

## Cotswold Canals Connected (CCC)




### Working with Nature

### Progress Report: 1<sup>st</sup> July to 31<sup>st</sup> December 2023

The information in this document is submitted and discussed as part of the CCC Project's quarterly reporting to the National Lottery Heritage Fund.

#### Progress towards the project's approved purposes

Green	Delivery is on track
Amber	Minor issues are impacting delivery
Red	Major issues are impacting delivery

People & Nature Activity	Summary of progress	Status
<p><b>PN01 – Environmental Training</b></p> <p><u>Priority Outcomes</u></p> <p>Volunteers are skilled and well-equipped to carry out tasks.</p> <p>Greater knowledge and understanding of canal wildlife and environment.</p> <p><u>Targets and Outputs</u></p> <p>70 people trained</p> <p>20 training courses</p> <p>4 accredited courses</p> <p>20 people engaged new to environment work</p> <p>8 environmental guardians</p>	<p>Various training courses arranged in the last 6 months. This includes:</p> <ul style="list-style-type: none"> <li>• Brush cutter and scythe training for volunteer leads to enable them to run volunteer work parties and teach volunteers necessary skills to carry out tasks</li> <li>• Riverfly training course arranged for 11 volunteers on 27/09/2023, led by a trainer from the Wildfowl and Wetlands Trust</li> <li>• Various on-site sessions for volunteers such as bird nesting check training and toolbox talks.</li> </ul> <p><u>Progress against targets</u></p> <ul style="list-style-type: none"> <li>• 83/70 people trained to date</li> <li>• 13/20 training courses</li> <li>• 4/7 accredited courses</li> <li>• 17/20 people new to environmental volunteering</li> <li>• 3/8 environmental guardians</li> </ul> <p><u>Photo's</u></p> <p><i>Figure 1: Riverfly training</i></p> <div style="display: flex; justify-content: space-around;">    </div>	

Approved purpose	Summary of progress	Status
<p><b>PN02 – Habitat creation and enhancement projects</b></p> <p><u>Priority Outcomes</u></p> <p>Volunteers are skilled and well-equipped to carry out tasks.</p> <p>Greater knowledge and understanding of canal wildlife and environment.</p> <p>Vols have increase in happiness, satisfaction, wellbeing and connection to place</p> <p>Minimal negative environmental impact during the construction phase</p> <p>Community members feel positive about biodiversity creation and improvements</p> <p><u>Targets and Outputs</u></p> <p>100 WWN volunteers</p> <p>30,000 trees/plants planted by vols</p> <p>20ha or new or restored habitat</p> <p>4km of new hedgerow</p> <p>100 bird/bat boxes installed</p> <p>Minimum 10% increase in biodiversity units</p>	<p><i>Habitat Creation/Restoration</i></p> <p><u>Scrape Creation (site 7)</u></p> <p>We hired the Liebrecht rotary ditcher in September 2023 to create a series of connected scrapes, shallow pools and ditches which will fill with water during periods of prolonged rainfall. It's the only machine of its kind in the UK. Owned by the RSPB, it has the sole purpose of wetland creation. This large cylinder on wheels is towed by a large tractor and has a rotating barrel inside armed with large "teeth". It's designed to scoop up and churn the topsoil before spraying it over a large area, avoiding the creation of spoil heaps.</p> <p>The ditcher created nine pools which vary in size and depth and connecting ditches. On the first run the driver removed the soil close to the surface. Several runs were needed to get down to the desired depths – between 40 and 50cms deep. Due to some quite substantial wet weather this winter the scrapes are already holding water and we'll soon see many species of plants and invertebrates arrive. We hope this will become an important feeding ground for waders and wildfowl, many of which migrate to wetland sites across the UK in the winter. Amphibians, bats and countless species of invertebrates will also benefit.</p> <p>The majority of the costs for hiring the ditcher (£14,280 of £15,320) will be paid for under the sites higher-tier countryside stewardship agreement, under option GS10 Management of wet grassland for wintering wildfowl and waders.</p> <p>To finish the site, we will lower 2 sections of the existing flood embankment to reconnect the floodplain with the River Frome and allow the scrapes to be filled from the river as well as rainfall. This is planned for summer 2024.</p>  <p><i>Figure 2: Drone footage of scrapes during construction</i></p>  <p><i>Figure 3: Pete Savage (Canal Project Officer) and rotary ditcher on site.</i></p>	



*Figure 4: Scrapes starting to hold water as viewed from Occupation bridge*

#### Orchard Restoration (site 6a)

The restoration of Pockett's orchard continues unabated with monthly volunteer work parties alongside some additional sessions to focus on constructing a field shelter for use by volunteers, the local school and community whilst on site.



*Figure 5: New field shelter under construction at Pockett's orchard*

#### Species Rich Grassland (site 6b)

We are currently in a higher-tier stewardship agreement for land on the north canal restoring it to species-rich grassland, To do this we are managing (reducing) grazing pressure by working with the local tenant farmer under a grazing license, as well as updating and replacing infrastructure such as fences and gates so that we can control cattle movement across the site.

#### Site 3

No progress over last 6 months as the priority has been delivering the scrapes and getting the water vole licence application in place.

Due to delays in the delivery of the Missing Mile, and because the two areas are likely to include similar working areas, it will not be possible to complete the habitat creation works in this area by the end of 2024. Instead, the aim is to have completed detailed design and have planning permission and all the necessary consents in place by the end of the year.

#### Progress against targets

- 91/100 WWN volunteers
- 10/20ha or habitat restored or enhanced
- Net gain calculations not yet complete

## *Landscape Connectivity and Enhancement Projects*

### Hedgerow Planting

We have now planted over 1km of new hedgerow as part of the CCC project with more planned for the coming year. We have also put on some recent hedge laying training for existing CCT/SDC volunteers to ensure they have the skills to manage both new and existing hedgerows in the future.

There have been some delays with agreeing locations for additional planting for this winter season. At one location where discussions had progressed well the landowner is now trying to apply for BNG which might mean that we are unable to deliver the 1.5km of hedge planting we had anticipated. We are pursuing other areas.

As the environment team will only be working on the project until the end of 2024 it is unlikely all the hedge planting will be completed - there is some 880m of new hedge planned within the Missing Mile and a 25m section of hedging at Walk bridge, neither of which can be planted until after the associated engineering/construction work has been completed. This also means we are unlikely to hit our targets for planting 30,000 trees/plants shrubs as most of these are within the hedged areas. All outstanding works will need to be handed over to a responsible person within CCC at the end of 2024 and this will be documented in the GWT/CCC transition/handover pack.



*Figure 6: Hedge Laying near Ham Mill Lock (phase 1A)*

### Built Habitat

Built habitat work has been a slow burner in the last 6 months as we have been focusing on getting the main habitat creation areas completed. We have, however installed 5 bird boxes in 3 locations we have planted new hedges (Pockett's orchard, Newtown Lock and at the Boatmobility compound. We also have agreements in place to install both bat and bird boxes within a pocket of woodland alongside the canal.

The biggest installation to date has been a barn owl box which was installed on land near Stanley Downton (to the southeast of the Ocean Railway Bridge).



*Figure 7: Barn Owl box installation near Stanley Downton*

The box was constructed by one of our volunteers, a real bird expert (he used to work for the British Trust for Ornithology) - this meant we only ended up paying for the material. In addition, as the box was so large, we arranged for an experienced

tree climber to install the box for us. Manuel ended up not charging us for this work (around half a day on the weekend) as he was so supportive of what the project is trying to achieve for wildlife.

As with the hedgerow work, the plan is to leave a detailed plan at the end of 2024 of where any uninstalled built habitat can be located.

Progress against targets

- 91/100 WWN volunteers
- 4,218/30,000 trees/shrubs/plants planted
- 1.08/4km of new hedgerow planted and managed
- 6/100 bird/bat boxes installed

Approved purpose	Summary of progress	Status
<p><b>PN03 – Wildlife Monitoring</b></p> <p><u>Priority Outcomes</u></p> <p>Greater knowledge and understanding of canal wildlife and the environment.</p> <p>More engagement with nature leading to improved health and wellbeing</p> <p><u>Targets and Outputs</u></p> <p>4000 volunteer hours</p> <p>Volunteers identify increased number and frequency of species using new habitat areas</p> <p>More multifunctional natural spaces and blue green infrastructure</p> <p>More connectivity of wildlife habitats in Severn Vale</p>	<p><u>Baseline Surveys - SWSG</u></p> <p>Stroud Wildlife Survey Group (SWSG) have been conducting ground and riparian (the area between a land and water) surveys across the CCC project area, laying the groundwork and creating a baseline which allows us to assess how healthy it currently is and record improvements over the next few years and beyond.</p> <p>SWSG was set up in 2016 by a number of volunteers within GWT for the purpose of monitoring and surveying wildlife in the Stroud area. It consists of around 70 volunteers with a diverse set of ecological survey skills. A significant proportion of the groups surveying was directed by GWT pre-Covid. Most of the work stopped like everything else during lockdowns. Since then, the group has slowly re-convened and there is a desire to get the organisation into a shape where it can operate independently, providing survey services organisations in the area.</p> <p>To help support the group in its aims to become an independent survey team for the Stroud area, CCC have provided some funding to cover some of the administration costs incurred setting up as an independent organisation and by providing survey and monitoring training for volunteers in a wider range of skills.</p> <p>In addition to the surveys by SWSG, GWT staff and trainees have also been on site carrying out a baseline Nature Reserve Condition monitoring which will be repeated every 3 years and will allow us to track change and adapt management in the future.</p> <p><u>Species Rich Grassland (site 6b)</u></p> <p>We are currently in a higher-tier stewardship agreement for land on the north canal restoring it to species-rich grassland, To do this we are managing (reducing) grazing pressure by working with the local tenant farmer under a grazing license, as well as updating and replacing infrastructure such as fences and gates so that we can control cattle movement across the site.</p> <p>The fields have also been subject to a full botanical survey which identified over 46 species including the rare (and rather beautifully named) Corky-fruited Water-Dropwort which is found in damp meadows and moist grassy places and often beside ponds or ditches (or on this case canals).</p> <p><u>Ongoing Wildlife Monitoring</u></p> <p>Since 2019 we have had a number of camera traps out along the canal – the exact location of these varies with the season. These images get sifted through by a GWT volunteer and then uploaded to MammalWeb for classification by volunteers online. This data then supports wider research on the current state of UK mammals. Since our project page went live over 129 different individuals have taken the time to classify the wildlife captured by the trial cams.</p> <p><a href="https://www.mammalweb.org/en/?view=projecthome&amp;option=com_biodiv&amp;project">https://www.mammalweb.org/en/?view=projecthome&amp;option=com_biodiv&amp;project</a></p>	<p style="background-color: #90EE90;"></p>

	<p><a href="#">id=131</a></p> <p>Following the completion of a Riverfly monitoring course earlier this year we are currently undertaking regular surveys at 2 sites locations along the river (the canal itself is too deep to allow monitoring to be carried out safely). This will increase to 5 or 6 sites after March once river levels recede.</p> <p><u>Progress against targets</u></p> <ul style="list-style-type: none"> <li>▪ 2367/4000 volunteer hours</li> <li>▪ Baseline surveys completed across project area</li> </ul>	
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Approved purpose	Summary of progress	Status
<p><b>PN04 Citizen Science</b></p> <p><u>Priority Outcomes</u></p> <p>Greater knowledge and understanding of canal wildlife and environment.</p> <p>More engagement with nature leading to improved health and wellbeing</p> <p><u>Targets and Outputs</u></p> <p>75 people participate in analysis and classification</p> <p>Increased biodiversity within 15 years</p>	<p>A number of citizen science projects have been ongoing across the Delivery Phase</p> <p>Mammal web – see above, 129 individuals to date.</p> <p>SWSG surveys – see above, 12 individuals involved to date.</p> <p><u>Riverfly Monitoring</u></p> <p>As briefly mentioned above, following, the completion of a Riverfly monitoring course by 11 individuals earlier this year we are currently undertaking regular surveys at 2 sites locations along the river (the canal itself is too deep to allow monitoring to be carried out safely). This will increase to 5 or 6 sites after March once river levels recede.</p> <p>Riverfly monitoring involves volunteers taking 3-minute samples from the riverbed each month and recording the presence and abundance of eight pollution-sensitive invertebrate groups. The focus of the sampling is on ‘riverflies’ – mayflies, stoneflies and caddisflies. If invertebrate numbers drop below a ‘Trigger level’ (expected population abundances), the Environment Agency is notified so that the problem can be identified, and action taken. This scheme allows groups and individuals to monitor and help to protect their local rivers and helps ensure rivers are monitored more widely and at greater frequency than is possible by the Environment Agency alone.</p> <p><u>Progress against targets</u></p> <ul style="list-style-type: none"> <li>▪ 152/75 citizen science volunteers!</li> <li>▪ Baseline surveys completed across project area</li> </ul>	

Approved purpose	Summary of progress	Status
<p><b>PN05 – Health &amp; Wellbeing</b></p> <p><u>Priority Outcomes</u></p> <p>Greater knowledge and understanding of canal wildlife and environment.</p> <p>Participants feel more engaged with nature, are happier, have increased satisfaction and/or connection to place</p> <p><u>Targets and Outputs</u></p>	<p><u>Built structures – bird hides and benches</u></p> <p>Various built structures were planned as part of the delivery of the project but much of the work on these has been delayed due to general project programming and to allow focus on other priority areas.</p> <p>Bird hides – we have so far created one small bird hide within Pockett’s orchard. This was created by a corporate volunteer group back in 2022 and is regularly used by a number of individuals from Whitminster village. A much bigger, roofed bird hide will be constructed adjacent to the towpath overlooking the new scrape areas over the next year (likely summer 2024).</p> <p>Benches – a number of locations are proposed for the siting of benches to encourage people to go outdoors and enjoy the canal. However, the locations need to not only be guided by aesthetics but also take into account the needs of the towpath users and take into consideration the proximity to interpretation. Given the overall delays with completion of the towpath and engineering works it is highly</p>	

<p>More multifunctional natural spaces and blue green infrastructure</p> <p>Building with Nature accreditation</p> <p>6 benches installed</p> <p>2 bird hides installed</p> <p>People make use of benches and bird hides</p>	<p>unlikely that there will be time to both agree and install benches before the end of 2024. As such it is proposed that any aspects of this work not completed are handed over to the engagement team at the end of 2024. We will, however, be able to install at least one bench within Pockett's orchard over the coming months.</p> <p><u>Building with Nature Accreditation</u></p> <p>It has not been possible to apply for Building with Nature Accreditation at this stage given the ongoing changes to project design. It will become clearer across 2024 whether gaining accreditation will be achievable by the end of the year.</p> <p><u>Progress against targets</u></p> <ul style="list-style-type: none"> <li>▪ 0/6 benches installed</li> <li>▪ 1 of 2 bird hides install</li> <li>▪ BwN accreditation not yet applied for</li> <li>▪ Baseline surveys completed across project area</li> </ul>	
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Approved purpose	Summary of progress	Status
<p><b>PN06 – Pockett's Orchard</b></p> <p><u>Priority Outcomes</u></p> <p>Orchard feels like a positive space</p> <p>Greater knowledge and understanding of canal wildlife and environment.</p> <p>People learn new skills, are happier, have increased connection to place and experience improved health and well being</p> <p><u>Targets and Outputs</u></p> <p>More multifunctional spaces &amp; blue green infrastructure</p> <p>More connectivity of wildlife habitats</p> <p>At least 4 orchard events held annually</p>	<p>The orchard restoration continues, with a monthly volunteer work party held on a Saturday to allow attendance from those people who cannot normally help out in the week.</p> <p>Work parties have picked and pressed apples (although the majority go off to one of the volunteers who makes his own cider), carried out formative and restorative pruning, scrub removal and lots of thistle pulling!</p> <div style="display: flex; justify-content: space-around;">   </div> <p><i>Figure 8: Pockett's Orchard volunteers carrying out various restoration tasks</i></p> <p>Alongside the volunteer work we have also used the orchard for various events from foraging evenings to Bioblitz days for families. The local school in Whitminster also regularly use the orchard as an outdoor learning area and to hold their annual harvest festival day celebration.</p> <p><u>Progress against targets</u></p> <ul style="list-style-type: none"> <li>▪ Regular orchard work parties and events held across the year including monthly work parties</li> </ul>	

Approved purpose	Summary of progress	Status
<p><b>PN07 – Engage with Nature</b></p> <p><u>Priority Outcomes</u></p> <p>Young people: have greater knowledge and</p>	<p>A number of the outcomes for this activity will now be delivered by (and subsequently reported on) by the engagement team, under Tony Chalk.</p> <p>We have continued our relationship with the local primary school in Whitminster who have already undertaken a number of projects with us – from painting signs for the orchard trees, to planting the edible hedgerow on the northern boundary of Pockett's orchard.</p>	

understanding of the state of the canal wildlife and environment

Increased engagement with nature

Experience health and wellbeing benefits

#### Targets and Outputs

6 educational projects with schools or colleges

200 children engaged

4 local primary schools have resources and training

2 schools run events independently

In the last 6 months we have also worked with them on an Eels in the Classroom project in partnership with Bristol Avon Rivers Trust and the Sustainable Eel Group. After applying for the necessary permissions from the Environment Agency, Pete Savage (Canal Project Officer) collected around 100 elver (young eel) from a local elver fisherman. These were then taken to the school where we had already set up a tank ready for their arrival. The elvers were looked after by the children for around 6-weeks, during which time they learnt about why eels are endangered and how many species struggle to move around our rivers (and indeed the wider landscape) due to the man-made barriers in their way.

Once they had started to pigment and mature into yellow eel the elver were then transported to the River Frome (close enough for the school children to be able to walk to the release site) and released into the river to carry out their lifecycle.



*Figure 9: Whitminster school children welcoming the eels to their new home!*

#### Progress against targets

- 4/6 educational projects completed
- 140/200 children engaged with
- 1/4 primary school has training/resources
- 1 of 2 schools run events independently



## 2024 Programme

Green	Delivery is on track
Amber	Minor issues are impacting delivery
Red	Major issues are impacting delivery

		2024								
		Q1	Q2	Q3	Q4					
Habitat creation Projects										
<b>Frome Washland (Site 3) - south of Frome, Missing Mile</b>	Detailed design									
	FR modelling									
	Planning application									
	Consenting - IDB, EA, NE									
	Baseline surveys									
	Tree planting									
<b>Species-rich grassland and heirloom orchard (site 6b)</b>	Infrastructure work - fencing and water troughs									
	order trees and shrubs									
	Heirloom Orchard creation									
	Baseline Surveys									
	Finalise Management Plan									
<b>Pockett's Orchard (site 6a)</b>	Restoration work - pruning, grafting etc									
	Culvert and access western boundary									
	Order and plant trees									
	Hedge laying and gapping up eastern boundary									
	Baseline Surveys									
	Orchard signs and interpretation									
	Continued orchard training - PN06									
	Bench									
	Install field shelter									
	Finalise Orchard Management Plan									
<b>Scrapes and pools (site 7)</b>	FR modelling									
	Planning application									

	EA and IDB consents																			
	Ditch over oil pipeline																			
	Lower flood embankment																			
	Water troughs																			
	Bird hide																			
	Fencing and gates																			
	standard tree planting																			
	Finalise Management Plan																			
<b>Water vole receptor ponds (site 7)</b>	Finalise Design																			
	FR modelling																			
	Planning permission																			
	EA, IDB and NE consents																			
	Excavation of ponds																			
	Translocation of remaining vegetation																			
	Water vole fencing																			
	Arrange release pens, traps etc.																			
	Volunteer training translocation and release																			
	Water vole translocation																			
	Finalise Management Plan																			
	<b>Wider Landscape Projects</b>																			
<b>Biodiversity Net Gain</b>	Defra metric calculation																			
	Environment Bank accreditation																			
<b>Long-term site management</b>	CSS agreement- sites 6 and 7																			
	SVCC management costs agreement																			
	Land acquisition agreement - GWT/SDC/SVCC																			
<b>Wildflower rich towpath verges or meadows</b>	Delivery plan																			
	Landowner's agreements																			
	Order seeds																			
	Sow seeds																			
<b>4km Hedgerow Planting</b>	Hedgerow location agreement																			
	Order trees, guards etc																			

	Hedge planting	■	■	■															■	■	■
	Hedge maintenance					■	■	■	■	■											
	Management plan incl laying																		■	■	■
<b>Standard Trees</b>	Ocean Bridge re-planting			■	■																
	Black Poplars																			■	■
	Standard tree planting			■	■	■														■	■
<b>Vegetation Management</b>	Invasive Non-Native species control - HB					■	■	■	■	■	■										
	Mink control			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	Hazardous tree work			■	■															■	■
<b>Built Habitat</b>	Installing bat boxes			■	■																
	Installing bird boxes (various)			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	Adapting pillboxes																			■	■
	Insect houses					■	■														
	Reptile/amphibian hibernacula							■	■	■	■										
<b>Environmental training for volunteers - PN01</b>	Environmental awareness training			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	Toolbox talks			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	Basic Tree Inspection course 2					■															
	Expert talks and ID various			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
<b>Wildlife monitoring and surveys - PN03</b>	Expert talks and ID various							■	■	■	■										
	Basic Tree Inspection of Phase 1					■	■	■	■												
	SWSG baseline surveys					■	■	■	■												
<b>Citizen Science Projects - PN04</b>	SWSG baseline surveys					■	■	■	■												
	Riverfly monitoring			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	Eels in the classroom					■	■	■	■												
	Mammal web			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
<b>Health and Wellbeing</b>	Building with Nature Accreditation																		■	■	■
	Benches																			■	■

## Risks and Issues

Risk / Issue	Likelihood	Impact	Mitigation	Priority
<p><b>1. Water Voles</b></p> <p>Water voles are present at R. Frome around the M5 and in the canal at Whitminster and Dock Lock. Otters and badgers present in all sections.</p> <p>WV displacements required at multiple locations with 3 translocations required at Wharf House, Bonds Mill Embankment and Dock Lock.</p> <p>Delays to project likely to result in even wider distribution of water voles across project area.</p> <p>Previous work undertaken by SDC and CCT volunteers is likely to have come close to breaching legislation causing huge risk to project.</p> <p>Need to consider impact both during restoration and once operational. Standard management of canal will not be possible.</p>			<ul style="list-style-type: none"> <li>Protected species surveys completed, and ecological consultants appointed for delivery phase - includes Mike Dean to oversee wv work.</li> <li>Mitigation strategy for water voles written and has been submitted for consideration by Natural England as part of the DAS, no major amendments requested at this stage. This will allow a site wide licence to be approved, increasing seasons when work can be carried out and meaning all works can be consented in one go rather than requiring individual licences.</li> <li>Programme and budget includes habitat creation/restoration for wv on both canal and river which should result in a clear conservation gain for the species overall</li> <li>Update to above - project delays have required separate licence applications for different sections of canal - Section 3 licence application submitted Dec 23.</li> <li>Water Vole action plan written and signed off by SVCC, CCT and CCC Boards. Cascade training outlining responsibilities and consequences to be rolled out.</li> </ul>	
<p><b>2. Flood Risk</b></p> <p>Increased flood risk to people or property from biodiversity creation projects.</p>			<ul style="list-style-type: none"> <li>Flood risk modelling has been completed by Katherine Teakle Associates as part of MM planning application - this includes canal, river and biodiversity creation areas (sites 3 and 7).</li> <li>Further modelling planned for water vole receptor ponds, lowering flood embankments. This is being carried out by Linda Hemsley.</li> </ul>	
<p><b>3. Biodiversity Net Gain</b></p> <p>Failure to meet restoration targets e.g. areas created, time for habitat to reach condition.</p> <p>Lack of design freeze (eg location and duration of compounds, access etc) mean BNG metrics cannot be assessed</p>			<ul style="list-style-type: none"> <li>Habitat Condition Assessment has been carried out (to meet requirements of current metric)</li> <li>Habitats identified for creation are priority habitats which score highly on metrics</li> </ul>	

<p><b>4. Long-term management of biodiversity creation areas</b> Failure to meet restoration targets e.g. areas created, time for habitat to reach condition.</p>			<ul style="list-style-type: none"> <li>▪ GWT Board have agreed to acquire and manage land in principle.</li> <li>▪ On-going management sustainable by project volunteers led by GWT.</li> <li>▪ SVCC have agreed to cover the costs of this for 15 years, which will allow time for habitats to establish and reach appropriate conditions to meet net gain targets.</li> <li>▪ Agreement in principle to be drawn up by parties in summer 2024</li> </ul>	
<p><b>5. Budget</b> Changes from budgeted figures - large increases in water vole population and delays in delivery have increased Env budget considerably. In addition, budget submitted to NHLF was as at 2017 rather than updated version so not correct</p>			<ul style="list-style-type: none"> <li>▪ Have carried out budget reforecast to take into account additional work required (e.g. receptor ponds) and increased costs due to covid and inflation. This has been submitted to exec board</li> <li>▪ Additional funding streams such as Countryside stewardship (which will pay for a lot of the capital items on site) and updated bid to National Highways</li> </ul>	
<p><b>6. Health &amp; Safety</b> Health and safety of volunteers working on habitat creation projects and vegetation management. Working near water. Handling mechanical equipment.</p>			<ul style="list-style-type: none"> <li>▪ Training to be provided to volunteers and project staff. Assessed for competence in task and use of equipment.</li> <li>▪ Risk assessments, personal protection equipment, and on-site briefings. Insurance cover.</li> <li>▪ and made available when anyone working on site.</li> </ul>	
<p><b>7. Biodiversity site 3</b> Washland design needs to be re-designed and approved by utilities companies and EA. Site 3 will not be delivered during time project team are in contract. Project Director might choose to cut this from programme to decrease budget resulting in project not achieving BNG. This could also impact ability to secure additional funding from National Highways</p>			<ul style="list-style-type: none"> <li>▪ Utilities companies to be re-engaged with re requirements.</li> <li>▪ Further design work to be commissioned once FRM completed and agreed for Missing Mile</li> <li>▪ Environment agency engaged with re design</li> <li>▪ Site 3 with be progressed to detailed design, with planning and consents in place by end of 3024. Full budget handed across to Project Director</li> <li>▪ Transition plan in place setting out when and how this work will take place with clear commitments to deliver</li> </ul>	
<p><b>8. Planning permission (habitat creation)</b> Wetland areas require planning permission under TCPA.</p>			<ul style="list-style-type: none"> <li>▪ Early engagement with planning team at SDC and working with EA and local community to ensure design is suitable for planning permission.</li> <li>▪ Programming gives time for TCPA application and consultation.</li> <li>▪ Once detailed design work completed meetings to be held with SDC planning team to get early advice.</li> </ul>	

<p><b>9. Invasive Non-Native Species</b></p> <p>The spread of INNS as a result of restoration work opening up canal and G&amp;S</p>			<ul style="list-style-type: none"> <li>▪ INNS management plan, engagement and education.</li> <li>▪ Mink and plant control underway since the development stage to minimise spread.</li> <li>▪ Train people in identification.</li> <li>▪ Biosecurity measures such as Virkon to be put in place for contractors</li> </ul>	
<p><b>10. Fish migration and biodiversity</b></p> <p>Project is deemed to impact on River Frome and potential fish populations. Additional compensation required that cannot be delivered by costed habitat creation works</p>			<ul style="list-style-type: none"> <li>▪ Engagement with EA and partners to ensure robust mitigation strategy in place and areas for improvement identified.</li> <li>▪ Eel strategy completed and sent to EA. Eel passes included as standard within new lock design</li> <li>▪ APEM have been appointed to oversee migratory fish sections of MM planning application</li> <li>▪ Fish survey undertaken for Oldbury Brook in advance of planning conditions</li> </ul>	
<p><b>11. Lack of coordination between project themes, particularly where early works can be undertaken</b></p> <p>Programmes not properly aligned causing delays to engineering or environmental works or requiring additional work to put right afterwards.</p>			<ul style="list-style-type: none"> <li>▪ Regular meetings between environment, engagement and engineering teams.</li> <li>▪ Programme revision underway to align and complement engineering programme</li> </ul>	
<p><b>12. Consenting</b></p> <p>Various works will require consents from IDB, EA etc. This could cause programme issues if delayed and/or impact overall project outcomes if aspects cannot go ahead at all.</p>			<ul style="list-style-type: none"> <li>▪ Consenting matrix written for NHLF bid setting out requirements for consents at each stage.</li> <li>▪ Timelines for each consent included within the project programme.</li> <li>▪ Good working relationships established within the project team and with statutory authorities.</li> <li>▪ IDB and EA engaged with during design stages of w</li> </ul>	
<p><b>13. Regulatory infringement during project delivery</b></p> <p>Works undertaken without correct training or not to agreed working methods breaches licence conditions and/or results in impacts to protected species</p>			<ul style="list-style-type: none"> <li>▪ Environmental training to be provided to volunteers</li> <li>▪ Matrix written showing ecological enabling works required before, during and after every engineering project</li> <li>▪ Engagement with engineering PM team</li> <li>▪ Incident reporting to Exec team with escalation to PB as required</li> <li>▪ Escalation and engagement plan included in training for all contractors.</li> <li>▪ Ecological consultants to produce PWMS and provide ECoW to mitigate risks and meet licence conditions</li> </ul>	

<p><b>14. Protected species (other)</b>  Volunteer groups not planning works to avoid bird nesting season.  Necessary checks not being carried out and documented ahead of works.  Members of the public making complaint to police and/or on social suggesting project is breaking the law or not taking wildlife into consideration</p>			<ul style="list-style-type: none"> <li>▪ Further bat surveys required for MM and Walk Bridge</li> <li>▪ Badger setts known and mitigation has been undertaken where appropriate (sett closed in MM)</li> <li>▪ Mapping created for use by engineering team and volunteers highlighting areas where protected species are present</li> <li>▪ Regular meetings with engineering team to schedule works in advance</li> </ul>	
<p><b>15. Vegetation Clearance</b>  Volunteer groups not planning works to avoid bird nesting season.  Necessary checks not being carried out and documented ahead of works.  Members of the public making complaint to police and/or on social suggesting project is breaking the law or not taking wildlife into consideration</p>			<ul style="list-style-type: none"> <li>▪ Vegetation management plan written by CCT, currently undergoing update</li> <li>▪ Advice sought with C&amp;RT and alignment of policies</li> <li>▪ Incident reporting to form part of monthly feedback to Exec team with clear actions to avoid impacts</li> <li>▪ Bird nesting check form created and circulated amongst organisations</li> </ul>	
<p><b>16. Reduced capacity</b>  In the last few months of the project due to staff leaving fixed-term posts early to secure future employment.</p>			<ul style="list-style-type: none"> <li>▪ Ongoing conversations with project staff to ensure early notice of intentions / plans to leave their posts.</li> <li>▪ Existing ways of working lend</li> </ul>	

**Budget - breakdown of expenditure (spent and committed)**

<b>Project</b>	<b>Description</b>	<b>Cost</b>
<b>Frome Washland (site 3)</b>	Spend to date £0	
	Detailed design (incl FRM), planning application and consents	£22,700
	Site infrastructure – gates, fences etc.	£3,300
<b>Pockett's Orchard (site 6a)</b>	Spend to date £4,692	
	Planting and tree guards	£1,100
	Bench and wooden field shelter	£1,000
	Volunteer training (PN06)	£1,180
<b>Species-rich grassland (site 6b)</b>	Spend to date £1137	
	Planting	£1,000
	Site infrastructure – fences, gates, water troughs	£2,500
<b>Scrapes and pools (site 7)</b>	Spend to date £24,077	
	FRM, planning application and consents	£5,200
	Water facilities for cattle	£3,920
	Lowering of flood embankments	£9,000
<b>Water vole receptor ponds</b>	Spend to date £12,400	
	Design (including FRM), planning application and consents	£9,700
	Excavation/spoil removal (incl. archaeological watching brief)	£76,000
	Planting and vegetation work	£13,500
	Water vole fencing and sundries	£75,000
<b>Wildflower meadows and grassland</b>	Habitat creation (including restoration of compounds)	£16,500
<b>Hedgerows and Trees</b>	Spend to date £5,339	
	Hedgerow plants, guards, bark mulch and fencing	£15,250
	Standard tree planting (incl black poplar)	£3,500
<b>Built Habitat</b>	Spend to date £101	
	Bat and bird boxes incl kingfisher tunnel	£3,900
	Insect houses, amphibian and reptile hibernacula	£150
	Pillbox conversion	£5,000
<b>Citizen Science</b>	Spend to date £540	
	Various projects	£1,960
<b>Health &amp; Wellbeing</b>	Main bird Hide	£13,000
	Benches	£1,000
<b>Vegetation Management</b>	Spend to date £31	
	Invasive Species control	£719
	Hazardous tree work	£15,000
<b>General</b>	Spend to date £21,127	
	Tools and materials (incl PPE/HSE)	£8,673
	Vehicle	£3,400
	Events and expenses	£2,071
<b>Training (PN01 and PN03)</b>	Spend to date £3,170	
	Environment and wildlife training volunteers	£1,830
<b>Ecological work</b>	Spend to date £104,727	
	Ecological surveys including Ecological Clerk of works	£82,757
	Natural England licensing	£4,100
	Accreditation	£3,380
<b>TOTAL BUDGET 2024</b>		<b>£350,312</b>