

Upper Derwent Catchment Action Plan

Action Required	Issues being addressed	Project Name	Project description	Status						
				Proposed idea	Developed idea	Appraisal/ Scoping	Agreed as feasible	Funded project	Current phase complete	Complete
Strengthening defences Engineered defences and infrastructure improvements to reduce flood risk	<ul style="list-style-type: none"> Flood risk in Keswick Flood risk in Braithwaite 	Braithwaite flood alleviation scheme	Managing flood risk from Coledale Beck and Barrow Gill to properties, businesses and the A66 via proposed measures including flood walls and embankments and improved bridge and culvert capacities. Currently in detailed design with construction to start 2019-2021				Funded by the Environment Agency			
		Thirlmere reservoir management	United Utilities have an agreement with Keswick Flood Action group to manage water levels in Thirlmere reservoir to reduce downstream flood risk.							
		Penrith Road Keswick	Water storage and pumping scheme by Environment Agency. Currently in detailed design with construction to start summer 2019							
		Keswick flood defences	Strengthening existing flood defences through Keswick. Environment Agency appraisals completed in 2018.				Not economically feasible at present			
Natural Flood Management Suite of measures to 'slow the flow' and hold water in the landscape	<ul style="list-style-type: none"> Biodiversity – Poor habitat in wider catchment Water Quality – Diffuse water pollution from agriculture Resilience to drought 	Eycott Hill slow the flow	Restoration of the upland Cumbria Wildlife Trust reserve to slow the flow and improve biodiversity.				Funded by Heritage Lottery Fund			
		Glenderamackin Natural Flood Management	Suite of natural flood management measures throughout the Glenderamackin, Troutbeck and Naddles beck catchment led by West Cumbria Rivers Trust							
River & Lake Restoration Restoring natural river courses and functioning, lakes and wetlands	<ul style="list-style-type: none"> Flood risk Resilience to drought Biodiversity – Poor in-stream habitat 	Skiddaw tributaries	Reconnect the tributaries with their floodplains, improving biodiversity and salmonid spawning habitat. Increase floodplain storage capacity.							
		Seathwaite valley restoration	Restoration of the River Derwent in the Seathwaite Valley through channel re-meandering, making space for gravel storage and wetland creation. Will include flood protection for Seathwaite Hamlet							
		St. John's beck restoration	Project to look at the feasibility of restoration options on the St John's Beck, as its geomorphology is extensively altered. Includes stakeholder engagement and Natural Capital assessments. Options include embankment removal and re-meandering, floodplain reconnection for habitat improvement, natural flood management and reduce issues with gravels downstream.							
		Lair beck restoration	This is a key nurse stream for salmon and trout but is cut off by a number of pipes in and around the Burnside holiday lodge park. Project to divert and/or daylight the stream.							
		Newlands & Pow beck restoration (linked to A66 Thornthwaite pitt scheme)	Restoration of Newlands and Pow beck to reduce flood risk, improve in-channel habitat, reduce required maintenance and gravel transport. Project led by West Cumbria Rivers Trust				Funded by Highways England			
		Chapel beck river restoration	Diversion of Chapel beck, which is a straightened and perched river, back into its natural course into Pooley beck							
		Stonethwaite beck restoration	Restoration of Stonethwaite beck through channel re-meandering, making space for gravel storage and wetland creation							
		Electro-fishing and habitat surveys	Ongoing programme of annual fish and habitat surveys to target improvement works				Funded by West Cumbria Rivers Trust and partner donations			

Action Required	Issues being addressed	Project Name	Project description	Status							
				Proposed idea	Developed idea	Appraisal/ Scoping	Agreed as feasible	Funded project	Current phase complete	Complete	
In-stream Habitat Improvements Increasing instream habitat diversity, bank stabilisation, riparian fencing	<ul style="list-style-type: none"> Biodiversity – Poor in-stream habitat 	Naddles beck restoration extension	Works to encourage natural flows to restore fish spawning gravels and 'slow the flow'. Linked to Eycott Hill slow the flow project.								
		Smolt tagging	Environment Agency project to tag salmon in St. John's beck to see how they move through the Derwent river system.								
		Dash beck Adopt-a-beck	A programme of work to improve salmonid habitat and improve access to the lake by Bassenthwaite Rotary Club working with West Cumbria Rivers Trust.					Funded by Lake District Foundation & Lake District National Park			
		River Corridors Group projects	Implementation of a programme of river bank and in-river habitat improvement works focussing on Lostrigg beck, R. Marron and Broughton beck. This is aimed at improving the condition status of the River Derwent and tributaries which is a designated SAC.					Funded by Derwent Owners Association, Natural England & Environment Agency			
Biosecurity Preventing spread of invasive non-native species	<ul style="list-style-type: none"> Biodiversity – Poor in-stream habitat Biodiversity – Poor habitat in wider catchment 	National Trust biosecurity procedures	Promotion of good biosecurity at public spaces and events, procedures for event organisers, potential for washdown stations on Derwentwater.					Funded by National Trust			
		Check, Clean, Dry campaign	Renewed partnership drive to promote good biosecurity throughout the area								
Invasive non-native species control Reducing the impact and preventing further spread of invasive non-native species	<ul style="list-style-type: none"> Biodiversity – Poor in-stream habitat 	River Derwent invasive non-native species control	Programme of eradication by West Cumbria Rivers Trust including spraying American skunk cabbage and Japanese knotweed, signal crayfish rapping, mink control and volunteer events to pull Himalayan balsam					Funded by Natural England			
		Rust fungus trials	Environment Agency project to trial biological control of Himlayan balsam using rust fungus								
		Derwentwater and Bassenthwaite Crassula control	Utilise techniques tested on Overwater to control waterweed in lakes								
		Controlling coarse fish	Investigation into controlling invasive ruffe and stopping the spread of coarse fish								
Enhancing Agri-Environments Improving farm infrastructure and land management	<ul style="list-style-type: none"> Water Quality – Diffuse water pollution from agriculture Biodiversity – Poor in-stream habitat (linked to SAC failure) 	Borrowdale landscapes facilitated farmers group	Farmer group hosted by National Trust who meet monthly with guest speakers and demonstrations to share best practice								
		Thirlmere sustainable catchment management	Changes to the land management within the land above Thirlmere reservoir, owned by United Utilities to improve the quality of drinking water whilst reducing risk of flood and drought and increasing habitat diversity.								
		Water friendly farming Bassenthwaite/ Bassenthwaite restoration programme	Advice and infrastructure improvements on farms to reduce diffuse pollution from nutrient and fine sediment. Linked to Lake District National Park Authority's Bassenthwaite Management Plan review.								
		Catchment Sensitive Farming	Natural England initiative to provide training, advice and grant support for farmers and land managers to reduce water and air pollution from agriculture					Funded by Natural England			
		Candleseaves bog peat restoration	Restoration of areas of degraded peat								
		Bassenthwaite & Skiddaw common peat restoration	Restoration of areas of degraded peat								

Action Required	Issues being addressed	Project Name	Project description	Status						
				Proposed idea	Developed idea	Appraisal/ Scoping	Agreed as feasible	Funded project	Current phase complete	Complete
Peat restoration Restoring areas of degraded and eroded peat	<ul style="list-style-type: none"> Flood risk – to properties Biodiversity – Poor habitat in wider catchment Resilience to drought 	Borrowdale and Wythburn fells peat restoration	Restoration of areas of degraded peat							
		Matterdale fenced area peat restoration	Restoration of areas of degraded peat by Cumbria Wildlife Trust					Funded by Cumbria Wildlife Trust		
		Matterdale and Mosedale common peat restoration	Restoration of areas of degraded peat by Cumbria Wildlife Trust							
		Armboth fells peat restoration	Restoration of areas of degraded peat within Armboth Fells SSSI. Project would increase the temporary water storage, block drainage grips and define a footpath to reduce erosion.		National Trust					
		Skiddaw peat restoration	Restoration of areas of degraded peat by Cumbria Wildlife Trust							
Tackling pollution from waste water Reducing impacts of sewage treatment works & minewater on river and lake water quality	<ul style="list-style-type: none"> Water Quality – Pollution from waste water Water Quality – Pollution from abandoned mines 	Gategill minewater treatment scheme	Proposed Mine Water Treatment Scheme for Gategill Beck by Coal Authority. Currently assessing feasibility and whether reduction in minewater pollution would cause invasive signal crayfish to spread.							
		Newlands beck mine spoil stabilisation	Reduce mobilisation of and runoff from contaminated mine waste in the upper Newlands valley							
		Phosphorus targets: River Derwent & Bassenthwaite Lake SAC	Work by United Utilities to reduce phosphate inputs from wastewater treatment works to the River Derwent.							
		'Call of Nature' campaign, Borrowdale valley and Derwent between Keswick & Bassenthwaite	Increase awareness of septic tank new laws, required maintenance and pollution issues to private home owners and small businesses upstream of Derwentwater, particularly focussing on unconsented discharges and tourist sites							
Woodland creation and management Increasing cover of riparian and catchment woodlands and management of existing woodlands	<ul style="list-style-type: none"> Flood risk – to properties Resilience to drought Biodiversity – Poor habitat in wider catchment Biodiversity – Poor in-stream habitat Water Quality – Diffuse water pollution from agriculture 	Lonscale tree planting	Tree planting and management over 35 ha to secure habitat improvements that will also reduce run off, improve soils and manage water					Funded by Woodlands Trust		
		Coledale commons tree planting	Tree planting in exclosures within the Coledale Valley.					Funded by Natural England		
		Woodlands for Water and Keeping Rivers Cool	Working with landowners to create more woodland cover, especially in riparian areas. Building on existing work of the Woodlands Trust, Cumbria Woodlands and the Forestry Commission.							
Education & Engagement Increasing opportunities for people to learn, enjoy and volunteer for rivers	<ul style="list-style-type: none"> Engagement – Lack of access to rivers/opportunities to enjoy and learn about rivers 	Riverlands	Programme of engagement events and volunteer opportunities					Funded by National Trust		
		Lake District National Park activities & Rights of Way	Events, guided walks and exhibits about management of the natural environment.					Funded by National Park Authority		
		Wild Rivers Education	School visits and field trips to educate primary school children about how rivers work and how to look after them.					Funded by United Utilities		