

Biodiversity Duty Summary Report (Scotland)

EDF Energy, January 2020

Contents

1.	Introduction.....	3
	About the company.....	3
	Overview	3
	Statutory Duties in Scotland.....	3
2.	Mainstreaming Biodiversity at EDF	3
	The Better Plan	3
	EDF NG Biodiversity Standard	4
	EDF Nuclear Generation Biodiversity Action Plan	5
	Biodiversity Benchmark	5
3.	Action	6
	The EDF NG Estate.....	6
	Hunterston B	7
	Overview	7
	Land Management Actions.....	7
	Torness.....	8
	Overview	8
	Land Management Actions.....	8
4.	Monitoring	10
	Hunterston B	11
	Torness.....	13
5.	Partnership	15
	Hunterston B	15
	Torness.....	16
6.	The Wider EDF Estate	16
	Other examples of EDF NG contributing towards biodiversity	18

1. Introduction

About the company

Overview

EDF is one of the UK's largest energy companies and its largest producer of low carbon electricity¹. A wholly owned subsidiary of the EDF Energy Group, one of Europe's largest energy groups, it generates around one fifth of the UK's electricity and employs around 13,000 employees. It provides gas and electricity for more than 5 million customer accounts and is the biggest supplier of electricity by volume in Great Britain and the largest supplier to British businesses.

As well as generating enough power to serve some 4 million homes the company also provides gas and electricity to over 80,000 Scottish customers with around half of those opting for one of the company's Blue+ products which are backed by low-carbon generation.

EDF is organised into four business units, which includes Nuclear Generation (NG) and Nuclear New Build. It is the Nuclear Generation section of the business for which this document has been prepared as this part of the business holds an Electricity Supply Licence.

One of EDF's core company ambitions is 'To power society without costing the Earth'. As part of this ambition, it will lead the decarbonisation of the UK electricity sector, whilst achieving an increasingly positive environmental impact across all its operations and a commitment to protect and enhance biodiversity for areas impacted by operations to ensure no net loss of biodiversity.

Statutory Duties in Scotland

In Scotland, the Nature Conservation (Scotland) Act 2004 placed a duty on all public bodies to further the conservation of biodiversity while carrying out their responsibilities. The Act also placed a similar duty to that in England in respect of the requirement for public bodies to further the conservation and enhancement of Sites of Special Scientific Interest (SSSIs).

Section 2A of the 2004 Act (as amended by the Wildlife and Natural Environment (Scotland) Act 2011), requires a public body to prepare and publish a biodiversity report within three years of the Act coming into force and every three years thereafter. NG submitted the first Biodiversity Report for their landholding in 2014² and a second report in 2017³. This report in 2020, is the third produced to ensure compliance with the Act. Legislation is summarised in **Appendix A**.

2. Mainstreaming Biodiversity at EDF

EDF is committed through its' core company ambitions and environmental policies to assessing the impacts of its operations on biodiversity and implementing opportunities for ecological enhancement throughout its business units. The main documents through which EDF communicates its commitments to Biodiversity are set out below.

The Better Plan

"The Better Plan" is EDF's framework for being a sustainable and responsible energy business and is an integral part of EDF's 2030 vision to be the efficient, responsible electricity company, and champion of low-carbon growth. The Better Plan is

¹ 42,233 GWh of zero-carbon electricity generation in 2019

² EDF Energy (2014). *Biodiversity Duty Reporting (Scotland)*.

³ EDF Energy (2017). *Biodiversity Duty Reporting (Scotland)*.

underpinned by six company ambitions one of which is to lead the decarbonisation of the UK electricity sector. Climate change remains a key challenge for everyone. At the Paris Conference in 2015, the international community reiterated the crucial aim of limiting carbon emissions to keep the rise in global temperatures to below 2 °C. To support this, EDF Group has undertaken to produce increasingly low-carbon electricity. The Better Plan commits EDF to lead the decarbonisation of the UK electricity sector whilst seeking to achieve a net zero environmental impact across our operations regarding air, land and water.

This means staying within our permitted limits for operations, using best available techniques to tackle our environmental impacts, prioritising our efforts where we can make the most difference in reducing our contribution to climate change, and to protect a cleaner, healthier and more resilient environment that benefits society and our economy. This includes a commitment to protect and enhance biodiversity for areas impacted by operations to ensure no net loss of biodiversity.

EDF Biodiversity Standard

The primary document that integrates biodiversity into all Company activities and sets out the key commitments and responsibilities to protect and enhance flora and fauna is the Biodiversity Standard (EDFE-STD-ENV 02, November 2015). It has been produced in recognition that EDF as a responsible company want to:

- ensure every activity will be done safely to protect the environment;
- achieve as a minimum legal compliance with all relevant biodiversity regulations, standards, and other codes of practice;
- identify our biodiversity impacts and take action to avoid, mitigate or manage these;
- engage stakeholders and work in partnership with others to ensure we make a positive contribution towards the conservation of biodiversity; and
- protect and enhance biodiversity for areas of land and water impacted by our operations to ensure no net loss of biodiversity.

The Biodiversity Standard acknowledges that operating practices and procedures have the potential to impact positively and negatively on biodiversity and identifies the activities where, with careful management, adverse consequences are minimised. It details the commitment to develop Biodiversity Action Plans (BAPs) for non-operational sites, to meet statutory responsibilities, and an undertaking to apply the precautionary principal informed by baseline survey and assessment in relation to new projects and significant changes to existing activities.

The key aims of the Standard are to:

- *ensure that habitats or species of high conservation status are protected;*
- *ensure that biodiversity requirements are fully integrated into our ISO 14001 environmental management system and risks to biodiversity are managed appropriately;*
- *develop action plans that set out the key actions, responsibilities and programme required to achieve our objectives and targets;*
- *track our performance against our Better Energy Ambition and Biodiversity Action Plan⁴ (BAP) objectives by setting targets and performance indicators from which we shall continually monitor and report our performance;*
- *ensure that our employees or those working on our behalf are appropriately trained, qualified and competent.*
- *continuously seek opportunities to communicate and promote biodiversity protection and enhancement to customers and the wider public;*
- *establish meaningful partnerships with nature conservation organisations and other stakeholders to help fulfil our policy commitments;*
- *record, categorise and document all environmental incidents across our sites in accordance with our Categorising and Reporting Environment Incidents Company Standard; and*

⁴ EDF Energy Nuclear Generation (2016). *Biodiversity Action Plan. Revision 2*

- *undertake assurance of our environmental management system including management of biodiversity and evaluate our compliance with legal and other requirements and as part of an ongoing internal audit programme.*

EDF Nuclear Generation Biodiversity Action Plan

The second revision of the EDF NG BAP was prepared in 2016⁵. The purpose of the BAP is to set out EDF Nuclear Generation's commitment to maintaining and enhancing biodiversity across its non-operational landholding through the implementation of appropriate land management actions. The BAP identifies the key biodiversity receptors present within the NG landholding and details objectives and targets to ensure the maintenance and/or enhancement of these, with the aim of contributing to the wider living landscape. It also details how progress towards achieving the objectives will be monitored using Key Performance Indicators (KPIs). This progress will continue to be reported to partners and stakeholders through quarterly land management meetings, the annual land management report for each site and various internal and external communications throughout the period. It is intended to review, and update as necessary, the BAP every five years (next revision due 2021).

Six high level biodiversity indicators have been developed to provide an estate-wide assessment of the overall success of Nuclear Generation's biodiversity contribution at a company level. These are based on the achievement of site specific KPIs (see Section 2- Action for details) as well as achieving more 'global' targets (see Section 6 – The Wider EDF Estate).

- *Nuclear Generation will seek, wherever feasible, to conserve and enhance biodiversity at each of its principal sites, primarily through its approach to land management but also through its business operations and the development of new assets*
- *Nuclear Generation will seek to maintain and where appropriate develop further partnerships with selected stakeholders for the delivery of ecological improvement schemes on its land or in the vicinity of its main operational sites.*
- *Nuclear Generation aims to increase the awareness of both its employees and local communities of biodiversity issues and the opportunities for its enhancement through education, participation and partnership.*
- *Biodiversity gain will be delivered through the implementation of the Site Action Plans*
- *Nuclear Generation will maintain a comprehensive ecological survey programme to facilitate the regular updating of the base data for each of its sites*
- *Nuclear Generation will report to partners and stakeholders on our biodiversity performance*

A site-specific action plan for each of the company's seven main estates, based on the identification of Key Biodiversity Receptors associated with each site and upon which management and monitoring can be focused, has then been agreed and are detailed in the individual ILMPs for each site. Further details are given below under Section 3 - Action.

Biodiversity Benchmark

The Biodiversity Benchmark for a Living Landscape scheme has been developed, and is run, by The Wildlife Trusts. It is a nationally recognised "standard for assessing and certifying an organisation's systems for achieving continual biodiversity protection and enhancement on its landholdings and their implementation". Achievement of the Benchmark demonstrates an organisation's commitment to biodiversity and responsible land management. Each accredited site contributes to the creation of a 'living landscape' by restoring, recreating and reconnecting wildlife-rich sites and habitats to enhance the permeability of the landscape to wildlife. This in turn supports delivery of the national government biodiversity strategy outcomes. In 2019, a total of 54 sites in the UK, covering an area of over 9,000ha and managed by 17 organisations, were accredited.

⁵ Currently in review to be published in 2021.

EDF NG first achieved the Biodiversity Benchmark in 2009 at the Sizewell estate, followed by Hartlepool in 2010, and Dungeness B in 2013. The first revision of the EDF NG BAP identified an objective to achieve the Benchmark for all of the seven main Estates by 2015. This has been achieved one year early in 2014 with both of the Scottish sites, Hunterston B and Torness, achieving accreditation. Both sites were reassessed in 2019 and retained this status. The Long Pits at Dungeness also achieved the Benchmark in 2018. A rolling programme of site audits is undertaken to ensure continued compliance with the requirements of the Benchmark.

For Scotland, both Hunterston B and Torness retained their Biodiversity Benchmark accreditation, following inspection visits in November 2019. The assessor made many positive observations regarding the mechanisms that EDF NG have in place to manage and enhance biodiversity.

At both sites it was noted that EDF NG's biodiversity management of the land is *'well-developed and functioning well. The quality and commitment of its staff and site biodiversity consultants also stands out.'* At both sites it was observed that *'targeted habitat creation and management of habitat for butterflies and other invertebrates has been successful, with the arrival of new species. Simple measures, which are identified and followed-through such as delaying the cutting of ragwort while it is in flower and a nectar source and then cutting before it seeds or allowing temporary car park banks to colonise naturally with common but 'untidy' wildlife-rich vegetation, are having an effect.'*

Other observations relating to both sites are that *'The quality of the annual site biodiversity reports are first class'* and that *'observations from the previous surveillance visit to these two sites have been considered and acted upon'* with all five previous observations now being closed. Another positive observation across both sites is that *'the involvement in this surveillance visit of non-biodiversity site staff, as well as the biodiversity team, is reassuring'*.

For Hunterston, a positive observation was made of the management for the land for biodiversity being done in partnership with farm tenants which is considered vital due to a large proportion of the estate comprising agricultural land. Also, at Hunterston, *'the veteranisation of trees for roosting bats is underway'*.

Specifically in relation to Torness, there was a positive observation that *'the 'Greening' element of an agricultural tenancy, aided and abetted by EDF, has resulted in the sowing of an impressive swath of wildflowers as nectar sources for invertebrates over several hectares of the land'*.

3. Action

The EDF NG Estate

EDF NG operates eight nuclear power stations (their main estates) at seven locations around the UK, two of which (Hunterston B in North Ayrshire and Torness in East Lothian) are in Scotland. All of the power station sites comprise both operational stations and associated facilities, as well as land not currently in operational use.

In all locations, designated sites of international and national biodiversity importance overlap or occur in close proximity and the land not currently in operational use supports a wide variety of interesting habitat types and legally protected and notable species. Maintaining the biodiversity of this requires continued active but tailored and specific management. The EDF NG estate also includes sites of historic and landscape value. In recognition of this, EDF NG has developed Integrated Land Management Plans (ILMPs), which set out objectives, policies and prescriptions for managing the land, aimed at protecting and enhancing wildlife, conserving the local landscape character and historical heritage whilst encouraging public access, education and community participation.

Hunterston B

Overview

The Hunterston B site extends to approximately 225ha of which only c. 36ha comprise operational land (power station and associated infrastructure). The non-operational land comprises semi-improved pasture, dune and marshy grassland as well as woodland plantations (formerly part of the parkland associated with the Hunterston Estate). The non-operational area also encompasses a series of arable fields and permanent semi-improved pasture known as Southannan Fields and an area of tidal foreshore forming part of Hunterston Sands. The coastal margins and inter-tidal area comprise part of the Southannan Sands SSSI, an important nationally designated site for nature conservation.

The non-operational part of the estate at Hunterston supports a range of breeding birds and various notable species including otter, brown hare, several species of bat and common toad as well as good diversity of butterfly species.

Land Management Actions

The objectives of the Hunterston action plan, based on the key ecological features associated with the site and upon which management and monitoring are focused, are set out below together with the actions taken between 2017 and 2019 to meet those targets and achieve biodiversity gain.

- Manage the woodlands to achieve an uneven age structure with canopy, shrub understory and ground flora to improve their habitat potential for wildlife*

The mature woodland blocks are managed on rotation, with different areas subject to thinning, planting and/or rhododendron and scrub control each year to maintain an uneven age structure with canopy, shrub understory and ground flora, to improve their habitat potential for wildlife. Between 2017 and 2019 nine compartments were subject to management activities. Bird and bat boxes were checked annually, with damage repaired and broken ones replaced, and in 2018 an owl box was installed in woodland close to the main station access road. In 2017, over 100 young trees were planted at Broomcraigs Plantation.
- Restore boundary features (where in keeping with the parkland landscape design) to act as functioning wildlife corridors and habitats*

During 2016-17, approximately 1900m of hedgerow was planted across the estate. The planting of this large volume of new hedgerow prompted an update to the hedgerow management plan, within the ILMP, to further enhance the biodiversity potential of this resource on the estate and to secure the establishment of the new hedges. The condition of each hedge was surveyed and recorded in 2018 and in 2019 each section of hedgerow was subject to management fitting its status and biological needs. Measures implemented included cutting back of weeds and undesirables, planting up gaps, and protecting young plants from browsing by deer and hungry sheep.
- Manage the grassland habitats along the road verges and coast to improve species diversity*

Prior to 2015 the verges along the main station access road were mown frequently, and uniformly, for amenity purposes. They provided only a very limited resource for biodiversity. Since 2015, a less intensive mowing regime has been implemented with the aim of increasing floristic diversity, to benefit invertebrates (particularly pollinators), whilst still providing areas of short grass for foraging oystercatcher, curlew, and song thrush. To supplement natural floristic diversity, thirty trays of plug plants along with a number of pots of selfheal, bugle, foxglove, wild marjoram and mullein were planted in October 2019.

Following operational activities, an area of coastal grassland was reseeded and restored in 2017. This area is now subject to annual monitoring together with an area of marsh habitat. Good species diversity is routinely reported with parts of the marsh identified

as 'purple moor-grass and rush pasture' a priority habitat in Scotland (as per the Scottish Biodiversity List).

- *Protect and manage waterbodies to maintain water quality*

As cattle, grazing in the pasture surrounding the pond, were causing damage to floating and submerged aquatic plant life a fence and gate were installed in 2019. The aim of this is to improve conditions in the pond which would allow vegetation to flourish and provide a source of shelter and materials for aquatic species.

- *Monitor and control invasive species, particularly Himalayan balsam*

There are two invasive non-native species on the estate: Himalayan balsam and common rhododendron, both of which are actively managed to minimise their presence. To provide cover and berries for birds, an area of encroaching sea buckthorn was cleared in 2016, routinely sprayed with a herbicide to reduce grass dominance, and then planted with native shrubs in winter 2017.

Other positive works for biodiversity include the establishment of a winter bird seed crop in 2018 in arable land on the estate. Buckwheat, triticale, spring wheat, linseed and fodder radish seeds were sown. Within the locality of Hunterston, arable farming is principally based on winter crops which leaves a very limited overwinter food resource for wild birds. The establishment of this winter seed crop will provide a good resource for overwintering birds on the estate.

Torness Overview

The Torness site extends to approximately 144ha of which 29.7ha comprises operational land (power station and associated infrastructure). 71.5ha of the site is land in active agricultural use. To the east of the station is an area (19ha) of semi-improved neutral grassland, formally a contractors laydown/compound area. At Skateraw, the estate covers a small area of semi-natural broadleaved woodland, located within a steep sided gully, through which flows a narrow stream. There is a small woodland plantation on the southern boundary of the estate near Thorntonloch. The site supports a range of breeding birds and various notable species including otter, brown hare, bats and common toad.

Neighbouring the site to the north is the Barns Ness Coast SSSI, another site of national importance to nature conservation.

Land Management Actions

The objectives of the Torness action plan, based on the key ecological features associated with the site and upon which management and monitoring are focused, are set out below together with the actions taken between 2017 and 2019 to meet those targets and achieve biodiversity gain.

- *Maintain and enhance grassland habitats*

Grassland plots were established in 2014 in four different grassland locations around the Torness estate. During the period 2017-2019, these plots were strimmed and the arisings removed - once in spring and once in autumn. The aim of this management is to prevent coarse grass species from outcompeting less vigorous grasses and wildflowers. This will enhance the grassland habitat for butterflies and other invertebrates whilst maintaining areas of shelter and a food resource for passage birds.

Ragwort control is undertaken at the estate; although a culture of tolerance is also employed to this species, as ragwort benefits a number of different invertebrate species. In 2018, hand pulling was required to maintain this species at a desirable level for biodiversity.

In 2019, the decision was taken to retain vegetation establishing on bunds which had been created when a new outage car park was built in 2018. This was instead of attempting to reseed the bunds with wildflower mix as planned. The intention is to see how this area continues to develop as the ruderal vegetation establishing was benefiting invertebrate and bird species (noted during monitoring). Moreover, given the dominance of coarse grasses and ruderals at this location, establishing wildflower grassland on the bunds would be challenging, with a high risk of failure. To maintain the establishing habitat, the bunds were strimmed in late summer (August / September) 2019.

- *Maintain woodland and scrub habitats (as landfall shelter to passage birds)*

From 2017-2019, management of established woodland focussed on maintaining safe access and post storm checks. Work involved selective thinning /felling of trees and removal of unsafe branches as required. Management of younger planting focussed on encouraging establishment through replacement of unsuccessful planting, weed control, and checks on tubes and supports. In 2017, two scots pines were felled, the timber was then retained as log piles, and the brash left in neat windrows, to provide shelter and harbourage for small mammals and birds.

In 2019, 400 whips were planted in an area previously set aside for wildflowers. As a wildflower area (sown in 2013), this area had failed to thrive and so it was decided to transition it into a shrub belt to provide shelter for passage bird species. In December 2018, around 80 whips (young trees) were planted between the access road and the field to the south of the operational area. The mixture contained silver birch, hawthorn, hazel, holly, dog rose and honeysuckle.

- *Maintain farmland bird populations*

Bird boxes were checked annually between 2017 and 2019, with damaged boxes repaired or replaced, and in March 2019 woodpecker guards were installed on some boxes to protect smaller bird species during nesting season.

A winter bird feed crop was sown in 2017 with species including triticale, quinoa, kale, oil radish and linseed. However, it did not thrive and so in 2019 it was decided to shift focus onto the arable field margins present, as these were providing a better habitat for overwintering bird, with some sown with wildflowers while others were left to regenerate naturally after cultivation.

Sunflowers, planted in 2018, were left standing over the winter 2018/2019 and provided a large area of feeding habitat for the birds on site. EDF NG's tenant farmer was also encouraged to leave a field in stubble over winter 2018/2019 which provided overwintering birds with a valuable resource.

In 2018, signage was installed at various points across the estate to encourage dog walkers to keep their dogs on leads during the breeding season to protect ground nesting birds. In December 2019, several large capacity seed and fat ball bird feeders were placed within the woodlands by the Visitor Centre and within a few days had already been noticed by the resident sparrows.

- *Monitor and control invasive species where required (giant hogweed and burnet rose)*

Giant hogweed was first identified at Torness in 2014. This plant is a non-native and invasive species in the UK and can be harmful to humans if there is contact between the sap and skin. Between 2017 and 2019, annual checks of the giant hogweed site at Links Cottage were undertaken, every June, to determine if any plants had regrown. They had regrown in 2017 and 2019 and so the affected areas were treated. The aim of management is to eradicate this species from the estate.

There is a large continuous patch of burnet rose on the dunes at Thorntonloch. If left unmanaged this species could potentially dominate the dune habitat and outcompete other more ecologically desirable species. Between 2017 and 2019, the extent of burnet rose was monitored annually, with management action taken in each year to control the extent of growth. Management trials took place during this time to establish the most effective method of control. It was concluded that a combination of physical removal followed by ground rotavation to break up the roots, and stump treatment (in spring), was most effective.

- *Work in partnership with SNH to minimise impact of visitors on Barns Ness Coast SSSI, specifically the area that overlaps with EDF Energy landholding, to improve the condition of the SSSI interest features*

Major works to repair and replace steps leading down from the Coastal Footpath to the station seawall were undertaken in March 2019, repairing many years' worth of erosion and ensuring that visitors are encouraged to keep to the path. General maintenance and repair of fencing around the Barns Ness SSSI is routinely undertaken and comprised the replacement of c. 50 weathered and rotten posts in 2019 and c.35 in 2017. A stile was added to the fence next to Chapel Point in 2019 with the aim that this will prevent walkers straying from preferred routes and causing damage to adjacent areas of sensitive dune habitat.

The slipway in Skateraw Bay, which is used by the general public to launch boats, was temporarily blocked off in autumn 2019 so that it could be repaired and missing/loose bollards could be replaced. These works will reduce damage to sensitive grassland habitat, which comprise part of the Barns Ness SSSI, through visitor pressure at this location.

Other positive works for biodiversity include a programme of rock rose planting, which was initially started in 2015/2016, at the Lime kiln to the north of the estate. Planting was supplemented in 2017. Stones were placed around the new transplants to minimise competition from grasses and also to make it easier to spot the plants when strimming the surrounding embankment. The aim of this work is to provide on-site habitat for northern brown argus butterflies, which are known to be present in East Lothian, but have yet to be recorded at Torness. Rock rose is the favoured food source for this species of butterfly.

Six new bat boxes were installed in woodland at Skateraw woods and twelve within the wider estate in 2018. This brings the Torness estate total to 23 bird boxes, 24 bat boxes and 2 owl boxes.

4. Monitoring

Regular biodiversity monitoring is completed at both Hunterston B and Torness to ensure compliance with the Biodiversity Benchmark accreditation and to assess progress against EDF NG BAP objectives.

Hunterston B

The following biodiversity monitoring surveys are undertaken at Hunterston B, with an ad-hoc record of wildlife sightings also kept:

Group	Frequency of monitoring	Year of most recent monitoring to this report
• breeding birds	biennially	completed 2019;
• wintering birds	biennially	completed 2018/2019;
• bat roost checks	annually	completed 2019;
• grassland habitat	3-year intervals	completed 2019;
• butterflies	annually	completed 2019; and
• ponds	annually	completed 2019.

Using the results of the biodiversity surveys, progress towards the Hunterston Biodiversity Action Plan objectives have been assessed as follows for the period 2017 and 2019 (**Table 1**).

Table 1 – Hunterston B Action Plan Objective Assessment

Objective	KPI	Target	Assessment result 2017	Assessment result 2018	Assessment result 2019
Manage the woodlands to achieve an uneven age structure with canopy, shrub understory and ground flora to improve their habitat potential for wildlife	Number of breeding bird species within woodland areas	Minimum of 20 species recorded per year	ACHIEVED 32 species were recorded as breeding (confirmed/probable) territories	NOT ASSESSED No breeding bird survey was undertaken in 2018.	ACHIEVED A total of 35 species were recorded as breeding.
	Presence of bats in boxes	Continued use of the boxes by bats	ACHIEVED 8 bat boxes confirmed as used by bats in 2017 plus the veteranisation feature.	ACHIEVED 5 bat boxes confirmed as used by bats in 2018.	ACHIEVED A total of 15 confirmed bat roosts have now been recorded, with the addition of a new roost in a previously unused bat box in 2019. Eight soprano pipistrelle bats (male and female, adult, and juveniles) were found within a total of 5 boxes. Species was confirmed by DNA analysis of droppings.

Objective	KPI	Target	Assessment result 2017	Assessment result 2018	Assessment result 2019
Restore boundary features (where in keeping with the parkland landscape design) to act as functioning wildlife corridors and habitats	Metres of new hedgerows planted or restored	Restore 250m of hedgerow and stone walls over 5yr period	ACHIEVED 1500m of new hedgerow planted in 2017 although some of this is likely to fail due to winter water logging	ACHIEVED Condition assessment survey undertaken in 2018.	ACHIEVED Following planting in 2016 and 2017, successful management was carried out throughout 2019.
Manage the grassland habitats along the road verges and coast to improve species diversity	Number of lowland meadow grassland indicator species	Presence of ten grassland indicator species across the site	NOT ASSESSED This indicator was not monitored in 2017.	NOT ASSESSED This indicator was not monitored in 2018.	ACHIEVED Botanical survey conducted over a longer area than in 2016. A total of 13 indicator species were recorded.
	Number of butterfly species	Minimum of five species recorded per year	ACHIEVED Twelve species of butterfly were recorded in 2017	ACHIEVED 14 species of butterfly were recorded in 2018 within transects.	ACHIEVED 13 species of butterfly were recorded in 2019: a significant increase from the seven recorded in 2016 and the three species seen in 2015.
Protect and manage waterbodies to maintain quality	Condition of ponds	Achieve 'brilliant' pond condition on an annual basis (based on The Freshwater Habitats Trust Big Pond Dip method)	IN PROGRESS The Big Pond Dip was completed in 2017 and the pond scored 22. This is classified as 'Good'. However, the survey confirmed that the pond is a mix of freshwater and saltwater (with saline intrusions from the sea).	IN PROGRESS The Big Pond Dip was completed in 2018 and the pond scored 27. This is classified as 'Good', and is only 3 points away from a classification of 'Brilliant'.	ACHIEVED The Big Pond Dip was undertaken in 2019; and the pond achieved a 'Brilliant' rating.
Monitor and control invasive species, particularly Himalayan balsam and Rhododendron	Treatment of invasive species completed	Undertake annual treatment and/or management of invasive species	ACHIEVED Himalayan balsam is being controlled, and rhododendron has not increased in distribution	ACHIEVED Himalayan balsam and Rhododendron are both being controlled.	ACHIEVED Both Rhododendron and Himalayan balsam continued to be controlled in 2019. The rhododendron has not shown an

Objective	KPI	Target	Assessment result 2017	Assessment result 2018	Assessment result 2019
					increase in distribution through informal monitoring since 2016.

Biodiversity highlights from the monitoring period 2017 to 2019 include:

- The third Wintering Bird Survey was undertaken over 2018/19 - 79 different species were recorded, the same number as in 2016/17. Eight of these were recorded during the survey for the first time: Canada goose, goosander, peregrine, long-eared owl, greenshank, water pipit, raven and brambling.
- Occupation by bats was identified in ten features during the 2019 bat survey, compared to just five in 2018. This increases the total confirmed or possible bat roosts recorded across the estate since 2016 to 15.
- Despite no moth trapping being carried out in 2019, five new moths were added to the moth list, bringing it to 60 different species recorded on transects and through trapping. In 2017, *Agriphila latistria*, a species of grass moth was found during night trapping which was a new record for Ayrshire. This species is usually found on dry heaths and coastal sand dunes, mainly in southern U.K.
- In 2017, a pair of oystercatcher nested on the island in the pond.

Torness

The following biodiversity monitoring surveys are undertaken at Torness on a regular basis, with an ad hoc record of wildlife seen also kept:

Group	Frequency of monitoring	Year of most recent monitoring to this report
• breeding birds	annually	completed 2019;
• wintering birds	annually	completed 2018/2019;
• grassland habitat	3-year intervals	completed 2017;
• butterflies	annually	completed 2019;
• Invasive species	biennial	completed

Using the results of the biodiversity surveys, progress towards the Torness Action Plan objectives have been assessed as follows for the period 2017 and 2019 (**Table 2**).

In addition to the formal monitoring surveys, the following informal surveys are also completed on the Torness estate:

Group	Frequency of survey	Year of most recent monitoring to this report
• bat surveys	annually	completed 2019;
• moth trapping	annually	completed 2019.

Table 2 – Torness Action Plan Objective Assessment

Objective	KPI	Target	Assessment result 2017	Assessment result 2018	Assessment result 2019
Maintain and enhance grassland habitats	Lowland meadow: Species-richness of managed plots	Achieve 25% greater species-richness within the managed plots than unmanaged	IN PROGRESS Three of the plots are more species diverse than the surrounding grassland. One plot currently supports	IN PROGRESS The next botanical survey is due in 2020.	IN PROGRESS The next botanical survey is due in 2020.

Objective	KPI	Target	Assessment result 2017	Assessment result 2018	Assessment result 2019
		monitored areas over five years	fewer species than surrounding grassland. The average species-richness within the managed plots is currently 14.25%. Whilst this is a positive indication, it is only the third year of vegetation monitoring of the plots so it is still too early to draw any firm conclusions.		
	Number of butterfly species	Minimum of 10 species recorded per year	ACHIEVED 14 species recorded	ACHIEVED 16 species recorded	ACHIEVED 16 species recorded.
Maintain woodland and scrub habitats (as landfall shelter to passage birds)	Extent of woodland and scrub habitats	No net loss of habitat area over five-year period	IN PROGRESS A commitment remains to replant the small amount of scrub that were in 2016 due to development works required to maintain the power station.	ACHIEVED The commitment to replant the small area of scrub lost to development works has been completed in 2018.	ACHIEVED No net loss of habitat area. Small increase achieved by planting c. 150m ² of scrub in the former Thorntonloch wildflower strip
Maintain farmland bird populations	Number of breeding bird species	Minimum of 25 species recorded per year	ACHIEVED 31 species recorded as breeding in 2017.	ACHIEVED 29 species recorded as showing signs of breeding in 2018.	ACHIEVED 29 species recorded as breeding in 2019.
	Number of wintering bird species	Minimum of 30 species recorded per year	ACHIEVED 54 species recorded in Winter 2016/2017.	ACHIEVED 50 species recorded in Winter 2017/2018.	ACHIEVED 61 species recorded in winter 2018/2019.
Monitor and control invasive species where required (giant hogweed and burnet rose)	Treatment of invasive species completed	Undertake annual treatment and/or management of invasive species	ACHIEVED Giant hogweed plant has been removed and treated. The area of burnet rose re-growth has been effectively managed.	ACHIEVED The area of burnet rose re-growth has been effectively managed.	ACHIEVED Giant hogweed plant was treated. Areas of burnet rose have also been managed
Work in partnership with SNH to minimise impact of visitors on Barns Ness Coast SSSI, specifically the area that	Presence and condition of measures to	Ensure all measures to minimise disturbance are implemented and	ACHIEVED Barriers to minimise public access have	ACHIEVED Steps have been repaired. Campfire	ACHIEVED Steps on Coastal Path have been repaired.

Objective	KPI	Target	Assessment result 2017	Assessment result 2018	Assessment result 2019
overlaps with EDF Energy landholding, to improve the condition of the SSSI interest features	protect SSSI features	maintained over duration of BAP	been repaired and maintained.	and BBQ use are being monitored.	Bollards have been replaced. Campfires and BBQ continue to be monitored.

Biodiversity highlights from the monitoring period 2017 to 2019 include:

- The 2019 Invertebrate survey achieved the second highest annual total since recording began at Torness in 2013 with 1179 individual butterflies counted on transects.
- The Torness butterfly species list now stands at 16 species (achieved in 2019 and 2018).
- Although not directly related to a BAP objective, moth surveys have been on-going at the site for a number of years. In 2019, twelve new to site moth species were recorded, bringing the total moth list to 179, which is an increase of 40 on the previous year. The 12 new species records for the site are the bullrush wainscot, garden grass veneer, autumnal rustic, black rustic, feathered gothic, red line quaker, plantain leafminer, diamond black moth, *Scoparia pyralella*, *Cochylis atricapitana*, *Mompha subbistregella* and *Bryotropha domestica*. Feathered gothic is currently in the process of colonising East Lothian, with only a handful recorded by the County Moth Recorder. The bulrush wainscot was a surprise find, given that there are only a few of the required larval food plants of bulrush and lesser bulrush nearby, sometimes appearing in the reed bed in the sewage treatment stream. The caterpillars of this moth species live inside the plant stems.

5. Partnership

EDF aims to work with other conservation organisations, its tenants, the local community and its employees not only to foster a wider appreciation of the company's sustainable land management, but to actively involve others in decision making and the on-going management activities which result in a positive contribution to biodiversity. Generally, two land management meetings are held per annum for the Scottish estates to discuss management activities and biodiversity monitoring results, with local representatives attending from organisations such as Scottish Natural Heritage (now NatureScot), local Councils and local Wildlife Trusts. EDF also encourages residents and visitors to enjoy the ecological resources present on the non-operational parts of their estates through the provision of permissive paths, guided walks, visitor days, interpretation boards and facilities.

Hunterston B

Hunterston Visitor Centre celebrated an important milestone during July 2018 – with 17,000 visitors since its opening in 2012. Throughout the period 2017-2019, the Centre hosted visitors from schools, local interest groups and individuals wanting to learn a little more about the Station and biodiversity on the estate.

In 2017, seven interpretation panels were installed along the access road and public footpath. These received positive feedback from the public. These signs have been specially designed so that topics can be easily interchanged. Topics covered include Woodland, Species-rich grassland, Hunterston Marsh Rushland, Largs Avenue, Coastal Grassland, and Butterflies.

The Clyde and Argyll Fungus Group carried out a fungus foray at Hunterston in November 2019. Members of the group surveyed areas of cut grass, parkland and mature trees on the estate before continuing off-site to Goldenberry Hill Local Wildlife Site to survey grasslands, bracken, heathlands and local woodlands.

Torness

As in previous years, in 2017 the Station Visitor Centre organised a Nature Trail around parts of the estate during both the Easter and summer holidays to engage with local children. The focus of the 2017 trail was to spot different tree species. In 2018, the Nature Trail took on a magical theme and more than 600 children and their families attended. As visitors walked the route they had the chance to learn about nature and the magical world of fairies.

In the summer of 2017, an illustrated talk was given by local naturalist George Hogg to members of the East Lothian Nature Study Group entitled 'The Wildlife of Torness'. This talk was followed by a nature-inspired walk when visitors could view the active peregrine nest site, through telescopes, and observe the results of the land management practices in place at Torness for example the wildflower strips, self-sown field margins, bird feed crops, and rock rose colony.

In 2018, the Visitor Centre held a successful Nest Box Week with just over 200 visitors attending. Children made bird boxes to take home and bird feeders to hang in their gardens to give local wildlife a winter treat. Visitors were also encouraged to have fun testing their ornithology knowledge by identifying some of the native garden bird species which are resident in the local area.

The Torness Visitor Centre took part in the Marine Conservation Society's Great British Beach Clean in both 2017 and 2018. A total of 21.4kg of litter was collected over a distance of 600m in 2017. The majority of items collected during this activity were plastic based products. Other rubbish included construction materials, foil wrappers and fishing lines.

In 2019, the Torness Visitor Centre organised several events including another National Nest Box week, an 'Easter Egg Hunt', a 'Summer Safari' for nature, and a Christmas Cracker opening event for over 150 visitors. The visitor centre also took part in the Doors Open Scheme. During all of these events, biodiversity was a key theme.

Visitors are very much encouraged to use the network of permissive and public footpaths around the Torness Estate and in 2019, EDF repaired the steps on the section of the Coastal Path which passes through their estate.

6. The Wider EDF Estate

It is not just at Torness and Hunterston that EDF manages its non-operational areas with careful recognition of the key ecological features associated with its landholdings. Each of the other five power station sites (Hinkley, Sizewell, Dungeness, Hartlepool and Heysham) have their own individual ILMPs which include a set of objectives based on the key ecological features associated with that site and upon which management and monitoring are focused. These combined contribute towards the overall estate-wide biodiversity action plan.

In terms of the wider EDF NG estate, the contributions made by the seven sites towards the NG BAP estate-wide action plan objectives for 2017 to 2019 are set out in **Table 3**.

Table 3 – Estate-wide biodiversity action plan assessment

Theme	Objective	KPI	Target	2017	2018	2019
Conserve	Nuclear Generation will seek, wherever feasible, to conserve and enhance biodiversity at each of its principal sites, primarily through its approach to land management, but also through its business operations and the development of new assets.	Number of major landholdings accredited to the Biodiversity Benchmark Standard	Maintain accreditation across major landholdings	ACHIEVED All 7 nuclear station sites certified. Dungeness achieved the inclusion of the Long Pits in to the Biodiversity Benchmark adding an additional 133ha to the accreditation.	ACHIEVED All 7 nuclear station sites certified. An additional 189.5 ha were put into scope.	ACHIEVED All 7 nuclear station sites certified.
Partner	Nuclear Generation will seek to maintain and where appropriate develop further partnerships with selected stakeholders for the delivery of ecological improvement schemes on its land or in the vicinity of its main operational sites.	Number of land management meetings held per annum involving partners	Engage with local partners at a minimum of 18 meetings per annum across all sites	ACHIEVED 20 land management meetings held across the fleet.	ACHIEVED 19 land management meetings held across the fleet. EDF also attended Dungeness NNR partner meetings.	ACHIEVED 19 land management meetings held across the fleet. EDF also attended Dungeness NNR partner meetings.
Communicate	Nuclear Generation aims to increase the awareness of both its employees and local communities of biodiversity issues and the opportunities for its enhancement through education, participation and partnership.	Number of people engaged with biodiversity at site e.g. through events, volunteering etc.	Increase number of people engaged by 10% over a five year period.	ACHIEVED EDF engaged with a total of 6,860 people in relation to biodiversity. The majority of these were at Hartlepool and Heysham	ACHIEVED 8571 people attended wildlife events or volunteered with management work.	ACHIEVED EDF engaged with a total of 10,117 people in relation to biodiversity over the course of 2019. This is a 90% increase from the 2016 baseline and 18% increase from 2018.
Action	Biodiversity gain will be delivered through the implementation of the Site Action Plans	Percentage of positive outcomes for Site Action Plan KPIs	80% annually of planned surveys	NOT ACHIEVED 79% of KPIs fully achieved 16% KPIs in progress and 5% of KPIs not achieved	ACHIEVED 84% of KPIs are being achieved. 14% are In Progress and 2% are not currently being achieved.	ACHIEVED 91% of KPIs are being achieved. 7% are In Progress and 2% are not currently being achieved.

Monitor	Nuclear Generation will maintain a comprehensive ecological survey programme to facilitate the regular updating of the base data for each of its sites.	Completion of monitoring surveys detailed in ILMPs and BAP	80% of surveys planned each annum completed	ACHIEVED With the exception of Sizewell which achieved 80% of its programmed surveys, the remainder of the sites all completed 100%	ACHIEVED 100% of surveys planned for 2018 were completed	ACHIEVED 100% of surveys planned for 2019 were completed
Report	Nuclear Generation will report to partners and stakeholders on our biodiversity performance.	Number of reports issued per annum providing information on biodiversity performance	A minimum of one annual report per site and one mid-year update (e.g. newsletter).	ACHIEVED Annual report for 7 stations and 4 quarterly newsletters.	ACHIEVED Annual report for 7 stations and 4 quarterly newsletters.	ACHIEVED Annual report for 7 stations produced. The newsletter switched to biannually with 2 newsletters produced.

A few biodiversity highlights from across the wider EDF NG Estate:

- In 2019 the white-letter hairstreak butterfly was recorded for the first time on the Estate at Hartlepool. This species is of high conservation importance in the UK.
- Our habitat management work has boosted the number of critically endangered red hemp-nettle at Dungeness by a staggering 2200% in six years (from 23 in 2013 to 605 in 2019).
- There are over 100 bat boxes across the NGL Estate and seven of the 18 UK bat species have been recorded using them for roosting
- In October 2019 EDF assisted with the installation of an aerial at Dungeness specifically to help with tracking the movements of migrating birds.
- In spring 2019 Cetti's warbler returned to breed in the reedbeds at HPB for the first time in eleven years, something which we hope our land management activities have contributed to.

Appendix A - Legislation

Nature Conservation (Scotland) Act 2004: Part 1 Biodiversity

1 Duty to further the conservation of biodiversity

- (1) It is the duty of every public body and office-holder, in exercising any functions, to further the conservation of biodiversity so far as is consistent with the proper exercise of those functions.
- (2) In complying with the duty imposed by subsection (1) a body or office-holder must have regard to—
 - (a) any strategy designated under section 2(1), and
 - (b) the United Nations Environmental Programme Convention on Biological Diversity of 5 June 1992 as amended from time to time (or any United Nations Convention replacing that Convention).

2 Scottish Biodiversity Strategy

- (1) The Scottish Ministers must designate as the Scottish Biodiversity Strategy one or more strategies for the conservation of biodiversity (whether prepared by them or by one or more other persons).
- (2) The Scottish Ministers must publish any strategy so designated in such manner (including on the internet or by other electronic means) as they think fit.
- (3) A strategy so designated may include different provision for different cases or types of case.
- (4) Within one year of a strategy being so designated, the Scottish Ministers must publish, in such manner (including on the internet or by other electronic means) as they think fit, lists of—
 - (a) species of flora and fauna, and
 - (b) habitats considered by the Scottish Ministers to be of principal importance for the purpose mentioned in section 1(1).
- (5) The Scottish Ministers may from time to time review any lists published under subsection (4).
- (6) Where, following such a review, the Scottish Ministers consider that any such lists should be revised they must publish revised lists under that subsection.
- (7) The Scottish Ministers must, within 3 years of the date on which—
 - (a) they first designate a Scottish Biodiversity Strategy, or
 - (b) a report was last laid under this subsection, lay a report before the Scottish Parliament regarding the implementation of the strategy.

[^{F1}2] Reports on compliance with biodiversity duty

- (1) A public body must prepare and publish a biodiversity report within 3 years of—
 - (a) the base date,
 - (b) the date on which a report was last published by the body under this subsection.
- (2) A biodiversity report is a report on the actions taken by the body in pursuance of its duty under section 1 during the period to which the report relates.
- (3) The base date is—
 - (a) the date on which section 36 of the Wildlife and Natural Environment (Scotland) Act 2011 (asp 6) comes into force, or
 - (b) where the body is established after that date, the date on which the body is established.
- (4) A report under this section—
 - (a) is to be prepared in such form and published in such manner as the body thinks fit,
 - (b) may be incorporated within another report prepared or published by the body.]