

LONGANNET POWER STATION: BIODIVERSITY INFORMATION

Key facts:

- Opened in 1972
- 2,400MW capacity
- 183m tall chimney
- Located on the north shore of the Firth of Forth
- Valleyfield lagoons are rich habitat for wildlife
- Committed to reducing its environmental impact



Site Description

Longannet Power Station is the largest generator of power in Scotland, with the capacity to power two million households. The main Power Station occupies an 89-hectare site on the north shore of the Firth of Forth near Kincardine, Fife with its associated Valleyfield Ash Lagoons near Culross occupying an additional 220-hectares.

The Valleyfield Lagoons, 5km east of Longannet, were created by reclaiming land from the sea and now form an important element in the make-up of the Inner Forth Estuary. This area is internationally recognised for its value to wildlife, especially birds, and covered by natural heritage designations including the Firth of Forth Ramsar site and Special Protection Area.

Valley field Lagoons were also designated part of the Firth of Forth Site of Special Scientific Interest (SSSI) in 1991 and in 1996, included in the wider Torry Bay Local Nature Reserve designation. The reserve extends to 683 hectares and regular surveys are carried out to monitor the variety and quantity of wildlife present on site. Our biodiversity action plan (BAP) ensures that Longannet and its adjacent storage lagoons and coal plant work in harmony with our wildlife.

Public Access

Longannet has created a network of leisure paths at Valleyfield to enable members of the public to enjoy the wildlife and open spaces at the site. The routes form part of the Fife Coastal Path and are popular with walkers and cyclists. Car parks and information boards have been provided.

For health and safety reasons, no public access is permitted to active lagoons or the power station site.



Valleyfield Lagoons

Priority Habitats and Species:

Valleyfield Lagoons are used for the storage and disposal of pulverised fuel ash created during the combustion of coal at Longannet Power Station. Enclosed by a seawall extending out a kilometre into the Firth of Forth, the lagoons' operation has resulted in substantial area of land being reclaimed from the river. Over the years, filled lagoons have dried out and been colonised, or planted, with vegetation, trees and shrubs, creating useful habitats for wildlife.

The low-lying lagoons are used as a roost site for birds displaced at high tide from adjacent Torry Bay. The bay's intertidal mudflats support 18 bird species, mostly wildfowl and waders, listed as being of national or international importance. An area of wet meadow on the southeast corner of the lagoons has been set aside as a wader roost that is kept free from disturbance.

Biodiversity at the lagoons has been carefully recorded over the years and the Torry Bay LNR Management Plan contains a systematic list of species. It includes 247 moth and 13 butterfly species, 51 types of hoverfly, 60 species of bee and wasps and 24 different spiders and harvestmen plus many other invertebrates. Several records are of national significance and notable specimens of invertebrates have been lodged with the national collection at the National Museum of Scotland in Edinburgh.

Throughout Britain 97% of all wildflower meadows have disappeared since the 1950's. Longannet and Valleyfield lagoons are reversing this trend by creating this increasingly rare habitat on the lagoon bunds.

Around 160 species of birds have also been recorded at the reserve and nine UK BAP priority species are regular breeding birds at Valleyfield: Grey Partridge, Lapwing, Skylark, Dunnock, Song Thrush, Grasshopper Warbler, Linnet, Bullfinch and Reed Bunting. A similar range of species can be found at Longannet and its lagoons while priority-listed mammals include Brown Hares which range over the wide open grassland spaces.

Their annual visits are further testament to the station and their work to provide habitats in which such creatures can not only live, but breed. It highlights the work being delivered in the biodiversity action plan has a positive impact on wildlife in the area.

Longannet supports the Forth Estuary Environmental Assessment Programme - a long-term study that is examining the ecological status of the Inner Forth Estuary. The station is also represented on the Forth Estuary Forum which promotes the sustainable development of the estuary.



The Bullfinch is just one of the many types of birds at the reserve

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Our Biodiversity Action Plan

Annually, Longannet update its five year Biodiversity Action Plan (BAP) which details planned work to promote the habitats and species found on its landholdings. The document presents a list of ecological enhancement objectives for woodland, scrub, grassland, hedgerows and open standing water habitats, and lays out a timescale for their implementation. Key projects include the thinning of woodlands, the maintenance of ponds, the creation of hedgerows and the management of grassland for wildflowers.

The BAP also details various measures for preserving a colony of Sand Martins that breed on ash stockpiles at Longannet Lagoons. A new management plan for Torry Bay LNR IS published every five years with targets for Valleyfield Lagoons that will support the implementation of the BAP.



Longannet and its lagoons from the air

Peregrine Falcons

A pair of Peregrine Falcons continue to return to Longannet Power Station to nest. The pair have nested on the station rooftops for a number of years, however they have had varying success in raising youngsters. Eggs are laid on a precarious ledge, when hatching is successful and after a number of weeks shedding their downy feathers, the youngsters can be seen honing their aerobic skills in the skies around the station.



Wetland Extension

A Longannet project team has extended the area devoted to wildlife at Valleyfield Lagoons.

During lagoon construction work in 2009, Lagoon No.5, at the southeast edge of the site, was bisected by the creation of a new embankment.

The 5.9 hectare south portion has been infilled with ash and allowed to dry out before being capped with a layer of Furnace Bottom Ash (FBA). Over time the site will revert to a nature area and it will complement the existing adjacent wet grassland that is used each year by breeding wading birds, such as Redshank, Lapwing and Ringed Plover.

The low-lying area now provides a safe roosting site for all the birds, displaced at high tide from Torry Bay's mudflats. In the summer large flocks of mixed species can be seen including Sandwich Terns, Black-headed Gulls along with Shelduck and a variety of small wader species.

Breeding Bird Islands Success

A key project delivered by the initial BAP was the construction of an island at Valleyfield's Lagoons for breeding wading birds and ducks.

Last year nest boxes were buried into the shale with access being provided through a short drain pipe. These boxes were designed to specifically provide a rare breeding site for Shelduck. Our efforts were well rewarded with Shelduck now successfully breeding at both Longannet and Valleyfield.



The Shelduck now successfully breeds within the lagoons

Sand Martins

A section of banking in our ash lagoons has been specifically constructed to attract Sand Martins and now supports one of the largest colonies in Fife with over 350 breeding pairs of these inspiring summer visitors.

