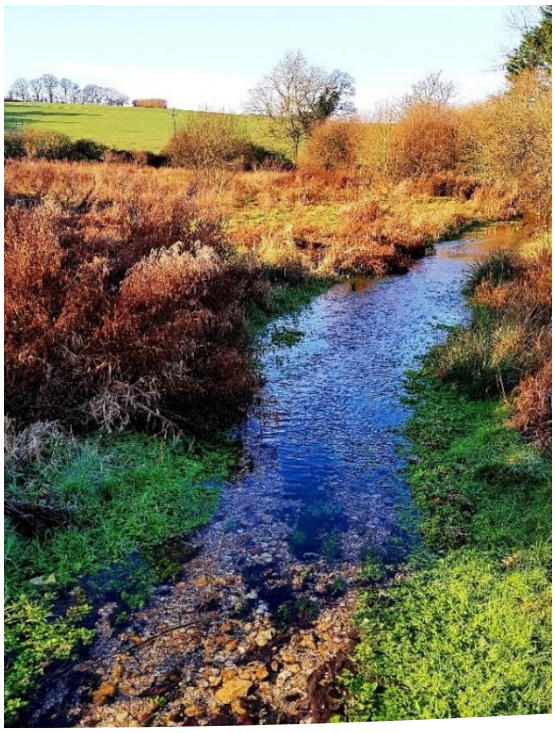
Cheriton Stream
Habitat Management Plan



Prepared in 2024 by Maggie Shelton, Watercress and Winterbournes

Hampshire and Isle of Wight Wildlife Trust (HIWWT)

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Cheriton Stream Habitat Management Plan

1. Introduction

Site Name	Cheriton Stream
Location	Cheriton, Hampshire
Description	A chalk stream, with associated winterbournes, that runs through a shallow valley and settlement.
Landscape	Cheriton Village has the source of the Itchen. The area lies in the western South Downs National Park (SDNP). Cheriton stream is a tributary of the river Itchen. It is a Site of Special Scientific Interest (SSSI) and a Special Area of Conservation (SAC). These designations will inform management practices. A study of DEFRA Magic Maps shows there are areas of purple moor grass, rush pasture, and patches of good quality semi-improved grassland. In the past, the valley floor and surrounding landscape would have been one of floodplain meadows, water meadows and cress beds. It is a heavily modified landscape with settlements and heritage features.
Size	11.045km
County	Hampshire
District	Winchester
Local Planning Authority	South Downs National Park Authority (SDNPA)

2. Description

Cheriton is a pretty Hampshire village with thatched cottages and the stream running through the village green. It is a popular destination for walkers and cyclists and has pubs and a National Trust property at the source of the River Itchen. The village lies within the westernmost boundaries of the SDNP and has a heritage battle site (Battle of Cheriton). There are relic water meadows and watercress beds that can be seen from the roads.

Cheriton Stream is a shallow gravelly stream that flows from the source of the river Itchen and winterbournes in the landscape, through the villages of Cheriton and Tichborne, to the confluence of the Itchen. The surrounding landscape is one of chalk downland and shallow valleys. This is a community with strong agricultural connections.

The stream and main river Itchen are an SSSI and an SAC. These designations will inform management practices. The stream is a stronghold of native white clawed crayfish, water voles, and otter. A white-tailed sea-eagle is sometimes seen in the wider Cheriton landscape.

3. Background and Context

Chalk streams are impacted by a range of pressures including pollutants, climate change and inappropriate management. The community wanted a conservation management plan to be able to confidently work together to improve and protect their chalk stream, and associated wetlands - one of the most famous chalk streams in the world.

National Lottery Heritage Funded Scheme Watercress and Winterbournes hosted a community workshop to understand the community's wishes, before producing this plan. Writing it involved consultation with experts in the field. It is meant to be concise and user friendly. The plans at the back will allow the community to take the best action for Cheriton Stream, at the right time of the year. It will allow them to consider the impact of climate change when they make long-term plans (25 to 100-year plans).

NB Before undertaking any work in the stream, it is recommended that the community communicate with NE, the EA and the SDNPA.

4. Long-term Vision

To protect existing good-quality habitat and enhance sub-optimal habitat to improve biodiversity for wildlife and people, now and into the future. To build community knowledge and skills about chalk streams. To share good news stories about Cheriton stream within the wider community.

5. Environmental information

Designated Areas	Relevant legislation / Authority
SSSI SAC Battlefield	EU Habitats Directive NE
Habitats	
The Itchen is a classic example of a sub-type 1 chalk river. Species of primary designation are Water crowfoot *Ranunculus spp.*; Southern damselfly *Coenagrion mercuriale*; Bullhead *Cottus gobio.* Species to consider: White-clawed crayfish *Austropotamobius pallipes;* Brook lamprey *Lampetra planeri;* Atlantic salmon *Salmo salar;* Otter *Lutra lutra*.	NE
Landscape and geology	
Chalk bedrock. Shallow gradient in stream.	

6. Flora

Common name	Scientific name
Bird's-foot trefoil (greater)	*Lotus pedunculatus*
Brooklime	*Veronica beccabunga*
Bugle	*Ajuga reptans*
Common valerian	*Valeriana officinalis*
Creeping buttercup	*Ranunculus repens*
Devil's bit scabious	*Succisa pratensis*
Fleabane	*Pelicaria dysenterica*
Hemp Agrimony	*Eupatorium cannabinum*
Lady's smock / Cuckoo flower	*Cardamine pratensis*
Marsh bedstraw	*Gallium palustre*
Marsh marigold	*Caltha palustris*

Meadow buttercup	*Ranunculus acris*
Meadow cranesbill	*Geranium pratense*
Meadow sweet	*Filipendula ulmaria*
Monkey flower (invasive species)	*Mimulus guttatus*
Purple loosestrife	*Lythrum salicaria*
Ragged robin	*Lychnis flos-cuculi*
Water crowfoot	*Ranunculus spp.*
Scabious	*Scabiosa columbaria*
Scented mayweed	*Matricaria chamomilla*
Southern marsh orchid	*Dactylorhiza praetermissa*
St John's wort (imperforate)	*Hypericum maculatum*
Viper's bugloss	*Echium vulgare*
Water cress	*Natsurtium officinale*
Water crowfoot (EU Habitats Directive)	*Ranunculus spp.*
Blunt-fruited starwort	*Callitriche obtusangula*
Various-leaved water starwort	*Callitriche platycarpa*
Water figwort	*Scrophularia aquatica*
Water forget-me-not	*Myosotis scorpioides*
Water mint	*Mentha aquatica*
Willowherb (hoary)	*Epilobium hirsutum*
Yellow (flag) iris	*Iris pseudacorus*

7. Fauna

Common name	Scientific name	Legislation
American mink	*Neovison vison*	Invasive non-native species
Bats	*Mammalia sp*	Wildlife and Countryside Act (WACA) 1981 as amended
Brook lamprey	*Lampetra planeri*	Annex II species (qualifying) WACA 1981 as amended
Brown trout	*Salmo trutta*	WACA 1981 as amended
Bullhead	*Cottus gobio*	Annex II species (primary) WACA 1981 as amended
Lapwing	*Vanellus vanellus*	WACA 1981 as amended
Little egret	*Egretta garzetta*	WACA 1981 as amended
Otter	*Lutra lutra*	Annex II species (qualifying) WACA 1981 as amended
Snipe	*Gallinago gallinago*	WACA 1981 as amended
Southern damselfly	*Coenagrion mercuriale*	Annex II species (primary) WACA 1981 as amended
Water vole	*Arvicola amphibius*	WACA 1981 as amended
White-clawed crayfish	*Austropotamobius pallipes*	Annex II species (qualifying) WACA 1981 as amended
Water rail	*Rallus aquaticus*	Annex II species (qualifying) WACA 1981 as amended
Kingfisher	*Alcedo atthis*	Annex II species (qualifying) WACA 1981 as amended

8. Cultural

Stakeholders	Legislation
Footpath users	Countryside and Rights of Way (CRoW) Act 2000; WACA 1981 as amended.
Historians (battlefield)	
Businesses: Farms; Flowerpots Inn and Brewery; Husqvarna; Community Shop.	
Previous management and expertise	
Cheriton Conservation Volunteers (CCV)	CRoW Act; WACA 1981 as amended; Health and Safety at Work Act 1974; Control of Substances Hazardous to Health (COSHH); Safeguarding Vulnerable Groups Act (2006).
National Trust (NT)	
South Downs National Park Authority (SDNPA)	

9. People

Stakeholders	Legislation
Community; Volunteers (local conservation group); visitors; locals in the village	Health and Safety at Work (HSW) Act 1974; COSHH
Landowners / land managers / farming community	HSW Act 1974
SDNPA and NT staff and volunteers	HSW Act 1974; COSHH
PSFFA fishing group	HSW Act 1974
Schools	HSW Act 1974
Citizen scientists / W&W volunteers	HSW Act 1974; COSHH
Funding	
Parish Council	HSW Act 1974
W&W	HSW Act 1974
Access	
SDNPA; Conservation Group; PSFFA; walkers	HSW Act 1974; CRoW Act

10. Evaluation of features

The following features have been identified by the community during outreach. Notable because of ecological, cultural or heritage importance.

1. Chalk stream: understanding groundwater; understanding the flow of a low-energy chalk stream; understanding the impact of barriers; understanding the plant community of water crowfoot and starworts and how best to manage them.
2. Bankside plant community: devising a list of suitable plants to have; understanding and removing invasive non-native species.
3. Wildlife: managing streams for water voles; brown trout; white-clawed crayfish; understanding and removing invasive non-native species.

11. Factors which affect the features

Feature	Factors which affect the features	
	Anthropogenic (man made)	Natural

Healthy chalk stream with in-channel plant community	Riparian management. Climate change. Vegetation cutting regime (ie: cutting too much or at the wrong time). Spread of invasive non-native species. Sediment entering the river. Pollution entering the river from septic tanks, or land and road run-off. Tick treatment entering river.	Seasonal fluctuation (especially winterbourne) and ecological succession altering the habitat. Impact of winterbourne on flow of stream.
Bankside plant community	Riparian management. Climate change. Vegetation cutting regime (ie: cutting too much or at the wrong time). Spread of invasive non-native species.	Seasonal fluctuation and ecological succession altering the habitat. Competitive plants dominating the area.
Wildlife: Water vole	Riparian management (not thick or wide enough bankside vegetation / mown to the edge or the river / gaps in suitable habitat). Climate change. Lack of suitable habitat. Isolated water vole community (in-breeding / vulnerable to stochastic events). Predation by American mink.	Seasonal fluctuation of population. Ecological succession altering the habitat.
Wildlife: Brown Trout	Riparian management and grazing regimes. Climate change. Lack of trees and overhead cover. Lack of riparian plants in channel. Sediment entering chalk stream. Barrier to movement for habitat/food/spawning sites (eg: sluice gates or other). Disturbance of nesting sites (redds).	Predation by otter, cormorant, heron, egret, kingfisher. Ecological succession altering the habitat.
Wildlife: White-clawed crayfish	Spread of disease from people entering the river with contaminated clothing or equipment. Riparian management. Climate change. Spread of invasive non-native species.	Spread of invasive crayfish. Ecological succession altering the habitat. Predation by otter and trout.
Accessible chalk stream	Private ownership. Unconnected walking routes. Stiles limiting access to all. Lack of maintenance of footpaths / routes.	Ecological succession altering the habitat.

12. **Objectives** (objectives are written for each feature, with a rationale beneath each item)

Healthy chalk stream with in-channel plant community

Objective	To allow in-channel plant community to thrive and create natural variation in the stream channel.
Targets	To work with landowners to have a longer and connected stretch of stream with varied in-channel plant communities, that are allowed to grow with natural processes influencing the growth. Where plants are causing a back-up of water (that cannot move around the plants elsewhere) to manage the channel sensitively. This might mean to remove just the smallest amount in the centre of the channel to allow water to move through. To learn about chalk stream ecosystems and healthy plant communities. To reduce the amount of weed cutting. To reduce the amount of tick treatment that enters the stream.

Rationale: Invertebrates and vertebrates require a diverse and rich habitat to be able to feed, nest, hide and breed. By improving the riparian habitat, and caring for it appropriately, the stream will be ecologically more biodiverse, will support more wildlife and will be better able to withstand the impacts of climate change. We aim to educate people about the benefits of a varied and rich in-channel habitat. We aim to educate people about the impact of groundwater as opposed to surface water, in relation to the risk of flooding. The conservation group will be confident about the most appropriate way to care for the in-channel plant community (weeds). By allowing the plants to naturally encroach into the stream, water will speed up and clear the gravels in a naturalistic way. This will help to keep a section of the stream bed free from sediment (silt). The seasonal growth pattern of plants growing in Summer and dying back in Autumn as well as frosts and faster water of winter, will cause a natural clearing of the stream. By educating people about the impact of spot-on tick treatment on chalk streams we can increase biodiversity.

Bankside plant community

Objective	To have wide (at least 2m wide) banksides that are luxuriant and rich in different species of native wildflowers and plants, connected along the chalk stream.
Targets:	To connect with neighbours and landowners to encourage dense bankside fringes. To discourage mowing or grazing to the edge of the river and find solutions to barriers, where possible. To celebrate and learn about bankside chalk stream plants. To share photos of plants and insects and share good examples within the community. To have a robust Flora group who are confident about what to do in the village green. To work with community and contractors re mowing regimes to achieve the target. To stop garden waste and cuttings from entering the river.

Rationale: By improving the cover along the banks, the river will be in better ecological status. It will allow water voles to be better supported and protected. It will provide valuable food and shelter for invertebrates, the food for many other larger invertebrates and animals such as swifts and bats. By having a more diverse and varied planting regime, it will be a nicer place for people. Bankside plants can also help prevent silt from entering the river. Cuttings from garden plants drift to neighbours to collect at pinch points and cause ponding, inconvenience and poor relationships. Cutting back some overly shaded stretches and planting some unshaded stretches will result in a better mosaic of habitat that increases biodiversity and is more resilient to the impacts of climate change.

Wildlife: Water voles

Objective	To increase the available habitat for water voles by encouraging a connected habitat of wide, luxuriant bankside wildflower planting all along the river. To monitor and remove American mink.
Targets	To work with landowners to map and increase knowledge about the areas that are suitable for water voles. To encourage the whole community to manage their riparian banks for water voles and allow better habitat connectivity. To monitor for mink all year round and catch and dispatch mink according to GWCT guidelines. To have a group who monitor the water vole population through annual surveys and submit records to Hampshire and Isle of Wight Wildlife Trust to add to national monitoring dataset. To improve sub-optimal water vole habitat.

Rationale: Anecdotal evidence and survey findings indicate that the water vole population of Cheriton is patchy. Over time this lack of connection will reduce their ecological fitness meaning that they become increasingly vulnerable to any pressures. By working with landowners, we hope to educate people about the best habitat to support water voles and the best way to monitor mink. We will advocate the best practice and encourage the whole community to support this iconic but declining mammal. We will support a community group to become confident to carry out an annual water vole survey and submit findings to the National Water Vole Monitoring Programme (HIWWT).

Wildlife: Brown Trout

Objective	To work with landowners to improve the riparian habitat so that it supports native brown trout, at all stages of their life cycle.
Targets	To learn about the different requirements throughout a trout's lifetime. To remove barriers that inhibit the movement of brown trout and eels, such as sluice gates. To improve the habitat for all stages of brown trout life cycle. To have a flourishing and connected brown trout population. To carry out an annual redd survey.

Rationale: Cheriton Stream is home to native brown trout, but the population may be patchy. We want to improve the stream habitat and increase biodiversity so that it supports trout and makes it an enjoyable experience for people to see these iconic fish. We will have a stream with clean scoured loose gravel (spawning opportunity); increased cover in the stream from bushy water crowfoot and starworts; increased tree root complexity and cover from trees; more variety in the stream bed such as deeper pools, shallower glides and rough ripples.

We want to monitor fish redds (spawning sites) and remove barriers that prevent or restrict trout movement eg: sluice gates and weirs. We will work with landowners to improve the river habitat to support native brown trout.

By managing the stream for trout, we will be improving it for other iconic chalk stream species (eel, brook lamprey, invertebrates, kingfisher, otter etc). By monitoring for spawning sites, we will know which areas of the river we should protect during the spawning season. We will not damage nests (redds). We will learn about the most suitable habitat, how to manage it, and will share this information within the community. The conservation group will know how best to care for the river, for these iconic species. We will be able to reach out to new members of the community to raise awareness about Cheriton Stream and how best to look after it.

Wildlife: White-clawed crayfish

Objective	To manage the river to support white-clawed crayfish, at all stages of their life cycle.
Targets	To work with landowners to allow native crayfish to increase their population in strategic areas of the river (with an aim to connect such habitat along the entire river in the future). To raise awareness of the importance of biosecurity when working in and around chalk streams.

Rationale: By managing the habitat with white-clawed crayfish as a consideration, biodiversity will be increased. There will be more opportunity for them to migrate to and colonise new areas. The community will be proud of having a chalk stream that supports this rare crustacean.

To stop the spread of crayfish plague, we will raise awareness of, and work to the highest levels of biosecurity using the Check. Clean. Dry method when working in and around the stream.

We will keep the number of people working in the river to an absolute minimum for the task in hand to cause the least disturbance to the habitat and species. After removing any material from the river,

we will carefully examine any arisings from work parties, or riparian management, to spot crayfish and be able to put them back into the river. These crayfish can be exceptionally small.

We will work hard to keep marginal habitats complex (eg: a mix of woody material, cobbles, plants), and cobbled or gravelly areas free from silt, to provide the greatest chalk stream habitat that will suit crayfish and other species such as bullheads.

Where large scale restoration projects occur, we will consult with the Southern Chalk Streams Project via Hampshire and Isle of Wight Wildlife Trust.

We will learn about the most suitable habitat, how to manage it, and share this information within the community and the conservation group, so that as many people as possible know how to best care for our stream.

Accessible chalk stream

Objective	To have as many opportunities as possible to have access to the chalk stream.
Targets	To identify and map barriers. To develop long-term relationships with landowners to develop access opportunities such as circular walks / change stiles to kissing gates etc. To maintain footpath access or know where to report issues. To have information about the chalks stream available and visible as appropriate for the area.

Rationale: by working together to spot opportunities for local people to connect with the river, Cheriton will be a nicer place to live. By joining in to care for the access there may be a shared feeling of community. By working with neighbours to develop lasting relationships there will be improved community cohesion. By sharing information about the chalk stream, walks may be more interesting to some individuals, and it can be a way to share knowledge and current thinking.

13. Action plan

Healthy chalk stream with in-channel plant community

Action	*To raise understanding of the positive impact chalk stream plants have on the stream.* *Community working together to improve the variety and amount of species of in-channel plants.* *Reducing the amount of weed being cut and removed. This is so that valuable invertebrate habitat is not destroyed and to allow for a wetter habitat at the bank, increasing floral biodiversity.* *Where there are houses with flooding concern: understanding exactly where this occurs and whether this is a result of high groundwater seeping from the ground into a property, or if it is river water running into a property from the river itself.* *Where ponding occurs (eg: village green) gently move plants from the very middle of the channel to the sides, to encourage water movement.* *Removal of broken-off plant fragments (for example following a frost) from around bridges, hatches or culverts so that they do not collect and cause a blockage. Keeping out of the river during the fish spawning season.* *Keeping woody material in the river to increase biodiversity.* *Remove all invasive non-native species (INNS).*	*Who*	*Riparian landowners, neighbours and community conservation group (CCG) working together.* *Cheriton Flora Group will be able to monitor plants in the river to advise the conservation group on action to take.* *Repositioning of plants in the summer = landowners and CCG* *Removal of plants following a frost = landowners and CCG.* *Landowners keeping woody material in stream.* *Landowners and community group working together to reduce silt from entering the river.* *Landowners and community and CCG keeping woody material in river, removing INNS, reducing sediment from entering the river.* *Farmers and landowners reducing sediment by adding buffer strips / fencing cattle from the river and other farm advisory techniques. FWAG or HIWWT or Wild Fish may be able to offer advice and support.*

	Reduce silt from entering the river. Reduce amount of pollution that enters the river (septic tanks / land / tick treatment). Survey for pollution incidents using the Anglers Riverfly Monitoring Initiative (ARMI)		
When	*Inspection of plants: Monthly, year-round.* *Repositioning of plants: July.* *Removal of plants: After a frost (look for dislodged plant fragments gathering at bridges).* *Surveying silt issues: survey in winter (in rain – the heavier the better).* *ARMI surveys – monthly, year-round.* *As opportunity arises: Awareness raising of healthy chalk streams at events and during work parties.*	*How*	*Inspect the stream with a walkover.* *Repositioning: Using hand tools such as rakes, gently draw some plants away from the centre of the area in question, to the sides of the channel, to create a narrow area of surface flow.* *Do this in a patchy, naturalistic pattern so that water moves in and around the plants and woody material that should be kept in the channel. Avoid creating a straight channel (see diagram 1, repositioning plants).* *Removal: following a frost, from the bankside not the river: using hand tools, pull out accumulated broken-off plants and fragments where there is concern about flooding. Leave them on the bank for a short time to let invertebrates and excess water move back to the river. Then remove the fragments well away from the river. Compost away from any wetland so that nutrients do not leach into the watercourse.* *Surveys are using prescribed standardised methods and kit. ARMI data is fed to the Riverfly Partnership for monitoring purposes.* *Raising awareness of issues such as tick treatment. Buying eco-friendly products from the local shop.* *Sharing the information on boards during work party days.*

Bankside plant community

Action	*Encourage conservation of a 2m wide thick, luxuriant bankside buffer of native plants along the entire stream. If mowing, keep the grass length as long as possible and do not mow to the bankside.* *Remove floral invasive non-native species (INNS) of monkey flower and monitor for other INNS.* *Education about not throwing cuttings into the stream as causes issues for neighbours downstream.*	*Who*	*The Flora Group, community and CCG.* *Removal of INNS by landowners and conservation group if happy to help.* *Education about cuttings via newsletter; community news; signs in village etc by the community. Community signage will also tell the story of the chalk stream plants and why they are important and what to spot.*
When	*If cutting bankside vegetation, do this once every 2 – 3 years. Leave bankside plants, stems and seeds over winter to provide valuable microhabitat, food, refuge and to prevent soil mobilisation. Cut in the Spring once it is warmer and over-wintering insects have left, and before water voles start to become active. NB check for nesting birds.* *Remove INNS Spring and Summer.*	*How*	*Use hand tools, if possible, to retain habitat complexity.* *Landowners and community groups hand-pull INNS and compost well away from wet areas. Collect any fragments that drift downstream to prevent spread.* *Community-wide shared awareness raising about the problems that arise from cuttings moving downstream.*

Wildlife: Water vole

Action	*Monitor and record water voles along the stream.* *Remove American mink.* *Retain tall, thick, luxuriant bankside vegetation everywhere (as above). Share story of, and celebrate, the water voles of Cheriton.* *Connect and increase the width of bankside habitat.*	*Who*	*Monitoring mink = landowners and land managers and fishing beat.* *Removing mink = volunteers / landowners.* *Celebration of water vole = community.* *Establishing thick riparian habitat = Conservation and Flora Groups working with community.*
When	*Monitor and trap mink = year-round.*	*How*	*Monitor and trap mink as per Waterlife Recovery Trust (MinkPolice / SmartRaft*

	Water vole survey = May or September as this avoids peak breeding season. *Celebrate stories: year-round.*		*method) or Game and Wildlife Trust methods. Keep SDNPA informed of findings.* *Use Survey123 App (or paper forms) to carry out a water vole survey following W&W training advice.* *Send records to HIWWT. Celebrate news of water voles at community events and on noticeboards / Facebook, Parish magazine, etc.*

Wildlife: Brown Trout

Action	*Increase accessible stream microhabitats for trout at all life stages. For example: shady areas; deep pools; clean gravel riffles (shallow area with fast and turbulent water); submerged plants (sometimes called weed); lush overhanging marginal plants; dead wood or living tree roots in the river.* *Monitor and record redds (trout nest sites). Stay out of these areas of the river during spawning season (Oct to Jan).* *Identify barriers to movement (eg: sluice gates) and have these removed with EA permission, or have them altered with notches or similar, so they are no longer a barrier.* *Stop silt from entering the chalk stream.*	*Who*	*Landowners, land managers, volunteers (CCG), Parish Council, National Trust, famers working to keep the microhabitats available.* *Community monitoring redds from the bankside using Survey123 app.* *Landowners working in partnership with the EA and SDNPA to remove barriers.* *Landowners improving the health of the stream by reducing the amount of sediment getting from their land into the watercourse.* *Community monitoring sediment pathways and points of actual entry into the stream using Survey123 app.* *Landowners, land managers, volunteers (CCG), Parish Council, National Trust, famers working to keep sediment out of the river.*
When	*Maintain healthy chalk stream habitat – year-round.* *Monitor redds December to February (they are less visible in November).* *Monitor fish access (or barriers) year-round.*	*How*	*Reduce amount of weed cutting. Reduce bankside grazing and trampling (also known as poaching) by erecting fencing. Increase bankside tree cover by planting alder, willow and hazel in the fenced off bank, close to the river. Do this on the side that casts shade into the river and randomly in clumps of 3 or 5 trees. Manage by laying on rotation every 3 years, rather than coppicing. Avoid the bird nesting season (Feb – August*

	Monitor silt movement in the winter, when groundwater is high, and during a rain shower.		*inclusive) and avoid causing disturbance during this period from noise such as chainsaws, etc.* *Continuously learn about healthy chalk stream habitats.* *Monitor and record the river, its habitat suitability, its accessibility and any evidence of fish (species and sizes) using a Stream Naturalness Assessment.* *Work with the EA and SDNPA to remove barriers.* *Wider community working together to prevent silt from entering the river. This may be through farmland advice, sediment traps, or other novel methods.* *Monitor redds from the bankside – during the spawning season. Do not enter the river where redds are present.*

Wildlife: White-clawed crayfish

Action	*Retain stream complexity for all stages of crayfish life.* *Retain wood, large clumps of gravel, boulders or flint, weed and riparian plants.* *Always keep cleanliness a top priority in and around the river as in "Check.Clean.Dry".* *Keep out of the river as much as possible.* *Report findings of native crayfish to HIWWT (Ben Rushbrook).*	*Who*	*Land managers, fishing clubs and conservation group.* *Crayfish records and clear close-up photos sent by surveyors and CCG.*
When	*Year-round.*	*How*	*Keep wood and a mix of sizes of gravel and flint and boulders in the stream bed.* *Clean and dry all clothing and equipment using the Check.Clean.Dry protocol. Share the story and success of white clawed crayfish conservation.* *Send photographic evidence by email to HIWWT.*

Accessible chalk stream

Action	*Identify and map barriers. Develop long-term relationships with landowners to develop access opportunities such as circular walks / change stiles to kissing gates etc. Maintain footpath access or know where to report issues. Have information about the chalks stream available and visible as appropriate for the area.*	*Who*	*Interested volunteers mapping the barriers and meeting landowners to explore opportunities to improve accessibility. Volunteers and Ramblers cutting back vegetation on walks. Community could produce a noticeboard about Cheriton Stream with information about its wildlife and what can be seen on walks.*
When	*Year round.*	*How*	*On walks and work parties. Production of a board by reaching out to the community artists. Sourcing funding for a small board with a space for interchangeable story telling.*

Diagram 1: repositioning plants

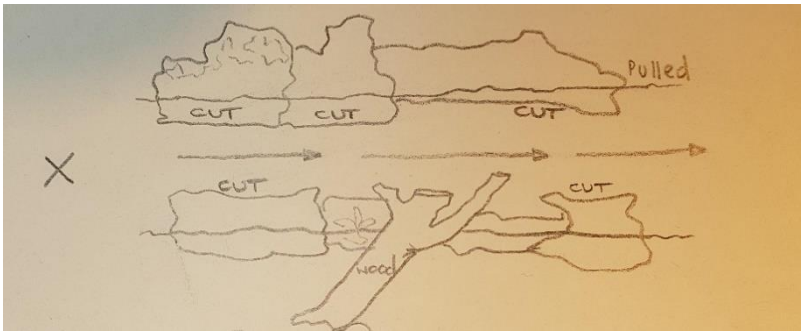
It is best to leave a complex community of plants in a chalk stream to complete their life cycle, undisturbed. If the community of Cheriton feel some management is important (for example to stop plant fragments from blocking a constricted bridge), the following is advised.

Note that consent for works on a SSSI is determined by the 'ORNEC' (Operations requiring Natural England's Consent) list, which is different for each SSSI depending on the features and the types of activities which may impact them. It is the landowner's responsibility to ensure that they have any necessary permissions before they undertake any work so they should look at the ORNEC themselves to check if SSSI consent is required.

In the ORNEC, ***repositioning*** of water crowfoot within the stream is exempt from consent.

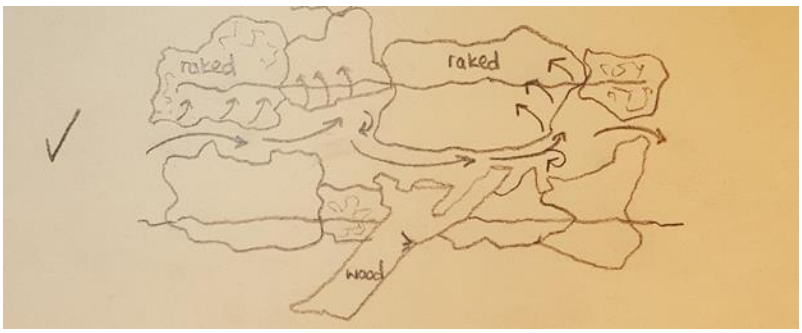
Poor management

✕ Avoid creating a straight channel.



Better management

✔ If management is essential, pull plants to the edges (as in short arrows), create a patchy natural pattern, to allow water to move in a non-uniform manner. This creates more microhabitats.



14. Activity planner

This plan considers when certain things must take place in accordance with the appropriate legislation, eg: activity avoids periods that are sensitive to wildlife such as bird nesting season. The coloured areas of each month indicate when the activity can take place.

Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Monitor from the bankside the in-stream plants												
Sensitively reposition plants within channel if deemed necessary												
Brown Trout spawning. Do not enter stream. ***Pause ARMI surveys.***	!	!									!	!
Following frost, from the bankside only, pull out broken-off plants												
INNS survey and removal of invasive plants												
Survey of sediment pathways and entrance points to the river												
ARMI surveys. (Blanks = paused due to trout spawning season)												
Sensitive management of bankside plants eg: mowing or cutting												
Sensitive management of bankside trees (keep in river where possible)												
Monitor and trap mink (join with Waterlife Recovery Trust)												
Survey for water voles (breeding period = March to October)												
Monitor / record redds (Wild Trout Trust advice)												

15. Monitoring

This part of the action plan is important as it will tell us if our plan is achieving its objectives. It gives us the opportunity to modify areas of focus if necessary. Significant change takes time, so survey data should be retained for future analysis. **This plan should be reviewed quarterly.**

Question to ask to check if objectives have been met.	Working on it	Achieved (*show evidence*)	Evidence:
Is stream more connected (ie with neighbours)?			
Are there more plants flourishing in stream?			
Are people keeping dogs out of river (especially if using tick treatment).			
Do we have a team carrying out ARMI surveys? In many and connected areas?			Riverfly partnership logs
Are the bankside plants thicker, taller and growing in a wider area?			
Is there a robust and regularly active Flora Group?			
Are less people mowing to the riverbank?			
Are less cattle getting in river?			
Are fewer garden cuttings getting in river?			
Do we have a robust native crayfish population?			
Are people aware of Check. Clean. Dry?			

Do more people know what a healthy chalk stream looks like?			
Are less people getting into the river? Do we know why this is important?			
Do we have an increasingly complex river habitat? Do we know what this means?			
Is less silt getting into the river?			
Have we mapped suitable water vole habitat and are these areas connected?			
Have we got an annual water vole survey team in place, and active each year?			
Are we monitoring and removing mink across the river?			
Do we understand the difference between ground-water and surface-water flooding?			
Do we know about the requirements of native brown trout?			
Have we removed all the barriers to fish (eg: sluice gates?)			
Do we have a group carrying out an annual redds survey?			
Have we changed all the stiles to kissing gates?			
Do we share information about chalk streams (for locals and visitors)?			

References / Supporting documentation

Marshall, I. & Nightingale, J. (2021). *Crayfish Restoration Manual.* Rostra Publications.

Natural England Designated Sites
https://designatedsites.naturalengland.org.uk/PDFsForWeb/Consent/2000227.pdf

Natural England Site Improvement Plan: River Itchen - SIP193 (naturalengland.org.uk)
https://publications.naturalengland.org.uk/publication/5404054607888384

Strachan, R., Moorhouse, T., & Gelling, M. (2011). *Water Vole Conservation Handbook (Third Ed).* Wildlife Conservation Research Unit, University of Oxford

Sutherland, W. & Hill, D. (eds.) (1995). *Managing habitats for conservation.* Cambridge: Cambridge University Press.

Waterlife Recovery Trust: trapping mink https://www.waterliferecoverytrust.org.uk/getting-started-qa/

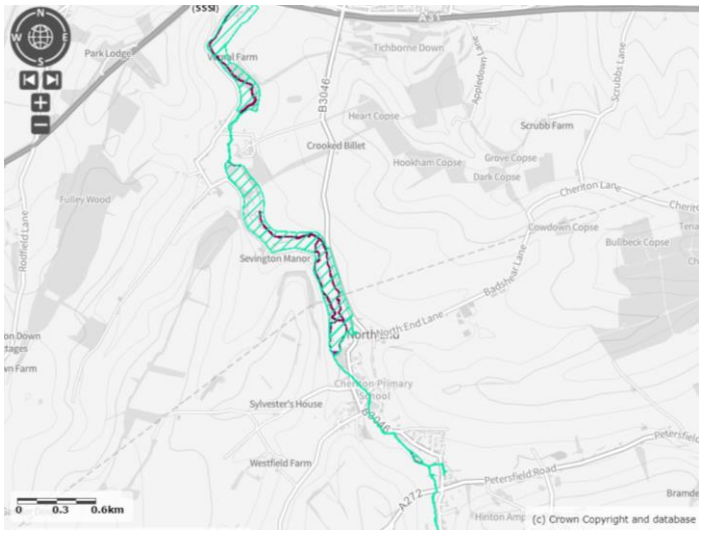
Wild Trout Trust: spotting redds https://www.wildtrout.org/wttblog/redd-spotting

Acknowledgements

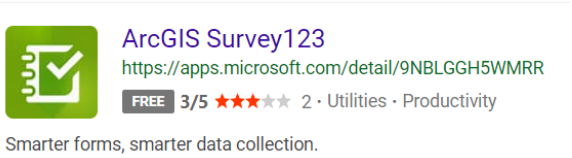
With thanks to Nick Lawrence Wild Trout Trust; Dr Ben Rushbrook Hampshire and Isle of Wight Wildlife Trust; Mike Blackmore Wessex Rivers Trust, Lara Brant Natural England.

Maps and apps

1. DEFRA Magic Map with designations.



Map indicating Site of Special Scientific Interest SSSI (green lines) and Special Area of Conservation (brown lines). The entire area is designated as a nitrate vulnerable zone.



2. Survey 123 app for surveying and recording: redds; sediment; invasive non native species, water vole.

3. Water vole data (up to 2024) displayed on Survey 123: