

Creating Nature Networks in North Manchester

An Evaluation Report for The Wildlife Trust for Lancashire, Manchester and North Merseyside 2022

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Executive Summary

The UK has an increasing mental health challenge, and in the wake of the Covid-19 pandemic the numbers of people suffering from poor mental health, isolation and loneliness have become a national concern. Over many years, connecting to nature and the outdoors has anecdotally been seen to be good for health. Beyond 'getting some fresh air', more recent studies provide scientific evidence for the benefits of spending time in, and connecting with nature, on mental health and wellbeing.

In 2020, The Wildlife Trust for Lancashire, Manchester and North Merseyside (LWT) received funding from the Cadent Foundation who seek to make lasting, positive differences in local communities to run intervention programmes to improve wellbeing through nature connectedness. This funding was used to create *Nature Networks* in North Manchester, a biodiversity project which aims to deliver a neighbourhood nature network to increase wild species numbers whilst also connecting local people to the natural environment, plants, and animals. The intervention took place in North Manchester, one of the most urban cities in the UK which provided a suitable setting to test how the new Local Nature Recovery Strategies in the Environment Act may work in urban settings.

The findings of this evaluation demonstrate that the North Manchester *Nature Networks* initiative had a very positive impact for participants.

Quantitative data evidenced significant increases in nature connectedness and mental wellbeing for the people who took part, whilst levels of loneliness showed a significant decrease.

Qualitative data evidenced that following participation in the nature-based activities, participants benefitted from increased social interaction with others, a sense of being more present in nature and seeing nature differently as well as experiencing increased wellbeing along with an improved sense of resilience.

For the future it is suggested that The Wildlife Trust for Lancashire, Manchester and North Merseyside continue to deliver projects such as this and focus on activities that provide opportunities to enhance social interaction alongside connecting with nature.

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1. Introduction to the evaluation context

Mental Health and Wellbeing

Increases seen in levels of mental ill-health during recent years (Baker, 2020) are of great concern. Evidence of the impact of the Covid-19 pandemic on mental health and wellbeing is growing, with the psychological impact on mental health (e.g., Cullen, Glati & Kelly, 2020) and wellbeing (e.g. De Pue et al., 2021) being raised as having potentially far-reaching implications. Good mental health is not just the absence of mental ill-health, but the presence of wellbeing (Richardson, et al., 2021), which has been defined as a state of optimal human functioning (Pritchard et al., 2019). Various factors have been shown to influence wellbeing, with higher levels of loneliness in older adults being linked to reduced wellbeing (Golden et al., 2019). Similarly, for younger people who are not in education, employment or training, lower levels of wellbeing are also observed (Goldman-Mellor et al., 2016). During the pandemic, people were placed under a range of restrictions which limited social interactions and resulted in high levels of loneliness (Groarke et al., 2020), which in turn may have negatively influenced wellbeing. Therefore, initiatives which might support wellbeing and reduce loneliness are important.

The Wildlife Trusts are establishing a growing body of evidence which demonstrates the impact for some of their initiatives on health and wellbeing. Research conducted with Wildlife Trust volunteers showed a significant improvement in mental wellbeing at the end of a 12-week programme, with improvements being greatest in people who were new to volunteering with the Wildlife Trust. In addition, these volunteers also reported improvements in positivity, health, nature relatedness, pro-environmental behaviours physical activity levels and contact with greenspace (Rogerson et al., 2018). A review of Wildlife Trust activities (Wood, et al. 2018) concluded these activities promote public health and can support the treatment of diagnosed illness through nature-based interventions. The Wildlife Trusts also commissioned a review of links between biodiverse environments and wellbeing. This established that contact with a variety of natural environments could have wellbeing benefits and environments which are rich in wildlife support improved wellbeing (Bragg et al., 2018).

The impact of Nature Connectedness

Nature connectedness has clearly been linked to increased wellbeing (e.g., Capaldi Dopko and Zelenski, 2014; Pritchard et al., 2019) therefore interventions which support increased nature connectedness have the potential to improve wellbeing. However, research indicates that wellbeing benefits from nature connectedness occur at an optimal point, when a certain level of nature connectedness is reached. This means that increased wellbeing benefits are associated with higher levels of nature connectedness. Research also shows that levels of nature connectedness tend to fall during teenage years, before rising again in the mid-thirties (Richardson et al 2019), so interventions to increase nature connectedness in this age group are of particular importance.

The Intervention

The Wildlife Trust for Lancashire, Manchester and North Merseyside (LWT) received funding from the Cadent Foundation who seek to make lasting, positive differences in local communities (Cadent Foundation, 2020) to run intervention programmes to improve wellbeing through nature connectedness. This funding was used to develop the North Manchester Nature Network (*Nature Networks*), a biodiversity project which aims to deliver a neighbourhood nature network to increase wild species numbers whilst also connecting local people to the natural environment, wild plants, and animals. The intervention took place in North Manchester, one of the most urban cities in the UK, which provided a

suitable setting for the LWT to explore and deliver opportunities for local people to connect with and take action for local nature.

The *Nature Networks* bring together local people interested in caring for nature in their local area. One of the key deliverables was recruiting members of the community to volunteer their time to conserve, enhance and create new habitats for wildlife species across north Manchester. Tasks included controlling invasive species, planting hundreds of native wildflowers to improve diversity, woodland thinning and wetland restoration works. The LWT recruited local people into this weekly activity programme through a variety of routes, including engaging with friends of parks groups, local community groups, referral providers and via general promotion amongst local people.

The project also brought together local people to help increase understanding of wildlife species in the area via citizen science recording. Organised walks and workshops to introduce and encourage local people to engage in species recording were complemented by awareness-raising work and promotion of key species finds in the area to communicate how people could volunteer their time to the project in a self-guided capacity.

To connect with local people who may not previously have had a high level of nature connectedness, the LWT delivered regular events, walks and workshops which were designed to be engaging and interactive. A series of self-guided family events in key parks in the area were complemented by more formal 7-week wildlife and wellbeing programmes aimed at elderly residents.

Impact of the Pandemic

Due to restrictions on social gatherings during the pandemic, some of the work to implement the *Nature Networks* was delayed as face-to-face volunteering had to be put on hold. When restrictions started to be lifted, some volunteers were reluctant to return, and so the LWT expanded their recruitment programme more broadly and were supported by Manchester City Council who helped promote the initiative.

2. The Evaluation Methodology

The Wildlife Trusts commissioned the University of Derby to evaluate the *Nature Networks* intervention to measure levels of nature connectedness, wellbeing and loneliness for those people taking part.

Study Design

To find out if the *Nature Networks* initiative had an impact on levels of nature connectedness, wellbeing and loneliness, data was collected at the start and again at the end of the sessions. This allowed us to compare scores across the two time points so we could see if there had been any changes in the measures taken.

The people who took part in more than one *Nature Networks* session were also asked to respond to five open ended questions asking about what they were hoping to achieve from taking part in the project, what they enjoyed about the project and what impact they felt it had for them. We then completed a content analysis of the responses to these questions.

Casual comments and observations were also captured by the group leader. These included direct feedback from participants and thoughts and reflections from the leader.

2.1 Measures used

So that we could assess the impact of the *Nature Networks* project on the key measures of Nature Connectedness, Wellbeing and Loneliness, the people taking part were asked to complete a questionnaire (see appendix A) which included three questionnaires and some open questions:

Nature Connectedness

The Nature Connectedness Index (Richardson et al., 2019) includes six questions that are suitable for use with both adults and children. Questions include things like "Being in nature makes me very happy" and responses are scored from 1 (Completely disagree) to 7 (Completely agree)

Mental Wellbeing

Mental Wellbeing was measured by the Edinburgh-Warwick Mental Wellbeing Scale (Tennant et al., 2007). This short measure contains seven questions which are scored on a five-point scale ranging from 1 (None of the time) through to 5 (All of the time). An example of the questions from the scale is "I've been dealing with problems well".

Loneliness

The three item UCLA Loneliness Measure (Hughes et al., 2004) was used to assess loneliness. Questions are scored on a three-point scale, ranging from "Hardly ever or never", "Some of the time", "Often". An example question is "How often do you feel left out?"

Open Questions

When completing the questionnaire for the first time, participants were asked an openended question:

What are you hoping to achieve from this programme?

If you would like to, please tell us about any goals you would like to achieve from taking part in the project. It could include anything from a skill you would like to develop, developing relationships with others through to how you might feel at the end.

When completing the questionnaires for the second time, participants were asked the following open-ended questions:

- What did you and your children enjoy the most about the event?
- Tell me about your life since you joined the activity/group. Has anything changed?
- How did you feel about yourself before you became involved in the activity/group?
- How do you feel now since taking part in the activity/group?

2.2 Data collection

Information about the evaluation was given to the people taking part in the *Nature Networks* sessions. If they were happy to take part, they completed a consent form to show they understood what they were being asked to do, how their data would be used and how they could stop taking part if they decided they would prefer not to continue with the evaluation. If people agreed to take part, they completed a paper-based questionnaire at the start of the first session and completed another questionnaire at the end of the final session.



2.3 Participant details

The people who took part were members of the local community. They were recruited through existing groups and organisations such as friends of local parks groups, LWT volunteers and through social media advertising. Some people came alone, and some came along with family members.

In total 95 people completed the questionnaires at the start of *Nature Networks* project and 70 people completed the questionnaires at the second time point. Some people completed the questionnaires at both time points, and this results in a total sample of 105 individual participants. 58 people completed the questionnaires at both time points where it was possible to match their data for comparison purposes. The people who completed the questionnaires were aged between 22 – 84 years with an average age of 51.34 (sd=15.91) years. Participant details relating to gender, ethnicity and the sessions they attended are show in appendix B.

3. Results

3.1 Quantitative data

Nature connectedness

Levels of nature connectedness were high when we measured them at time 1 indicating a ceiling effect as there was little room for nature connectedness to improve further. However, when we measured nature connectedness again at time 2, it had increased significantly, indicating that the *Nature Networks* sessions had led to an increase in nature connectedness.

Mental Wellbeing

Mental wellbeing also increased significantly from time 1, at the start of the sessions, to time 2, indicating that the *Nature Networks* sessions had helped to improve people's mental wellbeing.

Loneliness

The loneliness levels had decreased significantly between the two time points showing that people felt less lonely after taking part in the sessions, indicating that taking part in the *Nature Networks* sessions had led to a reduction in feelings of loneliness.

Table 5 shows a summary of the means (sd) across the two time points, and the associated statistical information for each of the three measures.

Table 1: Means (SD), Z values and significance for nature connectedness, mental wellbeing and loneliness across the time points.

Variable	Mean (sd) Time 1	Mean (sd) Time 2	Z value	Significant
Nature Connectedness	6.29 (0.83)	6.82 (0.32)	-5.288	Yes
Mental Wellbeing	26.02 (4.60)	29.20 (4.44)	-5.983	Yes
Loneliness	4.70 (1.60)	4.13 (1.57)	-4.906	Yes

3.2 Qualitative Data

Open Questions

Question 1 was asked at the start of the evaluation, and questions 2-5 were asked at the end of the evaluation.

Participants provided written responses to the open questions. A content analysis was used to identify the key factors that people identified when answering the open questions. Four main themes were developed across the open questions - *Community, New Relationships with Nature, Calming Environments* and *Mental Wellbeing.*

Q1. What are you hoping to achieve from this programme?

If you would like to, please tell us about any goals you would like to achieve from taking part in the project. It could include anything from a skill you would like to develop, developing relationships with others through to how you might feel at the end.

The participants hoped to gain a sense of *Community* from their involvement in the group. Meeting new people was an important ambition for the participants, many of whom were looking for people to connect with following a period of isolation. For example, one participant explained the importance of socializing with others following the death of their partner;

"Meeting other people and seeing more of nature that surrounds me. Helping me keep fit and being around others. As a recently widowed person I am hoping this helps me mix with other people"

For some participants, the group was an opportunity to meet others who shared similar interests. Connecting with others in this way allowed the participants to learn from one another and improve their current skills;

"I'd like to learn more about nature generally and also the habitats close to where I live. I'd like to connect with people who feel the same way"

Therefore, the group activities provided the participants opportunities to connect with others through company and a shared interest.

Some participants hoped to improve their own *connection with nature* through protecting the natural world and allowing it to thrive and for some, making a difference to nature was an important outcome from the group;

"I want to try and protect and hopefully expand nature within the city"

"This is just one of many activities for nature I participate in. I run my own conservation project and volunteer on another project with LWT. I just want to do as many things as time allows to try and make a difference for nature. I am very concerned about the environment and spend a lot of time trying to do my bit."

In addition to wanting to protect nature, spending more time in it allowed participants to increase their awareness of the benefits of connecting with nature. Some participants hoped to gain a greater sense of *mental wellbeing* from the group. From learning more about nature and having the opportunity to explore their surroundings, participants hoped to pass on the benefits that they had gained from nature to others;

"To explore more about the local area and to be able to contribute to keeping the area tidy, clean and raise awareness of how being outside is beneficial to wellbeing"

Through these expected benefits, one participant also hoped that their experience would contribute to greater mental wellbeing, autonomy and sense of self;

"To feel calmer, less worried about trying to please everybody all the time. Having more freedom and feeling more relaxed."

Summary

Overall, from the group activities, participants hoped to gain a sense of community through meeting new people with common interests. In addition, participants also showed desire to improve their own connection with nature, to give back to the natural world and obtain the benefits that they understood nature could provide for their wellbeing.

Q2. What did you and your children enjoy the most about the event?

For some participants, the activities were an opportunity to meet new people, reflecting the theme of *community*, and time spent connecting with others came across as important for them with one participant discussing the importance of:

"spending time outdoors together"

Engaging with the group enabled participants to form a *new relationship with nature*, fostered by the knowledge of the different aspects of nature around them. This led them to gain a greater awareness of the surrounding nature and for some, to be able to share their enthusiasm and new knowledge with others. For example;

"Finding out more about nature, getting close up to aspects of nature, e.g., plants, Fungi etc., that I might have walked past without noticing it previously"

"[Our instructor] was incredibly interesting and informative. He shared specialist information about flora and fauna which I have now shared with family, friends and colleagues. It was fascinating"

Through their new-found awareness of nature, participants reported discovering a new appreciation for nature, with a sense of compassion arising from this *new relationship* in which they want to protect and care for animals that may visit their own garden. For example, one participant stated that their children:

"loved seeing the bats and newts and have been asking how we can help more animals come to the garden"

In noticing more in nature, another participant reported the *calming environment* of nature which had a restorative property that also allowed space for a sense of presence to arise through mindful awareness;

"Nature is a real cure for me. When I'm outside I instantly feel more relaxed and calm. These walks allowed me to work with this and increase my ability to achieve maximum value from the space we walked in which I have been able to apply to other areas. We looked at mindfulness and for me this walk allowed me to gain valuable clarity on what this really means and how to achieve it, in a way I have never been able to before. This was a fantastic event!"





In using the concept of nature as a "cure", we can see a deeper relationship to nature being described by this participant, suggesting that their experiences with the Wildlife Trust activities have supported them moving beyond time in nature to a deeper sense of nature connection and enhance wellbeing.

Q3. Tell me about your life since you joined the activity/group. Has anything changed?

For some participants, a *new relationship with nature* emerged since joining the group. Learning about nature was highlighted by several participants, with some being inspired by the group to have a deeper relationship with nature and enhanced motivation to access nature more frequently in the future:

"It has been brilliant to join these walks. I love learning about local nature and have been visiting my local park more often."

"We spent quite a lot of time in nature before this activity. My daughter now is more interested in identifying the things we see on our walks."

Additionally, joining the group fostered a new perspective for some participants as they reported being more aware of the natural world due to the information they learnt. For example, one participant discussed their changed perspective as a real awakening:

"I have learnt so much about nature in this group. It has really opened my eyes, I never walk around a park in the same way now."



Through noticing nature more, participants described a greater sense of being present in their surroundings. This sense of mindfulness was shown through them taking greater time to observe and connect with individual aspects of nature, leading to a sense of peace and restoration:

"Spending time connecting to each aspect of being in nature "one at a time". Having the time to focus rather than passing through quickly."

"Feel a bit more calm. Can rush around a lot.....so seeing nature helps to calm me."

From joining the group, participants experienced changes in their lives through new relationships with nature with some noting that they had started to access nature more frequently, and/or were actively noticing different aspects in nature. This appeared to support some developing a new appreciation of and connection to their local natural environments. From this awareness, participants also reported feeling calmer and some experienced the restorative effects of spending time in nature.

Q4. How did you feel about yourself before you became involved in the activity/group?

For many participants, limited interaction with others prior to joining the group had a significant impact on their mental health. A sense of isolation emerged from a lack of *community* through retirement from work as well as a reduced sense of direction in life and a feeling of not being useful to society. For example, some participants spoke of their isolation prior to joining the group:

"I did feel a bit isolated and lacking focus in my life. (I'm retired.) I am naturally a rather shy person."

"Difficult to make new friends once retired because work colleagues don't retire at the same time, then felt not as useful after a lifetime of working as a nurse and guite isolated"

For some participants, their mental health manifested in high anxiety levels and low mood from a lack of meaning and direction in their lives:

"If I'm honest I felt slightly lost and low in mood, following a bad run of health and loss of routine (not working etc.)."

Although mental ill-health was not a significant problem for all participants, a lack of resilience was still prevalent prior to their involvement in the group. For example, one participant stated:

"I felt good about myself most of the time. Sometimes things would get hard and I wasn't always good at dealing with it."



Generally, prior to their involvement with the group, the participants expressed a low sense of wellbeing through isolation from others and feelings that they were not useful to society. In some cases, this lack of purpose and social interaction resulted in feelings of poor mental health through heightened anxiety and low mood, as well as a lack of resilience for coping with issues as they arose.

Q5. How do you feel now since taking part in the activity/group? Through joining the group, many of the participants experienced positive changes to their wellbeing and quality of life. To combat the sense of isolation some participants reported, meeting new people with similar interests allowed for a sense of *community* to emerge among the group. Finding others with similar interests allowed them to feel less alone, with one participant stated that it was:

"nice to meet others in a similar position"

Nature-based activities offered through the programme acted as a catalyst to allow individuals in the group to get to know each other and share common ground. This allowed connections to form between individuals (which may last after the group has finished). As a result, one participant noted a significant increase in their confidence from the activities:

"I now meet many more people and have become far more self-confident"

Being in nature produced a *calming environment* for the participants, giving them a break from the stressful activities of daily life and allowing them to focus instead on what was around them:

"[I feel] A bit more relaxed. Try to get a bit of time on my own with nature to relax and have time to myself"



Within a more mindful and reflective state, the participants reported feeling a sense of restoration in nature. One participant shared that they felt able to deal with problems as they arose through being able to take time away from stressful environments:

"I look forward to getting to the park as I feel like I can switch off there. I don't think about my problems, I just enjoy the park. When I get back home, I am then in a more positive place to deal with my problems"

Following the activities in the group, many participants also experienced improvements in mood, reduced nervousness surrounding social situations and a greater sense of meaning and purpose which contributed to more positive *mental health* and greater resilience. For example, one participant report that they felt;

"Much brighter. The walks gave me purpose and routine on my Fridays and I felt I had something to look forward to in the week."

Other participants added that;

"My anxiety still gets the better of me on occasion, but I feel like I can cope with it better when it happens"

"If problems arise, I seem to cope with them better following the walks"

Participants acknowledged that they felt better equipped to deal with difficulties in life and attributed this to their direct engagement with nature. Through the greater sense of wellbeing they gained from being in nature, participants reported feeling better equipped to overcome mental health challenges.

In summary, following their nature-based activities with the group, participants benefitted from increased social interaction with others as well as from a sense of being more present in nature. Through this, participants experienced increased wellbeing as well as an improved sense of resilience.





Casual Comments and Observations.

The group leader recorded comments and observations after each session and these are comprised of direct feedback from participants along with observations and reflections from the group leader. They provide an overview of where the LWT sessions took place and captured participants thoughts about the impact of the activities and what they had noticed. Four key themes emerged from this data namely: *Learning, Discovering Nature, Restoration* and *Purpose*.

Learning

The first theme, *Learning*, focused on how learning about different aspects of nature opened the participants to new ways to connect to the natural world and extend their sense of self. Nature provided new experiences for the participants to continue learning about the world around them regardless of their age. For example, one participant commented that:

"I'm 72 and I learnt something new today. Shows you're never too old to learn"

Learning about nature extended beyond the expectations of the participants and appeared to improve wellbeing both in the short and long term through applying new information to their daily lives. For example, this participant stated:

"We did a wildlife wellbeing walk over an hour. We knew that we would probably enjoy it, but we didn't think it would be as good as it was. We felt so much better after the session

and have been using what we learnt regularly, about how to connect to nature and how it can drastically improve your day."

This suggests that nature provides new opportunities for individuals to learn, and as a consequence of experiential learning, they can gain valuable information for how to regulate wellbeing and potentially how regular engagement can maintain these benefits.

Discovering Nature

The second theme, *Discovering Nature* highlighted how, through the information the participants had learned during activities, many people began to discover nature for the first time and gain a new perspective of the world around them. For some, this involved being more aware of animals in nature that they had previously missed. For example:

".....what a really wonderful evening this was.....and I learned much as well as seeing bats. I've seen them.....but never really registered them so couldn't properly appreciate them. The sound of the bats was fascinating and being told about their habits and life cycle was just so interesting."

For others an awareness of the complexity of life was reported with a sense of the world being larger and more interesting than they previously believed. This sentiment is summarised well in the following extract from one participant:

"I must have passed and looked at this tree for 10 years and I've never spent any time to really look at it. And you know when you do stop and stare it's unbelievable how much life is living on just one tree. It makes me so happy to see so much in such a small space. All you need is one tree!"



Close observation led to the development of a fresh perspective of nature being more fascinating and complex than previously believed, creating a world for the participants that was both larger, part of a bigger system, and awe-inspiring.

Restoration

The third theme *Restoration* discussed participants' experiences of calm and recovery gained from their experiences in nature, for example:

"Nature makes you so much calmer and invigorated. You don't realise how much nature is around where you live but the more you look the more you see."

For some, nature provided a break from the busy-ness of everyday life, allowing an opportunity to focus on the present rather than their concerns:-

"I care for my father, so working in nature gives me a really valuable break where I'm not worrying about what happened yesterday or the tasks I need to do later. It's a time where I can focus purely on what I'm doing and the nature around me. It helps me cope."

In this way, it can be suggested that engaging with the natural world can provide an opportunity for rest and recouperation from stress as well as coping skills to manage challenges. There is an element of mindfulness highlighted in this extract, a slowing down and becoming absorbed in the present moment in nature that is perceived as beneficial to this process.



Purpose

The final theme discussed how through their discovery of nature, the activities brought new *Purpose* to the participants' lives. For example, one participant found a sense of meaning from learning to tend for something that relies on them for sustenance:

"I have really enjoyed today, it's been nice. I don't know much about plants so it is great to learn about them and how we can care for them. It feels like it gives me purpose"

In this sense of caring for nature, purpose can be seen in the way in which the participants can see their own impact on nature, for example:

"It's great to see how quickly we can have an effect for nature."

This therefore suggests that engaging with nature can provide a sense of purpose through allowing participants to give back to the natural world and feel a sense of responsibility for nature, as well as giving a reason to continue moving forwards from personal challenges.

Summary of the casual comments and observations

The casual comments and observations provide additional evidence of the positive impact the *Nature Networks* project had for participants. The four themes of *Learning, Discovering Nature, Restoration* and *Purpose* provide insight into the ways in which the project had impact. These themes show some overlap with those emerging from the open questions with similarities being noted across the themes of *New Relationships with Nature, Learning* and *Discovering Nature;* whilst the themes of *Calming Environments* and *Mental Wellbeing* overlap with themes of *Restoration* and *Purpose*.

4. Conclusions

In summary the data evidences that *Nature Networks* initiative had a very positive impact for the people who engaged with the project and took part in this evaluation.

Across the quantitative data, significant increases in nature connectedness and mental wellbeing were observed, along with a significant decrease in levels of loneliness. This evidences the positive impact of the project for the people who took part.

The impact of the project on people's nature connectedness, mental wellbeing and loneliness is reinforced by the qualitative data which evidences that people who took part in the evaluation found the *Nature Networks* sessions to be overwhelmingly positive. People flagged the impact of the project on their own knowledge and highlighted ways in which their involvement helped them to discover nature in new ways, supporting the increase also observed in the measure of nature connectedness.

The importance of the social aspect of the project was clear, with people reporting that they felt less isolated after taking part, and they saw the project as an opportunity to meet new people with similar interests. This supports the reduction in loneliness found in the

questionnaire data and indicates the positive role that nature can have in bringing communities together.

The open comments also reflected the positive impact of the project on mental wellbeing, with participants noting the impact that time spent in nature could have on their feelings and mental health. Participants also highlighted the calming effect of nature and how, after spending time in nature, they were better able to cope with any problems, noting the restorative effect of nature. This supports the improvement in mental wellbeing demonstrated in the questionnaire responses.

Given the positive impact of this project on people taking part, it is recommended that The Wildlife Trust for Lancashire, Manchester and North Merseyside; and the wider Wildlife Trusts continue to deliver projects such as this and focus on activities that provide opportunities to enhance social interaction alongside connecting with nature. The new strategic priority of the Wildlife Trusts to support 1 in 4 people to participate in meaningful action for nature provides the framework for activities such as this project to be expanded across the UK which would make a strong contribution to addressing the increase seen in levels of mental ill-health during recent years (Baker, 2020).

In summary, the *Nature Networks* initiative has had a positive impact for those taking part. It has given them the opportunity to engage and take action in a range of activities in the local area and provided an opportunity to socialise and form new relationships in their community. The impact of the activities on nature connectedness, mental health and loneliness demonstrates the importance of projects such as this.

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6. Appendices

Appendix A: Copy of the questionnaire (excluding information given to participants at the start of the project and consent questions)



Please tell us about yourself





This evaluation seeks to understand any effect taking part in the Wildlife Trust project has on your wellbeing and relationship with nature (as covered in the information sheet you just read). Thank you for agreeing to take part.

Age How old are you (in years) Your gender (please circle) Male Female Prefer to self-define Prefer not to say **Ethnicity** White Mixed or Multiple Ethnic Group Black, African, Caribbean or Black British Asian or Asian British Other ethnic group What Wildlife Trust programme are you doing?

How often had you visited this natural space before? (please tick below)
At least once a week
Once or twice a month
Once every 2-3 months
More than once a year, but less than every 2 – 3 months
Once every year
Less often
Never

Nature Connectedness

The following questions are about you and nature. By nature we mean all types of natural environment and all the plants and animals living in them. Nature can be close to where you live in towns; the countryside or wilderness areas further away.

Please tell us how much you agree or disagree with each of the following statements, by putting a tick in the relevant box.

	Completely disagree						Completely agree
1. I always find beauty in nature	1	2	3	4	5	6	7
2. I always treat nature with respect	1	2	3	4	5	6	7
3. Being in nature makes me very happy	1	2	3	4	5	6	7
4. Spending time in nature is very important to me	1	2	3	4	5	6	7
5. I find being in nature really amazing	1	2	3	4	5	6	7
6. I feel part of nature	1	2	3	4	5	6	7

Wellbeing

Below are some statements about feelings and thoughts. Please tick the box that best describes your experience of each over the last 2 weeks.

	None of the time	Rarely	Some of the time	Often	All of the time
I've been feeling optimistic about the future					
I've been feeling useful					
I've been feeling relaxed					
I've been dealing with problems well					
I've been thinking clearly					
I've been feeling close to other people					
I've been able to make up my own mind about things					

Loneliness

	Hardly ever or never	Some of the time	Often
How often do you feel that you lack companionship?			
How often do you feel left out?			
How often do you feel isolated from others?			

Finally, what are you hoping to achieve from this programme? (Asked at time 1 only)
If you would like to, please tell us about any goals you would like to achieve from taking part in the project. It could include anything from a skill you would like to develop, developing relationships with others through to how you might feel at the end.
The following questions were asked at time 2 only
What did you and your children enjoy the most about the event?
How did you feel about yourself before you became involved in the activity/group?
How do you feel now since taking part in the activity/group?

Thank you. This is the end of survey. Please give it/send it back to a Wildlife Trust member of staff and read the debrief on the next page.

Appendix B:

A breakdown of participants gender and ethnicity is shown in table 1.

Table 2: Details about the people who took part

Gender	Number	%
Female	61	58.10%
Male	34	32.38%
Prefer to self-define	2	01.90%
Prefer not to say	8	07.62%
Ethnicity		
White	90	85.71%
Mixed/multiple	3	02.86%
Black	1	00.95%
Asian	1	00.95%
Other	2	01.90%
Prefer not to say	8	07.62%

Participants were also asked which event they attended and how often they had previously visited the natural space where they attended the programme. Only 10 people responded to this question and details of the events they reported attending are shown in table 2. A full list of events delivered as part of the *Nature Networks* programme is shown in appendix C.

Table 3: Number of people attending events

Event	Number	%
Broadhurst Bioblitz, September 2021	1	00.95
Moston Brook Nature Walk - August 2021	3	02.86
Bat Walks X 6 September-November 2021	6	05.71
Other/did not respond	95	90.48

Details of how often participants had previously visited the natural places where they attended the programme are shown in table 3.

Table 4: Frequency of vising the places where sessions took place

Frequency	Number	%
At least once a week	57	54.26
Once or twice a month	12	11.43
Once every 2-3 months	4	03.81
More than once a year, but less than every 2-3 months	6	05.71
Once every year	3	02.86
Less than once a year	3	02.86
Never	18	17.14

Participants were also asked to report how many children and adults they attended with if attending in a group. These are shown below in table 4.

Table 5: Number of adults and children attending in groups

Adults in	Number	%	Children in	Number	%
groups			groups		
1	33	47.14	1	5	07.14
2	16	22.86	2	4	05.71
3	1	01.43	3	2	02.86
4	1	01.43	4	1	01.43
5	0	00.00	5	0	00.00
6	0	00.00	6	0	00.00
7	0	00.00	7	0	00.00
8	1	01.43	8	0	00.00
None	0	00.00	None	40	57.14
No response	18	25.71	No response	18	25.71

Appendix C

Details of events delivered as part of the Nature Networks initiative

- Broadhurst Clough Bird Walk Feb 2022
- Moston Brook Bird Walk Feb 2022
- Camberwell School Sessions Wildflower planting Jan 2022
- Broadhurst Community Centre Bird Box Building 2022
- Wildlife and Wellbeing Course Jan to Feb 2022
- Wildlife and Wellbeing Course October to December 2021
- Broadhurst Clough Public Flower Planting November 2021
- Self-Guided Trail. Halloween October 2021
- Boggart Hole Clough Fungi Walk, October 2021
- Baileys Wood Fungi Walk, October 2021
- Moston Fairways Fungi Walk, September 2021
- Broadhurst Bioblitz, September 2021
- Broadhurst Clough Wildlife Walk X5 June-September 2021
- Dinosaur Trail September 2021
- Broadhurst Community Centre Bug House Building August 2021
- Moston Brook Nature Walk August 2021
- Bat Walks X 6 September-November 2021
- Bug Hunt at NEPHRA Aug 2021
- Pond Dip X 3 July 2021
- Boggart Hole Clough Bird Walk June 2021
- Boggart Hole Clough Flower Walk June 2021