Understanding perceptions of Nature-Based Solutions: understandings, motivations, and factors shaping potential engagement

Authors: Alhassan Ibrahim, Esther Banks, Kerry Waylen

26th March 2025

Alhassan.Ibrahim@hutton.ac.uk

Dreel Burn in Anstruther. Credit: Kerry Waylen.

Acknowledgements

This report corresponds with Milestone M4f "Completion of data collection on householders perceptions", carried out as part of WP4 of research project 'AiM NbS'. AiM NbS focuses on understanding and enabling catchment-based NbS in Scotland, and is Project JHI-D2-2 funded by the Scottish Government's Strategic Research Programme (SRP). WP4 of Aim NbS focuses on socio-economic opportunities and barriers to NbS, exploring the views and possibilities for different stakeholders to get more involved in NbS in Scotland.

For more information about the wider AiM NbS project, please visit https://www.hutton.ac.uk/research/projects/achieving-multi-purpose-nature-based-solutions.

We are grateful to the Anstruther Improvement Association (AIA) and Mark Wilkinson, the PI of AiM NbS for their advice during the development of this work, and to Jack Bloodworth for comments on an earlier version of this milestone report.

Summary

Nature-based Solutions (NbS) are *"actions to protect, sustainably manage, and restore natural or modified ecosystems, which address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits"* (IUCN, 2020). They potentially comprise a variety of actions to work with nature (often using other terminology). To deliver NbS at scale, involvement from all parts of society is needed, including from community members who are local to initiatives. However, understanding existing perceptions and engagement related to NbS are not well understood.

This report presents the findings of a survey to explore citizen views and perceptions of Nature-based Solutions (NbS). The survey was distributed in Anstruther, a rural coastal town in Fife, Scotland, where there is an active local community association and also already some local nature-related activities. It therefore offers a case where NbS could be salient to community members.

The survey was distributed in autumn 2024 and completed by 117 residents living in and around Anstruther. It explored three main issues: their familiarity and awareness of NbS, existing involvement in activities related to NbS, and the key conditions that either facilitate or hinder engagement. It also collected information about respondents' backgrounds, to enable us to explore how their answers might be affected by their personal circumstances.

We found that although familiarity with the term 'NbS' was low, there was a strong underlying recognition of nature's role in addressing societal and environmental challenges. Many respondents indicated awareness of nature's multiple benefits to people, such as through flood risk reduction, or providing recreational opportunities; many also indicated that people had a responsibility to care for nature. The results suggest there was support for more NbS-related initiatives, even in the face of other local challenge and priorities. There was also widespread interest and willingness among respondents to participate in NbS activities, suggesting that many saw local involvement as desirable and might seek to personally engage or support NbS. However, several challenges were also reported that limit participation in NbS projects. These challenges include limited time, limited awareness, perceived lack of expertise, competing priorities, resource constraints, and governance barriers. These differently affect different individuals, with some reporting multiple barriers to engagement.

The implications are relevant to policy-makers, practitioners, and local stakeholders. It would be valuable for future research to confirm these issues, using complementary methods and explore their generalisability to other settings, such as urban settings. However, the factors are aligned with the literature and give confidence about prospects for enabling NbS in Anstruther, and elsewhere. There is significant support for working with nature by at least a significant section of the population, which offers promise for supporting and helping to deliver any future activities to work with nature. When doing so, highlighting a wide range of ways to engage, and addressing the practical constraints and challenges will ensure all opportunities are taken to widen and deepen community engagement.

Whilst communities cannot and should not be held solely responsible for delivering nature-based solutions, we believe this study illustrates there is great potential to deepen their engagement for working with nature to tackle societal challenges.

Contents

1 Introduction

Nature-based Solutions (NbS) are *"actions to protect, sustainably manage, and restore natural or modified ecosystems, which address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits"* (IUCN, 2020). They can take many forms – as described in 2.1 – and all focus on working with nature to protect and enhance services and benefits to society. NbS are essential in light of increasing societal challenges, for example, climate change (Bisaro & Meyer, 2022) in Scotland and beyond. However, NbS – and related activities that work with nature – are not yet widely adopted at scale.

To deliver NbS at scale, involvement from all parts of society is required, including from community members local to initiatives. One of the primary challenges in advancing NbS is understanding the social, economic, and governance-related factors that shape community participation. Communities, especially those in rural and coastal areas, often have a deep connection to their natural environment (Sutton-Grier et al., 2015; Vasseur, 2021). However, we cannot assume that attachment to nature or pro-environmental attitudes automatically translates into involvement in working with nature.

Exactly when and how local people get involved in NbS is not fully understood. Research on effective mechanisms for triggering and sustaining public engagement remains limited (Pätzke et al., 2024). However, engagement is likely influenced by several factors, including limited awareness, competing local priorities, resource constraints, and governance structures (Loghmani-Khouzani et al., 2024). Whilst other issues are also important, for example, regulatory and legal barriers and conflicting land-use priorities (van Doornik et al., 2024; Venuti, 2025), the focus of this study is to better understand community perceptions and potential engagement in NbS.

The overall objective of this study is to assess citizens' awareness of and engagement in existing NbS-related projects. Three research questions are addressed:

a) What are local people's understandings of NbS?
b) What is the current involvement of local people in NbS and related initiatives?
c) What are barriers and enablers to involvement in NbS and related initiatives?

We explored these questions using a questionnaire survey distributed in the coastal town of Anstruther in East Fife, Scotland, a community already associated with NbS-related initiatives. Below we describe the factors explored by the survey and why we selected this location to study. We then share the results in relation to our research questions, and then discuss the implications and insights for academia, policy-makers, and NbS practitioners.

2 A review of literature on NbS and community engagement

2.1 Key concepts and challenges related to NbS

NbS are a comprehensive approach to addressing climate resilience, ecosystem degradation, and sustainable urban and rural development. The International Union for Conservation of Nature (IUCN) defined NbS as *"actions to protect, sustainably manage, and restore natural or modified ecosystems, which address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits"* (IUCN, 2020). NbS encompass a range of strategies, including reforestation, wetland restoration, urban green infrastructure, and coastal resilience projects (Figure 1). These approaches contribute significantly to mitigating the impacts of climate change by enhancing carbon sequestration, regulating local temperatures, and reducing urban heat island

effects (Prado et al., 2024). Restored wetlands and forests play a crucial role in flood control and water quality improvement, while sustainable land management techniques contribute to biodiversity conservation and soil regeneration (Rădulescu et al., 2024).

Beyond their environmental advantages, NbS offer substantial benefits to human well-being and economic development. Studies show that integrating green infrastructure into urban planning fosters social cohesion, enhances mental health, and reduces stress and anxiety by increasing access to nature (Davis et al., 2024). Additionally, NbS contribute to economic resilience by reducing infrastructure costs, preventing property damage from extreme weather events, and creating job opportunities in conservation, landscape management, and eco-tourism (Vanino et al., 2024). As such, NbS are being positioned as a transformative solution that aligns with global sustainability goals, providing long-term ecological and socio-economic advantages. However, their successful implementation and upscaling remain dependent on community engagement, policy integration, and financial support.

Despite their potential, NbS face several challenges in implementation and upscaling. A key issue is the lack of public awareness and engagement, as many communities and stakeholders remain unfamiliar with the benefits and functionalities of NbS, leading to low participation and weak policy support (Gholipour et al., 2024). Governance and institutional barriers further complicate integration, as fragmented policies and inadequate regulatory frameworks hinder the coordination of NbS projects across different sectors (Venuti, 2025). Financial constraints also pose a significant challenge, with many NbS initiatives struggling to secure long-term funding and private-sector investment (Schröter et al., 2022). Additionally, and relatedly, the effectiveness of NbS is difficult to measure, as their benefits often unfold over extended periods (Gómez Martín et al., 2021), making it challenging to quantify their immediate impact and justify investment. Addressing these barriers will require stronger cross-sectoral collaboration, innovative financing mechanisms, and enhanced community participation to ensure that NbS are effectively integrated into urban and rural landscapes for long-term sustainability.

While this study focuses on the widely used term NbS, we acknowledge similar approaches exist under different labels, including ‘ecosystem-based adaptation’ (EbA), ‘green infrastructure,’ and ‘natural climate solutions’ (Seddon et al., 2021). Therefore, many traditional and local practices could also embody NbS principles without explicitly using the terminology. Therefore, we further explored other local practices that might relate to the NbS idea.

1) Trees are being planted along rivers to:

Help absorb water when it rains a lot, keeping it out of rivers and reducing flooding

Make the banks of rivers more stable

Create shade for fish and habitat for birds

Create corridors for wildlife to reach other habitats

2) Rain gardens are being used to naturalise urban areas and to:

Help avoid flooding by creating surfaces which soak up water when it rains a lot (instead of just concrete)

Help keep the temperature down in the summer by cooling the air through evaporation

Increase urban biodiversity by creating habitats for wildlife like pollinators and birds

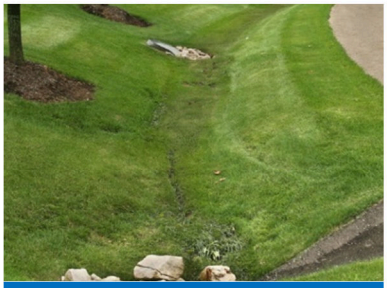
3) Wetlands are being restored and connected in order to:

Help absorb water when it rains, keeping it out of rivers and reducing flooding

Create habitat for wildlife like wading birds and newts

Improve water quality by filtering it and removing harmful chemicals

Provide water reserves during drought

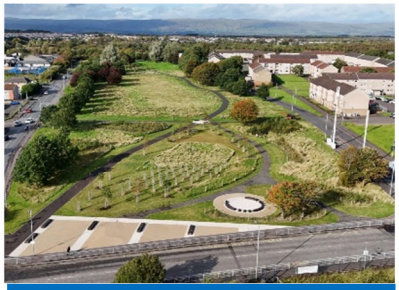


4) Grassy channels (called swales) are being created to:

Help avoid flooding by creating surfaces which channel and soak up water when it rains a lot

Improve water quality by filtering it and removing chemicals and other substances

Create wildlife habitats and improve biodiversity



5) Parks and greenspaces are being used to:

Help avoid flooding by creating surfaces which soak up water when it rains a lot

Help keep the temperature down in the summer by cooling the air through evaporation

Improve people's mental and physical health by providing opportunities for exercise and relaxation in nature

Create wildlife habitats and improve biodiversity

6) Leaky dams/barriers are being installed across streams to:

Slow down the flow of the water, especially during very rainy periods, to reduce flooding downstream

Create more natural stream habitats

Figure 1. A range of activities that could be considered examples of NbS. See Appendix for image sources.

2.2 Community awareness and involvement

Community involvement and awareness are critical factors influencing the success NbS initiatives. Involvement in NbS is often analysed using Arnstein's ladder of participation, which categorises engagement into levels such as informing, consulting, collaborating, co-deciding, and empowering (Kiss et al., 2022; Wolff et al., 2022). Higher levels of engagement foster deeper connections with the community and integrate multiple objectives into NbS. These include co-deciding and empowering, which can lead to significant social benefits like enhanced social learning, environmental stewardship, and inclusiveness. However, most citizen participation in NbS remains "tokenistic," limited to information sharing or consultation, often driven by municipalities through formal mechanisms like workshops or surveys (Kiss et al., 2022; Wamsler et al., 2020a). Citizen-driven initiatives, though less common, include informal actions such as protests or local advocacy. Despite its challenges, deeper participation is associated with improved social outcomes, even though its ecological impact may vary (Kiss et al., 2022).

Awareness is intrinsically linked to perceptions, attitudes, and acceptance of NbS initiatives (Anderson & Renaud, 2021; Ferreira et al., 2022; Soetanto et al., 2022). Awareness of NbS typically emerges through participation in past projects, proximity to existing NbS measures, or direct observation. Public awareness of NbS benefits – such as their ability to address climate challenges, enhance cultural values, and promote biodiversity – is one significant determinant of acceptance (Anderson & Renaud, 2021). However, studies highlight a persistent lack of awareness, particularly regarding the efficacy of NbS in mitigating disasters and adapting to climate change. For instance, in Portuguese cities experiencing increasing heatwaves, residents often remain unaware of NbS's potential to alleviate these impacts (Ferreira et al., 2022).

This literature informed our survey design, by exploring perception of NbS benefits and exploring views on other experiences of volunteering in local initiatives.

2.3 Factors likely to constrain or enable community support and involvement in NbS

Community support and involvement in NbS are likely to be shaped by several factors. Prior work has reported a variety of factors that can either enable or constrain participation, depending on the context and project stage. These factors encompass political and institutional structures, as well as personal and social dynamics, which influence the level of engagement across design, implementation, and maintenance phases. The interplay of these factors across different project stages is summarised in Table 1.

Table 1. Factors that could act as motivators or barriers to community participation in NbS.

Factor	When it motivates	When it limits or constrains	Sources
Political and institutional structure	○ Strong agencies and mediators (e.g. community-based groups) ○ Facilitating bottom-up participation ○ Frequent communication with communities about project progress.	○ Lack of dedicated professionals, particularly intermediaries. ○ Top-down participation processes may reduce trust. ○ Lack of regular communication about progress.	(Anderson & Renaud, 2021; Fors et al., 2015; Kiss et al., 2022)
	○ Increasing trust, usually through mediators.	○ Sense that participation will not change project outcomes. ○ Imbalanced power structures.	(Barclay & Klotz, 2019; Dyer et al., 2014; Samaddar et al., 2021)

		○ Previous negative experiences (e.g. not receiving remuneration which is promised).	
	○ Placing participation on political agenda and demonstrating commitment to it.	○ Lack of clear legal requirement for participation (e.g. where requirement is only about information sharing). ○ Considering participation as counterproductive.	(Anderson et al., 2021; Raymond et al., 2017; Toxopeus et al., 2020)
	○ Adopting flexible approaches to engagement.	○ Rigidity and inability to go beyond the legal requirement.	(Djalante et al., 2011; Howard, 2010; Jeffrey & Seaton, 2004)
	○ When the project progresses well and reveals clear positive outcomes.	○ Slow progress of project implementation which does not lead to any positive outcomes	(Dubo et al., 2023; Frantzeskaki et al., 2019; Prado et al., 2024)
Personal (social) issues	○ Clear demonstration of project benefits to communities.	○ Lack of clarity in project benefits. ○ Perception that project will increase cost to community.	(Alves et al., 2024; Anderson et al., 2021; Sutton-Grier et al., 2015)
	○ Increased awareness of environmental challenges and how project could address them. ○ Increased capacity and funding to get involved.	○ Lack of awareness about environmental challenges. ○ Lack of capacity including knowledge and funds.	(Ferreira et al., 2022; Han & Kuhlicke, 2019; Vasseur, 2021)
	○ Balanced social power structures and inclusive governance models that ensure decision-making power is distributed fairly, encouraging community engagement and trust.	○ Imbalanced social power structures (e.g., relating to levels of income, political orientation, etc.). ○ Conflicting interests.	(Keech et al., 2023; Mahmoud et al., 2022; Rodríguez-Izquierdo et al., 2010)
	○ Past positive experience of getting involved.	○ Past negative experience related to participation and project outcome.	(Batson et al., 2002; Josephs & Humphries, 2018; Rose et al., 2016)
	○ Strong emotional attachment and care for a place.	○ Lack of care/attachment or resistance to change. ○ Feeling of insecurity getting involved.	(Seenath et al., 2025; van Doornik et al., 2024; Welden et al., 2021)

2.3.1 Political and institutional structures

Institutional factors play a significant role in fostering or hindering community participation in NbS. Strong agencies and intermediaries, such as community-based groups, often act as catalysts for bottom-up participation by building trust and facilitating regular communication (Kiss et al., 2022). When municipalities prioritise citizen participation on political agendas and adopt flexible approaches beyond minimal legal requirements, they create an enabling environment for

engagement. Flexibility in participation mechanisms can also adapt to diverse community needs, enhancing inclusivity and equity (Rodríguez-Izquierdo et al., 2010) .

Conversely, institutional rigidity and a lack of clear legal requirements for citizen involvement can act as barriers. Tokenistic participation, characterised by one-way information sharing or consultation, reduces trust and discourages meaningful engagement (Wamsler et al., 2020b). Furthermore, the absence of dedicated professional staff, resources, and political instruments to support community involvement undermines the effectiveness of participatory processes. Trust deficits stemming from past negative experiences, such as failed collaborations or unfulfilled promises, exacerbate these challenges (Han & Kuhlicke, 2019).

Institutional constraints also arise when top-down decision-making processes dominate, limiting opportunities for communities to influence project outcomes. In some cases, powerful actors may bypass participation to expedite decision-making, further alienating communities (Rodríguez-Izquierdo et al., 2010). This imbalance of power and a lack of accountability can deter citizens from engaging, particularly if they perceive their input as inconsequential.

This section informed the survey design by highlighting the importance of past experiences with participation and engagement processes. Questions were designed to explore respondents' trust of their views being considered, previous involvement in local initiatives, and whether they felt involvement processes were inclusive or restrictive.

2.3.2 Personal and social dynamics

Personal and social factors, including perceptions of project benefits, emotional attachment to place, and community awareness, significantly influence participation in NbS. When communities perceive clear benefits from NbS, such as economic opportunities, improved living conditions, or enhanced public spaces, their willingness to engage increases (Barclay & Klotz, 2019). Positive past experiences of involvement also foster trust and encourage sustained participation in new initiatives (Rodríguez-Izquierdo et al., 2010).

However, a lack of clarity regarding project benefits or scepticism about their potential outcomes can hinder support. For instance, communities that perceive NbS as increasing costs or requiring sacrifices may resist engagement (Wamsler et al., 2020b). Similarly, limited awareness of environmental challenges or the role of NbS in addressing these issues constrains involvement, particularly in communities with low exposure to ecological initiatives (Rodríguez-Izquierdo et al., 2010).

Social power structures, including disparities in education, income, and political orientation, further shape participation. Communities with imbalanced power dynamics may struggle to engage equitably, leading to exclusion or conflict. Resistance to change, fuelled by insecurity or a lack of trust, also limits involvement, particularly in projects perceived as imposed by external actors (Fors et al., 2015).

The literature in this section influenced our survey by emphasising existing awareness of NbS and perceptions of project benefits in addition to other personal factors such as time, knowledge and skills. Survey questions examined respondents' familiarity with NbS, their awareness of existing local projects linked with NbS, and any concerns or hesitations regarding involvement. Additionally, aspects like values and connection with nature were incorporated into the survey.

3 Data collection and analysis

The study was conducted in Anstruther, a coastal town in Fife, Scotland (Latitude: 56° 13' 23.34" N and Longitude: -2° 42' 8.24" W). Anstruther was selected due to its proximity to ongoing nature-related initiatives, particularly the Dreel Burn Project (Box 1). The Dreel Burn, a main waterbody in Anstruther, divides the town into east and west. In 2020, the population of the town was estimated at 3,950[1]. Historically reliant on fishing, the town's economy (Fife Council, 2022) now revolves around tourism, hospitality, and small businesses, with attractions such as the Scottish Fisheries Museum and Anstruther Fish Bar drawing national and international visitors. The town also benefits from its position along the Fife Coastal Path, with outdoor recreation opportunities and landscape quality also influencing tourism.

Parts of the town are at risk of flooding, although this mainly arises from coastal and pluvial sources. The water quality of the Dreel Burn is known to be a concern, with awareness of this issue highlighted by an annual duck race within the Dreel Burn itself.

Anstruther was also selected as it is known to have an active community with many local initiatives, some of which are linked to the 'Anstruther Improvement Association' (AIA), which works for a 'thriving and resilient community'. It was therefore expected that activities related to NbS might be something salient to local community members, allowing our research to probe perceptions and (non)engagement with NbS.

Data was collected using a questionnaire designed to explore community perceptions of environmental challenges, awareness and involvement in NbS, and ways to enhance support for such initiatives. The questionnaire addressed three main research questions:

i. What are local people's understandings of NbS?
ii. What is the current involvement local people in NbS-related initiatives?
iii. Which factors motivate local people's involvement or support of NbS-related initiatives?

Background information, such as age, occupation, and years of residency, was also collected at the end of the survey

Approximately 700 paper questionnaires were distributed across the town, which was divided into clusters focusing on selected streets to ensure even distribution. The paper questionnaires included a link and QR code to provide respondents with the option to complete the survey online via Qualtrics or return the paper version using a prepaid envelope. This "push-to-web" approach was complemented by advertising the survey on social media platforms, including Facebook and Twitter, as well as through AIA's community noticeboard and social media pages. The questionnaire was open for responses from mid-July to the end of August 2024. Individuals completed the survey independently, so more than one individual per household could take part in the survey.

As with many social research methods, the self-selection of participants may have influenced our findings, as those with a particular interest in nature or local projects may have been more inclined to take part. However, messaging to share and promote strongly emphasised that we welcomed all views.

To analyse the data, the responses received on paper questionnaires were combined with the online submissions into a unified dataset. The quantitative responses were transferred to SPSS for descriptive statistical analysis. Some responses were re-categorised to improve clarity and alignment

[1] Scotland (United Kingdom): Localities in Council Areas - Population Statistics, Charts and Map

with the research focus end ensure that related themes are grouped appropriately. Open-text responses were exported to NVivo 12 for thematic analysis.

We also appraised relationships between some responses. Any indicative relationships were subject to statistical tests, notably chi-square. These included possible factors that shape awareness and propensity to become involved, especially the effect of past involvement in local initiatives, gender, age, on willingness to get involved, or challenges reported in involvement. In general, very few significant relationships were detected, so only the most noteworthy relationships are highlighted in the results sections below.

3.1 Description of the sample

There were 116 responses received (22 via paper-questionnaires). It is not possible to estimate the response rate, because we do not know how many people viewed the invitation to complete the questionnaire online. Most questions were optional, so sample size (N) varies for answers to different questions. There was some drop off by the end of the survey, where questions about respondents' background were asked, with about 78 reaching this point.

The respondents were predominantly long-term residents of Anstruther, with more than 93% identifying as residents of the town or surrounding areas (N= 78). Of those residents who reported their length of association (N=73) the majority (76%) had been associated with Anstruther for over ten years, 12% for five to ten years and 13% for less than five years. This demonstrates a high level of familiarity with the area among participants.

In terms of gender, there were slightly more female than male respondents: 62% female to 38% male. The age distribution varied, with the majority being 45 years or older. The largest group consisted of respondents aged 55-64 years (28% out of 78 respondents), followed by those aged 45 to 54 years (23%). 12% were aged 35-44, 10% were aged 25- 34, and only 1% was aged 18 to 24. Additionally, 26% chose not to disclose their age.

Regarding occupational ties to nature, not many respondents had work related to nature. Out of 78 respondents only 14% indicated working in nature-related occupations, while the majority of 86% did not report any professional connection to nature.

However, many respondents demonstrated significant engagement with natural spaces in their daily lives: a substantial number visited natural areas frequently, with 61% out of 78 respondents reporting visits 'most days' or 'every day.' Another 28% visited 'once or twice per week,' while fewer respondents reported less frequent visits, such as 'once or twice per month' (6%) or 'very rarely or never' (4%).

4 Results

The results are organised around the three research questions.

4.1 What were local people's understandings of NbS?

4.1.1 Familiarity with NbS terminology

In order to better understand any awareness with NbS terminology, an early question to respondents was, *"Were you familiar with the term 'nature-based solutions' before taking part in this survey?"* Just prior to this, the survey had introduced NbS as the idea of working with nature to benefit people, encompassing a range of activities, while differentiating it from traditional solutions like concrete flood defence interventions. The responses indicated varying levels of familiarity with the term. About half of the 116 respondents (52%) reported that they had not previously been familiar with the term. A notable proportion 39%, indicated that they had been 'somewhat' familiar with the term, a small fraction (8%), reported being 'very familiar'. In summary, the specific terminology of NbS was largely unfamiliar to community members.

4.1.2 Awareness of local initiatives related to NbS

To understand awareness of existing local work that might be related to NbS (whether or not using those terms), respondents were asked *"Are you aware of any projects or activities around Anstruther (past or present) that might relate to the idea of NbS?".* A significant majority, reported being aware of projects or activities that could be associated with NbS (Figure 2). This shows that many local people perceive there to be local activities for managing or working with nature. When asked to describe these projects respondents identified a diverse range of sustainability and environmental initiatives, which broadly fell into two categories: those that prioritised ecological restoration and conservation, and those that emphasised benefits for both people and nature. Among the nature-focused projects, the most commonly mentioned activities included tree planting, biodiversity enhancement, litter picking, beach cleanups, activism related to sustainable fishing, and wetland creation. In contrast, projects that centred on green well-being were primarily concerned with improving greenspaces and greenspace accessibility, tidal pool restoration, cycle path development and maintenance, community allotments and food-growing initiatives, and green arts projects. A notable example of a local initiative to improve nature's management is the Dreel Burn Project – see the text box on the following page for more information about its work.

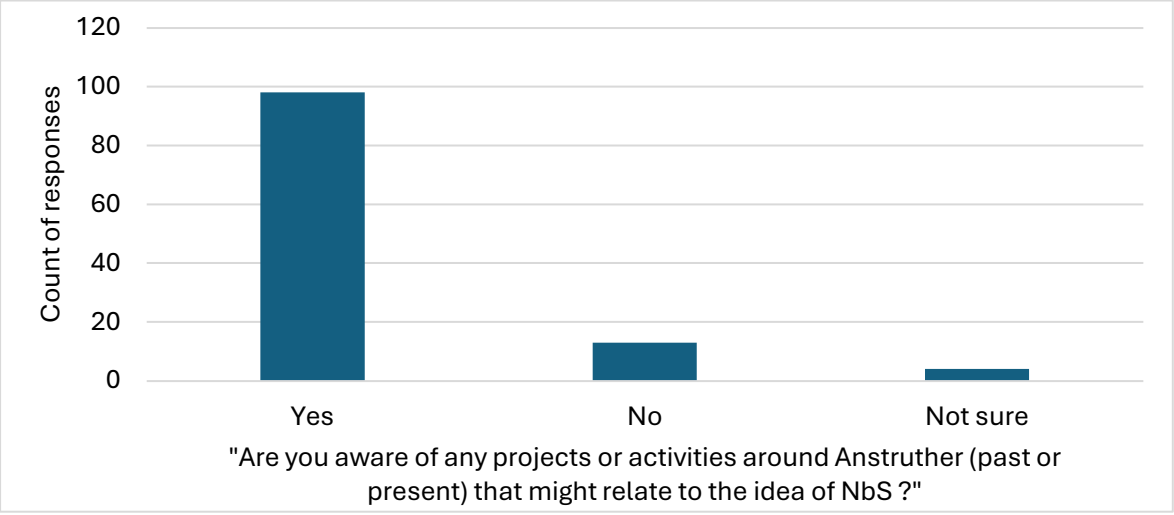


Figure 2. Awareness of local projects related to NbS (N=115)

Box 1. Dreel Burn Project as an example of a local NbS-like project

The Dreel Burn Project is a nature restoration project local to Anstruther. While not explicitly framed within the NbS terminology, it can be seen as an example of NbS in that it is working to achieve a "clean, biodiverse and vibrant river" with community involvement.

For more information about the work in the Dreel Burn visit https://forthriverstrust.org/project/dreel-burn-project/

We expected that this project might be familiar to some in the Anstruther area, so we specficially asked about it. Firstly, we posed the question: *The Dreel Burn project is an example of a local NbS project. Have you heard of it?* The majority of respondents (81% out of 115 respondents) indicated awareness of the project. However, 38% of those aware (94) felt they had heard a lot about it, while 62% had only limited knowledge, potentially suggesting that while the project had broad recognition, in-depth understanding and engagement were more limited.

Those familiar with the Dreel Burn project were also asked to describe its goals. There were 66 written responses to this question, with respondents often listing multiple objectives.
Overall, the most common response to this question (41 responses) related to outcomes and actions for nature, whether framed in terms of restoration/improvement of the Dreel Burn as a habitat/catchment, encouraging wildlife, improving biodiversity, or specific management actions such as invasive species removal or tree planting. In an additional 2 cases, tree planting was referred to as an end in itself and it was not clear what the respondents believed the purpose of the tree planting to be – whether, for example, a biodiversity measure or an aesthetic measure. Of these responses, 13 referred to outcomes for both nature and humans.

In terms of responses relating to human benefits, around 19 responses included aspects of improving the area for the local community as a local greenspace, in terms of making it more useable and accessible, creating recreational opportunities, and opportunities to engage with nature. 2 responses highlighted other human benefits of in terms of food provisioning and business support: "To restore biodiversity and good health to the waterway, while ensuring human needs are met (food from the land and sea…)" and "restoration of the Dreel for nature, community, agri and aqua communities…". Around 17 responses touched on ideas of improving water quality and/or reducing pollution in the Dreel Burn. Often it was not specified what the purpose of improving water quality was, i.e., whether for nature or human benefit, or both. 3 responses touched on the reduction of flooding risk, 1 on the reduction of soil erosion, 1 on the monitoring aspect of the project, and 1 on the private finance aspect of the project: "…exploration of private finance to support projects elsewhere".

Notably, a number of responses (15) referred to ideas of "clearing up", "cleaning up", "tidying up", a previously neglected space. One respondent specifically referred to perceived anti-social behaviour taking place in the area, stating that the project was to "repair the damage" caused. The purpose of "clearing up" was not always specified; but in some cases, this was linked to an outcome for people/nature.

9 responses referred to an educational or outreach aspect of the project, whether awareness raising around the Dreel Burn specifically, or around nature more generally.

An additional 5 responses indicated uncertainty or did not specify concrete project goals.

4.1.3 Factors potentially affecting familiarity with NbS

As discussed in Section 2, familiarity with the term 'nature-based solutions' may be influenced by a number of factors, including awareness of existing or past projects using related terminology and ideas.

Firstly, we examined for any association between levels of familiarity and awareness of local initiatives related to NbS. However, we found no significant difference in the number of NbS-like projects named by those with different levels of familiarity with the term 'nature-based solutions'. This suggests, at least in the case of Anstruther, that awareness of local green or NbS-like initiatives has not led to familiarity with the technical terminology of NbS.

Additionally, respondents were asked whether or not they worked in nature-related occupations; the supposition being that working in nature-related occupation could be linked to increased concept familiarity or awareness of existing or past NbS-like projects. This did suggest an effect: for the 11 respondents in nature-related roles, 36% were very familiar, 36% were somewhat familiar, and 27% were not familiar, whilst for the 66 respondents not in NbS-related occupations, only 3% were very. That said, while those in nature-related occupations were significantly more familiar with NbS than those outside the field, the fact that over a quarter (27%) of them still lack familiarity is notable.

Lastly, we also examined for relationships with age and gender. There was no significant association with either variable. However, with regards to age groups, the data is suggestive of differing levels of familiarity levels among the surveyed age groups (Figure 3). In particular, the 25 to 34 category included the highest proportion of respondents who were "very familiar" with NbS.

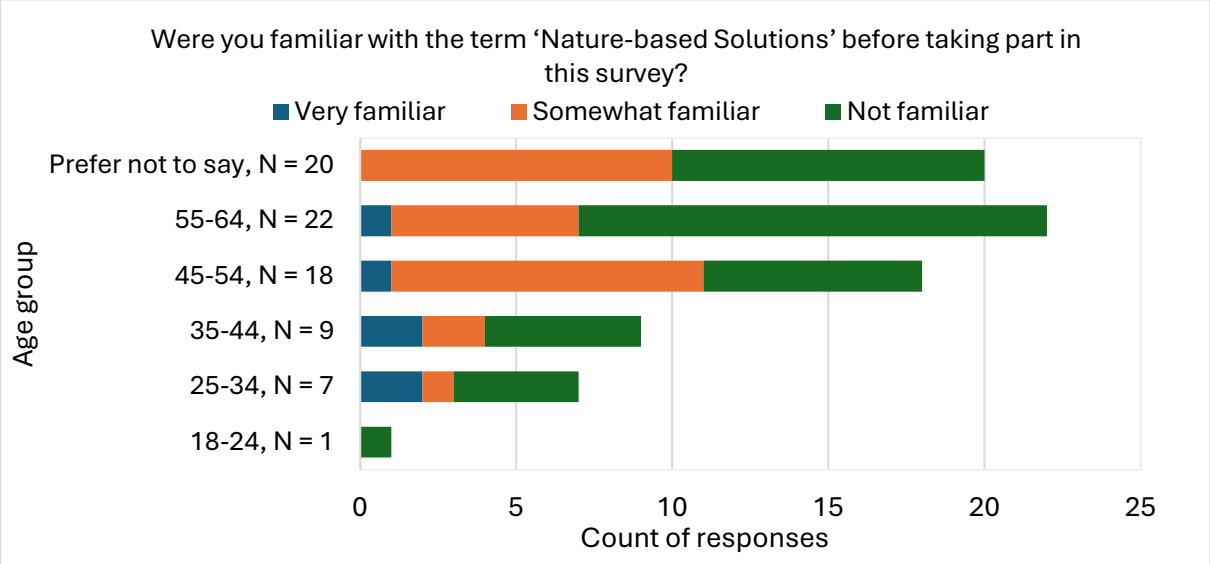


Figure 3. Familiarity with NbS, according to age group, N=77

4.2 How were local people involved in local initiatives related to NbS?

Involvement in NbS was assessed by asking respondents if they had been involved in any of the local activities that they had previously mentioned (see Section 4.1.2). Many people who were aware of such local projects were not involved in them (Figure 4). There was no obvious difference in participation rates between male and female respondents. Further understanding of the possible factors shaping low involvement is provided in Section 4.3.

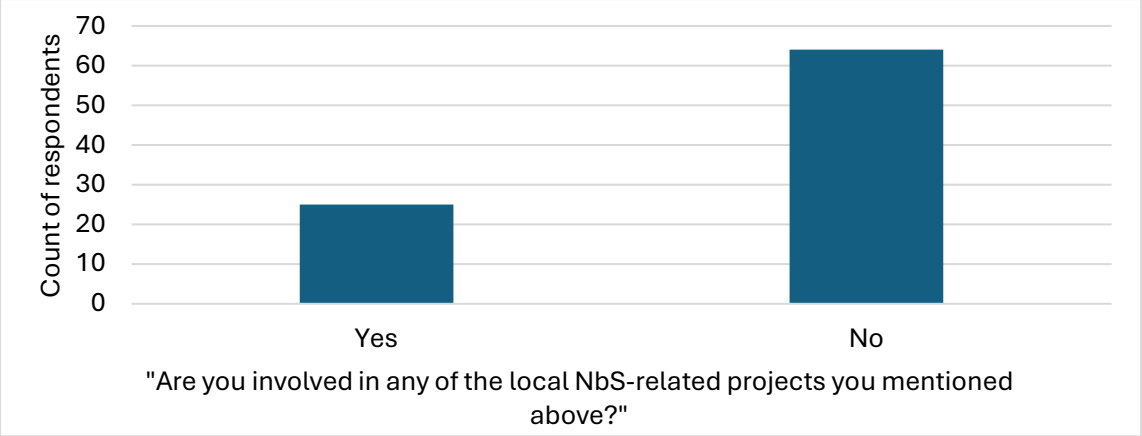


Figure 4. Respondents' involvement in local projects related to NbS, N=89

We asked for more details about how people were involved, for those respondents who had indicated involvement in either the Dreel Burn project (Box 1) or other local activities related to NbS. There were respectively 15 and 14 answers to these questions. These showed that these people were often involved in multiple projects and potentially in multiple roles within and across projects (Table 2). Respondents recorded involvement in a variety of different NbS-like projects and we organised these into 8 categories: greenspace accessibility and maintenance (4); biodiversity activities and tree planting (4); tidal pool restoration (3); allotments, gardening, and horticulture (2); litter picking and beach cleans (2); biodiversity education (1); and habitat restoration (1). Overall, the most commonly reported form of involvement was hands-on volunteering to support site management, suggesting that a significant proportion of involvement was centred on physical contributions to the restoration and upkeep of the area.

Table 2. Our categorisation of responses relating to types of involvement when asked to briefly describe "…how you have been involved in the projects you have mentioned", and "…how you have been involved in the Dreel Burn project"…Responses could encompass more than one category, so the answer types counted exceeds the count of respondents completing this question.

Types involvement mentioned by respondents	Count of responses
Types of involvement in NbS-like projects (N = 14)	
Hands-on volunteering	7
Organiser or official	4
Membership	4
Community outreach	3
Attending events/activities	2
Employment	1
Types of involvement in the Dreel Burn Project (N = 15)	
Hands-on volunteering (tree planting, scything, meadow management, litter picking, wetland creation, clearing the burn)	8
Monitoring water quality	3
Attending events/meetings	2
Organiser or official	2
Landowner	2

4.2.1 Involvement in other kinds of local activities and voluntary initiatives

We wished to understand how awareness and involvement in projects related to NbS might compare to other kinds of local projects.

We asked *"Are you aware of other local voluntary projects or activities carried out to help people in Anstruther – beyond anything that you might have mentioned [those related to idea of NbS] earlier?"* A majority (72%) out of 96 answered "Yes". We also assessed their involvement, by asking *"Have you ever been involved in any of the projects or activities you mentioned above?"* The results showed that 56% of the respondents who were aware of local voluntary projects were in involved somehow in them. Compared to local NbS projects (see section 4.1.2), for other types of local initiatives, respondents reported slightly lower levels of awareness but higher levels of involvement.

We asked for more information about what types of activities people were involved with, and we received 55 responses that reflected a wide diversity of activities (Table 3). Supporting local culture and events was most commonly mentioned – which may include Anstruther's famous duck race or Annual Harbour Festival, followed by care in the community – e.g. supporting vulnerable or elderly local residents. In the open-text responses about how people were involved, 34 respondents described their involvement, with a similar mix of roles to those mentioned for NbS projects (17 mentioning general volunteering, 11 involved in organising or official roles, 7 attending events, 6 as members, 5 engaged in fundraising or donating, and 1 each in employment, advising, and attending meetings).

This was a greater variety of initiatives than those mentioned in responses that had focused more specifically on NbS. This is probably because there are likely to be many more non-NbS than NbS initiatives. It is also possible that these other types of initiative are more attractive or accessible to get involved in, but we did not analyse motivations or barriers to engagement, per project.

Table 3 Our summary of themes in open text responses to the question "Are you aware of other local voluntary projects or activities carried out to help people in Anstruther – beyond anything you might have mentioned earlier? If you can, please name and give brief descriptions of any ongoing or past local voluntary projects or activities that you can recall. ". N=55. Total number of activities is mentioned is greater than 55 as many respondents mentioned multiple activities

Local culture and events (45)	Wild swimming groups (3)
Care in the community (27)	Childcare groups (2)
Tidal pool restoration (20)	Cycle path creation and maintenance (2)
Litter picking and beach cleans (10)	Hatchery restocking (2)
Greenspace accessibility and maintenance (9)	Community buy-out (2)
Charity shop volunteering (9)	Skatepark development (2)
Education initiatives (8)	Community governance (1)
Local emergency response activities (7)	Scotland the Bread (1)
Biodiversity activities and tree planting (7)	Skatepark protest (1)
Allotment, gardening, and horticulture (5)	Therapy (1)
Sports clubs (4)	Unclear responses (3)

4.3 What factors shaped local involvement or support for NbS?

This section aims to understand the willingness of communities to support or get involved in NbS initiatives, as well as factors that could influence this, in terms of enablers and challenges. The

relationship between these and other variables such as age, gender, and duration of residence are explored where relevant.

4.3.1 Levels of support for local activities related to NbS

The data indicated a strong preference for the expansion of NbS-related initiatives, with a majority expressing agreement to the statement *I would like to see more NbS-related activities in and around Anstruther.* Out of 85 respondents, a high majority (60%) of respondents strongly agreed, while an additional 17% respondents somewhat agreed, reflecting a high level of public support for such environmental interventions. Only small minority disagreed, with 12% strongly disagreeing and 3% somewhat disagreeing.

Enthusiasm to see NbS initiatives was high regardless of prior familiarity with the term (Figure 5). Since respondents had been introduced to NbS before being asked, their support may have been influenced by this information; but if so, it shows that communication about NbS can be a strong driver for support.

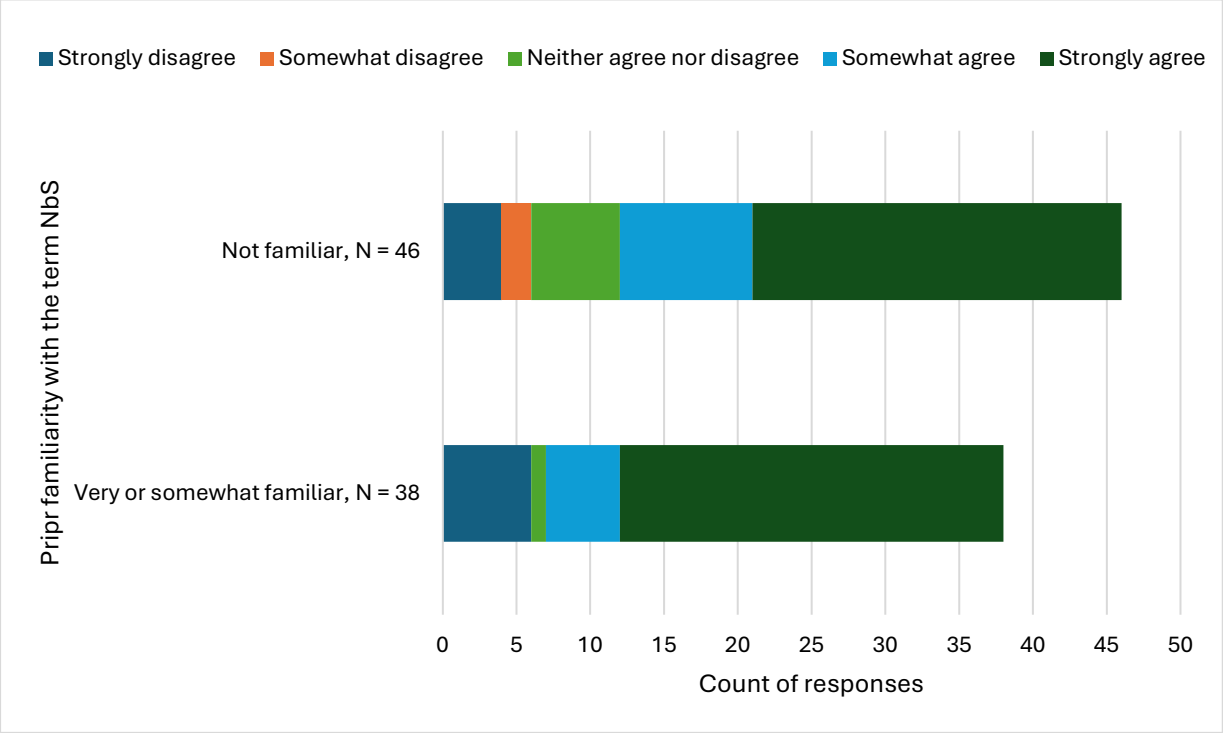


Figure 5. Respondents' enthusiasm for seeing more NbS, separated according to their prior familiarity with NbS

Respondents were offered the chance to add further comments about their interest in activities related to NbS. We received 23 comments, giving details or explanations of reasons for supporting more NbS. Some reasons mentioned were to realise and build a reciprocal relationship between nature and humans, restoring nature and/or prevent climate change, and halting local rural degradation which were mentioned by 4 respondents each. For instance, a respondent who earlier said they were not familiar with the NbS but had been involved in meadow management and scything as part of Dreel Burn Project, highlighted the need for projects that help address nature-degradation:

"I consider Anstruther's surroundings to be an agricultural desert. Intensive farming has squeezed out local wildlife to the detriment of our local natural environment. Run-off of agricultural chemicals has

clearly impacted waterways and the loss of hedgerows to make way for colossal fields has clearly contributed to a decline in the number of birds. Any project that would help to fight against the degradation of nature and our local environment would be welcome."

Other explanations for wanting more NbS-related activities were to tackle issues like plastic waste and litter, enhance green spaces, and to utilising NbS to support mental well-being.

Building on the previous question, respondents were asked an open-ended question: *"Are there certain types of NbS activities that interest you more than others? If so, what are these?"* To inspire their responses, a list of 9 NbS example measures was provided (Figure 1). More than half (49) of those who expressed interest in seeing more NbS-related activities went on to respond to this question. A variety of NbS initiatives were of interest (Table 4). Four types of activity were most commonly mentioned, of varying specificity: supporting greenspaces and nature activities (11); tree planting (11); flood management and prevention (11); and habitat enhancement, management, creation, and rewilding (10). Those who mentioned green spaces and nature activities often noted that creating nature trails and outdoor activities could support both physical and social well-being.

Table 4. Types of activities related to NbS that respondents would like (based on open text responses, N=49)

Our categorisation of activities	Count of responses
Greenspaces and nature activities	11
Tree planting (unspecified outcome)	11
Flood management and prevention including Non-specific (3), leaky dams (2), rain gardens (4), tree planting (2)	11
Habitat enhancement, management, creation, and rewilding	10
All (referring to examples suggested in the survey: riparian tree planting, rain gardens, restoring and connecting wetland, vegetation management, urban parks and greenspaces, leaky barriers, removing barriers in rivers, creating wetland, grassy swales)	8
Education and citizen science	5
Wetland creation/restoration (unspecified)	4
Dreel Burn	2
Litter picking	2
Marine and coastal interventions	2
Water quality	2
Active travel opportunities	1
Not sure / No preference	5

While these options are largely similar to the 9 NbS types already suggested in the survey, 8 respondents explicitly expressed a preference for implementing all 9. Additionally, a number of respondents specifically highlighted the need for educational programs to raise awareness of NbS and the creation of wetlands, suggesting an interest in both knowledge-building and ecosystem restoration.

Notably, while many respondents described interest in non-specific activities linked to particular environmental problems or concerns (e.g., habitat creation, flood management), there were others who instead highlighted the kinds of concrete activities that they would be interested in or able/comfortable to get involved in. For example, one respondent said *"I enjoy being outdoors and am happy to get involved in tree planting as an example"*. Another respondent simply stated *"Anything to do with trees."* Another respondent who was not sure stated *"Don't know. Whatever I'm capable of!"*, seeming to indicate a willingness to get involved in any kind of project which they felt

able to contribute to. Evidently, some of the activities listed did hint at concerns for a specific issues, for example, litter picking might be presumed to relate to a concern with plastic pollution and environmental degradation. Other examples of quite concrete activities given were:

- *"Beach combing"*
- *"Any recording (number, species etc) activities as I have some experience"*
- *"I also have some experience of woods maintenance"*
- *"Water quality monitoring"*
- *"Data processing"*
- *"Maps"*
- *"…more on the science side"*
- *"Citizen science"*
- *"Control of Giant Hogweed"*
- *"Helping with water sampling"*
- *"Science experiments"*

4.3.2 Interest in being personally involved in NbS

To further explore respondents' potential engagement with NbS, they were asked*, "If circumstances permitted, would you be interested in supporting or getting involved in NbS in and around Anstruther?"* This question was directed at all respondents, regardless of whether they had previously expressed interest in seeing more NbS-related activities. Among the 89 respondents, the majority (57%) expressed a clear interest in supporting or participating in local NbS projects in future, while 15% reported that they were already involved in NbS locally (Figure 6).

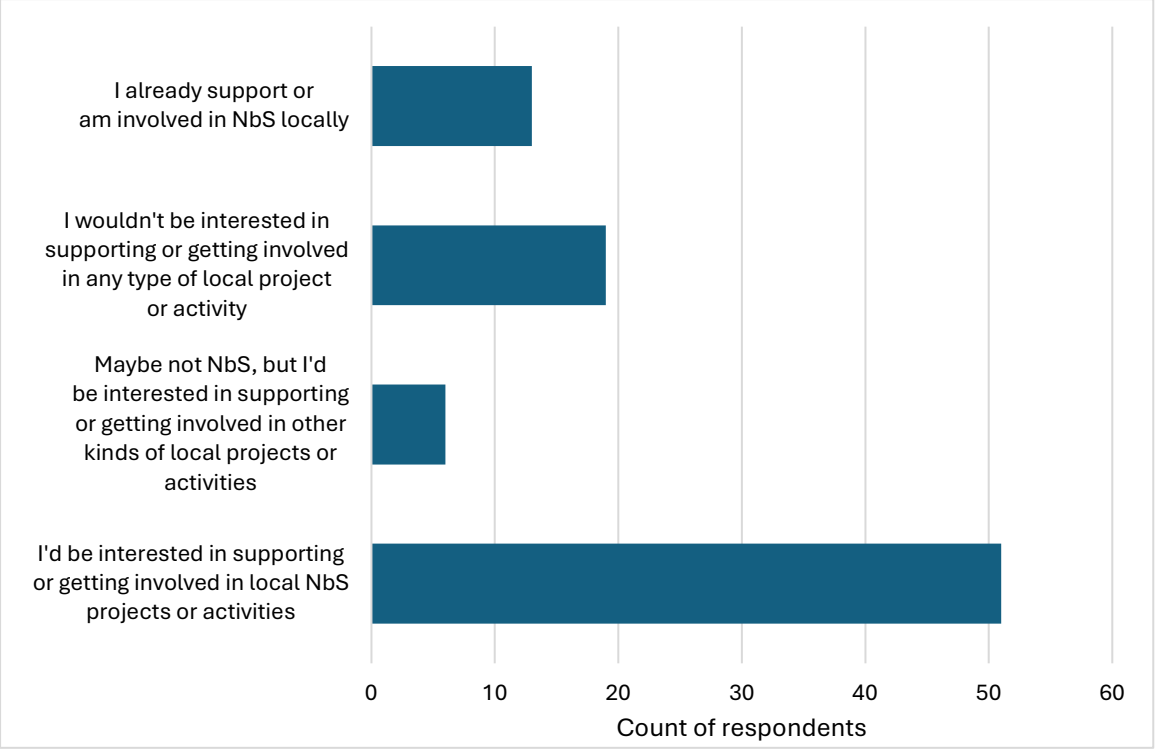


Figure 6. Respondents' response to the question "if circumstances permitted, would you be interested in somehow supporting or getting involved in NbS, in and around Anstruther?". N=89

Prior familiarity with the term NbS did not have an influence on the desire to get involved in NbS activities. Among the 40 respondents who had stated they were already familiar or somewhat familiar with NbS, 48% expressed interest in supporting or getting involved in local NbS projects, while a further 25% were already involved in NbS activities. Meanwhile, 67% of those not familiar (48) also showed the same interest in getting involved with additional 4% already involved. These findings suggest that interest in NbS participation existed regardless of prior familiarity, though our introduction of the concept may have increased awareness of NbS among respondents, potentially increasing their enthusiasm to see more of such initiatives.

4.3.3 Factors that may deter involvement

To understand factors that could constrain or deter involvement in NbS-related activities, we first posed an open-ended question: *What, if anything, might put you off or stop you getting involved in NbS activities or projects in and around Anstruther?* This was followed by another question *What, if anything, might encourage or allow you to get more involved in NbS activities or projects in and around Anstruther?*, the responses to which are discussed in section 4.3.4. The responses to both these questions can be variably presented as 'barriers' and/or 'enablers' depending on their framing. However, in keeping with how the data was collected, for the purposes of this report these are presented in separate sections: 76 respondents listed barriers (discussed in this section, see Table 5) and 65 listed enablers (discussed in the following section).

Table 5. Thematic grouping of key issues that might constrain getting involved in NbS related activities mentioned by 76 respondents

Constraining factors	Count of responses	Specific issues (themes
Constraining factors		
Time	64	Unspecified (25); Work (16); Family (11); Other interests (8); Carer responsibilities (3); Travel (1)
Accessibility	28	Physical health and age (17); Transport (3); Weather (2); Timing (2); Childcare (2); Mental health (1); Lack of skills (1)
Awareness, understanding, and perception of project	19	Concerns with social dynamics and 'small-p' politics (10); Project communication and engagement (5); Uncertainty around project aims and benefits (4)
Uncategorised	2	-

In terms of factors that 'might put people off', responses related to time constraints were the most frequent, with 64 mentions, often highlighting work, family responsibilities, and other commitments as limiting factors. While many respondents had earlier expressed interest in seeing more NbS-related activities and getting involved in supporting such initiatives, they often found participation impractical given time constraints. For instance, a respondent already involved in NbS activities indicated inability to take on more responsibilities, commenting that: *"Just time – I work full time… and am already involved in the [name of project]".* Other respondents echoed similar concerns, emphasising the challenge of balancing NbS engagement with existing obligations, including that of family: *"Time and availability - I am a full-time carer for dementia sufferer in the family, 24 hours a day, every day, on call. I can't schedule time away in case my relative requires immediate help."* The accessibility of events also posed challenges for respondents and featured in 28 responses, in that their personal circumstances and the format of events did not align, particularly for those with physical health issues (17), transport limitations (3), or childcare responsibilities (2). Some respondents felt limited by age and mobility issues in terms of the kinds of activities they could get

involved in, with one respondent stating, *"I am interested in what is being done but I am eighty years old and not fit enough."* Childcare issues were another barrier highlighted, whereby the lack of available childcare or events designed with families in mind prevented involvement, highlighting the need for more inclusive and flexible participation opportunities.

Another group of factors limiting people's desire to get involved in projects related to awareness, understanding, and perception of local projects. A small subset of respondents (10) detailed social and 'small p' politics concerns, with one respondent stating *"Too much 'politics' in the group. If we are going to make a difference just let's get it done instead of bickering. That's probably the only thing that would stop me"* and another *"I wouldn't want to be on committees etc (done that in the past). Big crowds of people, too many bosses, makes for an unpleasant experience."* There also seemed to be concerns around who else might be involved in the projects, and the conflict that this might create, or the lack of inclusive environment created by certain personalities, and potential hierarchies, with one respondent noting *"Local cliques and personalities not being kind to new people. No disability awareness and neurodiversity understanding"*. Another noted *"Not feeling welcome as not originally from Anstruther…".* These barriers existed both in terms of the prospect of getting involved, but also the effectiveness of getting involved, and how certain interests might direct and benefit from the projects and the repercussions this could have within the community, especially in the absence of widespread buy-in.

Other responses (4) described a level of uncertainty around project aims and benefits, limiting the respondents' ability or desire to get involved. Some respondents highlighted the need for community buy-in, with clear objectives and benefits for the community. Another respondent highlighted that sometimes these projects simply feel like *"pulling weeds"* in terms of the difference you one would be able to make through them. Another group of responses related to ideas around communication and engagement from projects (5). Some people simply stated that they were not always aware of projects going on or were new to the area. One respondent described how *"there is often very little communication, very little effort goes into getting people aware of what is going on in their communities."* One respondent described how they had joined a local outdoor volunteering group but had never heard from them again; this seemed to have put them off future involvements. Another respondent highlighted the need for there to be better education or engagement around the purpose of initiatives: *"They won't care about it if they don't understand it"* and *"There has to be education involved so people can understand the problem and get passionate about it".* These combined results perhaps emphasise the need for transparent, inclusive approaches to project management, as well as clear and consistent communication around opportunities for participation, and open and ongoing dialogue about project goals and outcomes.

The above open-text responses were consistent with categories selected in response to the question *"To what extent do the following statements apply to you in terms of your ability to get involved in activities or projects to support NbS?".* This question aimed to better understand of specific personal circumstances and practicalities that could hinder involvement in NbS (Figure 7). In line with the open-text responses, 54% out of the 84 respondents agreed or strongly agreed that lack of time was an issue, with only 18% of the respondents disagreeing or strongly disagreeing.

While the majority of respondents did not perceive a lack of skills and knowledge, transport difficulties, or health and physical restrictions as barriers to participating in NbS activities, these challenges remained significant for some. A notable minority – 24% out of 83 respondents, 17% out of 84 respondents, and 23% out of 84 respondents respectively – agreed or strongly agreed that these factors limited their involvement, reflecting concerns raised in open-text responses about accessibility and understanding. This suggests that while many felt confident and able to engage,

addressing these barriers through improved communication, accessibility, and support could help make NbS initiatives more inclusive.

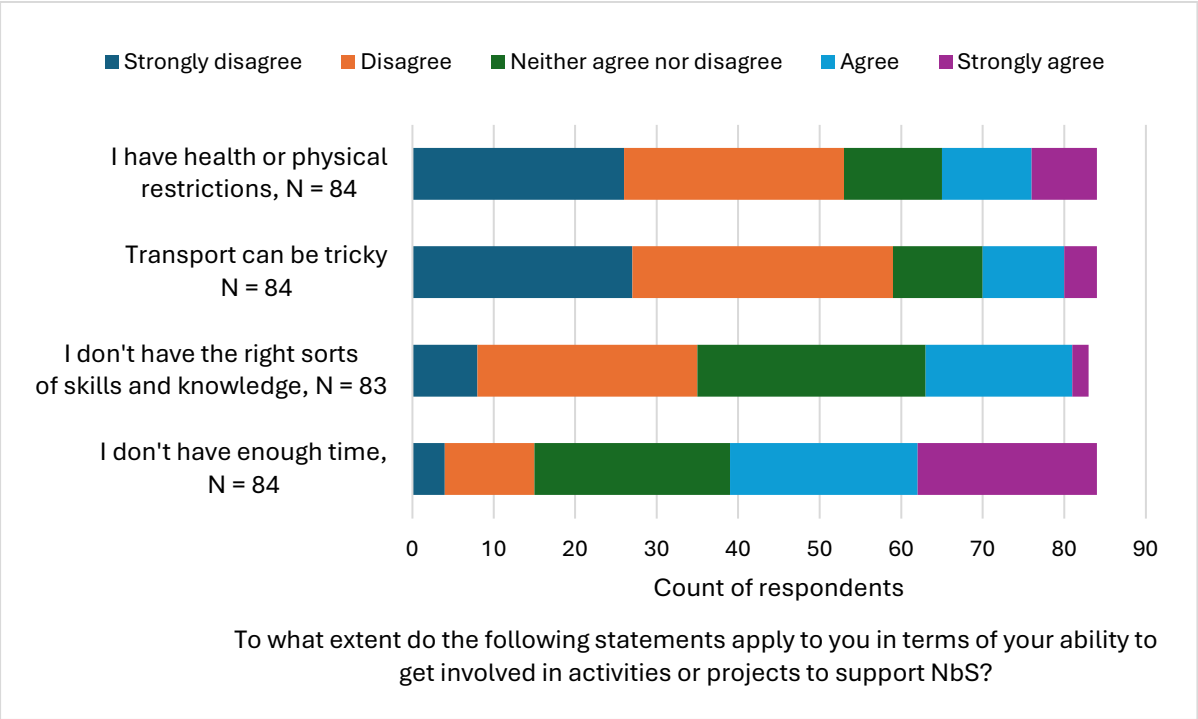


Figure 7. Responses to questions related to respondents' ability to get involved

4.3.3.1 Associations with gender and age

There were no statistically significant differences in the perceived barriers to NbS participation across gender and age, possibly due to sample size limitations. However, we summarise some potential trends below, as these may be relevant for future attention. We only note quantitative details where these are particularly striking

Time constraints affected both genders similarly, with roughly half of men and women respondents agreeing or strongly agreeing that they lacked time to participate. Older respondents were slightly more likely to cite time as a barrier.

Perceived lack of skills was a distinctly greater concern for women (30% of 40 female respondents versus 4% of 25 male respondents). Younger respondents were also more likely to be uncertain.

Transport difficulties were more likely to be reported by women, with 49% of 41 women and 76% of 25 men disagreeing or strongly disagreeing that transport was a challenge. There were no obvious relationships between age group and transport concerns.

Health or physical restrictions were reported by about a quarter of both men and women. However, older respondents were more likely to report health barriers, particularly those aged 55-64 (23% of 22 respondents) and 45-54 (28% of 18 respondents).

Overall, while some differences existed, particularly in **skills perception and transport uncertainty**, the results suggested that barriers to NbS participation were broadly similar across gender and age groups, with time constraints and perceived lack of skills being the most notable challenges.

4.3.4 Factors that may encourage involvement

In terms of factors that might encourage respondents to get more involved, an open-ended question asked respondents share their views on what, if anything, might encourage or allow them to get involved in NbS activities or projects in and around Anstruther (Table 6). 65 respondents gave responses, which in many cases offered positive counters to the barriers described in Section 4.3.3.

Many responses picked up on ideas relating to appeal or accessibility of events or activities. Some of these related to flexible and diverse ways to participate. In some cases, this was stated in terms of expectations around participation and the ability to just be involved when you could, for example: *"Less pressure and low key involvement. Ability to help when you can without feeling like you are letting anyone down"* and *"…ability to get involved a little or a lot".* Other responses highlighted the need for flexible and diverse types of participation, allowing opportunities for all sorts of abilities and interests. One respondent noted the things they *could* do and apologise that they could not do more: "*I can photograph things and record things on my walks and create a record if this is of any use. I do like interesting evening talks at Dreel Halls so [sic] try to support them, e.g. the talks on tree planting, seaweed harvesting etc. Sorry can't do more.*" Others specified particular roles that they could manage, whether administration or physical lifting. Related to the idea of diverse ways to participate, respondents highlighted that they would be more inclined to participate in projects that appealed to their interests and offered different opportunities for the participants. For some this was about the overall project or event, for example: *"Interesting experience to be involved in"* and *"If a project really interested me"*. Others noted specific interests, whether art, music, physical work, the feeling of being able to help the environment/local area, or learning particular skills or knowledge, with somebody specifying *"Any related training would be a plus alongside the practical work – knowledge / tools use /conservation / survey methods…"*. Some respondents highlighted that they would value the opportunity to meet with others, with some noting that refreshments being made available to participants would appeal.

Table 6. Thematic grouping of key issues that might enable respondents to get involved in NbS related activities mentioned by 65

Enabling factors	Count of responses	Specific issues (themes
Event appeal and accessibility	37	Appeals to different interests and offers opportunities (12); Diverse and flexible ways to participate (9); Flexibility in timing of events (5); Hold events in accessible locations (4); Child-friendly (4); Pet-friendly (1); Provision of transportation (1); Opportunities to meet people in advance (1)
Project management	31	Information provision (13); Good organisation and management (7); Clear aims, benefit, and impact (7); Synergy with current projects/activities (2); Ensuring buy-in (2)
Change of personal circumstances	4	-
Uncategorised	2	-

Also related to accessibility were comments around the timing of events. Some respondents expressed a preference for varied scheduling options, such as shorter weekend sessions or opportunities on different days of the week. A participant noted, *"Lots of flexible options for times of*

day/days of the week to get involved", with another stating "*Short sessions (not all day) on the weekends".* Other responses related to physical access, in terms of holding events close to home, or considering the characteristics of the site where an event might be held, whether indoor or outdoor. Some suggested that provision of transportation would help in this regard, with one stating *"Also, transportation. Plenty of people have transportation issues and a lot of activities occur in hard to access areas"*. Another accessibility-related factor mentioned was ensuring child-friendly or family-friendly projects, events or activities, where it was possible for children to be actively involved. One respondent also indicated that pet-friendly events would appeal.

Other responses related to different facets of project management. For some better communication and information provision about the project to prospective participants was seen as something that could facilitate engagement. Responses touched on themes of timing, format, content, and responsiveness. Examples of responses were: *"Easily accessible information about them"; "If I knew where and how to get involved!"; "More news"*; *"Further information on local Anstruther activities"*; *"As much social media information as possible".* There was also the suggestion of open days, and someone noted that the timing of communication was important: *"Given advanced notification about upcoming activities so I can organize time to get involved"*. Another suggested that information about the particular projects and roles within these would be helpful. Lastly, one respondent highlighted the important of engaging social media content and ensuring that potential participants are responded to.

Another facet of project management related to effective organisation and management. One respondent highlighted that projects should be *"Run and organised by professional, enthusiastic people",* another highlighted the need for *"strong and effective management of these projects"* and another noted that *"I would be encouraged if I felt there was a good structure and a motivated and like-minded group of people involved"*; previously they had been involved a project that had folded because they felt like they were *"…the only one making the effort."* This was something noted by another respondent who noted the importance of having enough people involved to share the load and ensure that the burden did not fall on a few key people. Other suggestions were the importance of transparency in the project and the process, a lack of bureaucracy, and the need for *"holistic, ethical, science-based exchange of information".*

A further section of these responses related to ideas around clear project aims, benefits, and impact. Respondents noted that projects and activities should benefit the local area, whether the community or local habitats. One respondent noted the importance of *"ambitious but achievable aims"* while others noted the salience of believing in long-term project impact: *"Knowing that we can all make a difference is a strong motivation"* and *"The knowledge that the project will continue into the future and will have a positive and lasting legacy."* The importance of ensuring community buy-in and wide collaboration was also highlighted. Lastly, there was the suggestion that people would be more motivated to get involved if there were ways to synergise them their current activities, whether work or other projects.

Finally, a number of responses highlighted that although certain individuals were currently unable to commit, that a change in circumstances in the future might enable them to take part.

4.3.5 Other views and experiences of local projects

Beyond the barriers and enabling factors identified by respondents (sections 4.3.3 and 4.3.4), we also asked questions to explore a range of factors which we expected, based upon the literature, might influence support for and willingness to be involved in NbS initiatives. The analysis focused on three

key areas: views on participation in nature-related projects, perspectives on priorities for action, and attitudes toward society's relationship with nature.

Assessment of views about getting involved in nature-related projects focussed on issues of communication, potential for community leadership, ability to have a voice in projects, and whether or not respondents had had previous negative experiences in similar projects. Respondents generally expressed positive attitudes towards these variables by disagreeing with the statements posed, although a minority expressed agreement, with several also expressing neutrality. For instance, in terms of past negative past experiences with nature-related projects, the majority of respondents (65%) strongly disagreed or disagreed that they had had negative experiences in the past, while 30% remained neutral (Figure 8). Only 4% agreed or strongly agreed, suggesting that past involvement in such projects has not generally been perceived as problematic, or that respondents simply had not been involved in such projects previously. Notably, among those who had previously noted involvement in NbS-related activities (Section 4.3.2), 83% strongly disagreed or disagreed, with no one expressing agreement.

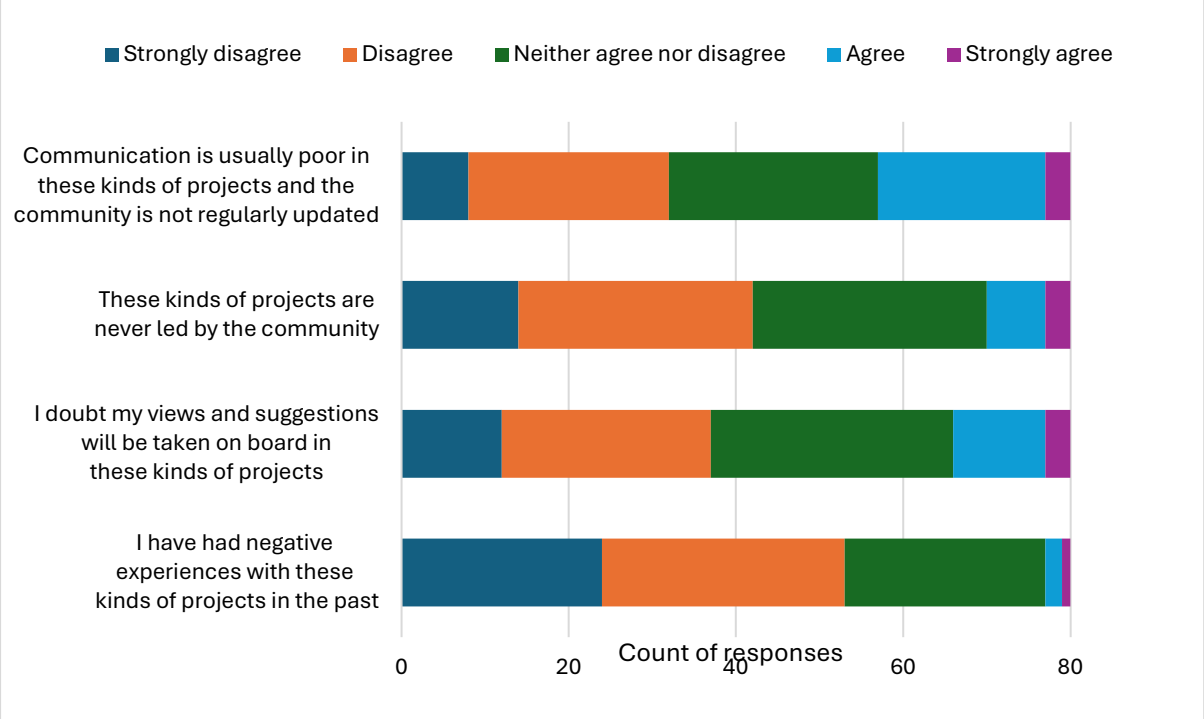


Figure 8. Response to questions about views about getting involved in nature-related projects, which assesses whether there are positive or negative views concerning communication, leadership by community, inclusivity of views and past experience with involvement. N=80 for all responses.

Similarly, the majority of respondents (47%) strongly disagreed or disagreed with the idea that their views and suggestions would not be taken on board. However, 17% agreed strongly agreed, reflecting some scepticism about the inclusivity of decision-making processes, which aligns with some of the open-text responses presented in 4.3.3.

In terms of views on the potential for community leadership in these projects, 52% of respondents strongly disagreed or disagreed that these kinds of projects are never led by the community while smaller proportion (12%), agreed or strongly agreed, suggesting that some respondents perceive a lack of local leadership; a view which was also represented in the open-text responses

Concerns about communication were more pronounced, confirming concerns raised in the open text responses. While the majority (40%) disagreed or strongly disagreed, a significant minority of respondents (28%) agreed or strongly agreed that project communication is usually poor, and the community is not regularly updated.

Despite generally positive views, a considerable proportion of respondents remained neutral, indicating uncertainty around these variables. 29% were unsure if their views would be considered, while 28% were uncertain about community leadership. Similarly, 25% expressed neutrality on communication issues, and 24% neither agreed nor disagreed about past negative experiences, suggesting limited engagement or mixed perceptions.

We also explored to what extent people support NbS versus other types of local projects. Figure 9 shows that most respondents did not see other local challenges as a reason to deprioritise NbS projects. A majority of the 78 respondents (63%) strongly disagreed or disagreed that NbS should not be a priority due to more pressing local challenges, although a considerable proportion (30%) neither agreed nor disagreed, indicating uncertainty.

A slight majority (55%) of respondents disagreed or strongly disagreed with the suggestion that there were better alternative ways of supporting Anstruther. While a very small minority (3%) agreed, there remained a considerable proportion of respondents (42%) who were uncertain. This uncertainty was particularly high among those who said they *"wouldn't be interested in supporting or getting involved in any type of local project or activity"* as 75% out of 16 respondents said that they neither agree nor disagreed, potentially suggesting that reticence linked to uncertainty about NbS rather than outright rejection of it.

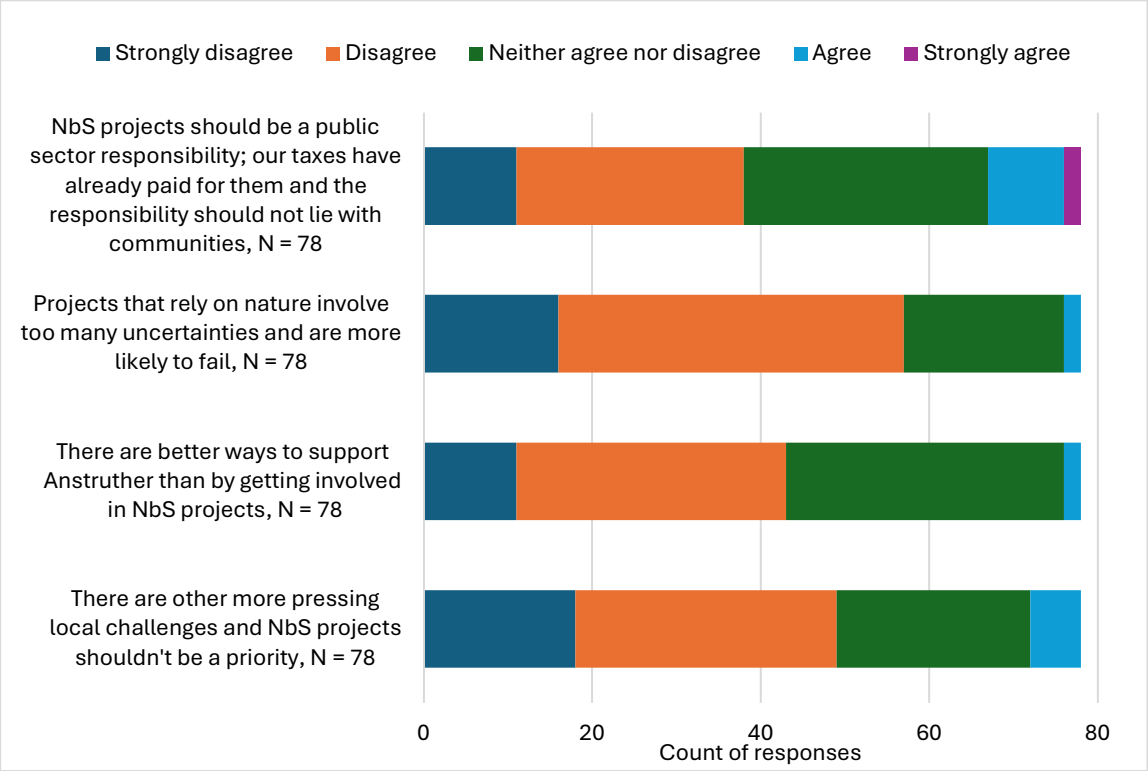


Figure 9. Responses to questions exploring views around prioritisation and responsibility of any local NbS. N=78 for all responses.

There did not seem to be widespread concern about the effectiveness of NbS. A majority (73%) strongly disagreed or disagreed that nature-based projects involve too many uncertainties and are more likely to fail – while only 3% agreed – indicating strong confidence in the feasibility of initiatives relying on nature. Confidence was particularly high among those who expressed interest in getting involved in supporting NbS-related activities. For instance, 83% among this group (46 respondents) strongly agreed or agreed with the statement, and no one disagreed. Even amongst those who were uninterested in getting involved in any local activities, including NbS, there was more uncertainty about the effectiveness of NbS (44% out of 16) as opposed to outright rejection (with only 6% agreeing that projects relying on nature involve too much uncertainty). Finally, opinions were more divided on whether NbS should be a public sector responsibility or not. For instance, while 49% disagreed or strongly disagreed that the responsibility for NbS should fall on the public sector alone, a considerable proportion (37%) were undecided with a further 14% agreeing or strongly agreeing. However, both those already involved in NbS (58% of 12 respondents) and those interested in getting involved (55% of 46 respondents) disagreed that NbS should be solely the responsibility of the public sector.

Lastly, we explored views on the relationship between society and nature, as shown in Figure 10. Responses indicated there was generally strong public recognition of nature's role in individual well-being, societal challenges, and community cohesion, alongside a widely held belief in responsibility to protect the environment. The vast majority of responses agreed or strongly agreed that nature supports personal well-being (95%), suggesting a perception of the mental health benefits of green spaces. Responses followed a similar pattern of agreement that nature can help address societal challenges, that people have a responsibility to respect and care for nature, and that nature can foster local community connections. These strong positive responses came irrespective of respondents' willingness to be personally involved in NbS projects. Notably, none of those who said they would not be interested getting involved in NbS initiatives expressed disagreement (with the exception of one respondent who disagreed that people have a responsibility to protect nature), perhaps indicating that inability to get involved in such initiatives is not due to a lack of belief in environmental responsibility but is instead mediated by other barriers.

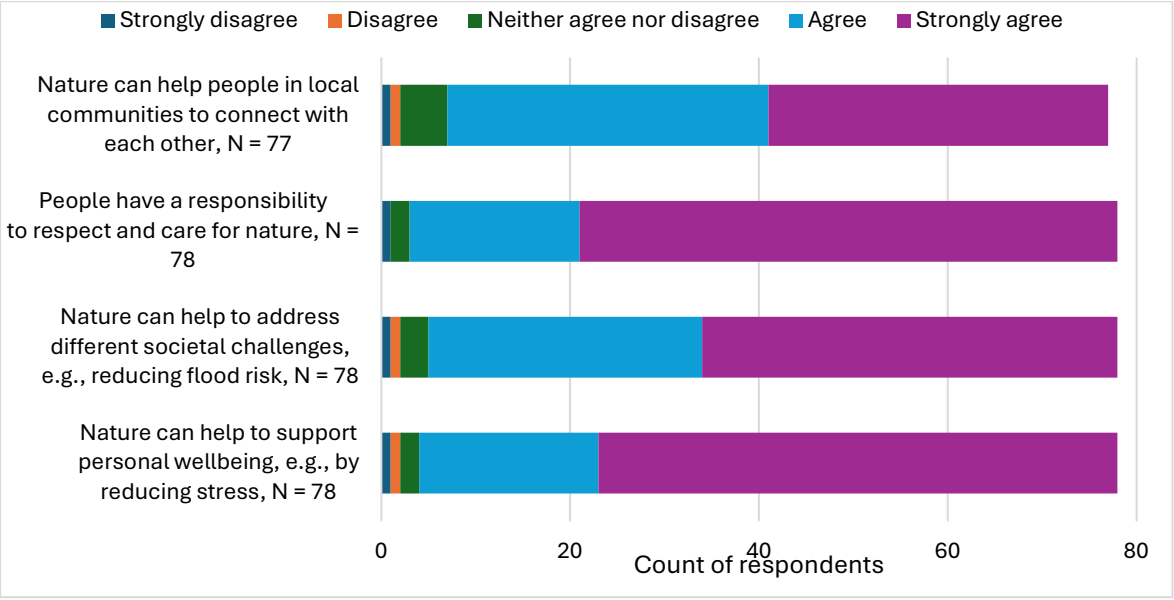


Figure 10. Ratings selected to indicate agreement or disagreement with statements related to the importance of nature and society's role in safeguarding nature

5 Discussion

The findings from this study provide insights into what influences public understanding, participation in and support for local NbS. The discussion that follows highlights the key findings emerging from the study, then considers implications for academia, policy and practitioners.

5.1 Review of key findings

This section summarises the answers to our research questions, and briefly reviews how these relate to pre-existing work on NbS and community engagement.

What were local people's understandings of NbS? At the start of our survey, we provided respondents with a description of NbS and examples of its application. Before this introduction, familiarity with the term NbS was low. Even among those who spent time in nature or had nature-related jobs, NbS terminology was not a familiar term, underscoring the disconnect between academic and policy frameworks and community-level environmental efforts. After reading about the definition, respondents recognised that there were pre-existing local initiatives that aligned with the ideas behind NbS; such as tree planting, wetland restoration, and green space enhancement. As such, it seems there is a familiarity with activities to manage or work with nature, regardless of low public use of or familiarity with NbS-specific terminology (though of course, local people's recognition of NbS-related activities may have been shaped by the description given in the survey).

What was the involvement of local people in initiatives related to NbS? There was widespread awareness of local green initiatives, and also many expressed interest in supporting NbS in future. Ideas mentioned included greenspace development, tree planting, natural flood management, and habitat enhancement. However, current involvement in projects working with nature was lower than these levels of interest, whilst rates of involvement were also lower than for some other local types of local volunteering, e.g. to support care in the community. Participation in existing initiatives was mostly described in terms of 'hands-on' activities such as tree planting, habitat restoration, and litter clean-ups, whilst fewer respondents held monitoring or governance roles.

What were the barriers and enablers to local involvement in initiatives related to NbS? Several barriers deterred participation. Time constraints – due to work, family commitments, and other voluntary obligations – were the most frequently cited. Governance issues, such as unclear leadership, exclusivity within initiatives, and poor communication, left many unsure about how to engage. Past experiences of other initiatives – not necessarily related to NbS – shaped these views. A perceived lack of expertise also discouraged participation, as some felt they lacked the necessary skills. A notable subset of our respondents cited a variety of practical accessibility challenges, including physical health conditions, transportation difficulties, and childcare responsibilities. Ideas for enabling participation offered mirrored these barriers. In general, responses suggested that flexible participation models, allowing different levels of commitment, would encourage more engagement.

Although there were no significant associations with responses and demographic attributes such as age or gender, there were some indications that that different age groups might vary in their familiarity with NbS and perceived barriers to engagement. Any such differences may reflect generational differences in education, technology use and different life stages – understanding these factors could be an important topic for future attention.

Our findings are consistent with studies from other settings that show there can be public support for NbS (Anderson & Renaud, 2021) especially when it is seen as offering local tangible outcomes (Ferreira et al., 2022; Raymond et al., 2017). However, they also show that levels of involvement do

not always match levels of interest in NbS. To increase levels of engagement, it will be useful to appraise opportunities to engage stakeholders in different aspects of NbS (Ibrahim et al., 2025) in conjunction with awareness of perceptual and practical barriers to engagement.

Our respondents cited a number of practical challenges as potentially constraining their involvement. Challenges such as exclusivity in decision-making, poor communication, or lack of transparency are well-documented in studies of NbS projects (e.g. Rodríguez-Izquierdo et al., 2010; Toxopeus et al., 2020) and these echo some of the challenges that respondents said might deter their involvement, including limited outreach, lack of follow-up on volunteer opportunities. Structural barriers such as time constraints, competing commitments, and accessibility issues are also widely recognised (Dyer et al., 2014; Han & Kuhlicke, 2019; Kiss et al., 2022). These also link to the effect of past experiences, which can erode trust and discourage participation (Han & Kuhlicke, 2019; Wamsler et al., 2020a).

Communicating clear options and pathways for involvement can help to address practical barriers and accessibility issues, helping to achieve the full range of possibilities for engagement and involvement in NbS (Kiss et al., 2022; Wamsler et al., 2020a; Wolff et al., 2022). Were NbS to be linked to other local concerns, this may enhance interest and involvement (Raymond et al., 2017; Seenath et al., 2025).

This has a number of implications for those who manage new or existing initiatives to work with nature 'practitioners'), as well as academia and policy.

5.2 Implications for practitioners

There are implications for those who would seek to promote community engagement in working with nature in and around Anstruther, reinforcing approaches already taken locally.

Firstly, interest or enthusiasm for NbS is promising but cannot be assumed to automatically lead to future involvement. Therefore, to foster involvement it is important to recognise and offer opportunities that reflect interests and expertise as well as practical constraints, ideally offering a diversity of ways to get involved (e.g. in different roles, at different times, some not involving strenuous physical work, perhaps ensuring that some events are designed to be inclusive of children). Given that time constraints were the most frequently cited barrier in Anstruther, offering flexible participation options, such as short-term volunteering, hybrid participation (in-person and digital), and community-based citizen science, can increase involvement (Loghmani-Khouzani et al., 2024). Understanding more about people's existing routines and responsibilities may be necessary to help tailor and communicate diverse participation options. It may also be useful to consider, plan, and emphasise how NbS or specific projects link to different interests, such as learning opportunities, health benefits, existing community initiatives and priorities. Considering synergies and partnerships with existing local initiatives (e.g., care in the community and green health) could be very helpful, both for raising awareness and offering prospective participants an efficient way of contributing towards the issues that matter to them.

Improving communication and visibility is another key priority given that many respondents who expressed interest in getting involved did not know how, and others cited concerns about exclusivity. Practitioners could leverage community networks, social media, and regular interactive engagement (e.g., open meetings, neighbourhood forums) to keep people – beyond the existing few – informed and actively involved. Relating to comments about the need for timely communication around events, creating and circulating a schedule of events in advance for a specified time period would enable potential participants to plan accordingly. Prior studies show that strong communication and

structured volunteer management improve participation rates in NbS projects (Kiss et al., 2022), reinforcing the need for clearer follow-up mechanisms and defined roles within NbS initiatives.

We note that these implications are likely to also be relevant to other settings, though will always require tailoring to specific contexts. Anstruther is a place notable for an active community association, local volunteering opportunities and prominent nature related projects (notably the Dreel Burn Project). In places where there are already fewer volunteering activities or nature projects, initiating new projects with good community involvement may require more 'ground work'. In general, NbS practitioners, including urban planners, conservation organisations, and community leaders, should focus on making NbS engagement more flexible, visible, and accessible.

5.3 Implications for academia

The findings highlight a disconnect between academic discourse on NbS and community involvement, demonstrating low familiarity with the term even among professionals in nature-related sectors. This reinforces previous calls for bridging the gap between research and practice (Raymond et al., 2023). Therefore, future research could explore how to effectively communicate NbS concepts without over-reliance on technical language, as well as how NbS can be integrated into broader community priorities without losing its core principles.

Another key research area is understanding the long-term sustainability of community involvement in NbS. While many NbS projects are launched with strong initial enthusiasm, maintaining engagement over time requires effective governance and stakeholder engagement (Tapia et al., 2025). Previous studies suggest that community-led governance structures play a crucial role in sustaining participation (Muwafu, 2024). Tracking involvement in existing and ongoing initiatives can offer valuable insights on this topic, aiming to identify what sustains long-term involvement. This could involve studying initiatives such as the Dreel Burn Project but also those in other social contexts, such as urban groups volunteering to create and manage greenspaces or watercourses.

Additionally, while studies often emphasise governance barriers at the policy level (Toxopeus et al., 2020), our study suggests that practical barriers, such as time constraints and unclear participation pathways, can be just as significant. More research is needed to understand if and how participation models can be made more flexible and integrated into people's existing commitments, rather than expecting them to take on entirely new roles. Projects that are driven or co-produced by community members presumably offer the best chance of developing such approaches (Kiss et al., 2022) but also entail a need for skilled facilitators or mediators (AlWaer & Cooper, 2020).

5.4 Implications for policy and the public sector

At present, there is no specific 'NbS policy' in Scotland or elsewhere, but our findings have relevance for those in the public sector who seek to enable, fund or promote initiatives to work with nature, such as the Scottish Government's Nature Restoration Fund[2]. Proposals that include elements of community engagement – ideally going beyond 'just' communication efforts, to also include involvement – should be preferred. It may be feasible to learn from and link to existing guidance and support, such as Scotland's Volunteering Action Plan[3]. Conversely, initiatives already focused on community empowerment could usefully consider if and how they will work with nature, perhaps building on existing commitments to support communities to become carbon neutral[4].

[2] https://www.nature.scot/funding-and-projects/scottish-government-nature-restoration-fund-nrf
[3] https://www.gov.scot/publications/scotlands-volunteering-action-plan/
[4] https://www.gov.scot/policies/community-empowerment/

Another key implication is the need for financial and logistical support to overcome time constraints, competing obligations, and accessibility challenges. Research suggests that funding mechanisms that empower local communities can to stronger, more sustainable involvement (Ferreira et al., 2022). Additionally, financial incentives and logistical support, such as transport assistance and flexible schedules, have been shown to increase participation and equity in NbS initiatives (Chan et al., 2023; Fitria et al., 2024). Given that many NbS projects depend on volunteers, structured financial support can ease burdens and encourage sustained involvement.

More generally, it is unclear whether use of NbS terminology should or could be promoted by the public sector. Research highlights that how NbS is framed significantly affects public acceptance, with people more likely to engage when NbS is connected to tangible local benefits rather than abstract environmental concepts (Anderson & Renaud, 2021). Rather than focusing on NbS terminology it may be more important to promote the ethos of NbS, and community-centred narratives that link NbS to everyday concerns such as public health, economic resilience, and social well-being, making it more relatable and actionable (Raymond et al., 2023).

5.5 Research Limitations

This study focussed on a single locality, Anstruther, which was selected for its proximity to the Dreel Burn Project, which may affect how far the findings can generalised to other communities. Additionally, the sample is somewhat imbalanced across certain demographic groups, notably with limited representation of younger respondents.

Another consideration is that respondents were provided with an explanation of NbS and given examples. This approach ensured respondents were referring to a similar set of ideas when they gave their answers but may also have influenced their responses, potentially leading to greater reported familiarity than if they had been asked without prior explanation. This should be considered when interpreting the study's findings.

It would therefore be valuable to consider future opportunities to explore these issues with other individuals, both in Anstruther, and in other settings; and also to use other methods which allow deeper exploration of understandings and experiences.

6 Conclusion

This report highlights the factors influencing community perceptions, support, and involvement in local initiatives related to NbS. While there is strong recognition of nature's benefits and widespread willingness to engage, participation can be limited due to time constraints, accessibility challenges, lack of awareness, and social dynamics. If future NbS are to be developed, this reinforces the need for inclusive engagement strategies, effective communication, and diverse participation opportunities. Successful Nature-Based Solutions with strong community involvement require as much attention to society as to nature.

Next steps

We intend to share a summary of this report with those survey participants who indicated their willingness to receive feedback. We also hope to share and discuss key findings with local community members or representatives, potentially by organising a workshop later in 2025 to further explore the enablers and barriers to participation. This will provide an opportunity to gather additional insights, clarify priorities, and explore strategies for fostering greater involvement. Anonymised feedback from these discussions will again be reported and shared within and beyond Anstruther. We hope this work will help foster community engagement in NbS relevant across Scotland.

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8 Appendices

Appendix A: Respondents background

Variable	Frequency	%
Gender of respondents (N=66)		
Female	41	62.1
Male	25	37.9
Total	**66**	**100**
Age of respondent (N=78)		
18 - 24	1	1.3
25 - 34	8	10.3
35 - 44	9	11.5
45 - 54	18	23.1
55 - 64	22	28.2
Prefer not to say	20	25.6
Total	**78**	**100.0**
Respondents' relationship to Anstruther (N=78)		
I am a resident of Anstruther or the surrounding area	73	93.6
I work in or near Anstruther, but I live elsewhere	1	1.3
I own a holiday home in or near Anstruther	3	3.8
Other (Please specify below)	1	1.3
Total	**78**	**100.0**
Duration of residence in Anstruther or the surrounding area (N=78)		
Less than five years	10	13.7
Between five and ten years	9	12.3
More than ten years	54	74.0
Total	**73**	**100.0**
Duration of respondents' knowledge of, or association with Anstruther and/or the surrounding area (N = 78)		
Less than five years	10	12.8
Between five and ten years	9	11.5
More than ten years	59	75.6
Total	**78**	100.0
Frequency of respondents' ability to walk through or spend time in natural places in and around Anstruther (N = 78)		
Every day	22	28.2
Most days	26	33.3
Once or twice per week	22	28.2
Once or twice per month	5	6.4
Very rarely or never	3	3.8
Total	**78**	**100.0**
Respondents' work in nature-related occupation (N = 78)		
Yes	11	14.1
No	67	85.9
Total	**78**	**100.0**

Appendix B: Source for images in Figure 1

Image sources [accessed 14/06/24]	
Tree planting	https://2030palette.org/riparian-buffers/
Rain gardens	https://greenactiontrust.org/project/zetland-park-raingarden/
Wetlands	https://inews.co.uk/news/turkey-brook-london-river-save-uk-waterways-2312081
Grassy channels	https://wiki.sustainabletechnologies.ca/images/7/7f/DAA_Grass_swales_1_550x550.jpg
Parks & greenspaces	https://greenactiontrust.org/solution/urban-greenspace/
Leaky dams	https://www.jbatrust.org/about-the-jba-trust/how-we-help/publications-resources/rivers-and-coasts/nfm-leaky-barrier-retention-times/

Appendix C: Survey questions

1) Were you familiar with the term 'Nature-based Solutions' before taking part in this survey?

- ☐ Very familiar
- ☐ Somewhat familiar
- ☐ Not familiar

Please add any further comments here:

2) The Dreel Burn project is an example of a local NbS project. Have you heard of it?

- ☐ I have heard quite a lot about it
- ☐ I have heard of it but don't know much about it
- ☐ I have never heard of it *[Please proceed to QUESTION 6]*

Image from https://www.dreelburn.earth/helping-restore-transform/

Image from https://www.dreelburn.earth/location/

3) What, if anything, do you think the goals of the Dreel Burn project are?

4) Have you ever been involved in the Dreel Burn project?

☐ Yes ☐ No *[Please proceed to QUESTION 6]*

5) Please briefly describe how you have been involved in the Dreel Burn project.

6) Are you aware of any other projects or activities around Anstruther (past or present) that might relate to the idea of NbS, even if they call themselves something else?

☐ Yes

☐ No *[Please proceed to QUESTION 11]*

☐ Not sure *[Please proceed to QUESTION 11]*

7) You indicated that you were aware of projects or activities around Anstruther that relate to the idea of NbS. If you can, please name and/or give brief descriptions of these. *[There is additional writing space on Page 11 if required]*

	Name	Description
Project 1		
Project 2		
Project 3		
Project 4		
Project 5		

8) Have you ever been involved in any of the projects or activities you mentioned above?

☐ Yes ☐ No *[Please proceed to QUESTION 11]*

9) Please briefly describe how you have been involved in these projects or activities.

10) Please indicate your agreement with the following statement by selecting the appropriate choice from the scale below.

	1	2	3	4	5
I would like to see more NbS-related activities in and around Anstruther	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
	☐	☐	☐	☐	☐

Please add any further comments here:

Section 2: Thinking about life in Anstruther

Of course, there are lots of things going on in and around Anstruther. We'd now like to step back from the idea of NbS to find out more about what other kinds of things are going on locally, and your awareness of or involvement in any other local activities. These don't need to have anything to do with nature or the outdoors.

11) Are you aware of other local voluntary projects or activities carried out to help people in Anstruther – beyond anything that you might have mentioned earlier?

☐ Yes ☐ No *[Please proceed to QUESTION 15]*

12) If you can, please name or give brief descriptions of any ongoing or past local voluntary projects or activities that you can recall. *[There is additional writing space on Page 11 if required]*

	Name	Description
Project 1		
Project 2		
Project 3		
Project 4		
Project 5		

13) Have you ever been involved in any of the projects or activities you mentioned above?

☐ Yes ☐ No *[Please proceed to QUESTION 15]*

14) Please briefly describe how you have been involved in these projects or activities.

Section 3: Your interest / ability to get involved in NbS, in and around Anstruther

This section is about whether or not you might be interested in getting involved in NbS projects in and around Anstruther, and the reasons behind this. There are no right or wrong answers - we know that not everybody is able to get involved in everything, and that some activities have to be prioritized over others.

15) If circumstances permitted, would you be interested in somehow supporting or getting involved in NbS, in and around Anstruther?

☐ I already support or am involved in NbS locally

☐ I'd be interested in supporting or getting involved in local NbS projects or activities

☐ Maybe not NbS, but I'd be interested in supporting or getting involved in other kinds of local projects or activities *[Please proceed to QUESTION 17]*

☐ I wouldn't be interested in supporting or getting involved in any type of local project or activity *[Please proceed to QUESTION 17]*

16) Are there certain types of NbS activities that interest you more than others? If so, what are these? As inspiration, please see overleaf a range of activities that could be considered examples of NbS

17) What, if anything, might put you off or stop you getting involved in NbS activities or projects in and around Anstruther?

18) What, if anything, might encourage or allow you to get more involved in NbS activities or projects in and around Anstruther?

19) Personal circumstances and practicalities mean not everyone can get involved in NbS. To what extent do the following statements apply to you in terms of your ability to get involved in activities or projects to support NbS?

	1 Strongly disagree	2 Disagree	3 Neither agree nor disagree	4 Agree	5 Strongly agree
I don't have enough time	☐	☐	☐	☐	☐
I don't have the right sorts of skills and knowledge	☐	☐	☐	☐	☐
Transport can be tricky	☐	☐	☐	☐	☐
I have health or physical restrictions	☐	☐	☐	☐	☐

Other, please specify here:

Section 4: Working with nature: your views and experiences

In this section, we ask about other views and experiences that might relate to your earlier responses. Again, there are no right or wrong answers. Please feel free to skip any questions that you'd prefer not to answer, though we'd love you to answer as many as you can! After this section, there are just a few easy questions about your background.

20) Your views about getting involved in nature-related projects

Please indicate your agreement with the following statements by selecting the appropriate choice from the scale below.

	1 Strongly disagree	2 Disagree	3 Neither agree nor disagree	4 Agree	5 Strongly agree
I have had negative experiences with these kinds of projects in the past	☐	☐	☐	☐	☐
I doubt my views and suggestions will be taken on board in these kinds of projects	☐	☐	☐	☐	☐
These kinds of projects are never led by the community	☐	☐	☐	☐	☐
Communication is usually poor in these kinds of projects and the community is not regularly updated	☐	☐	☐	☐	☐

Other, please specify here:

21) Your views about what priorities should be

Please indicate your agreement with the following statements by selecting the appropriate choice from the scale below.

	1 Strongly disagree	2 Disagree	3 Neither agree nor disagree	4 Agree	5 Strongly agree
There are other more pressing local challenges and NbS projects shouldn't be a priority	☐	☐	☐	☐	☐
There are better ways to support Anstruther than by getting involved in NbS projects	☐	☐	☐	☐	☐
Projects that rely on nature involve too many uncertainties and are more likely to fail	☐	☐	☐	☐	☐
NbS projects should be a public sector responsibility; our taxes have already paid for them and the responsibility should not lie with communities	☐	☐	☐	☐	☐

Other, please specify here:

22) Your views about society and nature

Please indicate your agreement with the following statements by selecting the appropriate choice from the scale below.

	1 Strongly disagree	2 Disagree	3 Neither agree nor disagree	4 Agree	5 Strongly agree
Nature can help to support personal wellbeing, e.g., by reducing stress	☐	☐	☐	☐	☐
Nature can help to address different societal challenges, e.g., by reducing flood risk, by providing recreation opportunities	☐	☐	☐	☐	☐
People have a responsibility to respect and care for nature	☐	☐	☐	☐	☐
Nature can help people in local communities to connect with each other	☐	☐	☐	☐	☐

Other, please specify here:

Section 5: Questions about you

Finally, this is about you and your life in Anstruther. These will give us a sense of the range of people who are responding to this survey and allow us to spot any links with other responses. For example, we might find that people who have lived in Anstruther for less time seem to be more or less aware of certain projects. We don't collect any information that allows for you to be individually identified.

23) What is your relationship to Anstruther?

☐ I am a resident of Anstruther or the surrounding area

☐ I am a temporary resident of Anstruther or the surrounding area

☐ I work in or near Anstruther but I live elsewhere *[Please proceed to QUESTION 25]*

☐ I own a holiday home in or near Anstruther *[Please proceed to QUESTION 25]*

☐ I am a visitor *[Please proceed to QUESTION 25]*

☐ Other, please specify below:

24) How long have you lived in Anstruther or the surrounding area?

☐ Less than 5 years ☐ Between 5 and 10 years ☐ More than 10 years

25) How long have you known or been associated with Anstruther and/or the surrounding area?

☐ Less than 5 years ☐ Between 5 and 10 years ☐ More than 10 years

26) How often are you currently able to walk through or spend time in natural places in and around Anstruther? Please select the option that best matches your experience.

☐ Every day ☐ Most days ☐ Once or twice per week

☐ Once or twice per month ☐ Very rarely or never

27) Do you work in a nature-related occupation?

☐ Yes ☐ No

If yes, what is your nature-related occupation?

_____

[You can leave this blank if you would prefer not to say]

28) Age

□ 18-24 □ 25-34 □ 35-44 □ 45-54 □ 55-64 □ 65 and over

□ Prefer not to say

29) Gender _____

[You can leave this blank if you would prefer not to say]