

Appendix D (Ecological impact)

ECOLOGICAL IMPACTS

Summary

The EDF proposal to transform agricultural and wildlife rich land into salt marsh will have a negative ecological impact on current land and estuary biodiversity. It is unethical to destroy one unique wildlife-rich habitat to create another. Large swathes of land along the seawall and inland in Kingston Seymour is environmental conservation land which is protected by law. Kingston Seymour is part of the Severn Estuary Special Area of Conservation (SAC) under the EU Habitats Directive, a Special Protection Area (SPA) under the Birds Directive and a Ramsar site under the Convention on Wetlands of International Importance. In addition, large parts of farmland host important Sites of Special Scientific Interest (SSSIs).

Natural England, The Avon Wildlife Trust, YACWG and Kingston Seymour residents (including wildlife experts like Chris Sperring) have all conducted wildlife surveys in Kingston Seymour which provide clear evidence that Kingston Seymour is a wildlife rich and biodiverse habitat which hosts many critically endangered seabirds, birds, insects and invertebrates, wildlife and flora and fauna. There is evidence that this wildlife would not survive or thrive in a more saline environment. It is highly unethical to seek to destroy one habitat to create another, and it is highly unlikely that Natural England would support EDF's proposal, given its devastating effect on current wildlife habitats which support many endangered species.

We have evidence to show that Kingston Seymour land proposed for EDF salt marsh is home to a large number of endangered and rare birds, bats, owls, great crested newts, river otters, badgers as well as rare endangered orchids, Slender hare's-ear *Bupleurum tenuissimum*, SPA/RAMSAR birds and flora and fauna.

- An Avon Wildlife Trust survey of Pool Farm on Ham Lane Kingston Seymour found 63 invertebrates including Amber Snail, 15 types of beetle, Bivalve mollusc, Bladder snail, Hoglouse, Leeches, Mayfly, Mus snail, Pond snail, Ramshorn snail (5 different species), 2 types of Shrimp (native and non-native), True bug, True fly, Valve snail, Water boatman (5 species). Of the 63 invertebrates found, only one Shrimp *Gammarus zaddachi* is able to tolerate brackish water or any salinity. The remaining species are unable to tolerate any salinity. 49 plant species were identified in the survey which were either intolerant to salinity or were slightly tolerant. Only a few plants tolerated both saline and non-saline environments.
- Bird surveys by Yatton & Congresbury Wildlife Action Group (YACWG) in 2023 and 2024 counted 589 birds across 39 species in Spring and 1489 birds in Winter across 47 species. Surveys show a significant number of critically endangered birds are dependent on the current wild-life habitat in Kingston Seymour. Red list birds include Greenfinch, Starling, House Sparrow, Mistle Thrush, Fieldfare and Herring Gull. Amber List birds include Shelduck, Kestrel, Song Thrush, Wren, Bullfinch, Sparrowhawk, Rook, Lesser black-backed gull, Moorhen, Redwing, Dunnock and Meadow Pipit. Any destruction of or

change to habitat including removal of hedgerows or breeding grounds would have a severe detrimental effect on the survival of these rare and endangered bird species.

- There have been multiple sightings of Firecrest, Fieldfare, Tawny Owl, Barn Owl, Little Owl, Greenfinch, Tree Sparrows, Wagtails, Swallows, Buzzards and Kestrels at Mendip View Farm and by the Congresbury Yeo recently in 2024 and in previous years. These are incredibly rare and endangered birds which thrive in the unspoilt habitat of Kingston Seymour.

Natural England Research

The Natural England research below outlines the areas of Kingston Seymour which are protected under regulation 63 of the Habitats Regulation 2017 ('Habitats Regulations Assessment') and other UK legal instruments.

Natural England. Assessment of the Coastal Access programme under regulation 63 of the Habitats Regulations 2017 ('Habitats Regulations Assessment')

Assessment of England Coast Path proposals between Aust and Brean Down on the:

- Severn Estuary Special Area for Conservation (SAC), Special Protection Area (SPA) and Ramsar site,
- the Mendips Limestone Grasslands SAC,
- the Chew Valley Lakes SPA,
- the Somerset Levels and Moors SPA and Ramsar site, and
- the North Somerset and Mendip Bats SAC.

25 July 2019

<https://n-somerset.gov.uk/sites/default/files/2023-05/CD8.18%20Natural%20England%20Aust%20Brean%20Down%20Habitats%20Regulations%20Assessment.pdf>

Summary of main points

This Report summarises the main wildlife interests for the Kingston Seymour stretch of coast in Table 1, which includes **subtidal and intertidal habitats** and **non-breeding waterbirds in internationally important numbers on the Severn Estuary, both on passage and over winter.**

In summary, the main habitats and birds that require conservation include the following:

- **Severn Estuary is a Special Area of Conservation (SAC), Special Protection Area (SPAR) and Ramsar site which hosts internationally important numbers of non-breeding waterbirds, intertidal and subtidal habitats, fish and vascular plants.**
- **The Severn Estuary hosts a North Somerset and Mendip Bats Special Area of Conservation (SAC) for the Lesser horseshoe bat *Rhinolophus hipposideros* and the greater horseshoe bat *Rhinolophus ferrumequinum*.**
- **An erosional trend for salt marsh in the area is blamed on lack of or inappropriate grazing and 'coastal squeeze'. Significantly, a loss of 300 hectares**

of salt marsh was predicted by NE (which aligns with Dr Rob Kirby's research) offset by the creation of Steart Marsh.

- There are concerns that where salt marsh is eroding, waterbirds sheltering on the seawall may be more subject to disturbance at high tides, along the coastpath.
- Many birds and waterbirds use habitat in Kingston Seymour and along the seawall defence for their essential habitat during passage or for overwintering. Most of the birds and waterbirds identified are listed in The Birds of Conservation Concern 5 Red List and Amber List, as shown in the table below. In particular, Curlews, Dunlin, Ringed Plover, Skylarks and Whimbrels are on the Birds of Conservation Concern 5 Red List. Bar-tailed godwits, Common Sandpipers, Green Sandpipers, Grey Plover, Redshank, Shelduck, Snipe, Turnstone and Wigeon are on the Birds of Conservation Concern 5 amber List.
- Natural England's response to a Planning Application for the Congresbury Yeo Tidal Banks Realignment Scheme comments on notable wildlife in Kingston Seymour. The Report specifically mentions the need to protect: Great Crested Newts, badgers, Slender hare's-ear Bupleurum tenuissimum, SPA/RAMSAR birds. In addition, any bat, Otter and Great Crested Newt found in any surveys are fully protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and Schedule 2 of The Conservation of Habitats and Species Regulations 2010 (European Protected Species). Reptiles and wild birds including their nests and eggs are also protected under the former. Badgers are protected by The Protection of Badgers Act 1992. Removal of hedgerows damaged by salt incursion is also mentioned.

North Somerset and Mendip Bats SAC

B1.9 The North Somerset and Mendip Bats SAC is designated as a Special Area of Conservation for its limestone habitats and for the populations of lesser horseshoe bat *Rhinolophus hipposideros* and greater horseshoe bat *Rhinolophus ferrumequinum* which they support [Ref. 34].

B1.8 The site consists of several discrete limestone outcrops, the nearest of which is 6.5 Km from the tidal sluice at Tutshill (map D2), the nearest land that could be affected by the proposals. There is a possibility that lesser and greater horseshoe bats from this SAC could interact with the coastal access proposals because they are mobile species and the SAC is included for consideration on that basis.

-

Table 1: Summary of the main wildlife interest

Interest	Description
Subtidal and intertidal habitats	The Severn Estuary is a wide coastal plain with a large tidal range. It supports numerous areas of subtidal sandbanks and reefs and intertidal reefs, saltmarsh, sand flats and mud flats. These features are important in their own right and as essential habitat for internationally important populations of waterbirds (see below) and fish.
Non-breeding waterbirds	Waterbirds occur in internationally important numbers on the Severn Estuary both on passage and over winter. The majority of waterbirds feed on the extensive areas of mud, sand and saltmarsh and often roost at the water's edge on saltmarsh and sea defence structures.

Natural England's approach was to ensure the protection of sensitive nature conservation under the Coastal Access Programme.

S3.4 On the Severn Estuary, the sensitivity of non-breeding waterbirds to recreational activity was identified as the main concern at an early stage: in particular the potential for increased disturbance at high tide, when feeding grounds are covered and birds gather to rest ('roost') or feed along the shoreline closer to where people already walk - or might be walking in the future, depending on the access proposals. Natural England commissioned two reports to identify the high tide roosting places along the estuary [Ref 21] [Ref 58]. These reports informed the detailed design of the access proposals.

The Report outlines the high significance of the Severn Estuary for its unique tidal habitat and internationally important numbers of non-breeding waterbirds.

B1. Brief description of the European Sites(s) and their Qualifying Features

B1.1 The Severn Estuary SAC, SPA and Ramsar site together extend from Frampton-on-Severn in Gloucestershire downstream to Lilstock in Somerset and Penarth in the Vale of Glamorgan, Wales. They include all the coast from Aust to Brean Down.

Severn Estuary SAC

B1.2 The Severn Estuary is the largest example of a coastal plain estuary in the United Kingdom and one of the largest estuaries in Europe. It is designated as a Special Area of Conservation as an estuary, and for its subtidal sandbanks, biogenic reefs (here, of the honeycomb tubeworm *Sabellaria alveolata*), intertidal mudflats, sandflats and saltmarsh, and the populations of waterbirds, fish and vascular plants that it supports [Ref. 30].

Severn Estuary SPA

B1.3 The Severn Estuary is designated as a Special Protection Area for the internationally important numbers of non-breeding waterbirds that use it on passage and to overwinter [Ref. 35].

Severn Estuary Ramsar

B1.4 The Severn Estuary is designated as a Ramsar site because of its immense tidal range, its intertidal habitats and the communities of waterbirds, fish and vascular plants which they support [Ref. 20].

North Somerset and Mendip Bats SAC

North Somerset and Mendip Bats SAC

B1.9 The North Somerset and Mendip Bats SAC is designated as a Special Area of Conservation for its limestone habitats and for the populations of lesser horseshoe bat *Rhinolophus hipposideros* and greater horseshoe bat *Rhinolophus ferrumequinum* which they support [Ref. 34].

B1.8 The site consists of several discrete limestone outcrops, the nearest of which is 6.5 Km from the tidal sluice at Tutshill (map D2), the nearest land that could be affected by the proposals. There is a possibility that lesser and greater horseshoe bats from this SAC could interact with the coastal access proposals because they are mobile species and the SAC is included for consideration on that basis.

Table 3. Qualifying features

Qualifying feature	Severn Estuary SAC	Severn Estuary SPA ¹	Severn Estuary Ramsar Site	Mendip Limestone Grasslands SAC	Chew Valley Lakes SPA	Somerset Levels and Moors SPA ²	Somerset Levels and Moors Ramsar site	North Somerset and Mendip Bats SAC
H1110 Sandbanks which are slightly covered by sea water all the time	✓							
H1130 Estuaries ³	✓		✓					
H1140 Mudflats and sandflats not covered by sea water at low tide	✓							
H1170 Reefs	✓							
H1330 Atlantic salt meadows (<i>Glauco-Puccinellietalia marimae</i>)	✓							
Assemblage of fish			✓					
S1095 Sea lamprey <i>Petromyzon marinus</i>	✓		✓					
S1099 River lamprey <i>Lampetra fluviatilis</i>	✓		✓					
S1103 Twaite shad <i>Alosa fallax</i>	✓		✓					
Allis shad <i>Alosa alosa</i>			✓					
Atlantic Salmon <i>Salmo salar</i>			✓					
Sea Trout <i>Salmo trutta</i>			✓					
European eel <i>Anguilla Anguilla</i>			✓					
A037 Bewick's swan <i>Cygnus columbianus bewickii</i> (Non-breeding)		✓				✓	✓	

Qualifying feature	Severn Estuary SAC	Severn Estuary SPA	Severn Estuary Ramsar Site	Mendip Limestone Grasslands SAC	Chew Valley Lakes SPA	Somerset Levels and Moors SPA	Somerset Levels and Moors Ramsar site	North Somerset and Mendip Bats SAC
A048 Common shelduck <i>Tadorna tadorna</i> (Non-breeding) ⁴		✓	✓					
A051 Gadwall <i>Anas strepera</i> (Non-breeding)		✓	✓					
A052 Eurasian teal <i>Anas crecca</i> (Non-breeding) ⁴						✓	✓	
A056 Northern shoveler <i>Anas clypeata</i> (Non-breeding) ⁴					✓			
A137 Ringed Plover <i>Charadrius hiaticula</i> (Non-breeding)			✓					
A140 European golden plover <i>Pluvialis apricaria</i> (Non-breeding) ⁴						✓		
A142 Northern Lapwing <i>Vanellus vanellus</i> (Non-breeding) ⁴						✓	✓	
A149 Dunlin <i>Calidris alpina alpina</i> (Non-breeding)		✓	✓					
A158 Whimbrel <i>Numenius phaeopus</i> (Non-breeding)			✓					
A162 Common redshank <i>Tringa totanus</i> (Non-breeding) ⁴		✓	✓					
A394 Greater white-fronted goose <i>Anser albifrons albifrons</i> (Non-breeding)		✓	✓					
Waterbird assemblage (non-breeding)		✓ ⁵	✓			✓ ⁶	✓	
Wetland invertebrate assemblage							✓ ⁷	
6210 Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>)				✓				✓

Qualifying feature	Severn Estuary SAC	Severn Estuary SPA	Severn Estuary Ramsar Site	Mendip Limestone Grasslands SAC	Chew Valley Lakes SPA	Somerset Levels and Moors SPA	Somerset Levels and Moors Ramsar site	North Somerset and Mendip Bats SAC
4030 European dry heaths				✓				
8310 Caves not open to the public				✓				✓
9180 Tilio-Acerion forests of slopes, screes and ravines				✓				✓
1303 Lesser Horseshoe Bat <i>Rhinolophus hipposideros</i>								✓
1304 Greater Horseshoe Bat <i>Rhinolophus ferrumequinum</i>				✓				✓

Notes on table 3

¹There have been three reviews of the UK Network of SPAs to assess the network's sufficiency of protection for qualifying bird species. These reviews have made recommendations for the addition of various species as features of the Severn Estuary SPA and Somerset Levels and Moors SPA. None of these recommended features have been formally added as qualifying features of the respective SPAs and there are no current plans to do so. Such un-designated SPA review features are not therefore legally protected in the same way as qualifying features of SPAs, but are given due consideration in this assessment. In relation to the Severn Estuary SPA this applies to: wigeon *Anas penelope*, teal *Anas crecca*, mallard *Anas platyrhynchos*, pintail *Anas acuta*, shoveler *Anas clypeata*, pochard *Aythya ferina*, tufted duck *Aythya fuligula*, ringed plover, grey plover *Pluvialis squatarola*, lapwing *Vanellus vanellus*, whimbrel and curlew *Numenius arquata* [Ref 51].

²Subsequent reviews of the Somerset Levels and Moors SPA classification identified that the site then supported nationally important populations of gadwall, wigeon, pintail, shoveler, whimbrel and snipe *Gallinago gallinago* [Ref. 51]. These species have not been incorporated into the citation and there are no current plans to do so, but they form part of the assemblage feature and are given due consideration in this assessment (see note 1 above).

Salt marsh

Natural England comments on the changing nature of salt marsh along the Severn Estuary and how surveys conducted in 1998 found deterioration in some locations due to 'lack of, or inappropriate, grazing' and in 2010, localised gains and losses of salt marsh due to 'coastal squeeze'. More importantly, it predicts that '300 hectares of intertidal habitat (including intertidal mud and sand flats as well as salt marsh) will be lost by 2025'. The loss has been offset by compensatory schemes such as Steart Marsh.

D2.3 Saltmarsh (Atlantic salt meadows)

D2.3.1 It is estimated in 2000 that there is 1400 hectares of saltmarsh on the site comprising four distinct transitional vegetation communities from pioneer to transitional high marsh and incorporating characteristic steps (low cliffs) and pills (creeks) [Ref. 42, p.61].

D2.3.2 As part of the Supplementary Advice on Conservation Objectives published in 2009 [Ref. 42], Natural England set a target to maintain the saltmarsh feature in favourable condition. This means maintaining the attributes relating to: overall extent; extent, distribution and zonation of the component communities; species abundance; sward structure; characteristic landforms and the processes that create them; and the development of *Spartina anglica* saltmarsh into other communities [Ref. 42, p.60].

D2.3.3 Baselines were established for these attributes using survey work conducted in 1998; a Severn Estuary SSSI condition assessment in 2010 recorded deterioration in some locations, attributed to lack of, or inappropriate, grazing. Recreational pressure is not recorded as a factor in the 2010 condition assessment [Ref. 27]

D2.3.4 The 2010 condition assessment also recorded some localised gains and losses in overall extent. Recreational pressure was not recorded as a factor in these losses: the main pressure on



Assessment of the Coastal Access programme under regulation 63 of the Habitats Regulations 2017 (‘Habitats Regulations Assessment’)

saltmarsh habitat remains coastal squeeze, a process in which saltmarsh is trapped between rising sea levels and manmade sea defence structures. It was estimated that some 300 hectares of intertidal habitat (including intertidal mud and sand flats as well as saltmarsh) will be lost in this way by 2025 [Ref. 15], p.7]. This loss has been offset by compensatory schemes including Steart Marshes, at the southern end of the site beyond Brean Down.

D2.3.5 Site inspections between Aust and Brean Down confirm that there is currently no widespread damage to saltmarsh as a result of recreation on foot. Where damage has occurred, it takes the form of well-established, narrow pathways of bare ground and trampled vegetation across mid and upper saltmarsh communities. These pathways are typically visible on aerial photography dating back to 1999 [Ref. 16].

Waterbirds

According to the British Trust for Ornithology (BTO) Wetland Bird Survey, the Severn Estuary’s Waterbird assemblage is one of the 15 largest aggregations in the UK.

D2.4 Non-breeding waterbirds

D2.4.1 The Waterbird assemblage of the Severn Estuary is one of the 15 largest aggregations in the United Kingdom according to the British Trust for Ornithology (BTO) Wetland Bird Survey, the principal scheme for monitoring the UK's non-breeding waterbirds. It supports significant populations of waterbirds over winter, notably shelduck, gadwall, dunlin and redshank, and is an important staging area in summer/autumn and spring for migratory waterbirds, notably whimbrel and ringed plover. Non-breeding waterbirds from the nearby Chew Valley Lake SPA and Somerset Levels and Moors SPA visit the Severn Estuary, in particular during cold weather when their freshwater habitats are frozen, notably teal, shoveler, golden plover and lapwing.

D2.4.2 As part of the Supplementary Advice on Conservation Objectives for the Severn Estuary European Marine Site published in 2009 [Ref. 42], Natural England set targets to maintain the SPA waterbird features and their supporting habitats in favourable condition. Supporting habitats in this context include intertidal feeding areas and high tide roosting areas on upper saltmarsh, sea banks/seawalls and nearby wet grassland and freshwater habitats. Waterbirds sometimes roost and feed on wet grassland and freshwater habitats that are not part of the designated site. Where there is evidence that this takes place the land is treated as supporting habitat in this assessment.

Lapwings and curlew appear on the 'red list' of birds of special conservation concern.

There are concerns that where salt marsh is eroding, waterbirds sheltering on the seawall may be more subject to disturbance at high tides, along the coastpath.

D2.4.10 Most waders and some waterfowl are considered more vulnerable to disturbance at high tide, when available habitat is greatly reduced and many birds roost on or just above the waterline. There are places on the Severn where this effect is more pronounced because the belt of saltmarsh below the seawall has been lost to erosion and birds are roosting on or closer to the seawall instead. The reverse may also be true, in places where saltmarsh is accreting.

Greater horseshoe bats

D2.6 Greater horseshoe bats

D2.6.1 The Mendip Grassland SAC supports a significant population of greater horseshoe bats. In winter they rely on caves and other underground sites for undisturbed hibernation. Natural England's target is to maintain (or, if necessary, restore) the population of greater horseshoe bats. Disturbance to hibernation sites can cause the bats to desert them, or in leaving the site to lose energy in winter when food is scarce.

Assessment of sites along the coastal path and Kingston Seymour birds

Many birds and waterbirds use land in Kingston Seymour and along the seawall defence for their essential habitat during passage or for overwintering. Most of the birds and waterbirds identified are listed in The Birds of Conservation Concern 5 Red List and Amber List, as shown in the table below. In particular, Curlews, Dunlin, Ringed Plover, Skylarks and Whimbrels are on the Birds of Conservation Concern 5 Red List.

Bird Name	The Birds of Conservation 5 Red / Amber List
Curlew	Red List
Dunlin	Red List