

The RWE PEIR report says whelk, lobster, scallop, and cuttlefish, all will be unable to avoid disturbance, and this needs more assessment.

(We hope that more research will be done before this goes to planning, so we and the planning committees and officers can make an informed decision.)

At end ?

The offshore cable route lies adjacent to 2 MCZs Kingmere, designated for Black Sea Bream and Offshore Overfalls designated for several marine habitats.

1km from internationally important breeding grounds for Common Sandwich and Little Terns.

10km from the vast bird feeding grounds of Pagham Harbour.

Birds bit

The Climping Beach SSSI is an important overwintering ground for the Sanderling *Calidris alba*. It contains the internationally rare Vegetative shingle, grassy and sandy dunes.

The West Beach Nature Reserve, has same ground with also small salt marsh. It contains Common Lizard, Rare hymenoptera, burrowing bees, wasps and ants.

END of PEIR Report bit.

2

3rd top line

Bats. Affected by Collision, Lights, Noise, Air Turbulence.

The most bat research was done on land based turbines, where thousands of bats die every yr.

This could be extrapolated to these technically on shore turbines, as they now realise more bats are migrating from Europe. They are attracted to light, and to the insects similarly affected. Bats are sensitive to ultra sound, infra sound, and ultrasonic sound. More research is necessary.

E+C

The underwater habitat is also not researched enough. RWE says that hundreds of thousands of metric tons of sand and boulders will be cleared away to build the bases. No mention of the creatures and plants living there already. 2017 report says more work needed.

Fish and marine mammals are sensitive to sound in all its wavelengths. Even invertebrates move away. That is only ok if suitable habitat is nearby, not another cleared area. Disruption will occur.

11

Use of remote sensing habitat classification during covid.  
R1 considerable Use of levels of investigations as before .

Needs more work

They mention seahorses at Beachy Head ,Selsey, Bembridge, but not in the River Arun area where we have <sup>2</sup> sps. These are legally protected.

RWE state the turbines are being put here because they won't be battered by Atlantic waves.

“Decommissioning so far in the future for any meaningful consideration of cumulative effects with other developments , therefore, will not be addressed.

Birds affected by, Collision, Lights, Noise, Impact.

Turbines can act as a barrier array to the of migrating birds that cross out and back and along the south coast as well as killing them. 60,000 song birds migrate from Africa and Europe each year. Plus ducks, geese etc  
Construction is a threat to habitat, R2 expected to take 5 years. R1 took much longer than anticipated.  
RSPB prefers Wind turbines to be off the Isles or Scilly or the Dogger Bank.

Nature Conservation says direct impact at all stages.

④

Wrong Information in RWE Report

RWE states that the very rare Sand Lizard is found in this SSSI/LNR. It is not. Only site is /Ambersham ,Midhurst. Also states Gryllus campestris ,field cricket is there ,it is not .Only site in West Sussex is Pulborough Brooks  
Calibris alba is the proper name for Sanderlings ,it is not a separate sp.

There were many notable, and local (restricted distribution, so important) sps recorded at Climping beach and Nature Reserve over one night in July 1992. List available.

We don't know how far the 50 metre trench will go to these sites and the haul road along side it, or the potential for change.

Also says Climping Beach and LNR will not be avoided by HDD.

Latest maps published Oct. 2022 do not show exactly where the landfall is at the shoreline.

There are many records of Schedule 1 or Red list bird sps from the Littlehampton West beach /Climping area by Sussex Ornithological Society. [Lists can be provided]

So far RWE have only done desk based surveys (!)  
they say they are going to do more.

“Groundtruthing results which will subsequently produce a final high confidence EUNIS map.” European Nature Info.system.

③

Insects fly up to 1200mts high thus at the height of the turbines.

We have already lost about 70 per cent of our wildlife , we must preserve the rest.

RWE states NO SIGNIFICANT EFFECT ON ANYTHING.

More Bird stuff

Campaigns.England@rspb.org.uk says not enough known about migrating birds and interacting with turbines. More research needed before building windfarms offshore. "planning offshore Renewables in harmony with nature".

RSPB is concerned that the planning laws are inadequate ,and gambling with our marine life."We are deeply concerned that without a system change the UK will continue to lose nature and fail to reach 2030 offshore wind targets". Dec 2021.  
Has anything changed?

(6)

1 kilometre from internationally important breeding ground of Sandwich and Little Terns.

Insects

3.5 Trillion insects migrate across and back across the South Coast including the Sussex Bay each year.  
4 billion Hoverflies that breed and consume 10 trillion aphids each year.

Insects are the bottom of the food chain.  
Insects feed most animals directly , and humans and other animals via pollination. Loss of insects will reduce the population of everything until it is unviable.

None of the PIER /Scoping Reports mention the insect migration.  
This should be considered as it's within the boundaries of 315 square kilometres.

Rare sps already mentioned above.

European research finds that dead insects stuck on blades slow down the electricity yield.

Inspectorate asked for more Insect information RWE said it was not necessary they were using R1 Desk Based Study.

As R2 is more than twice the size of R1 any study done should be a Field Study.

(5)

2

Paint It Black

Experiment on colour of rotor blades.

Painting one of them black reduced the fatalities of birds by 70%, the greatest effect on Raptors.

3/ Franz Trieb 2018 Interference of flying Insects on Wind Parks(FlipWip) German publication.

Major report giving data on the insect parts stuck to Rotor Blades reducing efficiency.

DNA to identify sps must be done.

Research done on height of Wind turbines ,and effect of air movement on flying insects. This can also affect birds and bats.

4/ Hayes M.A. 2013 Bioscience 63(12) American Institute of Biological Sciences.

Bats killed in large numbers in USA Wind Farms. Estimation by many surveys of fatalities suggest over 600,000 bats have been killed.

The paper acknowledges the great difficulty in getting accurate data ,as the collection of dead /injured bats is extremely difficult. Many charts, graphs etc for information of method. More research needed.

Lots of References.

5/ Smallwood K.S. 2013 Wildlife Society Bulletin37(1) American publication

Large amount of Bats and Birds killed by Wind Turbines.

8000,000 bats 573,000 birds at 51 megawatts of installed capacity in USA in 2012.

Now it would be considerably more, and rising.

let top line

1

Report on effects of Wind Turbines on Insect, Bird and Bat sps

These papers are from Germany Norway, and America where much more recognition and research done on the impact of wind turbines on Migrators, and all other insects ,birds and bats. As the behaviour of these animals can be assumed to be similar in this country, the research is relevant, and important.

RWE appears to have ignored or is not aware of the vast amount of papers written about the impact of wind turbines on and offshore, on flying creatures other than birds, which they choose to ignore.

This country has appeared to do very little on this aspect. Other than Dr J Chapman of Exeter University , 2016, Rothamsted Research publication gives information about migrating insects across the south coast.

3.5 trillion insects migrate across southern England, at 150-1500 mtrs . The proposed "off shore" windfarm from 8 miles off the Sussex Coast is 325 mtrs .

The summarised information here from the following papers should be taken into account by RWE and the deciding authorities before any planning is given.

Great Britain has lost more of its Nature , ie, declining numbers and species than any equivalent country. We can and must do better. ( Its not rocket science , just "will" that is needed.

1/ Christian Voigt 2021 Conservation Science and Practice 3(5) German publication.

Insect Fatalities at Wind Turbines as Biodiversity Sinks.

Estimated 1.2 trillion insects killed each year.

1 turbine kills 40 million per annum in temperate zone.

Mainly migrating, swarming and hill-topping sps interact with turbines.

2/ R.May 2020 Ecology and Evolution 10 (16) Norwegian publication.

10/10/2014

3!

All of these refs have refs also!

Thursday, 25 May 2023

This document is a brief summary compiled from research and help from other people to assess the possible impact of the proposed Rampion2 wind farm on the migration of all animal sps . Together with Rampion1 , an unrelated windfarm , which will enclose the whole of the Sussex Bay.

The impact of wind turbines on migratory animals. [REDACTED] 2023

The RSPB, Wildlife Trusts, British Ornithological Union and others have made a case for avoiding bird migratory routes, or at least turning off turbines during the migratory seasons. This would cut the limited use of Rampion2 down from 37% to much less. I will not repeat this research.

The Bat Conservation Trust recognises the research done in other European countries and America. They acknowledge that more should be done here, as bats are being killed.

Insects are the numerically largest animal group to be destroyed by wind turbines.

#### EVIDENCE

Dr D.J. Chapman Exeter university 2016 ,Rothamsted Research publication states 3.5 trillion insects which is 3.5 tons of biomass, migrate across the South Coast at 150- 1500 metres. The proposed "Offshore Wind farm" is 325 metres high. This research was done by vertical radar.

Dr C.Voigt ,Kaiser et al, 2022 Global ecology and conservation 37

.Entitled ." Wind turbines without curtailment produces large numbers of Bat Fatalities: A call against Ignorance and Neglect" Migratory Bats collide with Wind Turbines which counteracts conservation efforts.

Rodrigues et al Eurobats publication 3 2008 :17-18 guidelines for consideration in wind farms.  
update " 3 2014 :3-79 How

As the UK is ecologically similar to Europe we must take notice of their research.

----- planning ,surveys, and technology can stop wind farms  
destroying nature .

Most people are aware of the Lepidoptera Rhopalocera, butterflies, that migrate here ie Painted Lady from Africa to UK and back, there are 9 other butterflies.

Newland and Still, 2010, Britains Butterflies, 2<sup>nd</sup> Edit.

## WSCC report

Landfall at Climping moved cable route boundary 350 metres to east.

WSCC are concerned about the lack of plans in the Report on this part of cable run .

TLS is also very concerned about the landfall site as there is an SSSI and Nature reserve in the vicinity, containing red list sps.

Archaeological info.

See article already provided.

The lack of ground research is very concerning. Information in all reports appears to come from Rampion 1 desk studies and extrapolating. This is not acceptable.

Planning Inspectorate

The inspectors will implement action plans to understand and reduce our environmental impacts.

Uk has lost over 70% off wild species since the seventies, this must stop, or humanity will not survive.

(7)

Thursday, 25 May 2023

3

RWE has not done the required research into the effect that wind turbines can cause. There are many inaccurate statements in the environmental scoping reports.

EG. In the Climping SSSI the lizard is the wrong species. " Sanderling and Calidris alba "  
Sanderling is C. alba.

Insects are the bottom of the food chain, if they are destroyed by anything the higher animals will not have food, pollinators will eventually die out then we will be in trouble.

Thursday, 25 May 2023

2

Migrating Lepidoptera Heterocera , moths, there are 112 migrating Large moths that are labelled Rare 13 that are labelled Red Data Book. Townsend and Waring 2019, Concise guide to moths of great Britain and Ireland 2<sup>nd</sup> Edit.

There are 1600 sps of Micro moth in UK, many of whom would be migrants. No figures as yet.

There are many more orders of insect that migrate across the south coast of uk.

Diptera , flies Syrphidea, hoverflies. Between 1 and 4 million hoverflies migrate into and out of uk each year. They consume 3-10 trillion aphids so provide an important pest control. They are also pollinators. Quote "Migrant hoverflies play a vital role due to declines of other beneficial insects".

Wotton et al, 2019, Current Biology 29, 2167-2173

Some Odonata ,dragonflies. The British Dragonfly Society have started a research programme to improve our understanding of dragonfly migration and reasons for it. The records of the migration in some European sps are increasing. The resident population of dragonflies are added to each year by European members of the same sps.

Christian Voigt 2021 conservation Science and practice3(5) Insect Fatalities at wind farms.

Franz Trieb 2019 ,German Aerospace Centre 26 March interview . insect parts stuck to Rotor blades reduces efficiency.

K.S.Smallwood 2013,Wildlife Society Bulletin 37 (1) American publication. 8000,000, Bats 537,000 Birds killed by 51 megawatts of installed capacity in USA in 2012.

All references throughout have references .

In 1990 the wind industry said that blades were too high, and insects fly too slow to be impacted.

Both WRONG.

Scientists have reported dead insects on WT blades for 3 decades in different regions of the world.

Germany says wind industry causes death of 1/3 of total insect migration in S. England, comparison scientists say that equals 1 trillion per year.

In 2007 researchers calculated that insects had been reduced by 50%, now 2023 it's by 70%.

Forbes Magazine, 2023 M. Schellenberger .

Telegraph. 2023 13th April J Pinkstone , Science correspondent. Quoted by windwatch April 14 2023 Diving bird numbers plunge 90% near offshore wind turbines.

18 Red list sps of insect found on Climping Beach SSSI and LNR.[ endangered]

Insects leave organic detritus on leading edge of blades therefore constitutes a significant problem for owners.

Much more research has been done in other European countries. [Htts://doi.org/10.1111/csp2.336](https://doi.org/10.1111/csp2.336)

Woodland Trust states ,Without insects we could not grow food .or sustain wildlife, which would be lost forever.

Birds

Climping Beach SSSI is an important overwintering place for *Calidris alba*, Sanderlings .

Birds that migrate out and back across the south coast include



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As the UK is ecologically similar to Europe we must take notice of their research.

Experiment on colour of Rotor Blades. Painting them black reduces fatalities of birds especially raptors, Sea eagles fly across south coast from the Isle of Wight.

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Inspectorate asked for more Insect information. RWE said not necessary , they were using R1 desk study information. Due to the obvious differences in size this is nonsense, also desk studies about insects are now unreliable.

Bird interference.

Telegraph. 2023 13th April J Pinkstone , Science correspondent. Quoted by Windwatch April 14 2023 Diving bird numbers plunge 90% near offshore wind turbines.

I support the opinions of RSPB , BOU, WLTs on the need for more research on birdlife and migratory and travelling habits.

[Campaigns.england@RSPB.org.uk](mailto:Campaigns.england@RSPB.org.uk) "Planning offshore renewables in Harmony with Nature"

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