



The River Alt Restoration Project

The River Alt Restoration Project is being conducted in partnership with The Cass Foundation, Liverpool City Council, The Community Forests Trust and the Environment Agency. The Project aim is to divert a section of heavily engineered river from culvert into a new 870m meandering, naturalistic, open river channel with 1740m of newly vegetated river banks including ledges, riffles, brash bales, willow spiling erosion control, an extensive riparian zone plus adjacent wildflower areas, semi natural grassland, willow scrub and wooded habitat. The river corridor will form the focal point of 8.2ha of new public greenspace for the community to enjoy and experience.

The water course flows through an area of North Liverpool that experiences some of the most severe socio-economic problems in the UK. It is one of the Council's highest priorities for regeneration. The diversion of the river, and replacement of an 'engineered' and largely inaccessible river with a safe, healthy, attractive and ecologically-rich water course and associated linear green space will make a great contribution to the regeneration process.

Issues that project aims to address include:

- Poor river morphology
- High flood risk within extensive built up areas and agricultural land
- Fly tipping and debris removal causes an ongoing maintenance issue and a risk to the blockage and failure of culverted river sections
- Presence of invasive species including Japanese Knotweed and Himalayan Balsam
- A closed, manmade, culvert river section creating a poor environment for biodiversity. The biological status of the River Alt, for invertebrates, is 'Bad' with its predicted status for 2015 being 'Bad' also.
- Isolated green spaces and poor habitat connectivity
- The need for meaningful engagement with the community to encourage a sense of ownership, support and ultimately the long term success of the project
- Derelict, underused, neglected and brownfield land blighting a deprived area of the city.

Key facts	
River Basin District	North West
Catchments	Alt Crossens
Outcomes	<p>Improved biodiversity - Creation of a mosaic of new habitats to create an attractive, biodiverse landscape. Provide habitat suitable for protected species found locally within the river catchment e.g. water vole and kingfisher</p> <p>Improved water quality – Aeration and increased light penetration of the river within the new channel</p> <p>Environment - Regeneration of 8.2ha of brownfield land to create new habitats, public greenspace and an open, more naturalistic, river corridor. Removal and management of invasive vegetation</p> <p>Climate change - Increased flood storage capacity and reduced flood risk</p> <p>Social - Improved environment for recreation and activities promoting wellbeing, community cohesion and responsibility. Local volunteering and training opportunities. Educational resource</p> <p>Accessibility – Access to new public greenspace with <i>Disability Discrimination Act (DDA)</i> compliant path network</p> <p>Economic – Major regeneration project within the Alt Valley corridor. Catalyst for further economic investment.</p>
Start Date	July 2012
End Date	March 2015
Budget	£1.549m (£970k from CRF)
Project Partners	The Cass Foundation, The Community Forest Trust, Liverpool City Council, Alt Valley Community Trust, the University of Liverpool

Description of Works

Channel excavation – An 870m long channel will be excavated with a 3.5 - 4m wide, low flow, channel, a series of floodplain benches or ledges. Since the river realignment extends the river by c. 600m. Therefore the low flow channel bed has an asymmetric profile, at the sharper bends, to help maintain flow in the extended river.

Shallow riffles will be located on the entry and exit points of the meanders and brushwood bales will be used to capture silt on the inner bends.

There are sharp bends at the upstream entry and downstream exit points. Both bends will be constructed from reinforced earth and geotextile membranes. In addition, rock toes will help minimise erosion and the use of willow spiling will also contribute to the long term stability, soften the visual impact and enhance habitat diversity.

The design will deliver a significant increase in flood storage capacity within the river corridor, thereby reducing flood risk elsewhere in the catchment.

Habitat creation – a mosaic of habitats will be created including extensive planting of the riparian and marginal wetland planting along the floodplain benches within the river channel.

Inclusion of riffles, the open channel and selective tree and scrub planting will locally improve conditions for river invertebrates by improving aeration and light penetration.

The eastern bank will have a steep profile with 0.4 ha of willow scrub planting and semi natural grassland which will provide cover for nesting birds, small mammals and potential habitat for water voles and kingfisher known to be present locally along the River Alt.

Willow spiling will add additional cover for nesting birds whilst contributing to the stability of sharp river meanders.

3ha of native grassland and wildflower meadow will be planted on low fertility substrates, used to enhance the species diversity, above the western bank. Standard trees and blocks of woodland will create a more formal feature where the public have access.

An area of bee orchids was identified on within the Ecological Assessment. The soil from this area will be scraped and reused within ecological zone.

Managing invasive weed species – a small area of Japanese Knotweed will be eradicated and monitored prior to the excavation of the new river channel. Himalayan Balsam is located upstream and will therefore be monitored and managed by cutting before flowering in the late Spring

Providing access – a 4m wide path network (DDA compliant) will run the length of the site and, in places, will come close to the riverside within the upper floodplain. The path will allow access for easy maintenance of the water course, including vegetation management, the removal of rubbish and other obstructions, thus maintaining habitat quality and reducing the risk of flooding in the wider catchment.

The river bank will be steeper on the eastern side and public access will be limited within this ecological zone.

Community engagement - The project will improve the quality of local people's lives, create educational and recreational opportunities, deliver health and wellbeing benefits through encouraging outdoor exercise and connecting people to nature.

Engagement activities will include public consultation, 'walk and talk' sessions throughout the project, conservation volunteering and training, University field study site, wildlife surveying, tree planting, health walks, site visits for stakeholder and chartered organisation (during and post construction).

What will success look like?

Over 8km of the River Alt lies within a manmade culvert system. This project will be a useful exemplar of what might be achieved, in other parts of the catchment, where similar 'day-lighting' opportunities exist.

The River Alt Restoration Project will contribute to several Liverpool and Environment Agency strategic priorities and plans including the River Basin Management Plan, the City's Green Infrastructure Strategy and Flood Risk Management Plan. The site is also located within one of the City's priority Strategic Investment Areas.

Our vision is that by creating a new public open green space and opening up the River Alt, the rivers rediscovery will provide a quality environment that will deliver significant ecological benefits, become a valuable community asset and will provide a catalyst for regeneration in the heart of Croxteth, Liverpool. A project the community can be proud of.

About the team
Project Manager: Helen Rawlinson
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