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BirdWatch Ireland submission/observation to An Bord Pleanála Case OA07.321697 (Sceirde Rocks Offshore Wind Farm)

A submission by staff at BirdWatch Ireland

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Introduction

BirdWatch Ireland is Ireland's leading charity focused on the conservation of wild birds. Established in 1968, we currently have over 15,000 members and supporters and a local network of over 30 branches nationwide. As an organisation, our conservation team is actively involved in seabird conservation, research, and monitoring. Our policy and advocacy team are active stakeholders contributing to marine conservation at a national and EU level. We are the Irish partner of Birdlife International and are members of the Irish Environmental Network, Stop Climate Chaos, and the Sustainable Water Network, and a founding partner of the Fair Seas coalition.

Our vision is that Ireland should become a world leader in marine conservation and the sustainable management of our marine environment. The protection and restoration of Ireland's biodiversity is vital, and rapid decarbonisation is an essential element of this process. BirdWatch Ireland therefore supports the production of renewable energy and offshore wind to help achieve this. However, offshore renewable energy (ORE) devices and infrastructure must be sensitively located to minimise negative impacts on marine and terrestrial ecosystems, especially on seabirds as they may be more impacted than other taxa.

Ireland's Seabirds

Ireland's marine environment plays host to a huge diversity of ornithological life year-round. In summer, our offshore islands and cliffs host seabird breeding colonies, many of which are of international importance or regional significance. In winter, our coasts and estuaries are of huge importance for wintering waterbirds. Seabirds, as apex marine feeders, are exposed to all threats affecting the ocean and are excellent biodiversity indicators, providing us with an insight into the health of, and pressures facing, our marine environment [1].

However, 23 of 24 breeding seabirds in Ireland are either Red or Amber listed Birds of Conservation Concern [2]. They are highly vulnerable, facing current pressures and future threats, including (ranked in order of frequency of occurrence) [3].

- Bycatch and incidental killing (due to fishing and hunting activities) [4]
- Desynchronisation of biological/ecological processes due to climate change
- Decline or extinction of related species (e.g. food source/prey, predator/parasite, symbiote, etc.)
- Other invasive alien species (other than species of Union concern).
- Potential impacts from wind, wave and tidal power, including the associated infrastructure

Even though Ireland has designated a network of Special Protected Areas (SPAs) at coastal sites aimed at protecting the most important areas for breeding seabirds, trends in population and range for some species are declining [5]. At a European level, of the 24 seabird species regularly breeding in Ireland, nine are declining (Atlantic puffin *Fratercula arctica*, Black-headed gull *Larus ridibundus*, European herring gull *Larus argentatus*, European shag *Gulosus aristotelis*, Fulmar *Fulmarus glacialis*, Great black-backed gull *Larus marinus*, Kittiwake *Rissa tridactyla*, Little tern *Sternula albifrons*, and Mediterranean gull *Larus melanocephalus*) and an additional four have an unknown population trend (Black guillemot *Cepphus grylle*, European storm petrel *Hydrobates pelagicus*, Leach's storm petrel *Hydrobates leucorhous*, and Manx shearwater *Puffinus puffinus*) [6]. Nationally, of these 24 species, two species are declining in Ireland (Atlantic puffin and Kittiwake) with an additional two species (Arctic tern *Sterna paradisaea* and Common tern *Sterna hirundo*) facing probable declines due to Highly Pathogenic Avian Influenza (HPAI) H5N1 since last census; population trends for a further three species (European Shag, Fulmar, and Great cormorant *Phalacorax carbo*) are unknown [5 and Pers Comm Dr. Steve Newton, Senior Seabird Conservation Advisor, BirdWatch Ireland October 8th 2024]. Due to the sensitive nature of these populations, special consideration should be given to the potential effects of offshore developments on these seabird species. In particular, the cumulative effects of multiple developments must be adequately assessed.

For many years BirdWatch Ireland has been working to gather data and information on the importance and usage of our marine environment for seabirds and waterbirds. Our work includes tagging and tracking of seabirds at key sites, Digital Aerial Survey (DAS) work and observations on the daily movements and flight lines of a range of species. In addition to annual monitoring and management of key seabird colonies in the Irish Sea for more than 20 years (carried out largely under contract to the National Parks and Wildlife Service (NPWS)), we also monitor seabird populations at the Cliffs of Moher (under contracts) and since 2002, have annually monitored Kittiwake populations and productivity at Downpatrick Head (Co Mayo). Additionally, we have produced bird wind sensitivity mapping for terrestrial wind developments. The resulting map, hosted on the website of the National Biodiversity Data Centre, and the report accompanying it, is another tool in the toolbox to assist in the careful roll out of renewable energy infrastructure and to minimise the impacts to wild birds [7]. BirdWatch Ireland therefore has a unique understanding of the importance of Ireland for birds and the possible impacts of new offshore windfarm developments on their populations.

The main impacts of ORE windfarm projects on seabirds and waterbirds include displacement, disturbance, and collision risks. However, there are a range of other possible impacts, including:

- Barrier effects: wind turbines and structural development can interfere with birds foraging and migration routes, potentially increasing their individual energy expenditure and limiting the available habitat.
- Cumulative impacts: how are the cumulative impacts being examined? We are extremely concerned that the cumulative impacts of all current and future ORE

projects within and around the Irish marine environment are not being adequately assessed.

- Wider ecological impacts on fish stocks/prey base and its impact on fishing effort and location: Knowledge of the impact on the prey base/fish stocks is essential to be able to fully assess the impacts on seabirds. How will fishing efforts be shifted and what is the likely impact of such a shift on seabird foraging opportunities? Particular consideration should be given during construction and post-construction on how the additional disturbance and new structures within the marine environment may change prey location and numbers.
- Impacts on non-seabird species, waterbirds and other larger birds using the air space: The flight heights are not known for key species and this data has not been collected, as many digital aerial surveys don't collect height data.

Within our response, we will refer to Important Bird and Biodiversity Areas (IBAs). BirdLife International maintains a global database of IBAs, sites which are of particular importance for the conservation of wild birds and their habitats [8]. While IBAs do not afford legal protection to a site, they are identified using a globally agreed standardised set of data-driven criteria and thresholds. In 2024, BirdWatch Ireland, working with BirdLife International, completed the identification of a network of colony and marine IBAs in Ireland's Exclusive Economic Zone (EEZ) [9]. Within these sites, the species identified as qualifying interests occur in regionally or nationally significant numbers [8]. The sites generally also support other important populations (though they may not meet the thresholds for IBA designation), highlighting how these IBAs represent the most important areas for breeding and foraging seabirds in our waters. During this process, 24 marine IBAs and 49 colony IBAs were identified (see Figure 1 and 2 respectively); these sites will shortly be available on https://datazone.birdlife.org/country/ireland/ibas.

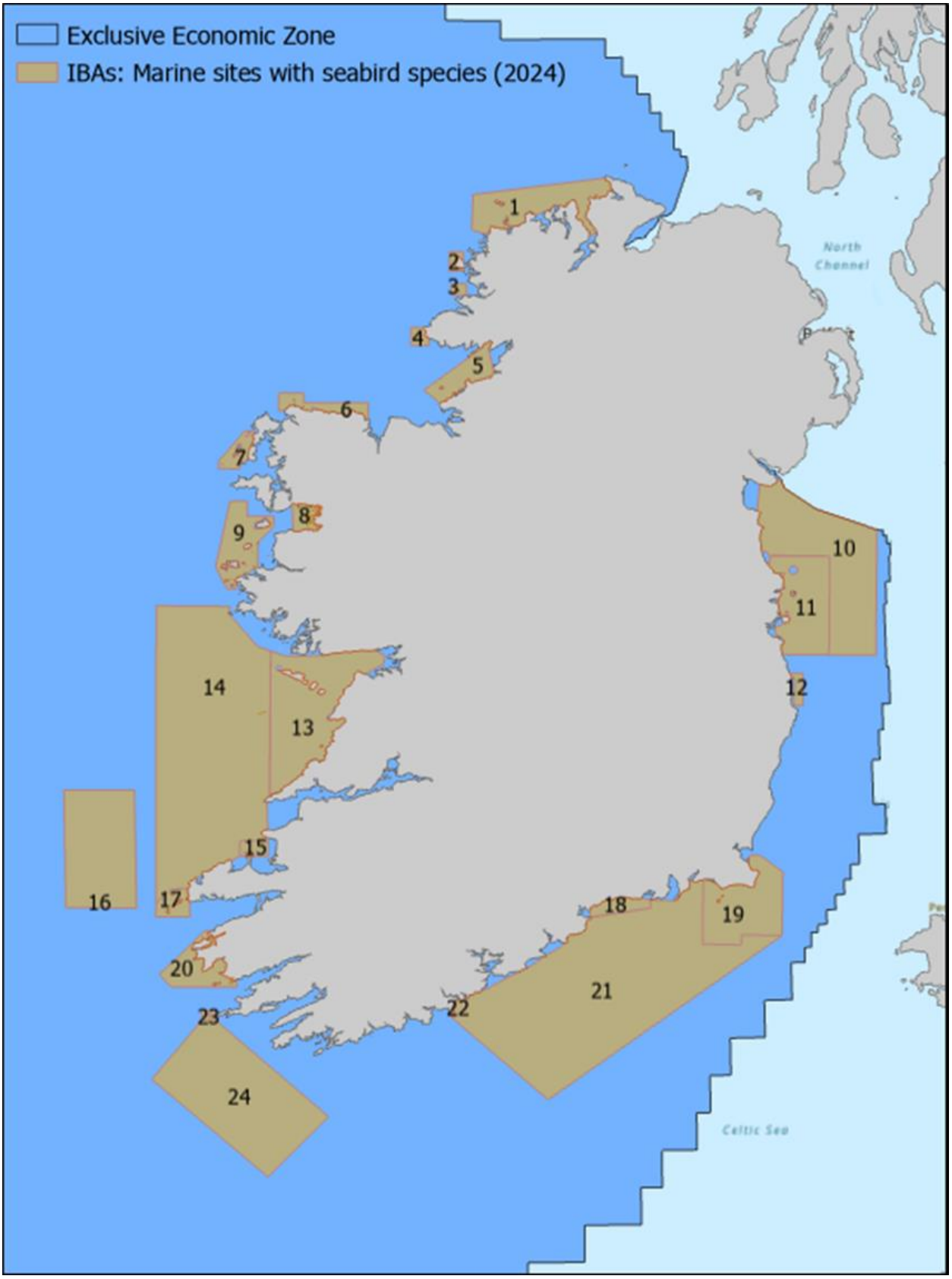

Figure 1: Ireland's marine IBA network of 24 sites.

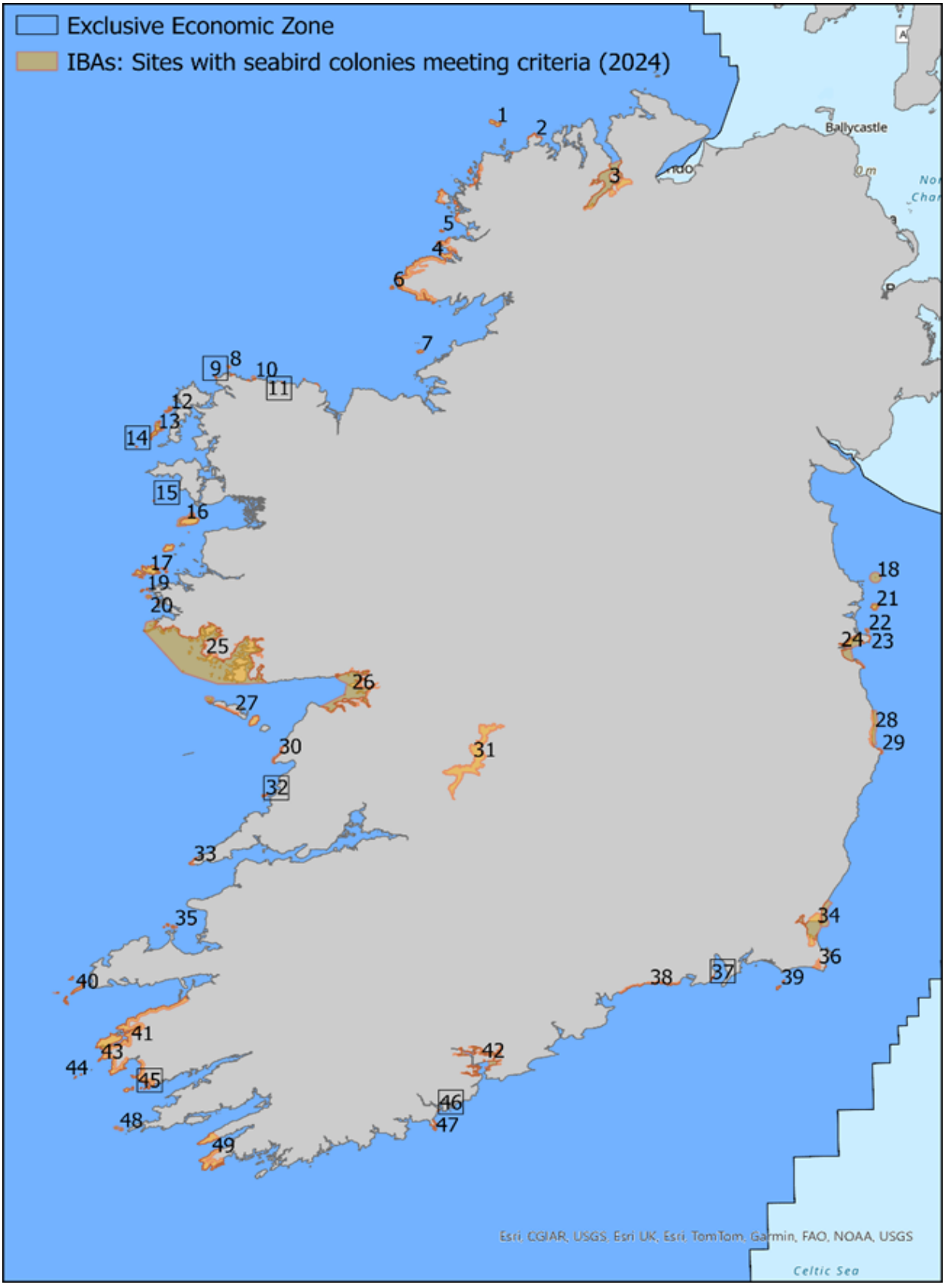
Exclusive Economic Zone
IBAs: Sites with seabird colonies meeting criteria (2024)
Ballycastle
Esri, CGIAR, USGS, Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS
Celtic Sea

Figure 2: Ireland's colony IBA network for 49 sites. Sites with blue numbers are new IBAs, where sites with black numbers were previously identified and have been updated in 2024.

Specific IBAs referenced in our response include two marine IBAs that occur along the west coast of Ireland near the Sceirde Rocks Offshore Wind Farm array and offshore cabling location, and an additional six colony locations are also near to either the array area, offshore cabling area, or onshore works (Table 1).

Table 1: The two Irish marine IBAs and six Irish colony IBAs near the proposed Sceirde Rocks Offshore Wind Farm development areas and the seabird species present at each IBA, including qualifying interest species used in designating the IBAs and other species also present within these IBAs that did not meet criteria for use in designation [9]

Type of IBA	**Name of IBA (Map reference)**	**Qualifying Interest Species (meet designation criteria)**	**Other Species Present**
Marine	Greater Galway Bay Inner (13)	Arctic tern, Atlantic puffin, Black guillemot, Kittiwake, Common guillemot (*Uria aalge*), Common tern, European herring gull, Great black-backed gull, Great cormorant, Little tern, Manx shearwater, Razorbill (*Alca torda*), Sandwich tern (*Sterna sandvicensis*), Auks (Guillemot/Razorbill)	Black-headed gull, Common gull (*Larus canus*), European shag, European storm-petrel, Lesser black-backed gull (*Larus fuscus*), Fulmar
Marine	Greater Galway Bay Outer (14)	Manx shearwater	Arctic tern, Atlantic puffin, Black guillemot, Black-headed gull, Kittiwake, Common guillemot, Common gull, Common tern, European herring gull, European shag, European storm-petrel, Great black-backed gull, Great cormorant, Great skua (*Stercorarius skua*), Lesser black-backed gull, Little tern, Fulmar, Razorbill, Sandwich tern

Colony	Connemara Islands (25)	Arctic tern, Black guillemot, Common tern, European herring gull, Great black-backed gull, Little tern, Sandwich tern	Black-headed gull, Common gull, European shag, European storm-petrel, Great cormorant, Lesser black-backed gull, Fulmar
Colony	Inner Galway Bay (26)	Great cormorant, Sandwich tern	Black-headed gull, Common gull, Common tern, European herring gull, Great black-backed gull, Lesser black-backed gull
Colony	Aran Islands (27)	Kittiwake, Little tern	Black guillemot, Common tern, European herring gull, European shag, Great cormorant, Lesser black-backed gull, Fulmar, Razorbill, Sandwich tern
Colony	Cliffs of Moher (30)	Atlantic puffin, Kittiwake, Common guillemot, Razorbill	European herring gull, European shag, Great black-backed gull, Fulmar
Colony	Mutton Island (32)	Great black-backed gull	Common gull, European herring gull, Lesser black-backed gull
Colony	Loop head (33)	Kittiwake	Common guillemot, Common gull, European herring gull, European shag, Great black-backed gull, Great cormorant, Lesser black-backed gull, Razorbill

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BirdWatch Ireland's key concerns and questions are detailed below. We stress that these may not be comprehensive, as additional concerns could arise as our knowledge increases and/or seabird populations change over time.

Our concerns are both general and more specific, relating to areas within the proposed Sceirde Rocks Offshore Wind Farm (hereby referred to as SROWF); the latter are in 2 sections: Onshore/Terrestrial and Offshore/Marine. This was done to aid in the understanding of where our concerns lie within the context of all the proposed development associated with the SROWF project. We have also included a table below of all our concerns with a brief summary of each to aid in navigating through our response (Table 2).

Table 2: Summary of all concerns within our response before deeper discussion on each below

Category	**Concern (# in response)**	**Summary of concern**
General	Consideration for nesting birds during summer maintenance (1)	Ensuring summer maintenance does not negatively impact nearby vulnerable nesting seabirds with recommendations
	Lack of assessment of effects across lifespan of project (2)	Ask for lifespan assessments of impacts to seabirds to better understand and evaluate potential adverse effects
	Methods that reduce precautionary aspects of analyses (3)	Ask for statement of precaution and cautionary approaches to potential negative environmental impacts across all works
Onshore/ Terrestrial	No account for yearly variations (4.1)	Assessments based on a single year of surveys are inappropriate for impact assessments of this magnitude
	Terrestrial survey design limitations (4.2)	Discussion of two survey design limitations that should be addressed to better understand potential effects
Offshore/ Marine	Lack of surveys during all sea/weather conditions (5.1)	Lack of information about seabird use of marine environment during adverse conditions and recommendations for addressing this data gap
	Potential effects for foraging seabirds (5.2)	Discussion of how increased fish numbers do not equal increased fish resources for seabirds, so this ‘positive impact’ may not exist in reality
	Potential foraging ‘hotspot’ identified from provided maps (5.3)	Maps from Appendix 11-7 show a potential high quality seabird foraging habitat within

		the SROWF marine area
	Lack of independent surveys for offshore cabling route (5.4)	Ask for independent surveying of offshore cabling route due to differences in bird frequency in this area
	Species that should be assessed further (5.5)	Species that were not scoped in for further assessments that we feel should have been included and our reasonings
	Underestimates for diving birds not precautionary (5.6)	Concerns about the underestimation of diving birds, particularly QI and highly sensitive species, within the EIAR
	Inappropriate Common Tern population estimate (5.7)	Population estimates used in assessments are likely higher than reality after 2023's HPAI-H5N1 outbreak, and therefore impact assessments could be underestimating the potential effects on the species
	SPA related concerns (5.8)	Concerns relating to way the distance between SPAs and the SRWOF is measured, as well as the lack of inclusion of a QI species for Inishmore SPA

General Concerns

1. **Consideration for nesting birds during summer maintenance**

Within the SROWF Environmental Impact Assessment Report's (EIAR) Non-technical Summary, it is stated that planned maintenance activities such as '*general inspection and servicing, oil sampling/change, cleaning of equipment, investigation of faults, minor fault rectification and replacement of consumables*' will '*generally take place during the summer months*'. While we understand that this timing of planned maintenance is presumably driven by the better weather and ocean conditions during the summer months, given the sensitivity of seabird species during this time, and the importance of these colonies to the conservation of seabirds nesting within Ireland, we would ask that all maintenance activities exercise caution to decrease the potential impacts to nesting seabirds. The nesting season, which also occurs from approximately March through September with a core period from May through July, is a vulnerable and important time for seabirds as adults are energetically taxed by reproductive activities such as nest creation, egg-laying and chick care, and chicks are extremely vulnerable to disturbance both in the nest and outside the nest when they fledge [10]. The SROWF array

area is within the Connemara Islands colony IBA, which has several species of nesting seabirds including one of the largest sites for nesting Sandwich terns in Ireland, and the offshore cabling route comes close to an additional two colony IBAs (the Aran Island IBA and Mutton Island ITM IBA), both of which have been designated for nesting seabirds experiencing declines in Ireland or Europe (see Table 1 above for further details).

We recognise that the potential for long-term displacement and barrier effects to affect seabirds during the operation and maintenance phase of the Offshore Site was assessed as not significant, as reported in the EIAR *Non-technical summary* and expanded on in *Chapter 11: Marine Ornithology*, but we would ask for added consideration to be given to short-term effects during this important period as well. Some recommendations we have are that maintenance activities are minimised or avoided during the core breeding period (May through end of July), that activities take place during the middle of the day, as many seabirds forage first thing in the morning and just before dusk [11,12], and to limit the number of vessels to what is necessary for works in order to lessen the short-term displacement and disturbance to nesting seabirds nearby.

2. Lack of assessment of effects across lifespan of project

Mortalities and displacement across all the operational years of the SROWF do not seem to have been addressed within the EIAR *Chapter 11: Marine Ornithology*. When reporting the mortality estimates of the different impacts, the annual impact to the regional and biogeographic populations is reported; however, as reported in the EIAR *Non-technical Summary*, the operational lifetime of this project is 38 years. While annual assessment of mortality may be low, when looking across the lifetime of the SROWF project, the totality of the mortality could be impactful to seabird populations locally and within Irish waters particularly given the long lifespan of the project. We would ask that this additional assessment be done to look at the expected mortality to bird species across the entirety of the lifespan of the project to ensure that all mortality associated with the SROWF project during its entire lifespan is understood and can be reviewed. Given that most impacts are assessed at non-significant, it is possible that effects could be more significant than assumed when they are assessed in totality across the lifespan of the project, and this is important to know and report before construction is undertaken. We suggest that these lifespan analyses are done for the Appropriate Assessment also, and data reported so we can be sure that the SROWF project will not have greater adverse impacts on Irish birds and the integrity of the SPA network when looking across the entire lifespan of the project.

3. Methods that reduce precautionary aspects of analyses

While the NIS & AA *Volume 1- Offshore* and various chapters of the EIAR does make mention of a few specific precautionary approaches or measures taken at specific intervals, there is no statement of an overall precautionary approach to the potential environmental impacts of the SROWF. This is concerning and we feel that more precautionary measures and analyses

should be taken in order to lessen the chance of impacts having a larger effect on birds than expected. An overall statement of precaution and consideration for biodiversity should be stated within the EIAR and followed throughout all assessments of potential impacts to ensure that the SROWF truly minimises all potential negative impacts to birds and other biodiversity during construction, operation, and decommissioning. We have detailed below in other sections specific instances where a more precautionary approach should be taken to decrease the risk of negative effects to seabirds.

4. Onshore/Terrestrial concerns

4.1 - No account for yearly variations

Our main concern with the terrestrial surveys undertaken and used in assessments of potential impacts to terrestrial bird species within the EIAR's *Chapter 21: Terrestrial Ornithology* is that the surveys were only done in the course of a single year, meaning one breeding season and one non-breeding season. Without surveys from multiple years, it is impossible to assess or account for yearly variations in bird distributions, meaning we cannot be sure that the surveys recorded the 'normal' bird distributions for the area, making the conclusions one can draw from this data limited. *Chapter 21: Terrestrial Ornithology* uses this single year of data in all assessments of whether construction works onshore will have effects on onshore bird populations, as well as the significance of these effects, which we at BirdWatch Ireland do not support as the data is insufficient to draw such a significant conclusion and this does not reflect a precautionary approach. Scottish Natural Heritage, an executive non-departmental public body of the Scottish Government, recommends 'a *minimum of 2 years [of surveys] to allow for variations in bird use between years*' for wind farm assessments [13] and scientific research warns that reducing monitoring effort compromises the precision of trend estimates [14]. Since large cabling works will be taking place onshore, at least two years of surveys is a relevant recommendation to account for yearly variation in bird species and locations within the onshore construction areas. For example, BirdWatch Ireland data indicates that the cabling route passes through a breeding wader hotspot. Although surveys for breeding waders were carried out and there was some evidence of breeding, there was no mention of Lapwing (*Vanellus vanellus*), which were recorded breeding in 2019. As a precaution, construction works during the main wader breeding season (April to July) should be avoided in this area. Additionally, Chough (*Pyrrhocorax pyrrhocorax*), which were identified as a KOR species and assessed in *Chapter 21*, have historically been seen breeding in this area [15] and without multiple years of surveys, it is not possible to say that this is not be important habitat for the species particularly in light of the potential in-combination effects of the SROWF onshore construction with other nearby projects. Until additional surveys are carried out, or relevant surveys from other sources within an appropriate time frame are added into analyses, the data is insufficient to make decisions of this magnitude on impacts that could compromise the populations of birds within the area.

4.2 - Terrestrial survey design limitations

Within the EIAR *Chapter 21: Terrestrial Ornithology* when discussing potential limitations, there are two limitations assumed to not be significant within the chapter. Considering that there is in our view insufficient survey work done, any additional limitations become more substantial. The first limitation mentioned is that '*breeding walkover surveys, which are typically undertaken from April, were not begun until May 2023*'. As mentioned above, the bird breeding season is approximately March through September with the earlier part, which was missed by surveyors, when breeding birds are more visible and vocal, aiding in identification and location of breeding adults [16]. By missing this period of breeding bird walkover surveys, not only could birds have been missed due to changes in behaviour later in the breeding season, but there is also the possibility that early nesting birds or birds whose nesting failed early were not counted and are therefore missing. All of this means that birds could be underrepresented in impact assessments. While this may not be a significant limitation if there were multiple years of surveys, with only a single year of surveys any potential limitations that affect the counting of birds is more impactful and therefore we recommend that additional breeding bird surveys are completed before construction begins, including surveys during the months missing in this initial assessment. The second limitation mentioned is that '*a short section of the OGC (c. 400m) near the Moneypoint 220kV Substation borders the River Shannon and River Fergus Estuaries SPA*' was not surveyed. This stretch of SPA must be surveyed. This estuary is important for wintering waterbirds that have suffered a national decline of 40% in 20 years [17].

5. Offshore/Marine concerns

5.1 - Lack of surveys during all sea/weather conditions

We would like to highlight that all offshore surveys for seabirds and other birds within the SROWF's marine footprint (which we define as the entirety of the array and offshore cabling areas) have only been undertaken in ideal conditions. We acknowledge that this may be due to necessity and safety of the aerial surveys, and we are not suggesting changing this or putting anyone at risk; however, it is very important to note that birds are still using the marine environment outside of these perfect conditions and therefore there could be increased or differing uses of the offshore marine footprint by birds that we do not know or understand at this time.

A potential way to address this knowledge gap would be increased research into the offshore usage of the marine environment by seabirds using tracking. Tracking key species of concern, or species that are shown to use the SROWF marine footprint in high density during ideal conditions, can give information about the usage of the marine environment by birds at any time and despite weather conditions that limit the ability to collect data using alternative methods. For example, our Marine IBA report [9] utilised tracking data, coupled with conservative estimates of distribution via sea-ward extensions, which was instrumental in identifying Ireland's marine IBA network (see Fig. 1). Additionally, studies utilising GPS tracking of seabirds have been used in assessing the effects of offshore wind farms on certain species, including a study that showed

strong avoidance effects for Common guillemots during the breeding season, particularly when commuting and less so when resting or diving [18]. This study highlights the specific type of information on usage and behaviour that can be collected by tracking seabirds, and it is worth noting that Guillemots could be similarly affected by the SROWF as a QI species for the nearby SPAs and a designating species for nearby marine and colony IBAs. Radar is another alternative method to collect data during poor weather and nighttime usage of the marine environment by seabirds. Until it is known how seabirds and other birds are using and utilising the marine environment in all conditions throughout the year, there is potential for increased or differing usage of the area that could be affected by the permanent nature of offshore wind farm infrastructure that is not being addressed. We would argue for caution to be taken in assessing the SROWF offshore data and surveys until more research is done to better understand how birds are utilising the marine environment in all sea/weather conditions, particularly given the common rough marine conditions in the Atlantic Ocean.

5.2 - Potential effects for foraging seabirds

We at BirdWatch Ireland have some concerns about how the proposed SROWF will affect the prey availability of fish for foraging seabirds. During the construction preparation, it is mentioned that rock will be placed on the seabed to allow for the construction of the turbines, and this rock will be left in-situ after decommissioning. This will permanently alter the seabird substrate of this area to a hard bottom, which will impact the fish communities that can use and utilise the area. We appreciate that effects from this seabed substrate change is addressed in *Chapter 11: Marine Ornithology* within '*Impact 5- Indirect effects on seabirds due to the presence of project infrastructure'* and further appreciate that potential effects on sandeels (*Ammodytes tobianus*), a core forage species for many seabird species that prefers sandy substrates [19], were explicitly mentioned. Sandeels are a particularly important prey species for seabirds such as Kittiwakes and Puffins [19], both of which are QI species for the nearby Cliffs of Moher SPA [20] (Kittiwakes are also a QI species for Inishmore SPA [21]) and are the designating species of several nearby colony and marine IBAs. While it is mentioned within the chapter that sediments are expected to recover, and that the hard infrastructure at other windfarms did not result in declines in sandeel abundance after initial displacement, it is important to acknowledge that the change in seabed substrate may also permanently displace this sandeels due to the habitat loss and therefore alter the availability of these important prey fish for foraging and breeding seabirds. Extra consideration should be given to ensuring that the impact to these fish populations and their habitats is minimal in order to protect this forage supply and ensure that there are enough sandeels for the surrounding breeding colonies.

In both *Chapter 11: Marine Ornithology* and *Chapter 34: Nature Positive Aspects*, it is mentioned that the turbine infrastructure may act as an artificial reef, thereby increasing fish numbers and health within the array area; however, just because fish species abundance may increase does not mean that foraging availability or quality is increased for seabirds. These fish species may not be suitable prey for seabirds and could actually decrease foraging

opportunities by outcompeting and replacing other species of forage fish that are preferable to seabirds. It is stated in *Chapter 34: Nature Positive Aspect*s that '*windfarms may provide nursery or refuge areas for fish or provide a greater diversity of substratum and associated fish assemblage, which can increase prey availability for some birds*'. Many of the birds cited in the literature foraging within offshore wind farms are generalist species, such as gull species who forage on a wide variety of different fish species [22], and not specialists who need a certain species of fish or can only access fish within a limited area of the water column due to diving depths. Increased fish assemblages or biomass does not necessarily mean increased foraging opportunities or prey availability for all seabirds. Additionally, within this section when restating results from the Predator & Prey Around Renewable Energy Developments' (PrePARED) studies, it is mentioned that '*fish were also slightly larger closer to the turbines*'. While a larger size does increase the total energy content of the fish, this does not necessarily mean a benefit to seabirds if the larger size makes the fish too large for seabirds to catch and carry for feeding. It is important to stress that these 'positive impacts' may not replace lost foraging opportunities or prey species loss and there is still the potential for a net loss of foraging availability for seabirds due to the SROWF infrastructure.

5.3 - Potential foraging 'hotspot' identified from provided maps

We greatly appreciate the density maps provided in *Appendix 11-7: Aerial survey two year report* of birds and their detections within the SROWF survey area, something we have requested from several other wind farm applications. One thing we noticed within the maps provided that should be investigated further is the trend of high-density bird activity on the Atlantic edge of the SWORF lease and total site areas (Figure 3).

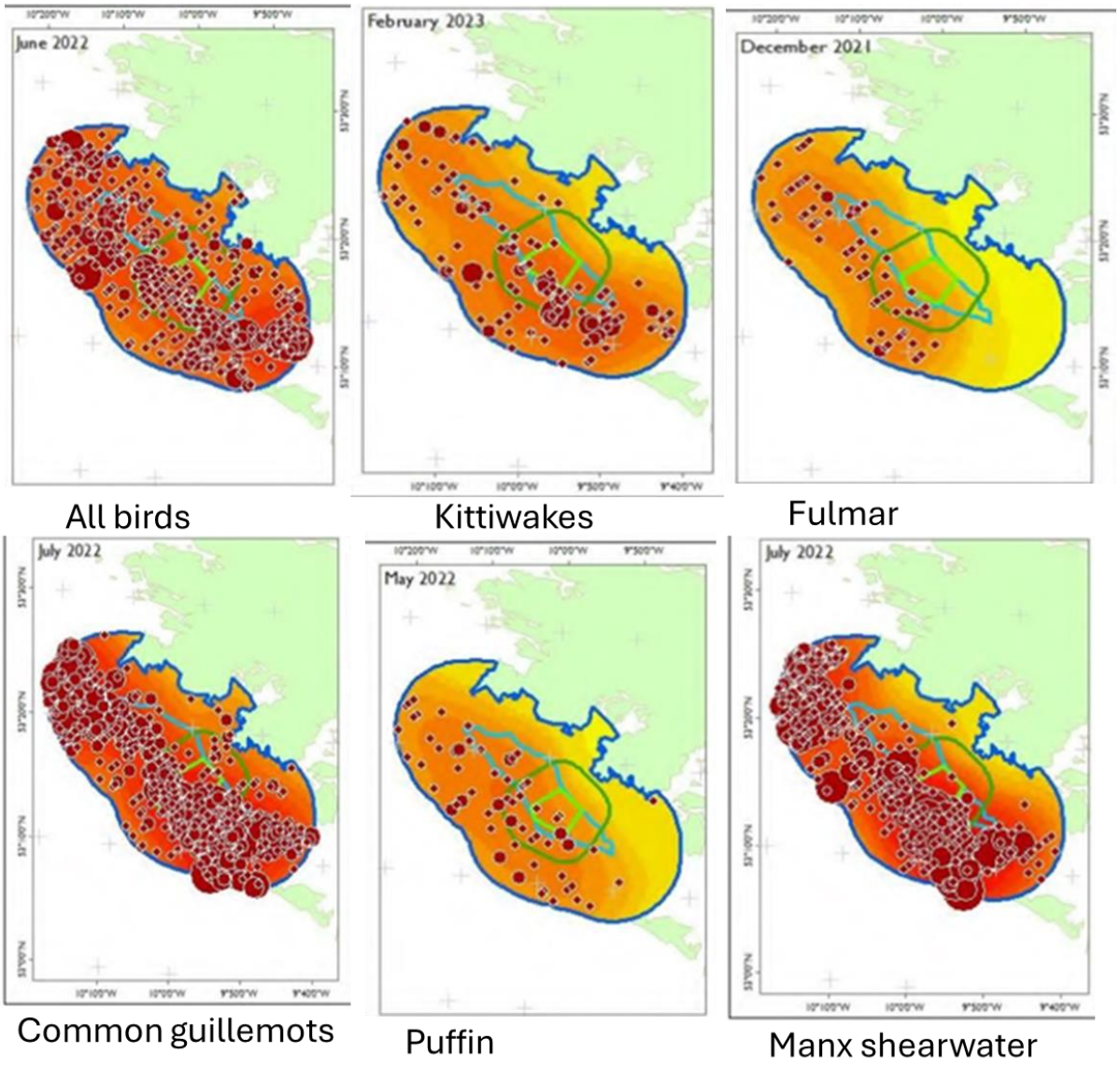

Figure 3: Density maps from sightings within the SROWF EIAR Appendix 11-7 that show high use of the Atlantic edge of the lease and total site areas by multiple species of birds throughout different months of the year.

The maps within Figure 3 highlight the trend of multiple species, as well as total birds in the top left map, using this area in a line just outside the SROWF lease area and along the total site area's Atlantic edge. It is important to note that these maps also show this area as high use by multiple species during different months, though many of these maps show heavy use during the summer months. When comparing these maps to bathymetry maps of the area, we can see that this high use area corresponds with a frontal shelf before waters drop off to 100m of depth (Figure 4).

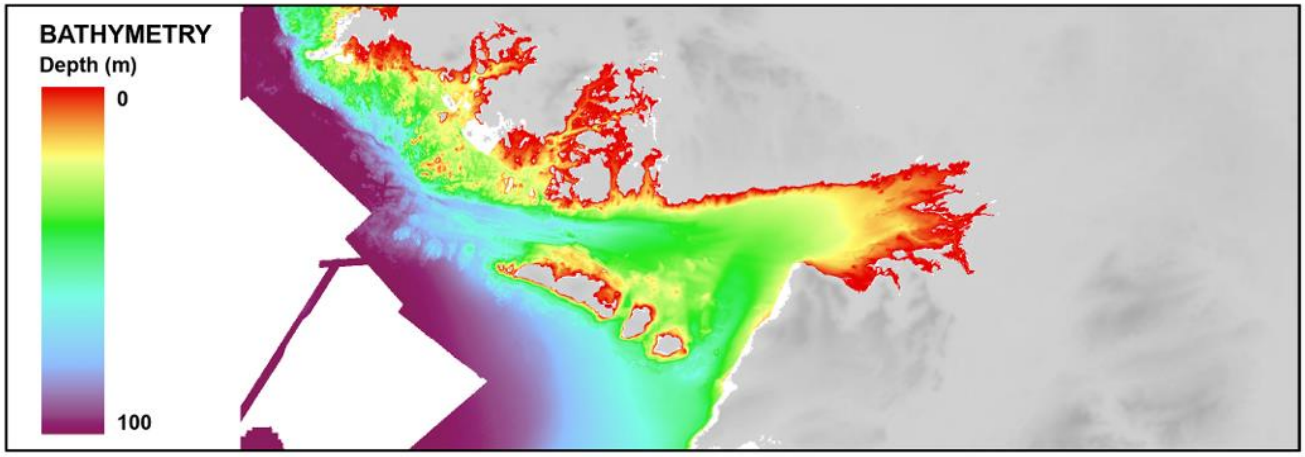

Figure 4: Bathymetry map of the Galway Bay area around the SROWF from the Infomar Programme website [23].

Underwater frontal shelves that are located before drop-offs to deep depths are particularly important and high-quality foraging areas for seabirds [24, 25]. This could explain the abundance of seabirds along this shelf-break within the density maps from *Appendix 11-7*, particularly during the summer months where seabirds are foraging for themselves and their chicks; however, this would also mean that this could be a vital foraging area to ensure the breeding success and survival of these species. While we understand that these shallower waters also mean that this is an ideal location for turbine infrastructure, putting these turbines within an important bird area could also have significant impacts to the seabirds who rely on and forage within this area. As stated in Table 1 we have identified this area as part of the Greater Galway Bay Inner marine extension IBA. This area merits further investigation to better understand how seabirds are using these waters.

5.4 - Lack of independent surveys for offshore cabling route

We at BirdWatch Ireland do not believe that the use of the offshore array area (OAA) surveys as a substitute for any independent surveys of the offshore export cable (OEC) route is appropriate. While we understand that the timings of work in the OEC means that a majority of the potential threats and disturbance will only occur during construction while the cable is being laid, the OEC route covers a large part of the marine footprint of the SROWF and passes by or through many important bird areas including SPAs and IBAs for both seabirds and waterbirds which warrants independent surveying. While many of the seabird species are present in both areas, they may not occur in the OEC route in similar numbers or frequency. For example, the two closest SPAs to the OEC landfall location (Mid-Clare Coast SPA and Illaunonearaun SPA) have Barnacle goose (*Branta leucopsis*) as a QI species [26,27], which was only seen in six of the aerial surveys of the OAA, highlighting a potential stronger use of OEC habitat than the OAA habitat. Additionally, the Mid-Clare Coast SPA has a number of waterbird species, including shorebirds such as Ringed plover (*Charadrius hiaticula*) and Purple sandpiper (*Calidris*

maritima), as well as Cormorants as QI species, all of which were not frequently seen during OAA surveys [26]. All of these species could be using the OEC area in higher numbers than the OAA area and therefore the potential impacts to them is not being accurately addressed or assessed under the assumption of similar patterns of abundance between the two areas. In *Chapter 21: Terrestrial Ornithology*, many seabirds and shorebirds were seen along the coast of the OEC landfall location and recorded within surveys in *Appendix 21-3: Summary data*, but this data does not appear to have been used in any assessment of bird abundance within the OEC. Given how unlikely it is that species are utilising the OEC route in the same numbers and frequency as they are using the OAA, we believe independent surveying and analysis should be done in order to more accurately assess the potential impacts of OEC construction works to birds who could be affected, particularly QI species of nearby SPAs.

5.5 - Species that should be assessed further

Within the NIS & AA *Volume 1- Offshore*, it is stated that '*where seabird species were not recorded in the OAA over the duration of site-specific baseline surveys (24 months), it is considered objectively reasonable using expert judgement that such species are extremely unlikely to use the OAA in numbers large enough to warrant further consideration*' and within the EIAR's *Chapter 11: Marine Ornithology Appendix 11-1 Baseline Technical Report* species scoped-in for further assessment on collision risk and displacement are detailed further on the basis of how often species were seen during baseline surveys and their sensitivity. While we feel that these methods are on the whole appropriate, there are a few species that were not scoped-in that we believe should have been assessed including QI or designating species for nearby SPAs and IBAs.

Cormorants should be considered further on the basis of their conservation status at a number of SPAs and IBAs near to the SROWF marine footprint and their behaviour leading to potential undercounting during baseline surveys. Cormorants are a QI species for both the Mid-Clare Coast and Inner Galway Bay SPAs and a designating species for the Greater Galway Bay Inner marine IBA and Inner Galway Bay colony IBA, as well as being present at a number of the other nearby IBAs (see Table 1 for more information). Despite cormorants only being seen '*intermittently across the survey period*' with 30 observations, the importance of the nearby habitat to the conservation success of the species with Ireland should take precedence and scope the species in for further assessments. Additionally, it is stated in *Chapter 11: Marine Ornithology's Appendix 11-1* and *Appendix 11-7* that diving bird abundance is likely underestimated due to a proportion of birds not detectable at the surface (i.e. spending time underwater). While this was corrected for some species, this was not able to be corrected for Cormorants despite the significant amount of time they spend underwater [28], so it is likely that the Cormorants were undercounted and are more present within the SROWF marine footprint than recorded in surveys (more on this below). With an unknown population trend here in Ireland, increased precaution and consideration should be given to the potential impacts from the SROWF on the species.

Fulmar should also be assessed further on the basis of their conservation status and presence at a number of nearby IBAs. While Fulmar are not a designating species at any of the nearby IBAs, they are present within all of the nearby marine IBAs and at the Cliffs of Moher, Aran Islands, and Connemara Island colony IBAs. Fulmars are also a QI species at the Cliffs of Moher SPA and have declining population trends at the European level with an unknown population trend in Ireland. Within *Appendix 11-7*, it is mentioned that '*Fulmar were recorded at 21 of the 24 surveys across the period*' with most being seen '*flying over the survey suggesting the site may be used for passage or may be making foraging trips*'. Given the high number of surveys where the species was seen, and the transitory nature of the behaviour meaning that individuals could have been missed by the aerial survey methods, it is likely that the SROWF marine footprint is within important habitat for Fulmar and therefore they warrant further assessment to ensure that any potential impacts do not further affect the species declining and unknown population trends.

Cory's shearwaters (*Calonectris diomedia*) should also be scoped in due to the large numbers that can be seen on passage through the area and the potential that climate change could increase these numbers in the future. Cory's shearwaters were listed as the most numerous species of the thirty less abundant bird species within the offshore survey period within *Appendix 11-7* with a boom of 777 Cory's shearwaters seen in August 2023 and 12 undetermined shearwaters (either Cory's or Great) seen in July 2023 as well. This highlights the numerous but sporadic nature of this species occurrence along the West coast of Ireland, something our own surveys including SeaTrack seabird migration surveys support [29]. While this pattern of abundance is sporadic, increasing numbers of Cory's shearwaters have been observed off the west coast in recent years from July into the late autumn, indicating that it is possible the species is gradually shifting north in response to climate change [Pers Comm Dave Suddaby, Reserves Manager, BirdWatch Ireland March 12th 2025]. With the large numbers moving within the area at specific times and the possibility of increasing pulses of passage Cory's shearwaters, we recommend that the species is scoped into further assessments and numbers of the species seen within the SRWOF marine footprint is monitored throughout the lifespan of the project to ensure that negative impacts are not increased in the future as the species range and migration patterns change.

5.6 - Underestimates for diving birds not precautionary

As previously mentioned above when discussing the potential underestimating of Cormorants within the SROWF marine footprint, it is stated in *Chapter 11: Marine Ornithology's Appendix 11-1* and *Appendix 11-7* that '*a proportion of seabirds that spend any time underwater, especially while feeding, will not be detectable at the surface*' and therefore will have an underestimated count. It is mentioned that for Guillemots, Razorbills, and Puffins an availability bias correction was made, but this did not occur for other species that also spend a significant amount of time underwater such as divers, Shags, and Cormorants. We would advise for

species undercounted by the aerial surveys due to time spent underwater that thresholds for further assessment are reduced to account for this potential bias and/or assessments are conducted in a more precautionary manner to ensure that potential impacts to the species are similarly not underestimated.

This is of particular importance as it relates to divers, including the Great Northern diver (*Gavia immer*), which are very sensitive to offshore construction and infrastructure including offshore windfarms [30]. Based on the aerial surveys presented in *Chapter 11: Marine Ornithology*, there appears to be a significant proportion of the wintering population of Great Northern divers occurring within the survey area (mean of 475 birds out of a regional population estimate of 1219); therefore, we query the conclusion that the impact on this species is considered to be not significant, given that the report indicates that the overall sensitivity to disturbance of this species is considered high. Also, under '*Impact 6- Displacement and barrier effects within the OAA*' it is mentioned that the estimate used in assessing potential displacement '*is likely to be a minimum estimate, as birds further offshore would be missed on regular monitoring schemes*', further highlighting the need to take additional precautions to ensure that these underestimates do not lead to a greater than assessed impact on the species, especially given their high sensitivity to offshore works.

5.7 - Inappropriate Common Tern population estimate

Common terns are assessed within the EIAR in *Chapter 11: Marine Ornithology* and we would like to address concerns that the population numbers used in assessments for Common terns are likely overestimating the current population size. Within the chapter, the autumn and spring migration period estimates 64,189 birds, while the breeding season regional reference population estimates 256 adults and 435 adults and immature birds and 120 breeding pairs in South Connemara, Co. Galway in 2023. We are concerned that this number is an estimate of the population before 2023's HPAI-H5N1 outbreak, which greatly affected Common terns, could be seen within the population. On breeding colonies throughout Ireland, including Dublin Port, Rockabill SPA, and other colonies monitored by BirdWatch Ireland, a decrease of approximately 50% was noticed in 2024 [31]; the effects from HPAI were also seen in Common tern colonies within Galway Bay [Pers Comm Brian Burke, Senior Seabird Conservation Officer, BirdWatch Ireland February 17th 2025]. The Irish breeding population of Common terns is now significantly lower than previous estimates made before the effects of HPAI-H5N1 mortality could be seen. Since assessments are likely using a population estimate that is higher than reality, it is possible that effects from the SROWF's impacts could be underestimated and more serious than described within the EIAR. A smaller actual population increases the potential that mortalities and displacement from the SROWF project could have severe adverse effects on Common tern populations regionally within Ireland and at specific SPAs where they are QI species. The calculations for the impacts to Common terns need to be redone with updated lower population estimates to more accurately reflect the current population and that extra consideration is given to the potential risks and impacts on Common terns from the SROWF.

5.8 SPA related concerns

Within the NIS & AA *Volume 1- Offshore*, it is stated that '*for SPAs and bird QIs, the distances presented are "round the coast as the seabird flies" between the centre of the SPA and the centre of the OAA, and not straight-line distance*'. While we understand that this choice was made in an attempt to convey the way in which birds are expected to fly and utilise the marine environment, we would argue that this method could also be seen as an attempt to artificially increase the distance between SPAs and the SROWF's marine OAA and is not in accordance with precautionary methods to ensure that all impacts are addressed as conservatively as possible to lessen their potential impacts on birds. We would therefore recommend that the straight-line distance is used in analyses when it represents the closest distance between the two areas and is more precautionary in its approach.

In the NIS & AA *Volume 1- Offshore* when discussing the potential impacts of the SROWF to Inishmore SPA it is stated that '*For Arctic tern, zero birds from the SPA were predicted to suffer collision mortality on the basis that Arctic terns were not recorded breeding at the Inishmore SPA in the most recent census*'. This same reasoning was also used in the displacement analysis for Arctic tern nesting in the Inishmore SPA; however, they are a QI species for this SPA [21] and have historically nested on this site. Surveys from the 2024 breeding season also show breeding Arctic terns in the Inishmore SPA [Pers Comm Brian Burke, Senior Seabird Conservation Officer, BirdWatch Ireland February 26th 2025]. While many seabirds return to the same location for nesting during the breeding season, other colonies are more inconsistent and can move around an area depending on the habitat available [32]. This seems to be the case with the Arctic terns nesting within Inishmore SPA. Furthermore, frequent surveys are not undertaken for this colony and further investigation including regular colony counts throughout the summer breeding months over multiple years would need to be done to address data gaps and understand the population dynamics and numbers for this nesting site. Ruling out Arctic terns nesting in this SPA and not addressing any potential impacts to them is not precautionary and does not take into account the historical information and survey limitations of previous fieldwork. For this reason and the close proximity of the SROWF to Inishmore SPA, we feel that it is important to reassess this population and any potential impacts SROWF may have on this QI species.

Conclusion

We appreciate that impacts to birds from both onshore and offshore works associated with the SROWF were assessed within the EIAR and NIS & AA documents and associated appendices, there are missed opportunities to address important issues for Irish birds. Further assessments are needed in the onshore to support conclusions made from a very limited data pool and in the offshore to ensure that all potentially impacted species are appropriately addressed and assessed. Conservative and cautionary approaches need to be taken to limit the potential of

negative effects to Irish birds caused by SROWF development, not just when data is limited but also for locally and regionally important seabirds and habitats like the QI species and designating species of local SPAs and IBAs. With so much unknown about seabird and migratory bird use of the Irish marine environment, particularly along the west Atlantic coast of Ireland, cautionary approaches tailored to the local environment and implemented with care and flexibility to address new issues or information are key to ensuring the smallest impacts possible on ornithological biodiversity with offshore wind development.

While we have detailed a few asks in the paragraphs above, we would also ask for more study to be done in conjunction with the SROWF project. To address data gaps and better understand seabird usage of the west coast of Ireland, further investigation and surveys should be conducted including tagging and tracking projects. We have several tagging and tracking projects along the east coast within the Irish Sea, as well as projects with UK partners, to show the movement of seabirds locally and nationally and would welcome the opportunity to collaborate on further tagging or tracking work, the results of which would further our understanding of how seabirds utilise Irish waters and could contribute to seabird conservation strategies. Another possible mitigation we feel should be added to planning is that developers should consider painting at least one turbine blade black as a collision-reduction measure [33], and request that funding is made available to find out if painting a blade black would lower any risk of collisions with seabirds in the Atlantic Ocean.

From the evidence presented to us in the supporting documents (EIAR, NIS & AA, and all the associated appendices) of the application and the gaps in the identification of birds at risk from the proposed development for the Sceirde Rocks Offshore Wind Farm, it is our view at BirdWatch Ireland that additional research and assessments should be done before it can be concluded that the project will not have significant adverse effects on local and regional populations of birds.

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