

Diversifying Volunteer Engagement with Citizen Science in the Chilterns

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Nicola Lynes, Siobhon Hayes



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Executive summary

The project was conducted to explore ways in which the current Chilterns National Landscape citizen science projects could diversify their volunteer audience.

Through engagement with project staff, community organisations and the general public, some themes emerged:

Internal Equality, Diversity and Inclusion work and volunteer procedure

Chilterns National Landscape have an ambitious EDI statement which seeks to embed inclusion across all aspects of their work. However, there seems to be little overall consistency for project staff to monitor or understand the diversity of existing volunteers. These volunteer procedures should be addressed as a priority for CNL to better understand their volunteer audience and implement data-led decisions to guide future work to increase diversity, and this work resourced properly.

Language and promotion of projects

While understood and positively received by existing staff and volunteers, the term “Citizen Science” held little meaning among the general public. Attention should be given to the language used in public facing documents when promoting volunteer projects including websites, volunteer adverts, social media posts and leaflets to reduce ‘jargon’ barriers to engagement.

Changes could be made to promotion and advertising of volunteer opportunities to increase engagement among a wider audience. This includes consideration of where opportunities are promoted, how the work is described, providing more information about what is expected at first point of contact, providing assurance that staff can provide reasonable adjustments according to needs.

Public interest with wildlife identification and monitoring

At a public event, 52 members of the public were asked about their understanding of citizen science, their knowledge of local projects and wildlife and their participation in recording nature. All participants showed an interest in wildlife and an understanding of examples of public wildlife monitoring projects (for example Big Garden Birdwatch, Big Butterfly Count). This demonstrates that there is a high level of interest among the public about wildlife and its current decline in the UK, which could be encouraged into participation in citizen science activities.

Partnerships

There is a strong opportunity to develop partnerships which can help CNL reach more diverse audiences. This includes collaborating with smaller, local citizen science initiatives to generate more species data and engage a wider range of people, and also with organisations who specialise in working with diverse communities (for example health support groups, different cultures and LGBTQ+ groups). These partnerships and relationships can take time to build, and so consideration of how to properly resource this work should be considered.

Introduction

What is Chalk, Cherries, Chairs Landscape Partnership Scheme?

The Chilterns National Landscape (CNL) is one of 46 National Landscapes in the UK (formerly known as Areas of Outstanding Natural Beauty). The Chilterns is a home and a workplace for over 80,000 people and 1.6 million people live within 8km of the National Landscape ([Chilterns Management Plan, 2019-2024](#)).

[Chalk, Cherries and Chairs](#) (CCC) is an ambitious Landscape Partnership Scheme that aims to connect local people to the wildlife and cultural heritage of the Central Chilterns. It operates under three themes – wildlife, heritage and people. CCC is funded by the [National Lottery Heritage Fund](#) with match funding from a range of sources, and is hosted by the Chilterns National Landscape. The scheme started in April 2019 and comes to an end in November 2024.

What is citizen science?

‘Citizen Science’ is an overarching term used for any project which engages members of the public in collecting and submitting data for research purposes. This approach means that much larger datasets can be collected and analysed than could be generated by researchers on their own. In the Chilterns National Landscape there are a number of citizen science initiatives, including [‘Tracking the Impact’](#), [‘Mend the Gap’](#) and the [‘Chilterns Chalk Streams Project’](#).

What is the need for this piece of research?

Throughout the Chalk, Cherries and Chairs scheme, it was noted anecdotally by citizen science project co-ordinators that the range of volunteers engaged in the various Chilterns National Landscapes projects do not represent a diverse range of demographics, particularly with regards to age, gender and ethnicity. The original brief requested consideration of this observation in the context of the core Chilterns National Landscape aspiration that all should feel welcome, confident and safe to participate in activities in the Chilterns landscape.

The [CNL Equality, Diversity and Inclusion Ambition Statement](#) clearly sets out the core values and aspirations in relation to all engagement work across the Chilterns National Landscape. These are below:

- Strive to ensure that people of all ages, abilities and backgrounds have a fair chance to take part in public engagement activities or volunteering opportunities.
- Actively seek to form relationships with those who aren’t accessing our activities, and to provide for people’s different needs.
- Seek to attract a wide range of people to our volunteering and public engagement programmes, festivals, events and other activities.

The ask of the consultant for this project was as follows:

1. To research other citizen science projects in the Chilterns and nationally, to understand what is offered by other organisations, whether they also have the same challenges with volunteer diversity or are approaching things differently to reach diverse audiences, and to suggest if the Chilterns National Landscape projects could approach their work differently to reach their objectives for equality, diversity and inclusion.

2. Summarise existing research into the barriers and motivations for participation in citizen science and national landscapes, and use this research to advise on best practices for diversifying audience participation with citizen science.
3. Review current volunteering with Chilterns National Landscape citizen science projects
4. Summarise the findings, pull out the main strategic insights and deliver a workshop for Chilterns National Landscape staff to present findings and recommendations.

[Support Staffordshire](#), as a member of Cirican Consulting LLP, was appointed to deliver this piece of work based on our expertise in undertaking research and advising organisations on reaching diverse communities, and our previous experience in running citizen science projects as part of Landscape Partnership Schemes.

[Cirican Consulting LLP](#) are a consultancy arm formed by fifteen members of the Action for Communities in Rural England (ACRE) network of rural development charities. All members are locally rooted rural charities based across England. Together with ACRE and Rose Regeneration, the Cirican partnership brings on-the-ground experience of engaging with partners, volunteers and communities. Our long-term links into communities facilitate engagement by leveraging trusted relationships and allow research findings to be placed in a local context.

A note on terminology

‘Citizen science’ is used throughout this report as an umbrella term for all wildlife, conservation and heritage projects which engage volunteers to collect, submit and analyse data which contributes to the long-term understanding of local wildlife and habitats. The suitability use of this term in public engagement, communications and marketing is discussed in more detail in this report, but as it is a familiar term to the Chilterns National Landscape team, we have used it throughout this report.

We have avoided using terms such as ‘hard to reach’, ‘ethnic minorities’ and ‘BAME’. We have based our language on our experiences in working with diverse communities, and have listened to their preferences on the language used to describe their communities. Language is ever-changing, and we strive to learn from and improve our communication to and about different demographic groups based on respect and understanding. Some guidance on the use of terminology around diversity is included in the appendices.

Research objectives and methodology

Research questions from the brief:

1. **Where does Chilterns National Landscape fit into the overall Citizen Science picture?**
2. **Do we need to shake up/ redesign the way we deliver such projects to access and engage a wider audience? For example, a co-creation approach working with specific communities or target audiences.**
3. **To what extent can we adapt our existing programmes to remove barriers and reach new, diverse audiences?**
4. **Who should we collaborate/partner with and what should our role be (direct delivery, enabler/facilitator)?**

Part of the original brief was to review existing CNL volunteers and their experiences in volunteering for citizen science projects. However, this overlapped with other pieces of work commissioned by the Chalk, Cherries, Chairs team (Community Impact Bucks 'Volunteering in the Chilterns National Landscape' and specific 'Tracking the Impact' volunteer evaluation), so it was felt that including the current volunteer experience in this research would be unnecessary duplication for little additional gain.

It was therefore decided that the focus should be changed to understand the range of community-based citizen science opportunities in the Chilterns, and to investigate what is understood by the term 'citizen science' among the general public. The purpose of this would be to understand if there is wider audience diversity among other local citizen science projects, and to gain insights on how 'citizen science' is perceived among the potential diverse volunteer pool among the public in the Chilterns.

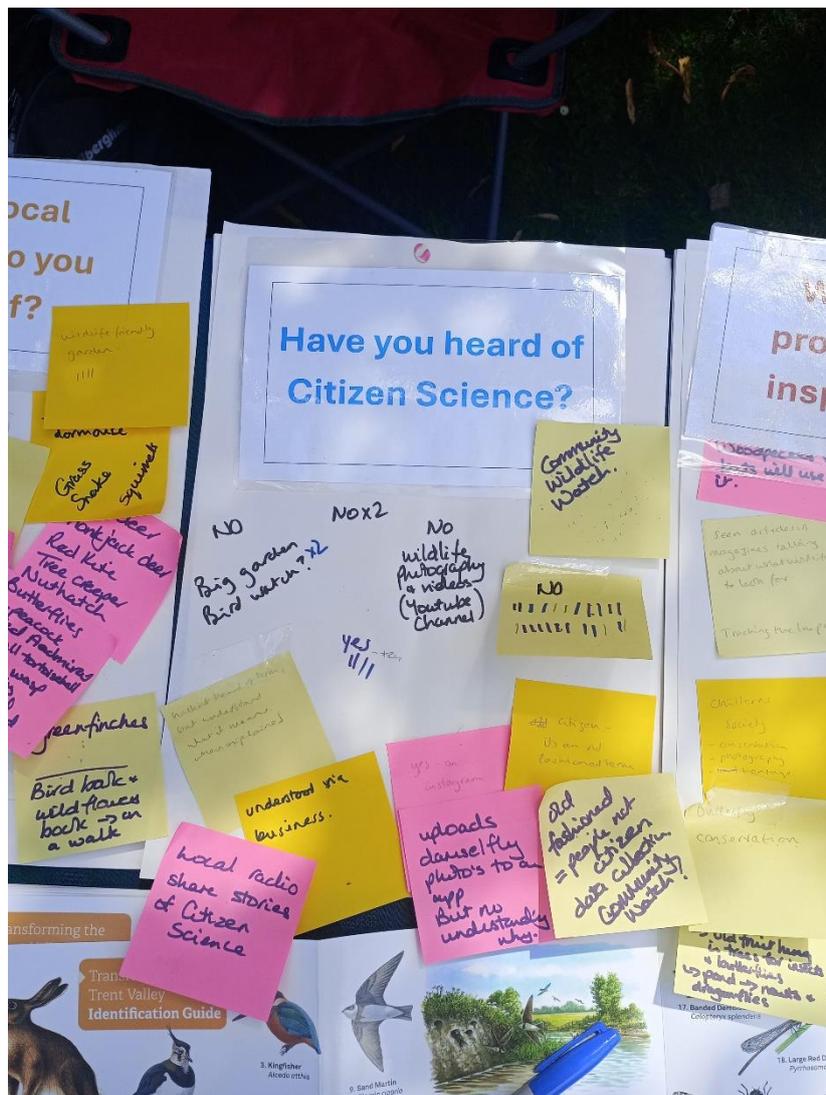
Methodology

Throughout July and August 2024 we conducted the following workshops and events:

1. Workshops with CNL citizen science co-ordinators to understand:
 - the existing projects led by CNL
 - current volunteer recruitment and retention practices
 - what CNL staff mean when using the term 'diversity'
 - "What does good look like" with regards to ambitions for volunteer diversity
2. Workshops with community organisations in the Chilterns to understand:
 - what other community organisations are running citizen science activities
 - what community groups understand by the term 'citizen science'
 - what the audience diversity is among wider organisations
 - the potential for joined up working between community groups and the Chilterns National Landscape
3. Engagement with the wider public at a Family Fun Day event to understand:
 - What engagement with wildlife exists among the wider public
 - What is understood by the term 'citizen science'
 - What citizen science projects are known by the general public in the Chilterns

4. Reflection workshop with CNL staff to discuss:
- Findings of research so far
 - How the suggested recommendations could be implemented within CNL projects and strategy.

Photo 1: Taken at Wycombe Museum Chairs Festival 'Citizen Science' stand



Literature review

The aim of this desk-based research was to learn from other citizen science projects locally and nationally, using reflections and best practise from other projects to guide our own recommendations for the Chilterns National Landscape.

Citizen Science projects

Organisation and funder (where known)	Project name and aims	Length of project	Geographical reach	Main findings
Field Studies Council (National Lottery Heritage Fund)	Biolinks Aims to increase number of records for under-recorded invertebrate groups and to increase skills in invertebrate identification.	4 years (2018-2022)	South East England and West Midlands	<ul style="list-style-type: none"> • Low ethnic diversity in participation numbers, despite working in areas of with high ethnic diversity (Birmingham, London). • Included targeted work to increase participation in young people through youth residential courses, youth conferences, targeted social media promotion, partnering with youth-focussed conservation organisation. • Pilot project to upskill FSC staff in supporting neurodiverse individuals after noting that there was a high percentage of neurodiverse people on FSC biological recording courses. • Successfully engaged young adults (16-25) via virtual training programme, but this younger age group were significantly under-represented on place-based courses. • 4 staff employed
Herefordshire Biological Records Centre and Cultivating Learning and Nature CIC (National Lottery Heritage Fund)	Hidden Herefordshire Aim to recruit and train a new generation of biological recorders, focussing on young people,	2 years (2021-2023)	Herefordshire	<ul style="list-style-type: none"> • Successfully engaged people who were not previously involved in biological recording, partly due to improved communications (social media, revamped website) • Measured ethnicity among participants, found it was broadly in line with Herefordshire's ethnic breakdown.

	people from lower socio-economic backgrounds, and other under-represented groups.			<ul style="list-style-type: none"> Majority of age range was adult, low participation below age 44. Offering a wide range of subjects has helped attract more and a wider range of people. Noted they could have spent more focus on engaging 'hard to reach' groups (projects own phrasing) eg young people (12-18). 1 Full time project officer
Southern Uplands Partnership	<p>Where's Wildlife in Ayrshire</p> <p>Aim to engage local people in locally distinctive wildlife sightings, and to generate new interest in wildlife recording.</p>	2 years (2016-2018)	Southern Uplands (Scotland)	<ul style="list-style-type: none"> No data on participant demographics. Attending local 3rd party events helped to raise awareness among wider public. Linking with community groups has helped to extend interest and participation in wildlife recording. Full time project officer
Campaign for National Parks	<p>Mosaic</p> <p>Aim to ensure that all people have an equal opportunity to enjoy National Parks, with a focus on engaging Black and Ethnic Minority communities with national parks by recruiting 'Community Champions'</p>	3 years (2009-2012)	Nationwide (National Parks)	<ul style="list-style-type: none"> Notes on term 'volunteer' – project reported that term is not commonly used in many Black or ethnic (global majority) communities. 'Community Champion' was a more popular term chosen by the participants, but it is a different role to traditional citizen science/conservation volunteers Partners had to review and reshape their volunteering strategies to accommodate a new type of volunteer, for example many Community Champions live some distance from the National Parks, which had implications on expenses (for volunteers and staff travel). Mosaic's flexible approach to volunteering has been identified as a key reason for the project's success.

Berks, Bucks and Oxfordshire Wildlife Trust	<p><u>Reserve Surveying Programme</u> Aims to collect data to direct the management of nature reserves.</p>	Ongoing (Since 2004)	Berkshire, Buckinghamshire, Oxfordshire	<ul style="list-style-type: none"> • Little mention of demographics of participants • State that inexperienced volunteers are signposted elsewhere for training and upskilling, but not specified where.
Transforming the Trent Valley Landscape Partnership Scheme (National Lottery Heritage Fund)	<p><u>Big Washlands Watch</u> Aim to engage more and a wider range of people with wildlife recording. Focus on encouraging more beginners to use and submit records to iRecord.</p>	2019-2024	Staffordshire, Derbyshire	<ul style="list-style-type: none"> • Changed use of language to ‘wildlife recording’ from ‘biological recording’. This increased engagement with the project almost immediately. • The social aspect of the volunteer project (walks, WhatsApp group and social activities) was just as valuable and enjoyable as learning identification and recording skills and helped to attract a wider audience. • Due to flexibility of activities, many volunteers were working adults or recently retired, with several university placement students each year. Placements included data analysis and online communication support. • There was a progression among some volunteers from a beginner to wildlife recording, to improving their identification skills via online courses, to taking part in structured surveys (eg Wetlands Birds Surveys, Butterfly Transects). This progression usually took 2-3 years.
UK CEH/Joint Nature Conservation Committee	<p><u>UK Pollinator monitoring scheme.</u> Aim to understand how pollinator populations are changing across the UK.</p>	Ongoing (since 2017)	National	<ul style="list-style-type: none"> • Much higher numbers take part in self-led Flower Insect Timed counts, but 88% of participants only take part in one year. • Retention rate of 1km square surveyors is much higher – reflective of effort needed and connection to the area being surveyed.

				<ul style="list-style-type: none"> Partnered with Buglife for outreach/introductory events – utilising contacts, experience and capacity
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Diversity in green spaces

This research also included a review of studies which have explored the barriers which different demographics face when trying to engage with volunteering and green spaces, and some projects which have addressed these barriers.

Many of the studies which explore the barriers to green spaces for different communities contain excellent recommendations to overcome these barriers which we will not seek to replicate here, but the original reports are listed below for reference:

- [Chalkscapes](#)
- [‘Included Outside’](#)
- [‘Ethnicity and UK climate perceptions’](#)
- [Everyone’s Environment publications](#)

There are common barriers across different demographics (eg ethnic, young, disabled, neurodivergent communities) in accessing green spaces and volunteering which can be summarised as follows:

- poor transport links into rural areas/green spaces
- cost of transport
- lack of confidence – a feeling that is it ‘not for me’.
- finding time to volunteer around other commitments (work, study, parental or caring responsibilities)
- lack of knowledge of available opportunities or areas to visit.

However, different communities and demographics will also face unique barriers, such as racism in rural areas and physical accessibility of rural areas/nature reserves away from main infrastructure.

Tackling the common barriers first means that different demographic groups will all benefit immediately and have more opportunity to engage with green spaces or volunteering opportunities. Specific barriers for different groups are more difficult to tackle and would require more targeted resources and staff focus to address.

Projects engaging with diverse communities

These projects did not have a focus on citizen science, but on engaging under-represented audiences with National Landscapes.

Arndale and Silverdale National Landscape, in	Into the Woods Aim to work with	2021 - present	Lancashire	<ul style="list-style-type: none"> Stomping Ground CIC were the lead delivery partner, using the National Landscape sites for their activities, with expertise in working with
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partnership with Stomping Ground CIC and Chadwick High School	vulnerable young people to build confidence in the natural world and use nature as way to improve mental health			<p>young people with challenging behaviour.</p> <ul style="list-style-type: none"> • Many of the young people had not experienced the National Landscape before, and through the programme overcame some of their individual barriers to engaging with the outdoors.
Suffolk and Essex Coast and Heaths National Landscapes, working with Suffolk County Council and PHOEBE charity	<p>Ambling African Women</p> <p>Aim to address inequalities in countryside access</p>	2023	Suffolk Coast	<ul style="list-style-type: none"> • Guided walks led by Suffolk County Council and PHOEBE, specifically for African women • Walks were on accessible paths and attended by people of all ages and fitness, including babies in pushchairs. The social aspect was emphasised. • Lunch and traditional African music provided at some events • Women from PHOEBE have also been trained as walk leaders so that they feel comfortable and confident in leading their own walks.

The success of these projects in engaging with specific target audiences has been due to the partnerships with organisations who have expertise in working with these groups.

“We think it is amazing that PHOEBE has been included as pioneer stakeholder in planning and delivering this exciting and enjoyable work in Suffolk. Our involvement has confirmed the many challenges that black women and children face in accessing landscape, including living in systemic poverty, working long hours with no time or funds for recreation. As a group, we have been able to overcome the transport barrier and have enjoyed the beautiful Suffolk countryside together.”

Suffolk and Essex Coast and Heaths National Landscape, Ambling African Women project

Legal requirements

There is a legal requirement to consider equality and diversity, and to provide reasonable adjustments for anyone wishing to visit a location or take part in activities. There are several resources and best practise guidance which are linked the appendices.

GDPR (General Data Protection Regulation) rules are also a legal requirement to follow when capturing and storing volunteer data. All projects should be following CNL policies on GDPR, and bear in mind that some demographic profile questions are capturing sensitive personal data. Volunteers need to give clear consent for this information to be captured by projects and projects must be clear about why they are recording it e.g. for funding purposes where it is a requirement of the project. Further guidance is linked in the appendix.

Workshop outcomes and analysis

Chilterns National Landscape citizen science co-ordinator workshops

3 staff took part in an online workshop, and 2 staff took part in individual interviews (listed in Appendix 1). We discussed current projects and volunteer management approaches, what diversity means to staff, what would “good” look like in an ideal world.

Current volunteer management

Each project co-ordinator has their own way of recruiting, communicating with, and managing volunteers, according to project needs. This has led to some very loyal and positive volunteer experiences, as outlined in the ‘Volunteering in the Chilterns’ report. However, as one co-ordinator noted, *“Projects tied to one person are vulnerable if that person leaves”*.

There seems to be a lack of consistency in measuring volunteer demographics across the Chilterns projects which means that there is currently no way of stating with confidence the demographic breakdown of existing volunteers. The ‘Volunteering in the Chilterns’ research retrospectively measured demographics of existing and potential volunteers, and these results did seem to confirm the observation that the majority of CNL volunteers (across natural and cultural heritage projects) are white British, older (above 55), non-disabled, with slightly more men than women.

It was however expressed by some co-ordinators, and repeated in the ‘Volunteering in the Chilterns’ report, that onerous recruitment forms and gathering of volunteer data could be off-putting to existing volunteers, and a barrier to new volunteers. There is also a need to consider GDPR with the collection and storage of volunteer’s personal data, and ensuring that safeguarding practices are met for volunteers (both for children and vulnerable adults).

What does diversity mean to you?

All staff recognised that there is a legal and moral obligation to make CNL activities and landscapes accessible to everyone, according to the Equality Act (2010) and the CNL EDI Ambition Statement. There is a strong desire among staff to make volunteering more open and inclusive to all, and several staff had ideas and inspiration from previous experiences which they were keen to develop in their current work. However, all staff agreed that the biggest barrier to making progress on this was their capacity and the resources to do so, as well as knowing where to start due to the lack of a clear organisational strategy.

“Staff time and capacity is biggest barrier to doing more of this work”

It was noted in the workshop that there is a need to secure the long term succession of volunteers within citizen science to ensure there will be skilled volunteers in future to continue monitoring the health of species and habitats. Developing strong identification skills and the knowledge to follow scientific procedures can take years of practise, so it is essential to begin work on widening the pool of potential volunteers and investing in a long-term training pathway to secure the future of projects and data collection within the Chilterns to safeguard strong, evidence-based decision making for the future of the landscape.

What does good look like?

There are plenty of examples of good work across the different citizen science projects which engage volunteers and address some of the barriers to engagement, but these are currently inconsistent across projects and have been initiated by individual staff. Staff who attended the workshop expressed that it was good to have this dedicated time to talk and share ideas with each other, and it would be beneficial to continue to do so in future.

An example of a project within CNL which has successfully addressed some barriers to participation is the New Shoots youth project. Effort was made to consider what barriers to participation existed for young people with this project, and solutions put in place to address them. This included improving information for new participants to build their initial confidence in the programme, and providing transport and equipment to overcome financial and transport barriers. This approach resulted in more young people accessing the project, with the unintended consequence of more neurodiverse young people also accessing the activities.

As outlined in the literature review, this demonstrates that there are universal common barriers to accessing green spaces/volunteering across different groups, and that addressing these universal barriers as a priority will benefit many different communities simultaneously, so should be seen as the priority for efficient use of limited staff time.

Staff also recognised that they would like to be able to make accommodations for parents navigating childcare responsibilities and options for people who can't access the countryside physically e.g. rivers for Riverfly monitoring, but who still want to get involved. It was thought that there was the potential for a wider range of volunteer roles to engage these audiences, perhaps through a lighter touch approach such as uploading photographs to nature apps, data analysis and presentation conducted remotely.

Summary of co-ordinators workshop:

- Existing projects are based on very strong scientific-led methodology and rigorous data collection
- Inconsistencies in volunteer management across projects within CNL
- Clear desire to widen volunteer diversity
- "Staff time and capacity is the biggest barrier to doing more of this work"

Community Workshop

The purpose of this workshop was to understand the range of smaller community organisations across the Chilterns who were undertaking citizen science activities locally, and whether these organisations were attracting a wider range of participants.

This online workshop was promoted via the local infrastructure organisations (Community Impact Bucks and Oxford Community and Voluntary Action), via the CNL social media channels, by email invitation to all parish councils in the Chilterns, and via staff contacts. Interest was high, with additional tickets added to meet demand. The capacity was limited to 20 people to ensure discussion could be managed effectively.

A list of organisations represented at the workshop is listed in Appendix 2. Most participants were from parish councils, species recording groups, or local 'Friends of' conservation groups.

Who is working locally on citizen science, and what are groups doing?

It is clear that there are a large number of organisations interested in the wildlife and habitats of the Chilterns, who want to learn more about how to improve their activities according to scientific best practice. Due to the range of organisations on the call, there was interest in sharing details between each other (eg parish councils asking for details of species recording groups represented). It was expressed by many groups that they wanted to know more about how their wildlife records could be improved, and reassurance that their work was beneficial and contributed to nature conservation in a meaningful way.

What do you think of the term 'citizen science'?

For the people on the call already engaged in citizen science activities or wildlife recording, the term was viewed positively, with one participant saying they were "proud" to be a citizen scientist. However, when asked if they felt was an appropriate term to use with the general public, the overall view was that it is not understood by the wider population, and is not a good term to use to attract new people to take part in activities. Both the word 'citizen' and the word 'science' could be viewed negatively by different members of society. Some suggestions for alternatives, suggested by community organisations in Staffordshire include: wildlife recording, nature monitoring, community science, people-powered research, community wildlife mapping.

How diverse is your audience?

Groups on the workshop reported that they also struggled to reach diverse audiences, particularly with regards to age and ethnic diversity. It was noted that the age of volunteers was a particular concern, with groups worried about who would take over the committee positions to safeguard the future of their organisation. Some groups reported that they focussed on engaging younger members of their community via specific family activities, or partnering with local scout groups, but that this did not usually result in long term volunteers.

There was little ethnic diversity reported, with some groups noting that this was reflective of their local population.

A follow up discussion with one organisation (Lindengate) showed that this organisation did have a wider audience diversity due to the range of activities they hosted (eg dedicated projects for adults with poor

mental health). Some participants from these dedicated projects did go on to volunteer positions with the organisation, showing that there is scope for these volunteer pathways to be developed.

Summary of Community Workshop

- There are lots of smaller projects in the Chilterns with an interest in recording local wildlife
- Many want support with this, and to partner up with each other to share knowledge and skills
- ‘Citizen science’ – people who are already involved like and identify with the term – but don’t use it with new people!
- Some smaller groups also struggle with audience diversity, particularly with regards to age.

Social media image to promote the Community Workshop online

Exploring Citizen Science in the Chilterns



Join an online workshop to discuss citizen science opportunities in the Chilterns:

- What wildlife recording activities do you take part in or know about in the Chilterns?
- What does the term 'citizen science' mean to you?

Open to all community groups and residents.

Help us make citizen science activities better for everyone

Book your free place here:
<https://events.humanitix.com/citizen-science-in-the-chilterns>



Wednesday 24th July, 6-8pm









Public engagement event – High Wycombe Museum

As part of the Chilterns Chairs Festival, we attended a Family Fun Day to host a Citizen Science stand. The aim was to engage with members of the general public (who would not have thought to attend a Community Workshop) to gain an understanding of how the term ‘citizen science’ is generally viewed, what local wildlife and projects people knew of an engaged with.

We spoke to 52 people, and this was the most diverse audience we spoke to during this research. There were different ethnicities and languages spoken (including south Asian, south-east Asian, Eastern European), possible neurodivergent individuals, lots of children.

Do you know of the term ‘citizen science’?

Only 6 respondents confidently understood or identified with this term. 29 people responded ‘no’, whilst others made guesses to what the term means, or could name some national citizen science projects with prompting, with the Big Garden Birdwatch and Big Butterfly Count named most often.

What local wildlife do you know of?

Everyone we spoke to had an interest in wildlife, and could tell us about wildlife they had seen, or actions they were taking in their own lives to support local wildlife. Much of this centred around having a wildlife friendly garden, with many people telling us how they had put in ponds, let grass grow, and planted pollinator friendly plants. Photography featured as a popular way to engage with wildlife, via mobile phones and cameras. The most referenced species were those most commonly seen – birds, butterflies, bumblebees.

What local wildlife projects do you know of?

Many people were able to name national citizen science projects they took part in each year. Some respondents were familiar with the various Chalk, Cherries and Chairs projects, others named local projects in their village or parish. There was a general sense among participants that they did not know of specific volunteer activities available to them, which aligns with the findings from the Community Impact Bucks research:

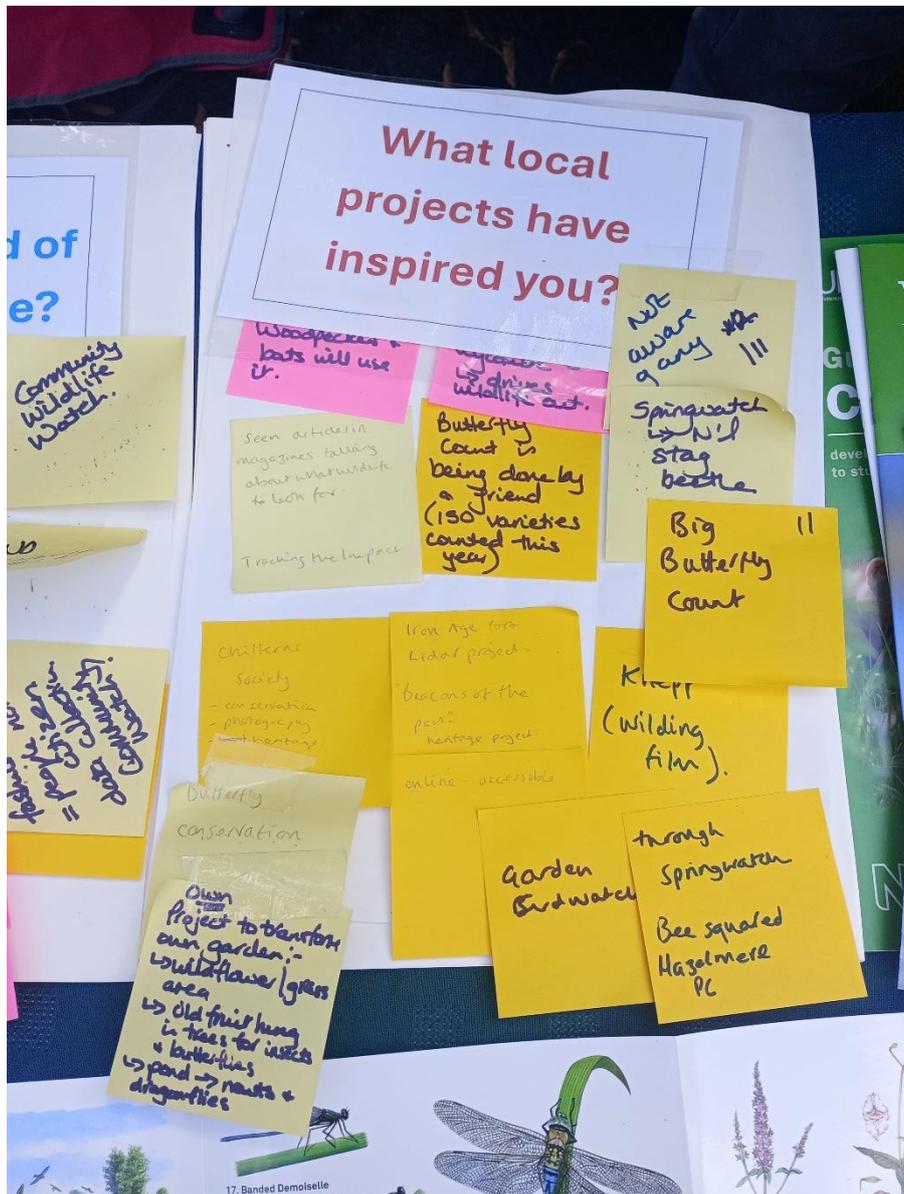
“The research found that insufficient marketing and a lack of awareness around diversity is leading to several barriers to volunteering for members of the public, who want to volunteer or have the right amount of time and interest in these sorts of roles but have no way to find out about opportunities.”

Once respondents understood what citizen science and wildlife recording consisted of, there was considerable interest in knowing how to take part, especially via apps such as iRecord and iNaturalist. This indicates that there is great interest among the public in contributing to wildlife conservation efforts, if there were more options promoted which fit in with people’s daily lives and routines. As demonstrated in the Transforming the Trent Valley project, iRecord can be a first step into wildlife recording, with potential for continued skills progression and development into further volunteering on specific species monitoring surveys.

Summary of public event

- This event attracted a more diverse audience than citizen science projects
- “Citizen Science” – only 6 people confidently understood and identified with the term.
- Many people could identify examples of citizen science projects once the term was explained – most popular were Big Garden Birdwatch and Big Butterfly Count.
- There is a strong interest in wildlife among the general public

Photo from Wycombe Museum Family Fun Day



Staff workshop to present findings

Draft recommendations based on the above workshops and research were presented to CNL staff at an in-person half-day workshop. The aim of this workshop was to present the findings of our research, and for staff to consider how our recommendations could be implemented within the Chilterns National Landscape to widen volunteer diversity.

Staff in attendance at the workshop were mainly project staff who had previously been involved in our research, with one senior manager and another project officer. Given the main outcome from the co-ordinators workshop had been *'this work needs more resource and funding'*, it had been requested that other relevant budget holders or decision-makers could be present to hear the results, however it is recognised that capacity for all staff is limited, particularly in the summer holidays.

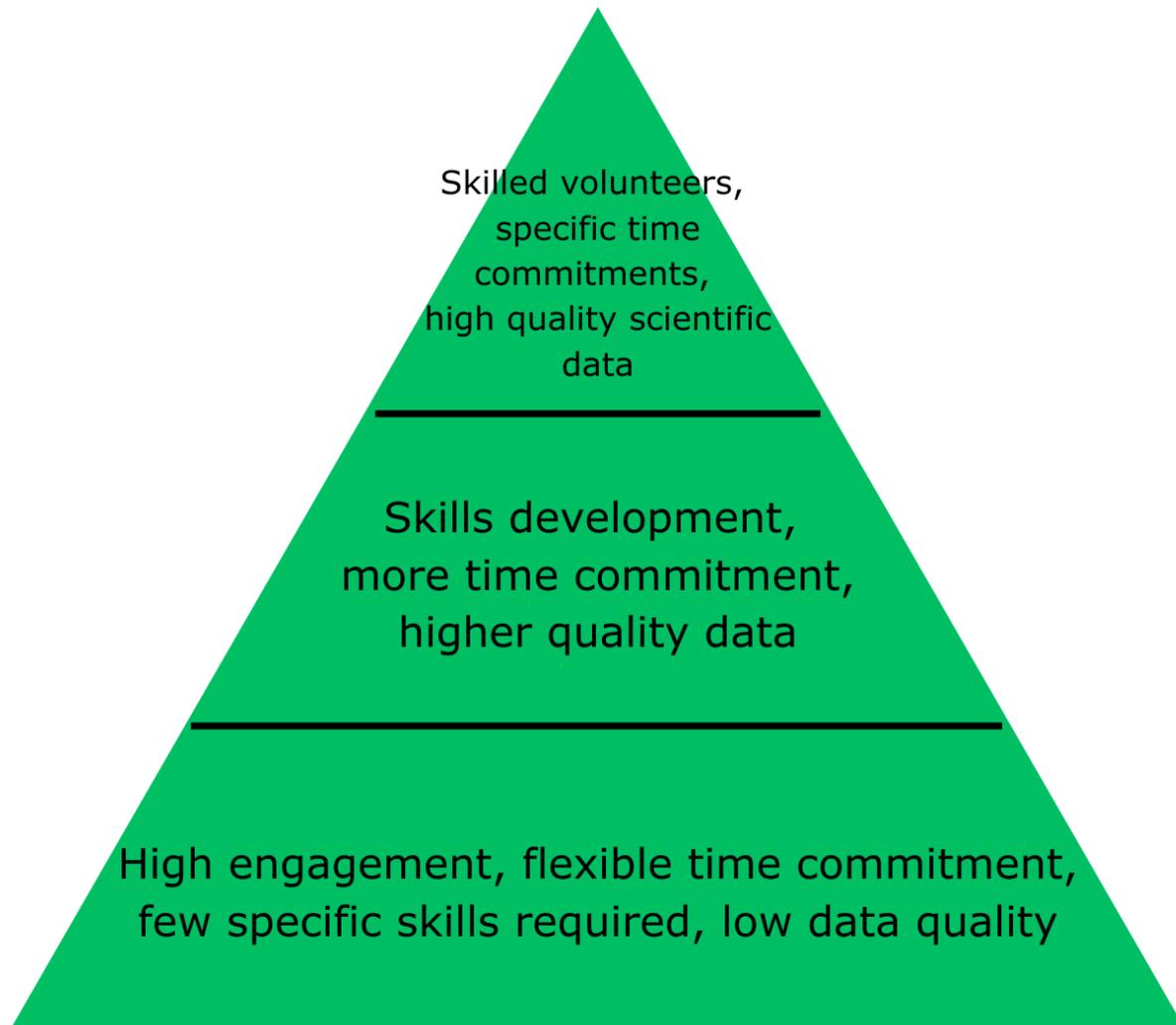
Discussion of recommendations

Staff mostly agreed that many of the suggested short term recommendations could be implemented immediately for some quick wins, with the caveat that this would require staff capacity to do so.

There was a strongly expressed desire for a clear organisation-wide strategy to address volunteer diversity that could be consistently applied across all work in CNL, that this strategy would be communicated to staff and volunteers, and that funding and resources would be planned into funding applications to ensure this work is continuously valued and embedded into all aspects of work.

One of the challenges raised during the initial co-ordinators workshop, and again in the staff workshop, was the purpose of the citizen science programmes within the Chilterns National Landscapes. The existing citizen science programmes in the Chilterns National Landscapes have been designed to generate high quality, scientifically valid datasets over the long term, often using nationally recognised methodology to track trends in populations and geographical spread of species and the health of local habitats in order to inform land management decisions. They have not been designed as an engagement tool for the wider population.

It was suggested that a pathway for volunteers is needed, with the citizen science projects sitting as part of a wider engagement strategy. This can be visualised with a pyramid, with each layer of the pyramid representing the numbers of volunteers engaged at each level.



- At the bottom, the focus is on engagement activities, reaching a wide diverse audience and 'introducing 'citizen science' (with consideration of language) to beginners. This could include the use of iRecord and iNaturalist, and the expectation is that the quality of data generated is potentially large, but generally of low quality. Partnerships with different community groups, parish councils and groups serving diverse communities would be beneficial here to reach a wider audience and potential pool of new volunteers.
- In the middle are the opportunities for skills development such as identification workshops and introduction to survey methodology. The time commitment may be higher for these activities. Partnerships with species interest groups would be beneficial here to reach new audiences and to gain from local species expertise.
- At the top sit the citizen science projects which are designed to generate high quality, robust scientific data. Time commitments may be more specific (eg early mornings, specific weekends). Skills in following scientific methodology, using equipment and species identification are required.

At each level of the pyramid, the barriers to engagement are likely to increase, which means diversity among volunteers may decrease. Time commitments may be higher, the capability and confidence to access remote or physically difficult terrain may be required, skill level requirements are higher. Care should

be taken to address these barriers where possible, while recognising and balancing the need for long term, robust data collection.

The process of moving volunteers up the pyramid will depend on the internal CNL volunteer procedures and communication of opportunities. It may take some years for volunteers to move up the pyramid, and some may never progress between levels. Having the different opportunities allows for more people to engage with CNL at a level which suits them.

Summary

Throughout the many conversations over the two months, there were some clear themes which emerged repeatedly:

- The need for a clearer strategy to link CNL citizen science projects with the wider CNL EDI Ambition Statement
- The current language and promotion of projects may be causing unintended barriers for new volunteers from diverse audiences
- The strong interest in wildlife identification and monitoring from the general public and smaller community groups, indicating there is a large pool of potential volunteers for future citizen science projects
- Potential to develop partnerships to create a volunteer pathway for beginners through to skilled volunteers over several years.

Recommendations

Timeframe	Challenge faced by CNL staff	Recommendation
Short term	Recruitment of volunteers inconsistent across projects. Barriers in place such as limited public information for potential volunteers, lack of diversity in promotional material, difficult to find out what roles and opportunities are available.	Standardise volunteer promotion and recruitment. This can include but is not limited to: <ul style="list-style-type: none"> • Diverse representation in visual images • Providing as much information as possible up front when advertising volunteer roles, to reduce barriers for young or neurodiverse candidates. • Use of diverse and accessible online tools to cater for disabled people (eg, alt-text on photos, captions on videos, colour contrast on documents and websites, font size and style – minimum size 12 and ‘sans serif’ fonts eg Calibri and Ariel)
	Lack of capacity to attend external community events to promote volunteering activities	Attend wider community events to promote volunteering and citizen science projects. Ask if existing volunteers would be interested in running these events, to be able to talk about their experience and expand capacity among staff team. Share citizen science opportunities with other CNL engagement staff to reach new audiences.
	No consistent demographic data on volunteers currently collected to understand demographics, unable to target resources effectively to make change.	Capture volunteer demographics at first point of contact in order to understand demographics of volunteer audience. This will enable CNL staff to identify gaps in their representation of different demographic groups, and take action on this as required. If volunteers request adjustments, this should be noted as well for a fuller understanding of barriers. Ensure staff (and volunteers where required) understand legal requirements for GDPR (including the recording of personal sensitive data).
	Current best practise across projects not shared effectively among staff to learn from and adopt	Learn from current good practise and successful volunteer engagement methods in CNL projects, supporting each other to implement these across all CNL citizen science projects for consistency. For example, learning from the New Shoots project to engage youth, and Chess Smarter Water Project for volunteer retention and ongoing engagement techniques.
	Lack of action plan to link citizen science initiatives to wider EDI Ambition Statement.	Commit to being open and transparent on CNL website with regards to the implementation of the EDI Ambition Statement. Update website with key milestones and achievements for 2022/2023 and 2023/24, and upload objectives for 2024/25. This will demonstrate your commitment to equality, diversity

		<p>and inclusion, and show leadership in accountability for the work that still needs to be done.</p>
<p>Medium term</p>	<p>Citizen science project staff do not have capacity to effectively begin to build relationships with diverse audiences, recognising that this takes time (potentially many years) and dedicated effort.</p>	<p>Develop partnerships with local organisations who work with diverse communities (eg disability support groups, culturally diverse organisations, LGBTQ+ groups) who are not currently engaged with CNL projects. For example:</p> <ul style="list-style-type: none"> • offering taster wildlife monitoring activities to the group in their familiar space to build trust and relationships with CNL staff and projects. • Listen to understand their unique barriers to accessing the Chilterns, and co-design project plans to overcome these. This could include: using different languages or communication methods, budgeting for transport costs, making the effort to offer reasonable adjustments (for example providing and promoting a quiet space for neurodiverse individuals and welcoming fidget gadgets and noise-cancelling headphones). • Recognising that building trust with these organisations takes time, and often results are not immediate, or even as expected. Time should be given to staff to allow them to build these relationships with no set agenda other than establishing strong, long term partnerships across the Chilterns. • Attending forums or networking opportunities via Community Impact Bucks and other infrastructure organisations to engage with non-environmental sectors, such as the Health Alliance meetings.
	<p>Staff do not have capacity to develop and lead wide engagement events to attract new audiences to citizen science</p>	<p>Develop partnerships with other citizen science projects across the Chilterns. There is a wealth of smaller wildlife groups who are doing important species and habitat monitoring work, many of whom may be reaching different audiences to the CNL staff team. Partnership working with these organisations will allow CNL to benefit from the local connections that these groups have, and will enable the groups to benefit from CNL's knowledge and expertise in monitoring and data analysis to create stronger wildlife monitoring data across the region. For example:</p> <ul style="list-style-type: none"> • Supporting smaller groups with their data collection and analysis methods • Recognising that diverse volunteers may prefer being part of a smaller, more local voluntary group. CNL should consider whether their priority is to increase the diversity of their own registered volunteers, or if it is enough for them to support diverse engagement in localised projects with common wildlife monitoring aims.

Long term	Sense that there is not a consistent embedded approach or strategy to EDI across the CNL staff team. This should be part of everyone's job.	Work towards an accreditation for diversity e.g. Investors in Diversity. The award is recognised as the national equality standard, providing organisations with a bespoke approach for improving Fairness, Respect, Equality, Diversity, Inclusion and Engagement (FREDIE) practices
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It is recognised that many of the above recommendations require additional staff time and resource to implement. This leads us to our over-arching recommendation for this piece of work; **time and funding must be allocated to progress this important work.** This may come from new streams of funding, a dedicated staff member to work across teams to embed inclusion practises in all CNL work, or a revision of all current job descriptions to support staff in making the time and effort to work on inclusion practices.

Appendices

Appendix 1: Staff attending co-ordinators workshop

Staff in attendance:

- Anna Foster, Chalk Cherries and Chairs Partnership Project Manager
- Steph Horn, Smarter Water Catchment Project Co-ordinator
- Ruth Staples-Rolfe, Mend the Gap Programme Manager
- Nick Marriner, Tracking the Impact project lead (individual meeting)
- Hannah Perry-Wilson, Citizen Science Co-ordinator (individual meeting)

Appendix 2: Community groups attending Community Workshop

- Pitstone Parish Council,
- CPRE for Buckinghamshire
- Kidmore End parish council
- Fungus Survey of Oxfordshire
- Buckinghamshire Fungus Group
- Thames Valley Butterfly Conservation
- Thames Valley Environmental Centre
- Friends of Studham Common
- Parish clerk - Hambledone, Turble, Ipstone Parish Councils
- Whitchurch on Thames Habitat Study Group
- Bucks invertebrate group (BIG),
- Milton Keynes Natural History Society
- Buckinghamshire Dragonfly recorder

Appendix 3: Links to further reading

1. Demographics of the Chilterns

[Chiltern Villages - areainsights.co.uk](http://areainsights.co.uk)

2. Legal Requirements

<https://www.gov.uk/guidance/equality-act-2010-guidance#:~:text=the%20Equality%20Act-Overview,strengthening%20protection%20in%20some%20situations>

3. NCVO – examples of what good looks like for diversity and volunteers

<https://www.ncvo.org.uk/help-and-guidance/involving-volunteers/understanding-volunteering/equity-diversity-and-inclusion-in-volunteering/#:~:text=voluntary%20sector%20organisations,-.Make%20sure%20volunteers%20understand%20equity%2C%20diversity%20and%20inclusion,Act%20relates%20to%20their%20role>

<https://www.ncvo.org.uk/help-and-guidance/involving-volunteers/volunteers-and-the-law/volunteers-and-employment-rights/data-protection-and-volunteers/>

4. Guide to GDPR requirements for volunteer information

<https://www.volunteeringkingston.org.uk/wp-content/uploads/2018/04/Monitoring-Volunteer-Data-Guide-IVR.pdf>

5. National Centre for Diversity – EDI Accreditations

[EDI Accreditations: Your Journey to Inclusive Workplace Culture with FREDIE \(nationalcentrefordiversity.com\)](#)

6. Skills matrix template:

[How To Create a Skills Matrix \[FREE Excel Template\] - AIHR](#)

7. Guidance on language to describe diverse communities

<https://www.ethnicity-facts-figures.service.gov.uk/style-guide/writing-about-ethnicity/>
<https://www.lawsociety.org.uk/topics/diversity-and-inclusion-framework/terminology>

Appendix 4: Miro Boards used in workshops

Miro boards were used as interactive tools during the co-ordinators workshop and community workshop. The links to view the Miro boards are below, these links do not give editing access.

Co-ordinators Workshop:

https://miro.com/welcomeonboard/bWNNkb0U4SGFiSTRGWEc5TVAzcmhaRGRBMHhoSngxRFpGY3B5R2FoZWNMbXJCZkpyT3NFRFNWTIE5S2k1NDdCNHwzNDU4NzY0NTQ0NDA5MDAzODc1fDI=?share_link_id=939851069999

Community Workshop:

https://miro.com/app/board/uXjVMovM5Mw=?share_link_id=267789927844

Appendix 5: Further considerations for different demographic groups (from literature review)

Considerations for different demographic groups:

Age

A concern raised in other projects and in the CNL co-ordinator workshop is the lack of young adults engaging in citizen science and wildlife recording/identification, which could lead to a subsequent lack of skilled professionals and volunteers who are equipped to continue natural heritage monitoring in the future. Beyond the desire to address the perceived lack of younger people in order to make current projects open and inclusive to all, the long-term viability of citizen science projects is dependent on future volunteers who have the required skills for data collection and analysis.

However, it was noted in the Transforming the Trent Valley project that many of the volunteers recruited to the wildlife recording group were adults (above the age of 40) who had recently begun to improve their

wildlife recording and identification skills to a high level and wanted to contribute to species monitoring in their local area.

Ethnicity

Those projects which did measure ethnicity of their participants reported that participation among people from non-white backgrounds was low. In some projects this matched the overall demographic data for the area (in Herefordshire, the ethnic breakdown of participants was largely in line with local ethnic demographics), but in some areas which worked in areas with high ethnic diversity (FSC Biolinks, Transforming the Trent Valley), the diversity of volunteers did not match the local ethnic diversity. It was noted in many project reports that successful engagement with different ethnic groups came about due to partnerships with external organisations which had the expertise of working with these communities (Mosaic, Arndale and Silverdale National Landscape).

Neurodiversity

The only report with any specific mention of neurodiversity was the FSC Biolinks report. This outlined the general perception, shared by CNL staff, that there is great potential for neurodivergent individuals to support with citizen science activities, due to the common tendency for neurodiverse people to have intense and highly focussed interests and strong pattern recognition, which lends itself to citizen science data collection and analysis. The Biolinks recommendation and course of action was to upskill Field Studies Council staff in working with neurodiverse audiences to improve staff understanding and accessibility for participants.

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