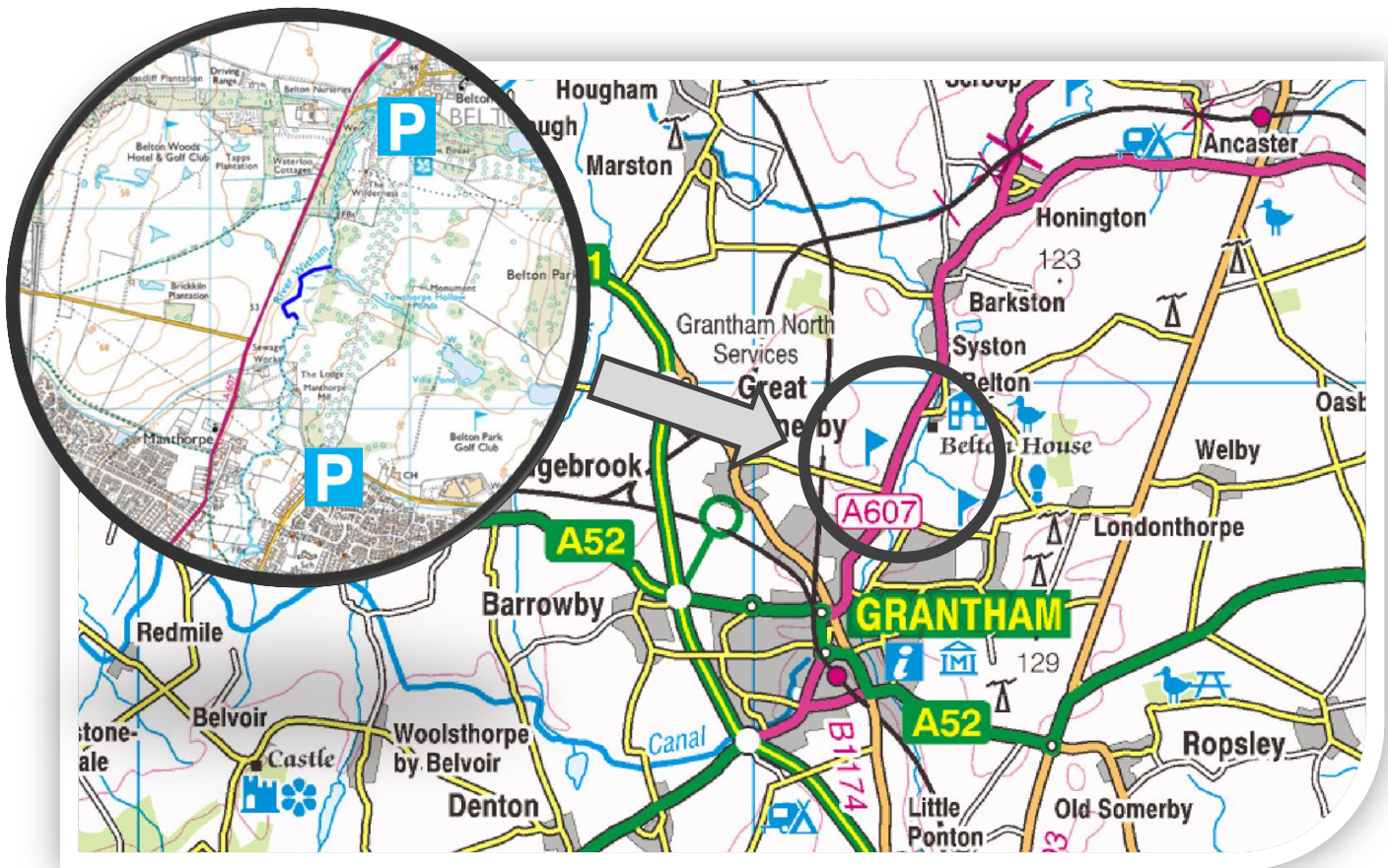


Belton House, near Grantham, Lincolnshire

Location:	Belton Park, Lincolnshire	Grid Reference:	SK 92450 38545
Catchment & Waterbody:	Upper Witham, Confluence of Cringle Brook to confluence of River Brant		
Length Restored:	400m		
Completion Date:	September 2017		
Partners:	National Trust		
Budget:	£XXXXXXX		



Project objectives

The Ecological Status of this section of the Upper Witham is classified as Moderate, principally because of the heavily modified flow and morphological condition; poor fish populations; and high levels of phosphates (See <http://environment.data.gov.uk/catchment-planning/WaterBody/GB105030056780>). To address some of these issues the work at Belton sought to:

- Create a more meandering channel with fast, shallow sections and pools.
- Improve the speed and variation of the flow to encourage natural cleansing of the gravel riverbed.
- Encourage the river to reconnect with its floodplain to slow the flow of flood water downstream.
- Protect the riverbanks from erosion.
- Increase in-stream woody habitat.
- Improve habitat for spawning fish and native white-clawed crayfish.
- Improve floodplain wetland habitats by increasing the frequency of “wetting”.

The Scheme

Following surveys and assessments to inform the design and ensure that sensitive species, e.g. water voles, and heritage features in the *Grade I Listed Historic Park and Garden*, were not affected by the work, the scheme was undertaken in 2 phases in 2016 and 2017. It involved:

- Introducing approximately 700 tonnes of mixed gravel to locally raise the river bed and create 7 new riffles.
- Placing numerous large stone cobbles on the new gravel riffles to provide refuges for native white-clawed crayfish and brown trout.
- Lowering the river bank in places to allow water to flow out of the river and on to the floodplain more easily.
- Installing faggot-fronted berms to narrow the channel and trap fine sediment.
- Hinging trees into the channel and securing them to the bank to increase woody habitat.

The Outcome



Before – Slow flow in a steep-banked channel



After – New gravel riffle created to speed the flow and bank lowered to improve the floodplain connection



Before – weed-choked channel



Work in progress on a faggot-fronted berm to trap fine sediment, narrow the channel and speed up the flow

Further information

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