

## BLEADON LEVELS NATURE RESERVE NR. WESTON SUPER MARE, NORTH SOMERSET

WESSEX WATER

BIG Biodiversity Challenge Award category: Medium Scale Permanent

### Project overview

In conjunction with the expansion of Weston Super Mare Sewage Treatment Works (STW), Wessex Water carried out significant modifications (1ha in total) to existing lagoons to create a new nature reserve, with improved features for bird life, additional public access and interpretation boards.

The project £50K scheme involved excavating a new deep pool in front of an existing hide, creating sand bar and island features, making an artificial otter holt and installing a new bird screen with associated paths and informative signboards. A grand Easter opening event was held in which local families were invited to make and paint bird boxes, and to take part in an Easter Egg trail.

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

In terms of wildlife, the existing wildfowl lagoons benefited from their coastal location on the North Somerset Levels, near the Axe Estuary, which means they are already host to water voles, otters and a range of overwintering birds including duck and wading species, including overwintering bittern.

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

During the expansion of the STW an area of moderate quality grassland was lost which could not be easily compensated for. A novel means of biodiversity offsetting was required, and the existing lagoons were the logical way to maximise the natural wildlife potential at the site.



*Southern lagoon after flooding, with gravel spit (unfinished) and bird screen in the background*

The focus on birds was also related to the construction phase impacts, as it was necessary to complete percussion piling through the winter period. The proximity of the site to the Severn Estuary SPA meant that it was the subject of a Habitats Regulations Assessment and significant bird monitoring.

### What were the biodiversity measures taken?

The southern lagoon was re-sculptured to create a new deeper pool suitable for diving ducks, and soil re-used to create shallow margins elsewhere for wading birds like snipe. A gravel spit was created, providing a safe haven for ducks and ground-nesting birds like plover.

Existing bird screens at the site were poorly positioned, and deep fringes of reeds blocked off views. This was tackled by digging a deep pool in front of the hide in one case and by moving another to a newly constructed plinth on the northern lagoon, opening up new views, accessed via a new gravel path.

Water voles and otters are BAP species nationally and locally. The design was carefully integrated around existing water vole populations, with the adjacent bank features intended to help them expand. Pre-construction surveys identified otters at the site, confirming the benefit of creating a new artificial otter holt. Cut and fill volumes were carefully calculated to ensure that all waste was re-used within the project.

A major driver was to make the nature reserve more accessible to the public. A signage and fencing plan was implemented, which gave the public protected access from the car park to the neighbouring seawall, and saltmarshes. A circular walk was incorporated, and new interpretation boards installed. We believe the concept of open access to water company sites should be encouraged, and there are benefits for the scheme to be replicated with Wessex Water and more widely.



*Artificial otter holt part-way through construction*

### What were the biodiversity measures taken? (cont.)

The Easter opening event, centred around our existing visitor centre, celebrated the opening the site, aiming to engage with families. Over 200 people made and painted bird boxes. They could also follow an Easter Egg Trail, with kids encouraged to spot a range of wildlife. A leaflet was launched to coincide with this.

## How would you best describe the project?

An Enhancement

### Further information

The project was funded partly from Wessex Water's Capital Programme budget and partly from annual stewardship payments. Design for the wetland was carried out within Wessex Water, in consultation with the County Ecologist and local bird watchers. Keystone Environmental were employed as specialist wildlife contractors. First the large pool was created, with clay re-used on site. A bund was left between the new feature and existing lagoon, allowing it to be sculpted in dry conditions, and the gravel spit to be created. Then the bund was breached to flood the new area. Meanwhile, the bird screen was installed on the northern lagoon, and new paths constructed and fencing put in place.

The site has certainly been a success in terms of its use by the public - numbers of visitors of all ages are considerably up, boosted by the fact that the opportunities to watch wildlife are so much better. The nature reserve also now connects well with the existing network of footpaths and the route of the coastal cycle path Route 33 which is currently being developed by Sustrans.

In terms of biodiversity, we have already seen water voles expand into to new areas of bank habitat, and the gravel spit is well used by breeding birds. There are no sign of any otters using the new holt yet, but we remain hopeful! The nature reserve generally requires only low levels of maintenance. We feel that the long objectives of the site have been met and exceeded.



Map of the Bleadon Levels Nature Reserve and STW

## What was your personal motivation for carrying out the enhancement?

My personal motivation was to bring life and interest back to a rundown area. Overall the atmosphere of the entire place has been changed massively – an area that used to see frequent fly tipping and burnt out cars, is now more usually full of friendly bird watchers and dog walkers!