

Severn Water Integration Management (SWIM) Project



Impact Report

June 2019

With grateful thanks to the Arwain Leader Fund for supporting this fantastic project



Project Name: Severn Water Integration Management (SWIM) project

Project Code: RDP018

Project Dates: 01 April 2019 – 31st March 2019

LEADER Theme: Adding value to local identity and natural and cultural resources

Project Funding Summary

Total Expenditure:	£88,631.21	100.00%
RDP Funding:	£70,631.21	79.69%
Match funding:	£18,000.00	20.31%

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Severn Rivers Trust



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Introduction

The Severn Water Integration Management (SWIM) project was delivered by the Severn Rivers Trust over two years (2017-2019) in northern Powys, across the former county of Montgomeryshire.

Clean rivers are important for recreation, for wildlife, for fishing, agriculture and for many businesses relying on ample supplies of clean water.

The river Severn and its tributaries suffer from a number of pressures including:

- Pollution from industrial, agricultural and domestic sources
- Concrete and paving in built-up areas limit water storage and drainage
- Barriers in rivers that stop fish from swimming freely
- Poor land management leading to loss of habitats and key species
- Alien species such as Himalayan balsam and Japanese knotweed which smother river banks and cause increased erosion

Flooding is devastating for homes, businesses and key infrastructure and river catchment management plays a role in the severity of these floods. We all have a role to play in soil and water management. The SWIM project developed a new technique for managing flooding by using natural capital at a catchment scale to reduce downstream flood peaks.

Where precipitation hits a river catchment, a great proportion of it ends up in the river, taking with it any pollution on the land. How quickly this water gets to our rivers and the severity of the impact depends on the land management. For example, soil compaction and a reduction in tree and hedgerow cover all increase the impact of flooding.

Natural capital such as tree cover, well maintained soils etc. can reduce the impact of downstream flooding. By modelling this natural capital, the SWIM project identified the areas where the most cost-effective interventions could take place.

By engaging local communities by setting up local flood action groups and by having two-way discussions with landowners; local people were able to lead the discussion and contribute by identifying the areas where natural capital can be improved on the ground. By engaging landowners in discussion which benefitted the farm business as well as the river catchment, we were able to get farmers to support the project in a sustainable way.

Engaging volunteers and communities ensured the project had multiple benefits. For example, best practice advice on hedge planting for agriculture students, active volunteering, increased biodiversity and reduced pollution leading to improved water quality.

This project has enabled Severn Rivers Trust to bid for future funding to undertake capital works to reduce flooding.

Highlights

- 4 feasibility studies completed
- 4 networks established
- 61 stakeholders engaged
- 96 participants supported
- 4 communities benefitting
- 9 businesses benefitting

What we achieved & how we did it

Feasibility studies

4 feasibility studies were completed the SWIM project.

The most cost-effective interventions were identified by mapping existing and potential natural capital in the upper river Severn in Powys through a series of desk-based feasibility studies. These studies used GIS mapping and data to map the current level of ecosystem service provided by the landscape and the locations where tree planting, wetland creation, riparian grassland buffers and soil management would maximise their impact of flooding, water pollution and soil erosion.

Studies titled 'Identifying areas of potential natural capital in the river' were produced for the river Tanat, Cain, Camlad and Guilsfield Brook.

See Appendix of Evidence for:

- Full feasibility study Identifying areas of potential natural capital in the Guilsfield Brook (1)
- Full feasibility study Identifying areas of potential natural capital in the river Cain (2)
- Full feasibility study Identifying areas of potential natural capital in the river Tanat (3)
- Full feasibility study Identifying areas of potential natural capital in the river Camlad (4)

Networks created

4 networks were established under the SWIM project.

In addition to working with existing groups, four formal networks have been created as a direct result of the SWIM project. These were not in existence prior to programme involvement.

The formal networks created are:

1. Guilsfield Flood Action Group
2. The Cain Valley Sustainable Management Scheme Network
3. The Nant Alan Sustainable Management Scheme Network
4. The Wye, Ithon, Severn Ecosystem Network

1. Guilsfield Flood Action Network

Localised flooding is a problem for homes and businesses in the Guilsfield Brook catchment. The aim of the Guilsfield Flood Action Network was to support local people with their knowledge of the history of flooding in the area in actions to reduce flooding.

The community in Guilsfield were supported to identify solutions to localised flooding affecting their homes and businesses and will be fully engaged in future interventions.

This was achieved by working in partnership with the National Flood Forum, who brought together a Multi-Agency-Meeting, with representatives from Severn Rivers Trust, Natural Resources Wales, Canal Rivers Trust and Powys Council to address issues in the area in their control. The group also met to assess areas where natural flood management interventions e.g. wetland creation and tree planting could take place to reduce flooding. This support from the National Flood Forum has enabled Severn Rivers Trust staff to gain invaluable knowledge which can now be replicated across the wider Severn and with other Rivers Trusts nationally. It also ensures a level of support in the long term with communities from the NFF.

The work with the Guilsfield Flood Action network has identified key interventions which will take place under new projects developed by Severn Rivers Trust with support from this project. It is important to manage expectations with communities with flood actions groups, who have been badly affected by flooding, for example projects would benefit from having the capital works built in so that action on the ground was guaranteed following the setting up of groups. In this case, the WISE sustainable Management Scheme project will undertake these actions, but if this had not been successful, there was potential for damage of reputation and need to manage expectations with those communities.

See Appendix of Evidence for:

- Notes of Multi-Agency-Meeting
- Email from National Flood Forum confirming meeting

2. The Cain Valley Sustainable Management Scheme Network

The Cain Valley Sustainable Management Scheme Network was formed from a number of project partners including: twelve landowners from the catchment which initiated the project; 'Stadco' an industrial partner with land in the valley; Cain Valley River Group; Montgomeryshire Wildlife Trust; Severn Rivers Trust; RSPB; NRW; and Llanfyllin Town Council.

The farmers in the Cain catchment were supported to identify actions to reduce flooding and a source of funding to complete the capital works under the Sustainable Management Scheme which will be led by Severn Rivers Trust

This steering group formed a partnership to successfully bid for funding to undertake capital works to manage land and water in the Cain catchment. This project is due to be delivered from the beginning of 2020 and is fully supported by landowners and

the wider community. The steering group network will continue to meet throughout the project.

A key output for the project is to deliver improvement to habitat, water and soil through a range of measures including: better stock management/stock infrastructure; planting trees and hedgerow shrubs along contours to help protect against surface water run-off and rain; new woodland planting and management, ponds and wet areas, and more riparian habitat.

See Appendix of Evidence for:

- Expression of interest for the project showing full project details
- Spreadsheet detailing capital works to be completed under the project

3. The Nant Alan Sustainable Management Scheme Network

The Nant Alan Sustainable Management Scheme Network was formed from a number of project partners including: twelve landowners from the catchment which initiated the project; 'Stadco' an industrial partner with land in the valley; Cain Valley River Group; Montgomeryshire Wildlife Trust; Severn Rivers Trust; RSPB; NRW; and Llanfyllin Town Council.

The farmers in the Nant Alan catchment were supported to identify actions to reduce flooding and a source of funding to complete the capital works under the Sustainable Management Scheme which will be led by Severn Rivers Trust

This steering group formed a partnership to successfully bid for funding to undertake capital works to manage land and water in the Nant Alan catchment. This project is due to be delivered from the beginning of 2020 and is fully supported by landowners and the wider community. The steering group network will continue to meet throughout the project.

The network aims to improve land management, biodiversity, biosecurity and make the valley and its catchment more resilient to climate change. We will reduce diffuse pollution, 'slow the flow', restore broadleaved woodland, create a forest school hub for community use, increase recreational opportunity, improve farm business resilience and improve community engagement/education. Activities will include reedbed construction, creating new ponds, new hedgerows and new woodland planting, restoring Plantation on Ancient Woodland Site (PAWS), carrying out a school/community engagement programme and creating a 'living laboratory' and network to discuss and plan the long term sustainability of the valley.

See Appendix of Evidence for:

- Expression of interest for the project showing full project details
- Spreadsheet detailing capital works to be completed under the project

4. The Wye, Ithon, Severn Ecosystem Network

The WISE project engages a network of people living around the river Camlad, including landowners and members of the community in actions to reduce flooding and pollution to the river Camlad. With support from the SWIM project and building on the feasibility studies, this network of people has been successful in partnering with the Wye and Usk Foundation to secure funding for a wider project across the Wye, Ithon and Severn to address issues identified.

The network of farmers will work with Severn Rivers Trust to create farm plans and deliver capital works to protect the river Camlad. This project began in April 2019 and will run for three years

See Appendix of Evidence for:

- Meeting notes

Stakeholders engaged

Definitions

Stakeholder: Any group or individual who can affect or is affected by the achievement of the project objectives. These can be people, groups or entities that have a role and interest in the objectives and implementation of a project. They include the community whose situation the project or programme seeks to change.

Engagement: Stakeholders who become actively involved in the project's implementation at any stage.

61 stakeholders were engaged through the SWIM project.

The Cae Bodfach Stakeholders are a group of people living around Llanfyllin with an interest in the river Cain. As this group was already in existence with support from the Town Council, the SWIM project engaged these people at their own regular meeting. SWIM project officers gave a talk to this group of stakeholders, which resulted in a two-way discussion, where local people were able to identify both landowners who would like to work with the project to plant trees and volunteers who would like to help with the tree planting. This way of working saved a great deal of resources in terms of site surveys and ground work. This led to a very successful tree planting project above the Cain at Yr Parc, Llanfyllin towards the end of the project.

Similarly, the Powysland Internal Drainage District (IDD) meeting is an existing group of people, who were able to have a two-way discussion regarding historic land use and opportunities for natural flood management. Two meetings were attended and at both, an update was given on the SWIM project and landowners were able to identify pollution issues and water storage possibilities.

Stakeholders were also engaged through the discussion group with farmers. Landowners entered into a two-way discussion about roof space calculations, rainfall capture and natural capital measures to reduce overland flow of water.

See Appendix of Evidence for:

- List of Cae Bodfach Stakeholders

- Minutes of Powysland IDD meetings
- Minutes of Severn Rivers Trust discussion group with farmers

Participants supported

96 participants were supported by the SWIM project.

Participants were engaged in the SWIM project through talks in partnership with other organisations to widen the audience and volunteering sessions organised by Severn Rivers Trust.

Agriculture students (years 10, 11 and sixth form) were engaged in a site visit to discuss water infiltration and hedgerow management near the river Cain and in tree planting work parties. We were able to gather a number of students as evidence along with the teacher's signature but chose not to record names of under 18's for data protection purposes.



Agriculture students from Llanfyllin High School planting trees to protect the river

Volunteers from the community also took part in a tree planting day and their hours are recorded. We have also recorded more detailed volunteer engagements as participants, for example a meeting was held with Ophelia Camp who is a local enthusiast for re-wilding and worked with us to plan increasing tree cover for natural flood management. This is evidenced by an email confirming the meeting.

At our volunteer's winter gathering, a talk was given on natural flood management and the importance to tree planting to reduce overland flow of flood water.



The presentation at the volunteers winter gathering

A presentation was also given at the NFU county meeting on the importance of soil and water management, but we do not request a full list of farmers names from the NFU for data protection. The contact details for our farm catchment officers are given out at these meetings to give farmers an opportunity to contact us to arrange works.

Peter Powell gave a talk to the Camlad Community Wildlife Group to raise awareness of the project and the project was a regular agenda item on the CaBA (catchment based approach) meetings. And Lisa Barlow gave a talk to the Cain Valley Group to update them on the project and plans under the Cain and Nant Alan SMS projects.

See Appendix of Evidence for:

- Volunteer sign in sheets for high school students
- Sign in sheet for volunteers winter gathering
- Minutes of NFU meeting
- Volunteer sign in sheets for community tree planting day
- Minutes of Camlad Community Wildlife Group meeting
- Email confirming meeting with volunteer
- Minutes of the Cain Valley River Group meeting

Communities benefitting

4 communities benefitted from the SWIM project.

- Guilsfield (Guilsfield Brook)
- Llanfyllin (River Cain)
- Llanrhaeadr (River Tanat)
- Churchstoke (River Camlad)

Communities benefitted in a number of ways. By engaging with local communities, we were able to plan cost effective solutions to localised flooding through the flood actions groups and set up steering groups of farmers in the Cain and Nant Alan catchments, who were then able to bid for £600,000 of project funds for capital works. These interventions will support those rural businesses and improve water quality for all members of the community. Volunteers were engaged in tree planting, which ensured the project was fully supported by local people.

With the ongoing support of Severn Rivers Trust, communities will continue to care for and celebrate their rivers in the future, and they in turn will benefit from improved health and wellbeing and an enhanced river environment. This is a real achievement of the River Friendly project, and a legacy of the funding provided by Arwain.

See Appendix of Evidence for:

- Example email showing support from members of the community

Businesses benefiting

9 Businesses benefitted from the SWIM project.

The SWIM project engaged business through farm visits to ground truth the findings of the river catchment modelling work. The maps pinpointed locations with high overland flow of flood water and the locations of farms, which were then visited to agree actions with the landowner.

Farm businesses were engaged in actions which were win-win for the farm and the environment, for example clean and dirty water separation and fencing of livestock out of rivers.

8 of the 15 farm businesses engaged in this way completed a farm business form which is evidenced in the appendix. A further 7 farms were engaged, but as the evidence needed to be retrospectively collected from landowners, we were unable to meet with all 15 landowners to complete the paperwork.

Following handover to the Senior Community Officer, a further business Yr Parc at Llanfyllin was engaged and this is evidenced by a landowner agreement showing that trees were provided to the landowner. The hedgerow planted at Yr Parc was a fantastic example of multiple benefits of this way of working. The landowner gained in field shelter for stock and improved biodiversity value, along with a small woodland which will provide wood for their heating system. The community benefitted from the hedgerow planting activity and the river Cain will benefit from reduced flow of flood water and pollution into the Cain at Llanfyllin. Agriculture pupils from Llanfyllin High school gained skills in hedge planting and maintenance and this activity enabled

Severn Rivers Trust to build a strong partnership with the high school and local farmers.

See Appendix of Evidence for:

- Completed farm business beneficiary forms
- Landowner agreement for tree planting project

Safeguarding staff

One job was safeguarded as a direct result of this project. The Senior Community Officer, would have been in a redundancy situation at the end of the River Friendly Severn Project 30th September 2019. The SWIM project funding ensured this post was safeguarded by handover from the Senior Catchment Officer for whom funding had been secured.

The role of Senior Community Officer has been to share our enthusiasm and passion to make a positive difference to the lives, aspirations, skills and values of people that we work with by providing meaningful experiences and connections with the natural world.

By safeguarding a post in this area, it has been possible to build on the relationships we have with members of the community and develop new projects which are both sustainable and embedded in the Severn Rivers Trust five year strategy.

See Appendix of Evidence for:

- Letter from Mike Morris, CEO of Severn Rivers Trust.
- Email from Mike Morris with further explanation.

Appendix: Documentation and supporting evidence

Evidence	Supporting	Additional Comments
Feasibility study with maps (1)	Feasibility studies (Guilsfield Brook)	
Feasibility study with maps (2)	Feasibility studies (Cain)	
Feasibility study with maps (3)	Feasibility studies (Tanat)	
Feasibility study with maps (4)	Feasibility studies (Camlad)	
Multi-agency meeting notes (5)	Establishing Networks (Guilsfield Flood Action Group)	
Flood action group meeting confirmation email (6)	Establishing Networks (Guilsfield Flood Action Group)	
Expression of Interest (7)	Establishing Networks (Cain Sustainable Management Scheme Network)	This project will deliver capital works from January 2020.
Spreadsheet of planned capital works with farm names (8)	Establishing Networks (Cain Sustainable Management Scheme Network)	This project will deliver capital works from January 2020.
Expression of Interest (9)	Establishing Networks (Nant Alan Sustainable Management Scheme Network)	This project will deliver capital works from January 2020.
Spreadsheet of planned capital works with farm names (10)	Establishing Networks (Nant Alan Sustainable Management Scheme Network)	This project will deliver capital works from January 2020.
Meeting notes (11)	Establishing Networks (WISE Network)	
Farm business beneficiary forms (12)	Businesses benefitting	
Landowner agreement (12a)	Businesses benefitting	
Cae Bodfach list of stakeholders (13)	Stakeholders benefitting	
Powysland IDD meeting notes (13a)	Stakeholders benefitting	
Meeting notes from farmers discussion group (14)	Stakeholders benefitting	
Volunteer sign in sheet for tree planting with students (15)	Participants benefitting	

Volunteer sign in sheet for winter gathering (16)		
Minutes of the SRT NFU county meeting (17)	Participants benefitting	Names of farmers could not be shared by NFU due to data protection.
Volunteer sign in sheet for community tree planting day (18)	Participants benefitting	
Minutes of Camlad Valley Community Wildlife Group talk (19)	Participants benefitting	
Email confirming meeting with volunteer (20)	Participants benefitting	
Minutes of Cain Valley River group meeting (21)	Participants benefitting	
Minutes of CaBA partnership meetings august 2018 and July 2017 (22)	Participants benefitting	
Email support from Mayor of Llanfyllin	Communities benefitting	Added to email with report
Letter from Mike Morris, CEO of Severn Rivers Trust.	Job Safeguarding	On email from Mike Morris