

# Inequalities in Access to Blue Coastal Space in Scotland: Research Report



# **AGRICULTURE, ENVIRONMENT AND MARINE**



# Inequalities in access to blue coastal space in Scotland: Research Report

Dr Emily Gray, Catriona Millar, Tom Coyle, Dr Alice Diaz & Dr Ben Wheeler

2023

# **Contents**

A	cknowledgements	4
E	recutive summary	5
1.	Introduction and methods	8
	Background to the research	8
	Research aims and questions	8
	Methods	9
	Report structure and conventions	15
2.	Review of previous research	16
	Benefits of access to blue space	16
	Inequalities in access to blue space	19
	Policy solutions in other countries	21
	Data sources that could be used as an indicator for access to blue space	26
3.	Overview of current use of the coast	28
	Visiting the coast compared to other types of blue space	28
	Frequency and regularity of coastal visits in the last 12 months	29
	Associations with and memories of visiting the coast	33
4.	Perceived benefits of visiting the coast	35
	Perceived benefits of being at the coast	35
	Reasons for visiting the coast	37
	Reasons for not visiting the coast	38
5.	Barriers and enablers to accessing the coast	39
	Motivational ('do I want to do it?')	40
	Ability ('am I able to do it?')	44
	Physical ('does the context encourage the behaviour?')	45
	Social ('what do other people do and value?')	51
	6. Potential policy solutions	55
	Improving public transport links	56
	Making public transport more affordable	57
	Developing the area along the coast	57
	Group activities	
	Improved water quality	
	Unprompted ideas for what would encourage people to visit the coast	
7.		
	Key learnings	

Considerations for future research	63	
Appendix A – Survey Questionnaire	64	
erviews8 <sup>2</sup> pendix D – Charts showing types of blue spaces visited in the last 12 months	66	
Guide for focus group discussions	66	
Guide for depth interviews with general public	70	
Guide for depth interviews with stakeholders	77	
Appendix C – Full breakdown of sample for qualitative focus groups and depth interviews	81	
Appendix D – Charts showing types of blue spaces visited in the last 12 months showing variation by subgroup		
Bibliography	89	

# **Acknowledgements**

We would like to thank everyone who gave up their time to speak to us for this research, as well as Kay Barclay at Marine Scotland, Cameron Reid at Crown Estate Scotland and the advisory group who have provided valuable advice throughout the project.

All responsibility for this report lies with the authors.

# **Executive summary**

Accessing blue space is associated with both physical and health benefits. Existing research has found that living near blue spaces can have stronger beneficial effects on the health and wellbeing of people living in lower income households and in socioeconomically deprived areas. Ensuring access to coastal and other blue space environments may therefore play a role in reducing health inequalities.

Given the association between access to blue space and reducing health inequalities, Marine Scotland and Crown Estate Scotland commissioned this research to provide a greater understanding both of the benefits of accessing the coast in Scotland and of the barriers to visiting. The study explored whether there are particular barriers for specific socio-demographic groups and also explored potential policy solutions or actions to improve access in future. The research was intended to address an evidence gap on the topic of inequalities of access to the coast.

The research design consisted of three stages:

- **1.** A rapid review of international literature to ensure the research built on what was already known about public access to the coast.
- 2. A nationally representative online survey of 2,355 adults aged 16+ in Scotland to identify which groups are less likely to access the coast.
- 3. Qualitative research with 39 occasional and non-users of the coast and 4 stakeholders to collect rich and detailed data on key barriers to visiting and views on what needs to change to make this easier.

The study took an iterative approach, with each stage informing the design of subsequent phases. The sampling framework for the qualitative research was designed based on the survey results, involving participants from groups that were less likely to visit the coast: those with a disability or health condition; those from an Asian or Black African background; those living in deprived (SIMD 1/2) urban areas; and young people aged 16-34.

Analysis was structured according to the <u>MAPPS behaviour change framework</u> to ensure that the full range of influences and experiences of accessing the coast were explored.

# **Key findings**

The key findings from this research are summarised below.

# Usage of coastal space

There is relatively limited previous evidence on inequalities in accessing blue space specifically. Evidence from England and Scotland indicates that those who visit nature infrequently (or never) are more likely to be: female, older, in poor health, of lower socio-economic status, from an ethnic minority, living in socio-economically deprived areas and lower green space neighbourhoods (Boyd et al., 2018; Stewart and Eccleston, 2020).

The quantitative survey carried out as part of this research showed that beaches, the sea and other coastline are by far the most commonly used type of blue space in Scotland (71% of the Scottish public having visited in the last 12 months), and also showed a disparity between socio-economic groups. The following groups were more likely on average to say they had not visited the coast (and often no blue space at all) in the 12-month period before taking part in the survey: disabled people, ethnic minorities, young people aged 16-34, non-graduates, those renting from a council or housing association, those living in urban areas and those living in the most deprived areas (SIMD 1).

However, findings from the qualitative research with occasional or non-users of the coast suggested that despite this, associations with the coast were typically positive, often framed by pleasant childhood memories of coastal visits with family. Participants acknowledged that the amount of time they spend at the coast changed at different times of year, with people tending to go more often in warmer months.

## Perceived benefits of accessing coastal space

Existing literature outlines how exposure to 'nature' can result in benefits for health and wellbeing through a number of pathways. Blue spaces in particular have been shown to provide both opportunity and motivation for people to be more physically active; promote good mental health; and facilitate social contact.

In line with this, the benefits that participants in the qualitative research associated with visiting the coast included physical health benefits (mainly relating to being more physically active), spending time in nature, socialising with friends and family, and particularly mental health benefits (including reducing stress or anxiety). Reasons mentioned for visiting the coast overlapped with these perceived benefits of visiting, such as wanting to relax, socialise or exercise.

Infrequent users and non-users of the coast were generally open to or enthusiastic about visiting more often. However, a range of barriers could make this difficult or unappealing.

#### Barriers to accessing the coast

The literature review indicated that various individual, social and structural conditions affect the accessibility of coastal blue space and this was reflected in the wide range of barriers described as part of the qualitative element of this research. These barriers were broadly grouped into the following categories: motivation, capability, physical barriers and social factors.

**Motivational barriers** had a considerable impact on participants not visiting the coast. These included personal preferences and not seeing the benefits of spending time at the coast. However, there were also features of the coast that actively put participants off visiting such as overcrowded beaches, anti-social behaviour, or beaches not being clean.

Other factors which could affect motivation to visit included participants' personal identity and feelings of connection to the coast, as well as perceived barriers (their expectations about how easy or difficult it would be to get to the coast).

Two main factors limited participants' individual **capability** to visit the coast; namely having the necessary knowledge and experience or a lack of time. There were also those whose mental health limited their ability to go out in general.

**Physical barriers** to spending time at the coast came out strongly. Participants cited travel barriers (primarily relating to public transport), travel costs, challenges interacting with the physical environment at the coast such as sandy beaches or eroded paths, and a lack of good quality facilities. Weather and limited daylight hours in winter also played a role.

**Social and cultural norms** were another important factor that shaped participants' experiences of, knowledge of and attitudes towards visiting the coast. When participants were unaware of friends or family visiting the coast, or others in their community doing so, this made them less likely to consider going themselves. Among minority ethnic participants, there was some concern about stigma and feeling uncomfortable at the coast.

# **Potential policy solutions**

The literature review identified policy interventions and solutions that were already in place in other countries and regions, including societal, local/regional and personal actions. Participants in the qualitative research gave their views on five potential policy interventions based on these findings. They were also asked for any further suggestions that might encourage them or others around them to visit the coast, or visit it more often.

Overall, participants' support for different policy solutions linked with the specific barriers they faced to visiting the coast. Two key policy solutions that were felt to be important were improving transport links to the coast and making public transport to the coast more affordable. This reflected the importance of transport-related barriers.

When asked to consider whether **developing the area along the coast** might encourage them to visit it more often, participants advocated for a balanced approach to developing the area along Scotland's coast. There was a desire to preserve the natural and peaceful feel of coastal spaces, particularly rural parts of the coastline. They were keen that any changes should be well thought-out, purposeful and take into account any impacts on the local community and the natural environment.

Offering more groups or club activities at the coast was not generally felt to be a solution that would encourage them personally to visit the coast more often, although few drawbacks were identified. Stakeholders working with ethnic minority communities, however, felt that group trips led by members of these communities could be an important means of tackling the potential unease these individuals may feel when visiting the coast.

Information provision and communication about visiting the coast was spontaneously mentioned as something that could help to encourage people to visit more often. Further suggestions were: improved cleanliness and maintenance of beaches including regular bin-emptying; the provision of facilities to make the experience of visiting more comfortable, such as beach furniture or showers or water fountains to wash off sand; facilities being more inclusive, for example cafes providing halal food options; and having dog-free areas.

# 1. Introduction and methods

This report presents the findings of research carried out by Ipsos and Dr Ben Wheeler on behalf of Marine Scotland and Crown Estate Scotland, exploring inequalities in access to the coast in Scotland.

# **Background to the research**

Accessing blue space is associated with both physical and mental health benefits. For example, research conducted in England found that good health was more prevalent the closer one lives to the coast (Wheeler, White et al. 2012). Living near blue spaces can have significantly stronger beneficial effects on the health and wellbeing of people living in lower income households and in more socio-economically deprived communities (White, Elliott et al. 2020). Ensuring access to these environments may therefore have a role to play in the reduction of health inequalities (Garrett, Clitherow et al., 2019; Allen, Balfour et al., 2014). Research conducted in Scotland specifically has found similarly. For example, a recent paper from the University of Glasgow found that "the availability of both freshwater and coastal blue space was associated with lower antidepressant medication prevalence among older adults in Scotland" (Hanley et al., 2021).

Given the association between access to blue space and reducing health inequalities, Marine Scotland and Crown Estate Scotland wished to undertake new research to provide a greater understanding of the ways in which coastal spaces support mental and physical health and wellbeing, including a better understanding of barriers to visiting the coast and inequalities in access to the coast in Scotland. This was intended to address a current evidence gap on the topic of inequalities of access to coastal blue space.

# Research aims and questions

The project's overarching aim was to obtain a better understanding of how and why people use coastal blue space in Scotland, including whether there are particular barriers for specific socio-demographic groups, and to explore potential policy solutions or actions to improve access in future.

This work provides timely and robust evidence to inform policy making, in the context of strategies, frameworks and policies. For Marine Scotland, this includes the Blue Economy Vision and Outcomes and National Marine Plan. The research also supports Crown Estate Scotland to meet objectives in relation to the use of coastal assets for the benefit of Scotland's people. The project provides findings that are relevant to a wide range of policy priorities more broadly across the Scotlish Government in relation to health, environment and planning.

The specific research questions were:

- 1. How is the coast currently perceived and used by different people/groups?
- 2. What are the key factors that affect use of the coast amongst different people/ groups (especially those people/groups who do not access the coast to the same extent as others)?
- 3. What policy changes and interventions are needed to facilitate better access to the coast?
- 4. What data sources could be used as an indicator for "access to blue space" (separately from access to green space)?

## **Methods**

#### Overview

The research design incorporated both quantitative and qualitative data collection and consisted of three stages:

- A rapid review of international literature to ensure the research built on what is already known about public access to the coast; to outline examples of relevant policy initiatives in other countries; and to identify data sources which could be used as an indicator for access to blue space.
- A robust quantitative survey of adults in Scotland to identify which groups are less likely to access the coast; and
- Qualitative research with infrequent and non-users of the coast and stakeholders – to collect rich and detailed data on key barriers to visiting and views on what needs to change to make this easier.

The research took an iterative approach, with each stage informing the focus and design of subsequent phases.

# Rapid literature review design

The first stage of the research was a literature review which was completed during November and December 2022. It was led by Dr Ben Wheeler of the University of Exeter, in close collaboration with Ipsos Scotland. The findings from the literature review informed the design of both the short quantitative survey and follow-up qualitative research with infrequent users of the coast and stakeholders.

This was a rapid rather than an exhaustive review of the available evidence. Expert knowledge, existing databases and recent evidence reviews were used to inform the rapid review, as well as using specific search terms in Google Scholar to ensure that significant recent, relevant evidence on coastal blue space was not missed. The search terms used were:

• **General:** ("blue space" OR bluespace OR coast OR coastal) AND (health OR wellbeing OR well-being OR inequality OR inequalities OR inequity OR inequities OR equality OR equity OR access OR accessibility)

# • Specific:

- Social interaction ("blue space" OR bluespace OR coast OR coastal) AND ("social contact" OR "social interaction" OR "social isolation" OR "loneliness")
- Perceived access ("blue space" OR bluespace OR coast OR coastal) AND ("perceived access" OR "perceived accessibility" OR "perceived distance" OR "perceived proximity")
- Disability ("blue space" OR bluespace OR coast OR coastal) AND ("disability" OR "disabilities")
- Ethnicity ("blue space" OR bluespace OR coast OR coastal) AND ("ethnicity" OR "ethnic group" OR "race" OR "racism").

Specific searches were also undertaken for evidence from comparator countries, which were agreed with Marine Scotland following input from Research Advisory Group members in advance of undertaking the review. These were:

- Other countries in the UK (England, Northern Ireland, Wales)
- Ireland
- Nordic countries (Sweden, Denmark, Norway, Finland)
- Netherlands
- New Zealand.

The literature search focused on findings from the previous five years, i.e. from 2018 to 2022. However, some literature was also included from before this period, where it was particularly relevant, typically around the benefits of accessing coastal blue space and inequalities of access to blue space.

# Survey design

The second phase of the research consisted of a short, three-question survey. This aimed to understand whether the general public had recently accessed blue space, including the coast; how often they visit the coast; and their perceived distance from their nearest coastal area. The survey also collected sociodemographic information to enable subgroup analysis across these measures.

The full survey questionnaire is included in Appendix A at the end of this report.

The survey was completed by 2,355 adults living Scotland aged 16 and over between 8 – 14 December 2022. Interviews were conducted via Ipsos' KnowledgePanel, a high-quality random probability online panel which is nationally representative (including digitally excluded participants who are provided with a device and internet access to take part).

# Qualitative research design

Follow-up qualitative research was conducted with survey participants who visited the coast no more often than once every two to three months, as well as relevant stakeholder organisations. The aim was to achieve an in-depth understanding of attitudes towards visiting the coast and key barriers to access, as well as what could encourage these infrequent and non-users to visit the coast in future.

Fieldwork consisted of focus group discussions and one-to-one depth interviews. Both focus groups and interviews were semi-structured and were based on a discussion guide which allowed for open discussion while ensuring all key points were covered. The guides covered questions about attitudes towards the coast, previous experiences, ease of access and any changes that would make participants more likely to visit in the future. While all discussion guides covered broadly the same content, they were adapted for use in focus groups, interviews and discussions with stakeholders. Copies of the discussion guides are included in Appendix B.

Fieldwork was conducted between 27<sup>th</sup> January and 9<sup>th</sup> March 2023.

# **Sampling**

Overall, 39 participants from the general public in Scotland took part in the qualitative element of the research. This included 24 participants across four focus groups and 15 participants who took part in depth interviews. Four interviews were conducted with relevant stakeholder organisations.

A sampling framework was designed based on the results of the survey, in order to include groups that were less likely to visit the coast in this research. The sample consisted of a mix of 'occasional users' (those who have accessed the coast at least once in the past 12 months, but have done so no more than every two to three months) and 'non-users' who live within a 5 km distance of the coast.

Within this, the following sociodemographic groups were targeted for inclusion:

- Those with a disability or health condition;
- Those with an Asian or Black African background;
- Those living in deprived (SIMD 1/2) urban areas; and
- Young people aged 16-34.

While those living in urban areas as a whole were less likely to visit the coast, the qualitative research focused on participants from Glasgow and Edinburgh/Lothians specifically. This was both to enable discussion groups to be segmented by location, so that participants could discuss similar stretches of local coastline, and to ensure sufficient numbers of participants could be recruited from the available survey sample.

While ethnic minority communities as a whole were less likely to visit the coast, this research focused on Asian and Black African participants to ensure there were a number of participants from relatively similar backgrounds in order to be better able to draw meaningful conclusions about any differences in experience (however, as noted in the limitations section of this chapter, the sample sizes for these groups remain small). These specific groups were selected on the basis of being the largest ethnic minority groups within Scotland's population.

The majority of participants were invited to take part in a group discussion. To enable a fuller understanding of specific barriers for disabled or ethnic minority participants, and to ensure any barriers that might be sensitive for the individual could be discussed in an appropriate way, these participants were invited to take part in one-to-one depth interviews.

Table 1 provides an overview of the sample across the focus groups and interviews. An overall sample breakdown is provided in Appendix C.

Table 1

Method of engagement	Sample characteristics	Number of participants
Group 1	Those living in deprived (SIMD 1/2) urban areas in Glasgow	7
Group 2	Those living in deprived (SIMD 1/2) urban areas in Edinburgh/Lothians	5
Group 3	Young people aged 16-34, urban areas	5
Group 4	Young people aged 16-34, urban areas (mainly Lothian)	7
	Disabled participants living within 5k of the coast	8
Depth	Asian participants	3
interviews	Black African participants	3
	Mixed/Multiple ethnic backgrounds	1

There were a further four interviews conducted with stakeholder organisations. Two of these supported disabled people living in Scotland to access the coast and other outdoor areas, while two supported ethnic minority communities in Scotland (including one which specifically supported ethnic minority communities to access nature in Scotland).

#### Recruitment

Participants who took part in the qualitative element of this study were primarily identified using a database of respondents who had taken part in the survey conducted as part of this project, and who had agreed to be recontacted by Ipsos about further research. Eligible participants were sent an invitation to either a discussion group or an interview with key information about the research. This included contact details for the research team and participants were asked to get in touch and opt in if they were willing to take part. Participants were then contacted by telephone to confirm details of their participation.

For ethnic minority participants, recruitment was supplemented with the support of a relevant stakeholder organisation. This organisation acted as a gatekeeper and passed on the invitation to the research to people they worked with who would be eligible to take part, in order to give them the opportunity to opt into the research as well.

Stakeholder contact details were free-found by the research team, who invited relevant organisations directly to take part in an interview.

#### **Qualitative analysis**

A systematic thematic approach was taken when analysing the qualitative data in order to produce findings that are both clearly grounded in participants' accounts, and transparent and methodologically robust.

Interviews were audio recorded with participants' consent, and detailed notes were made by the researchers following each group discussion or interview. All four group discussions were transcribed. Researchers then inputted the data into a thematic matrix in Excel, summarising and organising the data so that it could be interrogated systematically later on in the analysis process.

The research team met both during the fieldwork phase and after fieldwork completion to discuss emerging themes and then interrogate these in more detail.

The final stage of analysis consisted of an in-depth review of the data where researchers used the thematic matrix to ensure the full range of views and experiences were captured, as well as any differences between groups.

As this research is focused on behaviour change, analysis was structured according to the MAPPS behaviour change framework, developed by the Ipsos Behavioural Science team. This ensured a systematic exploration of the specific behaviours of interest. MAPPS is based on the COM-B system and Behaviour Change Wheel process and categorises, or 'diagnoses', behaviours, based on the series of factors shown in Table 2.

**Table 2: Ipsos MAPPS behaviour change framework** 

MAPPS DIMENSION	MAPPS CATEGORY	CONTENTS	WHAT IT MEANS
	Outcome expectations	How estimation/predictions about outcomes affect motivations	I don't think it will work
	Emotion	How feelings/emotions and emotion regulation can support behaviours	I'm not feeling like doing it
Motivation	Internalisation	How behavioural motivation evolves from extrinsic to intrinsic	I don't want to do it
	Identity	How personal and social identities support behaviours	I'm not that kind of person
	Self-efficacy	How feelings of self-efficacy and mastery support change and persistence	I don't feel able to do it
	Capability	How we learn new behaviours	I don't have the skills to do it
Ability	Routines	How behaviours become habits, embedded in routines	It's not part of what I usually do
Processing	Decision forces	How heuristics, biases and behavioural regulation guide decisions and behaviour	How things are processed
Physical	Environmental factors	How the physical environment, context and resources supports or impairs behaviour change	How things are set up
Social	Social Norms	How group, transient or situational norms guide behaviour	What's expected of us
Juliai	Cultural Values	How broad cultural values affect behaviour	The way we live

# **Scope and limitations**

The survey data from Ipsos' KnowledgePanel is based on a robust and representative sample of Scotland's population. However, the majority of primary data collected as part of this research is qualitative in nature. Therefore the extent to which qualitative findings presented in this report apply to the wider population, or specific sub-groups, cannot be quantified. Rather, the value of qualitative research lies in capturing rich and nuanced data, and identifying the range of different issues involved and the way in which these impact on people.

Related to this, participant numbers for particular subgroups within the qualitative sample, particularly for ethnic minorities, are very small. Where differences between groups emerged or when participants discussed issues that they felt were particularly relevant to their own demographic or community, this is noted in the text. However, it is important to bear in mind that these views and experiences do not represent the wider views and experiences of these communities as a whole.

Finally, the sample of participants in the qualitative phase of this research was intentionally skewed towards participants that were infrequent or non-users of the coast in Scotland. Since these groups are concentrated in urban areas, and for other methodological reasons explained in the qualitative sampling section of this chapter, the sample is purposefully skewed towards those living in Glasgow and Lothian. However, views of participants living in other areas of Scotland were also collected as part of the interviews.

# Report structure and conventions

The remainder of this report is structured as follows:

Chapter 2: Review of previous research. This chapter summarises the key findings of a rapid review of the literature around coastal access in Scotland. It also identifies examples of policies aimed at increasing equality of access in other countries.

Chapter 3: Overview of current use of the coast outlines general attitudes towards Scotland's coast, including when and how often people visit.

Chapter 4: Perceived benefits of visiting the coast. This chapter considers what participants felt were the key benefits of spending time at the coast.

Chapter 5: Barriers to accessing the coast explores the challenges experienced by participants when they wanted to visit the coast, as well as what could deter participants from visiting.

**Chapter 6: Policy solutions.** This chapter presents participants' views on what would need to change to encourage or enable them to visit the coast more often.

**Chapter 7: Conclusions.** This chapter synthesises key learnings about the barriers to coastal access and policy solutions that could address them, as well as outlining how the findings could be built on in future.

Case studies are included throughout the report to illustrate important points and diverse experiences. These are based on real experiences, but pseudonyms have been used and some details have been changed in order to protect anonymity.

This research was carried out in accordance with the requirements of the international quality standard for Market Research, ISO 20252.

# 2. Review of previous research

The rapid literature review provides an overview of the current knowledge base relating to the research questions. Specifically, it covers:

- Evidence about the benefits of access to coastal blue space;
- Existing knowledge about inequalities in access to coastal blue space;
- What good practice examples exist of policy solutions or initiatives that have been used in other countries to improve access to coastal blue space; and
- Which data sources could be used as an indicator for access to blue space.

The review focuses on inequalities in access to coastal blue space rather than use of blue space in general. However, it also incorporates relevant learnings from research dealing with inequalities of access to green space (under the second question outlined above) and where green and blue space are researched together.

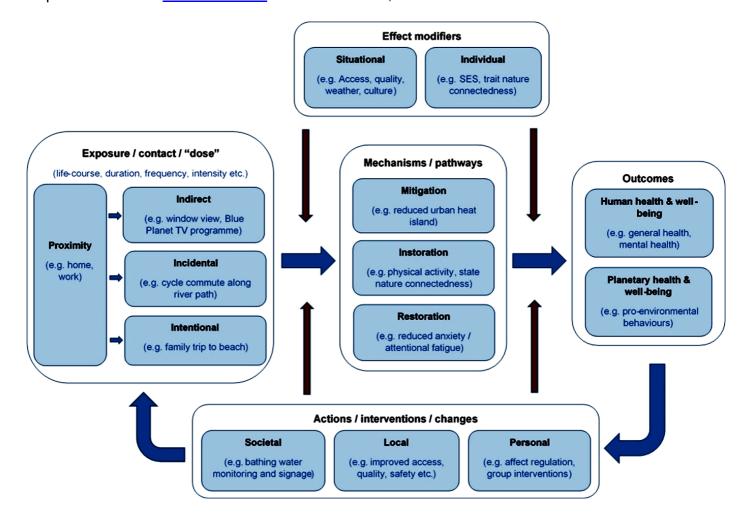
# Benefits of access to blue space

Evidence has accumulated rapidly in recent years demonstrating the substantial population health and wellbeing benefits of access to natural environments, often referred to as 'green and blue spaces' (Geneshka et al., 2021; Twohig-Bennett and Jones, 2018). Much of the research has focused quite generically on 'green/blue space' or 'nature', but there is now a substantive body of evidence on blue space, and particularly coastal environments (Gascon et al., 2017; White et al., 2020).

Coastal communities experience a range of challenges to their health and wellbeing, such as poor housing and access to services (CMO, 2021). However, evidence based on England Census data shows that after accounting for levels of socio-economic deprivation and population age, those living closer to the coast typically report better health than those more inland (Wheeler et al., 2012). Importantly, it is also suggested that these benefits may be stronger in more socio-economically deprived communities, indicating that benefits associated with coastal living may to some extent ameliorate health inequalities (Garrett et al., 2019; Wheeler et al., 2012).

Passive or active exposure to 'nature' is proposed to result in benefits for health and wellbeing through a number of pathways. These pathways have been summarised as (Markevych et al., 2017): building capacities (e.g. support for physical activity and social contact); restoring capacities (e.g. recovery from stress) and reducing harms (e.g. mitigating noise and heat). Again whilst these pathways have been developed generically, they capture the ways in which access to coastal blue space can lead to health and wellbeing benefits (Georgiou et al., 2021; White et al., 2020). Figure 1 summarises the pathways from blue space to health and wellbeing, including indicating how these relationships may be modified (for example by socio-economic status) and how different kinds of actions may influence the pathways.

Figure 1. Pathways from blue space to health and wellbeing. Reproduced under CC-BY license from White et al., 2020.



Whilst some benefits of coastal blue space do arise through passive pathways (e.g. mitigation of excess heat in coastal urban areas), this summary focusses on the benefits of time spent on actual visits to these environments. Much of this access is recreational and associated with intentional visits, although some is also more incidental such as commuting routes that pass through blue spaces. However, there is very limited evidence on the benefits of these more incidental interactions (White et al., 2020) and the evidence here primarily relates to intentional access to blue spaces, primarily coastal, and drawing upon evidence relevant to Scotland's coastal environments and communities.

Firstly, blue spaces provide both opportunity (usually freely accessible space with amenable environments such as paths, beaches, open water) and motivation (e.g. aesthetics, perceived restorativeness) for people to be more physically active, a critical determinant of numerous physical health conditions and mental health and well-being. Living near to, and spending time in, coastal blue spaces has been demonstrated to be associated with higher levels of physical activity (White et al., 2014). Importantly, most active visits to these environments are not for more high impact activities (e.g. swimming, surfing), but for walking (Elliott et al., 2018), one of the most common ways in which 'everyday' physical activity can be gained for a large proportion of the population (NHS Scotland, 2022) (note that access and disabilities are discussed below). Analysis of the Health Survey for England has shown that walking is a key mediator of the health benefits of living in proximity to coastal blue space (Pasanen et al., 2019), and a study using the

same data estimated the health economic value of physical activity in marine environments in England at £176m/year (Papathanasopoulou et al., 2016).

Secondly, blue spaces, particularly coastal environments, can promote good mental health through support for subjective wellbeing and stress reduction. These are some of the key mechanisms proposed for the linkage between time spent in natural environments and mental health (Markevych et al., 2017), and there is some evidence that blue spaces may be particularly beneficial in this regard (White et al., 2020). A recent review on behalf of an EU programme found multiple types of evidence to support positive impacts of blue space visits on mental health and wellbeing, with most of the evidence arising from the UK and concerning coastal blue space (Beute et al., 2020). Evidence from Scotland indicates that populations living closer to coastal and other blue spaces typically have lower rates of antidepressant prescribing (McDougall et al., 2021).

The third key pathway to health benefits is how blue spaces may promote social contact. While a recent review of the mechanisms for benefits did not find clear quantitative evidence that social interaction mediates the blue space-health relationship (Georgiou et al., 2021), several qualitative studies in the UK, Ireland and Germany have indicated the importance of these environments for people to spend quality time with friends and family (Ashbullby et al., 2013; Bell et al., 2015; Foley, 2015; Volker and Kistemann, 2015). Additionally, survey data for England indicate that social interaction is a key motivation for visits to beaches and other coastal environments, and to a greater extent than it is for inland blue space, urban open space or woodlands (Elliott et al., 2018).

The Covid-19 pandemic illuminated and emphasised the value of access to green and blue spaces to support health and wellbeing, especially through these key pathways (Pouso et al., 2021; Stewart and Eccleston, 2022). One study, in Belgium, specifically explored the value of coastal environments during Spring 2020, and found coastal residents to report greater happiness and less boredom and worry than inland residents, although there were no associations with actual coastal visit frequency (Severin et al., 2021). Qualitative research in the south west of England on the coast as therapeutic landscape during the pandemic highlighted how people's relationships with the sea changed during this time, and the potential importance of 'homely' coastal encounters as part of everyday life for coastal residents (Jellard and Bell, 2021).

Whilst the focus here is on the benefits of access to coastal blue spaces, it is acknowledged that access also poses some risks to humans. Coastal environments present a range of hazards, including the potential for drowning and other accidents, flooding and dangerous weather conditions, and the potential for exposure to water contaminated by sewage or other pollution. However these hazards can and should be mitigated (e.g. (Scott et al., 2022)), and should not detract from the benefits that may be gained from safe access to good quality coastal environments.

# Inequalities in access to blue space

# Access and accessibility

There is relatively limited evidence on inequalities in access to blue space specifically. However, there is evidence that more socio-economically deprived areas typically have lower availability of good quality public green/blue space (based on a systematic review including studies from UK, Germany, France, Finland, Portugal (Schüle et al., 2019)). Further, evidence from England and Scotland indicates that people who make visits to nature infrequently (or never) are more likely to be: female, older, in poor health, of lower socio-economic status, from an ethnic minority group, living in socio-economically deprived areas and lower green space neighbourhoods (Boyd et al., 2018; Stewart and Eccleston, 2020). These same sources indicate that the reasons why infrequent nature visitors say they do not visit more often are primarily to do with personal/social circumstances rather than a lack of physically accessible natural spaces, including lack of time at home/work, poor health and 'old age' (Boyd et al., 2018; Stewart and Eccleston, 2020).

It is therefore important that individual, social and structural barriers are considered alongside availability of/proximity to blue space when aiming to address inequalities in access. Behaviour change frameworks can be used to help structure approaches to access; for example, the MAPPS framework has been used in NatureScot work previously (Scottish Government, 2021). Interestingly there is some evidence from England suggesting that social/structural inequalities in accessibility to coastal blue spaces may be somewhat more equitable compared to those for natural environments more generally. These survey data indicate that, for example, visits to beaches are more likely to be made by women, older age groups (35-64 vs 16-34) and some lower socio-economic groups. This was contrasted with, for example, a strong socio-economic gradient in woodland/forest visits being much more likely amongst people in higher socio-economic groups (Elliott et al., 2018).

#### **Access domains**

Despite these complexities of access and accessibility, physical proximity is still an important driver of recreational visits to green/blue spaces. In one study using data from the Scottish Household Survey 2013-19, frequency of visits to the nearest local green/blue space was strongly associated with self-reported walking time to that space. 87% of people reported living within a 10 minute walk of their nearest green/blue space (a significant threshold given policy interest in the '20 minute neighbourhood'), but those within a 5 minute walk were 53% more likely to visit at least once a week compared to people living 6–10 minutes away (Olsen et al., 2022). In terms of blue spaces, an international survey found that individuals living closer to the coast based on map distance were more likely to make frequent visits (at least once a month), with an exponential relationship between distance and probability of frequent visits. For example, those living within 1km were around twice as likely to make frequent visits as those living 1-5km away, and those twice as likely as people living 5-10km away (Elliott et al., 2020).

These studies highlight the relevance of both objectively measured proximity (e.g. distance from home) and perceived distance (e.g. self-reported walking time). This is an important consideration, since map distance is important for understanding potential accessibility, but people's propensity actually to make visits may be more likely to be influenced by their perception (including both perceived distance and perceptions of local transport networks, public transport links etc.). For example, a systematic review of associations between neighbourhood environment measures and physical activity found that perceived environment measures were more strongly associated with activity than objectively measured environment characteristics (Orstad et al., 2016). Further, a study investigating proximity to green spaces in Glasgow found poor agreement between perceived and objectively measured distance, with some suggestion that the level of agreement was lower amongst people from lower socio-economic groups (Macintyre et al., 2008). Perception of water quality may also impact frequency of visits to blue space, as suggested by a pan-European survey (Börger et al., 2021), and environmental qualities more broadly are likely to be important.

As indicated above, a range of individual, social and structural conditions and circumstances affect the accessibility of coastal blue space. Physical infrastructure (or lack of it) has a significant impact on accessibility for many people in several different ways. General evidence on greenspace accessibility highlights for example the importance of toilets, benches and path networks, which may be more important for people with disabilities or older people, for example (PHE, 2020). Qualitative research in the UK specifically on visual impairment and experience of coastal blue space demonstrated the importance of both physical and social accessibility, but also to be wary of assuming that making coastal environments accessible and appealing for individuals with visual impairment requires removal of all risks (Bell et al., 2019). This work has more widely led to the development of guidance on inclusive design and walking groups to promote and support access to nature (Bell, 2018).

A review on engaging people from ethnic minority backgrounds in nature flagged how racism, unwelcome visibility and being made to feel 'out of place' have fundamental impacts on accessibility. It also raised the importance of acknowledging diversity within groups, relevant for any work aiming to improve accessibility for particular groups of the population (Rishbeth et al., 2022). While in a very different context, research in the USA specifically focused on access to beaches, and found significant contemporary ethnoracial inequalities grounded in historic, structural discrimination and racism (Phoenix et al., 2020). Qualitative research in Scotland explored a range of drivers of participation in outdoor recreation, and also revealed a range of issues particularly pertinent for many people from ethnic minority backgrounds, such as the importance of cultural norms and circumstances (Scottish Government, 2021).

# **Environmental justice and links with health inequalities**

Work on environmental justice has typically focused on environmental hazards, but applies just as well to access to health promoting environments, including coastal blue spaces. It makes clear the importance of considering not only 'distributional injustice' (e.g. inequalities in accessibility of blue spaces), but also 'procedural injustice' (e.g. processes, policies, laws that lead to these inequalities) and 'recognition injustice' (e.g. the exclusion of individuals, communities their knowledge and experience in determining actions and outcomes) (Mitchell, 2019). When considering inequalities in access to coastal blue spaces and their benefits, these complex structural and system considerations are therefore relevant in understanding and tackling those inequalities. In this context it is also important to recognise that some processes of environmental improvement may lead to undesirable social outcomes, particularly potential gentrification (the process of changing the character of a place through the influx of more affluent residents and businesses). This can have adverse impacts, especially upon residential affordability (Anguelovski et al., 2022).

There is evidence suggesting that access to good quality green/blue space may help to mitigate socio-economic health inequalities to some degree ('equigenesis' (Garrett et al., 2019; Mitchell et al., 2015)). Considering this in combination with the evidence above on inequalities in access suggests that there may be a 'win-win' scenario whereby decreasing inequalities in access could potentially lead to disproportionate benefit for those communities and individuals who have most to gain. Interventions that improve access for all, but are suitably targeted, would be consistent with the concept of 'disproportionate universalism' in addressing health inequalities (Marmot et al., 2010), with the proviso that unintended exacerbation of inequalities (e.g. through gentrification), can be avoided.

While significant benefits of access to nature were observed during the Covid-19 pandemic, it also served to emphasise inequalities in access to natural outdoor environments, including blue spaces. Evidence indicates that older people, those in poor health and those in lower socio-economic groups were more likely to actually reduce their time spent on visits to natural environments during periods of restrictions (Burnett et al., 2021; Stewart and Eccleston, 2022).

# Policy solutions in other countries

This section outlines a set of policy interventions and solutions from other countries and regions that may help to improve access to coastal blue space. As discussed in the first section of this review, existing evidence has shown that significant health and social benefits can result from exposure to blue spaces (Geneshka et al., 2021; Hanley et al., 2021; Twohig-Bennett and Jones, 2018; Wheeler, White et al., 2012). In this context, public authorities and practitioners in many countries have developed policy solutions and interventions that aim to enhance safe access to blue spaces (White et al., 2020).

We draw on a categorisation model developed by White et al. (2020) as a way of classifying blue space policy solutions and interventions. The framework divides interventions into societal actions, local and regional actions and personal actions:

- Societal actions are defined as structural solutions that enable greater access to blue spaces, such as improving transport links to the coast or improving bathing water quality;
- Local and regional actions seek to augment the blue spaces themselves, by, for example, developing waterfront promenades or coastal cycle lanes;
- **Personal actions** include projects that incentivise the use of blue spaces (rowing or swimming clubs, for example).

Policy action and associated research agendas on coastal blue spaces typically focus on risks to humans and their mitigation (e.g. EU directives on bathing water quality, shellfish waters and surface waters) (Borja et al., 2020). As described elsewhere, policy and other interventions on recreational access to natural environments for health and wellbeing typically focuses on 'green space' or 'nature' generically. There is therefore an opportunity to bring these arenas together to promote and support the potential health and wellbeing benefits of safe access to healthy coastal blue space (Fleming et al., 2021).

#### **Societal actions**

Policymakers in a range of countries have implemented structural solutions that help to enable greater access to blue spaces. These include:

- In England, the landmark Marine and Coastal Access Act 2009 (UK Government, 2009), which mandated the creation and maintenance of accessible walking routes along the majority of England's coast. The policy targeted a 2,800-mile-long coastal path with the explicit objective of increasing public exposure to the coast (White et al., 2020). This increased recreational access would be expected to lead to increases in opportunity for physical activity, and mental health and wellbeing improvement in the context of the evidence summarised above.
- In Scotland, reforms that enable greater personal actions in respect of blue space use. Since the introduction of The Land Reform (Scotland) Act 2003, citizens in Scotland have a statutory right to responsible use of blue spaces. It established the right to non-motorised access to most inland water throughout Scotland and set out the extensive duties of local authorities to uphold access rights, including for people with disabilities.

• In several national and multilateral contexts, including the EU, the USA, the UK and New Zealand, management of water quality is one critical component of enabling public use of blue spaces. A prominent water management policy was the EU Bathing Water Directive (EU, 1976). The measured quality of bathing water across EU member states rose significantly in the decades following the legislation's introduction; meanwhile, public use of these bathing waters increased substantially (White et al., 2020). Through the development of comprehensive water management systems, societal actions in the USA (the American Best Management Practices), New Zealand (the Low Impact Development system), and the UK (the Sustainable Urban Drainage System) have indirectly enabled blue space access for decades (Scholz, 2006). In Scotland, the Scottish Environment Protection Agency (SEPA) routinely monitors and publishes the chemical conditions of Scotland's freshwater bodies in order to support the River Basin Management Plan process and ensure the sustainable public use of the water environment.

# Local and regional actions

A comprehensive review of local blue space interventions found 172 successful policy examples that improved access to coastal waters (Bell, 2019). Several of the interventions were intended to enhance the aesthetic quality of the space (making it more appealing to tourists and locals) and/or to facilitate physical exercise (for example, by building walkways or cycle lanes in and around blue spaces). Other examples included the conversion of former docks into recreational areas, building waterfront promenades, and improving the quality of and access to local bathing waters.

Local and regional actions within a group of countries (USA, Denmark, Poland, Sweden, Colombia, UK, France) shared broad themes:

#### • Lighting up promenades, docks or other coastal infrastructure at night

o In England, the promenade at Whitley Bay has been lit up to encourage dog walking, cycling and walking at night.

#### Renovating waterfronts

 In Poland, a smooth wooden deck was constructed along the Paprocany Waterfront, where blue hammock nets were installed for users to relax with lake views.

#### Elevated viewpoints and blue-facing seating

- Sweden's Sjovikstorget project involved the building of a belt of wooden stepped seating along the water's edge overlooking the open plaza.
- In Denmark, the augmentation of the Amager beach area included building elevated viewpoints along sections of the promenade.

## Facilities (e.g. gyms, kayak centres) in surrounding area

 The 'Berges de Rhone' development (2007) was a project undertaken by the city of Lyon, which transformed a riverside car park into a multi-functional public space. Facilities constructed along the river include a swimming pool, sports centre, refreshment kiosks, cycle hiring and fishing facilities.

## Integrating walking and cycling paths with blue space

 England's Marine and Coastal Access Act (2009), referred to earlier in this section, requires public bodies to create paths for walkers all around the English coast.

England's Environment Agency, alongside Natural England, has recently initiated a raft of local and regional blue space policies. These include collaborations with Tideway, who are developing additional public spaces to bring London's inhabitants and tourists closer to the River Thames than is currently possible.

Pan-European research initiative BlueHealth ran from January 2016 to December 2020 and aimed to "provide evidence-based information to policymakers on how to maximise health benefits associated with interventions in and around aquatic environments" (Grellier et al., 2017). The initiative's researchers drew attention to the statistically significant positive effects on wellbeing and life satisfaction (which held when controlling for relevant variables) that resulted from the recent regeneration of an inner-city beach in Plymouth. Infrastructure improvements in the proximity of Plymouth's blue space included an openair theatre and a children's playground, while coastal wildflowers were planted to improve the aesthetics quality of the area. Before and after surveys, along with before and after behavioural observations, were used to track the public's response to the new site (BlueHealth, 2020, p.26).

BlueHealth has developed an environmental assessment tool to assess the quality of coastal environments. This is intended for use by local governments to help them maximise these spaces and determine the most impactful interventions in terms of promoting the health of local communities (BlueHealth, 2020).

In England, Manchester City Council and the Irwell Rivers Trust recently embarked on a large-scale development to restore public footpath access to sections of the River Medlock: a project hailed as exemplary by the European Union. Indeed, revitalising rundown natural assets can be an effective means of unlocking the potential health benefits offered by blue space environments (Smith et al., 2021).

However, Kabisch et al (2016) caveats this approach, arguing that if revitalisation of existing blue space occurs within a wider context of gentrification, then this could be distributionally counterproductive since it would further exclude the most disadvantaged groups. Haase et al (2021) and Raymond et al (2017) found that upgrading blue space displaces low-income residents by enticing richer households to the area. Indeed, a study analysing house prices in the Netherlands found a strong positive correlation between the value of a house and the extent to which that house was exposed to blue space (Luttik, 2000).

## **Personal actions**

Personal actions involve projects that facilitate the use of blue spaces by specific individuals (for example, water sports clubs). Kabisch et al. (2016) found that such community-led programmes, which encourage use of urban blue spaces for physical exercise, enjoyment, or socialisation, may enhance urban public health more effectively than top-down (societal) interventions.

Individual-focused interventions have been branded variously as 'blue care' or 'the Blue Gym' (Depledge and Bird, 2009), and are being deployed with increasing regularity (Britton, 2018). 'Blue care' refers to structured programmes or activities taking place within a natural water setting, targeting individuals with defined needs, to alleviate illness or promote mental and physical wellbeing for that group (Britton et al., 2018).

In a systematic review, Britton et al (2018) examined 33 of these individually-focused programmes in countries including the USA, Canada, Portugal, Israel, the UK, New Zealand, and Italy. The authors studied only programmes that were structured for therapeutic purposes. They found that programmes were generally targeted at those with defined needs, including: post-traumatic stress disorder (e.g. among army veterans), breast cancer, cognitive impairments, and complex mental health issues. Surfing was the most popular intervention activity, followed by dragon boat racing, sailing, kayaking, and fishing. Approximately half of the interventions occurred in coastal waterways, with the other half occurring in inland water areas.

The systematic review by Britton (2018) found little evidence that the interventions improved physical health. However, there was some evidence for increased social connectedness during the programs. The review concluded that a wide range of blue care personal action initiatives delivered substantial benefits for both mental health and social well-being. One notable example was the delivery of a kayaking program for 129 inner-city economically disadvantaged children in Jacksonville, Florida. Tardona (2011) evaluated the impact of the programme by collecting qualitative evidence from the programme instructors (who also happened to be trained psychologists). He found that child well-being – as observed by the psychologists – near-ubiquitously improved between the start and end of the program.

Similarly, Vert et al (2020) found that an intervention to promote walking in and around Barcelona's seafront yielded positive effects for walkers' mood and overall wellbeing.

# **Further policy suggestions**

Beyond existing policy solutions and initiatives, a host of practical policy recommendations have been forthcoming from researchers. Many of these relate to the urban environment, where space can be at a shortage. Langie et al (2022) suggest incorporating 'micro-blue spaces' (such as wading fountains) or repurposing vacant and derelict land as blue space. Smith et al (2021) highlight the merits of granting public access to private spaces, as has been implemented to some degree in Scotland.

Recommendations from Mishra et al (2020) involve the use of blue space environmental assessment tools to inform policymaking (such as those designed by BlueHealth). These could combine self-reported user assessments of blue spaces with objective surveys undertaken by trained environmental auditors. Such assessment tools could measure the cleanliness, aesthetics, safety and accessibility of blue spaces; and could therefore be used to inform the decisions of local authorities and planners when evaluating existing blue spaces. They might also be turned into citizen science initiatives to educate local communities (Jansson & Randrup, 2020).

Findings from Jansson & Randrup (2020) suggest that in terms of maximising benefits for existing populations, policies which facilitate community governance of blue spaces may be more useful than policies which simply seek to improve the quality of blue spaces.

While the focus was on urban green space, a key finding from a systematic review of the environmental, health, wellbeing, social and equity impacts of interventions was that the best results across these multiple domains are likely to arise from integrated actions. These aim to make changes to physical environments to improve and promote access and appeal, alongside social interventions such as educational and promotional programming (Hunter et al., 2019). These findings have influenced an action brief from WHO on urban green space, and are likely to also have relevance to the coastal blue space setting when considering actions.

# Data sources that could be used as an indicator for access to blue space

As part of Marine Scotland's monitoring of the Blue Economy vision<sup>1</sup>, an indicator to measure access to coastal blue space (separately from green space) is required. This section considers which data sources could be used for this indicator/s.

There is currently a data gap on access to both coastal blue space and blue space more generally in Scotland:

- The Scottish Household Survey (SHS) has been used since 2016 as the data source to monitor progress on the Scottish Government's National Indicator on access to green and blue space, which forms part of the indicator set for Scotland's National Performance Framework. This indicator of access to green and blue space is based on measuring the proportion of adults who live within a 5-minute walk of their local green or blue space, and does not split out green space from blue space.
- Scotland's People and Nature Survey (SPANS), conducted on behalf of NatureScot in 2013/14 and 2017/18, includes questions about coastal visits (% who have gone to 'the seaside (a resort or the coast)' in the last four weeks for leisure and recreation, what type of location/destination they visited (e.g. loch, sea/ sea loch, river, canal, beach, cliff, etc).

<sup>&</sup>lt;sup>1</sup> Scottish Government Blue Economy vision

 The Covid-19 Recreation Survey, three waves of which were conducted in 2020 and 2021, also included questions about outdoor visit behaviour during the past four weeks, including coastal blue spaces such as the sea/ sea lochs, beaches or cliffs.

Also relevant is **The People and Nature Survey for England**, which has questions about free time spent outside in green and natural spaces, including any visits to the coast and activities in the open sea. The survey asks about visit frequency to green and natural spaces, types of green and natural spaces visited in the last month (including 'beach/ other coastline/ sea'), whether the quality of the green and natural spaces close to where the respondent lives has improved, reduced or not changed in the last 5 years, and about what they think green and natural spaces should be like as well as what the green and natural spaces close to where they live actually *are* like.

Three important considerations when developing an indicator for access to blue space include:

- 1. How access should be defined. We recommend that the focus should be on actual access (i.e. those who have visited the coast in the last 12 months) rather than potential access (i.e. those who would be able to access the coast but may or may not have done so in the last 12 months).
- 2. How proximity to coastal blue spaces should be defined and captured. Existing research often defines coastal proximity as living less than 5 kilometres from the coast. Proximity can be measured based on postcode data, as long as postcode is collected as part of the survey. Another option is to measure perceived distance to coastal blue space; for example, the Scottish Household Survey indicator of access to green and blue space is based on self-reported walking distance. For the question set fielded for this research, both options were used to enable the research team to look both at perceived and actual proximity to the coast.
- 3. How usage/non-usage are defined and captured. For example, SPANS uses the following categories of visit frequency to the outdoors: frequent visitors (those who visit once a week or more often), occasional visitors (those who visit once or twice a month), those who visit seldom (once every 2-3 months, or once or twice a year), and those who never visit the outdoors for leisure or recreation.

Data sources that could potentially be used in future for an indicator of access to coastal blue space are:

- Placing question/s on an existing survey, such as Scotland's People and Nature Survey or the Scottish Household Survey
- Placing question/s on an omnibus survey. Options include random probability panel surveys and standard opt-in online panel surveys.

The decision on which data source should be used will depend on a range of factors, including methodological quality, frequency, timeliness of results and available budget.

# 3. Overview of current use of the coast

#### **Key Points**

- Beaches, the sea and other coastline are by far the most commonly used type of blue space, with 71% of the Scottish public reporting they have visited these in the last 12 months.
- Groups that are more likely not to have visited any blue spaces, including the
  coast, in the past 12 months are: disabled people, ethnic minorities, nongraduates, those renting from a council or housing association, those living in
  urban areas and those living in the most deprived areas (SIMD 1).
- Among those who either did not visit the coast or visited it only occasionally, associations with the coast were typically positive even though they did not visit often. Pleasant childhood memories of coastal visits with family framed these positive associations.

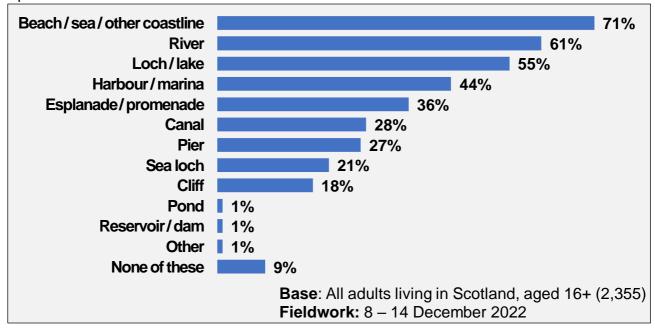
This chapter outlines how Scotland's coast is currently used by people in Scotland, examining how usage of blue space (and the coast specifically) differs for different groups within the population. It looks first at how often different groups use the coast, based on evidence from the quantitative survey, before exploring associations with and childhood experiences of the coast, based on the qualitative research.

# Visiting the coast compared to other types of blue space

Participants in the quantitative survey were asked which types of blue space they had visited in the last year. The most common response was the beach, sea or other coastline with 71% of respondents having visited these places in the last 12 months (Figure 2).

Figure 2 – Types of blue spaces visited in the last year

Q: In the last 12 months, which of the following type(s) of blue space have you visited in your free time? Please do not include time spent at the coast as part of your job, or time spent outside Scotland.



# Subgroup differences

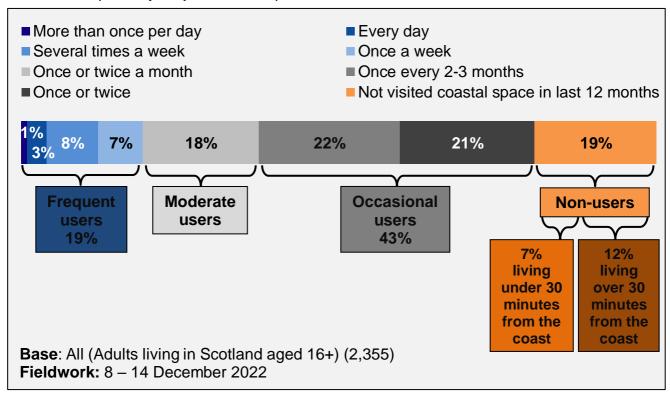
Groups that were more likely to have visited no blue spaces in the last 12 months included those with a disability (i.e. a health condition that reduced their abilities 'a lot'); those belonging to an ethnic minority; non-graduates (compared to graduates); social renters; those living in urban areas and those living in the most deprived areas (SIMD 1).

# Frequency and regularity of coastal visits in the last 12 months

Around one in five respondents (19%) were 'frequent users' of the coast who had visited at least once per week over the last 12 months. A similar proportion (18%) were 'moderate users' who had visited the coast once or twice per month, while 43% were 'occasional users' who had visited the coast at most every 2-3 months. One in five (19%) had not visited the coast in the last 12 months (Figure 3).

# Figure 3 - Frequency of coastal visits in the last 12 months

Q: In the last 12 months, how often, on average, have you spent free time outside at the coast? This includes areas such as the beach, sea or other coastline, cliffs, esplanades or promenades, piers and harbours or marinas. Again, please do not include time spent at the coast as part of your job, or time spent outside Scotland.



#### **Subgroup differences**

Frequency of visits saw variation by age; disability; ethnicity; tenure; rurality and level of deprivation (Figures 4 to 10).

Figure 4 - Frequency of coastal visits in the last 12 months, by age

Younger people aged 16-35 are less likely to be frequent users of the coast (12%) compared to those aged 55+ (24%).

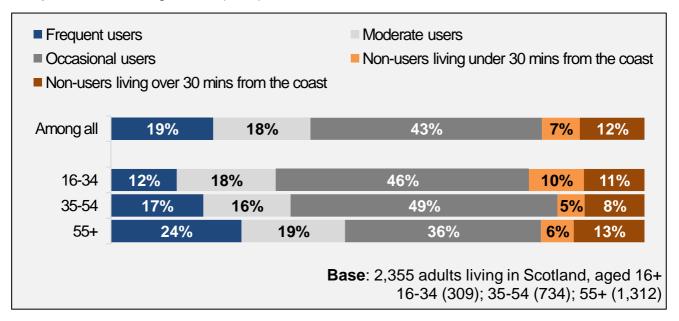


Figure 5 – Frequency of coastal visits in the last 12 months, by disability

Those with a disability that reduces their abilities 'a lot' are less than half as likely to be frequent users of the coast (7%) compared to those with no health condition (20%) or those who have a health condition that reduces their abilities 'a little' (19%).

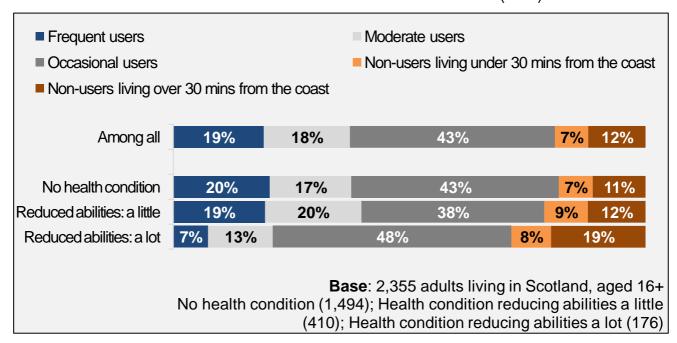


Figure 6 – Frequency of coastal visits in the last 12 months, by ethnicity Almost a third of people from ethnic minorities in Scotland are non-users of the coast (31%), compared to 18% of White people.

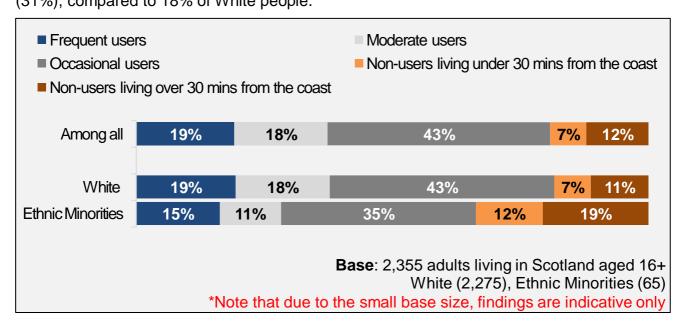


Figure 7 – Frequency of coastal visits in the last 12 months, by education Non-graduates are more likely not to be non-users of coastal space (20%) compared to graduates (14%).

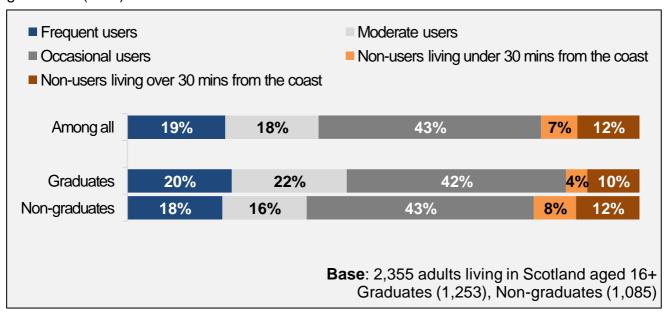


Figure 8 - Frequency of coastal visits in the last 12 months, tenure

Both social renters (34%) and private renters (25%) are more likely to be non-users of the coast compared to homeowners (15%).

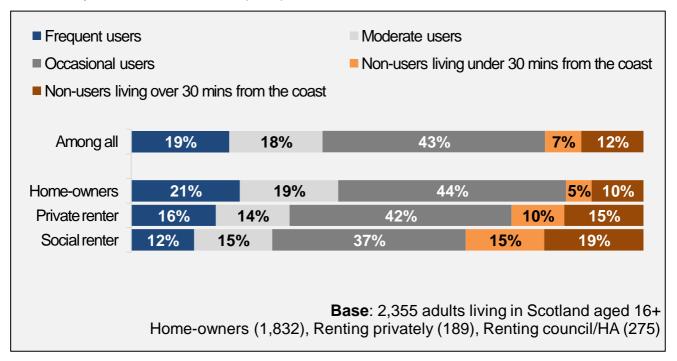


Figure 9 – Frequency of coastal visits in the last 12 months, by rurality

Those living in urban areas are more likely to be non-users of the coast (20%) compared to those living in rural areas (15%) and almost half as likely to be frequent users of the coast (15% vs 30%).

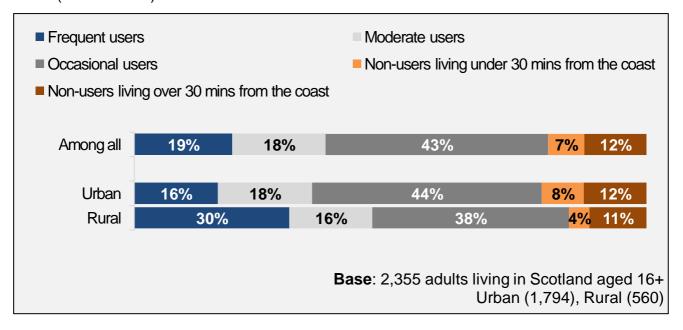
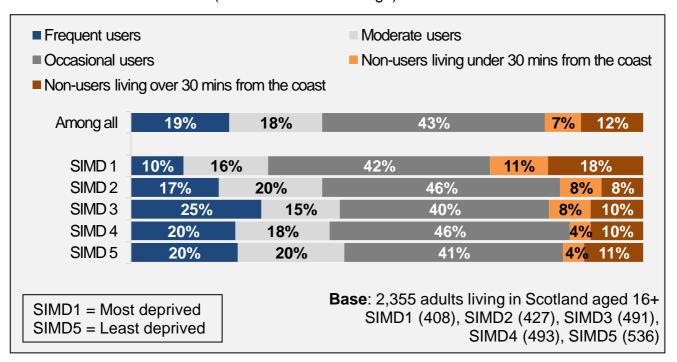


Figure 10 – Frequency of coastal visits in the last 12 months, by deprivation (SIMD) Those living in the most deprived areas in Scotland (SIMD1) are more likely than average to be non-users of the coast (29% vs 19% on average).



# Qualitative findings on visit frequency

The qualitative research was carried out among non-users and occasional users of the coast. Participants' history of visiting the coast ranged from those that went occasionally throughout the year, to those who tended to go only during summertime, to those who had not visited for many years (e.g. for over a decade) or had never visited.

Visiting the coast could be seen as a seasonal activity. Weather played an important role in how regularly some participants visited the coast, with some explaining that they are more likely to visit in the summer months when the weather is better. However, there were also those who visited in the colder months as well.

"I would say I'm much more likely to go between the months of May and September, just from a weather standpoint."

(Female participant, 16-34)

# Associations with and memories of visiting the coast

The qualitative research investigated the associations people had with the coast, their childhood memories of the coast, and the ways in which they typically made use of the coast when there.

# **Experiences of visiting the coast**

Visiting the coast provided different experiences to different people, depending on their activities and preferences. While some visited the coast to walk on the beach or to swim, others interacted with nature by collecting rocks and shells or exploring rock pools. Some

preferred to visit during summer for a day out with family and friends, while others went at other times of year to see family who live by the coast.

Participants described how the coast is an ideal setting for a quiet and peaceful walk. One participant with osteoarthritis, for example, explained that he visits beaches as they are flat and suitable for him to walk on. He prefers to go on his own, with his dog, and take binoculars to look out at places he knows. Others discussed how their experience of the coast is different depending on the location, for example some preferring the ruggedness of Scotland's west coast compared to the east coast.

#### **Associations**

Although they did not visit often, participants generally expressed favourable associations with the coast. Beaches were the standout feature for most when they thought about the coast. Participants described feelings of relaxation, tranquillity, enjoying fresh air, being in touch with nature, admiring beautiful views, and spending time with family on holiday. The unique sounds and smells of the coast, the nostalgia from childhood visits, summer holidays, fun, and enjoyment were key associations when thinking about the coast.

Associations with the coast also varied depending on the stretch of coast participants were thinking about. For instance, some participants associated the coast with particular places, memories, or activities, such as visiting castles along the West Coast or rock pools on the Isle of Skye.

Where participants recalled childhood experiences of the coast, these were typically positive memories of visits to see family at the coast, enjoying holidays, and visits as part of organised school activities. Activities mentioned included cycling, picnics, fishing, and swimming. To illustrate, one participant who grew up in Northern Ireland recalled visiting castles near or on the coast and enjoying visits with friends, climbing along the harbour. For another, renting a cottage on the coast for a couple of weeks during summer holidays had been a family tradition, where they enjoyed spending time with friends and going fishing. There were also participants who had grown up near the coast in other countries, such as near the Atlantic Ocean in the Niger Delta, who tended to view this positively. However, Scotland's coast could feel less appealing to participants who had grown up in warmer climes, given the colder weather in Scotland.

Where participants' spontaneous associations with the coast were more negative, this typically related to the impact of other visitors on particular beaches, such as overcrowding, anti-social behaviour and a lack of cleanliness (e.g. litter being present, or the water quality being poor). Other negative associations were dogs being present (for those who had a fear of dogs); the coast feeling scary in bad weather; or perceptions of the coast being an exclusive place where only certain types of people tended to visit. There was also a view (discussed further in Chapter 5) expressed by ethnic minority participants and stakeholders that the coast is a place where mostly White people tend to visit, which could create some unease for these participants.

# 4. Perceived benefits of visiting the coast

## **Key Points**

- In line with the literature review, the benefits that participants in the qualitative research associated with visiting the coast included mental health benefits, spending time in nature, socialising with friends and family, and physical health benefits (mainly relating to being physically active or exercising).
- Reasons mentioned for visiting the coast overlapped with the perceived benefits
  of visiting, such as mental health, socialising and exercise, as well as learning
  and discovering new places.
- Participants were generally open to or enthusiastic about visiting more often.
   However, there were a range of barriers which could make this difficult or unappealing (outlined in detail in the next chapter).

This section explores the perceived benefits of visiting the coast, before outlining the reasons why participants visited the coast, if and when they did.

# Perceived benefits of being at the coast

Participants discussed a range of benefits of visiting the coast, although they had visited it only occasionally or not at all over the past year. The positive effects on mental health was an overarching theme, and participants also mentioned benefits such as being in contact with nature, socialising with friends and family, and the physical health benefits of exercising at the coast.

These findings are in line with the literature review conducted as the first stage of this research, which found that blue spaces, and particularly coastal environments, can promote good mental health through support for subjective wellbeing and stress reduction. Participants perceived the coast as a relaxing place where they could get fresh air and 'get away' from their everyday concerns. For example, being at the coast was described as 'clearing your mind' and being 'restorative' mentally. One participant with anxiety explained that being at the coast reduced their symptoms.

"Absolutely fresh air and you feel like you are away from it all, away from your stresses and strains. [Being at the coast] makes you feel better."

(Disabled female participant, 55-64)

The perceived mental health benefits of the coast were felt to go beyond removing sources of stress, as being at the coast enables people to focus on the present, themselves, and their inner thoughts. In this sense, solitude and quietness were also considered benefits of visiting the coast, with participants noting that it encourages them to be more reflective.

"When you're at the beach it kind of reminds you of who you really are because you're just there. There's no sense of mirrors in the cafes or the shops that you constantly see; there's no need or desire to fix your hair."

(Female participant from a Black African background, 16-34)

"I get quite pent up in a lot of towns, so [visiting the coast] it is nice to get a breather and to feel like I can really get rid of my anxiety. It's sort of like a therapy for me."

(Female participant, 16-34)

In addition to the mental health benefits associated with reflection or feeling relaxed, participants also mentioned the pure enjoyment of being close to nature, contemplating wildlife or spending time in beautiful scenery.

"It is kind of refreshing to be away from the hustle and bustle of the city, somewhere very scenic. It is about pondering on creation, looking at something so simple like the trees and the ocean, the wind, enjoying that being in the moment, being present for a change and not having to rush off."

(Female participant from an Asian background, 45-54)

Another benefit of visiting the coast was that it could facilitate spending quality time with friends and family. To illustrate:

"Just having a great time with my friends and my family while I am there [at the coast]. It just uplifts your mood and makes you feel better."

(Disabled female participant, 25-34)

Organisations working with ethnic minorities noted that organised visits to natural areas, including the coast, could be a good opportunity for people to connect with others in their communities and to discuss any issues they were facing.

Some physical health benefits were also mentioned, typically as a result of being physically active when at the coast, for example walking or swimming in the sea. There were also perceived circulatory benefits of wild swimming, and one participant highlighted the soothing effect of seawater on eczema. Exercise was also linked to mental health benefits.

"I would quite like to try and get a bit more into cold water swimming, because I just think the benefits of that are phenomenal. I have been once on Portobello beach and it was freezing cold, but I felt great afterward."

(Female participant living in a more deprived area, Edinburgh/Lothians)

"[When] we visited the coast in lockdown, that was all for mental health benefits, and I think we're still doing it for that reason whenever we are near the coast. It is a great opportunity to clear your head, get back into nature and do a little bit of exercise."

(Male participant, 16-34)

#### Reasons for visiting the coast

The perceived benefits of visiting the coast overlapped with the reasons participants gave for visiting the coast, if and when they did. Again, mental health benefits were a key theme. Participants reported visiting the coast to get a change of scene and be close to nature, as well as to feel calm and relaxed.

While social benefits were discussed in general terms, there were participants who visited the coast primarily in order to socialise with friends or family.

"[When I visit] the coast where I grew up, is more for a social benefit. [...] We go out and go to the beach and we go to the cafes and restaurants there, so for me it is more, depending on which coast, the social aspect more than its exploration."

(Female participant, 16-34)

Activities such as walking, wild swimming and fishing could also draw people to the coast. Participants with young children mentioned activities such as playing in the sand or climbing rocks. Among families, the coast was seen as a cost-effective way to entertain children for a whole day.

"You can go to one place and do so many different things and I know getting there costs money, but when you're there you can have a free day. Like you say you can take a picnic, you can take a ball, you can lie and read a book. It blows away the cobwebs, it is nice to be with nature, dip your feet in the sea."

(Female participant living in a more deprived area, Glasgow)

Participants also mentioned visiting the coast for food-related activities, such as going to cafes or restaurants, getting fish and chips, or having a picnic or a barbecue. Other activities that led people to visit included dog walking, visiting amenities (e.g. arcades) or nearby attractions (e.g. an art gallery).

For some, spending time at the coast also offered learning opportunities, for example around Scotland's natural environment, wildlife or history and culture. There was a desire among participants who had more recently moved to Scotland in particular to visit the coast as a way of seeing more of the country.

"I think for me it [the reason I visit] would probably be educational purposes for my daughter, because there is lots of rockpools and that. So when we go, we go, 'Oh, what is this? What can you see?' [...] having an adventure and making memories."

(Female participant, 16-34)

Other reasons for visiting the coast included seeking comfort, due to associations with the coast relating to childhood memories, to 'home' or a sense of connection with nature or with the wider world.

"I think it is good, to bring back your childhood memories. Like, you remember going there when you were young and it feels good, like it is what you know."

(Female participant living in a more deprived area, Glasgow)

"I am originally from the Netherlands and I usually go to the coast when I feel quite homesick. I tend to touch the sea, because the other side of the sea washes up to the Dutch shore, so I feel like I get to sort of be home for a little bit."

(Female participant, 16-34)

#### Reasons for not visiting the coast

While there were those who did not see a personal benefit to visiting the coast more often than they currently did, participants were generally open to or enthusiastic about visiting more often. However, there were a range of barriers which could deter or prevent participants from visiting the coast. These related to motivation, capability, social factors and structural/physical challenges and are outlined in detail in the next chapter.

#### Pen portrait 1 - Edward

Edward is in his late forties and has anxiety. He was born and brought up on the Isle of Skye so wildlife, green spaces, and the coast have always been part of his life. He now lives in a rural area of Scotland, ten minutes by car from the coast, and he visits the coast roughly once a month all year around. He is very fond of the coast and cannot think of any reasons why he does not visit more often other than not having the 'gumption'.

For him, the coast has profound mental health benefits. When he visits the coast, he often finds himself mesmerised by the waves and the wildlife. This makes him feel relaxed and allows him to reflect on issues that would normally make him anxious, without feeling stressed about them.

"I am on my own literally sitting on a rock looking at the waves splashing backwards and forwards, looking out for seals. [...] Probably the most beneficial thing about the sea [is] it allows me to be in the moment without feeling those stresses that might otherwise be preoccupying my mind".

## Barriers and enablers to accessing the coast

#### **Key Points**

- There were a wide range of reported barriers that stopped participants from visiting the coast more often, or at all. These can be broadly grouped into the following categories: motivation, capability, physical barriers and social factors.
- Motivational barriers had a considerable impact on participants not visiting the
  coast. These included personal preferences and not seeing the benefits of
  spending time at the coast. However, there were also features of the coast that
  actively put participants off visiting such as overcrowded beaches, experiences
  of anti-social behaviour, or beaches not being clean.
- Other factors which could affect motivation to visit included participants' personal identity and feelings of connection to the coast, as well as perceived barriers (expectations about how easy or difficult it would be to get to the coast).
- Two main factors limited participants' individual capability to visit the coast; namely having the necessary knowledge and experience or a lack of time. There were also those for whom their state of mental health limited their ability to go out in general.
- Physical barriers to spending time at the coast came out strongly. Participants
  cited travel barriers (primarily relating to public transport), travel costs,
  challenges interacting with the physical environment at the coast such as sandy
  beaches or eroded paths, and a lack of good quality facilities. Weather and
  daylight hours also played a role.
- Social and cultural norms were another important factor that shaped participants' experiences of, knowledge of and attitudes towards visiting the coast. When participants were unaware of friends or family visiting the coast, or others in their community doing so, this made them less likely to consider going themselves. Among ethnic minority participants, there were some reported concerns about stigma and feeling uncomfortable at the coast.

This chapter addresses the second research question, namely what the key factors are that affect use of the coast amongst different people and groups. As the research focuses on the experiences of infrequent visitors to the coast, this section explores the barriers to visiting, but also covers factors that acted as enablers where relevant. It draws primarily on the data from qualitative interviews and group discussions as well as some quantitative survey data (on perceived distance from the coast).

In line with the literature review findings, a range of barriers emerged during qualitative fieldwork with infrequent visitors to the coast. This chapter is structured using the MAPPS behavioural framework which breaks down individual barriers into those relating to 'motivation' (do participants want to visit the coast?) and to 'capability' (do participants have the capacity to visit the coast?). These are outlined in detail, before being followed by a discussion of the physical and social/cultural barriers to spending time at the coast.

Figure 13 below provides an overview of the barriers and enabling factors identified from thematic analysis of the qualitative data. Each of these is then discussed in turn.

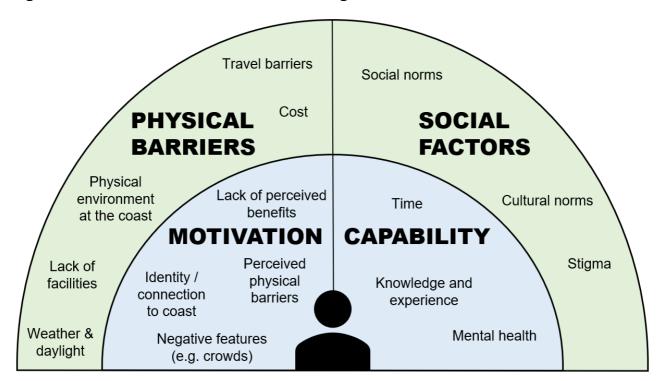


Figure 13. Overview of barriers and enabling factors

#### Motivational ('do I want to do it?')

Motivational barriers had a considerable impact on participants not visiting the coast. These included personal preferences and a lack of 'pull factors', as well as features of the coast that actively deterred participants from visiting. Personal identity and connection to the coast also played a role, as did perceived barriers (negative expectations about how easy or difficult it would be to get to the coast). Finally, weather and limited daylight hours in the winter months affected participants' motivation to visit.

#### Personal preference and lack of 'pull factors' to visit

As outlined in the previous chapter, participants generally had positive associations with the coast. When they did visit, they were motivated to do so for various reasons, often depending on personal circumstances and individual preferences. Therefore, when particular parts of the coast did not facilitate the kinds of activities or experience participants were looking for, this could be off-putting. For example, coastal areas which were perceived as more 'industrial' were typically less appealing to visit as they lacked the aesthetic landscape and views that could draw people to the coast. For participants who enjoyed visiting local coastal amenities such as cafés or arcades, a lack of these (particularly during the winter when many are closed) made them less keen to visit.

Linked to this was a view that there can be a lack of things to do at the coast. One stakeholder found that in their experience, the young men they worked with in particular seemed to prefer hill walking as they liked to do something challenging or goal-orientated, which was not something they associated with the coast. To illustrate:

"I would choose a woodland or a hilly area over a beach every time given the choice.
[...] I've got more something to do, like if I'm walking up a hill or something and if I have got a goal and then I feel like I had a workout or something like that. Whereas walking along the beach is just like walking along the street but a bit nicer."

(Male participant, 16-34)

#### Perceived negative features of the coast

In addition to the lack of 'pull factors' mentioned above, participants also discussed things they did not like about the coast which actively deterred them from going. These were largely related to the presence or behaviour of other people at the coast, including: overcrowding; safety and anti-social behaviour; littering and cleanliness; and the presence of dogs (which divided opinion).

Participants tended not to enjoy spending time at the coast when it was very busy, as it could be unrelaxing or stressful. This was typically associated with beaches and especially in the summertime. For those who went to the coast to feel calm and relaxed, these wellbeing benefits were directly diminished by crowds and this could also present significant barriers for those with anxiety. Participants had previously left beaches that felt too crowded or avoided going in the first place if they suspected it would be too busy.

"Definitely in the summer or if there is a bank holiday weekend and everybody is at the beach, I find that really off-putting. It is [...] an anxiety thing, a claustrophobic feeling, not wanting to deal with so many people. So, yes, I think how popular certain beaches are can make them difficult [to visit]."

(Female participant, 16-34)

"With large groups of kids or just gatherings in general, I think I would probably avoid it, and I think a lot of people who have like social anxiety would feel pretty similarly."

(Male participant, 16-34)

There were some worries discussed around personal safety at the coast, primarily around anti-social behaviour although one participant mentioned being afraid of the sea. Concerns ranged from people drinking and being 'rowdy' at the coast, to more dangerous behaviours such as throwing bottles or even the presence of gangs and related violence. Portobello beach in Edinburgh was an example of a beach that participants felt could be unsafe. Worries around experiencing anti-social behaviour could particularly put people off visiting the coast alone or with children.

"They were just rowdy and they were just throwing bottles everywhere and all that and the little one got a bit frightened, and I'm like, you know what, it's just not worth it."

(Female participant living in deprived area in Edinburgh/Lothians)

Coastal areas not being clean could also deter people from visiting or spending as much time at the coast as they would like. Participants described beaches that had litter on them as well as over-filled bins.

"There is quite a lot of litter as well, particularly at Portobello, which is rotten to go out and spend some nice time amongst nature just seeing like bottles and alcohol bottles, and packets and wrappers everywhere, It almost defeats the point of being in a nice, serene space."

(Female participant living in deprived area in Edinburgh/Lothians)

While poor water quality was not generally seen as a major issue in Scotland, there were participants for whom this had been off-putting. This was usually an issue for particular areas of the coast, for example one participant described avoiding a particular beach due to concerns about pollution from nearby industrial sites. It was typically more of a barrier for those who wanted to swim in the sea, and one stakeholder who took people on organised trips to the coast recalled cancelling plans to go wild swimming when it was felt that the water was not clean enough.

Opinion was split over the presence of dogs at the coast. While there were participants for whom being able to take a dog to the coast was an important factor in encouraging them to go, or who found the presence of dogs appealing, others did not like dogs or were frightened of them. Participants had also experienced issues with dog fouling on the beach. There was a view among those with dogs that more clarity was needed about which parts of the coast it is permissible to take dogs to, to help both themselves and other visitors at the beach feel at ease.

#### Identity and connection to the coast

Perceptions of identity and how connected participants felt to the coast also played a role in how much they wanted to visit. For example, when participants were asked if they associated the coast with certain 'types' of people, families with children and dog walkers came out strongly. This could make people who did not fit into these categories feel less comfortable about visiting. This was particularly discussed by young people aged under 35, with one participant saying they did not feel like the coast was somewhere where 'single professionals' usually went.

"I feel like I stick out a little bit on a beach because I'm not there with a dog and I'm not there with a child, I'm just me by myself. So I think that is why I more avoid those places now."

(Female participant, 16-34)

There was a view among stakeholders working with ethnic minorities in Scotland that there can be a perception that the coast is a 'White space' which is not as diverse compared to cities, and that it is not typical for ethnic minority groups to visit. While the impacts of social influences are discussed later on, it was suggested that these feelings could contribute to a general sense that people did not see themselves as the type of person that visited the coast.

Furthermore, participants did not tend to describe feeling a sense of personal connection to the coast. While this was not explicitly discussed as a barrier, it was clear that among those who *did* feel a connection to the sea or the coast this increased their motivation to visit. This was typically built up as a result of positive experiences and familiarity with the coast, especially when participants had previously lived nearby. Once formed, this type of connection tended to be strong and enduring and motivated participants to return to coastal areas.

"I find I have to go and get my sea-fix every now and again. Though I wasn't actually brought up as a child by the sea, I think once you've lived by the sea you've always got that hankering to go back."

(Disabled female participant, 65-74)

A stakeholder highlighted that for ethnic minority communities, there may be less of a familiarity with the coast in cases where people in these communities or their relatives had moved to Scotland more recently. There was a suggestion that first generation immigrants in particular may be more focused on other priorities, for example work or establishing themselves in a new place, and less on leisure time. However, this could then contribute to a lack of connection to the coast for second or third generation immigrants as well if they did not spend time there growing up.

"That kind of gets passed down to us as well [...] determined by what was of interest from the people before you [...] and I think that's why I don't go [to the coast]."

(Female participant from a Black African background, 16-34)

#### Perceived barriers to accessing the coast

While participants described potential external barriers that limited their ability to visit the coast, there were cases where the idea of possibly coming across barriers (rather than the barriers themselves) could deter people from attempting to visit in the first place. This typically related to avoiding potential transport issues such as cancelled trains or delayed buses, but participants also described being hesitant to risk a long journey to the coast if it turned out to be unpleasant once they got there (for example being overcrowded). One participant highlighted that this risk aversion was made worse by the fact that it was not easy to travel between beaches and spread out to another part of the coast if your original destination felt too busy.

"I would like to go more, but I think it is about kind of knowing that once you get there you are going to be able to have a nice, relaxed time and not be surrounded by other people."

(Female participant living in a deprived area in Edinburgh/Lothians)

"[To] not have anywhere to stop [to park] and have to find somewhere else to go, that kind of inconvenience would make us think twice about going to the coast."

(Male participant, 16-34)

A stakeholder who worked with disabled people pointed out that, while they felt there was a lot of information available about the accessibility of various areas on the Scottish coastline, this was not always easy to find. In their experience, much of this information was only available online which excluded those who were not comfortable searching for information this way. They also described doing a 'recce' themselves to determine whether certain routes were fully accessible, but imagined that many people would not want to do this themselves.

"[Not knowing if a route is accessible] It will put a lot of people off. A lot of people need to know where they're going and what they're able to achieve and they don't want to come across these barriers and have to turn back."

Stakeholder (Disabled Ramblers)

One participant suggested that although they had a perception of the coast as being difficult to visit, in reality it was probably easier than it seemed:

"I think objectively it is really easy for me to get to the coast, but then sort of subjectively, it feels like more of an effort to go to Portobello than to go to other places."

(Male participant, 16-34)

#### Ability ('am I able to do it?')

Two main factors limited participants' individual capability to visit the coast; namely having the necessary knowledge and experience and a lack of time. Mental health could also limit participants' ability to go out in general.

#### Knowledge and experience

Among participants who had not had much experience of visiting the coast in Scotland, there was a sense that they did not know exactly how to go about this. For example, participants mentioned not knowing which areas of the coast would be nice to visit or accessible, how to get there and back, what sort of facilities would be available or what to do there. While participants described having been inspired to visit some beaches after coming across images on television or social media, there was a sense that it was challenging to seek out this information. For example, it was not always felt to be clear which coastal areas were nice to visit from looking at a map.

"I always wonder if there are maybe coastal areas which are conveniently, like quite close to me that I'm maybe not entirely aware of. [...] I do wonder sometimes if I am missing out on a hidden gem there."

(Female participant living in a deprived area in Edinburgh/Lothians)

There was a view among ethnic minority participants and stakeholders working with these groups that information was a key barrier for their communities. This related both to being less likely to have spent time at the coast themselves and not knowing others who went (more detail on this is outlined in the social barriers section below). This could mean that, apart from knowing where to go or how to get there, they did not have a sense of basic practical information such as how long is an ideal amount of time to spend at the coast or what people typically do there.

#### Lack of time

A lack of time to plan and carry out a trip to the coast came out as a key barrier, particularly for those working or studying full-time or those with childcare or other caring responsibilities.

"There's nothing stopping me other than life."

(Disabled male participant, 55-64)

This intersected with travel barriers, as travel time and issues with public transport could make it difficult for participants to fit in visiting the coast with other plans or commitments before or after, and could mean that effectively they felt they needed to block out an entire day to visit the coast.

#### Mental wellbeing and energy levels

Individual capability to go out could be affected by participants' mental state and energy levels. Those with health conditions or disabilities were particularly likely to face barriers in this regard, both as a result of physical conditions (such as ME) or suffering from poor mental health (such as depression or anxiety).

One Muslim participant highlighted that when fasting during Ramadan, they and the wider Muslim community have less energy and are less able to go out and do things, including visiting the coast. As the dates of Ramadan change each year, they felt this had a particular impact in years when it takes place during the summer, when people would otherwise be more likely to want to go to the beach.

#### Physical ('does the context encourage the behaviour?')

Participants discussed various physical barriers that made it difficult for them to visit the coast, including: transport infrastructure; transport costs; the availability of facilities; the physical environment at the coast; the behaviour of other visitors; cleanliness and water quality; and the weather and limited daylight hours in winter.

#### Distance from the coast

Naturally, the distance participants lived from their nearest coastal area played a role in how likely they were to visit.

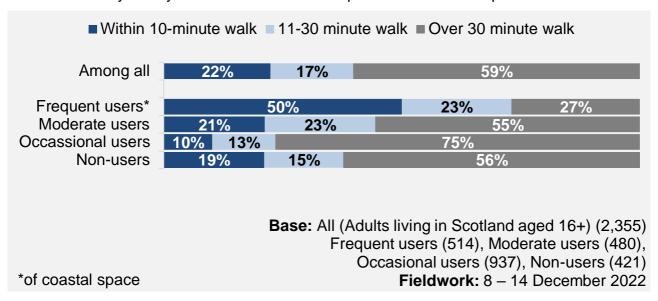
"To me it is just about proximity, I think, because you can't just pop there because it is just not close enough, even a train or a car can only go so fast. [...] If I lived closer to the coast, I would just go a lot more."

(Female participant living in a deprived area in Glasgow)

This is supported by the data from the general public survey which asked about how far away their nearest public coastal space was. Notably, there was a positive relationship between perceived distance from the coast and being a 'frequent user' of coastal space (Figure 6). However, for non-users of the coast there was a higher proportion of participants living within a 10-minute walk of the coast compared to occasional users, suggesting other barriers (unrelated to transport) were more relevant among those who did not choose to visit the coast at all.

Figure 14 - Perceived proximity to the coast, broken down by frequency of visit

Q: How far away from your home is the nearest public coastal blue space?



#### **Travel barriers**

Travel barriers emerged as a strong theme among participants that did not live within easy walking distance of their local coastal area. While most travel barriers related to the use of public transport, challenges with driving or walking to the coast also came up.

A variety of issues with public transport provision were discussed, centring on convenience, availability, and cost. While these barriers were mainly relevant to those who did not have access to a car, one participant who travelled to the coast by car felt that a better train service would encourage him to visit more often as he would prefer taking the train to driving a long distance.

Public transport was typically viewed as a slow way to access the coast, especially buses in comparison to driving. While off-putting in itself, a longer journey also cut into the time participants were able to spend at the coast, making a visit seem less worthwhile. The time-consuming nature of public transport could also exacerbate other issues, for example making a trip to the coast more of an 'event' which would take up a whole day, with the extra planning and costs associated with a daytrip. One participant explained that taking the bus to the coast would take so long that they felt they would have to stay overnight before returning. This was contrasted with visiting green spaces, and one participant described spending time more 'passively' passing through local green spaces compared to taking a more intentional and pre-planned approach to visiting the coast.

"For me it involves like buses, trains, it would be an entire day. You would have to take money for food and everything like that."

(Female participant, 16-34)

Participants had experienced infrequent, inconveniently timed or unreliable public transport which made it more difficult to plan a trip to the coast or making certain areas inaccessible at particular times of day. When transport wasn't running in the evening, this also cut into the amount of time people could spend at the coast and prevented them staying for a whole day. This, combined with the perceived unreliability of transport links, prompted concerns about getting 'stranded' at the coast and being unable to get back home. Wanting to visit the coast with people who did not live in the same place could create additional logistical challenges with matching up timetables and routes.

"You've got to plan it a bit more. If you can't just jump in the car you've got to work out timetables and so on and if it doesn't match up, that's a bit of a barrier."

(Female participant living in a deprived area in Glasgow)

"If I want to go to a quieter place, it would require changing buses a bunch. [...] It means that I'm kind of locked into going to Portobello and I can't really explore."

(Female participant, 16-34)

There was an acknowledgement that some coastal areas do not have any public transport links, limiting which parts of the coast people can visit and 'funnelling' people into the same areas. For example, one participant thought it would be challenging to access more secluded parts of the coast which were more "off the beaten path". Another participant highlighted that the lack of transport connections between coastal areas made it difficult for them to access the coast in an enjoyable way due to not being able to visit a different part of the coast easily if their original destination turned out to be too crowded.

There was also a view that spending time on a bus can be unpleasant, particularly in warmer weather (which is when participants tended to be more likely to want to visit the coast). For participants who had to change buses or trains, this meant extra hassle, time and often cost due to needing multiple tickets.

By contrast, having a car was typically seen as an enabler to visiting the coast, since it gave participants the freedom to choose exactly when and where they wanted to go. However, those that drove reported experiencing different kinds of barriers, such as difficulties finding suitable parking. A lack of parking space could make popular beaches less accessible for those driving to the coast generally, although a stakeholder believed this was particularly relevant to those with mobility issues who typically need to drive to the coast and may require a larger car park if they use a ramp to get in and out of their vehicle. One participant with a disability also highlighted the importance of disabled parking areas near to the beach, as walking was difficult for them.

"There were no car parking spaces when we went there., they were all full, there was a small pay car park and people were parking away up the road as well. So, I think the busier beaches, the most popular places, can be hard to get to by car."

(Male participant, 16-34)

Among participants who cycled, this was often a way they would like to access the coast, but there were concerns around a lack of cycle lanes or secure bike storage.

"With Edinburgh in particular, the lack of secure bike storage at the beach [is a barrier]. Like I would go on my bike, but I would never leave my bike. Which means that I could never then go into businesses, so I wouldn't want to take my bike down".

(Male participant, 16-34)

There were participants who felt their beach was within a reasonable walking distance for them, however external factors that could make walking difficult or less appealing included unpleasant routes (for example busy roads) or unsafe routes.

#### **Transport costs**

There were participants for whom the cost of public transport, especially trains, was prohibitive. There was a belief that this was getting worse, due to increasing prices and the cost of living crisis. Notably, this barrier came out strongly in discussions among participants living in more deprived areas. Participants also suggested that cost barriers would be especially relevant for families paying for multiple tickets.

"It would be a very costly experience, especially like when you're talking probably about £20 just in transport for myself, never mind the rest of my family."

(Female participant, 16-34)

#### Pen portrait 2 – Alistair

Alistair lives in Glasgow and runs his own business. Lately he's been having some financial difficulties. He enjoys walking his dog in local parks, although he would like to go for dog walks at the coast if it was more affordable for him.

"I think if money was no object, I would go most days, because it would just be nice to go on big long walks with the dog and go somewhere different, you know? As it is I just go to all the parks in Glasgow."

ScotRail being unreliable is another barrier, as Alistair is concerned about the possibility of trains being cancelled or delayed, which could leave him and his dog stranded at night. Since he is unable to drive, he relies on public transport to get around.

In Alistair's experience, the time commitment required to plan and execute a trip to the coast is off-putting.

"You have to pretty much block out like a whole day for it, most of the day, based on where we are."

Alistair indicated that a cheap monthly train pass could make him more likely to visit, and that if he had a car he would visit much more often.

There was also a belief that getting to the coast was more expensive than visiting other outdoor spaces.

"There is not much difference saying you want to go to the coast to saying you want to go up to the Highlands and just walk about on the hills, [...] but it is the cost of getting there, or the friction of getting there".

(Male participant living in a deprived area in Glasgow)

Costs associated with driving, including parking charges and the rising price of fuel, could also stop people from visiting particular coastal areas.

"Last year, the cost of petrol was high so that was a barrier to doing things. [...] I wouldn't take long trips because it was costing too much to fill the tank."

(Disabled female participant from an Asian background, 45-54)

#### The physical environment at the coast

Something that was unique to the coast were features of its physical environment such as sand, rocks and the sea. In some cases, the topography of the coast could pose difficulties for participants, particularly when they had a health condition or disability.

Firstly, while there were participants who specifically sought out sandy beaches, sand could pose significant barriers to those with mobility issues. For example, sand could be tiring for people to traverse and make it difficult or impossible to use a wheelchair. Even when wheelchair users are able to use a beach wheelchair (adapted for use on sand), a stakeholder highlighted that these can't be motorised and people are then reliant on having somebody else with them and cannot visit the coast independently.

More generally, sand was perceived as inconvenient as it stuck to clothes, could be blown into people's faces or food, and there were participants for whom the feeling of sand could make them feel uncomfortable, especially when there are no walkways or promenades to walk on. One participant highlighted that this was a problem for them specifically due to having a health condition which made them particularly sensitive to tactile stimuli. Sand was also seen as a difficulty for families with children, due to being unable to easily use a pushchair and concerns around children getting sand in their mouths and eating sand.

A stakeholder who supported disabled people to spend time in nature explained that coastal erosion could make paths along the coast more challenging to use on a motorised mobility scooter, and when sand blew over paths this could be dangerous. The windy weather at the coast could also pose a threat: one stakeholder recalled a time where the wind at the coast had caused somebody's mobility scooter to overturn. Narrow paths, paths with a camber or inaccessible gates had also been known to cause difficulties.

Other concerns about the physical environment included the timing of the tides; the build up and smell of seaweed; and issues with coastal wildlife, specifically seagulls harassing people and trying to take their food.

#### Lack of good quality facilities

Participants described how a lack of good quality facilities at the coast could sometimes be a barrier to spending extended time at the coast, specifically: access to toilets, indoor spaces, food or drink, or, for Muslim participants, an appropriate space to pray.

Lack of toilets was mentioned as a difficulty, particularly for people with a health condition or disability. A stakeholder highlighted that people with mobility issues may also require larger toilets or ones with rails and other adaptions to make them accessible to use, limiting them further. One participant whose mother had dementia explained that they would be unable to go to a beach without a toilet. A stakeholder that works with people with disabilities pointed out that this can be a particular issue at the coast compared to green spaces, due to being unable to set up temporary natural toilets which need to be far from bodies of water. Putting up a tent could also be more challenging on the open, often windy, coastline.

"If you need the toilet and you are there visiting in November, you've got a choice of walking back up to the main road at Portobello or the sea."

(Female participant, 16-34)

There was also a desire among certain participants for nearby indoor spaces such as cafes in order to take shelter if the weather became cold or particularly windy or wet. Again, it was felt that this was particularly important for those with disabilities or additional needs. The availability of facilities could therefore mediate the impact of concerns about accessing the coast in periods of colder weather, however participants pointed out that availability of coastal facilities can be seasonal, meaning access to facilities is typically more of an issue in the winter months.

There were participants for whom the ability to purchase affordable food or drink as important in making a visit enjoyable (food was often a positive association with the beach, particularly on holiday, for example ice-cream or hot dogs).

Availability of food could be a particular barrier for Muslim participants, who said it is difficult to find halal food options outside of Scottish cities. However, there was a view that the community may be more likely to bring their own food to deal with this.

Finally, one Muslim participant described the difficulties she had experienced on a previous trip to the coast when trying to find an appropriate space to pray (which she did five times every day). Difficulties included having a clean space that was large, clean and private enough to pray. The last time she was at the coast she had prayed in her car, but this was not ideal and she had felt uncomfortable doing so.

#### Weather and daylight

There was widespread acknowledgement that the weather and limited daylight hours in winter have a significant impact on the experience of visiting the coast.

While there were participants who would prefer not to be outside at all during cold or wet weather, there was some evidence to suggest that bad weather could be particularly impactful for people's decision to visit the coast compared to other outdoor spaces. Firstly, there were widespread associations of the coast with the sun and warm weather, and of

visiting during the summer holidays. One participant who grew up in Holland and did not experience childhood holidays at the beach reflected that they may be more likely to visit the coast throughout the year in part because they had not built up this association.

"I'd rather take a walk around the field, far away from water, in the winter. The coast for me is sunshine, relaxation."

(Male participant from a Black African background, 45-54)

"The connotations of the coast always have to do with summer so it's kind of like you limit your access. [...] The way it's advertised is 'be there in the summer, don't go when it's not sunny' kind of thing."

(Female participant from a Black African background, 16-34)

However, there was also a view that the coast still has something to offer in cold or windy weather, with participants mentioning that the landscape was still "beautiful" and that the sea could be interesting to watch. In fact, one participant felt that bad weather is less offputting for them when it comes to visiting the coast compared to green spaces, since it feels more of an 'event' in itself.

"I think when it is rainy and cold, I'm probably less likely to go to a park because then the park seems not enough of an event, I guess, so I won't got there necessarily. Whereas going to the beach, even when it is quite grey and blowy, like it feels a bit bracing. It is quite nice sometimes."

(Female participant, 16-34)

There was a sense among ethnic minority participants and stakeholders working with these groups that the weather could be an important factor for these communities in particular, especially when participants or family members had links with countries with warmer climates, making Scotland's climate seem particularly cold in comparison. One participant from a South Asian background mentioned a belief in their culture that visiting the coast can cause people to get ill easily due to the cold.

"[My wife and I] like it more with the warmth, the water is cold. [...] I can't get used to it, I wish I could."

(Male participant, grew up in Niger Delta, 45-54)

Finally, there was reference to limitations imposed by daylight hours, mostly during the winter. This could limit the amount of time participants felt comfortable spending at the coast or even make it difficult to go in the first place for those who were working or had other commitments during the day.

"In the warmer months, maybe once every two to three weeks, I tended to try and make an effort on a Sunday to get out and [walk to the coast]. But, yes, as soon as it is dark outside it's like 'nah'."

(Male participant, 16-34)

#### Social ('what do other people do and value?')

Social and cultural norms were an important factor that shaped participants' experiences of, knowledge of and attitudes towards visiting the coast.

#### Social norms

There was evidence to suggest that social norms played a role in participants' likelihood to visit the coast. Participants who visited the coast more often (albeit still infrequently) tended to know others in their social circle or wider community who enjoyed visiting the coast, while those who visited less were more likely to say they didn't. Knowing others who enjoyed visiting the coast was particularly important given the fact that participants tended to prefer visiting the coast with company.

While there were young people (aged under 35) who knew people that went to the coast regularly, there was a view among this group that people their age might prefer to do other types of activities. Social norms and not seeing or hearing about other people visiting the coast was also seen as a particular barrier for ethnic minority groups among ethnic minority participants and stakeholders.

"I would say that I can't off the top of my head think of anyone my age that goes to the beach regularly [...] at least they don't mention it."

(Male participant, 16-34)

"I think most our age would probably think of going [...] for a holiday somewhere else together instead of, like, going to the beach here in Scotland."

(Male participant, 16-34)

"As someone that comes from a Pakistani background, it just wouldn't pop into the discussion 'ok, why don't we go to the coast?' [...] and I feel like that is mainly to do with your ethnicity and the culture that you've been brought up in."

(Participant from an Asian background, 16-34)

#### **Cultural factors**

Ethnic minority participants highlighted various cultural factors which affected how easy it was to incorporate visiting the coast into their lifestyle and routines. These were echoed by stakeholders that worked with these groups.

There were examples of cultural activities that were not seen as fitting well with visiting the coast. A participant from a Pakistani background felt that in their culture, food was an important part of going out and socialising but the coast offered fewer opportunities to do this or access the kind of food or drink they wanted.

"You tend to go for food in our culture, being able to share nice meals is a special thing. But I feel like in the coast there are fewer people like us so there would not be restaurants that offer the food we like, also because we don't eat pork or drink. So the options are more limited, we cannot participate.""

(Male participant from a Pakistani background, 16-35)

Intersectionality between groups was highlighted, including barriers specifically for women in minority ethnic communities. For example, a stakeholder from an Asian background felt that within their community, people typically valued having single-sex spaces or activities. Women in his family would not feel comfortable swimming in an open, public space, while a Muslim participant highlighted that due to dressing modestly in line with her cultural and

religious beliefs, she was not interested in activities typically associated with going to the beach such as sunbathing.

One participant though people who had recently moved to Scotland may be more likely to visit areas that they felt more interesting and 'unique' to Scotland.

"People from my ethnic background will choose Loch Lomond over the actual coast [...] because Loch Lomond is more unique to Scotland."

(Female participant from an Asian background, 16-34)

A participant from a Black African background said that in her experience, people in the Black community were less likely to swim, which could reduce motivation to go to the coast. She also pointed out that it could be especially inconvenient for her and other Black women to get their hair wet.

"You won't find a lot of black girls going to the beach, a lot of it has to do with our hair.
[...] You don't really wanna go to the beach 'cos like, you know, you've got your braids and you don't want to ruin them because you've paid a lot of money."

(Female participant from a Black African background, 16-34)

#### Social stigma

Both stakeholders and minority ethnic participants explained that for people in their communities, there could be additional social barriers due to a perceived lack of diversity at the coast, causing concerns around feeling uncomfortable, being stared at or experiencing racism. One stakeholder stressed the importance of being able to see people 'like you' and from your community at the coast to feel comfortable.

"The moment people see other people in the community smiling having a good day out, they want to be part of it."

Stakeholder working with ethnic minority communities

They also highlighted that there may be cultural differences in how people from different communities want to interact with outdoor spaces. For example, they recalled a group of young Asian men out in the countryside playing loud Punjabi music and having a BBQ, and that this may not be socially acceptable to others.

#### Pen portrait 3 - Yasmin

Yasmin is a Pakistani woman in her forties, living in Glasgow. She has lived with long-term health conditions for a number of years as well as being a single parent to her daughter. Although she has some positive associations with visiting the coast in Scotland, there are lots of different kinds of barriers that get in the way and she hasn't been for the past five years.

For Yasmin, key benefits of being at the coast are the calming atmosphere and spending time in nature. However, being at the coast can also cause her anxiety. Since she is afraid of dogs, Yasmin worries about coming across them at the beach. In bad weather the coast itself can be also be scary, and Yasmin recently cancelled a trip to the Isle of Skye in November as she felt the weather would be too unpredictable and the daylight hours too short to make it enjoyable.

As a Muslim, Yasmin has experienced additional challenges including a lack of halal food options or suitable places to pray at the coast. She is also concerned about stigma at the beach and experiencing racist or Islamophobic remarks, particularly around praying in pubic.

"If the worst comes to the worst and I'm out, I'll have to pray in my car or in a car park. The weather can be unpredictable, so you don't want the prayer mat to blow away in the wind [and] I don't know if the space is clean."

When she was younger she went on day trips to the coast organised by Islamic groups and enjoyed the community feel. When she thinks of organising a trip herself though, she is unsure that she has the knowledge or experience to know which parts of the coast to visit. She would like to have information on the characteristics of different beaches, particularly whether they are scenic and how busy they tend to be, as well as whether dogs are allowed and what amenities and facilities are available.

Although she used to visit the coast once a year or so as a child, Yasmin feels that her personal circumstances have changed and made it more difficult to visit as often. This included childcare responsibilities as well as health issues which mean she has less energy to go out.

"When I was younger it was once per year, but then university takes over and life gets in the way. [...] Then I moved down south to get married and had no access to blue or even green space, [...] then I had a child and was trying to survive; work and looking after my daughter was the priority."

## 6. Potential policy solutions

#### **Key Points**

- Participants in the qualitative research gave their views on five potential policy solutions that were presented to them. Overall, their support for different policy solutions linked with the specific barriers individuals faced to visiting the coast.
- Two key policy solutions felt to be important were improving transport links to the coast and making public transport to the coast more affordable. This reflected the importance of transport-related barriers.
- When asked to consider whether developing the area along the coast might encourage them to visit it more often, participants advocated for a balanced approach to developing the area along Scotland's coast. There was a desire to preserve the natural and peaceful feel of coastal spaces, particularly rural coastline. They were keen that any changes should be well thought-out, purposeful and take into account any impacts on the local community and the natural environment.
- Offering more groups or club activities at the coast was not generally felt to be a solution that would encourage them personally to visit the coast more often, although few drawbacks were identified. Stakeholders working with ethnic minority communities, however, felt that group trips led by members of these communities could be an important means of tackling the potential unease these individuals may feel when visiting the coast.
- Information provision and communication about visiting the coast was spontaneously mentioned as something that could help to encourage people to visit more often. Further suggestions were: improved cleanliness and maintenance of beaches including regular bin-emptying; the provision of facilities to make the experience of visiting more comfortable, such as beach furniture or showers or water fountains to wash off sand; facilities being more inclusive, for example cafes providing halal food options; and having dog-free areas.

This chapter explores which policy solutions and initiatives could encourage people who do not currently visit Scotland's coast, or do not visit it often, to make more use of the coast. Five policy solutions were selected for testing with infrequent users and non-users of the coast in the qualitative research on the basis of the literature review, and were chosen to ensure coverage of all three blue space policy types (personal actions; regional actions; societal actions) as identified by White et al (2020).

#### The solutions tested were:

- Improved transport links to the coast (e.g. more frequent train and bus services, running late-night services during summer, creating more direct services linking up areas across Scotland with the coast)
- Making public transport to the coast more affordable;

- Developing the area along the coast, such as creating waterfront promenades with benches and tables, more walking paths or cycle lanes, building viewpoints, or putting more lighting along the coast so that people can use beaches and coastal paths at night time;
- Offering more groups or club activities, such as walking groups, wild swimming clubs, community beach cleans, or water sports activities e.g. kayaking, rowing or fishing; and
- Improving the quality and cleanliness of water at the coast.

Before being prompted to discuss these five solutions, participants were also asked for their spontaneous views on what, if anything, would need to change to encourage them to visit the coast more often.

In terms of what would encourage them to visit the coast, participants generally could see the merits of the proposed policy solutions, even if they did not think that it would encourage them personally to visit the coast.

The factors which would encourage participants to visit the coast more often were primarily related to addressing the barriers they faced. This shaped their responses to the policy solutions presented. For example, those that did not have a car identified initiatives relating to improving public transport provision and affordability as important, reflecting that these were key barriers to them visiting the coast more often. Participants viewed certain policy solutions, such as developing the area along the coast through measures such as adding lighting and promenades, as 'nice to have', since they did not address the core reasons why they did not visit.

#### Improving public transport links

Generally, it was thought that improving transport links, such as increasing train or bus services, would encourage greater use of the coast. There was strong support for this idea in particular among those who relied on public transport to access the coast and for whom this could be a major barrier. For buses to the coast, extending the operating hours and expanding the coverage of the network was considered to be helpful for those for whom their last bus is at an inconvenient time or those who live in a rural area with limited transport options. Regarding the transport network, there was a specific suggestion that connecting different beaches would be helpful, so that if persons arrived at the beach and it was crowded or there were other issues that meant they were not keen to stay, they could easily visit another. While there were participants who felt their own likelihood of visiting the coast would not be influenced by better transport links, they nonetheless acknowledged it might benefit others and recognised that improved transport links could bring co-benefits, such as reducing pollution due to fewer car journeys.

However, others were more sceptical and identified potential drawbacks to this policy – such as longer journey times if more stations are added along routes. Further, others would still prefer to drive regardless of improved transport options, as they believed driving to be more cost-effective, especially when travelling in large groups.

#### Making public transport more affordable

There was general support for this policy solution, particularly among those who relied on public transport and did not already hold a free bus pass. However, cheaper transport was not thought to be a panacea as concerns remained about transport frequency and reliability.

There was a clear sense that transport to the coast should be affordable, especially for those who are on a tighter budget. Participants noted that this would particularly benefit families and people on low incomes, who may otherwise find it difficult to afford the cost of transport and associated expenses like food and ice-cream. Others suggested financial incentives such as deals for families, discounts for students, and free bus travel for children.

For participants who do not drive, the cost of transport can be a significant factor in their decision to not go to the coast and they felt that cheaper options would encourage them to visit more often.

Overall, more affordable transport was seen as an important factor in encouraging more people to visit the coast.

#### Developing the area along the coast

A further potential policy solution discussed with participants was coastal development. Examples of developments included creating waterfront promenades with benches and tables, more walking paths or cycle lanes, building viewpoints, or putting more lighting along the coast so that people can use beaches and coastal paths in the evening.

The importance of balancing development and environmental preservation was a central theme. Concerns were raised about preserving the natural beauty and wildness of the coast, while also acknowledging the need for some development and facilities to accommodate visitors. Examples were cited of places that were thought to have become overly developed for tourism and lost their charm as a result:

"You find a lot of the seaside towns can be really touristy and quite tacky and to me that's not what the beach is about."

(Disabled female participant, 65-74)

Participants also discussed the risks of gentrification of coastal areas, the potential wider impact of development on local communities and issues around anti-social behaviour.

"[Developments] bring a lot more people and a lot more problems [...] like littering."

(Disabled male participant, 55-64, rural area)

Overall, participants advocated for a balanced approach to developing the area along Scotland's coast and wanted any changes to be well thought-out, purposeful and take into account any impacts on the local community and the natural environment.

Participants felt differently about this policy solution when it came to urban as opposed to rural coastal areas. Interviewees expressed concerns about developing rural coastal areas, for fears of spoiling the area; whereas development in urban coastal spaces was thought to be permissible so long as local communities were consulted. In cases where participants were open to development in rural coastal areas, they stipulated that it should be in keeping with what is already there in the surrounding local environment. Relatedly, there was a view that light pollution could be more of an issue in rural areas though this would be more acceptable in urban areas.

Among those who felt they would use them, there was a view that facilities such as cycle lanes, benches, and lighting would make coastal spaces easier and safer spaces to access, which could be helpful in encouraging more people to visit the coast. There was also a sense that providing more facilities can encourage visitors to stay longer and spend more money locally.

#### **Group activities**

Overall, participants responded positively to the idea of having more activities at the coast through initiatives such as sports groups and community-based events. There was broad, spontaneous agreement that organisations such as universities, churches and community groups (Black Scottish Adventurers were mentioned specifically) should actively facilitate trips to the coast. There was a view that activities at the coast already exist, but that the main barrier was knowing about them and having the necessary information about what was on and where. However, participants also noted that some considerations need to be taken into account, such as ensuring the safety of groups engaging in water-based activities.

A stakeholder highlighted the benefits of group activities for people with disabilities; however, there were concerns raised among disabled participants that people with a disability might not be able to commit to regular group activities due to numerous barriers such as the difficulty of using a wheelchair on soft sand, the lack of accessible toilets or simply their state of health worsening.

Others did not feel that they personally would take part in such activities, since they preferred individual activities over group events. The idea of having all coastal activities under a single website or platform was proposed in order to improve the overall experience for visitors.

One factor seen as important was offering a diverse range of activities and catering to different needs and preferences, particularly for ethnic minority groups. One stakeholder who works with people in ethnic minority communities felt that group trips and clubs led by members of these communities could be an important means of tackling the potential unease that people from ethnic minorities may feel when visiting the coast. Ethnic minority participants pointed out that while there are many well-known community groups offering trips into nature, these are typically focused on green spaces as opposed to blue spaces. It was felt to be important that group trips can cater to a broad range of interests and offer 'something for everyone'.

Overall, the policy suggestion was not regarded as something that would inspire more visits to the coast to the same extent as other policy solutions such as improving public transport or developing the area along the coast. More group activities were thought of as a nice thing to have, but were not seen as fundamental to participants' decisions to visit or not. Nonetheless, this policy solution was still seen as important in terms of making coastal areas more inclusive spaces for ethnic minority communities.

#### Improved water quality

Participants had not typically thought much about water quality at the coast. Of those that had considered it, they said it had not previously factored into their decision to visit. In general, the groups felt that water quality in Scotland was already of sufficient quality, and so did not regard this policy solution as one that would significantly encourage people to visit the coast more often. However, participants could see the positive environmental impacts of improved water quality of this policy solution, even if they did not anticipate they would be personally impacted by it.

#### Unprompted ideas for what would encourage people to visit the coast

Participants shared their views on solutions that they felt would encourage them and others around them to visit the coast more often. Suggested solutions included: providing more information about different coastal areas that are accessible via public transport; better cleanliness and maintenance of beaches (including regular bin-emptying); providing facilities such as beach furniture or showers or water fountains to wash off sand, for greater comfort and convenience; making the coast more inclusive for ethnic minority communities, for example by offering halal food options; and having schools run more trips to the coast. In addition, having dog-free areas was mentioned as a way to accommodate those with a fear of dogs.

Regarding information provision, participants expressed a desire for more information about the coast which included guidance on things to do and activities in and around the coast, as well as having a clear way of booking such activities in advance where needed. For example, they suggested easily available information about which facilities were available in coastal areas, such as restaurants and shops, would be helpful in planning their visit. Participants were also keen to see further information about the different coastal areas that are accessible via public transport.

They highlighted the importance of ensuring the accessibility of this information through inclusive communication. One suggestion from a Pakistani participant was that advertisements and information about the coast could be provided in different languages to cater to the older generation within the Scottish-Pakistani community, as many of this group do not speak English. Channelling communications through radio stations such as Awaz FM was also suggested as a way of raising awareness of different coastal areas among ethnic minorities.

Participants suggested that the cleanliness and maintenance of the beaches and surrounding areas were important factors in attracting visitors. They highlighted the need for regular emptying of bins to maintain cleanliness.

Having better facilities at the coast was seen as something that would make visiting more convenient – for example, showers to help wash off sand and to cool down – and would encourage them or others to go to the coast more. Participants also mentioned that cafes could help provide shelter in bad weather.

Muslim participants identified that beaches could be made more inclusive spaces, for example by halal food options being available or spaces available that were suitable for prayer. While they felt these changes would make visits to the coast more convenient, they did not necessarily feel that they would make a significant difference to their likelihood to visit, for example because the lack of halal options has meant that they and others around them are used to bringing their own food anyway.

Early exposure to the coast on school visits was another factor participants mentioned could encourage participation. They felt that trips to the coast early in children's lives may encourage an interest in the coast that will sustain into adulthood.

Lastly, dog-free zones on beaches or having dog-free times of the day or year could make a difference to the likelihood to visit these spaces for those with a dislike or fear of dogs.

## 7. Conclusions

## **Key learnings**

This research provides new and timely evidence on inequalities in access to the coast in Scotland. The key findings are summarised below, in relation to the research questions.

#### How is the coast currently perceived and used by different people/groups?

Findings from the nationally representative and robust KnowledgePanel survey conducted as part of this project (in December 2022) showed that the coast is the most popular type of blue space accessed in Scotland. However, the following groups were significantly less likely on average to access the coast in Scotland:

- Those with a disability or health condition;
- Ethnic minority communities;
- Those living in deprived (SIMD 1/2) urban areas; and
- Young people aged 16-34.

As would be expected, qualitative research carried out among non-users and occasional users of the coast suggested that patterns of usage could change throughout the year, as participants were more likely to visit in the summertime.

Despite not spending much time, if any, at the coast, participants tended to have broadly positive associations with and memories of visiting the coast.

## What are the key factors that affect use of the coast amongst different people/ groups (especially those people/groups who do not access the coast to the same extent as others)?

Participants discussed various perceived benefits of visiting the coast, including: mental health benefits, spending time in nature, socialising with friends and family, and physical health benefits. These were often reasons that led people to spend time at the coast, and there was a general desire to go more often.

However, participants mentioned a range of barriers which could make this difficult or unappealing, relating to motivation, capability, social factors and structural/physical challenges.

## What policy changes and interventions are needed to facilitate better access to the coast?

Key barriers discussed, as well as potential policy solutions to address these, are summarised below.

#### 1. Improving transport links to the coast

This policy solution would address barriers related to public transport, including reliability of services, timing of services, available routes and journey times.

There was strong support for these measures, particularly among those who relied on public transport to access the coast. There was a desire for extended operating hours, expanded coverage of the network and direct links between beaches.

A potential drawback discussed included longer journey times with more stops, while it was noted that the cost may still be prohibitive, especially for groups.

#### 2. Reducing transport costs

Cost of public transport could be prohibitive and was sometimes the most important barrier. There was therefore strong support for reducing transport costs, particularly among those who relied on public transport to access the coast. There was a desire for discounted travel for families, students and children on public transport.

However, reducing costs was not thought to be a panacea, as it was felt that improvements to the frequency and reliability of public transport were also required.

#### 3. Developing the area along the coast

Developing the area along the coast was seen as a potential way in which to mitigate barriers relating to the physical environment, including: a lack of toilets; lack of cycling infrastructure; anti-social behaviour at the beach; sand or cold or wet weather.

There was particular support for more cycle lanes and lighting (boosting accessibility and safety of coastal areas) as well as more facilities, such as (accessible) toilets, benches/beach furniture or water fountains to wash off sand. Promenades were seen as important for wheelchair users. Having indoor spaces, like cafes, can help people to shelter from cold or wet weather when necessary.

However, participants were relatively cautious in their support of this policy solution. There was a desire to avoid over-developing the coast and losing connection to nature (particularly at more rural parts of the coastline). There were also concerns raised about beaches becoming too busy or causing social issues through gentrification.

#### 4. Providing more clubs or activities at the coast

More clubs or activities at the coast could help to address social barriers to accessing the coast, such as wanting or needing to visit the coast with company or concerns about stigma at the beach among ethnic minority communities. It could also help to tackle the perception that there is not enough to do at the coast.

There was a positive response to this intervention among participants, although it was seen as a 'nice to have' rather than essential. Specific suggestions of things participants felt would be beneficial included: having a diverse range of activities/clubs; one-off events at the coast; activities to entertain children; activities facilitated by universities, churches and community groups; organised activities catering for specific groups, e.g. disabled people, Muslim women etc.; and having a list of activities at the coast on a single website.

However, possible downsides discussed included concerns about overcrowding and it was acknowledged that not everyone would be able to afford or commit to regular clubs.

#### 5. Ensuring cleaner water/environment at the coast

This policy solution aims to alleviate concerns about cleanliness at the coast, such as littering, overfilled bins, or poor water quality.

There was broad support for this, specifically more frequent bin-emptying. While water quality was not seen as a significant factor in decisions to visit, there was a desire for more reliable information about water quality, such as the blue flag award.

#### 6. More easily accessible information about visiting the coast

Lack of information or awareness about visiting the coast and what it entails was a significant barrier discussed in the qualitative research. Having more easily accessible information therefore emerged as an additional suggestion from participants.

Specifically, there was a desire for: sharing practical information about what a day at the coast looks like; better publicity of available facilities; information in different languages or via community communications channels, e.g. Awaz FM; and early exposure at school, including school trips to the coast.

#### 7. Dog-free zones on beaches or dog-free times

To help combat concerns about dogs at the beach, there was a suggestion that having 'dog-free zones' or times where dogs were not allowed at particular beaches could help to put people who didn't like dogs at ease. More clarity on this (in particular, better signage) was also seen as reassuring for dog walkers.

#### Considerations for future research

As highlighted previously in this report, this is a relatively small-scale initial study that examines barriers to access among groups that are less likely to access the coast. For ethnic minorities and disabled people in particular, the findings are indicative only and there would be benefit in exploring these issues further with these groups.

While this research provides a qualitative understanding of barriers to access and views on policy measures, the findings could be used to develop survey questions to quantify how prevalent those barriers are across Scotland's population or among specific groups who are less likely to access the coast.

This research also aimed to inform the development of an indicator for access to blue space in the future, if desired. The survey questions that were designed as part of this research can be used as a basis for this, while the literature review identifies potential data sources that could be used. Options include placing question(s) on an existing survey (such as Scotland's People and Nature Survey or the Scottish Household Survey) or placing question/s on an omnibus survey (random probability panel surveys or standard opt-in online panel surveys.)

## Appendix A – Survey Questionnaire

#### Introcutory Text

We'd now like to ask you some questions about any free time you have spent outside in blue spaces. By blue spaces we mean bodies of water and areas near them, such as beaches, rivers, lochs, and canals.

This includes any visits to...

- blue spaces in towns and cities (e.g. ponds, canals)
- blue spaces in the countryside (e.g. rivers)
- the coast (e.g. beaches, cliffs) and activities in the open sea.

#### [Ask all. Multicode.]

Q1. In the last 12 months, which of the following type(s) of blue space have you visited in your free time?

Please do not include time spent in blue spaces as part of your job, or time spent outside Scotland.

Please select all that apply

[Rotate order of codes 1-9.]

- 1. Loch
- 2. Sea loch
- 3. River
- 4. Canal
- 5. Beach / sea / other coastline
- 6. Cliff
- 7. Esplanade / promenade
- 8. Pier
- 9. Harbour / marina
- 10. Another blue space (please specify) [Fix]
- 11. None of these I have not visited a blue space in the last 12 months [Fix] [Exclusive]
- 998. Don't know [Fix] [Exclusive]
- 999. Prefer not to say [Fix] [Exclusive]

[Ask all who have visited the coast in the last 12 months (q1= 2, 5, 6, 7, 8, 9). Single code.]

Q2. In the last 12 months, how often, on average, have you spent free time outside at the coast? This includes areas such as the beach, sea or other coastline, cliffs, esplanades or promenades, piers and harbours or marinas.

Again, please do not include time spent at the coast as part of your job, or time spent outside Scotland.

Please select one option only

[Reverse scale for half of respondents]

- 1. More than once per day
- 2. Every day
- 3. Several times a week
- 4. Once a week
- 5. Once or twice a month
- 6. Once every 2-3 months
- 7. Once or twice in the past 12 months
- 998. Don't know [Fix] [Exclusive]
- 999. Prefer not to say [Fix] [Exclusive]

[Ask all. Single code.]

Q3. How far away from your home is the nearest public coastal blue space?

Please select one option only

- 1. A 5-minute walk or less
- 2. Within a 6-10 minute walk
- 3. Within an 11-20 minute walk
- 4. Within a 21-30 minute walk
- 5. Within a 31-minute to 1 hour walk
- 6. Between a 1 hour 1 minute and 2 hour walk
- 7. More than 2 hours walk
- 998. Don't know [Fix] [Exclusive]
- 999. Prefer not to say [Fix] [Exclusive]

# Appendix B – Discussion guides for qualitative fieldwork

#### **Guide for focus group discussions**

Introduction / ground rules / warm-up 6.00 - 6.10 [10 mins]

Facilitator to introduce self, any observers/note takers and thank participants for attending.

We (Ipsos Scotland, an independent research organisation) are carrying out some research about access to Scotland's coast. The research is being conducted on behalf of Marine Scotland, the Directorate in the Scotlish Government that is responsible for the integrated management of Scotland's seas.

The discussion will last an hour and a half this evening, so we'll be here until 7:30. If you have any problems with your connection and you drop out you can let the moderator know on [work mobile number]

- Conversation will be relaxed and informal
- No right or wrong answers, just keen to hear what everyone thinks
- Not everyone thinks the same, so you may well hear views you don't agree with please feel free to disagree, just keep it polite
- Please try to avoid talking over one another
- Plenty to get through, so I may have to move people on from time to time
- Explain independence of Ipsos and that everything shared will be treated anonymously. No identifying information will be included in report.
- Taking part completely voluntary, don't have to answer any questions you don't want to
- Explain audio-recording and ask for consent to use

Icebreaker: Ask people to introduce themselves and say where they live, and what they like to do in their spare time.

#### Section 1 – General perceptions of the coast

6.10 - 6.25 [15 mins]

Aim: To warm up participants to the discussion, and to understand their top-of mind perceptions of the coast, including early experiences

Thinking about how you spend your time...

In your free time, what places do you most like to go to? [Note whether the coast is mentioned]

- What is it about those places that you enjoy?
- How does going to the coast compare with visiting those places?

What comes to mind when you think of the coast? [Probe for words, images, associations]

Thinking back to when you were a child, what are your early memories of visiting the coast, if any?

- What did you do there?
- How often did you visit?
- Did you enjoy going? Why/why not?
- Does this make any difference to how you feel about visiting the coast now?
- If they never/very rarely visited: do you remember why that might have been?

Tell me about the last time you visited the coast in Scotland...

- When did you go?
- Which part of the coast did you go to?
- Why did you go?
- Did you go with anyone else?
- What was the experience like?

Does how frequently you visit the coast change throughout the year at all? [If yes, probe on why]

Thinking about the nearest part of the coast to you...

- How often do you visit it, if at all?
- What is the experience of going there like? [Probe for good and bad things about the experience]

#### Section 2 – Benefits and drawbacks of visiting the coast

6.25 - 6.40 [15 mins]

Aim: To understand the perceived benefits and drawbacks of visiting the coast

You all took part in our survey late last year, and said either that you hadn't visited the coast in the last year or that you had been less often than once a month.

What, if any, do you think the benefits of visiting the coast would be for you personally, if you did choose to visit it more? [Probe fully]: Any other benefits?

- Exercise/ walking/ physical health benefits
- Mental health benefits (e.g. managing stress, relaxing)
- Spending time in nature
- Activities they enjoy (e.g. water sports)
- Opportunity to visit amenities (e.g. cafes/restaurants)
- Social contact/ spending time with others

[Note how people describe the benefits in their own words]

Is there anything that puts you off visiting the coast, or that you don't enjoy about it? [Probe fully]: Anything else?

- Lack of / poor facilities (e.g. toilets, benches, path networks)
- Difficult to get to/ poor transport links
- Cost of getting there and back
- Takes a long time to get there
- Difficult to navigate/ get around once there
- Anti-social behaviour
- Poor quality environment (e.g. litter)
- Poor water quality

- Safety
- Crowds
- Weather
- Don't feel it's for people like me [probe on reasons]

Are there any areas of Scotland's coast you would particularly like to visit? Why do you say that?

#### Section 3 – Experiences of visiting the coast

6.40 - 7:00 [20 mins]

Aim: To understand motivations and barriers to visiting the coast

Now I'd like to ask specifically about your experiences of visiting (or not visiting) the coast.

In general, how easy or difficult do you find it to visit the coast? And what types of things make it easy/difficult?

- If difficult: What if anything would make it easier to get there?
- Probe on transport specifically: How do you need to travel to get there? (NOTE: Do they know how to get there?)

If they visit the coast: When you do visit the coast, what would you say are the main reasons you visit?

[Probe fully – e.g. mental health, physical health, socialising/ social contact, to walk a dog, enjoyment, feeling close to nature, spending time outdoors, nostalgia, etc.

If they don't visit it often/ at all: What are the main reasons you don't visit the coast (more often)? [Probe fully]

[Probe on e.g. external factors (don't have others to go with/ social factors; knowledge e.g. not sure how to get there/ where to go once I get there; time; costs of getting there; practicalities e.g. facilities I need aren't available, lack of parking; cultural factors; internal factors (e.g. not personally motivated to do so; lack of confidence; physical ability)

Of all the reasons you've mentioned, which are the most important reasons for not visiting the coast for you personally?

Would you like to visit the coast any more often than you currently do, or not?

- If yes: And what prevents you from visiting more often? [Probe fully]
- If no: Why is that? Is there anything that puts you off doing it more often? Is there anything about your own situation specifically that makes you more or less likely to visit the coast?

What types of people do you think are most likely to visit this part of the coast?

- What makes you say that?
- And how about the coast across Scotland more generally?

#### Section 4 – Potential policy interventions

7:00 – 7.25 [25 minutes]

Aim: To gauge views on some potential policy interventions that could be used to help encourage people to access the coast in Scotland

What, if anything, would need to change to encourage you to visit the coast more often? [Probe fully]

How about your family and friends – how often do they visit the coast? What, if anything would need to change to encourage them to visit the coast more often?

I'm interested in hearing what you think of some different changes that could be made in coastal areas in Scotland.

[Moderator to spend 4-5 minutes on each of the following policy interventions. rotate order in which these are discussed across groups. use stimulus slide for each.]

- 1. Improved transport links to the coast, which could include:
  - a. More frequent train and bus services
  - b. Running late-night services during summer to allow people to spend the day at the coast
  - c. Creating more direct services linking up areas across Scotland with the coast
- 2. Making public transport to the coast more affordable
  For those of you who are under 22, has the under 22s free bus pass made any
  difference to how often you visit the coast? How about your friends, has it made any
  difference to how often they visit the coast?
- 3. Developing the area along the coast, such as creating waterfront promenades with benches and tables, more walking paths or cycle lanes, building viewpoints, or putting more lighting along the coast so that people can use beaches and coastal paths at night time.
- 4. Offering more groups or club activities, such as walking groups, wild swimming clubs, community beach cleans, or water sports activities e.g. kayaking, rowing or fishing.
- 5. Improving the quality and cleanliness of water at the coast (e.g. legal standards for bathing water quality)

#### Probes for each:

- Initial reactions
- Would this make you personally any more likely to visit the coast?
- How about your family and friends do you think this would make them any more or less likely to visit the coast?

From all the ideas we've talked about, which one or two would make most difference to how likely you are to visit the coast – if any?

#### Section 5 – Wrap up

7.25 - 7.30 [5 minutes]

From everything we have discussed tonight about the coast, what one thing stands out for you as most important? [Go round group so all have the opportunity to feedback]

Any final points that you would like to add?

#### Guide for depth interviews with general public

#### Introduction

2 minutes

Interviewer to introduce self & thank participant for taking part.

We (Ipsos Scotland, an independent research organisation) are carrying out some research about access to Scotland's coast.

The research is being conducted on behalf of Marine Scotland, the Directorate in the Scotlish Government that is responsible for the integrated management of Scotland's seas.

The discussion will last for around one hour and as you know, you will receive £35 as a thank you for your time. We can sort that out at the end.

- The conversation will be relaxed and informal
- No right or wrong answers, just keen to hear what you think
- Explain independence of Ipsos and that everything shared will be treated anonymously. No identifying information will be included in report.
- Taking part completely voluntary, don't have to answer any questions you don't want to
- Explain audio-recording and ask for consent to use

#### Warm-up questions:

3 minutes

To start us off, can you tell me a bit about where you live and who you live with...

- Where do you live? How long have you lived there?
- Who do you live with? (If have children: How old are they?)

And are you currently working?

• If working probe: What kind of work do you do? Full time or part time? And are you currently working from home or travelling to your workplace?

And do you currently have any studying or caring responsibilities?

Ask to disabled respondents only: Could you tell me a bit more about the nature of your health condition or disability?

[Probe on type of condition (physical/mental) but stress that participant does not have to go into detail if they do not want to]

#### Section 1 – General perceptions of the coast

10 minutes

Aim: To warm up participant to the discussion, and to understand their top-of mind perceptions of the coast, including early experiences

Thinking about how you spend your time...

In your free time, what places do you most like to go to? [Note whether the coast is mentioned]

- What is it about those places that you enjoy?
- How does going to the coast compare with visiting those places?

What comes to mind when you think of the coast? [Probe for words, images, associations]

Thinking back to when you were a child, what are your early memories of visiting the coast, if any?

- What did you do there?
- How often did you visit?
- Did you enjoy going? Why/why not?
- Does this make any difference to how you feel about visiting the coast now?
- If they never/very rarely visited the coast: do you remember why that might have been?

Tell me about the last time you visited the coast in Scotland...

- When did you go?
- Which part of the coast did you go to?
- Why did you go?
- Did you go with anyone else?
- What was the experience like?

Does how frequently you visit the coast change throughout the year at all?

[If yes, probe on why]

Thinking about the nearest part of the coast to you...

- How often do you visit it, if at all?
- What is the experience of going there like? PROBE FOR GOOD AND BAD THINGS ABOUT THE EXPERIENCE

# Section 2 – Benefits and drawbacks of visiting the coast 10-12 minutes

Aim: To understand the perceived benefits and drawbacks of visiting the coast

You took part in our survey late last year, and said that you [hadn't visited the coast in the last year/ you had been less often than once a month].

What, if any, do you think the benefits of visiting the coast would be for you personally, if you did choose to visit it more? [Probe fully]: Any other benefits?

- Exercise/ walking/ physical health benefits
- Mental health benefits (e.g. managing stress, relaxing)
- Spending time in nature
- Activities they enjoy (e.g. water sports)
- Opportunity to visit amenities (e.g. cafes/restaurants)
- Social contact/ spending time with others

[Note how they describe the benefits in their own words]

Is there anything that puts you off visiting the coast, or that you don't enjoy about it?

[Probe fully - Anything else]

- Lack of / poor facilities (e.g. toilets, benches, path networks)
- Difficult to get to/ poor transport links
- Cost of getting there and back
- Takes a long time to get there
- Difficult to navigate/ get around once there
- Anti-social behaviour
- Poor quality environment (e.g. litter)
- Poor water quality

- Safety
- Crowds
- Weather
- Don't feel it's for people like me [PROBE ON REASONS]

Are there any areas of Scotland's coast you would particularly like to visit? Why do you say that?

## Section 3 – Experiences of visiting the coast 15 minutes

Aim: To understand motivations and barriers to visiting the coast

Now I'd like to ask specifically about your experiences of visiting (or not visiting) the coast.

In general, how easy or difficult do you find it to visit the coast? And what types of things make it easy/difficult?

- If difficult: What if anything would make it easier to get there?
- Probe on transport specifically: How would you need to travel to get there? (NOTE: Do they know how to get there? Probe on transport links / cost / travel time)
- Probe fully on barriers: poor accessibility for people with physical disabilities, environmental factors, social factors such as not feeling welcome/included

If they visit the coast: When you do visit the coast, what would you say are the main reasons you visit? [Probe fully]

- social norms/peer pressure
- it's purposeful/ functional/ part of routine (e.g. walking a dog);
- mental health
- physical health
- socialising/social contact
- to walk a dog
- feeling close to nature, spending time outdoors
- nostalgia

If they don't visit it often/ at all: What are the main reasons you don't visit the coast (more often)?

#### [Probe fully]

#### External factors:

- don't have others to go with/ social factors
- knowledge e.g. not sure how to get there/ where to go once I get there
- time
- costs of getting there
- practicalities e.g. facilities I need aren't available, lack of parking
- cultural factors

#### Internal factors:

- not personally motivated to do so
- lack of confidence
- physical ability

Of all the reasons you've mentioned, which are the most important reasons for not visiting the coast for you personally?

Would you like to visit the coast any more often than you currently do, or not?

- If yes: And what prevents you from visiting more often? [Probe fully for external and internal barriers to increased participation]
- If no: Why is that? Is there anything that puts you off doing it more often?

When visiting the coast, have you ever felt uncomfortable? [Probe on what happened and why they felt uncomfortable]

Is there anything about your own situation specifically that makes you more or less likely to visit the coast?

What types of people do you think are most likely to visit this part of the coast?

What makes you say that?

And how about the coast across Scotland more generally?

#### Section 4 – Potential policy interventions

15 minutes

Aim: To gauge views on some potential policy interventions that could be used to help encourage people to access the coast in Scotland

What, if anything, would need to change to encourage you to visit the coast more often? [Probe fully]

For disabled participants:

- What if anything would make it easier for you to visit Scotland's coast? [Probe for factors relating to accessibility]
- If group trips to the coast were available, would that make any difference to how likely you are to visit?

For participants from ethnic minorities:

- What if anything would make it easier for you to visit Scotland's coast? [Probe fully]
- If community or group trips to the coast were available, would that make any difference to how likely you are to visit?

How about your family and friends – how often do they visit the coast? What, if anything would need to change to encourage them to visit the coast more often?

I'm interested in hearing what you think of some different changes that could be made in coastal areas in Scotland.

Ask for their views on each of the 5 changes below. This is flexible - if they have already suggested this change earlier in the discussion, no need to cover again here.

- 1. Improved transport links to the coast, which could include:
  - a. More frequent train and bus services
  - b. Running late-night services during summer to allow people to spend the day at the coast
  - c. Creating more direct services linking up areas across Scotland with the coast
- 2. Making public transport to the coast more affordable
  Probe for under 22s: has the under 22s free bus pass made any difference to
  how often you visit the coast? How about your friends, has it made any
  difference to how often they visit the coast?
- 3. Developing the area along the coast, such as creating waterfront promenades with benches and tables, more walking paths or cycle lanes, building viewpoints,

or putting more lighting along the coast so that people can use beaches and coastal paths at night time.

- 4. Offering more groups or club activities, such as walking groups, wild swimming clubs, community beach cleans, or water sports activities e.g. kayaking, rowing or fishing.
- 5. Improving the quality and cleanliness of water at the coast (e.g. legal standards for bathing water quality)

#### Probe for each:

- Initial reactions good/bad idea, any drawbacks
- Would this make you personally any more likely to visit the coast?
- If time: How about your family and friends do you think this would make them any more or less likely to visit the coast?

From all the ideas we've talked about, which one or two would make most difference to how likely you are to visit the coast – if any?

#### Section 5 - Wrap up

2 minutes

Any final points that you would like to add about visiting the coast in Scotland?

#### Guide for depth interviews with stakeholders

#### Introduction

8 minutes

Interviewer to introduce self & thank participant for taking part.

We (Ipsos Scotland, an independent research organisation) are carrying out some research about access to Scotland's blue spaces. A 'blue space' is any body of water or places around them, such as beaches or rivers. We're focussing on visiting the coast.

The research is being conducted on behalf of Marine Scotland, the Directorate in the Scotlish Government that is responsible for the integrated management of Scotland's seas.

The purpose of this study is to understand why people access the coast, how they make use of the coast, and what may make a difference to people's decision to visit or not.

- Explain independence of ipsos and that everything shared will be treated anonymously. No identifying information will be included in report.
- Taking part completely voluntary, don't have to answer any questions you don't want to. Let us know if something you'd prefer not to be quoted.
- Explain you would like to audio record, if consent begin recording.

To start us off, can you tell me a bit about your organisation and your role within it?

- Remit and aims
- Core people they work with
- Their role within it

Does your organisation support the people it works with to go to green spaces or to the coast in Scotland at all? [If yes, probe on the work it does]

# Section 1 – Perceptions, benefits and drawbacks of visiting the coast 12 minutes

Aim: To understand perceptions of the coast and its perceived benefits and drawbacks of visiting the coast among certain groups

What comes to mind for you personally when you think about Scotland's coast? [Probe for words, images, associations]

And how do you think the people your organisation works with perceive Scotland's coast? [Probe fully: Why do you say that?]

How important is having access to the coast to the people you support?

What benefits do you think there are of visiting the coast for the people your organisation works with, if any?

#### E.g.

- Exercise / walking / physical health benefits
- Mental health benefits (e.g. managing stress, relaxing)
- Spending time in nature
- Activities they enjoy (e.g. water sports)
- Opportunity to visit amenities (e.g. cafes/restaurants)
- Social contact / spending time with others

Would you say there are any benefits that are particularly important to [disabled people / people in the Black African community/from an Asian background in Scotland']?

Do you think the people you work with experience any negative impacts of spending time at the coast?

We carried out a survey on Marine Scotland's behalf looking at which groups of people were less likely to visit the coast in Scotland. [Disabled people / people from ethnic minorities] were among these groups. Does that surprise you at all?

- Why/ why not?
- Why do you think it is that [disabled people/ people from ethnic minorities] are less likely to visit Scotland's coast?

#### Section 3 - Accessibility and barriers

15 minutes

Aim: To understand barriers to visiting the coast for these groups

In general, how easy or difficult it is for the people you support to visit the coast? What types of things make it easy/difficult?

#### Probe on barriers:

- Social factors
  - such as not feeling welcome/included
  - o not something their family / friends / community do

o not formed the habit / don't think to go

#### Transport

- Difficult to get to / poor transport links
- Cost of getting there and back
- o Takes a long time to get there

#### Characteristics of coastal areas

- Difficult to navigate / get around once there
- Lack of / poor facilities (e.g. toilets, benches, path networks)
- Anti-social behaviour
- Poor quality environment (e.g. litter)
- Poor water quality
- Safety
- o Crowds
- Weather

Are some parts of the coast easier for to access than others (if so, why)?

If organisation has a focus on supporting people to access nature/the coast: Could you tell me a bit more about how your organisation supports people to access nature and/or the coast?

- How do they mitigate/overcome access barriers?
- What are the key factors that help encourage or enable people to access the coast?
- Is there anything they have tried previously that did not work so well?
- What factors remain a challenge?

Is there anything that you think would encourage the people your organisation works with to visit the coast more often, or make it easier for them to do so?

[Probe on motivation (including social/cultural factors), as well as capability/ opportunity/ practical barriers]

#### Section 4 – Potential policy interventions

15 minutes

Aim: To gauge views on some potential policy interventions that could be used to help encourage people to access the coast in Scotland

I'm interested in hearing what you think of some specific changes that could be made in coastal areas in Scotland and whether these would make any difference to whether the people your organisation works with visit the coast.

#### Probe for each:

- What difference this change would make to the people they support in encouraging them/enabling them to visit the coast more often?
- What is good about this
- Any drawbacks
- 1. Improved transport links to the coast, which could include:
  - a. More frequent train and bus services
  - b. Running late-night services during summer to allow people to spend the day at the coast
  - c. Creating more direct services linking up areas across Scotland with the coast
- 2. Making public transport to the coast more affordable
  Probe for under 22s: has the under 22s free bus pass made any difference to how
  often you visit the coast? How about your friends, has it made any difference to how
  often they visit the coast?
- 3. Developing the area along the coast, such as creating waterfront promenades with benches and tables, more walking paths or cycle lanes, building viewpoints, or putting more lighting along the coast so that people can use beaches and coastal paths at night time.
- 4. Offering more groups or club activities, such as walking groups, wild swimming clubs, community beach cleans, or water sports activities e.g. kayaking, rowing or fishing.
- 5. Improving the quality and cleanliness of water at the coast (e.g. legal standards for bathing water quality)

#### Section 5 - Wrap up

2 minutes

What one thing feels most important to bear in mind when it comes to the people your organisation works with visiting the coast?

Are there any final points that you would like to add before we finish?

# Appendix C – Full breakdown of sample for qualitative focus groups and depth interviews

Please note that where this does not add up to 39 for dog ownership, this is due to participants not having that information for every participant.

Sample characteristics	Number of participants
Total sample	39
Gender	
Female	22
Male	17
Age	
16-35	22
36+	17
Ethnicity	
White	30
Asian/Scottish Asian/British Asian	3
Black African	3
Mixed/Multiple ethnic backgrounds/Other ethnic group	3
Rurality	
Urban	35
Based on the Scottish Government Urban Rural Classification 2020	
Rural	4
Health status	
Disability/long term health condition	15
No disability/long term health condition	24
Deprivation	
More deprived areas – SIMD 1 or 2	25

Based on the Scottish Government's Scottish Index of Multiple Deprivation	
Less deprived areas – SIMD 3, 4 or 5	14
Dog owner	
Yes	10
No	26
Employment status	
Working full-time	16
Not working full-time (including those working part-time)	23
Coastal visit frequency in past 12 months (in 2022)	
Occasional user	28
(Those who had accessed the coast at least once in the past 12 months but no more than once every 2 or 3 months)	
Non-user	11
(Those who had not accessed the coast in the past 12 months)	

# Appendix D – Charts showing types of blue spaces visited in the last 12 months showing variation by subgroup

#### Question text for all figures:

In the last 12 months, which of the following type(s) of blue space have you visited in your free time? Please do not include time spent at the coast as part of your job, or time spent outside Scotland.

Figure D1 - Variation by age

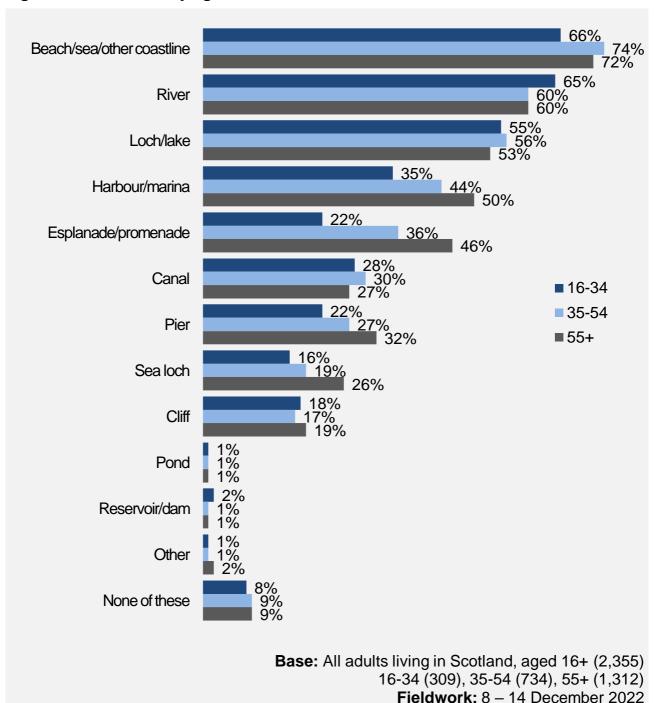


Figure D2 - Variation by gender

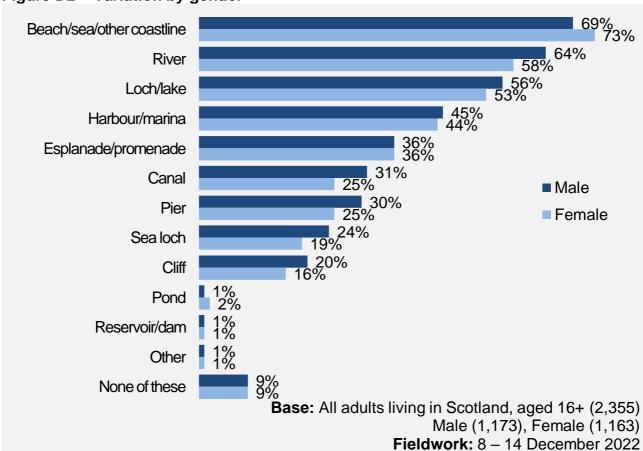
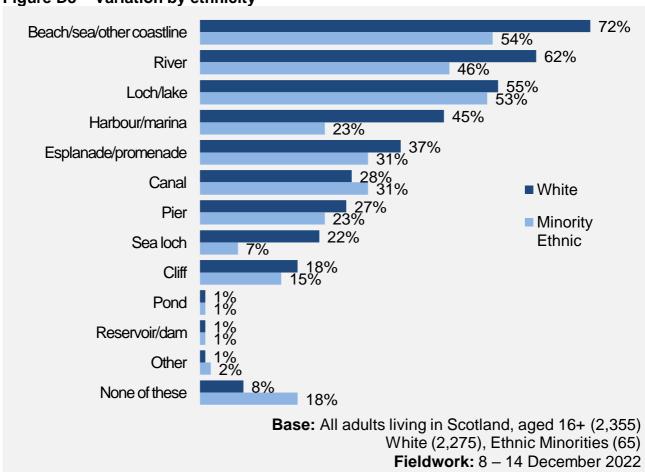
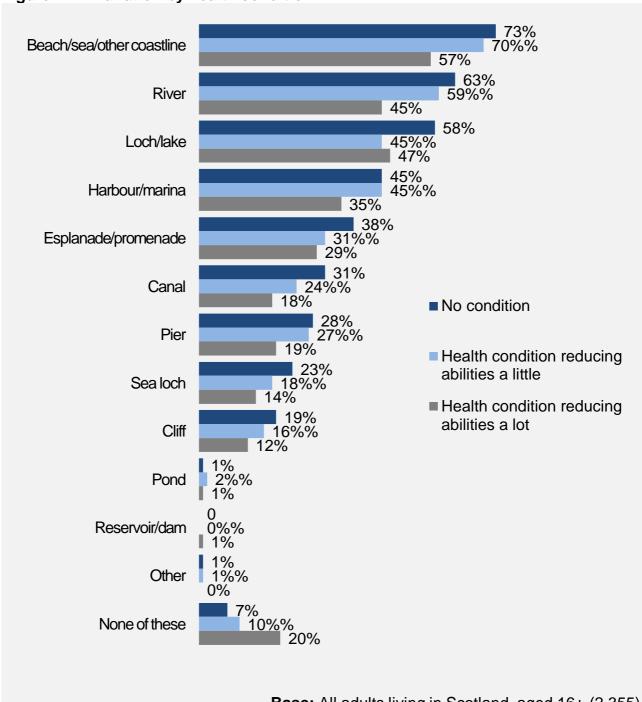


Figure D3 - Variation by ethnicity

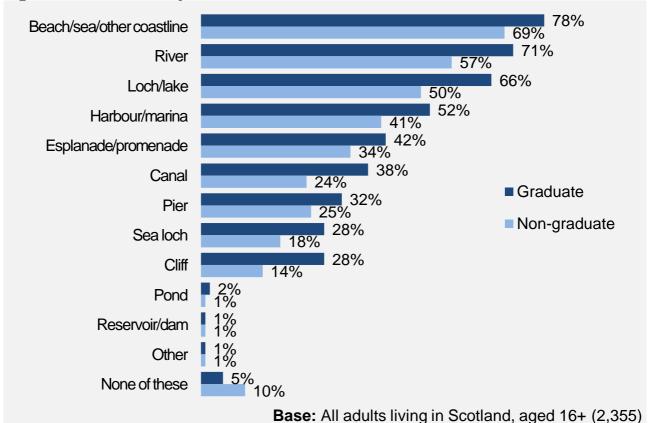






Base: All adults living in Scotland, aged 16+ (2,355) No health condition (1,494); Health condition reducing abilities a little (410); Health condition reducing abilities a lot (176) Fieldwork: 8 – 14 December 2022

Figure D5 - Variation by education level



Graduates (1,253), Non-graduates (1,085)

Fieldwork: 8 – 14 December 2022

Figure D6 - Variation by deprivation (SIMD)

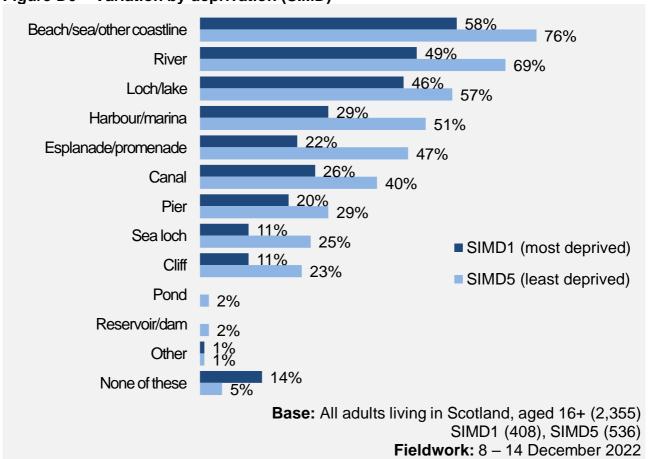
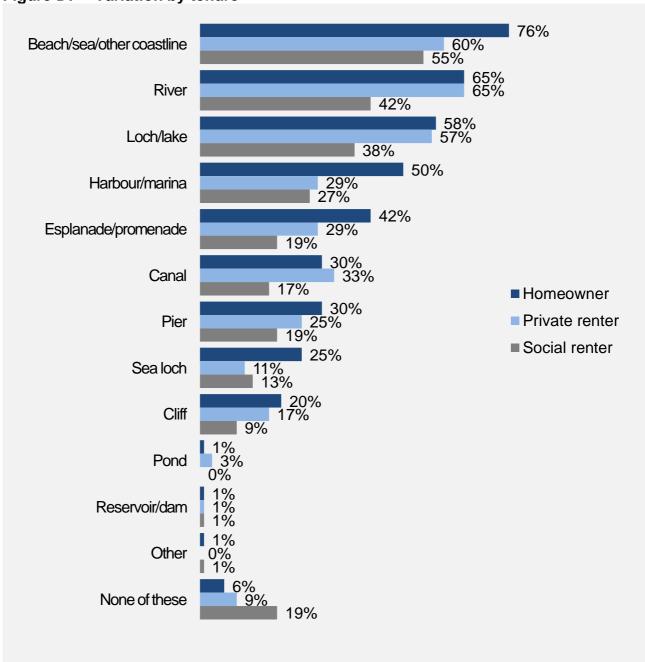
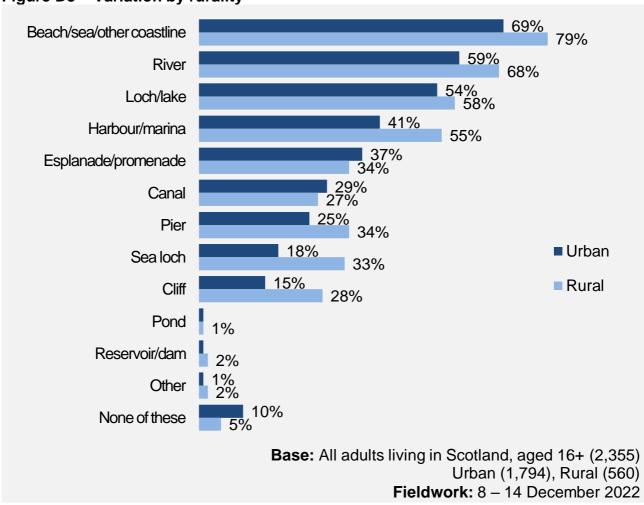


Figure D7 - Variation by tenure



**Base:** All adults living in Scotland, aged 16+ (2,355) Homeowners (1,832), Private renters (189), Social renters (275)





### **Bibliography**

- Anguelovski, I., Connolly, J.J.T., Cole, H., Garcia-Lamarca, M., Triguero-Mas, M., Baró, F., Martin, N., Conesa, D., Shokry, G., del Pulgar, C.P., Ramos, L.A., Matheney, A., Gallez, E., Oscilowicz, E., Máñez, J.L., Sarzo, B., Beltrán, M.A., Minaya, J.M., 2022. Green gentrification in European and North American cities. Nature Communications 13, 3816
- Anguelovski, I., Connolly, J.J.T., Cole, H., Garcia-Lamarca, M., Triguero-Mas, M., Baró, F., Martin, N., Conesa, D., Shokry, G., del Pulgar, C.P., Ramos, L.A., Matheney, A., Gallez, E., Oscilowicz, E., Máñez, J.L., Sarzo, B., Beltrán, M.A., Minaya, J.M., 2022. Green gentrification in European and North American cities. Nature Communications 13, 3816.
- 3. Ashbullby, K.J., Pahl, S., Webley, P., White, M.P., 2013. The beach as a setting for families' health promotion: A qualitative study with parents and children living in coastal regions in Southwest England. Health and Place 23, 138-147.
- 4. Bell, S.L., 2018. Sensing Nature. https://sensing-nature.com/. Accessed: Nov 2022
- 5. Bell, S.L., Hollenbeck, J., Lovell, R., White, M., Depledge, M.H., 2019. The shadows of risk and inequality within salutogenic coastal waters, in: Foley, R., Kearns, R., Kistemann, T., Wheeler, B. (Eds.), Blue Space, Health and Wellbeing: Hydrophilia Unbounded. Routledge, London.
- 6. Bell, S.L., Phoenix, C., Lovell, R., Wheeler, B.W., 2015. Seeking everyday wellbeing: The coast as a therapeutic landscape. Soc Sci Med 142, 56-67.
- 7. Beute, F., Davies, Z., de Vries, S., Glanville, J., Keune, H., Lammel, A., Marselle, M., O'Brien, L., Olszweska-Guizzo, A., Remmen, R., Russo, A., Andreucci, M.B., 2020. Types and characteristics of urban and peri-urban blue spaces having an impact on human mental health and wellbeing: systematic review. EU.
- 8. BlueHealth, 2020. Active Neighbourhoods Urban nature delivering healthier communities for people and wildlife Final Report (2016-2019), p.26, Available via: https://bluehealth2020.eu/wp/wp-content/uploads/2017/01/Active\_Neighborhood\_Report.pdf
- 9. Börger, T., Campbell, D., White, M.P., Elliott, L.R., Fleming, L.E., Garrett, J.K., Hattam, C., Hynes, S., Lankia, T., Taylor, T., 2021. The value of blue-space recreation and perceived water quality across Europe: A contingent behaviour study. Science of the Total Environment 771, 145597.
- 10. Borja, A., White, M.P., Berdalet, E., Bock, N., Eatock, C., Kristensen, P., Leonard, A., Lloret, J., Pahl, S., Parga, M., Prieto, J.V., Wuijts, S., Fleming, L.E., 2020. Moving Toward an Agenda on Ocean Health and Human Health in Europe. Frontiers in Marine Science 7.
- 11. Boyd, F., White, M.P., Bell, S.L., Burt, J., 2018. Who doesn't visit natural environments for recreation and why: A population representative analysis of spatial, individual and

- temporal factors among adults in England. Landscape and Urban Planning 175, 102-113.
- 12. Britton, E., Kindermann, G., Domegan, C., Carlin, C., 2018 Blue care: a systematic review of blue space interventions for health and wellbeing, Health Promotion International, Volume 35, Issue 1, Pages 50–69, Available via: https://doi.org/10.1093/heapro/day103
- 13. Burnett, H., Olsen, J.R., Nicholls, N., Mitchell, R., 2021. Change in time spent visiting and experiences of green space following restrictions on movement during the COVID-19 pandemic: a nationally representative cross-sectional study of UK adults. BMJ Open 11, e044067.
- 14. CMO, 2021. Chief Medical Officer's Annual Report 2021. Health in Coastal Communities. Department of Health & Social Care, London.
- 15. Elliott, L.R., White, M.P., Grellier, J., Garrett, J.K., Cirach, M., Wheeler, B.W., Bratman, G.N., van den Bosch, M.A., Ojala, A., Roiko, A., Lima, M.L., O'Connor, A., Gascon, M., Nieuwenhuijsen, M., Fleming, L.E., 2020. Research Note: Residential distance and recreational visits to coastal and inland blue spaces in eighteen countries. Landscape and Urban Planning 198, 103800.
- 16. Elliott, L.R., White, M.P., Grellier, J., Rees, S.E., Waters, R.D., Fleming, L.E., 2018. Recreational visits to marine and coastal environments in England: Where, what, who, why, and when? Marine Policy 97, 305-314.
- 17. Fleming, L.E., Depledge, M., Bouley, T., Britton, E., Dupont, S., Eatock, C., Garside, R., Heymans, J.J., Kellett, P., Lloret, J., Maycock, B., Pahl, S., Philippart, C.J.M., Roberts, B.R., Thiele, T., White, M.P., Wuijts, S., 2021. The Ocean Decade— Opportunities for Oceans and Human Health Programs to Contribute to Public Health. American Journal of Public Health 111, pp.808-811.
- 18. Foley, R., 2015. Swimming in Ireland: Immersions in therapeutic blue space. Health and Place 35, 218-225.
- 19. Garrett, J.K., Clitherow, T.J., White, M.P., Wheeler, B.W., Fleming, L.E., 2019. Coastal proximity and mental health among urban adults in England: The moderating effect of household income. Health and Place, 102200.
- 20. Gascon, M., Zijlema, W., Vert, C., White, M.P., Nieuwenhuijsen, M.J., 2017. Outdoor blue spaces, human health and well-being: A systematic review of quantitative studies. International Journal of Hygiene and Environmental Health 220, 1207-1221.
- 21. Geneshka, M., Coventry, P., Cruz, J., Gilbody, S., 2021. Relationship between Green and Blue Spaces with Mental and Physical Health: A Systematic Review of Longitudinal Observational Studies, International Journal of Environmental Research and Public Health.

- 22. Georgiou, M., Morison, G., Smith, N., Tieges, Z., Chastin, S., 2021. Mechanisms of Impact of Blue Spaces on Human Health: A Systematic Literature Review and Meta-Analysis, International Journal of Environmental Research and Public Health.
- 23. Grellier J, White MP, Albin M,. 2017, BlueHealth: a study programme protocol for mapping and quantifying the potential benefits to public health and well-being from Europe's blue spaces, BMJ Open; 7(1), Available via:doi:10.1136/bmjopen-2017-016188
- 24. Hunter, R.F., Cleland, C., Cleary, A., Droomers, M., Wheeler, B.W., Sinnett, D., Nieuwenhuijsen, M.J., Braubach, M., 2019. Environmental, health, wellbeing, social and equity effects of urban green space interventions: A meta-narrative evidence synthesis. Environ Int 130, 104923.
- 25. Jellard, S., Bell, S.L., 2021. A fragmented sense of home: Reconfiguring therapeutic coastal encounters in Covid-19 times. Emotion, Space and Society 40, 100818.
- 26. Langie, K.; Rybak-Niedziółka, K.; Huba cíková, V. 2022 Principles of Designing Water Elements in Urban Public Spaces. Sustainability 2022, 14(1), pp.68-77. Available at: https://doi.org/10.3390/su14116877
- 27. Macintyre, S., Macdonald, L., Ellaway, A., 2008. Lack of agreement between measured and self-reported distance from public green parks in Glasgow, Scotland. International Journal of Behavioral Nutrition and Physical Activity 5, 26.
- 28. Markevych, I., Schoierer, J., Hartig, T., Chudnovsky, A., Hystad, P., Dzhambov, A.M., de Vries, S., Triguero-Mas, M., Brauer, M., Nieuwenhuijsen, M.J., Lupp, G., Richardson, E.A., Astell-Burt, T., Dimitrova, D., Feng, X., Sadeh, M., Standl, M., Heinrich, J., Fuertes, E., 2017. Exploring pathways linking greenspace to health: Theoretical and methodological guidance. Environmental Research 158, 301-317.
- 29. Marmot, M., Boyce, T., McNeish, D., Grady, M., Geddes, I., 2010. Fair Society, Healthy Lives. The Marmot Review, London, UK.
- 30. McDougall, C.W., Hanley, N., Quilliam, R.S., Bartie, P.J., Robertson, T., Griffiths, M., Oliver, D.M., 2021. Neighbourhood blue space and mental health: A nationwide ecological study of antidepressant medication prescribed to older adults. Landscape and Urban Planning 214, 104132. Available via: Media\_779006\_smxx.pdf (gla.ac.uk)
- 31. Mitchell, G., 2019. The Messy Challenge of Environmental Justice in the UK: Evolution, status and prospects. Natural England Commissioned Reports, Number 273, http://publications.naturalengland.org.uk/.
- 32. Mitchell, R.J., Richardson, E.A., Shortt, N.K., Pearce, J.R., 2015. Neighborhood Environments and Socioeconomic Inequalities in Mental Well-Being. American Journal of Preventive Medicine 49, 80-84.
- 33. Ngom, R., Pierre, G., Claudia, B., 2016 Reduction of disparities in access to green spaces: Their geographic insertion and recreational functions matter, Applied Geography. 66(1), pp.35–51. Available via: doi:10.1016/j.apgeog.2015.11.008.

- 34. NHS Scotland, 2022. Walking. https://www.nhsinform.scot/healthy-living/keeping-active/activities/walking. Accessed: Dec 2022
- 35. Olsen, J.R., Nicholls, N., Panter, J., Burnett, H., Tornow, M., Mitchell, R., 2022. Trends and inequalities in distance to and use of nearest natural space in the context of the 20-min neighbourhood: A 4-wave national repeat cross-sectional study, 2013 to 2019. Environmental Research 213, 113610.
- 36. Orstad, S.L., McDonough, M.H., Stapleton, S., Altincekic, C., Troped, P.J., 2016. A Systematic Review of Agreement Between Perceived and Objective Neighborhood Environment Measures and Associations With Physical Activity Outcomes. Environment and Behavior 49, 904-932.
- 37. Papathanasopoulou, E., White, M.P., Hattam, C., Lannin, A., Harvey, A., Spencer, A., 2016. Valuing the health benefits of physical activities in the marine environment and their importance for marine spatial planning. Marine Policy 63, 144-152.
- 38. Pasanen, T.P., White, M.P., Wheeler, B.W., Garrett, J.K., Elliott, L.R., 2019. Neighbourhood blue space, health and wellbeing: The mediating role of different types of physical activity. Environment International 131, 105016.
- 39. PHE, 2020. Improving access to greenspace. Public Health England, London.
- 40. Phoenix, C., Bell, S.L., Hollenbeck, J., 2020. Segregation and the Sea: Toward a Critical Understanding of Race and Coastal Blue Space in Greater Miami. Journal of Sport and Social Issues 45, 115-137.
- 41. Pouso, S., Borja, Á., Fleming, L.E., Gómez-Baggethun, E., White, M.P., Uyarra, M.C., 2021. Contact with blue-green spaces during the COVID-19 pandemic lockdown beneficial for mental health. Science of the Total Environment 756, 143984.
- 42. Rishbeth, C., Neal, S., French, M., Snaith, B., 2022. Included outside: Engaging people from ethnic minority backgrounds in nature. Evidence Briefing. Natural England Technical Information Note TIN185. Natural England, York.
- 43. Scholz, Miklas., 2006. Best Management Practice: A Sustainable Urban Drainage System Management Case Study. Water International. 31. 310-319. 10.1080/02508060608691934.
- 44. Schüle, S.A., Hilz, L.K., Dreger, S., Bolte, G., 2019. Social Inequalities in Environmental Resources of Green and Blue Spaces: A Review of Evidence in the WHO European Region, International Journal of Environmental Research and Public Health.
- 45. Scott, T., Masselink, G., Stokes, C., Poate, T., Wooler, A., Instance, S., 2022. A 15-year partnership between UK coastal scientists and the international beach lifeguard community. Continental Shelf Research 241, 104732.

- 46. Scottish Government, 2021. Understanding the Drivers of Participation in Outdoor Recreation in Scotland, Available via: https://www.gov.scot/publications/understanding-drivers-participation-outdoor-recreation-scotland/.
- 47. Severin, M.I., Vandegehuchte, M.B., Hooyberg, A., Buysse, A., Raes, F., Everaert, G., 2021. Influence of the Belgian Coast on Well-Being During the COVID-19 Pandemic. PSYCHOLOGICA BELGICA 61, 284-295.
- 48. Smith, N., et al., 2021 Urban blue spaces and human health: A systematic review and meta-analysis of quantitative studies, Cities, 119(1), Available via: https://doi.org/10.1016/j.cities.2021.103413
- 49. Stewart, D., Eccleston, J., 2020. Scotland's People and Nature Survey 2019/20 outdoor recreation, health, and environmental attitudes modules. NatureScot Research Report No. 1227. NatureScot, https://www.nature.scot/doc/naturescot-research-report-1227-scotlands-people-and-nature-survey-201920-outdoor-recreation-health.
- 50. Stewart, D., Eccleston, J., 2022. Enjoying the Outdoors Monitoring the impact of Coronavirus and social distancing Wave 3 survey results (September2021). NatureScot Research Report 876. NatureScot, https://www.nature.scot/doc/naturescot-research-report-1289-enjoying-outdoors-monitoring-impact-coronavirus-and-social.
- 51. Tardona, D., 2011 Opportunities to explore nature and wellbeing through kayaking for inner-city youth
- 52. Twohig-Bennett, C., Jones, A., 2018. The health benefits of the great outdoors: A systematic review and meta-analysis of greenspace exposure and health outcomes. Environmental Research 166, 628-637.
- 53. UK Government, 2009 Marine and Coastal Access Act, p.2009.
- 54. Vert, C., Gascon, M., Ranzani, O., Márquez, S., Triguero-Mas, M., Carrasco-Turigas, G., Arjona, L., Koch, S., Llopis, M., Donaire-Gonzalez, D., Elliott, L.R., Nieuwenhuijsen, M., 2020 "Physical and mental health effects of repeated short walks in a blue space environment: a randomised crossover study". Environmental Research, Available via: doi.org/10.1016/j.envres.2020.109812.
- 55. Volker, S., Kistemann, T., 2015. Developing the urban blue: Comparative health responses to blue and green urban open spaces in Germany. Health and Place 35, 196-205.
- 56. Wheeler, B., White, M., Stahl-Timmins, W., Depledge, M., 2012 Does living by the coast improve health and wellbeing?, Health & Place, 18(5) pp.1198-1201, Available at: https://doi.org/10.1016/j.healthplace.2012.06.015.
- 57. Wheeler, B.W., White, M., Stahl-Timmins, W., Depledge, M.H., 2012. Does living by the coast improve health and wellbeing? Health and Place 18, 1198-1201.

- 58. White, M. P. et al. 2013 Coastal proximity, health and well-being: Results from a longitudinal panel survey, Health & Place. Pergamon, 23, pp.97–103. Available via: doi: 10.1016/J.HEALTHPLACE.2013.05.006.
- 59. White, M.P., Elliott, L.R., Gascon, M., Roberts, B., Fleming, L.E., 2020 Blue space, health and well-being: A narrative overview and synthesis of potential benefits. Environmental Research, 191
- 60. White, M.P., Wheeler, B.W., Herbert, S., Alcock, I., Depledge, M.H., 2014. Coastal proximity and physical activity: Is the coast an under-appreciated public health resource? Preventive Medicine 69, 135-140.
- 61. Wu J, Yang S, Zhang X., 2020 Interaction Analysis of Urban Blue-Green Space and Built-Up Area Based on Coupling Model—A Case Study of Wuhan Central City. Water, 12(8), Available via: https://doi.org/10.3390/w12082185 or https://www.mdpi.com/2073-4441/12/8/2185
- 62. Zhang, C.; Zhong, S.; Wang, X.; Shen, L.; Liu, L.; Liu, Y., 2019 Land Use Change in Coastal Cities during the Rapid Urbanization Period from 1990 to 2016: A Case Study in Ningbo City, China. Sustainability, 11(1), Available at: https://www.mdpi.com/2071-1050/11/7/2122
- 63. Zhang, H., & Nijhuis, S., & Newton, C., 2022. Freshwater blue space design and human health: A comprehensive research mapping based on scientometric analysis. Environmental Impact Assessment Review. 97(1), Available at: https://www.researchgate.net/publication/362453917\_Freshwater\_blue\_space\_design\_and\_human\_health\_A\_comprehensive\_research\_mapping\_based\_on\_scientometric\_a nalysis

now to access background or source data
The data collected for this social research publication:
☐ are available via an alternative route
☐ cannot be made available by Scottish Government for further analysis as



#### © Crown copyright 2023

You may re-use this information (excluding logos and images) free of charge in any format or medium, under the terms of the Open Government Licence. To view this licence, visit http://www.nationalarchives.gov.uk/doc/open-government-licence/ or e-mail: psi@nationalarchives.gsi.gov.uk. Where we have identified any third party copyright information you will need to obtain permission from the copyright holders concerned.

The views expressed in this report are those of the researcher and do not necessarily represent those of the Scottish Government or Scottish Ministers.

This document is also available from our website at www.gov.scot. ISBN: 978-1-83521-010-9

The Scottish Government St Andrew's House Edinburgh EH1 3DG

Produced for the Scottish Government by APS Group Scotland PPDAS1313702 (02/23) Published by the Scottish Government, February 2023





Social Research series ISSN 2045-6964 ISBN 978-1-83521-010-9

Web Publication www.gov.scot/socialresearch

PPDAS1313702 (02/23)