

Kendal Flood Risk Management Scheme Tree appraisal and landscape enhancements key facts

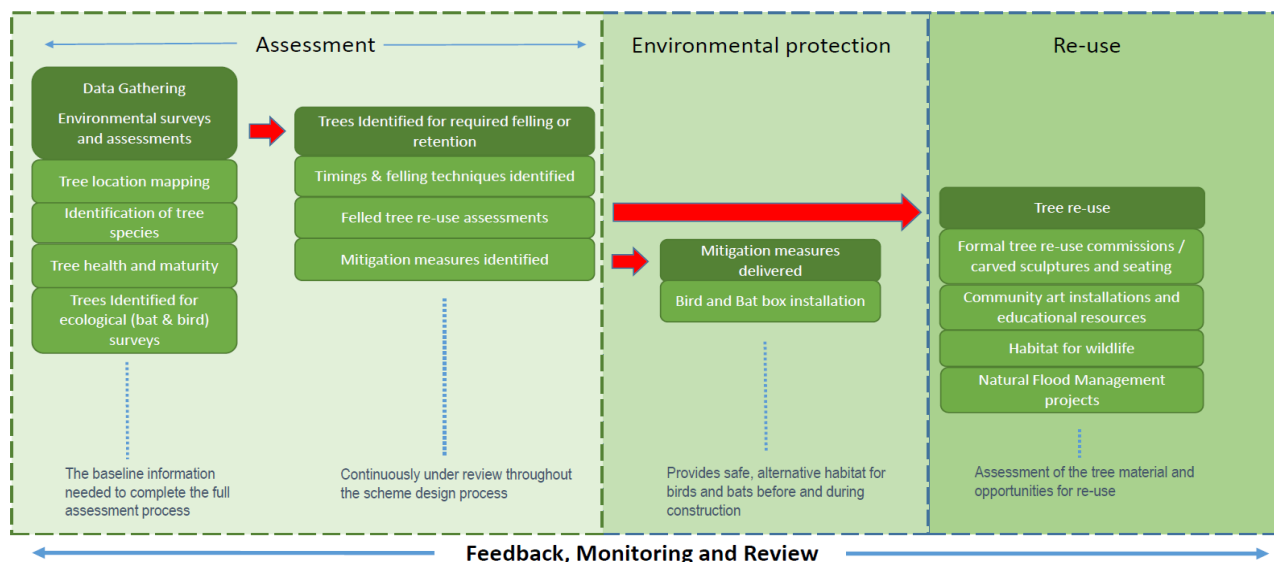
The Environment Agency is delivering a phased Flood Risk Management Scheme to better protect residential and business properties from flooding in the Kent catchment and improve the local environment and community amenities. Kendal is the first phase being delivered with further phases proposed for Burneside, Staveley, Ings and upstream storage. Complementary to this, Natural Flood Management interventions are being delivered to slow the flow. Here is a snapshot of some of those benefits being delivered as part of the scheme;



The aim of the Kendal Flood Risk Management scheme is to protect people and properties from flooding, and to create a lasting benefit for the community and the environment. We have worked hard to minimise the number of riverside trees that will be affected by our flood defence works, and we continue to undertake careful assessments of all trees to determine whether there is scope to protect and retain them. Through the assessment and refining process, we have been able to reduce the number of trees we originally identified for removal from **779 to now under 500**. We remain committed to continue our assessments and where possible, to refine our flood scheme design to reduce this number further.

Tree assessment and appraisal process explained

As part of our tree assessment process, we have identified and recorded individual trees, groups of trees and woodlands which could be affected by the construction of the scheme. Through detailed survey and assessment, we have identified trees that could be saved by adjusting locations of flood defences, trees that could be protected by keeping construction vehicles away from root areas or by coppicing, and trees that may require removal because they lie along the line of the defences or because roots would be significantly damaged.



Where we have needed to prune, coppice or remove trees, this has, and will be undertaken using a sensitive approach. We have already provided additional habitat for birds and bats in key nesting and roosting sites throughout Kendal. This additional safe habitat will mitigate against some of the loss of nesting and roosting sites during construction works.

We have, and will continue to use a range of techniques in order to manage the tree and vegetation removal on site ahead of any construction works.

Trees that will be retained - We have, and will continue to install tree protection barriers to minimise the risk of damage to tree root systems, branches and trunks from soil compaction, contamination, construction works or vehicles.

Vegetation clearance and pruning - Ground covering vegetation will be removed to ensure the working areas are clear. Some trees have, and will require pruning to ensure there is safe clearance and space to work and will be protected from further impact. If trees are pruned they will be retained in their position.

Coppicing - A process of cutting trees down to ground level and allowing the stumps to regenerate new growth over a number of years. This technique enables us to retain the tree.

Soft Felling - This felling approach has, and will be used on trees that have been identified through our assessment process to have bat roosting potential. Soft felling will be undertaken outside of the bat roosting season. This technique involves removing small sections of the tree, carefully lowering to the ground and leaving overnight to provide an opportunity for bats to vacate the tree.

Felling - For those trees other than those to be soft felled, a sensitive approach has, and will be taken to ensure we limit all impacts. We aim to fell trees outside of the bird nesting season and appropriate checks will be made on site for any active nests prior to removal works.

An Ecological Clerk of Works will be on site prior to, and during construction works, to oversee the management of construction associated with biodiversity. This is to ensure the safe working, and protection of the local environment. An Ecological Clerk of Works is an independent role to ensure that the construction works on a scheme are undertaken in accordance with legislation and best practice.

Landscape and environmental enhancements

Kendal's rich heritage is inextricably linked to the river Kent that runs through the heart of the town. This historic town, centred along the river provides a settlement for homes and businesses as well as nurturing the historic values of the town that are cherished by the local community and an attraction for visitors.

The Flood Risk Management Scheme has given us the opportunity to not only provide increased protection to homes and businesses, but improve the habitat for wildlife by investing in a number of locations to create a green corridor.

We have identified two habitat improvement areas at Mintsfeet and Beezon Fields. These areas have been carefully designed to enable the bringing together of enhanced habitat for wildlife and better community access and usability. These 5 hectares of land now host over 80 species of trees and plants carefully selected to encourage rich habitat for wildlife. This combined with a number of educational and sensory features will create an attractive area for the local community and visitors to explore and enjoy.

Beezon Fields - new improved public amenity area and enhanced area for wildlife



Improved river habitat.
Mixture of dense and open woodland habitat.
Planting that is rich in berries and seeds.
Greatly improved foraging for bat species.
Footpath and sensory path including educational play features.



English Oak



Aspen



Alder



Blackthorn (prunus spinosa)



Elder (Sambucus nigra)



Teasel (Dipsacus fullonum)



Native wildflower and meadow seed mix



Black poplar

Proposed environmental enhanced area at Mintsfeet



Focus on native species e.g. aspen, oak, hazel, rowan.
Wetland scrapes and reed beds will provide improved habitat for wildfowl and wading birds.
Specific nest boxes to encourage starlings.
Woodland, grassland and wildflower habitat creation.
Publicly accessible area including native woodland, art installations and educational play features.

Did you know - we are installing, monitoring and maintaining at least 67 new bird and bat boxes throughout Kendal to

Landscaping for the environment and community

Our planting and landscaping plans have been designed to improve the environment for some of our most threatened and well loved species. Woodland planting will provide additional cover for otters, foraging opportunities for birds and bats, and specific nest boxes for starlings and swiffts will help encourage them back into the area. New wetland habitat will increase diversity and species richness, native wildflowers will provide a boost to our pollinators. The landscape plans for each area, also known as 'reaches' have been tailored to the character and conditions of the site with moisture-loving plants in the wetter areas, native species used where possible, but with some more formal planting and ornamental species in the town centre.

We will plant a diverse mixture of species and will include:-

Tree species to be planted

We are taking a "right tree, right place" approach to ensure all trees, plants and shrubs that we plant can thrive, provide good quality habitat and are attractive with a high visual presence.

We will be planting at least 4500 trees along the riverside which will be predominately native species, preferably of local provenance and contain some species that are fruit bearing.



Silver Birch



Scots Pine



English Oak



Black Poplar



Rowan



Bird Cherry

Ornamental planting and improved diversity for our pollinators

Rich, diverse shrub and ground flora planting will provide essential habitat and food for our much loved pollinators. It will provide a mix of natural wildflower areas as well as more formal ornamental planting in more central areas of town. Working in partnership with Kendal in Bloom, you will find this planting in areas such as Miller Fields, along Aynam Road and Ford Park.



Reintroducing species like the Westmorland Damson Toothwort



Reclaimed timber seating will feature throughout the scheme.

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