

Written evidence submitted by The Wildlife Trusts

1. About The Wildlife Trusts

- 1.1. The Wildlife Trusts (TWT), with more than 800,000 members, are one of the largest UK voluntary organisations dedicated to conserving the full range of the UK's habitats and species, whether they be in the countryside, in cities or at sea. TWT manages 2,300 reserves covering more than 90,000 hectares of land including coastal reserves. We stand up for wildlife, inspire people about the natural world and foster sustainable living.
- 1.2. TWT support the Government's ambitions to tackle climate change and increase the proportion of overall energy generated from alternative sources. We recognise that climate change poses one of the biggest threats to the environment and will push species to their ecological limits. However, it must also be recognised that the environment also contributes to natural climate solutions. The delivery of low carbon energy to meet net zero by 2050 must not be at the expense of the environment and TWT firmly believe that future development needs to use the right technology in the right location.
- 1.3. TWT are one of the main eNGOs engaging in offshore wind farm development. We are actively involved in casework and have numerous places on both marine mammal and benthic ecology expert topic groups for individual developments. We engage at a strategic level with places on groups such as the Offshore Energy Strategic Environmental Assessment Steering Group, and are in regular discussions at a senior level with organisations such as Defra, The Crown Estate and Orsted. We are pleased to be able to bring our expertise to the Environmental Audit Committee and we outline our submission below.

2. Impacts of offshore wind development on the marine environment

- 2.1. TWT focus on two key areas of offshore wind farm development: the impact to marine mammals from underwater noise during construction and impacts of offshore wind farm installation and infrastructure on seabed habitats. We also recognise the threats posed to birds from offshore wind farm development but acknowledge RSPB's expertise in this area, who we work closely with. Below we have given an overview of the impacts.

2.2. Underwater noise impacts on marine mammals

2.2.1. The Southern North Sea, where the majority of offshore wind farm development is currently taking place, is a particularly murky environment and therefore the numerous marine mammals¹ which use the area navigate with sound rather than vision. Any noisy activities which take place within the sea can affect the ability of marine mammals to forage and to detect predators and mates. If noisy activities take place on a large scale across the range of a marine mammal, it will not only have the impact of causing hearing damage and disturbance but may reduce the survival ability of an individual and result in population declines.

2.2.2. Offshore wind farm construction is a particularly noisy activity. Firstly, the Southern North Sea is littered with Unexploded Ordnance (UXOs), remnants from the first and second world wars, which require clearance before offshore wind farm infrastructure can be installed. Secondly, offshore wind farm foundations are installed using huge hammers which cause underwater noise disturbance up to 26km from source for harbour porpoise. Add these activities together with other noisy activities which take

¹ Marine mammals regularly found in the Southern North Sea include harbour porpoise, bottlenose dolphins, minke whales, grey seals and harbour seals.

place in the Southern North Sea, such as seismic surveys, and the cumulative underwater noise impacts on marine mammals could result in population losses. Bearing in mind that there is currently around 10GW of offshore wind farms installed, a huge amount of construction activity will need to take place in UK seas to meet the Committee on Climate Change's target of 75GW by 2050. Therefore, the impacts of underwater noise if not managed correctly will pose a threat to all marine mammal populations in all regions of the UK's seas.

2.2.3. It is important to highlight marine mammal monitoring needs to be improved, particularly in the Southern North Sea, to understand a) the impact of underwater noise from offshore wind cumulatively with other noisy activities and b) if management and mitigation, much of which is in its infancy in the UK, is fit for purpose to reduce underwater noise impacts to ensure that we do not see population declines in marine mammals species.

2.3. Impacts to seabed habitats

2.3.1. Seabed or benthic habitats are at risk from offshore wind farm development. Impacts include:

- Loss of habitat - This can be temporary or permanent in nature and a particular risk to sensitive or irreplaceable habitats. Even when impacts are temporary, it takes a number of years for the seabed to recover.
- Disturbance of habitat- This is normally classed as temporary. However, in some circumstances there can be repeated disturbance to habitats which significantly extends recovery time. For example, developers aim to bury cables below the seabed, but in some circumstances cables become exposed which has resulted in repeated installation activity in MPAs (Marine Protected Areas), slowing the recovery rate of a site and putting the condition of the site at risk.

2.3.2. We are already seeing the decline in MPA condition (see section 5) due to offshore wind farm infrastructure. TWT is concerned about impacts to the benthic environment based on the targets to meet 75GW of offshore wind by 2050. Offshore wind farms need to be located in the least damaging areas of our seas and also using the right technology to ensure that there will not be a decline in the condition of UK seas.

3. What level of output can the sector deliver in the UK, and what Government support would be needed to achieve this?

3.1. This question carries a great deal of uncertainty when considering the sustainable development of offshore wind whilst ensuring the Good Environmental Status of our seas. TWT believe that if offshore wind farm development continues using the same approach and methods that have been used for the past 20 years, there will be a decline in the condition of the marine environment. To ensure the sustainable development of offshore wind without causing a decline in the marine environment, the following is required:

3.1.1. Strong decision making

Government must be coordinated and take a leading role in the future development of offshore wind. This will include strategic and spatial planning of future offshore wind farms to ensure that they avoid areas which are most sensitive for wildlife. Improvements to regulatory and consenting regimes are essential to achieve sustainable offshore wind farm development.

3.1.2. Evidence, research and tools

There must be investment in strategic monitoring and wider work to understand cumulative impacts and environmental limits to ensure sustainable development of offshore wind. Evidence gaps must be mapped, and a programme of research implemented. The development of assessment and management tools will be essential to enable future offshore wind farm development.

3.1.3. Good ecological management

A strong understanding of impacts from offshore wind farm development must be developed, which will inform best practice in future planning. Where damage to habitats takes place, loss will need to be compensated for on a like for like basis. All future planning for offshore wind development must also incorporate the impact on the MPA network and Good Environmental Status in decision making. In all circumstances, offshore wind farm development will result in an improvement to marine ecology.

3.2. Key actions required

TWT believe the Strategic Enabling Actions Programme (SEAMAP) announced in the Offshore wind Farm Sector Deal² is the best forum to oversee strategic work required to ensure the sustainable development of the sector. TWT recommends the following as the top 5 priorities as part of a programme of strategic actions for future offshore wind farm development:

3.2.1. Strategic monitoring and mitigation of underwater noise impacts on harbour porpoise within the Southern North Sea.

Although TWT welcomes the progress made on underwater noise management, we cannot currently agree that there will be no adverse effect on the Southern North Sea SAC from underwater noise, due to the lack of regulatory mechanism to manage cumulative impacts.

Investment in the development and implementation of a strategic programme of monitoring and mitigation is not only essential but urgently required based on the current roll-out of offshore wind farms. Future large-scale offshore wind farm deployment may not be possible without these mechanisms in place.

3.2.2. Identification of appropriate compensation, mitigation and enhancement approaches and mechanisms for delivery.

To enable future large-scale deployment of offshore wind, difficult questions on compensation, mitigation and enhancement must be asked and solutions found. Compensation is already being considered at a project level for a number of offshore wind farms³. TWT must emphasise that we consider it essential for a pause in decision making to be made at a project level to ensure strategic and project level conversations on compensation to run parallel to ensure the right outcome for developers and to ensure the long term coherence of the UK MPA network.

² Offshore Wind Sector Deal

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/790950/BEIS_Offshore_Wind_Single_Pages_web_optimised.pdf

³ For example, Hornsea Three <https://infrastructure.planninginspectorate.gov.uk/projects/eastern/hornsea-project-three-offshore-wind-farm/> and Norfolk Vanguard <https://infrastructure.planninginspectorate.gov.uk/projects/eastern/norfolk-vanguard/>

TWT recommend a series of stakeholder workshops to initially discuss the issues and suggest possible solutions. Discussions must centre around the ecological coherence of the MPA network and improvement to the Good Ecological Status of the marine environment.

3.2.3. Mapping of environmental and ecological evidence gaps to inform future offshore wind farm development resulting in the delivery of a prioritised monitoring and research programme

Targeted research and monitoring to gather evidence must be put in place to enable future offshore wind farm development. This should include a review of existing evidence, including that gained as part of consented schemes. A programme of work to address cumulative impacts should be prioritised. Existing research programmes should also be taken into account e.g. ScotMER⁴, Offshore Energy SEA research programme⁵.

3.2.4. Developing a truly spatial approach to marine planning

75GW by 2050 will not be achieved without the implementation of spatial planning. We propose that the offshore wind farm target of 75GW by 2050 is used as a marine spatial planning case study, which will result in an understanding in the spatial requirements required to achieve this target.

3.2.5. Development of a strategic approach to cabling to reduce the ecological impacts on the marine environment as well as limitations to future offshore wind farm deployment

The planning of future cable routes will be one of the major limitations in future offshore wind farm development. Access to the coast is becoming increasingly difficult with the range of infrastructure which is already in place within the sea and coastal areas. In addition, there is increasing pressure on the marine environment from cabling infrastructure and we are already seeing a decline in MPA condition from cabling. A strategic approach to future cabling must be considered to meet future ambitions for offshore wind farm development.

4. How might the UK take advantage of further technological advances in offshore floating wind technology, particularly in relation to floating arrays?

4.1. Floating wind may reduce environmental impacts in some circumstances, but it is important to highlight evidence gaps in terms of impacts on marine mammals and benthic habitats.

We propose that floating wind should be implemented at a small scale, potentially as pilot projects, to establish a good baseline and to monitor impacts in order to plan and mitigate against impacts of large-scale deployment. Potential impacts that require consideration are outlined below.

4.2. Marine mammals

Floating wind developments will require multiple tension lines and anchoring to keep installations in place. Despite the potential reduced underwater noise impacts on marine mammals during installation, there is little information on how tension lines would affect UK marine mammals, especially in terms of barrier effects. We would expect reduced underwater noise impacts on

⁴ ScotMER <https://www2.gov.scot/Topics/marine/marineenergy/mre/research>

⁵ Offshore Energy Strategic Environmental Assessment Programme
<https://www.gov.uk/government/publications/uk-offshore-energy-strategic-environmental-assessment-research-projects>

marine mammals from the installation of anchors, but further information would be required to give certainty around this.

4.3. Benthic habitats

The anchoring required for floating wind developments could also have benthic impacts, including the loss and disturbance of habitats. Floating wind infrastructure will be installed in deeper areas where less data is available on the type and sensitivity of benthic habitats. It is important to establish pilots to collect baseline data on benthic habitats in order to fully assess and manage the impacts of floating wind infrastructure on these habitats.

5. How well is the UK industry managing the environmental and social impacts of offshore wind farm installations, particularly on coastal communities with transmission-cable landing site?

5.1. TWT would like to highlight that a number of MPAs are already either in unfavourable condition due to offshore wind farm development or at risk from this activity. TWT are aware of impacts and threats to the following sites, however there may be other MPAs which have been placed into a negative condition due to offshore wind farm development:

- Haisborough, Hammond and Winterton SAC⁶

Condition assessment by Natural England states that the whole site is 100% in unfavourable condition, with offshore wind farm cables contributing to a loss of habitat within the site.

- Inner Dowsing, Race Bank and North Ridge SAC⁷

As above, condition assessment by Natural England states that that the areas which have been assessed are in unfavourable condition, with offshore wind farm located within the site contributing to a loss of habitat.

- The Wash and North Norfolk Coast SAC⁸

Condition assessment by Natural England states that the site is at risk from offshore wind farm cable installation.

5.2. Offshore wind farm cabling poses a significant threat to MPAs. As highlighted, we are already seeing a decline in MPA condition from existing offshore wind farms and the threat will only increase from multiple offshore wind farm projects in the pipeline in the Southern North Sea. We are aware of concerns being raised about the impact of multiple offshore wind farm cables along the east coast from an onshore perspective but must emphasise that the threats to the marine environment are also significant. As outlined in section 3, TWT are calling for a strategic approach to offshore wind farm cabling. To achieve this, a review of the regulatory mechanism for cabling will be required. In addition to this, there must be a join up between onshore and offshore discussions regarding a strategic approach to cabling.

⁶ Site condition for Haisborough, Hammond and Winterton SAC

<https://designatedsites.naturalengland.org.uk/MarineCondition/publicFeatures.aspx?SiteCode=UK0030369&SiteName=hais&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=>

⁷ Site condition for Inner Dowsing, Race Bank and North Ridge SAC

<https://designatedsites.naturalengland.org.uk/MarineCondition/publicFeatures.aspx?SiteCode=UK0030370&SiteName=inner%20dowsing&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=>

⁸ Site condition for The Wash and North Norfolk Coast SAC

<https://designatedsites.naturalengland.org.uk/MarineCondition/publicFeatures.aspx?SiteCode=UK0017075&SiteName=wash&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=>

- 5.3. As highlighted earlier in this submission, risks to the marine environment are not just a consequence of offshore wind farm cabling and the impacts of all offshore wind farm infrastructure must be considered. As outlined in section 3, much work is required to ensure that offshore wind farms will not be at the expense of the environment, including better planning of future offshore wind farm development to ensure the right technology is placed in the right location.
- 5.4. With regards to managing the impact of underwater noise, especially disturbance impacts, we have much further to go. Both Defra and Regulators have taken positive steps to develop management within harbour porpoise SACs, but further work is required to ensure management is fit for purpose. This will involve ensuring appropriate regulatory mechanisms are in place to manage cumulative underwater noise impacts and the implementation of strategic monitoring to measure the effectiveness of management measures and put corrective measures in place if necessary. It is important to raise that TWT are calling for a strategic approach to monitoring within harbour porpoise SACs, which developers support, but a delivery mechanism is not in place. Finally, it must be recognised that managing the disturbance impacts of underwater noise is focused only on harbour porpoise SACs. Although harbour porpoise are particularly sensitive to underwater noise impacts and management put in place for porpoise may be effective for other marine mammal species, this may not always be the case due to how marine mammals detect underwater noise. In addition, there may be geographical gaps in underwater noise management in locations which are particularly important for certain marine mammal life cycles. This must be considered in wider underwater noise management in relation to offshore wind farm development.

May 2020