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Public Perceptions of Offshore Wind farm Developments in Scotland

AGRICULTURE, ENVIRONMENT AND MARINE

social research

Contents

Executive Summary

Introduction

The Diffley Partnership was commissioned by the Scottish Government, with funding support from Marine Scotland and NatureScot, to conduct a study to assess public perceptions of offshore wind farm developments in Scotland. Specifically, the aims of the study were:

- to gain an overview of the perceptions and experiences of those living near offshore wind developments in Scotland based on their lived experiences
- to understand the factors which affect perceptions and experiences of living near offshore wind farms
- to understand if perceptions and experiences change at different stages of a development (planning, construction, operation[1])
- to understand whether, and in what way, offshore wind farms influence people's decisions regarding tourism and recreation in coastal areas.

Research Method

Within this research, it was important to ensure that those who live in coastal regions of Scotland were sufficiently represented in the study. The research was intended to enable valid and robust statistical comparisons between people living in coastal regions with the population as a whole.

Therefore, two versions of the survey (see Appendix A) were designed for two groups within the Scottish population:

- 1,000, aged 16+, representative of the national population in Scotland
- 1,065, aged 16+ who live in Scottish postcodes with a coastal sea border.

A breakdown of the sample is included in Appendix B and details of the sample in Appendix C.

The research was conducted using the *ScotPulse* online panel between 11th and 16th February 2021.

[1] Decommissioning was not covered in this study as no offshore wind farms have yet been decommissioned in the Scotland

Terminology

Given the sample design, outlined above and expanded in Appendix C, comparisons between those in coastal areas and the population as a whole are commented on throughout this report. For ease of reading, the following terminology is used in the report:

- *National respondents* - those from the representative sample from across Scotland
- *Coastal respondents* – those who have a postcode bordering a coastline
- *Lived experience respondents* – a subset of the *coastal respondents,* those who have the same *outward* postcode[2] as an area which is used during the construction of an offshore wind farm. This includes areas where there is onshore infrastructure, where the offshore cables make landfall and areas which are parallel to the offshore development.

Summary of Findings

Key findings from this public research on perceptions of offshore wind farm developments are as follows:

- The vast majority of respondents view marine and coastal industries as having social and economic importance, regardless of which part of Scotland they live in.

- In particular, 92% think the renewable energy sector is important to Scotland in terms of its social value, while 89% think the sector is important to Scotland in terms of its economic value.

- Over 4 in 10 (43%) of *coastal* respondents are aware of an offshore wind farm near to where they live, compared to around a quarter (24%) of *national* respondents.

- Four in five (80%) *national* respondents and 83% of *coastal* respondents either strongly approve or tend to approve of offshore wind farms.

[2] An *outward* postcode refers to the prefix or first part of the full postcode

- Perceived attitudes to offshore wind farms have not changed significantly over time; 85% of *coastal* respondents reported in the survey that they have always had the same opinion of offshore wind farms, while the same is true for 80% of *national* respondents.

- A quarter (25%) of *lived experience respondents* think that offshore windfarms have had a positive impact on their quality of life, while 4% think the opposite, that they have a had a negative impact.

- Further, two-thirds (66%) of *lived experience respondents* think the development provides a boost for the local economy.

- However, a significant minority of *lived experience respondents* have *some* negative attitudes towards offshore windfarms even if their attitudes are broadly positive overall; this includes around a third (34%) who think that offshore wind farms detract from the traditional image of the coast.

- Both *national* and *coastal* respondents are unconcerned about visiting or holidaying in areas where there are offshore wind farms; for example, four in five (81%) say that if they could see an offshore wind farm while on holiday it would make no difference to their choice of destination.

1 Background and methodology

1.1 Background

The Scottish Government has set a target of generating 50% of Scotland's overall energy from renewable sources by 2030,[3] and offshore wind generation has a crucial part to play in delivering against these targets.

The most recent Programme for Government, "A Fairer, Greener, Scotland" 2021-2022 published by the Scottish Government in September 2021 reaffirms the statutory commitment for Scotland to be a 'net zero society' by 2045.[4] Specifically included is the commitment to, "make offshore wind central to our delivery of emissions reduction targets through further ScotWind leasing rounds over this Parliament." As outlined in the Offshore Wind Policy Statement, there is as much as 11GW of offshore wind capacity possible in Scottish waters by 2030.[5]

The Sectoral Marine Plan for offshore wind energy outlines the significant amount of offshore wind energy activity to date.[6] There are 14 offshore wind farms having received consent, with five currently operational. To put that in context, there is currently 0.894 GW capacity installed and a capacity of 5.62 GW available in consented installations. In January 2022 Crown Estate Scotland awarded option agreements to 17 projects totalling almost 25GW in its ScotWind offshore wind lease auction, the first Scottish offshore wind leasing round in over a decade[7].

The Scottish Government is aware of the potential social and economic benefits that could arise through the development of Offshore Renewable Energy (ORE) in Scotland. The fourth chapter of the 2021-2022 Programme for Government outlines the investments made to "create new, good and green jobs", and describes the importance of creating new jobs and help for workers transitioning into green jobs, in low carbon industries such as offshore renewables.

[3] Renewable and low carbon energy - gov.scot (www.gov.scot)

[4] A Fairer, Greener Scotland: Programme for Government 2021-22 - gov.scot (www.gov.scot) (Last accessed online – January 2022)

[5] Offshore wind policy statement - gov.scot (www.gov.scot) (Last accessed Online July 2021)

[6] 1. Introduction and background - Sectoral marine plan for offshore wind energy - gov.scot (www.gov.scot)

[7] ScotWind Offshore Wind Leasing Round: statement by the Net Zero Secretary - 18 January 2022 - gov.scot (www.gov.scot)

The Scottish Government's ambition is to maximise the potential positive impacts and minimise potential negative impacts from ORE for local communities and the nation as a whole. One of the ways this is being achieved is by carrying out Socio-Economic Impact Assessments (SEIA) to ensure that any new projects are planned and developed with these impacts in mind.

Current research on the social impacts of offshore wind farms often focuses on attitudes to offshore wind farms and renewable energy,[8] or explores the reasons for opposition.[9] There is little research looking at the experience of living near a development or characterising the impacts of a development throughout its life cycle. It is widely understood that engaging with stakeholders and communities and providing clear information about a development and the range of changes it might bring about, is crucial for gaining local acceptance.[10] Without understanding these impacts and how they might change over the course of a project, there is a limit to how effective stakeholder and community engagement can be.

At the time of the survey, there were five major operational offshore wind farms in Scottish waters, two under construction and others in the planning phase. The locations of these developments are illustrated in Figure 1.1.

Despite the importance of ORE for Scotland's economy and the value of understanding local perceptions, there is little existing research with members of the public in Scotland on this topic. To fill this research gap, this research was commissioned on Scottish public perceptions of offshore wind farm developments. As the first study of its kind, results within this report can act as a benchmark for future public research following ongoing policy implementation.

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[8] David Bidwell, "The Role of Values in Public Beliefs and Attitudes Towards Commercial Wind Energy," *Energy Policy* 58 (2013/07/01/ 2013), http://dx.doi.org/https://doi.org/10.1016/j.enpol.2013.03.010.; Åsa Waldo, "Offshore Wind Power in Sweden—a Qualitative Analysis of Attitudes with Particular Focus on Opponents," *Energy Policy* 41 (2012/02/01/ 2012), http://dx.doi.org/https://doi.org/10.1016/j.enpol.2011.11.033.; Götz Walter, "Determining the Local Acceptance of Wind Energy Projects in Switzerland: The Importance of General Attitudes and Project Characteristics," *Energy Research & Social Science* 4 (2014/12/01/ 2014), http://dx.doi.org/https://doi.org/10.1016/j.erss.2014.09.003.

[9] Paul Upham and Katinka Johansen, "A Cognitive Mess: Mixed Feelings About Wind Farms on the Danish Coast and the Emotions of Energy Infrastructure Opposition," *Energy Research & Social Science* 66 (2020/08/01/ 2020), http://dx.doi.org/https://doi.org/10.1016/j.erss.2020.101489.; Marco Sonnberger and Michael Ruddat, "Local and Socio-Political Acceptance of Wind Farms in Germany," *Technology in Society* 51 (2017/11/01/ 2017), http://dx.doi.org/https://doi.org/10.1016/j.techsoc.2017.07.005.

[10] Claire Haggett, "Understanding Public Responses to Offshore Wind Power," *Energy Policy* 39, no. 2 (2011/02/01/ 2011), http://dx.doi.org/https://doi.org/10.1016/j.enpol.2010.10.014. J. K. Kaldellis et al., "Environmental and Social Footprint of Offshore Wind Energy. Comparison with Onshore Counterpart," *Renewable Energy* 92 (2016/07/01/ 2016), http://dx.doi.org/https://doi.org/10.1016/j.renene.2016.02.018.

Figure 1.1 Offshore wind farm development locations in Scotland

Offshore wind developments can generate opposition for a number of reasons. Literature considering these developments in countries such as the United States and Denmark has included concerns about the change in cultural characteristics of a community, or the affect a development may have on particular groups (for example the fishing community or those working in tourism).[11] Gaining insight into

11 Sokoloski, Rebecca, Ezra M. Markowitz, and David Bidwell. "Public estimates of support for offshore wind energy: False consensus, pluralistic ignorance, and partisan effects." Energy Policy 112 (2018): 45-55; Firestone, Jeremy, et al. "Wind in the sails or choppy seas?: People-place relations, aesthetics and public

the experiences of those living close to offshore wind farms was seen as crucial in this commission to contribute to the evidence base around the socio-economic impacts of offshore wind developments in Scotland.

This research was conducted during a period of national lockdown due to the COVID-19 pandemic. It is unlikely that the pandemic affected the overall perceptions of offshore wind farm developments. However, it should be noted that this research was conducted during a period when respondents were not permitted to travel for non-essential purposes.[12] The visibility of offshore wind farms would have been absent for all but those who lived, or conducted work for essential services, on a coastal vantage point.

1.2 Aims and objectives

The aim of this research was to explore views about the development of offshore wind farms using both a representative national sample of the Scottish population, and a sample of those who live in coastal communities across Scotland. The specific objectives of the study were to establish views on:

- the perceptions and experiences of those living near offshore wind developments based on their lived experiences
- whether and why perceptions and experiences change at different stages of a development (planning, construction, operation)
- what factors affect perceptions and experiences of living near offshore wind developments
- whether, and in what way, offshore wind farms influence people's decisions regarding tourism and recreation in coastal areas.

Additionally, the research was designed to enable robust sub-group analysis to take place and this report comments on significant differences on a range of factors, including by different age groups and social class groups. The full survey questionnaires are included in Appendix A.

1.3 Methodology and Questionnaire design

support for the United States' first offshore wind project." Energy research & social science 40 (2018): 232-243.

12 See: Timeline of Coronavirus (COVID-19) in Scotland, Scottish Parliament Information Centre.

The questionnaire was designed in partnership with Marine Scotland, ensuring that all key issues were included, and that design principles were upheld, namely that:

- questionnaires should not be too long
- questionnaires should be ordered to avoid confusion and bias
- questions should be clear and written in plain English
- all instructions to respondents should be clear and unambiguous
- respondent confidentiality should be respected and communicated to respondents.

The survey was administered online through the *ScotPulse* online panel of more than 31,000 adults (age 16+) across Scotland. *ScotPulse* is a dedicated online research panel with members across Scotland, including those in remote, rural and coastal areas. Panel members sign up on a voluntary basis and are not paid to complete surveys. The panel is recruited through a range of advertising. This includes advertising on national television as well as on social media, ensuring that it is available beyond those who have social media profiles. Participants are chosen at random to participate. In some studies, this may be a simple random sample, while in others there may be stratification of the population involved. In this study a simple random sample approach was taken for the *national* and *coastal* surveys.

Survey fieldwork took place between 11th and 16th February 2021. A total of 2,065 completed responses were achieved:

- 1,000 adults aged 16+, representative of the national population in Scotland, demographically and geographically,
- 1,065 adults aged 16+ who live in Scottish postcodes with a coastal sea border.

1.4 Data weighting

National survey data were weighted to the age and gender profile of the population in Scotland using mid-year population estimates.[13] Data from the survey of coastal residents were weighted to the age and gender profile of the coastal population using estimates from Scotland's Census 2011.[14]

1.5 Defining key terms

One key theme in this report is consideration of differences in attitudes between people who live in different parts of Scotland in terms of their proximity to offshore

[13] Scotland population mid-year estimate - Office for National Statistics (ons.gov.uk)

[14] Census table data | Scotland's Census (scotlandscensus.gov.uk)

wind farms. To that end, the following categories of respondent were agreed upon, broken down in Table 1.1 below:

Table 1.1 Definitions of each type of respondent

Term	Definition
All respondents	Respondents from both the national and the coastal survey.
National respondents	Respondents who took part in the nationally representative survey, defined as those who live in postcodes in Scotland with or without a coastal border.
Coastal Respondents	Respondents who took part in the targeted coastal survey, defined as those who live in postcodes with a coastal border.
Lived experience	A subset of the *coastal sample* - respondents who have the same outward postcode as an area which is used during the construction of an offshore wind farm. This includes areas where there is onshore infrastructure, where the offshore cables make landfall and areas which are parallel to the offshore development.

1.6 Pilot Testing

A pilot of the survey was carried out with 65 respondents between 4th and 5th February 2021 to ensure the scripting of the questionnaire was correct and to gain insights from participants on survey length and any issues encountered. The main purpose of the pilot was to check the timing of the survey and to receive feedback from participants. This pilot was conducted on coastal communities since this version of the survey was longer and accounted for the more complex question ‘routing’, meaning the way in which respondents are guided through the survey depending on the answers that they give.

Feedback to the pilot survey was positive with respondents reporting that it flowed well, was a reasonable length and easily understood. One minor refinement was conducted, separating ‘agriculture and fisheries’ employment codes into different options at the relevant questions (see Appendix A, National survey question 13, Coastal survey question 21).

1.7 Presentation and interpretation of findings

The survey findings indicate the prevalence of views and experiences in answer to the survey questions. Where percentages do not sum to 100%, this is due to rounding, the exclusion of ‘don’t know’ categories, or multiple answers. Aggregate percentages (for example where ‘satisfied’ and ’very satisfied’ responses are combined) are calculated from the absolute values. Therefore, aggregate percentages may differ from the sum of the individual scores due to rounding of percentage totals. Throughout the report, an asterisk (*) denotes any value of less than half a per cent and a dash (-) denotes zero. For questions where the number of respondents is less than 30, the number of times a response has been selected (n), rather than the percentage, is given.

Answers to open-ended questions are analysed and reported thematically. This data is qualitative in nature and therefore it is not appropriate to draw conclusions from this type of data about the prevalence of views or experiences, but rather to indicate the range of different views expressed.

1.8 Analysis and Reporting

The analysis focusses on a range of population sub-groups of demographic and geographic characteristics. Sub-group analysis was undertaken using R Studio software. Statistical tests were run to ascertain differences within achieved samples for these sub-groups:

- gender
- age group
- socio-economic grouping[15]
- Scottish Government 6-fold Urban-Rural classification[16]
- proximity to an offshore wind farm
- employment sector.

[15] Socio-economic classification uses National Readership Survey social grades. Questions on education, age and occupation are asked to establish social grades (A, B, C1, C2, D, E). Social grades are regularly grouped into ABC1 and C2DE which are taken to equate to middle class and working class, respectively. NRS LIfestyle and classification data: social grade

[16] See Urban-rural classification for Scotland(last accessed 31/01/22).

Significance testing, at a 95% confidence level ($p<0.05$) was applied. Differences are only reported when statistically significant. Reporting does not include every result of every statistical test conducted; the most relevant results are highlighted. In addition, a full anonymised dataset, containing the raw data collected is provided separately to this report.

The remainder of this report sets out the detailed findings and is structured as follows:

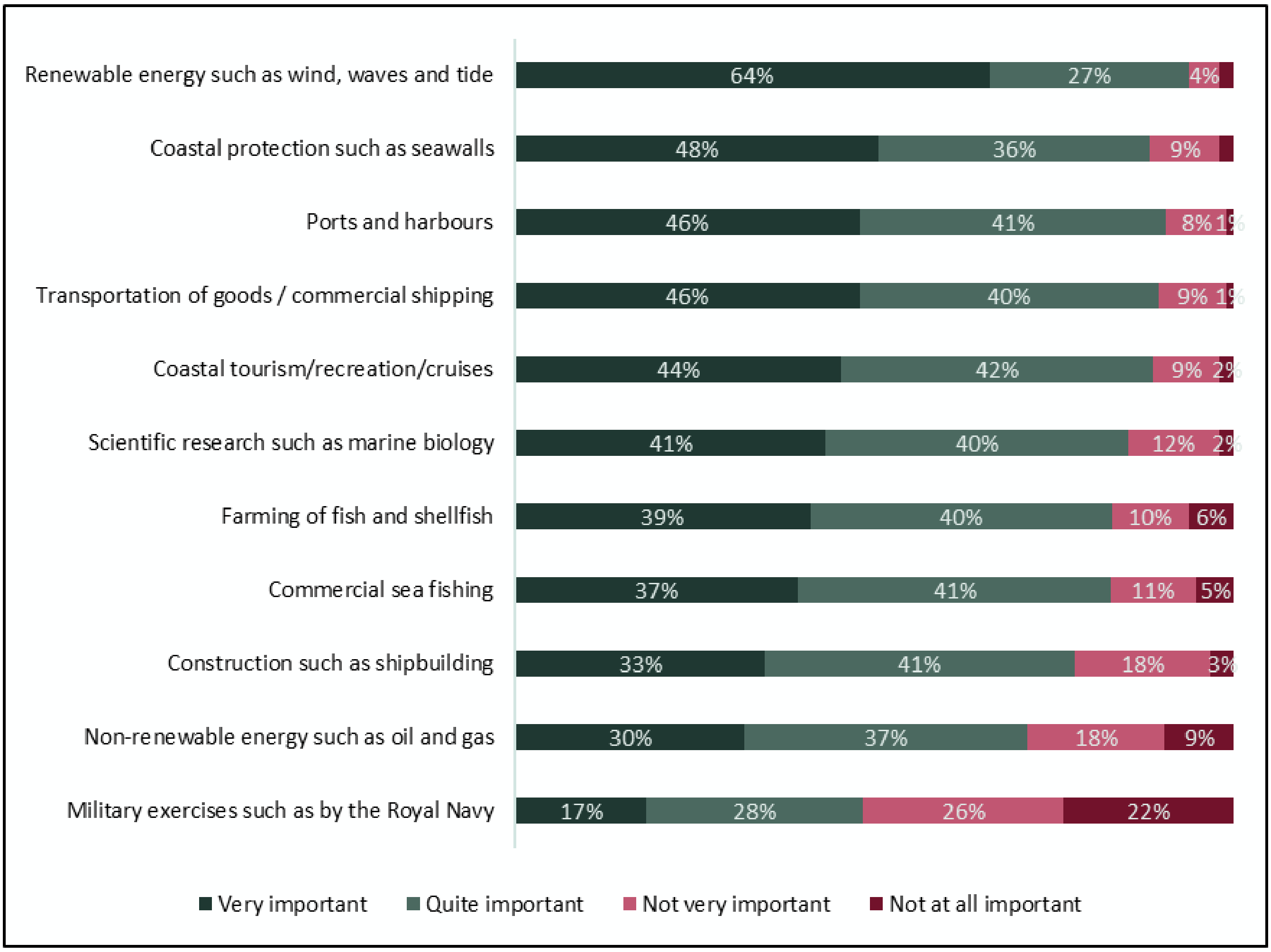
- Knowledge of and attitudes to Scotland’s marine industries
- Broad perceptions of Offshore Wind farms
- Perceived impact of Offshore Wind farms
- Impact on recreation and tourism
- Conclusions.

2 Perceptions of and attitudes towards Scotland’s marine industries

2.1 Social value of marine industries to Scotland

Respondents were asked for their opinions on the *social value* (the value to society as a whole or to local communities) of various sectors and industries. Most sectors and industries receive positive net importance ratings in terms of social value from *national respondents* (see Figure 2.1). The exception is military exercises where opinion is fairly evenly split (45% important, 48% as not important). Almost all *national respondents* (91%) see renewable energy as important to Scotland in terms of its social value.

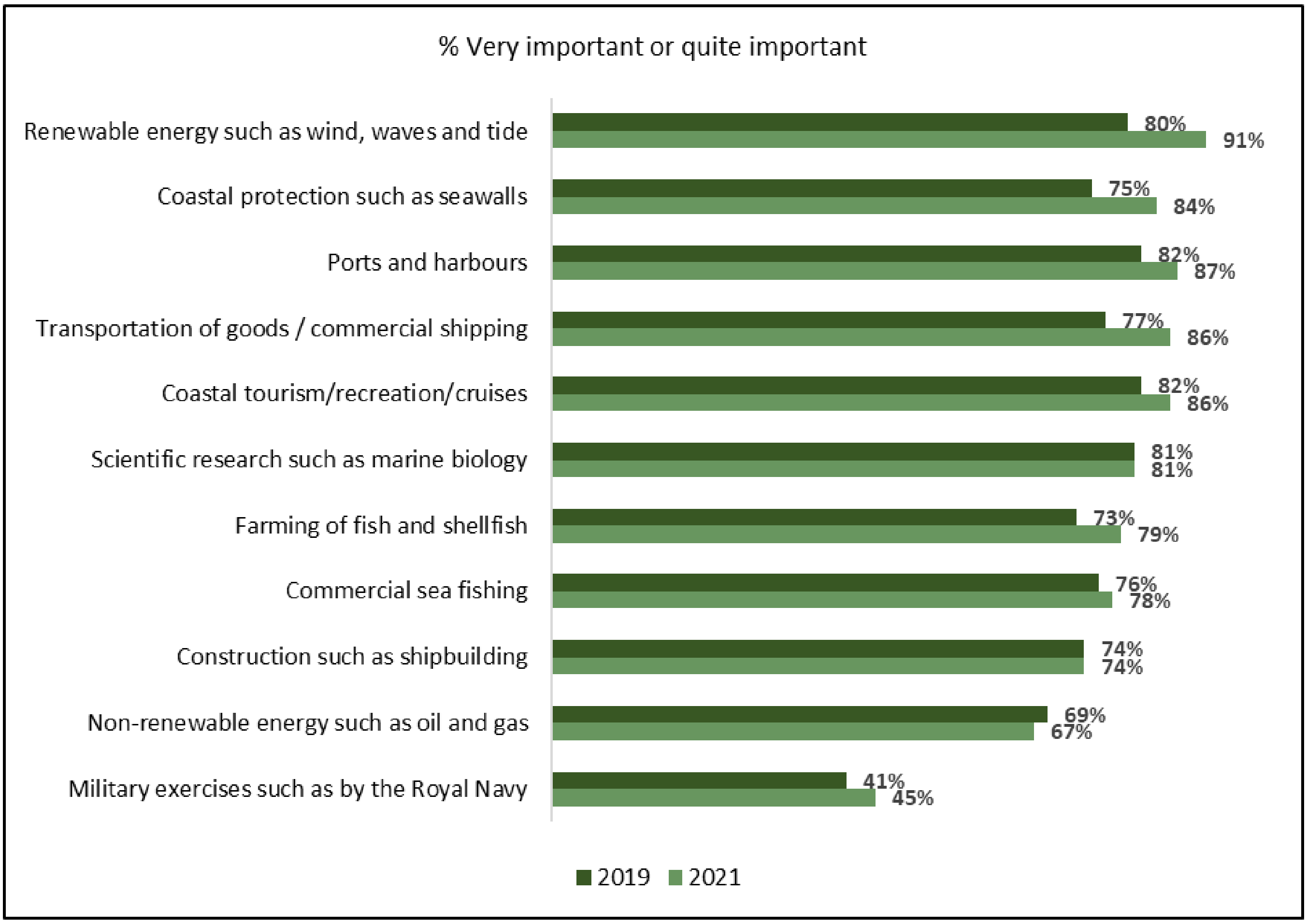
Figure 2.1 How important or not do you feel these sectors or industries are to Scotland in terms of their social value? By social value, we mean their value to society as a whole or to local communities.



Base: Scottish Residents (National n= 1,000)

Figure 2.2 compares the findings on public perceptions of social value of different marine sectors in Scotland with the same question from the 2019 Marine Social Attitudes survey.[17] The surveys were conducted at different times and using different methodologies so caution should be taken when drawing comparisons. However, it is notable that in most cases the ratings are similar. Differences can be observed between the two surveys for a minority of sectors, notably renewable energy, coastal protection and transportation of goods. The survey does not provide reasons for this difference in perceptions. It is notable, however, that those sectors where opinions have changed have had a higher profile in recent years, due to additional focus on climate change and issues around EU Exit.

Figure 2.2 How important or not do you feel these sectors or industries are to Scotland in terms of their social value? By social value, we mean their value to society as a whole or to local communities.

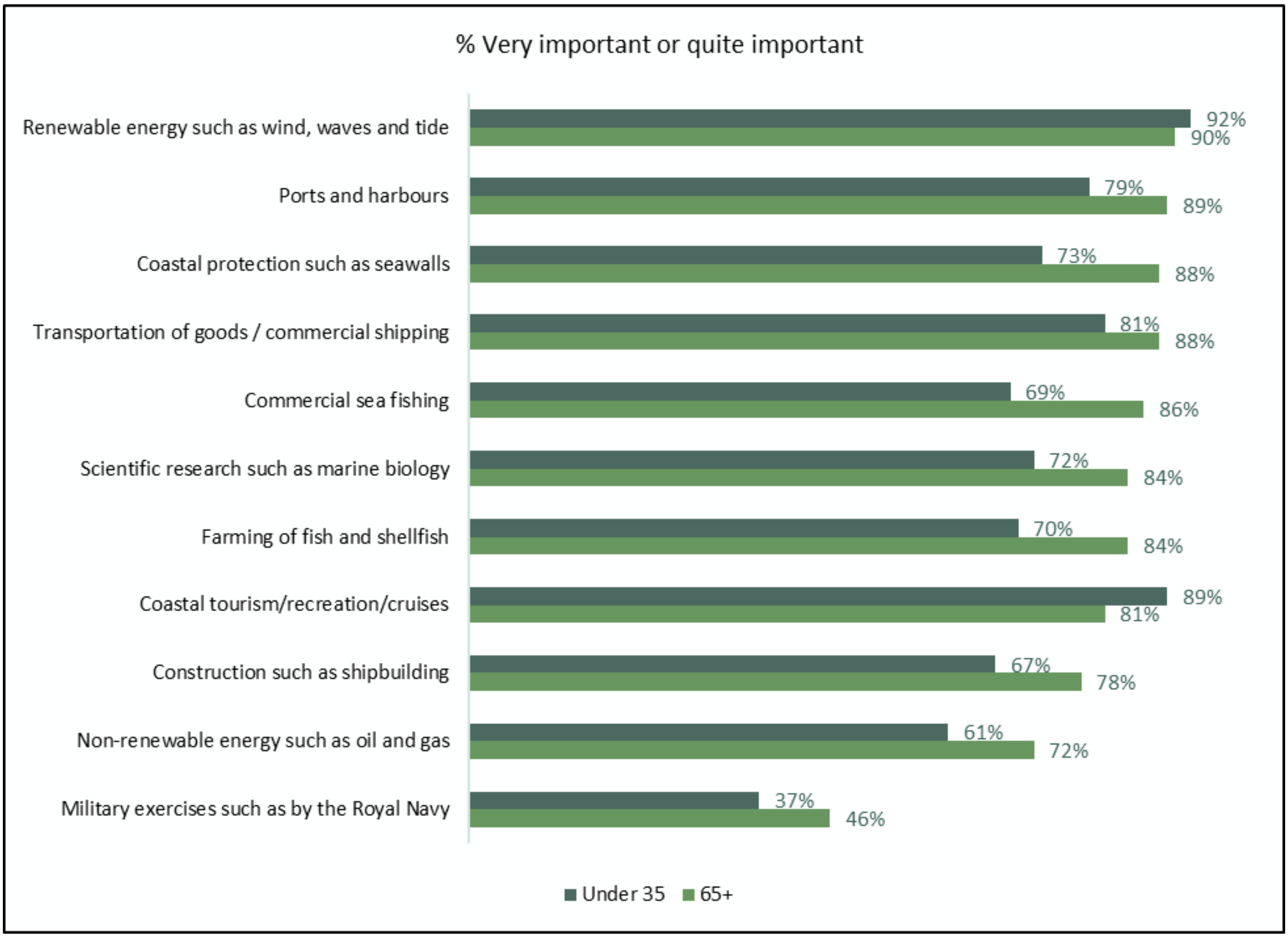


Base: Scottish Residents (2019 n= 2,198, 2021 n= 1,000)
Source: Information taken from Marine Social Attitudes Survey 2019.

[17] Scottish Government (2019), Marine social attitudes: Survey

Further analysis of this question among *national* respondents illustrates a high degree of similarity between most demographic sub-groups, such as gender and social class, though different perceptions according to age profiles are worth exploring further. As Figure 2.3 illustrates, in most cases, those in the oldest groups give a higher ranking of social value importance to almost all industries and sectors than those in the youngest age group. The exceptions are coastal tourism and renewable energy which those under 35 rate more highly.

Figure 2.3 Social value of industries and sectors - analysis of national respondents by age



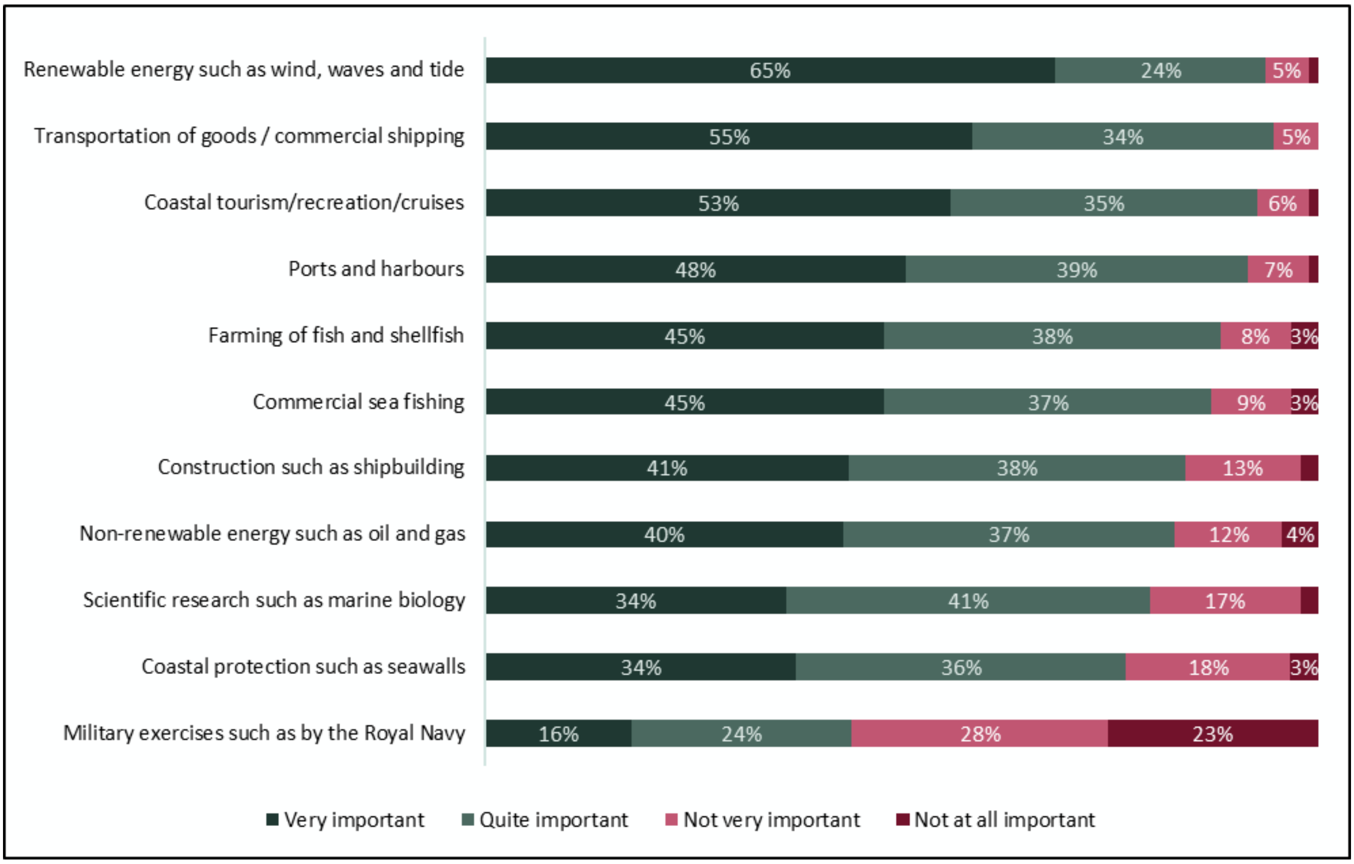
Base: Scottish Residents (National n= 1,000: Under 35 n = 290, 65+ = 230)

2.2 Economic value of marine industries to Scotland

As with the 2019 Marine Social Attitudes Survey, this study asked about the perceived *economic value* (generating tax revenue, creating and providing jobs) of different marine-based industries. As with perceptions of *social* value, most *national respondents* believe renewable energy is an important marine industry in terms of its economic value to Scotland (89% rating as important versus 6% as not important).

In many cases the perceived *economic* value follows a similar trend to the *social* value, with the notable exception of coastal protection. For coastal protection, 70% of respondents consider it to be important or very important in terms of its economic value compared to 84% for social value. As with its perceived social value, military exercises are considered of least importance economically with over half (51%) reporting very little or no importance (Figure 2.4).

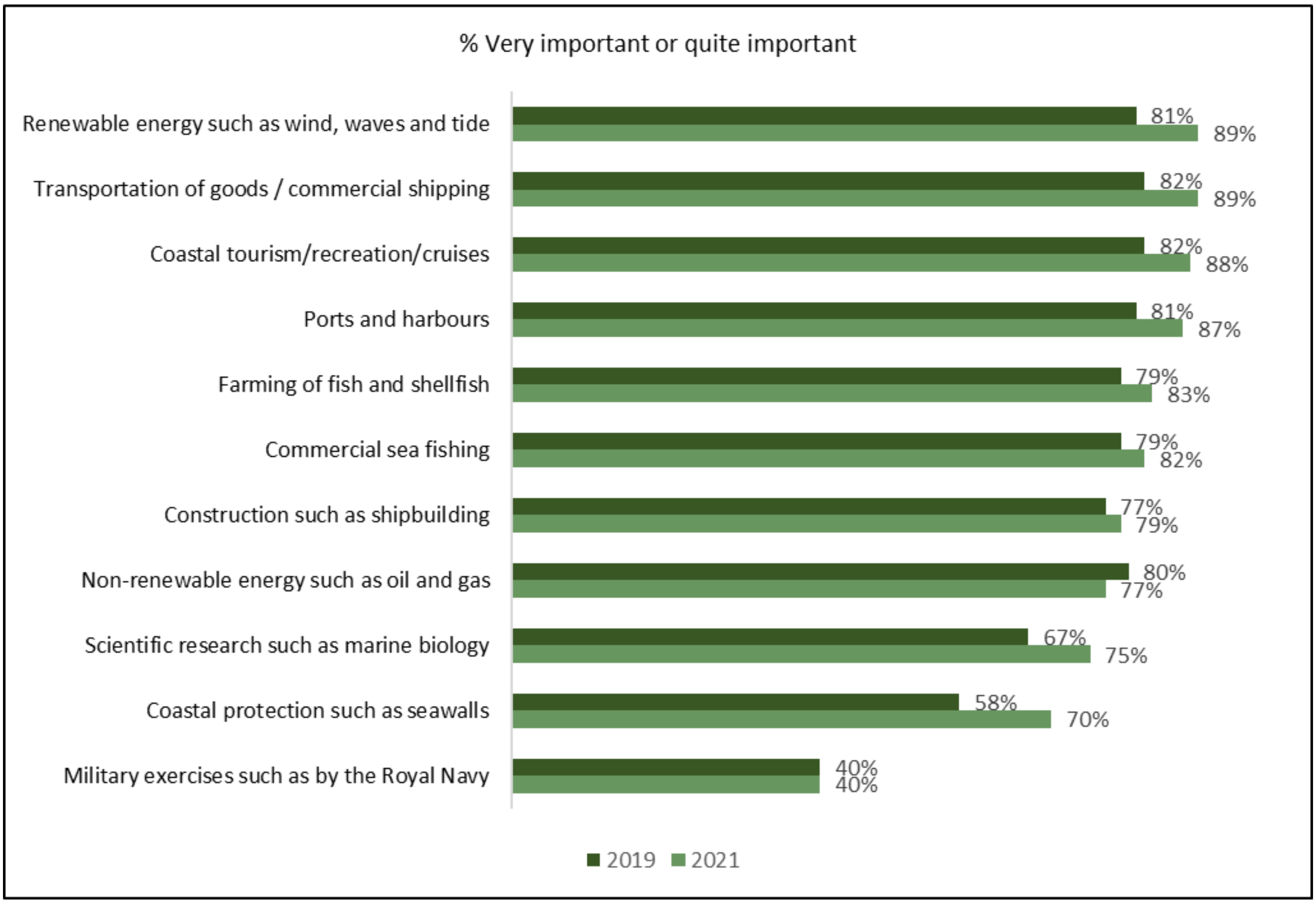
Figure 2.4 How important or not do you feel these sectors or industries are to Scotland in terms of their economic value? By economic value we mean generating tax revenue, creating and providing jobs



Base: Scottish Residents (National n= 1,000)

When looking at the survey data alongside the 2019 Marine Social Attitudes Survey, one can observe similar patterns when comparing perceptions of economic value and social value. These are presented in Figure 2.5. Once again, caution must be taken when interpreting these findings (for reasons set out above). It is interesting to note, however, that those sectors where opinions have changed, have gained a higher profile in recent years, due to the additional focus on climate change and issues around EU Exit.

Figure 2.5 How important or not do you feel these sectors or industries are to Scotland in terms of their economic value? By economic value we mean generating tax revenue, creating and providing jobs

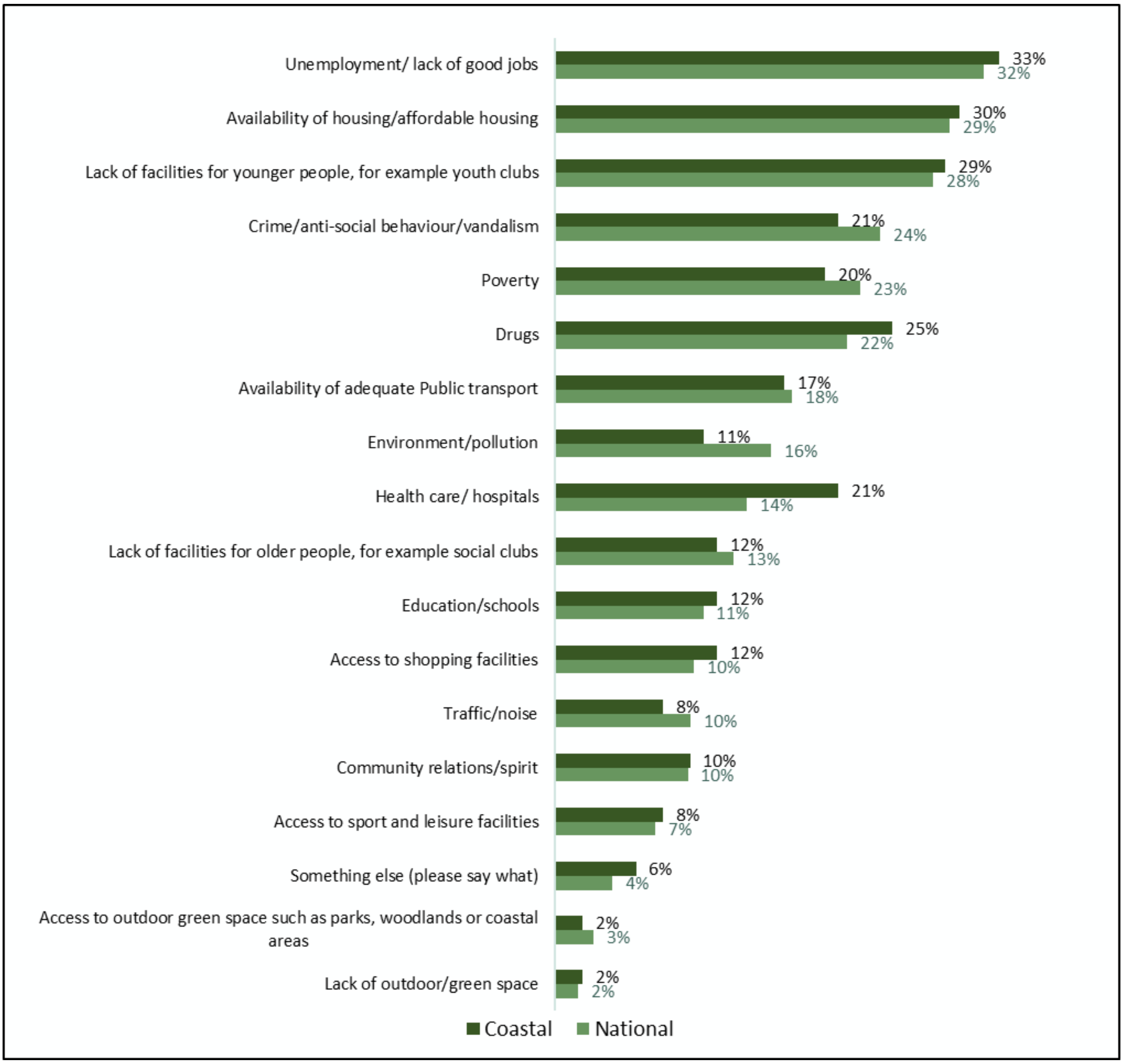


Base: Scottish Residents (2019 n= 2,198, 2021 n= 1,000)

2.3 Issues that affect local areas

Respondents were asked to identify the three most important issues facing their local area, with 'local area' being self-defined by respondents (see Appendix C for full explanation of these definitions).

Figure 2.6 Looking at the list below, which do you think are the most important issues facing your local area? Please select a maximum of three issues.



Base: Scottish Residents (National n= 1,000, Coastal n= 1,065)

There was a striking similarity between the views of *coastal* and *national* respondents in terms of issues that they saw as being most important (Figure 2.6). For example, a third of *national* and *coastal* respondents saw unemployment or a lack of good jobs as an important issue, while around three in ten in both samples believed the availability of affordable housing is an issue in their area as well as a lack of facilities for young people (28% national, 29% coastal). There was a small number of notable differences in opinion between the two samples, such as *coastal* respondents being more likely to view healthcare or hospitals (21%) in their local area to be an issue compared to 14% among *nationa*l respondents.

Despite the similarities of opinion between the two samples on this question, there were some notable sub-group differences in the sample of *national respondents,* including:

- Women (32%) were more likely than men (24%) to view a lack of facilities for younger people as one of the most important issues facing their local area
- Similarly, 16% of women viewed a lack of facilities for older people as an important issue, compared to 10% of men.
- Around a quarter (27%) of those aged 45-54 saw the issue of drugs as important, higher than all other age groups
- The issue of healthcare/hospital may also be related to age, with 21% of those aged 65+ seeing it as the most important issue, versus 7% of those aged 35-44.
- One in eight (12%) of those aged 35–44 thought community relations/spirit were an important issue versus 5% of those aged over 65
- 48% of those in remote rural areas saw the availability of housing/affordable housing as an issue in their local area compared to 25% in accessible rural areas and 27% in accessible small towns.
- 38% of those respondents in remote rural areas thought availability of adequate public transport was an important issue facing their local area versus 13% of those in large urban areas.
- 21% of those respondents in large urban areas thought environment/pollution was an important issue facing their local area versus 13% of those in remote rural areas.

3 Perceptions of offshore wind farms

This chapter will discuss issues directly related to offshore wind and related developments. As a reminder, the definitions used to discuss respondents are in Table 3.1.

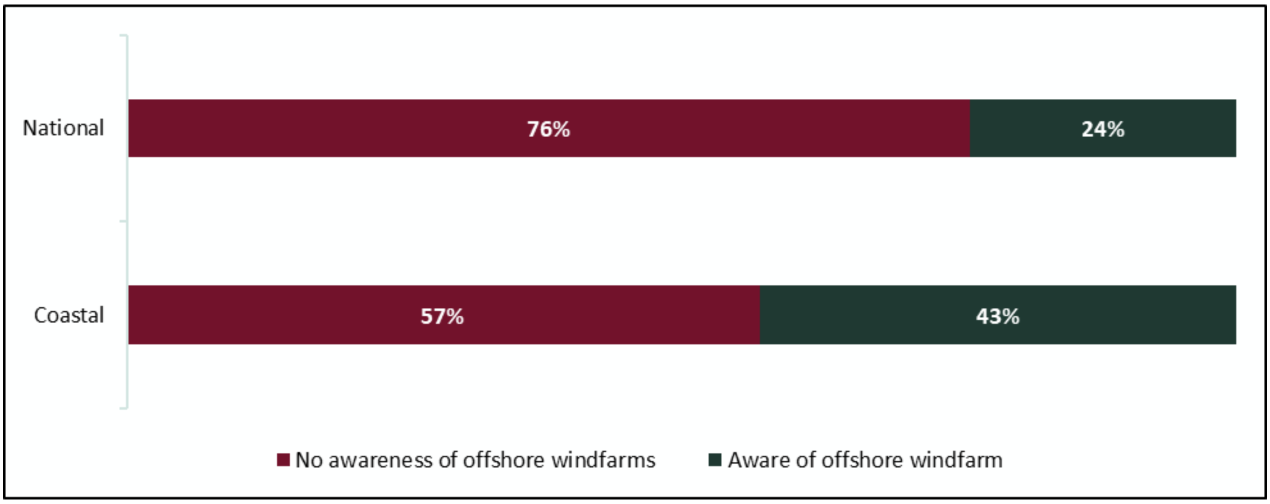
Table 3.1 Definitions of terms used to describe respondents

Term	Definition
All respondents	Respondents from both the national and the coastal surveys.
National respondents	Respondents who took part in the nationally representative survey, defined as those who live in postcodes in Scotland with or without a coastal border.
Coastal Respondents	Respondents who took part in the targeted coastal survey, defined as those who live in postcodes with a coastal border.
Lived experience	Respondents who have the same outward postcode as an area which is used during the construction of an offshore wind farm. This includes areas where there is onshore infrastructure, where the offshore cables make landfall and areas which are parallel to the offshore development.

3.1 Awareness of offshore wind farm developments

Almost a quarter (24%) of *national* respondents said that they are aware of an offshore wind farm near to where they live; this compares with more than two in five (43%) *coastal* respondents who said that they were aware of an offshore wind farm near to them (Figure 3.1).

Figure 3.1 Are you aware of any offshore wind farm located near to where you live?

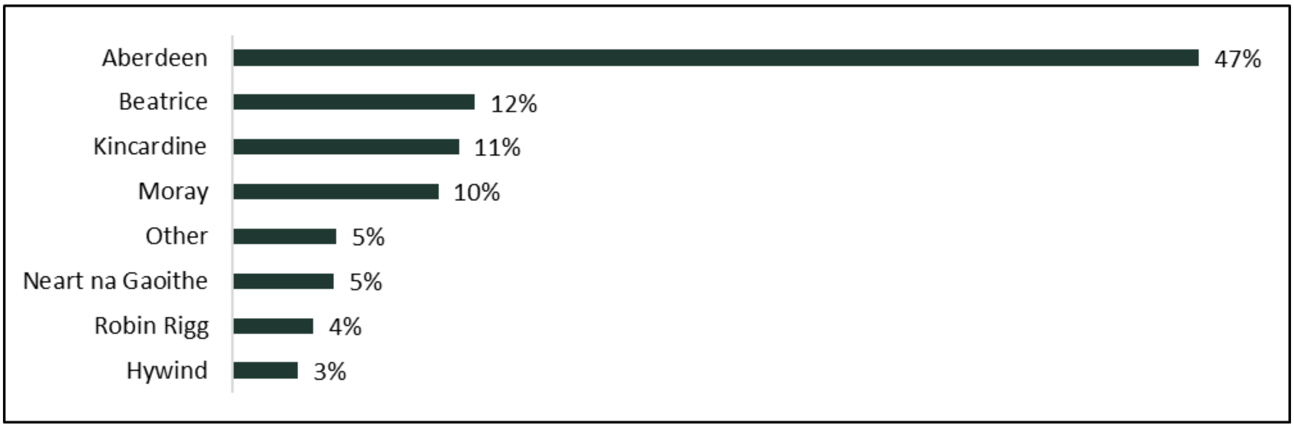


Base: Scottish Residents (National n= 1,000, Coastal n= 1,065)

Before analysing the results further, it is important to note that all respondents were asked about their '*awareness'* of offshore wind farms located '*near to where you live'.* This means the interpretation of '*near to where you live'* by respondents is subjective; respondents may have different ideas about what constitutes 'near', and a respondent who may not consider themselves to be 'near' to the wind farm but are fully aware of a development could answer '*yes'*, whereas another respondent in the same situation could answer '*no'*. This should be borne in mind when considering the data.

Respondents were then asked about the development with which they were most familiar, and around half of respondents who are aware of an offshore wind farm near to where they live named the Aberdeen Bay offshore wind farm (47%). A number of factors may explain this. Firstly, it could be due to that development's proximity to the coast, as Aberdeen Bay offshore wind farm is only 3 kilometres from the shore. Secondly, it may be due to the population density of the area, and this is explored in further detail within a specific case study in a later section below. Thirdly, the Aberdeen Bay offshore wind farm received significant media attention which may have resulted in greater levels of knowledge. There was also some awareness of Beatrice (12%), Kincardine (11%) and Moray (10%) as set out in Figure 3.2.

Figure 3.2 Looking at the list below, which offshore wind farm located near you are you aware of? If you are aware of more than one, please select the one you know most about.



Base: Those aware of offshore wind farms (combined National and Coastal respondents) (689)

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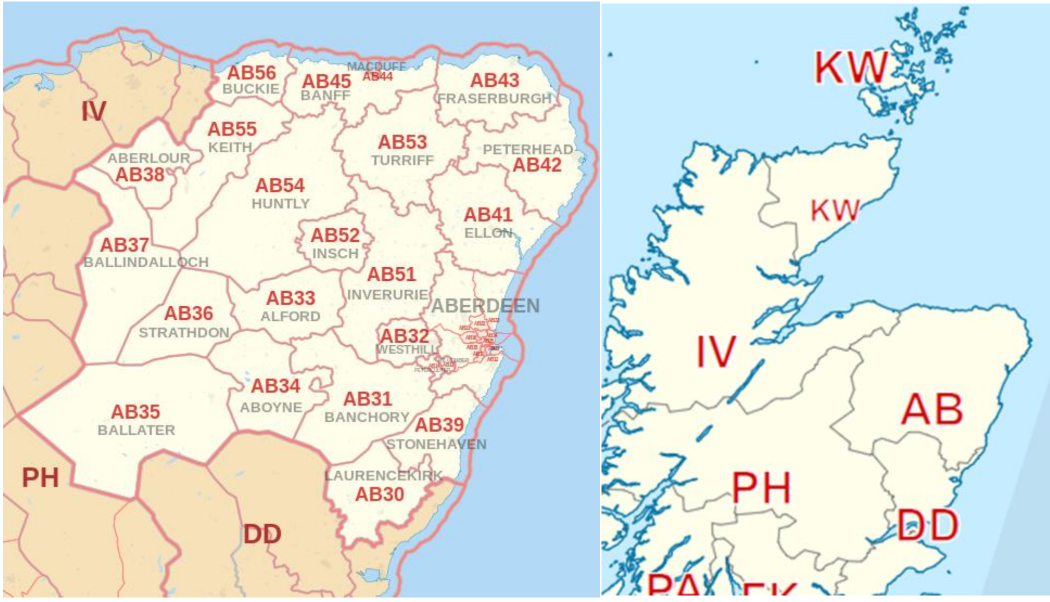
A total of 322 respondents with an AB postcode prefix (237 *coastal* respondents and 85 *national* respondents) took part in the study, representing 16% of the entire sample. To put that into context, respondents from Inverness, Dundee or Kirkwall represent 7%, 10% and 3% of the entire sample respectively.

The AB postcode area is large (Figure 3.3), with 40 postcode districts and over 17,000 live postcodes and has a relatively high population density. As the sample was not stratified, to ensure even coverage along the coast, it follows that there will be a large number of respondents from the Aberdeen area, and awareness of the Aberdeen Bay offshore windfarm may be higher as a result.

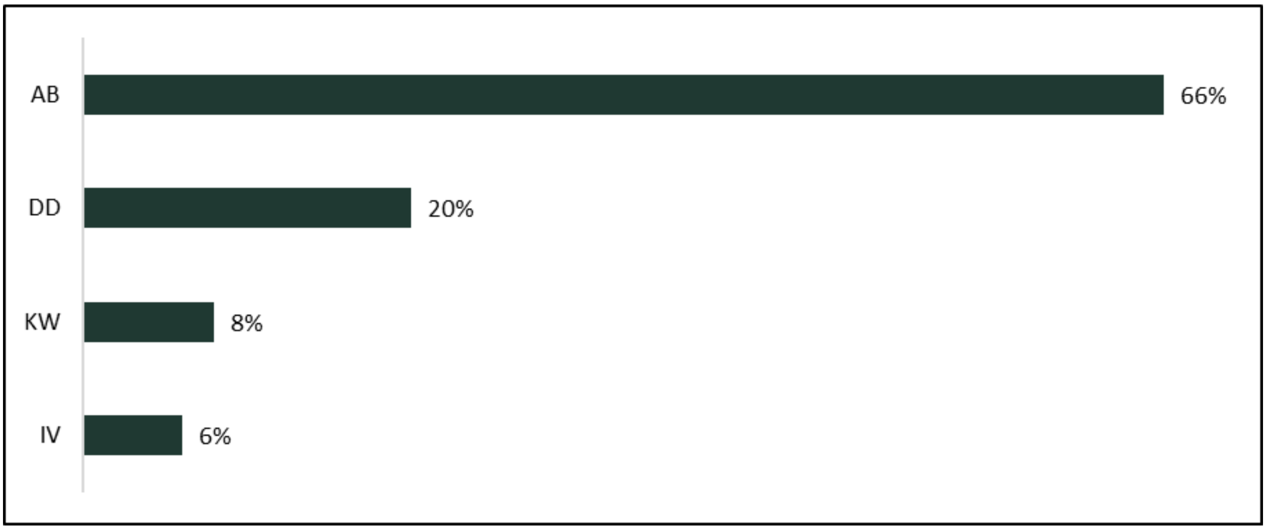
Figure 3.3 Aberdeen (AB) postcode area alongside Kirkwall (KW), Inverness (IV) and Dundee (DD) postcode areas



Map by Richardguk on Wikimedia Commons, licensed under CC BY-SA 3.0. Contains information from Ordnance Survey and Royal Mail data © Crown copyright and database right (2012)

Awareness of the Aberdeen Bay offshore wind farm is not limited to those within the AB postcode area, however. Of those respondents having awareness of the Aberdeen Bay offshore wind farm, two-thirds (66%) of respondents have an Aberdeen (AB) postcode, while the rest are from Dundee (DD), Kirkwall (KW) or Inverness (IV) postcode areas (Figure 3.4).

Figure 3.4 Postcode areas aware of Aberdeen Bay Offshore Wind farm



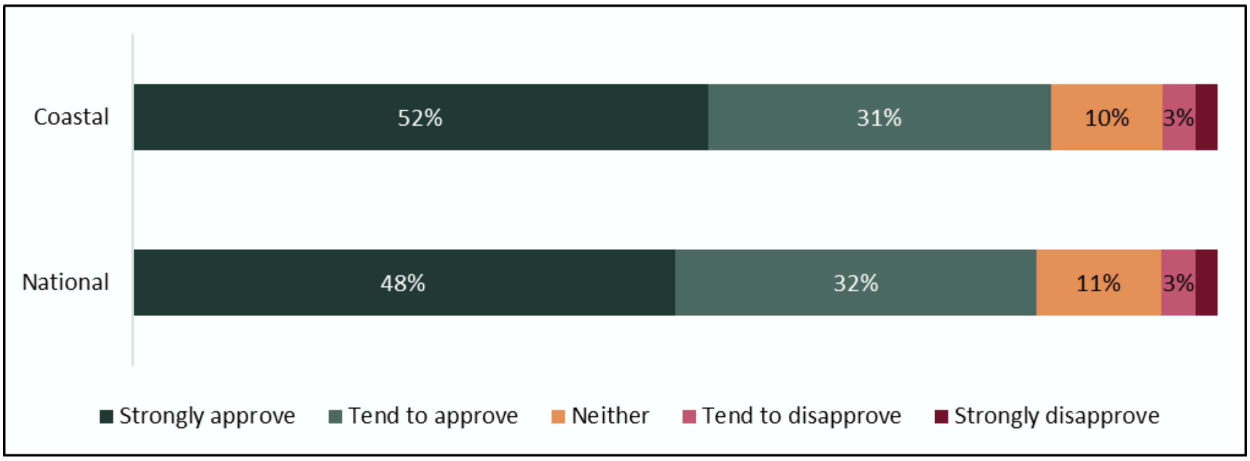
Base: National (n = 85), Coastal (n = 237)

This suggests that the high level of awareness of the Aberdeen Bay offshore wind farm is not restricted to the Aberdeen area and is not purely a result of the sampling used for the survey. Other factors such as the media attention given to the development and its proximity to shore may also play a part.

3.2 Approval of offshore wind farms

Among both *national* and *coastal respondents* there is extensive support for offshore wind farms, with around four in five people from both samples responding that they approve or strongly approve of them (Figure 3.5).

Figure 3.5 To what extent do you approve or disapprove of offshore wind farms?



Base: Scottish Residents (Coastal n = 1,065, National n = 1,000)

Sub-group analysis of *national respondents* for this question revealed only two significant differences, namely that:

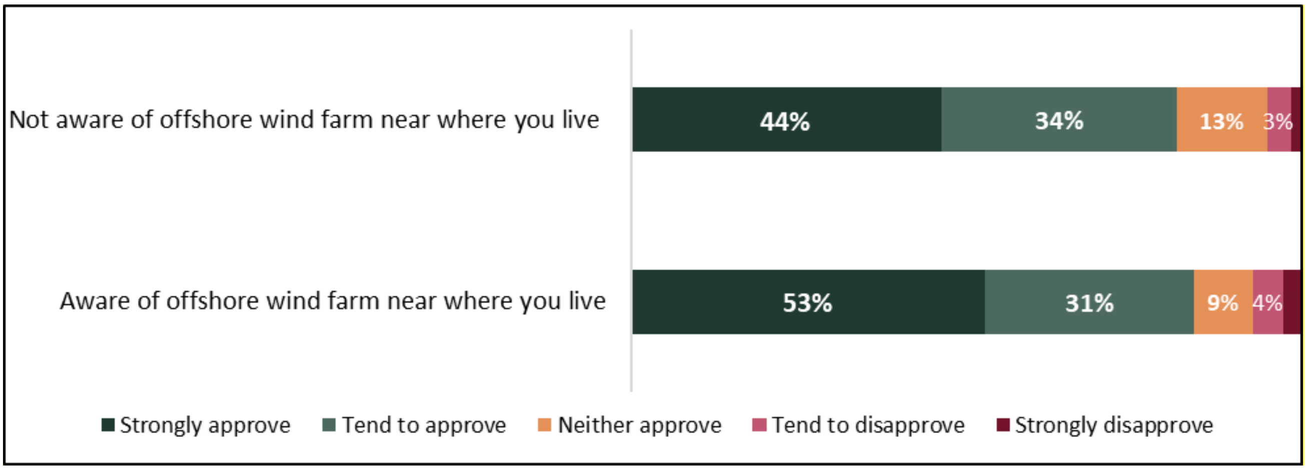
- men are more likely than women to approve of offshore wind farms, 85% versus 76%,
- those in the ABC1 social grades are more likely to approve of offshore wind farms than those in the C2DE grades, 83% versus 76%.

Among *coastal* respondents, younger people tend to be more likely to *approve* (61% of under 34-year-olds strongly approve compared to 40% of over 65-year-olds). On the same theme, *coastal* respondents most likely to *disapprove* of offshore wind farm developments were those aged 65+ (12% compared to 2% of those under 35 years old).

3.3 Awareness and approval

Approval towards offshore wind farms is highest among respondents who have awareness of an offshore wind farm (84% strongly approve or tend to approve). Even so, approval is still high among those with no awareness of an offshore wind farm near to where they live, with 78% of this cohort approving of offshore wind farms (Figure 3.6).

Figure 3.6 Approval of offshore wind farm developments



Base: Scottish Residents (Coastal n = 1,065, National n = 1,000)

4 Proximity to offshore wind farms

As outlined in section 3, respondents were asked *'which offshore wind farm located near you are you aware of?*'. Mapping awareness of offshore wind farm developments indicates that proximity to a development and awareness are not inextricably linked (Figure 4.1). However, proximity and approval is an area of interest and this is examined further in this chapter.

Figure 4.1 Awareness of offshore wind farm developments near respondents, where each plotted point represents one respondent

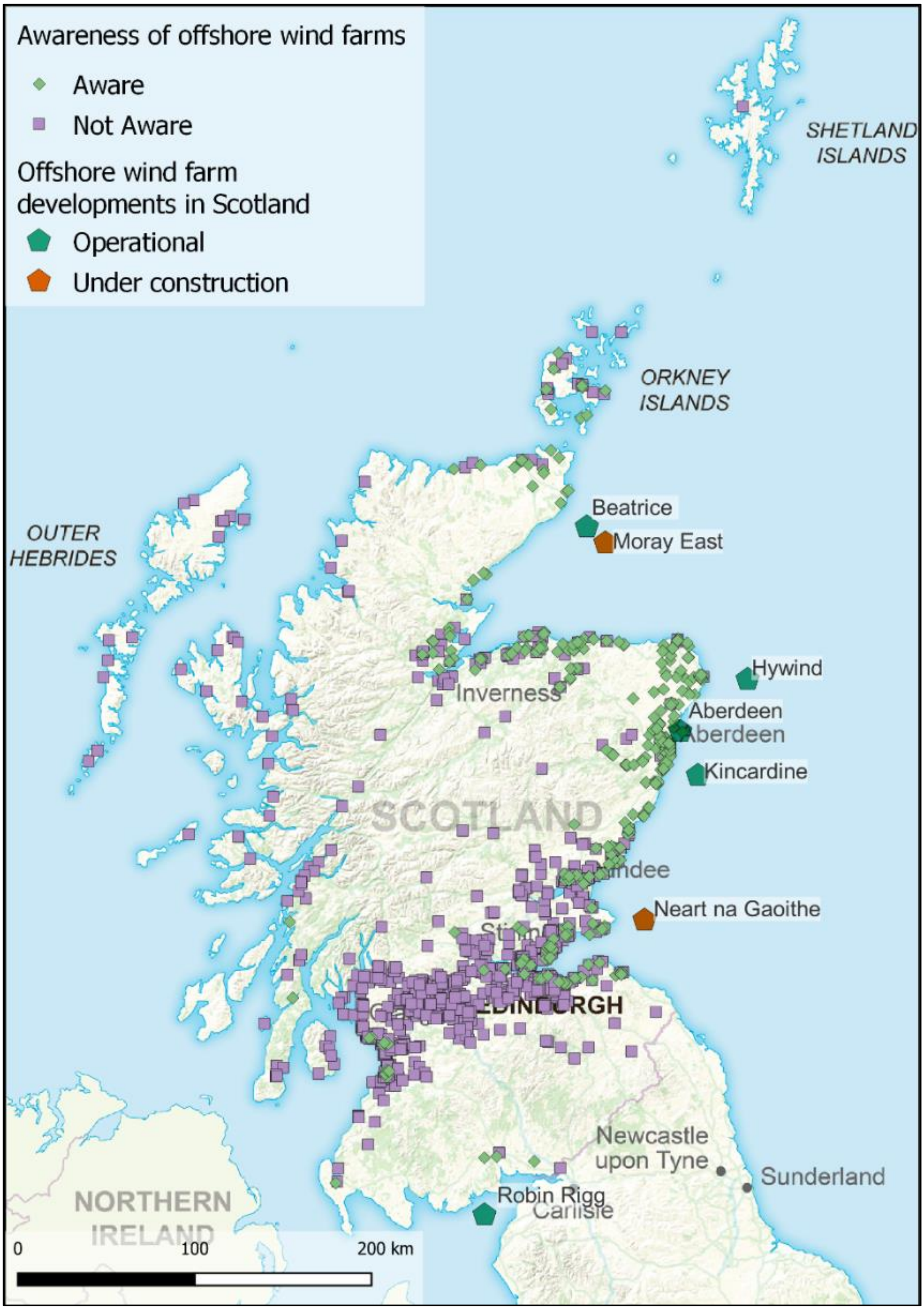


Figure 4.1 illustrates the span of awareness of offshore wind farm developments: some respondents consider themselves to be near a wind development without living particularly close to it, while others may live very close to a development but

are not aware of it. People with awareness of offshore wind farm developments in Scotland typically span the east coast.

This can be better demonstrated at a local level and the remainder of this chapter will discuss:

- Aberdeen area offshore wind farms developments (Aberdeen Bay, Hywind and Kincardine),
- Moray firth developments (Beatrice and Moray East),
- Southern Scotland developments (Robin Rigg and Neart na Gaoithe).

4.1 Aberdeen area offshore wind farm developments.

Aberdeen offshore wind farms include Aberdeen Bay, Hywind and Kincardine offshore wind farm developments. There is a high level of awareness of the three Aberdeen offshore wind farms, from *all* respondents. Around three in five people (61%) with an awareness of an offshore wind farm development are aware of a development in the Aberdeen area (47% Aberdeen Bay, 11% Kincardine and 3% Hywind). Figure 4.2 displays the spread of awareness of an Aberdeen offshore wind farm development and shows that respondents as far as Dundee and Stirling are aware of the Aberdeen offshore wind farms.

Figure 4.2 Awareness of offshore wind farms in the Aberdeen area, where each plotted point represents one respondent

Looking at the perceptions of those people who were aware of a development in the Aberdeen area, 84% approve of offshore wind farms.

4.2 Moray Firth area offshore wind farm developments

The same was true for developments in the Moray Firth (Figure 4.3), where there was a spread of awareness spanning the coastal area, with 24% of people aware of an offshore wind farm development naming Beatrice or Moray East.

Figure 4.3 Awareness of offshore wind farms in the Moray Firth, where each plotted point represents one respondent

As with develpments within the Aberdeen area, proximity to these developments did not have a negative effect on approval. Indeed, 81% of those who were aware of either Beatrice or Moray East OWF development approved of offshore wind farm developments.

4.3 Southern Scotland offshore wind farm developments

Fewer respondents (around 9% of those with an awareness of an offshore wind farm development) are aware of the Robin Rigg (operational) and Neart na Gaoithe (under construction) developments in southern Scotland (Figure 4.4).

Figure 4.4 Southern Scotland offshore wind farm developments, where each plotted point represents one respondent

Again, despite awareness of and proximity to offshore wind farm development approval ratings are high, with 85% of those aware of a development in southern Scotland approving of OWFs.

The direct impacts felt by those respondents closest to the developments are explored in Chapter 5.

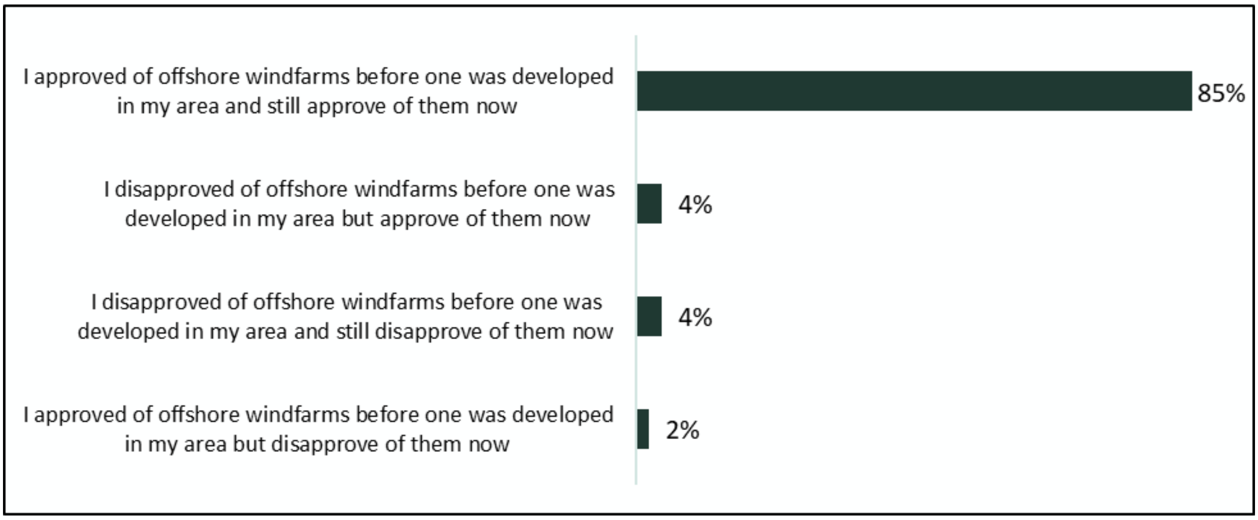
5 Impacts of offshore wind farms

To explore the impacts of offshore wind farms on communities closest to developments, the survey contained questions asked of those with *lived experience* of offshore wind farms, as defined earlier as those ‘who have the same outward postcode as an area which is used during the construction of an offshore wind farm.’ Using this definition, a total of 244 respondents within the *coastal sample* had ‘*lived experience’* of an offshore wind farm.

5.1 Approval of offshore wind farms

Among this *lived experience* sample, a clear majority (85%) indicated that they approved of offshore wind farms before one was developed nearby, and *still* approve of them now, as illustrated in Figure 5.1. Just 6% have changed their minds about offshore wind farms since one was developed; 4% have become more positive in that period while 2% have moved in the opposite direction.

Figure 5.1 Thinking specifically about your views of offshore wind farms in your area, which of the following comes closest to your view?



Base: Those near to an offshore wind farm, excluding those with ‘don’t know’ responses (186)

Further analysis was carried out to explore any common traits held by those who changed their opinion about offshore wind farms, including consideration of gender, age, location, social grade, UR6 code and awareness of each offshore wind farm; no significant relationships were found in the data.

The very small numbers of *lived experience* respondents who have changed their mind about offshore wind farms were asked to give reasons for this change. Those who *now approve* of offshore wind farms often commented on the direct benefits of developments, their increased knowledge of offshore wind farms and the benefits they bring to the community as the reason for changing their opinion.

"Job creation, renewable energy, no pollutants and don't use water. Before I was ignorant of the benefits."
(Aberdeen)

"I think greater use should be made of wind and tidal power. I did not know what the benefits were of using these and we have to get into a situation where we use less of the world's resources."
(Neart na Gaoithe)

Lived experience respondents who now *disapprove* cited the impact on wildlife and seascapes as reasons to oppose offshore wind farms.

"They ruin the view when built close to shore. I believe they are the cause of marine wildlife, whales especially, losing their bearings because of underwater vibrations set up by the turbines. The farms are over illuminated and ruin the dark sky."
(Beatrice)

It is important to note that those who disapprove of offshore wind farms after having experience of a development nearby, did not cite any direct impact to themselves or their lifestyle as a reason for disapproval.

All respondents, *national* and *coastal*, were asked to consider the factors which might change their mind about offshore wind farms in the future. In response to this open-text question the majority of those who already approved of offshore wind farms do not expect to change their mind in the future, suggesting that they see offshore wind farms as a long-term positive feature.

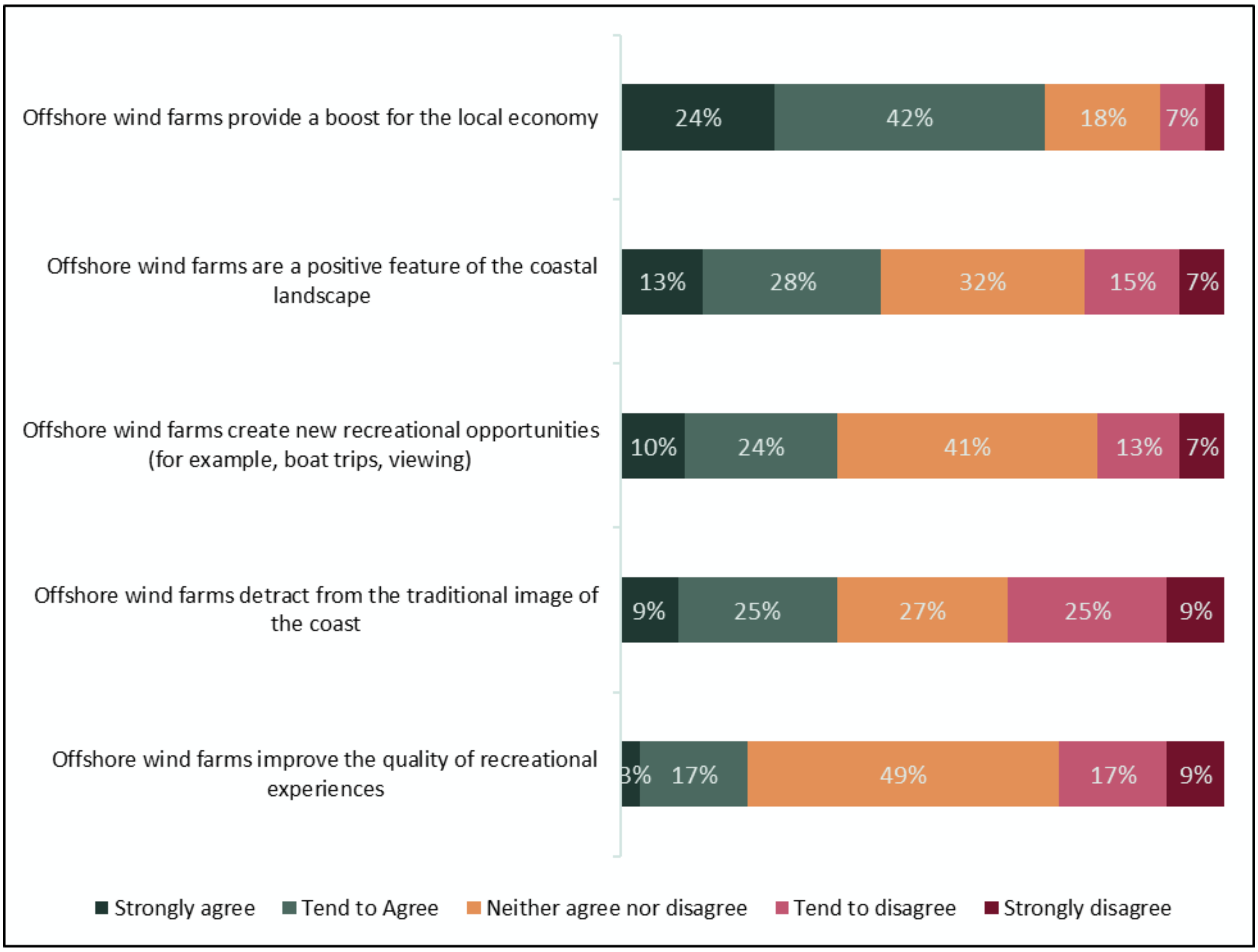
"I doubt if my mind would change as they are a better alternative than other options."
(Beatrice)

"Nothing will change my mind. I think it is an amazing way to provide energy."
(Robin Rigg)

5.2 Impacts of offshore wind farms

Two-thirds of *lived experience* respondents (66%) agreed with the statement that offshore wind farms provide a boost for the local economy, while two in five (41%) agree that they are a positive feature of the coastal landscape and around a third (34%) agreed that they create new recreational opportunities (Figure 5.2). Despite the overall positivity around offshore wind farms in this sample, opinion is equally divided over their impact on the traditional image of the coast, with 34% agreeing that they detract from that image and the same proportion disagreeing.

Figure 5.2 Thinking about the impact of offshore wind farms in your area, to what extent do you agree or disagree with the following statements?



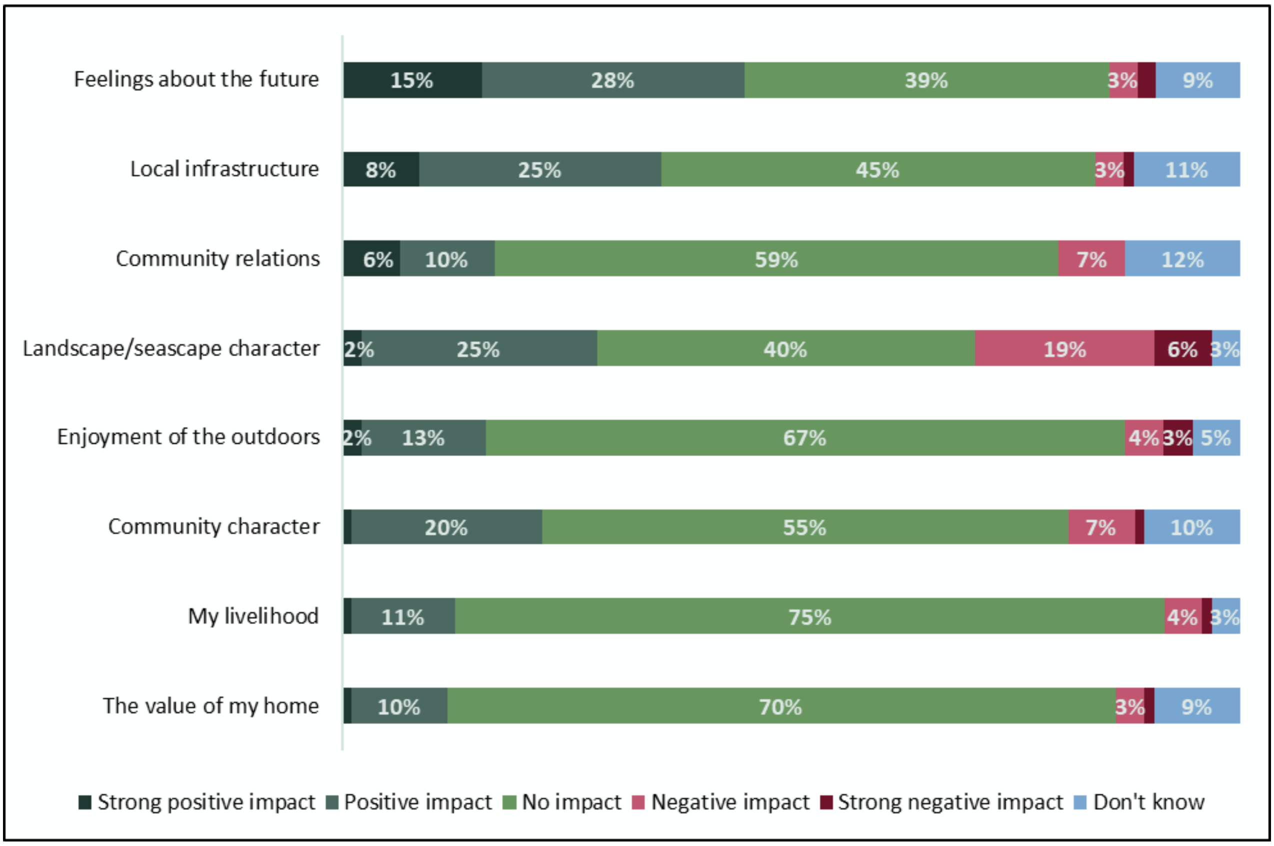
Base: Those near to an offshore wind farm (244)

Sub-group analysis of this question revealed that 34% of those aged between 45 to 54 strongly agree with the statement that offshore wind farms provide a boost to the local economy, compared to only 17% of those aged 65 and over. This may reflect the experience of those of working age who can see the economic benefits more closely. No other significant relationships were found in the data.

5.3 Community impacts

When those with *lived experience* of offshore wind farms were asked a series of questions about specific impacts, in most cases the responses suggested that the impact has largely been neutral. In particular 75% said that the local offshore wind farm has *no impact* on their livelihood, while 70% say the same for the impact on the value of their home (Figure 5.3). There is evidence of a perceived positive impact of offshore wind farms; in particular 43% said that offshore wind farms have a positive impact on their feelings for the future, while 33% perceived a positive impact on local infrastructure. Opinions on the impact of offshore windfarms on the local landscape/seascape character were split fairly evenly, with 27% saying that offshore wind farms had a positive impact and 25% saying that the impact was negative. Positive responses outweigh negative responses for all issues covered.

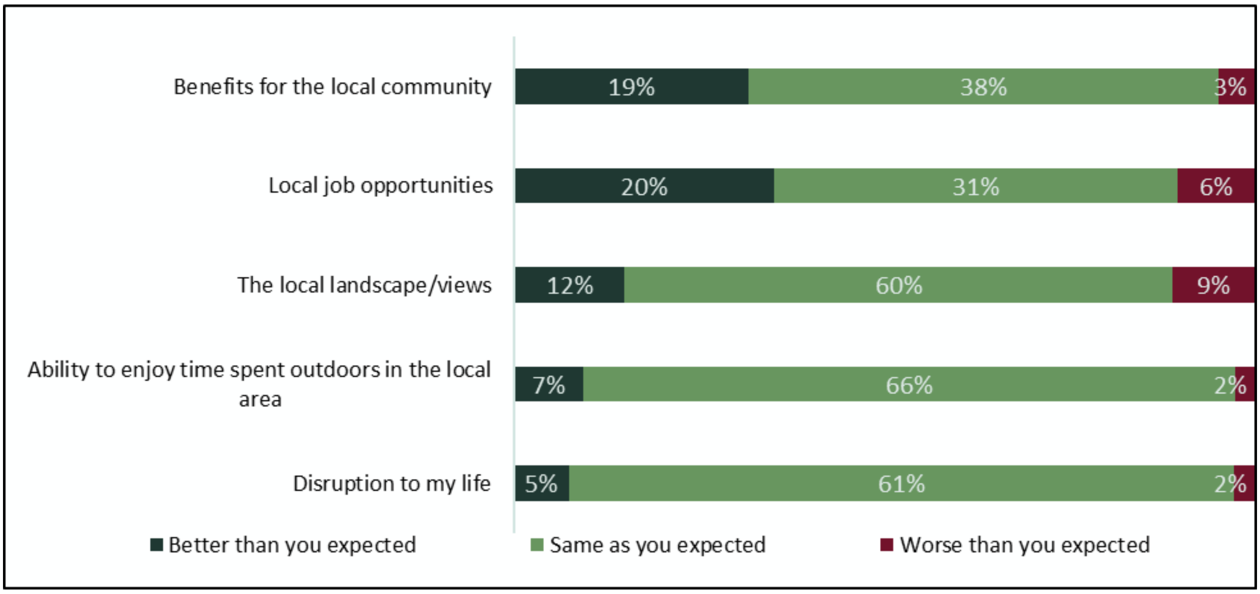
Figure 5.3 And what impact, if any, do you think that offshore wind farms in your area have had on the following?



Base: Those near to an offshore wind farm (244)

Respondents said that the impacts they experienced were broadly in line with what they expected. It is worth noting, however, that the benefits for the local community and local job opportunities have been better than expected for around a fifth of residents (19% and 20% respectively) (Figure 5.4).

Figure 5.4 Thinking about the offshore wind farm closest to you, has the impact of it been better than you expected, worse than you expected or as you expected in terms of the following issues?



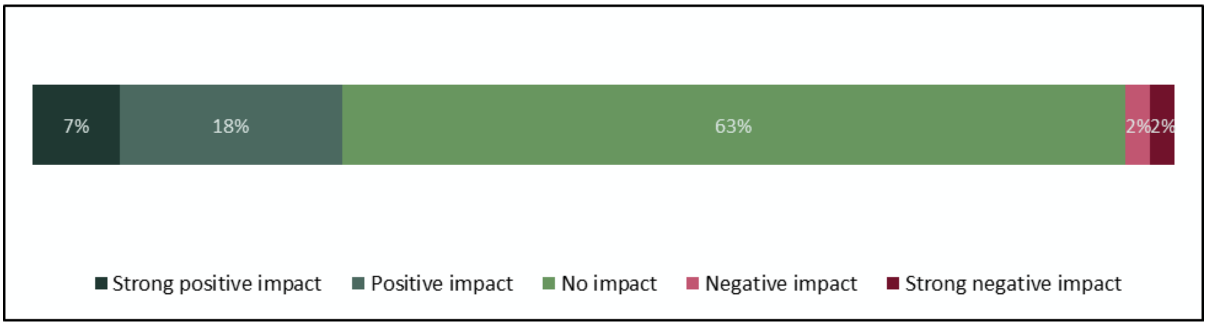
Base: Those near to an offshore wind farm (244)

Sub-group analysis was not possible as the sub-groups were too small for statistical tests to be valid (see section 1.8 Analysis and Reporting for more details).

5.4 Quality of life impact

In terms of overall quality of life, nearly two-thirds (63%) of *lived experience* respondents felt that offshore wind farms had had no impact as shown in Figure 5.5. For those who reported an impact, those reporting a positive impact (25%) outweighed those reporting a negative impact (4%) by six times.

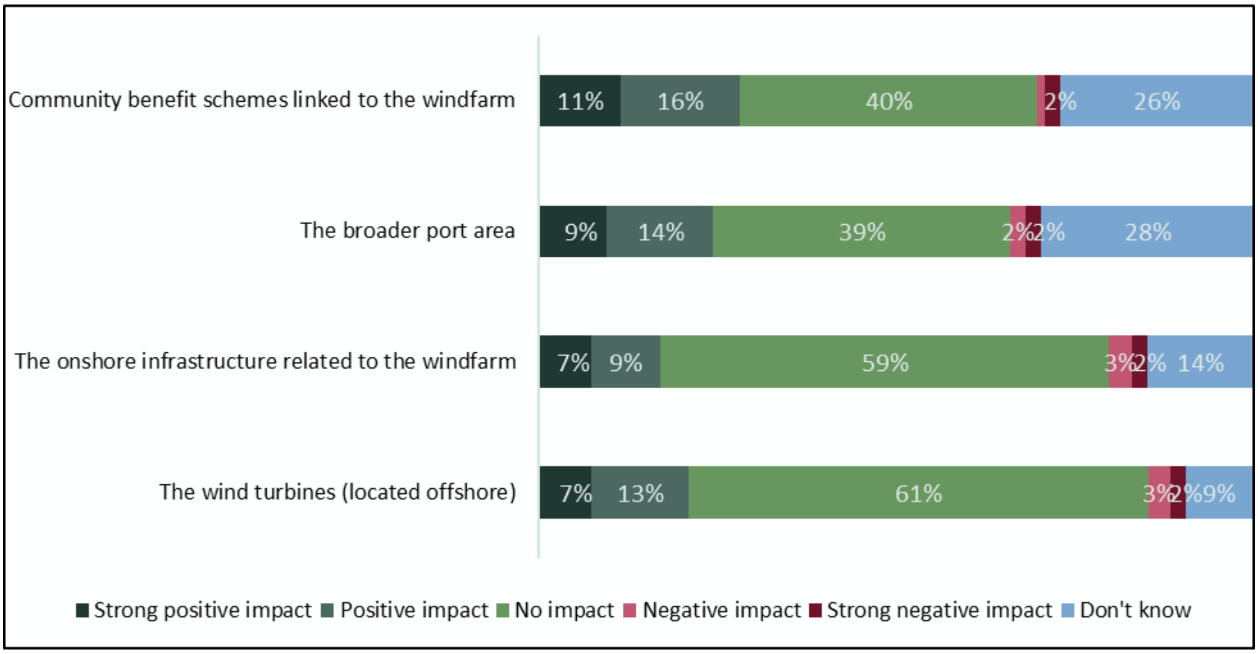
Figure 5.5 Overall, what impact, if any, would you say that offshore wind farms have had on your quality of life?



Base: Those near to an offshore wind farm (244)

Similarly, when looking at a range of specific impacts, listed in Figure 5.6, in all cases, the vast majority of *lived experience* respondents reported either no impact or that they did not know. The impacts which had most positive ratings were community benefit schemes (27% saw as positive) and the broader port area (23%).

Figure 5.6 Thinking about the different components of the offshore wind farm closest to you, what impact on you, if any, has each had?



Base: Those near to an offshore wind farm (244)

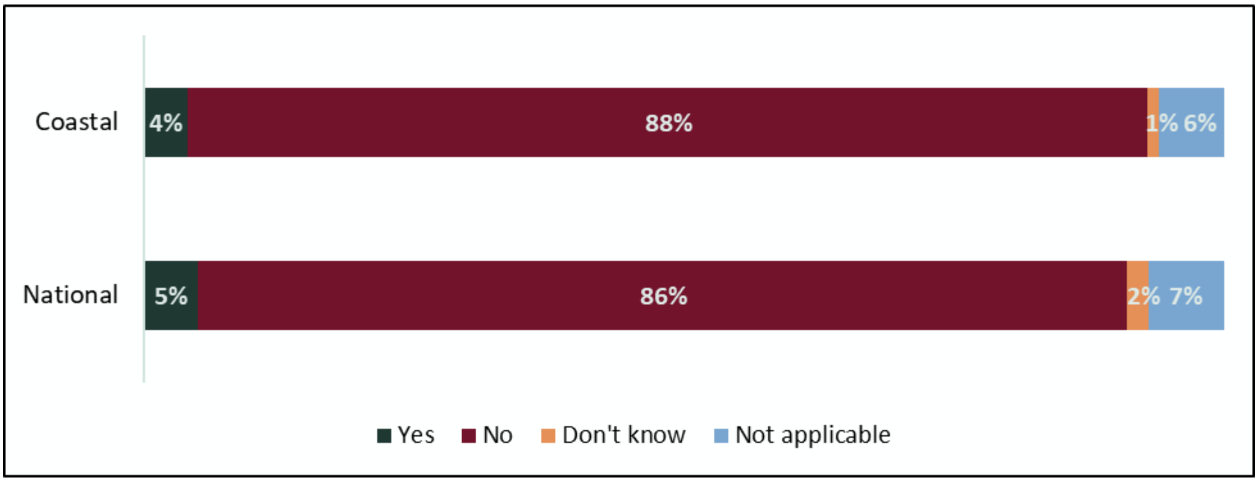
Community benefits are a renewable industry led voluntary initiative to support communities – often in the form of funds. As they are designed to have a positive impact on communities near windfarms, it is notable that 40% of respondents felt that these schemes had had no impact.

6 Recreation and tourism

6.1 Visiting the coast

The vast majority of all respondents, whether *national* or *coastal,* have *not* avoided visiting an area due to the presence of offshore wind turbines visible from the shore, while just 4% of respondents have done so (Figure 6.1).

Figure 6.1 In planning a visit to a coastal area in Scotland, have you ever deliberately avoided visiting an area because there are offshore wind turbines visible from the shore?

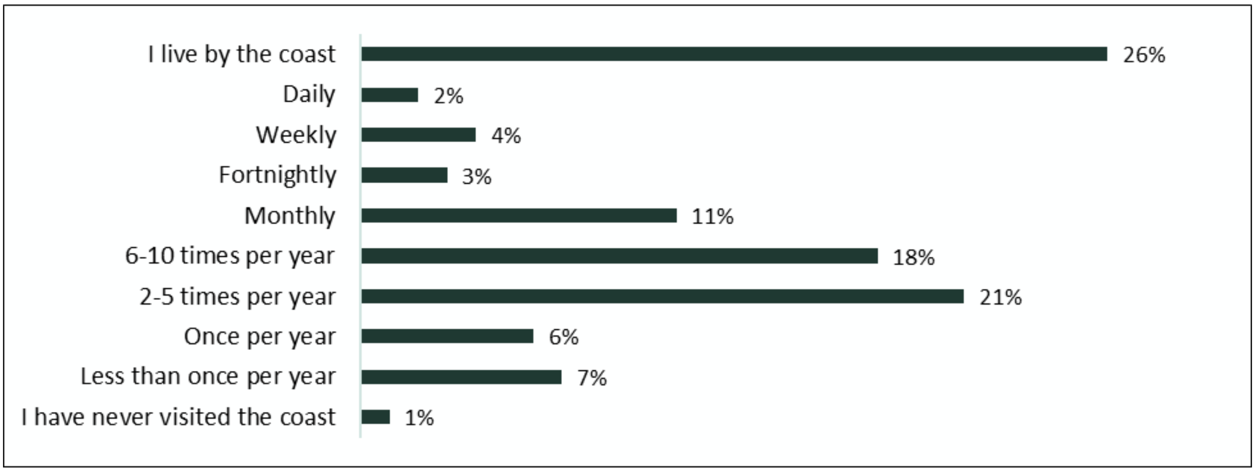


Base: Scottish Residents (National n= 1,000, Coastal n= 1,065)

There was a very small differentiation in this overall positive finding, where men are more likely to say that they will avoid an area due to the presence of offshore wind farms than women (8% versus 3%). There were no other significant sub-group differences.

Visiting Scotland's coastline is an activity frequently undertaken by respondents, with 85% either living by the coast or visiting at least 2-5 times per year (Figure 6.2). Only 13% visit less often than that and just 1% reported having never visited the coast.

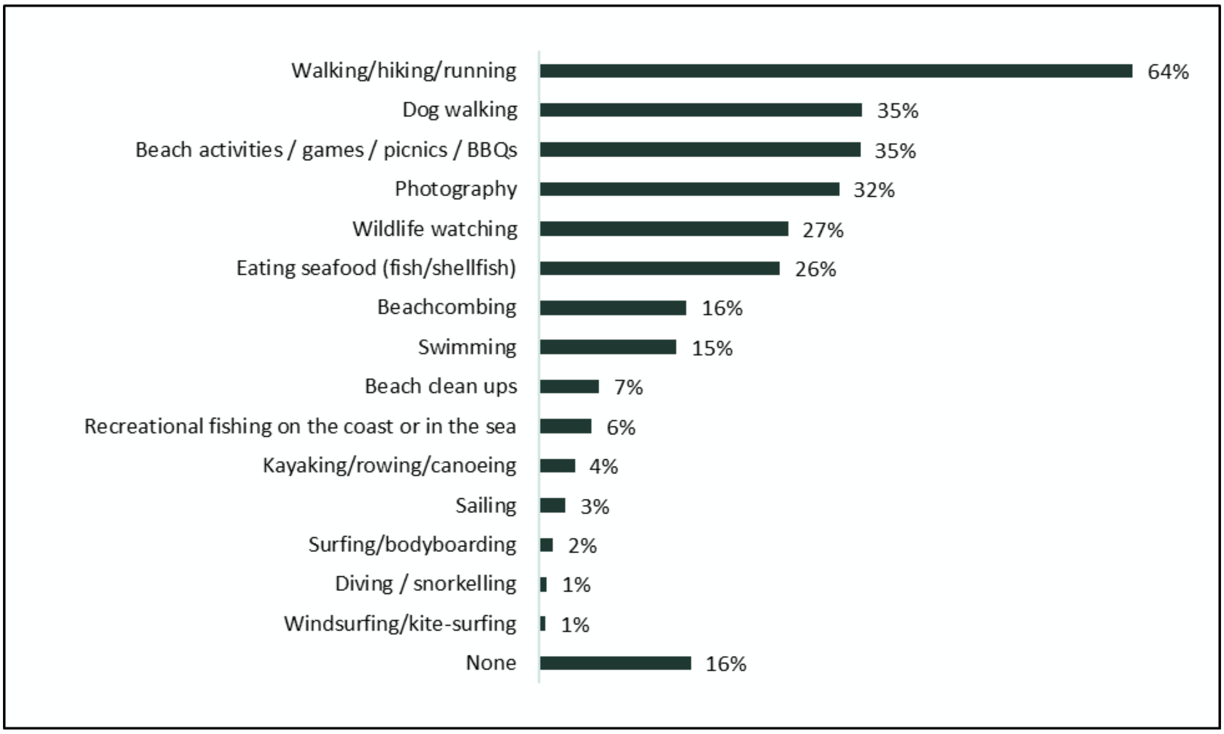
Figure 6.2 Approximately how often do you visit the coast in a typical year?



Base: Scottish Residents (National n= 1,000)

National sample respondents who reported visiting the coast take part in a range of activities while there (Figure 6.3). The most popular activities combine different types of physical exercises, specifically walking/hiking/running (undertaken by 64%) and dog walking (35%).

Figure 6.3 Which, if any, of the following leisure activities have you done at the Scottish coast or sea in the last year?



Base: Scottish Residents (National n= 1,000)

Additional analysis illustrates that approval for offshore wind farms remains high regardless of the activity undertaken by those who visit Scotland's coast. For example, 86% of those who visited the coast to eat seafood, or take part in beach games, picnics or BBQs also approve of offshore wind farms. Although the approval ratio falls a little with other activities, it remains above three quarters for all activities undertaken. The full breakdown is shown in Figure 6.4.

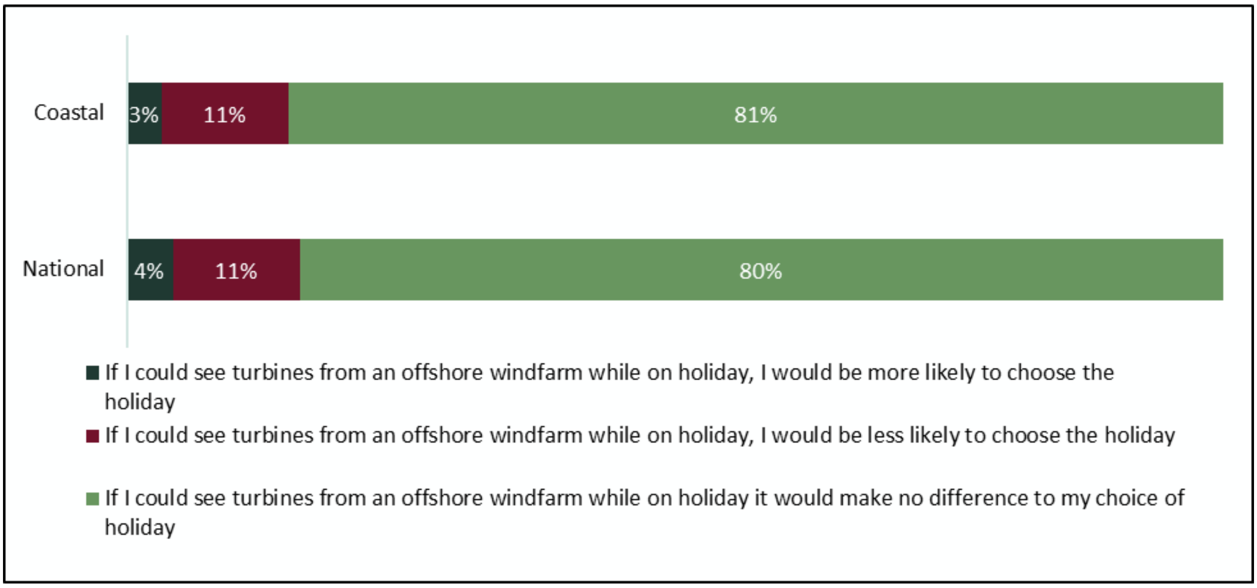
Figure 6.4 Approval of offshore wind farms, by coastal activity

Base: Scottish Residents (National n= 1,000)

6.2 Tourism

In line with survey findings about the impact of offshore wind farms on taking trips, the vast majority of respondents do *not* avoid having a holiday in Scotland because of visible wind turbines (Figure 6.5). Four out of five *national* respondents (80%) say being able to view turbines from an offshore wind farm while on holiday in Scotland would make no difference to their choice of holiday, while 4% would be more likely to choose the holiday if they could see turbines. Around one in ten (11%) of *national* respondents would be less likely to choose the holiday because they could see turbines from an offshore wind farm.

Figure 6.5 Thinking about having a holiday in Scotland, which of the following statements comes closest to your view?



Base: Scottish Residents (National n= 1,000, Coastal n= 1,065)

Sub-group analysis reveals that women are more likely than men to say that a visible turbine would make no difference to their holiday plans (83% versus 75%). A similar pattern emerges with age; 84% of those aged under 44 say visible wind turbines would make no difference, compared to 75% of those aged 65 and over.

Those who would be more likely to choose the holiday if they could see offshore wind farm turbines are most likely to be from urban areas (7% from Large Urban Areas vs 1% from Remote Rural Areas).

7 Conclusions

The research provides fresh insights into the experiences and views of the people of Scotland towards an issue of growing importance in the nation's future. The Climate Change (Emissions Reduction Targets) (Scotland) Act set targets to reduce Scotland's emissions of all greenhouse gases to net-zero by 2045 at the latest, while ensuring a Just Transition and social engagement. Scottish offshore wind generation is seen to play a vital part in meeting this challenge, and Scotland's offshore wind policy statement details ambitions for as much as 11 GW capacity in Scottish waters by 2030. The broader context for this research is that we know, for example from the Scottish Household Survey, that people in Scotland increasingly see climate change as an immediate and urgent problem, think it is an issue that will have direct impact on Scotland and are prepared to take individual action to change their behaviour in ways that will benefit the environment. With that in mind, we think that the following conclusions can be drawn from the research.

The most significant finding from this study is that majority of people from both samples, national and coastal, approve of offshore wind farms. Furthermore, this approval of offshore wind farms is present throughout the population, regardless of demographic sub-group or locality, and this persists with lived experience of, or proximity to, a windfarm.

Another key finding is that those who approve of offshore wind farms have not changed their minds and have held that view for a period of time. This suggests that, other things being equal, these values are likely to upheld in the future.

When presented with a range of features of offshore wind farms, those who live in coastal areas are most likely to cite local economic boosts as their main benefit. This may be because of the jobs created through the construction, development and maintenance of offshore wind farms and other industries in the supply chain.

Renewable industries are seen by national and coastal respondents alike as more socially and economically valuable than non-renewable energy industries (e.g., oil and gas) noting that non-renewable industries still have high value.

The research indicates that potential impacts on the tourist industry and businesses that rely on tourists located near to offshore wind farms could be minimal given that the vast majority of respondents would not avoid an area simply because of an offshore wind farm. The findings show that only a small minority of respondents would be put off holidaying in a location in Scotland if they could see a wind turbine; and that others would actually be more likely to visit an area with turbines.

These conclusions and the fuller report point to positive public attitudes which are widespread across Scotland. The issue of offshore wind farms is a key strategic policy area within the broader environment and climate change agenda. A range of evidence from survey data illustrates the growing importance the public places on environmental issues and the urgency with which they want to see climate change addressed.

Appendix A

National Questionnaire

Introduction

The following questions are about offshore wind farms, located at sea, in Scotland.

Ask all
Q1. Looking at the list below, which do you think are the most important issues facing your local area? Please select a maximum of three issues.
Randomise order
- Crime/anti-social behaviour/vandalism
- Drugs
- Education/schools
- Unemployment/ lack of good jobs
- Environment/pollution
- Lack of facilities for older people, for example, social clubs
- Lack of facilities for younger people, for example, youth clubs
- Health care/ hospitals
- Lack of outdoor/green space
- Availability of housing/affordable housing
- Access to sport and leisure facilities
- Access to shopping facilities
- Access to outdoor green space such as parks, woodlands or coastal areas
- Poverty
- Availability of adequate Public transport
- Traffic/noise
- Community relations/spirit
- Something else (WRITE-IN)

Ask all
Q2. How important or not do you feel these sectors or industries are to Scotland in terms of their social value? By social value, we mean their value to society as a whole or to local communities.
Single code per line
Commercial sea fishing
Farming of fish and shellfish
Non-renewable energy such as oil and gas

Renewable energy such as wind, waves, tide
Transportation of goods / commercial shipping
Coastal tourism / recreation / cruises
Coastal protection such as seawalls
Scientific research such as marine biology
Ports and harbours
Military exercises such as by the Royal Navy
Construction such as shipbuilding
Scale: Very important, Quite important, Not very important, Not at all Important, DK

Ask all
Q3. How important or not do you feel these sectors or industries are to Scotland in terms of their economic value? By economic value we mean generating tax revenue, creating and providing jobs. *SINGLE CODE PER LINE*
Commercial sea fishing
Farming of fish and shellfish
Non-renewable energy such as oil and gas
Renewable energy such as wind, waves, tide
Transportation of goods / commercial shipping
Coastal tourism / recreation / cruises
Coastal protection such as seawalls
Scientific research such as marine biology
Ports and harbours
Military exercises such as by the Royal Navy
Construction such as shipbuilding
Scale: Very important, Quite important, Not very important, Not at all Important, DK

Ask all
Q4a. Are you aware of any offshore wind farm located near to where you live?
Single code only
scale: yes/no

Ask if yes at q4a
Q4b. And, looking at the list below, which offshore wind farm located near you are you aware of? If you are aware of more than one, please select the one you know most about.
Code all that apply
Beatrice Offshore Wind Farm (North),

Moray Offshore Wind Farm – East (North),
Hywind Buchan Deeps (North East),
Aberdeen Offshore Wind Farm (North East),
Kincardine Offshore Wind Farm (North East)
Neart Na Gaoithe (East)
Robin Rigg (South West),
Other (Please write-in)

Ask all
Q5. And to what extent do you tend to approve or disapprove of offshore wind farms?
Scale: Strongly approve, tend to approve, neither/nor tend to disapprove, strongly disapprove, DK

Ask all
Q6a. And whether you approve or disapprove of offshore wind farms overall, which of the following statements comes closer to your view?

a. I have had the same opinion about offshore wind farms, and this has not changed over time

OR

b. I have changed my opinion about offshore wind farms since I first knew about them

DK

Ask if changed opinion (code b. at q6a.)
Q6b. And thinking about your views of offshore wind farms generally, which of the following statements best applies to you? *SINGLE CODE ONLY*

a. I used to approve of offshore wind farms but now disapprove of them
b. I used to disapprove of offshore wind farms but now approve of them
DK

Ask all
Q7. And in the future, what factors do you think might change your mind about offshore wind farms either in favour of them or against them?
Please write in below

Ask all
Q8. In planning a visit to a coastal area in Scotland, have you ever deliberately avoided visiting an area because there are offshore wind turbines visible from the shore?
Scale: yes, no, dk, na

Ask all

Q9. Thinking about having a holiday in Scotland, which of the following statements comes closest to your view?

- If I could see turbines from an offshore wind farm while on holiday, I would be *more* likely to choose the holiday OR
- If I could see turbines from an offshore wind farm while on holiday, I would be *less* likely to choose the holiday OR
- If I could see turbines from an offshore wind farm while on holiday it would make no difference to my choice of holiday

Ask all

Q.10 Approximately how often do you visit the coast in a typical year? **Single code only**

- I live by the coast,
- Daily,
- Weekly,
- Fortnightly,
- Monthly,
- 6-10 times per year,
- 2-5 times per year,
- once per year,
- less than once per year,
- I have never visited the coast

Ask all

Q.11 Which, if any, of the following leisure activities have you done at the Scottish coast or sea in the last year? **Code all that apply**

- Beach activities / games / picnics / BBQs
- Beachcombing
- Beach clean-ups
- Diving/snorkelling
- Dog walking
- Eating seafood (fish/shellfish)
- Kayaking/rowing/canoeing
- Photography
- Recreational fishing on the coast or in the sea
- Sailing
- Surfing/bodyboarding
- Swimming
- Walking/hiking/running

- Wildlife watching
- Windsurfing/kitesurfing
- Other **(write-in)**
- None

Q12. In the space below please put in your postcode

Ask to those in employment

Q13. Which sector do you work in?

Health/life sciences
Education
Wholesale/retail
Hospitality/tourism
Financial services
Manufacturing
Other service sector
Third sector
Public sector
Energy & renewables
Creative industries
Agriculture
Fisheries
Other **(please write in)**

Coastal Questionnaire

Introduction

The following questions are about offshore wind farms, located at sea, in Scotland.

Ask all

Q1. Looking at the list below, which do you think are the most important issues facing your local area? Please select a maximum of three issues.

Randomise order

- Crime/anti-social behaviour/vandalism
- Drugs
- Education/schools
- Unemployment/ lack of good jobs
- Environment/pollution
- Lack of facilities for older people, for example, social clubs
- Lack of facilities for younger people, for example, youth clubs
- Health care/ hospitals
- Lack of outdoor/green space
- Availability of housing/affordable housing
- Access to sport and leisure facilities
- Access to shopping facilities
- Access to outdoor green space such as parks, woodlands or coastal areas
- Poverty
- Availability of adequate Public transport
- Traffic/noise
- Community relations/spirit
- Something else **(write-in)**

Ask all

Q2. How important or not do you feel these sectors or industries are to Scotland in terms of their social value? By social value, we mean their value to society as a whole or to local communities. **Single code per line**

Commercial sea fishing
Farming of fish and shellfish
Non-renewable energy such as oil and gas
Renewable energy such as wind, waves, tide
Transportation of goods / commercial shipping
Coastal tourism / recreation / cruises
Coastal protection such as seawalls
Scientific research such as marine biology

Ports and harbours
Military exercises such as by the Royal Navy
Construction such as shipbuilding
Scale: Very important, Quite important, Not very important, Not at all Important, DK

Ask all
Q3. How important or not do you feel these sectors or industries are to Scotland in terms of their economic value? By economic value we mean generating tax revenue, creating and providing jobs. **Single code per line**
Commercial sea fishing
Farming of fish and shellfish
Non-renewable energy such as oil and gas
Renewable energy such as wind, waves, tide
Transportation of goods / commercial shipping
Coastal tourism / recreation / cruises
Coastal protection such as seawalls
Scientific research such as marine biology
Ports and harbours
Military exercises such as by the Royal Navy
Construction such as shipbuilding
Scale: Very important, Quite important, Not very important, Not at all Important, dk

Ask all
Q4a. Are you aware of any offshore wind farm located near to where you live?
Single code only
scale: yes/no

Ask if yes at q4a
Q4b. And, looking at the list below, which offshore wind farm located near you are you aware of? If you are aware of more than one, please select the one you know most about.
Code all that apply
Beatrice Offshore Wind Farm (North),
Moray Offshore Wind Farm – East (North),
Hywind Buchan Deeps (North East),
Aberdeen Offshore Wind Farm (North East),
Kincardine Offshore Wind Farm (North East)
Neart Na Gaoithe (East)
Robin Rigg (South West),

Other (Please write-in)

Ask all

Q5. And to what extent do you tend to approve or disapprove of offshore wind farms?

Scale: Strongly approve, tend to approve, neither/nor tend to disapprove, strongly disapprove, DK

Ask all

Q6a. And whether you approve or disapprove of offshore wind farms overall, which of the following statements comes closer to your view?

c. I have had the same opinion about offshore wind farms, and this has not changed over time

Or

d. I have changed my opinion about offshore wind farms since I first knew about them

Dk

Ask if changed opinion (code b. At q6a.)

Q6b. And thinking about your views of offshore wind farms <u>generally</u>, which of the following statements best applies to you? **Single code only**

c. I used to <u>approve</u> of offshore wind farms but now <u>disapprove</u> of them
d. I used to <u>disapprove</u> of offshore wind farms but now <u>approve</u> of them
DK

Ask those in coastal area with wind farms (priority 1, 2 and 3)

Q7. Thinking specifically about your views of offshore wind farms <u>in your area</u>, which of the following comes closest to your view

Single code only

a. I approved of offshore wind farms before one was developed in my area and still approve of them now,
b. I approved of offshore wind farms before one was developed in my area but disapprove of them now,
c. I disapproved of offshore wind farms before one was developed in my area and still disapprove of them now
d. I disapproved of offshore wind farms before one was developed in my area but approve of them now
e. DK

Ask those whose opinion has changed after wind farm developed in their area – either oppose to support or support to oppose – codes b. Or d. At q7)

Q8. And why has your opinion of offshore wind farms in your local area changed?
Please write in below

Ask all
Q9. And in the future, what factors do you think might change your mind about offshore wind farms either in favour of them or against them?
Please write in below

Ask all
Q10. In planning a visit to a coastal area in Scotland, have you ever deliberately avoided visiting an area because there are offshore wind turbines visible from the shore?
Scale: yes, no, dk, na

Ask all
Q11. Thinking about having a holiday in Scotland, which of the following statements comes closest to your view?

- If I could see turbines from an offshore wind farm while on holiday, I would be *more* likely to choose the holiday OR
- If I could see turbines from an offshore wind farm while on holiday, I would be *less* likely to choose the holiday OR
- If I could see turbines from an offshore wind farm while on holiday it would make no difference to my choice of holiday

Ask all in priority 1, 2 and 3 areas
Q12. Thinking about the impact of offshore wind farms in your area, to what extent do you agree or disagree with the following statements?
Single code per line
Randomise order
- Offshore wind farms are a positive feature of the coastal landscape,
- Offshore wind farms create new recreational opportunities (for example, boat trips, viewing),
- Offshore wind farms detract from the traditional image of the coast,
- Offshore wind farms improve the quality of recreational experiences,
- Offshore wind farms provide a boost for the local economy

Scale: strongly agree, tend to agree, neither agree nor disagree, tend to disagree, strongly disagree.

Ask all in priority 1, 2 and 3 areas
Q13. Overall, what impact, if any, would you say that offshore wind farms have had on your quality of life?

SCALE: strong positive impact, positive impact, no impact, negative impact, strong negative impact, don't know

Ask all in priority 1, 2 and 3 areas

Q14. And what impact, if any, do you think that offshore wind farms in your area have had on the following?

Randomise order single code per line

- Community character
- Community relations
- Landscape/seascape character
- Feelings about the future
- Local infrastructure
- Enjoyment of the outdoors
- The value of my home
- My livelihood
- Something else **(write-in)**

Scale: strong positive impact, positive impact, no impact, negative impact, strong negative impact, dk

Ask all in priority 1 2 and 3 areas

Q15. Thinking about the wind farm closest to you, has the impact of it been better than you expected, worse than you expected or as you expected in terms of the following issues?

Randomise order

- benefits for the local community
- disruption to my life
- the local landscape/views
- ability to enjoy time spent outdoors in the local area
- Local job opportunities

Scale: better than you expected, worse than you expected, same as you expected, dk

Ask all in priority 1 2 and 3 areas

Q16. Thinking about the different components of the offshore wind farm closest to you, what impact on you, if any, has each had

- The wind turbines (located offshore)
- The onshore infrastructure related to the wind farm
- Community benefit schemes linked to the wind farm, for example funding for local community projects or training schemes,
- The broader port area

Scale: strong positive impact, positive impact, no impact, negative impact, strong negative impact, dk/na

Ask all in priority 1 2 and 3 areas

Q17a. Thinking about the different stages of the wind farm development listed below, how good or poor was your experience of each?

- The planning process (before building began)
- The consultation – your ability to contribute to the process
- The construction stage (building work offshore and onshore)
- The operational stage (once the wind farm is up and running)

Scale, very good, fairly good, neither/nor, fairly poor, very poor, dk, na

Ask all in priority 1 2 and 3 areas

Q17b. And thinking about the consultation process, how good or poor was it in terms of the following?

- the amount of information provided by the developers
- the usefulness of the information provided by the developers
- The opportunity to meaningfully influence the process

Scale: very good, fairly good, neither/nor, fairly poor, very poor, dk, na

Ask all

Q.18 Approximately how often do you visit the coast in a typical year? **Single code only**

- I live by the coast,
- Daily,
- Weekly,
- Fortnightly,
- Monthly,
- 6-10 times per year,
- 2-5 times per year,
- once per year,
- less than once per year,
- I have never visited the coast

Ask all

Q.19 Which, if any, of the following leisure activities have you done at the Scottish coast or sea in the last year? **Code all that apply**

- Beach activities / games / picnics / BBQs
- Beachcombing
- Beach clean-ups
- Diving/snorkelling
- Dog walking
- Eating seafood (fish/shellfish)

- Kayaking/rowing/canoeing
- Photography
- Recreational fishing on the coast or in the sea
- Sailing
- Surfing/bodyboarding
- Swimming
- Walking/hiking/running
- Wildlife watching
- Windsurfing/kitesurfing
- Other (WRITE-IN)
- None

Q20. In the space below please put in your postcode

Ask to those in employment

Q21. Which sector do you work in?

Health/life sciences

Education

Wholesale/retail

Hospitality/tourism

Financial services

Manufacturing

Other service sector

Third sector

Public sector

Energy & renewables

Creative industries

Agriculture

Fisheries

Other **(please write in)**

Appendix B- Sample Frequencies

Perceptions of offshore wind farm Survey Sample Profile						
	All		National		Coastal	
	N	%	N	%	N	%
Gender						
Male	981	48	470	47	511	48
Female	1084	52	530	53	554	52
Age bands						
Under 35	599	29	290	29	309	29
35-44	320	15	150	15	170	16
45-54	362	18	170	17	192	18
55-64	330	16	160	16	170	16
65+	454	22	230	23	224	21
Aware of an offshore wind farm development						
Yes	**689**	**33**	**238**	**24**	**451**	**42**
No	1372	66	760	76	612	57
Not answered	5	*	2	*	3	*
Total	2065	100	1000	100	1065	100
Awareness of offshore wind farm, by development						
Aberdeen Bay	321	47	89	37	232	51
Beatrice	85	12	34	14	51	11
Hywind Buchan Deeps	20	3	6	2	14	3
Kincardine	78	11	37	16	41	9
Moray East	72	10	26	11	46	10
Neart na Gaoithe	32	5	7	3	25	6

Robin Rigg	28	4	13	5	15	3
Total	689	100	238	10 0	451	100

Appendix C- Further sample details

Sampling approach

For the national survey, respondents were selected using a stratified approach according to age, sex and geographic location. This means that those invited to respond to the survey were chosen to reflect the adult population of Scotland (16+) in terms of age, sex and location. This minimises the level of weighting required at the data analysis stage. Respondents to the survey among those who live in Scotland's coastal communities were selected at random, using the known locational data embedded within the *ScotPulse* database to ensure that they lived in a coastal area, the definition of which is explained below. As explained in section 1.3, data from the national survey were weighted to the most recent mid-year population estimates, while data from coastal survey were weighted to the age and gender profile of the coastal population using estimates from Scotland's Census 2011.

Location information held by *ScotPulse* on panel members was utilised to target those within coastal communities. For the purposes of this research, we identified coastal communities as a postcode area that borders the sea. Panel members were then subset by their outward postcode[18] and those with the same outward postcode as each development were identified as having *'lived experience'.*

Defining 'local area'

The term 'local area' is used within the report and is self-defined by the respondent e.g., some of the questions in the questionnaire ask about perceptions of the local area and the term "local area" may mean something different for each respondent. Also, during additional sub-group analysis, the 6-fold urban rural classifications are used to define the postcode area the respondent lives in.

Lived experience is defined, for this report, as those living in postcode locations near a development or associated infrastructure. This definition may include some respondents who are aware of the development and some who are not. We

[18] An *outward* postcode refers to the prefix or first part of the full postcode

consider this to be valid as an experience of a wind farm may include being completely unaffected and oblivious to it.

Scottish Government Urban Rural Classification, 6-fold

Class	Class Name	Description
1	Large Urban Areas	Settlements of 125,000 people and over
2	Other Urban Areas	Settlements of 10,000 to 124,999 people
3	Accessible Small Towns	Settlements of 3,000 to 9,999 people, and within a 30-minute drive time of a Settlement of 10,000 or more
4	Remote Small Towns	Settlements of 3,000 to 9,999 people, and with a drive time of over 30 minutes to a Settlement of 10,000 or more.
5	Accessible Rural Areas	Areas with a population of less than 3,000 people, and within a 30 minute drive time of a Settlement of 10,000 or more
6	Remote Rural Areas	Areas with a population of less than 3,000 people, and with a drive time of over 30 minutes to a Settlement of 10,000 or more.

Appendix D – Study limitations

All surveys are, by their nature, estimates of the population which they represent, in this case a national survey of adults (16 years and older) in Scotland, and a survey of adults (16 years and over) who live in Scotland's coastal areas.

Representativeness of estimates is increased through the sampling approach; choosing respondents at random and broadly in line with the wider population; and through weighting of the raw data to known population characteristics. There are also considerations unique to this study, important when interpreting survey findings.

Firstly, while sample sizes of those with *lived experience* are large enough to gain insight, when these are further broken down by age group, location and proximity to the offshore development, sub-groups are not large enough to be tested for significant relationships.

Secondly, a simple random sampling approach was used, rather than a stratified random sampling approach. As a result, there are more urban respondents than rural and more respondents from the east coast than the west. While this mirrors the spread of the population in Scotland, it does mean that some groups of interest are underrepresented. For example, rural populations are more likely to be affected by offshore windfarms than urban populations.

In addition, there are issues of interpretation which need to be mentioned. Respondents were asked about their awareness of offshore wind farms located *near to where they live.* There are different ways this question could be interpreted, and so analysing the responses is not straightforward. A respondent may not consider themselves to be near to the wind farm but could be fully aware of a development and thus answer 'no' while another respondent with awareness in of the same wind farm in a similar location may say 'yes'. They could answer yes or no depending how near to the development they *feel*.

While these issues are important to acknowledge, the data and commentary in this report represent a robust and accurate reflection of perceptions of offshore wind farms in Scotland and should be used to help shape future thinking and policy towards their future development.

How to access background or source data

The data collected for this <statistical bulletin / social research publication>:

☐ are available in more detail through Scottish Neighbourhood Statistics

☐ are available via an alternative route <specify or delete this text>

☒ may be made available on request, subject to consideration of legal and ethical factors. Please contact Scottish Government for further information.

☐ cannot be made available by Scottish Government for further analysis as Scottish Government is not the data controller.

social research

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