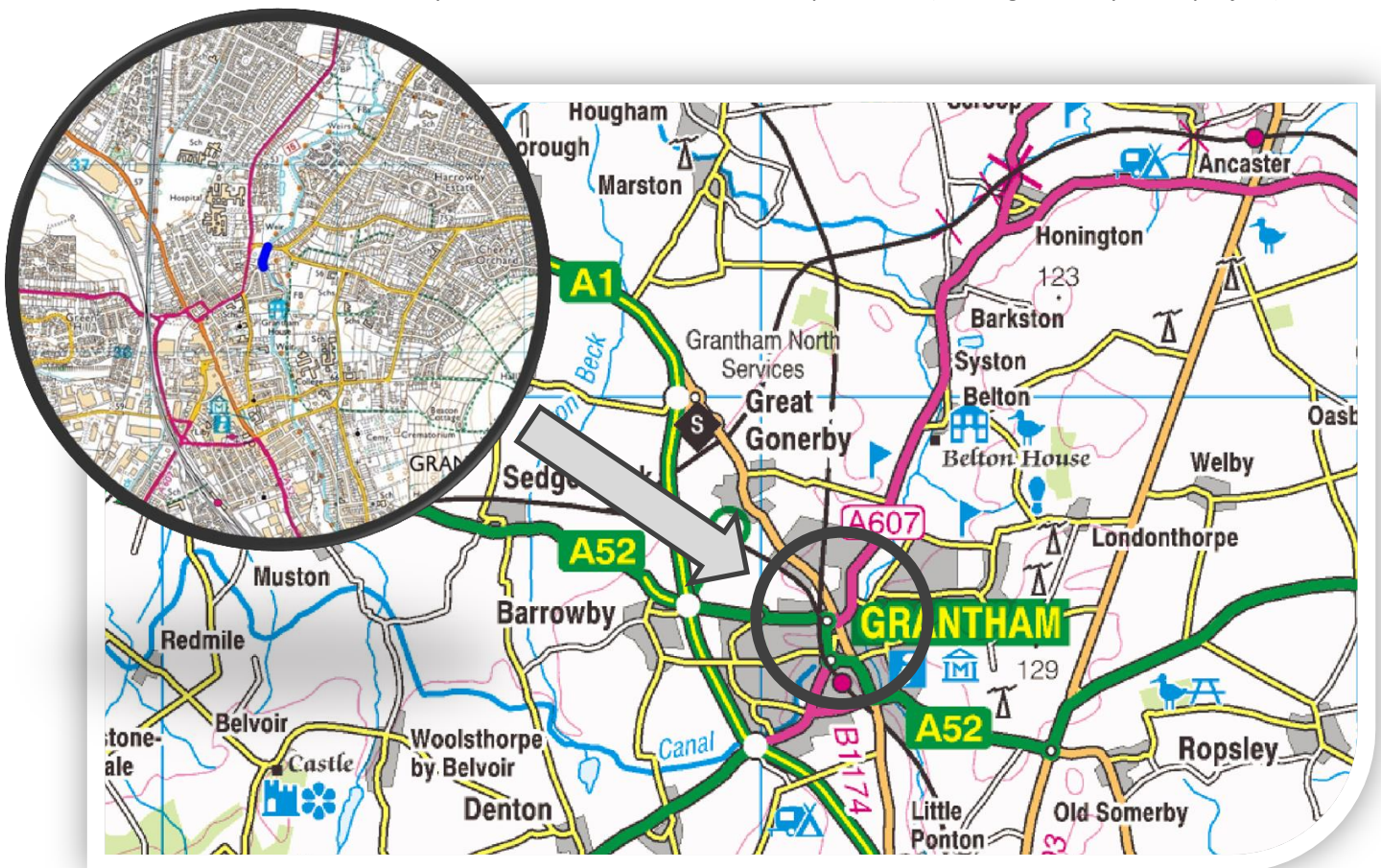


Wyndham Park, Grantham, Lincolnshire

Catchment & Waterbody:	Upper Witham. Confluence of Cringle Brook to confluence of River Brant	
Location:	Wyndham Park, Grantham	
Upstream Grid Ref:	SK 91603 36462	Completion Date: late July 2017
Length of river enhanced:	100m	
Partners:	South Kesteven District Council, Lincolnshire Rivers Trust, Wyndham Park Forum, Grantham RiverCare, Sustrans	
Budget:	c£65K	
Related Plans & Strategies:	Grantham Urban River and Wetlands Plan Upper Witham River Corridor Habitat Plan Wyndham Park Grantham: The People's Park (Heritage Lottery Fund project)	



Background

Located in Wyndham Park in urban Grantham this short section of the River Witham between White Bridge and Belton Lane footbridge is publicly accessible and highly visible. The channel was overwide with a shallow bed gradient and predominantly concrete banks (Fig 1). There was very little marginal and aquatic vegetation and the bed was covered with a thick layer of immobile fine sand and silt. There was also localised bank erosion (Fig 2).

The overall Ecological Status of the section of the Witham, which includes the Grantham reach, is classified as Moderate, due to the heavily-modified channel which lacks morphological and habitat diversity, poor fish populations and high levels of phosphates. (See <http://environment.data.gov.uk/catchment-planning/WaterBody/GB105030056780>).

Project Objectives

The 2016 Grantham Urban Rivers and Wetlands Plan, launched in 2016, identified numerous opportunities for river habitat improvements through the town, and Wyndham Park was selected as a pilot project to demonstrate the benefits of urban river restoration to the people of Grantham and to show that projects like this, when carefully designed, do not increase flood risk.

The overall objectives of the Wyndham scheme were to improve the flow, reduce sedimentation and create habitats for river life, including native brown trout and white-clawed crayfish, as well as insect pollinators. A narrower, more sinuous, 2-stage channel would increase the flow and reduce the accumulation of fine sediment on the river bed.



Fig 1. Before (May 2017). Looking downstream from White Bridge showing the original wide channel and concrete banks



Fig 2. Before (December 2014). Upstream of the Belton Lane footbridge the river bank was heavily-eroded (also see Fig 7).

The Scheme

There were four components to the scheme:

- Soft berms (Figs 4 & 7) - low bankside shelves fronted with faggots (tightly bound bundles of sticks) were constructed to narrow the channel, conceal much of the concrete edging and provide erosion protection. The enclosures, which will be submerged to maintain flood resilience when the river level rises, were filled with fine sediment from the river bed, and topped with coir planted with colourful locally native wetland plants to support pollinator species. The resulting 2-stage channel reduces siltation by increasing the speed of flow.
- Access berm (Fig 5) - located at the foot of the existing steps down to the river, surfaced with recycled plastic boards and fronted with stone, the decking has the same channel narrowing and silt mobilisation function as the soft berms. It also allows park users to get closer to the river and provides a safe platform for river studies.
- River bed restoration (Fig 6) - Large quantities of fine sand and silt were excavated from the river bed and used to back-fill the soft berm enclosures. The bed level was then restored by replacing the sediment with fresh, clean gravel to provide habitat for native white-clawed crayfish, fish and other aquatic life.
- Tree management (Fig 7) - all the willow trees that had established naturally on the river bank were retained to provide cover, but some needed to be managed to enable access. Rather than removing them, the trees were coppiced or pollarded to encourage rapid regeneration and restoration of bankside cover following the works.

The Outcome [\(also see the photos below\)](#)

In August 2017 the flood resilience of the project was immediately demonstrated when heavy overnight rain caused the river to rise and temporarily flood the berms (Fig 8). Soon after completion chub were observed on the fresh gravel bed and in winter 2017/18 brown trout redds (spawning scrapes) were located. The access berm was an immediate success and provided the venue for river studies at the World Rivers Day event in September 2017.

Further Information

Contact the Fisheries, Biodiversity and Geomorphology Team, Lincs and Northants Area, Lincoln.

Customer contact line
03708 506 506

Incident hotline
0800 80 70 60

Floodline
0345 988 1188

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Photos



Fig 3. The newly restored channel. The planted berm on the left bank narrows the river and softens the hard bank, while park visitors enjoy the new access decking.



Fig 4. The soft berm, edged with faggots, infilled with sediment excavated from the river and topped with pre-planted coir.



Fig 5. Visitors to Wyndham Park can now get closer to the river by using the accessible decking, which also narrows the channel.



Fig 6. Fine sediment excavated from the bed has been replaced with fresh, clean gravel.



Fig 7. The eroded bank has been restored behind a faggot and gravel enclosure and planted-up with native plants. The willows behind have been coppiced or pollarded.



Fig 8. Shortly after completion (8th Aug 2017) the low berms were temporarily flooded following heavy rain.

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