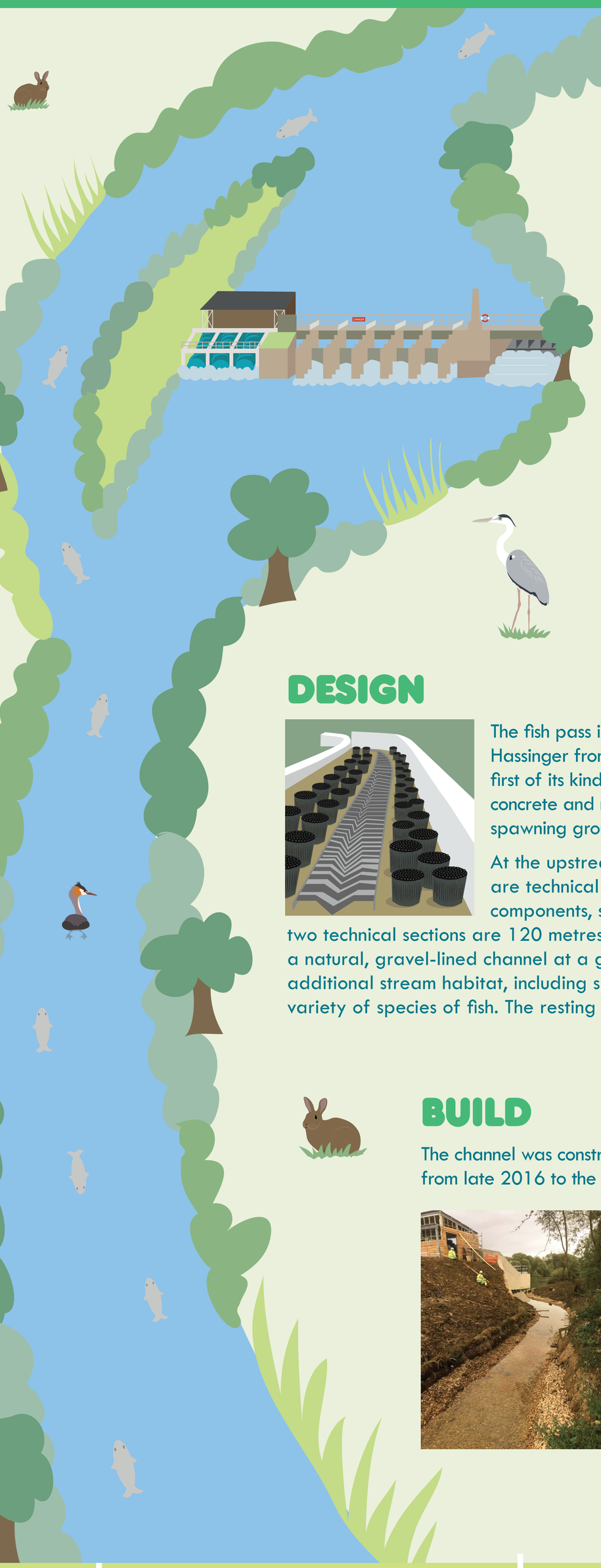
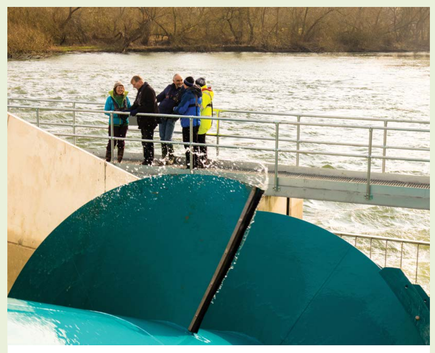
SANDFORD HYDRO AND THE FISH PASS

Sandford Hydro is the largest community-owned hydro on the Thames, generating 1.6 GWh of carbon-free electricity per year. Started by a group of local residents, the project was built and developed by local social enterprise the Low Carbon Hub.

The hydro has returned the Lasher Weir to its historical role as a generator of clean energy. It will generate a colossal 1.6 GWh of renewable electricity per year, which is the equivalent demand for about 450 households – or most of Sandford!

The Sandford Lock hydroelectric plant uses three massive Archimedes screws to generate electricity from the flow of the river water.





You can see videos of the screws turning and our fish pass on the Low Carbon Hub YouTube channel.

The site has been through rigorous ecosystem surveys to ensure it has minimal impact on the local wildlife, such as trees, shrubs, birds and bats.

FISH PASS

The fish pass at Sandford Hydro encourages all kinds of fish to migrate upstream beyond the Lasher Weir for the first time in over 400 years. It is a separate watercourse that links the Thames up- and downstream from both the weir and the hydroelectrical plant. Effectively it is a watery by-pass for fish!

Particular species of fish it is designed to help include salmon, sea trout, brown trout, eels, fast water course fish (e.g. barbel, chub, dace) and also slow water course ones (e.g. roach, bream, pike).

COMMUNITY ENERGY

Sandford Hydro has been a long labour of love from the local community. Community members directed the project tirelessly from its conception all the way through to setting up as a Sandford Hydro Community Interest Company. As the project grew, Sandford Hydro CIC teamed up with the Low Carbon Hub for the planning, development and completion of the project.

Sandford Hydro was part of a community energy share offer, which means that members of the community and local residents own part of this amazing hydro system. The funds from the electricity generated will give a return to people who have invested in the hydro, as well as funding future community energy initiatives through Low Carbon Hub's community benefit programme.

DESIGN

The fish pass is an innovative design by Dr Reinhard Hassinger from the University of Kassel, Germany. It's the first of its kind in the UK with the novel design combining concrete and naturalised sections, a resting pool and spawning grounds.

At the upstream and downstream end of the pass are technical sections comprising 'brush and baffle' components, set at a gradient of 5%. Between these two technical sections are 120 metres of a natural, gravel-lined channel at a gradient of 1 in 160. This provides additional stream habitat, including spawning and nursery habitat for a variety of species of fish. The resting pool has a volume of 22 cubic metres.

BUILD

The channel was constructed at the same time as the hydro, from late 2016 to the autumn of 2017.

SANDFORD HYDRO

440 KW installed capacity

1.6 GWH carbon-free electricity produced annually

On average, 2 TONNES of CO_2 are saved every day

See how much clean electricity Sandford Hydro produces on our online interactive map: **www.peoplespowerstation.org**

www.lowcarbonhub.org **@lowcarbonhub**

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The Low Carbon Hub is two organisations working together: The Low Carbon Hub IPS Limited (registration number: 31903R) and the Low Carbon Hub Community Interest Company (registration number: 7583663). Designed by www.goodthinkingcommunications.net