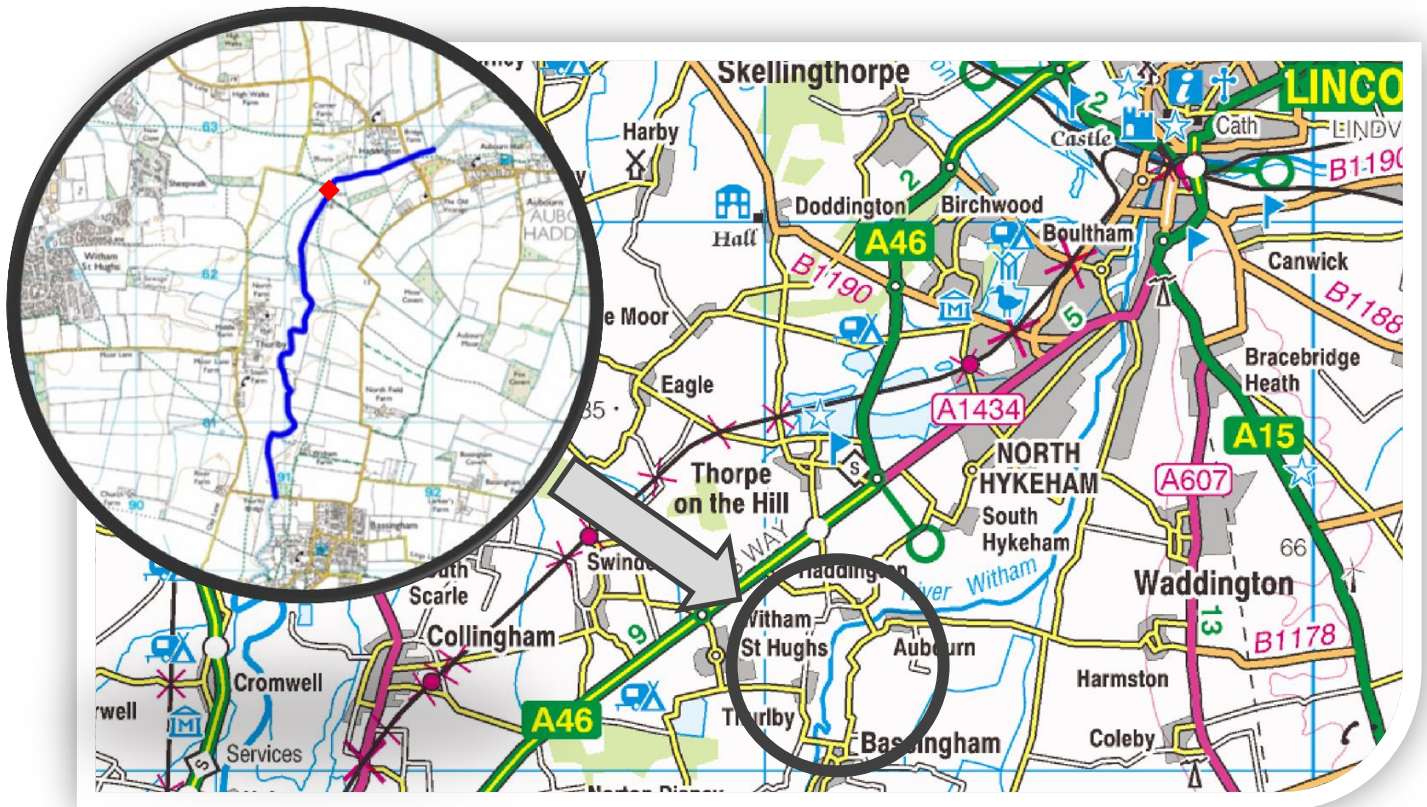


Aubourn Rock Ramp Fish Pass, Aubourn, Lincs & Bassingham to Aubourn Woody Habitat Creation

Catchment & Waterbody:	Upper Witham. Confluence of Cringle Brook to confluence of River Brant	Upstream Grid Ref:	SK 90938 60497
Location:	c10km south-west of Lincoln	Length of river enhanced:	3.25km
Partners:	Aubourn Estate & Wild Trout Trust		
Completion Date:	Rock ramp and associated works: May 2016		
	Tree hinging (2017 & 2018): February 2018		
Budget:	Rock ramp and associated works: c£100K		
	Tree hinging (2017 & 2018): c£7.5K		
Related Plans & Strategies:	Upper Witham River Corridor Habitat Plan		



Background and Project Objectives

Aubourn Weir, located in the lower reaches of the Upper River Witham, presented a major barrier to upstream fish and eel passage and the heavily-modified channel in the vicinity, lacked morphological and habitat diversity resulting in poor fish populations. Also affected by high levels of phosphates, the overall Ecological Status of this section of the river is classified as Moderate. (See <http://environment.data.gov.uk/catchment-planning/WaterBody/GB105030056780>).

The key objectives of the Aubourn project were to enable fish and eel passage at the weir and to undertake additional enhancements to improve the channel diversity. The wider project, from Bassingham Bridge to beyond Aubourn Weir, sought to enhance the heavily-modified channel using existing riverside trees to create in-stream deadwood habitat, improve flow variation and provide valuable refuges for fish and invertebrates.

The Outcome

There were two parts to the project: construction of the rock ramp fish pass and associated bed enhancements in the vicinity of Aubourn Weir, and extensive woody habitat creation from Bassingham downstream to beyond Aubourn Weir.

- Rock Ramp - Using large rocks and steel sheet piling to maintain the water levels, a series of stepped pools, rising c1m in c20cm increments, were constructed to create the “rock ramp” which now enables fish and eels to negotiate the former obstruction. See Figs 1 & 2.
- Pools – Five pools were excavated in the river bed, three above the new rock ramp and two below it. The excavated material was deposited against the bank immediately upstream of each pool to narrow the channel and speed up the flow - a technique known as “dig-and-dump”.
- Woody habitat - Riverside trees, in particular those that had collapsed in to the river or were in imminent danger of doing so, were selectively hinged and/or secured into the channel and along the bank throughout the whole of the 3.25km reach. The large woody material creates flow variation and provides refuges for fish and invertebrates as the river level and speed of flow changes. See Figs 3 & 4.



Fig 1. Before – Aubourn Weir showing the drop of around a metre which created a barrier to the passage of fish and eels.



Fig 2. After – the completed Aubourn Rock Ramp. Fish and eels can now pass freely upstream and downstream.



Fig 3 (Before) and Fig 4 (After). Large riverside trees were selectively hinged and secured along the bank and into the water to create valuable instream woody habitat and provide refuges for fish and invertebrates as the river level fluctuates.

Further Information

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