

Congresbury Yeo Tidal Banks
Wick St. Lawrence, North Somerset

Kier/ Team Van Oord

BIG Biodiversity Challenge Award category: Medium Scale Permanent

Project overview

The Congresbury Yeo Tidal Banks is a flood defence scheme completed on behalf of the Environment Agency. The scheme saw approximately 1320m of new flood bank created on a set-back alignment at a height of 8.82m above ordnance datum (AOD).

Once the new embankments were established, the length of existing tidal embankment that they replaced were then demolished and used as fill for the remaining embankment raising works, which saw an additional 1350m of bank raised to the new required height.

The scheme is situated on the banks of the River Severn/ Bristol Channel and has many environmental constraints, including an extremely high tidal range and is an important area for wintering bird species.

Were there any specific conditions that led to you carrying out this work?

No work instructions or planning mitigation was given for the project with respect to enhancements. The site team use their specialist expertise to the design-in enhancements which would also save time, money and reduced traffic movements through nearby villages, minimising disruption.

What were the biodiversity conditions on site, prior to the enhancement?

The site is very sensitive and diverse with the Severn Estuary being designated as a RAMSAR site, SPA, SAC and SSSI. The estuary habitat is especially important as nationally it is in decline.



Congresbury Yeo from the air.

What were the biodiversity measures taken?

A 1328m long embankment was set back from the existing flood defence. The site team then removed the existing flood defence bank which had been replaced because it had become unstable. This created 7.57 hectares of intertidal habitat, an enhancement within the estuary. The team managed all landowner agreements to make this happen, which in its self was a challenging job.

To ensure that the habitat creation was successful the team specified seed mixes to compliment the intertidal zone, and ensured that there were only small variations in level to promote salt marsh habitat.

All materials used to create the embankments came from on-site borrow pits. Each borrow pit was designed to maximise the range of habitat, side slopes incorporated shelves for variation of plants and species, the base was designed with variation of depth to create a diverse habitat. This reduced traffic movements through nearby villages and minimised disruption to local residence and businesses.

Over 1km of new hedgerow planted and maintained to ensure there was no nett loss of hedgerow from the scheme. The existing hedgerows were surveyed and were replaced with hedges that were more species diverse.



Newly created intertidal habitat

How would you best describe the project?

An enhancement

Further information

A full appreciation of the importance on the inter-tidal habitat was taken into consideration by the site team, who used their knowledge and experience to increase the internationally important estuary habitat through their own initiative. Careful consultation with the client and landowners meant that 7.57ha of additional habitat could be created.

Along with additional features like informed seeding, hedgerow creation and careful creation and reinstatement of ditches has lead to a positive impact from a construction activity. Whilst working in such areas may not be common place, taking opportunities to make improvements through careful planning can make a big difference to local wildlife.

What was your personal motivation for carrying out the enhancement?

Our personal motivation was to enhance the local environment through positive design. Having the opportunity to enhance internationally important habitat is something that the whole team wanted to be involved with, this was shown in the level of detail and effort put in by everyone.



Borrow pit created habitat