Wetland Habitat Creation Area - Sizewell C
Sizewell C / Suffolk
Arcadis and EDF SZC

BIG Biodiversity Challenge Award Category: Category 3: Habitat Creation - Medium Scale

Project overview

This application relates to a specially designed wetland (4.5 ha) complementary to an associated species rich grassland (total site 50ha) created on existing farmland neighbouring the RSPB's Minsmere Reserve to provide Marsh Harrier with enhanced foraging habitat during construction of the Sizewell C nuclear power station. Arable conversion started in 2018, the wetland habitat creation, for which we are applying, started in September 2022, and was completed May 2023.

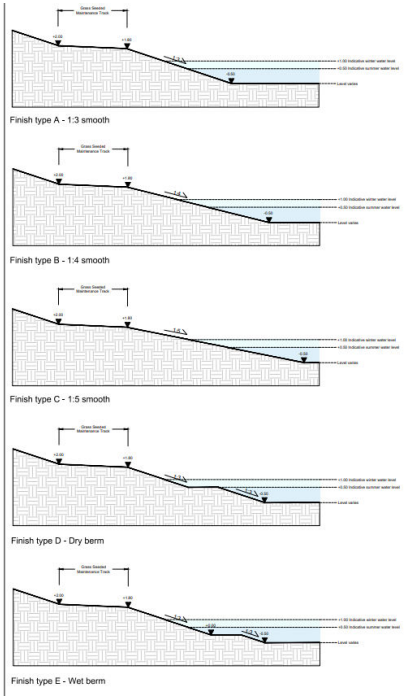
What were the biodiversity conditions on site, prior to the enhancement?

The site comprised species poor semi-improved grassland which had previously been in agricultural use. Minsmere –Walberswick Heaths and Marshes SSSI and RSPBs Minsmere Reserve are situated to the north and the east of the site.

What were the reasons behind this project ?

The aim was to provide Marsh Harrier with additional foraging habitat as mitigation and enhancement for potential disturbance of their current foraging areas due to the construction of the Sizewell C nuclear power station. The wetlands neighbouring the construction site are used for breeding and wintering by marsh harrier and other birds. Disturbance to birds using the neighbouring sites could have adverse effects on the overall population health. Therefore, to ensure that construction disturbance would be minimised and/or avoided this wetland was proposed to provide additional breeding and foraging habitat, while also buffering the neighbouring RSPB Minsmere Reserve which is not directly impacted by the scheme.

4.5ha of wetland created on existing farmland



A variety of habitats created to maximise the ecological niches available

Wetland Habitat Creation Area - Sizewell C

Sizewell C / Suffolk

Arcadis and EDF SZC

What were the biodiversity measures taken?

Marsh Harrier prey on wildfowl and terrestrial mammals, the new wetland was designed to maximise the number and diversity of Marsh Harrier prey species. Innovative methods, using mathematical measures, designed the topography to optimise prey numbers and foraging habitat effectiveness. The location, shape and extent of areas of open water, areas of reedbed and wet woodland maximised the number and diversity of prey species. The design was consulted upon by a wide range of national and local environmental stakeholders including the RSPB.

Wetland habitats are hotspots for biodiversity, in addition to Marsh Harrier and other birds, this will support floral species, reptiles, foraging bats, water vole, otter and a range of invertebrates. It will provide climate adaptation and resilience in an area subject to rising sea levels, temperatures and increased drought. Adjacent to RSPB's Minsmere Nature Reserve (also an SSSI), the area protectively buffers the site from development in perpetuity and contributes towards a tranquil habitat. It will be managed for the foreseeable future along with other habitats in the wider EDF Sizewell Estate under a Landscape and Habitat Management Plan. The new habitat will reduce carbon emissions, soil erosion, nutrient run off and water consumption. This has the potential to extend the functional habitat for species using the Minsmere Nature Reserve. This is complemented by an additional comprehensive suite of mitigation and enhancement for the Sizewell C development which will deliver Biodiversity Net Gain and will be managed in perpetuity.

Aerial view of the wetland

The newly created wetland edge prior to planting

Further information

The ecological aspects of site clearance and excavation work was guided by an Ecological Working Methods Statements and site supervision. The provision of a new reedbed and areas of wet woodland contributes to national and local biodiversity targets. The terrestrial and aquatic habitats are expected to support floral species, reptiles, foraging bats, water vole, otter and a range of invertebrates so contributing to local biodiversity species targets. A small number of small felled trees cleared to create the wetland were re-used elsewhere on the site as reptile refugia.

Project Team

- EDF Sizewell C
- Arcadis
- Multiple NGOs and Suffolk County

What was the motivation for carrying out the enhancement?

Working to protect one of the UK's rarest raptors during one of the Europe's largest and longest infrastructure construction programme required a habitat solution which addressed their foraging needs in the most comprehensive way possible. In addition, opportunities were taken to contribute to several local and national targets. Finally, the location of the site had to compliment and provide a continuation of neighbouring biodiversity rich areas of RSPB's Minsmere Reserve to demonstrate that there would be no adverse effects on the Reserve or any of its species.

Marsh Harrier at Sizewell

Future overall vision for the Sizewell Estate converting arable land into valuable biodiversity habitat