

## HAMPSHIRE COUNTY COUNCIL

### Decision Report

<b>Decision Maker:</b>	Executive Member for Economy, Transport and Environment
<b>Date:</b>	2 December 2020
<b>Title:</b>	Outer Winchester – Strategic Flood and Water Management Pilot Programme
<b>Report From:</b>	Director of Economy, Transport and Environment

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### Purpose of this Report

1. The purpose of this report is to outline the requirements for a strategic study of the sub-catchment area of the River Itchen to the north of Winchester in order to explore potential options to provide long term improvements to flood and water management in the communities and areas surrounding Kings Worthy, Headbourne Worthy and Littleton. The strategic study will be undertaken as a pilot so that the outcomes can be evaluated and, if appropriate, applied to other locations within Hampshire.

### Recommendations

2. That the Executive Member for Economy, Transport, and Environment notes that some initial highway maintenance and other works along Springvale Road in Kings Worthy and Headbourne Worthy have been included in the current works programme, and a project appraisal will be brought forward for further work in due course.
3. That approval is given to undertake a strategic study of the sub-catchment area of the River Itchen north of Winchester in order to identify options for long term improvements to flood and water management in support of forthcoming mitigation measures, as outlined in this report.
4. That the proposed study should be developed in two phases with a further report to the Executive Member for Economy, Transport, and Environment on completion of Phase 1.

### Executive Summary

5. This paper seeks to outline the requirements for a strategic study of the sub-catchment area of the River Itchen to the north of Winchester in order to explore potential options to provide long term improvements to flood and water management in the communities and areas surrounding Kings Worthy, Headbourne Worthy and Littleton. The study will complement proposed flood mitigation measures to be implemented in the next 18 months and will be

undertaken as a pilot so that the outcomes can be evaluated and, if appropriate, applied to other locations within Hampshire.

6. Following incidents in previous years, notably 2000/01, in 2014 rising groundwater levels and surface water caused flooding to properties, including private cesspits, in Littleton, Headbourne Worthy and Kings Worthy. Also significantly affected were the Southern Water Waste Treatment Site, and the Sir John Moore Barracks which lost critical parts of its training facilities. Local business and use of the highway network were disrupted, particularly at Andover Road (B3420) and Springvale Road in Kings Worthy, for an extended period of time.
7. Since that event, the County Council, working with the local parish, city and county councillors, the Environment Agency, Winchester City Council, Defence Infrastructure Organisation, Southern Water, residents and landowners, has investigated measures to manage the flood risk in the area.
8. As the drainage systems of Littleton, Headbourne Worthy and Kings Worthy are interlinked, an integrated approach has been adopted to ensure that the causes and dynamics of the flooding are understood, that the contribution of the sub-catchment as a whole are taken into consideration, and that measures developed for one area do not lead to flooding elsewhere.
9. A joint programme of works has now been developed with Hampshire Highways for the Headbourne Worthy and Kings Worthy area. Approval has already been given for a first tranche of work and implementation which will commence before the end of the year. A Project Appraisal for a second tranche of drainage improvements will be submitted to the Executive Member for Economy, Transport and the Environment in early 2021 with the intention of completing the works before the end of the year. A Project Appraisal detailing work to be undertaken in the Littleton area will also be presented next year with completion also planned for late 2021.
10. While the implementation of the flood mitigation measures will significantly benefit the above areas, there will be a residual risk of flooding. The extensive investigations, feasibility and development work that has been undertaken to develop the measures now being proposed have demonstrated that 'traditional' engineering led options will only be part of the response, and that a strategic approach is required to explore how the complex flood and water management issues in this location might potentially be alleviated.
11. The strategic study now being proposed will support the delivery of the programme of works for Littleton, Headbourne Worthy and Kings Worthy, will inform future improvements at this and other locations that share similar characteristics, and contribute towards the County Council's four strategic aims (Hampshire maintains strong and sustainable economic, growth and prosperity; People in Hampshire live safe, healthy and independent lives; People in Hampshire enjoy a rich and diverse environment; and People in Hampshire enjoy being part of strong, inclusive communities) and Hampshire's Local Flood and Water Management Strategy.

## Contextual information

12. Following incidents in previous years, notably 2000/01, in 2014 rising groundwater levels and surface water caused flooding to properties, including private cesspits, in Littleton, Headbourne Worthy and Kings Worthy. Also significantly affected were the Southern Water Waste Treatment Site, and the Sir John Moore Barracks which lost critical parts of its training facilities. Local business and use of the highway network was disrupted, particularly at Andover Road (B3420) and Springvale Road in Kings Worthy, for an extended period of time.
13. Littleton, Headbourne Worthy and Kings Worthy are located in a sub-catchment area of the River Itchen to the north of Winchester. Headbourne Worthy sits at the confluence of two branches with upper catchment areas, each covering a substantial rural area, that extend to the north of Kings Worthy and south west of Littleton. Although both branches are categorised as main river by the Environment Agency, they are, over the majority of their length, ephemeral in nature, being susceptible to recharge by groundwater rising from the underlying chalk during the winter and spring. While approximately two thirds of the length of the main river has retained the traditional characteristics of a winterbourne i.e. either an open channel or ditch, informal and semi natural, the remaining portion has been absorbed within traditional urban drainage systems. Historically, and until the gradual post war development of Littleton and Kings Worthy took full effect, the whole of the sub-catchment drainage system would most likely have operated on the basis of open, natural winterbournes and watercourses.
14. The drainage systems within the built-up areas of Littleton and Kings Worthy, and to a lesser extent at Headbourne Worthy, have sought to manage water from properties and highways in pipes with outfalls to open ditches and the remaining sections of the winterbourne, or to soakaways. In most circumstances, these arrangements have performed well. However, in periods of rising groundwater, the activation of springs and generation of overground flow routes, these systems do not have enough capacity, are quickly overwhelmed, and become ineffective, leading to property and highway flooding. The damaging impacts are further compounded by the loss of definition of the winterbourne at key locations, and the inundation of private cesspits for those many residents, especially in Littleton, that are not on the main foul sewer network.
15. While built development in all three areas has underestimated the need to accommodate flow paths, and significantly compromised the effectiveness of the drainage system, it is probable that changes in rural land management practice in some areas has reduced the ability of the land to intercept and absorb rainfall, and reduce damaging runoff. Recycling and reusing water locally is now also less common.
16. Forecast climate change impacts include a predicted increase of winter rainfall, an increase in intensity of rainfall events, and drier summers. This indicates that the likelihood of flooding, and water shortage, in areas like Littleton, Headbourne Worthy and Kings Worthy are likely to increase, and the impacts worsen unless steps are taken to mitigate and adapt. Future new development in this area presents both a further risk but also an opportunity for flood and water management.

17. It is critically important that new development contributes positively to flood and water management both at the local and strategic level. A comprehensive understanding of how the sub-catchment operates, the dynamics of the whole water cycle from flooding to demand management, and the opportunities to model a sustainable approach as part of a broad coalition of partners is vital if past mistakes are not to be repeated.
18. The strategic study proposed within this report seeks to inform that approach by exploring potential options to provide long term improvements to flood and water management. In looking at both flooding and water demand management, the study will bridge the rural and urban interface, and as such is likely to cover a broad range of topics including extensive sustainable drainage systems, natural flood management, catchment sensitive farming, and winter storage techniques. The study will be open to new and innovative approaches, as well as looking again at traditional practices.
19. This work can only be done in partnership, and it is therefore envisaged that those who have already been involved in developing proposals for Littleton, Headbourne Worthy and Kings Worthy, including the Environment Agency, Winchester City Council, Defence Infrastructure Organisation, Southern Water, residents, and landowners will be further engaged. In order to strengthen a catchment based approach, it is anticipated that the Test and Itchen Catchment Partnership, Water Resources South East, and the Southern Regional Flood and Coastal Committee will also be asked to collaborate with the County Council on the understanding that lessons learned from the pilot will be widely shared and, if appropriate, applied to other locations within Hampshire.

### **Approach to the Strategic Study**

20. It is proposed to undertake the strategic study in two phases. Phase 1 will scope the extent of the study and identify the key issues and themes to be explored further. This phase will also establish the position of the County Council's principal partners and other stakeholders and consider the options for undertaking a more detailed investigation at Phase 2 and how this is to be delivered. The outcomes of Phase 1 will be reported to the Executive Member for Economy, Transport and Environment and approval sought to move to a second phase, which will be informed by the findings of Phase 1, and which will explore the key issues in more detail. Should authority be granted to move to Phase 2, on its completion the outcomes of the overall Pilot Programme will be evaluated and reported to the Executive Member for Economy, Transport and Environment.

### **Finance**

21. It is intended to utilise strategic frameworks and within existing resources to undertake Phase 1 of the study. The proposed delivery model for Phase 2 will be set out in the report to the Executive Member for Economy, Transport and Environment following completion of Phase 1.

## Conclusions

22. The proposed implementation of flood mitigation measures for Headbourne Worthy, Kings Worthy and Littleton will significantly benefit these areas. However, there will be a residual risk of flooding. The extensive investigations, feasibility and development work that has been undertaken to develop the flood mitigation measures have demonstrated that 'traditional' engineering led options will only be part of the response, and that a strategic approach is required to explore how the complex flood and water management issues in this location might potentially be alleviated. Climate change, increasing development pressures, changes in land management practice, and other challenges amplify the need for the County Council and its partners to consider flood and water management in a broader context, to investigate new and innovative approaches, and to look again at traditional practices.
23. The Strategic Flood and Water Management Pilot Programme for Outer Winchester will provide the opportunity to examine in detail how the resilience and adaptation of communities in one sub-catchment area can be improved. However, where appropriate, the County Council will apply the lessons learned to other areas across Hampshire faced with similar challenges.

## REQUIRED CORPORATE AND LEGAL INFORMATION:

### Links to the Strategic Plan

Hampshire maintains strong and sustainable economic growth and prosperity:	Yes
People in Hampshire live safe, healthy and independent lives:	Yes
People in Hampshire enjoy a rich and diverse environment:	Yes
People in Hampshire enjoy being part of strong, inclusive communities:	Yes

### 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.)

Document

Location

None

## **EQUALITIES IMPACT ASSESSMENT:**

### **1. Equality Duty**

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 by or under the Act with regard to the protected characteristics as set out in section 4 of the Act (age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, sex and sexual orientation);
- Advance equality of opportunity between persons who share a relevant protected characteristic within section 149(7) of the Act (age, disability, gender reassignment, pregnancy and maternity, race, religion or belief, sex and sexual orientation) and those who do not share it;
- Foster good relations between persons who share a relevant protected characteristic within section 149(7) of the Act (see above) and persons who do not share it.

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

- The need to remove or minimise disadvantages suffered by persons sharing a relevant characteristic connected to that characteristic;
- Take steps to meet the needs of persons sharing a relevant protected characteristic different from the needs of persons who do not share it;
- 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.

### **2. Equalities Impact Assessment:**

The impact of the Strategic Study at the initial stages covered by this decision is considered to be neutral for groups with protected characteristics.