PEAS) is funded by this Council, and has provided sand bags and equipment to local town and parish councils so that these can be stored locally, and deployed as necessary. At present there are 97 communities involved in the scheme, and most now have adequate supplies in place to help them deal with local flooding incidents. However, there are still some parishes which have not yet taken advantage of the scheme and they are being encouraged to become involved.
27. The Council provides gel-sacs which are similar to sandbags, but are filled with a substance that expands when wet, and when dry they are virtually flat. This means they are simple to store and far easier to distribute in an emergency. They inflate when immersed in water, allowing a protective flood barrier to be built quickly to protect doorways and airbricks. When the flood has abated they can often be reused. Signs are also provided to warn of flooding and to encourage drivers to slow down when driving through floods as bow waves can cause additional flooding to nearby properties.
28. The preparation of Flood Plans and the appointment of Flood Wardens are important in helping communities to prepare themselves, and they are encouraged to make use of the resources available. Work is continuing to encourage communities to prepare plans or develop existing arrangements in more detail where they are known to be at risk.
29. Flood Warden training was held in Salisbury in August, and a county wide warden seminar was held earlier this month. Local communities are being encouraged to review their Flood Plans to ensure they are up to date, and to make use of the flood warden training if required.
30. The Council has been helping communities to bid for grants available from SSE through their Resilient Communities fund. This has provided funding for additional equipment such as generators, lights, torches, radios, first aid kits, additional flood sacs, and pumps for a number of communities in Wiltshire.
31. Property owners are responsible for protecting their own property. Where property is at risk of flooding owners are encouraged to take steps to ensure the protection of their property and to speed the recovery following flooding. Good information is available on the Environment Agency and National Flood Forum websites regarding suitable measures that can be used by individuals to reduce the risk to their property.

Development

32. The Council's drainage team continues to review and comment on planning applications, providing technical advice to other Council departments and teams, and deals with general enquiries from the public regarding drainage matters. The team also reviews and approves Land Drainage Consent applications for ordinary watercourses.
33. Wiltshire Council's approach is to ensure that there is effective management of surface water, especially on those sites where proposed development is likely to present significant risks and where there are opportunities for improvement and the achievement of sustainable development. The intention is to reduce pressures on the existing drainage infrastructure and reduce the risk of surface water flooding and pollution.
34. The Council is currently exploring an innovative approach with the EA and Wessex Water to review planning applications as there are many joint concerns, and there is potential for a more efficient way of dealing with them. The Council is also working with Swindon Borough Council to ensure there is a consistent approach to development control issues in connection with drainage and flooding.

New Highways Contract

35. The new highway contract with Ringway Infrastructure Services started in April 2016, and is for five years, with a possible extension of up to two years subject to performance. The contract has been working well, and Ringway has ensured the delivery of the programme of drainage improvements to the same high standard, using predominantly the same sub-contractors and staff as the previous contractor.
36. The new contract provides a CCTV drainage survey capability. This enables pipework to be surveyed before major resurfacing or other work is undertaken to ensure that the drainage is working and the road will not need to be dug up again. The process can include tree root cutting to ensure drains are working and free flowing, and the provision of gangs to make repairs as necessary.
37. Wiltshire Council has been collecting drainage information for many years, and this approach has been acknowledged as good practice in national guidance. The Council is building a good data base of information on our drainage systems, but with an extensive road network this work is likely to need to continue for many years before there is full coverage.
38. The Council's contractors and their supply chains are prepared to respond to requests for support from the Council in the event of flooding. Ringway has been successfully operating the out of hours response for over a year, and carried out the winter maintenance operation for the Council during 2016/17.
39. The state of readiness of the Council's contractors is good, but it is necessary to be realistic about what support can be provided at short notice in the event of major flooding, and to ensure that local communities, property owners and residents are taking steps to improve their own resilience.

Preliminary Flood Risk Assessment

40. The Flood Risk Regulations 2009 implemented the requirements of the European Floods Directive, which aimed to provide a consistent approach to managing flood risk across Europe. It established four stages of activity within a six year flood risk management cycle.
41. The initial assessment was based on the number of properties in each 1 kilometre square with an estimated 1 in 200 risk of flooding in any given year. The adjoining grid squares were analysed to identify those clusters where more than 20,000 people were considered to be at risk. In the south west the only area qualifying as potentially having a Flood Risk Area as defined by the guidance was Bristol.
42. The initial assessment was reported to this Committee in May 2011, when it was reported that there were no areas in Wiltshire which met the criteria as defined by the regulations. The flood information collected since then has been reviewed, and despite the extensive flooding in 2014 the position is unchanged and the EA has been informed accordingly.

Overview and Scrutiny Engagement

43. The progress on carrying out the Council's flood risk management duties is reported to the Environment Select Committee annually. Additional reports may be made in the event of extreme weather events, or as a result in changes in legislation.

Safeguarding Implications

44. Does not apply.

Public Health Implications

45. Flooding can have serious health implications, not only from the risk of injury and drowning, but also from pollution when sewers and industrial sites are affected. The stress caused to those affected by flooding, and the disturbance and disruption for communities should not be underestimated.
46. There can be particular problems with sewers overflowing, especially as a result of groundwater inundation. The Council's staff work closely with the water companies and hold regular co-ordination meetings with them regarding this issue. Rural septic tanks are particularly susceptible to groundwater flooding and can be flooded for long periods if there is groundwater flooding, with consequent public health implications.
47. Flooding has significant implications for road safety, especially with regard to standing water on high speed roads, and having effective drainage contributes to keeping roads safe.

Corporate Procurement Implications

48. There are no procurement implications at this stage.

Environmental and Climate Change Considerations

49. The projections for future climate change indicate that it is likely that winters will become significantly wetter and extreme winter precipitation may increase. In summer there is likely to be less overall rainfall, but intense heavy downpours are anticipated. The main cause of flooding is likely to be from storm rainfall, but there is also potentially an increased risk of river and groundwater flooding in Wiltshire.
50. The Council's flood risk management helps reduce the risks associated with flooding, but residents and businesses also need to take action to protect their properties from flood risk and reduce the potential impact. Short duration high intensity storms could become an increasing problem.

Equalities Impact of the Proposal

51. No significant factors have been identified.

Risk Assessment

52. Since flooding is a serious issue for Wiltshire there are safety and reputational risks associated with it. It is important to have a clear approach and demonstrate that the Council is pro-active in its flood management across the county, recognising the increasing risk posed by predicted wetter weather, and emphasising the need for communities and businesses to take their own measures to reduce the potential impact of flooding.

Risks that may arise if the proposed decision and related work is not taken

53. There are no decisions required at this time, and this report is for information only.

Risks that may arise if the proposed decision is taken and actions that will be taken to manage these risks

54. There are no decisions required at this time, and this report is for information only.

Financial Implications

55. There are no direct financial implications currently. However, it is important that opportunities are taken to bid for Defra, local levy and other funding as opportunities arise.

Legal Implications

56. The Flood and Water Management Act 2010 requires the Council to prepare a Local Flood Risk Management Strategy, and carry out the duties of Lead Local Flood Risk Authority in Wiltshire. The Council has a duty under the act to investigate flooding incidents. The Council is also a landowner with extensive ownership, including car parks, public open spaces, buildings and other areas which can be at risk of flooding.

57. Legal support is required in connection with carrying out flood risk management duties, especially with regard to Byelaws and land ownership issues. Ensuring land owners carry out their responsibilities with regard to reducing flood risk for others remains a challenge.

Options Considered

58. This report is for information only, and no decisions need to be made at this time.

Conclusions

59. The work carried out by the Council in connection with flood alleviation and drainage improvements helps the Council meet its duties as Lead Local Flood Authority under the Flood and Water Management Act 2010.
60. The work of the OFWGs and the programme of improvement schemes help to manage flood risk in Wiltshire effectively and reduce the risk for our communities.

Parvis Khansari
Associate Director Highways and Transport

Report Author:
Peter Binley
Head of Highways Asset Management
Tel No. 01225 713412

The following unpublished documents have been relied on in the preparation of this Report:

None

Appendices:

Appendix 1 – Drainage Improvement and Flood Alleviation Schemes 2016/17