Water Environment Improvements
Project Evidence Form

Scope & Purpose

This form is to be used by the external Water Environment Governance Group (WEGG), to review, validate and formally approve the length of bluespaces improved for the Water Environment Improvements ODI. The form will be completed by the Water Environment Team with support from project partners and presented to the WEGG. After formal approval, the km of water environment improved will be recorded against the ODI and projects will be marked as completed on the Water Environment Scorecard and illustrated as delivered in the Bluespaces Mapping Portals.

Project Name

Howgill Beck Naturalisation

Project Lead

Company/ Organisation	Named Lead	Position
RSPB	Jen Selvidge	Monitoring Warden

Bluespaces Improved

Year	Claimed	Proposed	Reason For Any Change
Year 3/4	2 km	2 km	NA

Water Environment Assurance

This project has been reviewed internally to ensure it has delivered benefits above and beyond our baseline and regulatory obligations to improve the water environment accessible to customers across at least two out of three aspects. Following our assurance process, the project was approved by both our internal and external groups for review before delivery. This form presents evidence of project completion and the outputs achieved, to request project sign off.

Level	Project Acceptance Date	Project Approval Date	Completed Project Sign Off Date
Project Team	November 2020 October 2021	N/A	N/A
Water Environment Steering Group (Internal)	November 2021	December 2021	N/A
Water Environment Governance Group (External)	December 2021	December 2021	May 2024

Project Timescales

Candidate Project Approved	Project Initiated	Project Completed
December 2021	June 2022	May 2024

Project Summary and Highlights

Summary

The RSPB, with Northumbrian Water and other partners, has delivered 2 km of water environment improvements through this large-scale wetland restoration project at RSPB Geltsdale in the upper Tyne catchment. Howgill Beck is situated on RSPB Geltsdale and is within the Geltsdale & Glendue Fells SSSI, the North Pennine Moors SAC & SPA and is part of the North Pennines AONB.

Howgill Beck has been re-meandered to provide a flood meadow, allowing the beck to form its own natural course and create a delta into the Tindale Tarn downstream. This has restored wetland habitats that have been lost after historical watercourse modification to drain the surrounding meadow to aid livestock grazing. The more sinuous route results in a river with a greater diversity of width, depth, and flow rate, which will create a greater range of conditions within the river, delivering benefits for biodiversity, raw water quality, flood alleviation and public enjoyment by reinstating natural processes.

The restoration work has taken place adjacent to the RSBP's Stagsike Cottage visitor centre and is in the vicinity of multiple promoted visitor trails in one of the most accessible areas of this upland reserve, so it is clearly visible from different vantage points and paths on site.

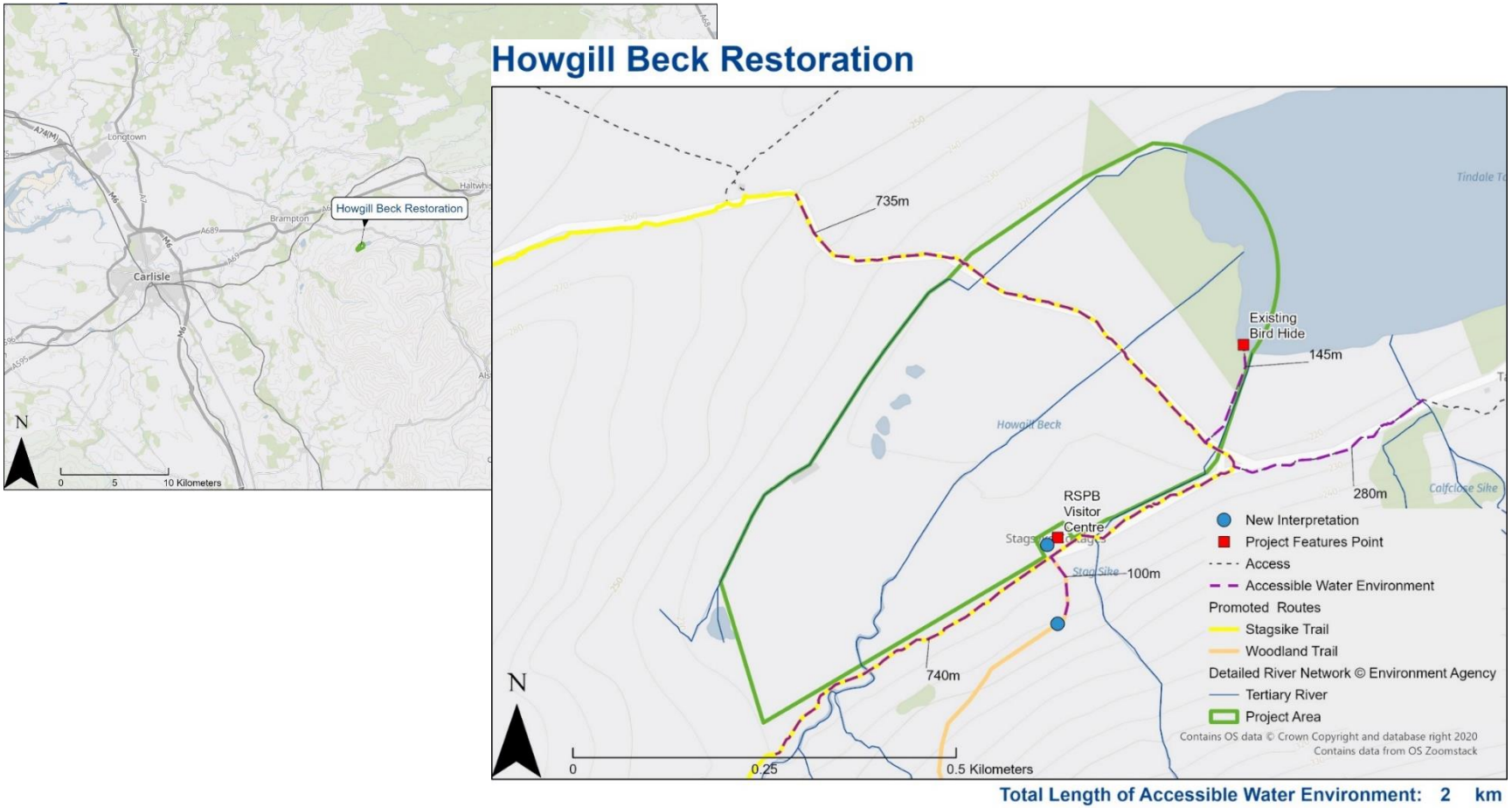
The area has been transformed from dry species-poor grassland into a bustling wetland habitat. The wildlife spectacle has been enhanced as a result, and the education and demonstration of the site improvements and its benefits to visitors and other land managers and decision makers has been an important aspect of the project.

This site was visited by the Bluespaces Delivery Manager on 27/11/23 to view the improvements made in this project.

Highlights

- Restoration of 20ha of wetland habitat, providing huge benefits for the local wildlife and visitor experience
- Improvements to accessibility on site
- Involvement of local volunteers on a large-scale habitat restoration project
- Site visits used as demonstration events to share best practice and raise awareness
- Production of an educational film about the restoration of Howgill Beck for the general public

Maps



Bluespaces improved around Howgill Beck at RSPB Geltsdale

Project Outputs, Benefits & Evidence Against Criteria

Access, Facilities & Recreation

Expected Project Outcomes	Benefits
1. Existing access track crosses the project area to Stagsike Cottages, this track will be raised, and the surface improved to protect it from flooding which may result from the rewetting of the area, which will also provide an improved view over the new habitat for residents and visitors 2. Involvement of local volunteers in habitat works and monitoring and surveying throughout the project will support improved health and wellbeing 3. New interpretation will be installed promoting the project and its impacts 4. The RSPB will welcome landowner visits to showcase the project demonstrating the benefits of restoring a natural watercourse, managing land for increased biodiversity and sustainable working farm practices, encouraging positive environmental behaviours 5. Educational films created using a drone will be made available to visitors and stakeholders and to local schools as learning aid, telling the story of the catchment, and explaining the project. This film will be used to demonstrate the project with partners and be offered as learning aid and educational resource to local schools	➢ A1: Increases access to, engagement with and enjoyment of the water environment ➢ A2: Benefits health and wellbeing through: ➢ A3: Influences positive environmental behaviors

Outputs

1. With current funding, raising the full access track was not possible, but this is still included in the long-term plans for the site. Access improvements have instead been achieved on one of the main footpaths from the visitor centre, with views over the restored wetland area. The trail has transformed from a challenging, muddy path to a surfaced footpath that is accessible to a much wider range of people.
2. Volunteer tree planting sessions have taken place along the beck, as well as ongoing opportunities provided to volunteers to help monitor the progress of the restoration e.g. bird surveys.
3. Due to an RSPB re-brand, interpretation signage was put on hold early in the project. The costs of the educational video were also higher than expected, therefore it was decided the video should take priority. Interpretation signage is still planned for the future of the site.
4. The project has attracted a lot of attention from other landowners nationally and has been a catalyst for information sharing. RSPB has hosted 11 site visits with more planned in 2024.
5. An educational video, a key output of the project, is in the final editing stage and due to be released in June 2024. All footage has been filmed. Delays have been a result of staff sickness, redundancies within the RSPB, and the film changing producer mid-way through.

Evidence

Footpath improvements

Tree planting by volunteers

List of site visits

Date	Visitor Organisations
17/10/22	United Utilities & RSPB
06/10/22	AONB
21/07/23	NE, EA, Tyne Rivers Trust & Coal Authority
27/06/23	Ecology workshop
06/10/23	Dumfries & Galloway Raptor Group
	Life Wader (NE Lindesfarne NNR)
20/03/23	NE training event
	Wild Kielder (Forestry Commission)
14/04/24	Conservation Science (RSPB)
25/04/24	Curlew Life Steering Group
02/05/24	Forestry England (CEO & Head of Operations) & RSPB (England Director)

A draft storyboard for the video is available in the supporting evidence section.

Footage of an interview with principal project designer, some of which will be included in the final video is available here: **https://shared-assets.adobe.com/link/68b77d5f-bf80-4752-5fce-edf6794b2cf0.**

Footage taken for the video of a nesting curlew was also featured on BBC Wild Isles, Episode 6

Wildlife & Biodiversity

Expected Project Outcomes	Benefits
1. Creation and enhancement of over 20 ha of water environment and new wetland habitat, through de-canalising and re-meandering the beck, creating new scrapes and a 'slack water ditch' and diverting the stream into the meadow 2. Red and amber listed bird species using the site will benefit from the improvement of this area, including Lapwing, Curlew, Dipper, Redshank and Snipe 3. Greater invertebrate and fish species diversity supported within the beck through a variety of conditions, which should also support greater foraging opportunities for birds and small mammals 4. A range of plant life will also benefit from more diverse habitats resulting from the improvements	➢ B1: Improves the quantity, quality and connectivity of habitats ➢ B2: Improves the conservation status and or abundance or distribution of species

Outputs

1. Capital works have been completed on Howgill Beck to restore the river and wetland habitat, including de-canalising, re-meandering, scrape creation, and allowing the river more freedom to revert back to a natural system.
2. The meadow has been completely transformed into an extensive wetland area, which has increased key bird species populations. In June 2023, 40 snipe were observed, a number that had never previously been seen, and common sandpiper are breeding on site for the first time.
3. The wetland restoration has increased and enhanced habitat for invertebrates and fish. Kingfishers are being seen more along the beck indicating a good fish population, a brook lamprey has been seen for the first time in 2024 in the new channel, four-spotted chasers were spotted in one of the pools in 2023, otter spraint is present in the new wetland, and areas of trees that are now flooded provide refuges and nurseries for fish, invertebrates and others.
4. Aquatic vegetation such as starwort has started to colonise the wetland area.

Evidence

Images captured by drone, before (2022) and after (2023) the improvement works

Image captured by drone of new wetland areas

Breeding curlew at the site post improvements

2023 Howgill Beck Bird Summary

Curlews regularly use the newly formed shallows of Howgill Beck, a breeding pair in Stagsike Meadow were frequently seen bathing. It has been great to witness transformation of this water course which has now seen its first 'breeding year'.

Flood events over winter helped deposit finer gravels in the channels, developed the flowing wetland, and shaped shallow, silty edge habitat, which is great bathing and foraging areas, especially for wader chicks. The water continued to flow through the dry weather in June and the flowing wetland attracted non-breeding Snipe as well providing great habitat for breeding pairs and broods.

31 Snipe were recorded in a single walked line through the project area, along with 3 pairs of alarming Redshank, 2 pairs of Oystercatchers, 2 pairs of Common Sandpiper (first time this species has been recorded along Howgill Beck), 1 alarming Curlew, multiple Lapwing, 2 Four-Spotted Chasers (on one of the newly created pools), feeding Sand Martin and also Otter spraint were seen along the new main channel. A Great Egret was also attracted into the new wetland in November.

Water Quality

Expected Project Outcomes	Benefits
1. Improvements to the Howgill Beck hydrology and morphology, state and function of the water and improved visual appearance through renaturalisation	➢ C3: Improves state and function of water, including naturalisation, visual appearance, litter and odour

Outputs

1. The Howgill Beck has transformed from an artificially canalised channel into a more natural functioning river system. Natural gravel beds are already building up, and sediments are being deposited into the new wet meadow habitat, and the visual appearance of the river is greatly improved for visitors of the site.

Evidence


Gravel build up and natural meanders following restoration


New wetland areas with sediment being naturally deposited

Footage of an interview with the principal project designer discusses the hydrology and morphology changes. Some of this footage will be included in the final video:
https://shared-assets.adobe.com/link/68b77d5f-bf80-4752-5fce-edf6794b2cf0

This project was also funded through the NW South Tyne Holistic Catchments project, which aims to fund catchment improvements to reduce sediment transfer and improve raw water quality in the River Tyne.

Additional & Secondary Benefits

Expected Project Outcomes	Benefits
1. Increased capacity of the system to hold water during drought and flood through creation of wetlands and slow the flow interventions to capture flood water and keep more water onsite. 2. Engagement of local children at Hallbankgate primary school through a series of stream dipping events, allowing them informed access to natural resource on their doorstep. 3. Project builds on long term conservation strategy and historic capital works at RSPB Geltsdale and unlocks other adjacent and downstream water environment improvement projects	➢ D1: Provides resilience and adaptation to climate change and/or reduces the risk of flooding ➢ D2: Provides benefits to local communities, the local economy or NWG ➢ D3: Supports strategic project or investment into strategic partnership or landscape/regional activity

Outputs

1. Breaching the steep artificial banks of the river has allowed reconnection with the natural flood plain, enabling increased water storage in both flood (image below) and drought (image on page 9) conditions. In June 2023 when there had been a particularly dry period, water was still present in the wetland.
2. Due to staff sickness, school activities have been delayed but are booked in for May 2024. Stream dipping has been undertaken with a group of local children.
3. The project has complemented the aims of RSPB – providing high quality habitats for wildlife and people to enjoy. The project has also been a catalyst for more future improvements, for example accessibility improvements to the bird hide is currently in progress, and plans to extend the wetland downstream at the reservoir edge. It has put wetland restoration higher on the agenda, the team are now looking at more peatland restoration work, and sharing knowledge and experience with different landowners through site visits has been invaluable.

Evidence

Water storage across the site post improvements

Customer Testimonies & Media

BBC article: [Howgill Beck: Straightened stream 're-wiggled' to attract wildlife - BBC News]

BBC Radio Cumbria interviews available on request (November 2023)

I'm very lucky to live close to RSPB Geltsdale and so I often walk various routes that take me past Stagsike Meadow where the beck restoration took place. We often take visiting friends and family on these walks too.

The Restoration Project has hugely enhanced both the visual and birding appeal of the meadow. It now looks interesting and attractive compared with the straight canalised channel that was there before. The value to the birds and the value to anyone watching those birds are also greatly improved in equal measure. Common Sandpipers took immediate advantage of the shingle beds for breeding with lots of wet grassland close on hand. The other breeding waders there have seen their habitat improve similarly. In winter both Snipe and Jack Snipe have much better habitat. There's always the promise of something interesting to see.

As I walk past the beck I often see Dippers and other species making use of the multiple channels that were created. It not only looks good for anyone walking right by but hill walkers coming down from the fell now see a lovely mosaic of pools and meanders and so its visual appeal is extremely wide ranging.

Feedback from Local Resident

> I regularly (about weekly) walk around the Stagsike area of the Gelsdale RSPB reserve. I have done so for nearly 10 years. For centuries the Howgill Beck (north of Stagsike) was canalised as part of the industrial infrastructure of the site. I have watched with great pleasure how the canalisation has been removed and the water flow has returned to a natural course. This has had great benefit for the local fauna and humans alike. Visually the area around this part of the beck has been improved hugely, whether viewed from ground level or above on the fells. It has been a wonderful extension of the work the RSPB had already done in reclaiming this part of the reserve from its history of major extractive and smelting industries.

Email feedback from local resident

Lead Partner Quotes & Testimonials

The project has brought more resilience to the land, both in winter and summer. It has created some fantastic habitat for wildlife, a highlight being 40 snipe flushed up in June 2023 when elsewhere, fields had completely dried up. The great thing about this project is the diversity that has been created in such a small area, going from a simple canalised channel where the water moved through so quickly, to making it a much more interesting water system. Nature has well and truly moved back in!

Jen Selvidge, Monitoring Warden, RSPB

RSPB has allowed us to be innovative, and push some boundaries with this project. What we're hoping is that we will see many people coming and seeing the benefits, not just for the climate, but for the environment. Nobody can say this hasn't been worthwhile for the very small amount of money spent against the benefits. It's amazing how quickly this system recovers.

George Heritage, Fluvial Geomorphologist, Project Designer

Other Supporting Evidence

RSPB Geltsdale Reserve Management Plan:
https://www.rspb.org.uk/reserves-and-events/reserves-a-z/geltsdale/

Additional reports, design work, radio interviews and photos are available on request

Howgill Beck Video Storyboard

What's it all about?

This project will see the creation of a series of videos to provide a narrative for habitat restoration projects carried out at Geltsdale within a high nature value farming system. Works carried out at the reserve to be used as a case study are as follows: blanket bog restoration (to include heather cutting as a management tool as opposed to burning); tree planting and wood pasture (use of no-fence cattle collars; management for breeding waders and the restoration of Howgill Beck.

Habitat restoration at RSPB Geltsdale

The film will introduce and demonstrate to key groups how nature value farming can benefit the land and support more biodiversity. The longer film will introduce /demonstrate to policymakers and key groups, the benefits a high nature value farming system can bring, and the importance of making space for nature in the farmed landscape.

A long film (7 mins?) will be used to support upland policy staff and the conservation team, to share with partners, policy makers and landowners. It will be shown during RSPB talks with already engaged members of the general public. It will be on the Geltsdale webpage and on YouTube for access to all.

The shorter 60/90 second films (using footage from the longer film) will use less technical language and will be designed to connect with the general public on social media platforms. These could also be used at RSPB talks/school visits.

Audience:

- Partners, policy makers, land-owners, already engaged general public (longer film)
- General public (shorter films)

Theme:
This will be a positive film; it will demonstrate and celebrate the success of habitat restoration works already carried out at Geltsdale and works on progress (Howgill Beck). The film will be optimistic in tone.

Outline

Voice Over/interviews
The (longer) film will introduce technical terms and expand, explain and educate. It will seek to widen the knowledge base of engaged groups invested in the countryside, providing a case study to use as a demonstration site. It will introduce practices such as: blanket bog restoration and grip blocking; heather cutting (as opposed to burning); the importance of grazing as a management tool and restoring watercourses.

Visuals
The film will take the viewer on a journey, linking all of the above habitat restoration practices via the water flowing down Howgill beck – an illustrated story of part of the water cycle from the moorland tops to Tindale Tarn.

- Intro to the reserve. Soundbites from Steve W, Ian & Jen interviews.
- Footage will start at the top of the watershed and the blanket bog. Close up shots of sphagnum/restored bog etc. In Nick's garage? Did you get footage of the sphagnum you got from Dovestones in your garage set up?
- Drone footage of wider area picking up member of staff carrying out surveys/argocat (?)
- Drone footage of heather cuts
- Interview with Moorland warden: importance of restorage blanket bog/carbon and water storage)
- Footage of a Golden Plover/ Curlew nest in heather cut.
- The film will travel down the beck (footage of Dipper/Grey Wagtail?) through the Bruithwaite Forest… footage of tree planting, cattle (with collars) (more soundbites from Ian's interview).
- Drone footage of children stream dipping/people walking
- The film then enters the meadow: footage of the straightened beck (a before drone footage)
- Drone footage of diggers on site. Interview with George Heritage
- Footage of the project area restoration project after completion. Repeat drone footage.
- Stagsike Meadow: shots of breeding waders (Spring – existing footage); the hay meadow bird song (Spring – existing footage?); the hay meadow flowing (Summer – existing footage?)
- Footage of the beck after heavy rain and the channels have joined to create a much larger watercourse.
- Interview – Jen & Ian Bell. Success of project and positive response to birds etc. Stress that Ian Bell very to happy with the project.

Style: TBC. Voice over and background music or use interviews.

Background – Howgill Beck restoration Project

This project will demonstrate the resilience of a nature friendly farm business. The Howgill Beck re-meandering project, is ideally placed to deliver and demonstrate the benefits of restoring a natural watercourse and managing land for increased biodiversity on a sustainable working farm. The beck flows through RSPB Geltsdale, and is within the Geltsdale & Glendue Fells SSSI, the North Pennine Moors SAC & SPA and is part of the North Pennines AONB. The beck was canalised pre 1791 and lacks many of the natural features associated with this watercourse type and is steep sided.

Howgill Beck originates 3km upstream of Stagsike, on Cold Fell. The stream runs through the Bruithwaite Forest and Stagsike Meadow, with a fall of 5m across the field as it flows East towards Tindale Tarn and is canalised for 430m.

The project will create a flowing wetland system and re-meander the stream in Stagsike Meadow, by splitting the watercourse, allowing some of the water to flow down the existing (modified) channel acting as a fish passage, and diverting a portion (c60%) of the water and then blocking the channel, allowing an exciting and dynamic flowing water system to develop. The water from the wetland will then join up with the flow form the modified existing channel in a newly dug sinuous channel, creating a longer stream bed with more varied depth and bankside features, slowing the flow and create more beneficial habitat for wildlife.

In addition to the work on the watercourse, numerous new scrapes will be created. These will be offline features that will be connected to the watercourse by high flow channels creating sustainable still water habitat, maximising the potential for habitat improvements at the site.

The existing channel will be modified in parts (where not filled in) and act as a fish passage adjacent to the flowing wetland.

By de-canalising Howgill beck and restoring a more natural flowing water course, the capacity of the system to hold water both in drought and in flood will be increased.

As climate change related weather patterns become more erratic throughout the seasons, being able to store more water on site will make the habitat and species reliant on them more resilient to the effects of climate change by creating more areas for foraging waders during the breeding season as well as the wintering population. Priority wetland habitats are extremely sensitive to changes to climate but the most adversely impacted; this scheme will demonstrate the importance of restoring natural processes and safeguarding important areas for wildlife.

The naturalisation of Howgill Beck, releasing it from its artificial canalised route, will re-instate the natural processes of the watercourse before reaching Tindale Tarn.

Dipper feed along the stream, but there are no suitable banks for nesting along the straight canalised watercourse. Common Sandpiper are not recorded along the stream, presumably due to the lack of gravel beds for nesting. This work will result in a beck with greater diversity, depth and flow rate, which will help to create a greater range of conditions within the river, create gravel beds and support a greater diversity of species including invertebrates and fish which in turn would support greater foraging opportunities for birds, bats and otters etc. The beck, connected to its floodplain will keep water on site for longer during flood events and the edges and scrapes will be accessible to wader chicks allowing access to muddy edges for feeding.

A water vole survey has been carried out - no positive signs were found. Re-meandering the beck will make this watercourse more appealing for this species and it is hoped they will colonise the area. Habitat will be created for suitable nesting habitat for Oystercatcher and Common Sandpiper.

The naturalisation of Howgill Beck will be an important part of the wider conservation goals of RSPB Geltsdale, continuing a valuable partnership with the North Pennies AONB. The grips have been blocked at the top of the water catchment before the beck flows down fell, running through the restored Bruithwaite Forest which is now grazed by cattle wearing the No Fence collars to benefit species such as Black Grouse, connecting these restored areas of the reserve.

The restoration work will occur adjacent to the RSPB's Stagsike Cottage visitor centre and is in the vicinity of multiple promoted visitor trails in one of the most accessible areas of this upland reserve. The project will provide health and wellbeing benefits and engagement opportunities with the local community, tourists and visiting school groups. The new route of the watercourse will bring people close to the beck, offering more opportunities to enjoy the landscape and increased wildlife watching possibilities.

As a result of the water course route changing, the footbridge will have to be moved. We will be taking this opportunity to upgrade the bridge to be compatible with all terrain wheelchairs/pushchairs, allowing the site to be accessible to more visitors.