



Committee and Date

Item

Public



# River Severn Partnership Demonstrator Programme

|   |                               |      |              |
|---|-------------------------------|------|--------------|
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| <b>Cabinet Member (Portfolio Holder):</b> | Cllr Ian Nellins              |      |              |

## 1. Synopsis

This report seeks approval for the Council, in its capacity as Lead Local Flood Risk Management Authority (LLFA), to support the Environment Agency in overseeing a programme of demonstrator projects through the River Severn Partnership.

## 2. Executive Summary

- 2.1 The Shropshire Plan’s Healthy Environment priority highlights the importance of investment and joint working to tackle climate change and maintain, protect and enhance our outstanding natural environment.
- 2.2 Further to recommendations approved in the report to Cabinet on 18<sup>th</sup> November 2019 entitled ‘River Severn Partnership’, officers have been working with the Environment Agency, through the River Severn Partnership, to identify a joint approach to climate resilience and the best application for £4.5million demonstrator monies which were awarded via the River Severn Partnership to the Environment Agency through ministerial direction in 2020.
- 2.3 The Partnership was successful in securing the ministerial investment to deliver a pipeline set of ‘demonstrator’ projects which support early thinking and work by the Environment Agency on the Severn Valley Water Management proposal, to:

- test innovative solutions to long term resilience in the upper Severn catchment
  - use natural flood management techniques (floodplain reconnection, wetland creation, woody debris dams and woodland planting) to 'slow the flow' of water
  - accelerate delivery between 2021 and 2027.
- 2.4 The first project under the demonstrator programme commenced in Spring 2022. Led by the Severn Rivers Trust with partners from Powys County Council, Shropshire Council and the Environment Agency, the Guilsfield Brook Project is the first joint delivery between England and Wales within the River Severn Partnership.
- 2.5 Following detailed partner development and engagement, the Partnership is now ready to progress two further projects under the demonstrator programme, involving work on the Rea Brook and River Perry.

### 3. Recommendations

Cabinet agree to:

- 3.1. Approve the Council's role in managing and delivering the Shropshire based demonstrator programme, under the River Severn Partnership, utilising the Council's formal statutory role as Lead Local Flood Risk Management Authority (LLFA).
- 3.2 Approve the Council signing two grant funding agreements for the River Perry and Rea Brook, which exceed £500,000 in grant contribution, thereby enabling transfer of the Defra funds to Shropshire based delivery partners
- 3.3 Delegate to the Executive Director of Place, Section 151 officer and the Portfolio Holder for Climate Change, Environment and Transport to:
- 3.3.1 proceed with setting arrangements for the delivery and monitoring of benefits associated with the demonstrator programme, in partnership with the Environment Agency.

## Report

### 4. Risk Assessment and Opportunities Appraisal

- 4.1. Significant opportunity is provided by the £4.5million Defra monies to pilot the collective approach of the River Severn Partnership, which takes a strategic view of flood, water resource, water quality and environmental management to respond to the challenges of climate change.
- 4.2. As the funding for the demonstrators is being delivered as Flood Defence Grant in Aid (FDGiA), strategic oversight will be provided by the English Seven and Wye Regional Flood and Coastal Committee (RFCC) which is facilitated by the Environment Agency. As with any other FDGiA project, delivery and expenditure of the demonstrator projects will be monitored by the Environment Agency. The Environment Agency will therefore maintain strategic oversight and has responsibility for meeting the ministerial requirements associated with the use of the funds.

- 4.3. In line with the formal statutory role of Shropshire Council, as the LLFA the budget management responsibility for the projects will sit with the Council. This will happen once the projects are formally recognised as Shropshire schemes on the Flood and Coastal Risk Management (FCRM) investment programme.
- 4.4. The Environment Agency has led the identification of the demonstrator programme of measures and identified the appropriate delivery partners. Agreement for use of the £4.5million has been agreed with Defra via the Environment Agency. Shropshire Council and the Environment Agency are now preparing a business case to allocate the monies onto the FCRM programme.
- 4.5. Discussions have taken place between the Environment Agency and Shropshire Council's Legal Services and Procurement teams to understand how the ministerial funding award needs to be treated and delivered under the Environment Agency's strategic oversight. It has been agreed that this is grant funding as it has been allocated from ministerial direction via Defra to the Environment Agency for specific demonstration projects under the River Severn Partnership. Under this Defra agreement, the monies can only be used for specific purposes within Shropshire. The projects have been established to trial and test key Partnership deliverables around nature based solutions, socio economic benefits, green finance, innovation and skill development by using measures to address flood risk and climate change within the upper catchment of the Severn. The Environment Agency must use these projects to share wider learning with Defra around how you reduce flood risk and use water management to safeguard jobs or unlock new jobs.
- 4.6. Given the ministerial delivery requirements, only Shropshire Wildlife Trust and Severn Rivers Trust have been identified as realistic suppliers that can deliver the services in line with the partner and funding requirements. The grant funding agreements will therefore be between Shropshire Council, as the LLFA, and Shropshire Wildlife Trust and Severn Rivers Trust.
- 4.7. The funding is being overseen by the Environment Agency as part of the six year FCRM programme. There are established processes and procedures in place for both the Environment Agency and Shropshire Council regarding the governance, application and reporting of projects and delivery under the six year FCRM programme.
- 4.8. The Environment Agency has agreed a defined scope for each project with the delivery leads and allocated expenditure for each activity. The Council is therefore not at risk of any increased project costs since delivery partners will only be able to deliver within the scope and agreed budget. Managing the projects as an overarching programme also reduces risks, with flexibility built in to manage the delivery of outcomes and outputs at a programme level rather than project by project. Monies will be drawn down to delivery partners on an agreed basis from the Environment Agency, with monthly and quarterly reporting undertaken by delivery leads and shared with the Environment Agency and Shropshire Council as part of the funding agreement requirements to monitor progress and learning.
- 4.9. The risks and opportunities relating to this report are predominately focused around Shropshire Council's agreed role as Joint Chair of the River Severn Partnership and ambition to take a more integrated and transformative approach to water management. As 'demonstrators' the programme of project delivery offers

significant opportunity for shaping and learning to understand benefits and to enable opportunity for wider scaling up across the wider catchment. It will support development of a strategic response to the challenges of climate change and nature recovery.

- 4.10. Whilst the Flood and Water Management Act 2010 defines both the Environment Agency and Shropshire Council as RMA's, the funding has been allocated to the Severn Valley Water Management demonstrator programme. As Shropshire led projects, Shropshire Council is the LLFA and under Department for Levelling Up, Housing and Communities (DLHUC) rules the funding cannot be paid directly by the Environment Agency to a delivery partner. It must first be allocated to Shropshire as the LLFA to allocate to chosen delivery partners.
- 4.11. The risks of not using our role as LLFA means the Environment Agency cannot pass the allocated grant funding directly to the agreed Shropshire based delivery partners. The Council would therefore limit the ability to deliver the agreed interventions and would not support the Environment Agency in meeting the ministerial requirements. This would undermine the collaborative approach of the River Severn Partnership and provide reputational risks to Shropshire Council in its capacity as Joint Chair of the Partnership.

## 5. Financial Implications

- 5.1 The £4.5million investment programme to enable delivery of the Partnership's demonstrator programme across the upper catchment has already been secured from Defra. The funding has been agreed and will be drawn down by Shropshire Council from the Environment Agency as part of the FCRM programme delivery.
- 5.2 The Guilsfield Brook Project was the first project under the demonstrator programme and commenced in Spring 2022. There is now a need to progress two further projects within the programme; the Rea Brook and River Perry, as set out in this report.
- 5.3 The Environment Agency's assurance process has agreed application of the investment for these two projects which comprises £900,000 for the Rea Brook project and £800,000 for the River Perry project. As these two projects exceed £500,000 in value, Cabinet approval is needed for Shropshire Council to progress the grant funding agreements.
- 5.4 Further work is also underway, led by the Environment Agency, to progress the remaining set of projects within the demonstrator programme and apply the remaining funding as agreed by Defra ministers. The remaining projects will not exceed £500,000 and will therefore not require Cabinet approval to progress the grant funding agreements. These will instead be progressed under the delegated approval of the Council's Section 151 officer.
- 5.5 The financial implications for Shropshire Council as LLFA are therefore associated with resourcing management and delivery of the projects. This is addressed through application of a project management fee. This will enable the Council to use some of the grant funding to resource the project management, support services and additional administrative requirements of supporting the Environment Agency. Agreement is already sought within the Environment Agency business case to

cover the costs of this project management which Shropshire Council will source from the local authority's framework consultants, WSP.

## 6. Climate Change Appraisal

- 6.1. The River Severn Partnership is aimed at providing a strategic and integrated response to the challenges of climate change across the River Severn catchment area.
- 6.2. The Partnership's demonstrator programme seeks to pilot and test how an integrated approach to water management unlocks opportunities for growth and improved wellbeing. Focused initially on the upper Severn catchment area, the project programme involves a suite of nature based measures to address climate change and its impacts, working with Wildlife Trusts, Severn Rivers Trust, the National Trust, landowners and others.
- 6.3. As joint Chairs of the River Severn Partnership, the Council and the Environment Agency are committed to exploring the opportunities that the £4.5million demonstrator investment secured from Defra provides. It will enable testing and learning as a showcase for a new approach to climate resilience.
- 6.4. In addition to the demonstrator programme delivery, the Partnership is one of four national pilots identified by Defra to develop, deliver and test an 'adaptive planning' approach. This new thinking by Defra is aimed at ensuring a more resilient and adaptive approach to the challenges faced as a result of climate change.
- 6.5. Adaptive planning offers the ability to respond to new information as it becomes available, such as relating to rising water levels and more frequent flood events. The approach identifies and evaluates different climate scenarios and subsequently identifies potential adaptation actions that can be implemented over time, to directly respond to climate changes; such actions may include increasing or reducing floor levels, utilising public open space for water storage or investment in flood management projects. Adaptive planning provides the flexibility to 'adapt' actions based on what the climate is actually doing and therefore enables the most effective and resilient response.
- 6.6. An adaptive planning approach allows for a long-term plan to be developed, providing a range of options for which the Council can respond accordingly, implementing the most appropriate and effective actions at the right time and in the right way. It also avoids unnecessary over investment or unsuitable design parameters, thereby enabling better decision making and use of money at all stages of a project's delivery. The approach creates a clear plan to manage flood risk, providing confidence for investors.
- 6.7. Although at an initial stage, the wider adaptive planning thinking and approach will help inform the demonstrator programme, where possible, supporting thinking and learning. It will help embed climate resilience thinking and learning in our future ways of working and is already shaping other work within the Council, such as the Riverside redevelopment.
- 6.8. As part of a drive towards integrated infrastructure delivery, the demonstrator programme and adaptive planning approach will include consideration of multiple benefits. The aim is to understand and assess how future flood risk management

provides co-benefits for carbon capture and storage, biodiversity, health and wellbeing and economic growth.

- 6.9. Both the demonstrator programme and adaptive thinking are key to informing the development and delivery of the Severn Valley Water Management Scheme as a strategic scale initiative, with potential to scale up multiple benefits across the upper Severn catchment.

## 7. Background

- 7.1. The Partnership's transformative ambition to look at the future water and environmental management needs of the River Severn catchment as a whole gained significant ministerial support and investment in July 2020. Ministers announced the Partnership as one of four national pilots identified by Defra to develop, deliver and test an 'adaptive planning' approach. This new thinking by Defra is aimed at ensuring a more resilient and adaptive approach to the challenges faced as a result of climate change. At the same time, ministers announced significant additional investment for the Environment Agency to drive forward the Partnership's work, including £30million to accelerate both the Severn Valley Water Management Scheme and work at Tenbury Wells alongside £5.4million to undertake carbon offsetting of the next 6 year Flood Defence Grant in Aid programme.
- 7.2. The £30million announcement for the Severn Valley Water Management Scheme enabled some small scale early investment to be used to test the potential for combining flood risk management work with the development of Shrewsbury's North West Relief Road. The aim was to assess the opportunity for providing a single integrated infrastructure solution. The approach was set out in a Cabinet paper entitled River Severn Partnership- Shropshire Flood Prevention dated 27<sup>th</sup> September 2020. Cabinet agreed to explore the potential for development of water management measures north of Shrewsbury as a holistic approach with the North West Relief Road and creation of a water based tourism, leisure and natural environment resource. The feasibility work undertaken by the Environment Agency with support of Shropshire Council concluded that assessment should be firstly made of the potential to deliver flood risk management benefits through delivery of nature based solutions across the upper catchment, to better understand the need for more hard engineered solutions. Agreement was therefore sought by the Environment Agency with Ministers to redefine the scope of the investment. This included agreement to reshape the Severn Valley Water Management Scheme as a hybrid programme of measures combining nature based solutions, large scale landscape management change and formal engineered solutions, alongside use of £4.5million to accelerate smaller projects within the Severn Valley to pilot and test delivery of natural flood management.
- 7.3. The acceleration of smaller projects under the £4.5million is currently led by the Partnership under its demonstrator programme, overseen by the Environment Agency. The aim is to test delivery of an integrated approach to water management and the role this can have in unlocking opportunities for growth and improved wellbeing by reinstating natural connections with the floodplain.
- 7.4. The Partnership and Environment Agency have been working with partner organisations including those representing Welsh, environmental, local authority and



community and landowner interests to identify the best application for the £4.5million demonstrator monies. A pipeline set of projects has emerged that is driven by partners but which also meets the ministerial requirement to test innovative solutions to long term resilience in the upper Severn catchment using natural flood management techniques (floodplain reconnection, wetland creation, woody debris dams and woodland planting to 'slow the flow' of water) and to accelerate delivery between 2021 and 2027.

7.5. The following Table provides an overview of the demonstrator programme:

| Project Name   | Lead Delivery Partner     | Project Aim   | Project Outcomes  |
|--|---------------------------|---|---|
| Guilsfield Brook   | Severn Rivers Trust       | Natural Flood Management and Farm Hydrology Model                             | Leaky dams, woodland and hedgerow creation, attenuation features and development of a farm hydrology model to appraise the economic benefits of improved water management as a result of soil husbandry and rainwater harvesting. |
| Rea Brook  | Severn Rivers Trust       | Nature based solutions and green finance                                      | Leaky dams, woodland and hedgerow creation, attenuation features and farm-based rainwater harvesting  |
| Perry Peat   | Shropshire Wildlife Trust | Rewetting of peatland and demonstration linked to sustainable crop production | Rewetting of peatland, native woodlands, wetland, peatland conference at Harper Adams University with North Shropshire Farmers Group.   |
| <b>Projects in development and subject to change:</b>  |                           |   |   |
| Morda DePave to investigate permeable alternatives and a Community Interest Company  |                           |   |   |
| Feasibility study for the development of a centre of excellence for climate change, focusing on links to skill development and a water management based academic offer |                           |   |   |
| Use of drone technology in catchment management to help identify opportunities and monitor benefits.   |                           |   |   |
| An enhanced network of farm cluster groups to enable landowner liaison and engagement  |                           |   |   |
| Water management feasibility study on National Trust land to improve visitor experiences.  |                           |   |   |

7.6. The first project under the demonstrator programme commenced in spring 2022. The Guilsfield Brook project is the first joint delivery between England and Wales within the River Severn Partnership. Led by the Severn Rivers Trust with partners from Powys County Council, Shropshire Council, the National Flood Forum and the Environment Agency, the project is using natural flood management to reduce flood risk to a number of homes as well as the B4392 and A490 roads. It will also provide information on the economic benefits of soil and water management on rural land. Working with landowners, the hope is that it provides helpful learning and information on the potential value of future environmental management within farm businesses.

7.7. Following detailed partner development and engagement, there is now a need to progress two further projects under the demonstrator programme. These two

projects are for £900,000 to be used for work on the Rea Brook and £800,000 for work on the River Perry.

### *Rea Brook Project*

- 7.8. The Rea Brook flows northwards from Marton Pool down to its confluence with the River Severn in the centre of Shrewsbury.
- 7.9. There are 8 waterbodies within the Rea Brook catchment, none of which meet the required Good Ecological Status under the Water Framework Directive and four that show signs of deterioration, mainly due to diffuse pollution from agricultural sources and from old mine water discharges.
- 7.10. Communities along the Rea Brook catchment from Worthen at the top to Pontesbury, Minsterley, Brockton and Westbury in the middle and Shrewsbury at the bottom have all suffered from flooding in recent years, with record floods recorded in 2020 and 2021.
- 7.11. Working through the River Severn Partnership, the Environment Agency has secured a partnership project to be delivered by the Severn Rivers Trust. The Rea Brook project will involve the construction of 200 leaky dams, 4ha of woodland creation, 1.5km planting of new mix hedgerows across slopes, creation of at least 35 water storage features such as ponds, scrapes and swales to provide additional offline water storage during storm events and installation of on-farm rainwater harvesting systems where maximum benefit can be achieved such as on large roofs.
- 7.12. In providing a 'demonstrator' for the delivery of nature based solutions, the work will create a wide range of benefits including; an estimated 35ha of new wetland habitat to facilitate the development of a more natural hydrology, provide valuable habitat for wading birds and amphibians, improve water quality and reduce the need for fertiliser through soil biodiversity improvements, support farm businesses through water efficiency savings and provide native woodland for a range of priority species and for the sequestration of around 2,500 tonnes of carbon dioxide.
- 7.13. The project will also provide a key demonstration for the development and application of green finance solutions. In particular, developing an integrated nature-based funding strategy to monetise nature-based outcomes such as carbon sequestration, biodiversity gain, soil & water quality enhancement, aligned to River Severn Partnership and Environment Agency strategic priorities within the catchment. Development of an integrated nature-based financing strategy will include the following activities:
  - Establishing a series of options around integrated (i.e. not only carbon) nature-based outcome funding models/investment structures.
  - Establishing options around an appropriate delivery vehicle for the funding models/investment structures, recognising the interests of stakeholder needs incl. River Severn Partnership and the Environment Agency
  - Testing funding models/investment structures with a group of experienced investor/buyers of nature-based investment products
  - Supporting the selection of an optimal nature-based outcome funding solution to replicate across the wider catchment in line with wider programme timescales

### *River Perry Project*



- 7.14. The River Perry flows southwards from Hengoed down to its confluence with the River Severn, 2 kms downstream from Montford Bridge. There are 7 waterbodies within the River Perry catchment, none of which meet the required Good Ecological Status under the Water Framework Directive.
- 7.15. The Perry has one of the highest densities of unprotected lowland peat under farmland as identified by Natural England's Peat for the Planet project. This is peatland that has been generally drained and is in a state of deterioration.
- 7.16. Working through the River Severn Partnership, the Environment Agency has secured a partnership project to be led by Shropshire Wildlife Trust in partnership with Harper Adams University. The River Perry project will involve the rewetting of 11ha of peatland, the creation of 3ha of new, native woodland, at least 5 water storage features and 9ha of Paludiculture (demonstration of rewetting peat for the purpose of growing sustainable crops) alongside two peatland conferences at Harper Adams University, to enable engagement and support for the North Shropshire Farmers Group.
- 7.17. In providing a 'demonstrator' for peatland restoration, the project will seek to identify the multitude of benefits that could be achieved, creating examples of peat rewetting to a more natural state as well as rewetting for Paludiculture purposes. The project will quantify the opportunity to hold water within peat and work with local landowners to identify opportunities as part of farm businesses.

## 8. Additional Information

- 8.1. As demonstrator projects, flexibility has deliberately been built into the projects to allow for further innovation during the development and delivery phase. This is aimed at supporting the achievement of greater and multiple outcomes. The projects therefore allow for evolution and refocus as part of the learning process and specific deliverables and outcomes may therefore change in response as the projects are continually reshaped.
- 8.2. Learning from the development and delivery of the projects will be gathered by Shropshire Council from Severn Rivers Trust and Shropshire Wildlife Trust via the requirements of the grant funding agreement. This will be shared with the Environment Agency to inform Defra ministers as well as with the wider River Severn Partnership, in the Council's role as Joint Chair, to support wider scale up of delivery across the Severn catchment.

## 9. Conclusions

- 9.1. Delivery of the Shropshire based demonstrator projects for the River Severn Partnership will accelerate testing and learning around nature based responses to climate resilience and adaptation. It will help establish the River Severn Partnership as the UK's first strategic rural partnership, harnessing the natural and cultural value of the UK's longest river system to provide the catalyst for community resilience and economic prosperity in the face of climate change and a nature emergency.
- 9.2. Delivery of the demonstrator programme will utilise Shropshire Council's unique position as Joint Chair of the River Severn Partnership to influence thinking by Defra. The local project examples will demonstrate collaborative delivery and enable

learning to be shared on the application of new policy requirements under the Environment Act.

- 9.3. The programme will help provide a strategic framework for supporting landowning communities to understand the value of environmental management within farm businesses and enable testing of new financial mechanisms for delivery.
- 9.4. The Shropshire Plan recognises the climate change challenge and need for urgent action both by the Council and working with external partners such as Defra. Developing and delivering a range of collaborative projects will improve the natural environment for future generations and secure economic and community resilience in the face of climate uncertainty.

**List of Background Papers (This MUST be completed for all reports, but does not include items containing exempt or confidential information)**

Cabinet report title 'River Severn Partnership' dated 18<sup>th</sup> November 2019

Cabinet report title 'River Severn Partnership- Shropshire Flood Prevention' dated 27<sup>th</sup> September 2020

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**Local Member:** *Rea Brook Project*

Cllrs: Heather Kidd, Ed Potter, Nick Hignett, Roger Evans, John Clarke, Bernie Bentick, Kate Halliday, John Clarke and Mary Davies

*River Perry Project*

Cllrs: Robert Macy, Brian Williams, Steve Charmley, Nick Bardsley, Geoff Elner, Ed Potter and Lezley Picton.

**Appendices** [Please list the titles of Appendices]