



Federation of
City Farms
& Community
Gardens

Supporting,
representing
and
promoting
community-
managed
farms and
gardens

Patron HRH The
Prince of Wales

The GreenHouse
Hereford Street,
Bristol BS3 4NA

Tel: 0117 923 1800

Fax: 0117 923 1900

admin@farmgarden.org.uk

www.farmgarden.org.uk

Registered in England as a
Limited Company
No: 2011023
Registered Charity
No: 294494

The true value of community farms and gardens: social, environmental, health and economic

Helen Quayle BSc MSc
Research and Development Worker,
Federation of City Farms and
Community Gardens

Key words:

Community, farm, garden, nature, therapeutic, social interactions, health, volunteering, capacity building, empowerment, engagement, training.

This research project was developed and conducted in conjunction with Lyn Dodds BA MSc, Regeneration Exchange Project Coordinator at the University of Northumbria and Michael Marston, FCFCG Northern England Development Manager.

Regeneration Exchange has been established since 1999 and has a remit to exchange good practice in regeneration within the North East regeneration community in order to increase the learning in this sector so that partners and practitioners may be able to deliver initiatives more effectively.

University researchers Sara Liley BSc MSc and Neil Tait BA assisted with data collection.

Funded by the Northern Rock Foundation, an independent charity whose objective is to tackle disadvantage and to improve quality of life in North East England and Cumbria.



Contents

1. Introduction
 - 1.1 Background
 - 1.2 Aims
 2. Methods
 - 2.1 Introduction
 - 2.2 Grounded theory
 - 2.3 Project selection
 - 2.4 Clients and volunteers
 - 2.5 Informal interview sessions
 - 2.6 Case studies
 - 2.7 Participatory analysis
 - 2.8 Mapping
 - 2.9 Forcefield analysis
 - 2.10 Timelines
 - 2.11 Facilitation
 - 2.12 Rapid appraisal
 - 2.13 Verification
 - 2.14 Postal questionnaire
 - 2.15 Timeframe
 - 2.16 Confidentiality
 3. The findings
 - 3.1 The emergence of themes
 - 3.2 Theme 1 - Social interactions and inclusion
 - 3.3 Theme 2 - Healthy eating and exercise
 - 3.4 Theme 3 - Natural therapy
 - 3.5 Theme 4 - Skill development, training and education
 - 3.6 Theme 5 - Environmental awareness and activities
 - 3.7 Theme 6 - Economic
 - 3.8 What people did not like about their project
 - 3.9 Overview of verification data
 4. Conclusion
- References
- Glossary
- Appendices
1. Initial questionnaire
 2. Final questionnaire

Abstract

In 2007 the Federation of City Farms and Community Gardens (FCFCG) began research into the true value of community farms and gardens, targeting 22 projects across North East England and Cumbria. Data was collected from farms, gardens, allotments and stables using informal interview sessions, participatory appraisal (PA), rapid appraisal (RA) and postal questionnaires. PA and RA data was verified at four further sites.

The findings clearly demonstrate the contribution made by community farms and gardens to increasing the well-being of individuals and communities.

Community-growing projects reconnect people with nature and promote local action on global environmental issues through recycling, composting, the use of organic methods, the creation of wildlife areas and local food production.

The presence of hands-on food growing experiences on our doorsteps promotes uptake of healthier diets and bridges the gap from field to plate.

Community farms and gardens provide opportunities for exercise and learning in alternative outdoor settings, acting as stepping-stones to the wider countryside.

Plants and animals can be used to engage individuals with learning difficulties and disaffected young people, instilling a sense of responsibility and providing routes into education and/or employment.

Social opportunities provided at these facilities instigate the development of support networks and strengthen communities, promoting integration and inclusion.

Findings also suggest that community farms and gardens have a positive impact on the local economy through local spending and employment opportunities.

It is also concluded that community farms and gardens support the delivery of government agendas relating to social inclusion, health, climate change, education, regeneration and local economies.

By raising the profile of these projects and the benefits they deliver to individuals and communities FCFCG hopes to increase recognition and influence funding and policy decisions at a local, regional and national level.

(Please note, the raw data from the project is available as a separate document to download from: www.farmgarden.org.uk/truevalue/rawdata).

Acknowledgments

This research project would not have been possible without the help and support of the 22 participating community farms, gardens, allotments and stables. The University of Northumbria have been an invaluable source of advice and FCFCG staff have played a key role in supporting the research project.

1. Introduction

1.1 Background

City farms and community gardens are community-managed projects working with people, animals and plants. They range from tiny wildlife gardens to fruit and vegetable plots on housing estates, from community polytunnels to large city farms. City farms and community gardens are often developed by local people in a voluntary capacity, and commonly retain a strong degree of volunteer involvement.

The origins of community farms and gardens stem back to therapeutic gardens associated with hospitals, school growing areas and early co-operative agricultural systems. Changes in cultures and land-management systems led to ownership of land falling into fewer hands and a move away from outdoor learning and therapy. However, the last half of the 20th century has seen a resurgence in community food growing, partly inspired by the growth of the community garden movement in the United States. Influence from the Netherlands generated interest in community farming and in 1972 the UK's first city farm was established in Kentish Town, London.

The Federation of City Farms and Community Gardens (FCFCG) was established in 1980 and is the representative body for city farms, community gardens and similar community-led land-based organisations in the UK. FCFCG now represents around 60 city farms, nearly 1,000 community gardens, more than 70 school farms, a growing number of community-managed allotments and at least 200 city farms and community gardens in development. Between them FCFCG members employ more than 550 people, offer thousands of volunteering opportunities and attract over three million visitors each year.

A large amount of work has already been undertaken and published on the therapeutic value of gardening and exercise. More recently, this has expanded to include the health and social benefits of public green spaces and animal-assisted therapy. However, there is a scarcity of research on the holistic value of community farms and gardens to individual mental and physical well-being and the social, economic and environmental benefits to the community. In addition, sections of the population have received more attention than others. Sempik

et al (2003, in Morris, 2007) describe the limited research on how young people are affected by social and therapeutic horticulture.

Much research on the contribution of green space to community cohesion examines the benefits of community forests (Brown, 2004); hence there is a need to address the relationship between cohesion and different outdoor spaces. Recent research into care farming by Hine, Peacock & Pretty (2008) has begun the task of documenting the benefits received through this initiative but there is still a need to identify the therapeutic value of farming within the context of a community setting.

There is a growing amount of research examining the relationship between health and the environment and how environments can be designed to accommodate specific groups of people such as those suffering from dementia (Black & Crawford, 2004). According to Sempik (2005) there is also a lack of quantitative data in the field of social and therapeutic horticulture.

There is a need to expand these streams of research to encompass a wider range of groups in order to generate the greatest benefit.

1.2 Aims

This study encompasses aspects of social and therapeutic horticulture, equestrian associated therapy and elements of care farming, assessing and documenting the impact and value to individuals and communities.

The research focusses on engagement, volunteering, training, capacity building and empowerment. This is achieved by working with community groups in the North East and Cumbria, holding interview and consultation sessions. The methodology was developed based on the initial findings. Factual evidence was collected from specific individuals and projects selected as case studies. The less tangible benefits were tracked by investigating how community farms and gardens influence people's future decisions and aspirations and, where possible, what happened next to those who have moved on.

This research has implications for community growing projects, service users, practitioners and policy makers.

The evidence gathered by this research will be used to demonstrate and legitimise the value of community farms and gardens. The overall aim of the research is to influence policy development and

resource allocation at a local, regional and national level to support these projects. Any increase in support will benefit members and users of community gardens, allotments, city farms and other related community growing projects. Through the wide dissemination of results to policy makers and funders across the whole of the UK, this research will benefit community projects beyond the initial target area and strengthen the movement as a whole.

The evidence gathered here will also be used to help the ongoing development of FCFCG good practice guidelines. This will improve the organisation's standard of service delivery and ability to support projects at a grassroots and national level.

2. Methods

2.1 Introduction

Four phases of data collection were created using a range of methods, including informal interview sessions, participatory appraisal (PA) techniques, verification and postal questionnaires. This strategy was developed throughout the project as an iterative process in line with the grounded theory approach. This section explains why the research was developed using grounded theory and the methods used.

2.2 Grounded theory

Grounded theory is an alternative to testing or verifying already existing theories. Martin & Turner (1986) describe how the approach allows researchers to begin with an open mind without any preconceived hypotheses, suspending the review of literature until analysis has occurred.

A distinguishing feature of this technique is simultaneous involvement in data collection and analysis phases of research (Martin & Turner, 1986). Theories are developed to explain relationships appearing in the data (Martin & Turner, 1986). These relationships can subsequently be investigated through further data collection (Martin & Turner, 1986). Hence, the theory is discovered from the data from the accumulation of more data substantiating the relationships (Glaser & Strauss, 1967 in Martin & Turner, 1986).

Here grounded theory has been implemented through an iterative process of data collection and analysis. Data collected during initial interview sessions informed the development of appropriate PA methods for subsequent investigation. PA findings were used to identify topics where further quantitative data was required. Only at this stage in the research was the literature consulted to identify similarities and disparities between this study and those that have gone before it.

2.3 Project selection

A variety of sources were sampled to select projects; the FCFCG database of known community farm garden projects, FCFCG North East and North West maps, the internet and contact with other community organisations. From these sources a total of 25 projects including a mix of community allotments, gardens, farms and stables were selected based on:

- Project location – a good geographical spread across the target area of North East England and Cumbria (16 and 9 respectively)
- Project age – a mix of both new and longer established projects
- Project management – a mix of projects run by staff and those that are completely voluntary
- Project client and volunteer base – people from a wide range of backgrounds and cultures
- Neighbourhood statistics at ward level were consulted to ensure that selected projects represented areas of low and relatively high deprivation.

The search for groups uncovered two allotment projects that had previously been involved in community work but were currently inactive due to a mix of funding, staffing and volunteer willingness issues. Despite the low rate of current community involvement, the decision was made to include these projects to create a realistic image of community farms and gardens and demonstrate the struggles that they encounter.

An effort to include both FCFCG members and non-members was made to ensure that the research represents the benefits of the community farming and gardening movement as a whole.

A range of groups satisfying the criteria were contacted by telephone and email. Telephone conversations and visits were important in establishing a positive relationship. Several projects

had already worked with FCFCG in the past whereas others were completely new to the organisation.

Access was obtained to 21 out of 25 projects contacted. Two non-consenting projects had ceased to exist, the third had lost its community garden but was looking to recreate it in the future and the fourth project initially expressed interest in being involved but subsequently did not respond to further communications.

To compensate for the loss of four potential participants and the fact that Cumbria was only represented by four projects the decision was made to include a project based in Morecambe close to the Cumbrian border, bringing the overall total of projects to 22.

Once participants had agreed to take part in the study follow up calls were made to organise visits. Participating projects were very positive about the research and keen to get involved.

The categories which the final 22 participating community projects represent, are consistent with the proportions in which these types of project exist across the target area. The projects include:

- Five projects with livestock, two of which are farms and one is a stables.
- Seven allotment projects, five of which support specific groups (e.g. black and minority ethnic people, unemployed)
- Eleven community gardens, one of which is attached to a school
- Two projects run by local councils
- Three projects run by volunteers.

A variety of allotment sites were selected, including traditional sites where plots have been allocated for community use amongst single held plots and a site where each plot has an individual user but schools and the community have been invited to get involved.

It should be noted that all of the city farms featured here had garden areas. To ensure that an all round picture was developed a group in the very early stages of developing an allotment and a project that was currently on hold were included.

Several projects agreed that the ward in which they were located could be disclosed. The wards include All Saints, Cowpen, Eppleton, Owton, Natland, Prudhoe South and Sandyford.

2.4 Clients and volunteers

For the purpose of this study project users are classified as volunteers and clients. Volunteers are defined as people attending a project voluntarily based on a decision they made themselves. In contrast, clients are defined by their referral to projects via health, learning and probation services and similar institutions. As there was a degree of overlap in users classified by projects as students and volunteers, here students are classed as volunteers. The term project managers will be adopted to describe all project leaders, including paid workers and individuals who are running projects on a voluntary basis, where there are no paid workers. The term staff will be used to refer specifically to paid workers only.

2.5 Informal interview sessions

In the first phase of data collection, a questionnaire was devised to obtain information about project users including: how frequently they visited, activities and training courses run by the project, any problems the project was currently facing, and perceived crime levels. This questionnaire was used to structure informal interview sessions with project managers during visits to all 22 projects. Visits began in February 2007 and were completed in November 2007. These sessions were generally conducted with project managers but occasionally, where there was not the opportunity for private discussions, volunteers and clients were also involved.

A risk assessment was undertaken for conducting project visits and phone calls were also used as an opportunity to check for any high risk factors such as building work. In the case of the latter visits were postponed until completion.

2.6 Case studies

In order to further investigate the benefits of community farms and gardens, it was necessary to pick a smaller number of case study projects from within the total 22. The second phase of data collection focussed specifically on these groups.

Case study selection

The original selection criteria and the information collected in the interview sessions were used to select seven case study projects. The case study projects consist of four community gardens (including one located on a school and one totally volunteer run), one allotment working with rehabilitating drug users, one city farm and one community stables. One of the community gardens is based in Cumbria. The other six projects are spread across the North East of England.

The aim of case study projects was to spend time with clients and volunteers to identify the reasons they used projects and how this affected other aspects of their lives. A different approach was needed to the structure of interviews to engage individuals of different ages and abilities in discussions. The decision was made to use participatory appraisal techniques. Case study projects were contacted to organise access to volunteers and explain the participatory appraisal methodology.

2.7 Participatory appraisal

Participatory Appraisal (PA) is developed from Participatory Rural Appraisal, and has been widely used in the southern hemisphere in the context of working with rural communities in developing countries. In recent years the principles of participation and action-oriented research have been increasingly drawn upon in the northern hemisphere to identify and find solutions to a range of issues within local communities. In North East England PA has been used to look at a wide range of issues including drugs, crime, barriers to employment, sexual health, community facilities, graffiti, financial exclusion and education (PeaNUT The University of Northumbria, 2007).

PA is an approach to learning about communities that places equal value on the knowledge and experience of local people and their capacity to come up with solutions to problems affecting them. PA techniques encourage people to interact in a way that enables everyone to share and contribute. These techniques are suited to this study as they can be used to engage a wide range of stakeholders including those with little or no literacy skills. The three PA tools used in this study include mapping, forcefield analysis and timelines. These techniques were developed in response to initial findings and

are explained in greater detail in the following sections.

2.8 Mapping

Mapping is a technique used for collecting layers of information. This method was utilised to instigate dialogue between participants and facilitators and between participants themselves, acting as an icebreaker – particularly for young people – whilst getting people to think about their project in preparation for the next stage of PA. Clients and volunteers were asked to draw a visual representation of their project in groups or individually, depending on how people felt most comfortable. This drawing will be referred to as a ‘map’.

The original intention was for participants to map their project within the surrounding area to identify what other services they considered they have available to them. It became apparent that some groups were reluctant to draw or were not familiar enough with the local area (they did not live locally). Mapping sessions were therefore limited to the project itself which people felt more comfortable with.

2.9 Forcefield analysis

Forcefield analysis is a technique used to weight attitudes or thoughts on how positive or negative they are. Clients and volunteers were asked a series of questions about their project. These questions reflect the initial findings and were designed to identify the range of benefits (and any detriments) clients and volunteers receive at community farms and gardens and measure the strength of feeling towards each finding. The questions were designed to uncover how involvement with the project influenced the behaviour of individuals and impacted on the local area, and what aspects were most valued. The questions are displayed in Box 1 (below).

Each question was posed and answered in turn to avoid confusion. Participants had the option of putting a statement in both the negative and the positive categories if a consensus could not be reached. Facilitators encouraged group discussions and elaborations. Working in a group or individually, depending on how people felt most comfortable, the responses to these statements were ranked. All quotes used are verbatim.

Box 1. Forcefield analysis questions asked to case study project clients and volunteers

1. What do you like about the farm/garden/allotment/stables?
2. What do you not like about the farm/garden/allotment/stables?
3. Why do you come to the farm/garden/allotment/stables?
4. How do you feel when you are at the farm/garden/allotment/stables?
5. Have you learnt any new skills at the farm/garden/allotment/stables?
6. Has coming to the farm/garden/allotment/stables made you want to do anything different in the future?
7. What impact do you think the farm/garden/allotment/stables has had on the local area?

2.12 Rapid appraisal

At the case study allotment project it was not possible to conduct a session with the clients as several had moved on since the project visit and the remaining individuals were quite vulnerable. Instead rapid appraisal (RA) questionnaires based on the PA questions were developed and sent to the project. The allotment project worker returned questionnaires from over 20 clients, both past and present.

The same strategy was used to gather information from the city farm. Three support workers completed RA questionnaires on their groups' behalf (groups of people with learning disabilities and young adults on probation). A member of the management committee and an ex-volunteer also completed questionnaires. Questionnaires were sent to three current volunteers who had agreed to participate but these were not returned.

2.13 Verification

Data collected using forcefield analysis and the RA questionnaire was verified in the third phase of data collection. Verification validates the findings through triangulation (cross checking). All the response statements collected using forcefield analysis and RA were amalgamated according to which question had been asked. The responses to what people liked about projects and why they came were often linked. Consequently, for the purpose of verification, responses to these questions were combined into one category.

Due to the large number of statements collected, it was necessary to collapse the data. First of all repeated statements were placed together, and then very similar statements were collapsed into headings (Table 1, below). In collapsed form the statements covered seven pages of A1 flipchart paper (including space to respond), which was overwhelming for some participants. A larger number of statements would have resulted in waning attention spans and participants potentially departing part-way through. Collapsing the data into similar categories was a compromise between representing all of the data and creating a practical number of statements for volunteers and clients whose time at projects is often limited. The data in its entirety was taken to verification sessions should anyone ask to see it. Unique or very specific statements were not collapsed.

2.10 Timelines

Timelines are often used to investigate how people got to a particular place or to doing a specific thing. Timelines were used to show how people got involved with a project and how it had since impacted on their lives including, where appropriate, any future aspirations they now have.

2.11 Facilitation

Two researchers from the University of Northumbria assisted with the facilitation of these sessions. If participants were not confident with their literacy skills, facilitators would write down responses on their behalf and with participant's agreement. In these circumstances facilitators would read out what they had written to the speaker before placing the statement on the board to ensure that they had correctly recorded the statement.

PA was generally conducted without the presence of the project manager to allow participants to speak freely. In sessions where participants required the support or security of the project manager, the latter assisted with facilitation of PA.

Table 1. An example of how data collected from seven projects using forcefield analysis and rapid appraisal techniques was collapsed into sub-headings within each category

Statement displayed in verification	Amalgamated statements
Category: What do you like about the project? / Why do you come to the project?	
Getting eggs from chickens	Getting eggs from chickens
	Get your own eggs
	Like collecting my eggs
Category: What do you like about the project? / Why do you come to the project?	
Friendly	It's friendly
	People friendly
	Friendly
	Because people are friendly
	Welcoming manner
	The friendly atmosphere
	Friendly atmosphere
Friendly atmosphere	
Category: What impact has the project had on the local area?	
Keeps us off the streets	Keeps us off the streets
	Gets me off the streets – people suspect you will be naughty on the streets
	People not on streets any more – used to get chased
	Keeps us off the streets

Statements were displayed in randomly ordered lists to avoid any inherent bias or influence. The statement lists were placed with the question that had elicited the responses.

Verifiers were asked to place different shaped stickers next to statements that they agreed and disagreed with (Rectangles were used to represent agree and circles disagree). Males and females were asked to use yellow and red colour stickers respectively. These colours were selected to avoid any problems with colour-blindness. The number of people involved in verification was recorded by asking each participant to place one sticker on a recording sheet.

Occasionally participants were asked to use blue or green stickers to allow their responses to be distinguishable. This was the case for a support

worker responding on behalf of his group at one project and a staff member who until relatively recently had been a volunteer. Participants were given the option of sticking as many stickers as they liked to enable them to respond more positively or negatively to statements they felt strongly about. At the bottom of the tables there was space to add on statements should people feel that something was missing.

This method of verification was tested at the FCFCG Autumn North East Networking event in October 2007. The participants were predominantly staff members or project managers. It became apparent that people were unsure how to respond to a statement that did not apply to their project and which sticker to respond with to show that they agreed with dislikes. In future sessions, instructions were written down next to the tables and more facilitators were present. The data collected in this trial run has not been included in the analysis.

Verification took place during November 2007 at four of the original 22 community projects. To collect a range of opinions verification was held with volunteers, clients and recreational visitors at an allotment, a garden, a farm predominantly working with young people and horses and the case study farm. The decision was made to use the latter again as it was hard to obtain access to the other city farm participating in the research. As the RA questionnaire had not been returned by any current volunteers their opinions had not been sampled. Those individuals who did take part in appraisal did not participate in verification.

2.14 Postal questionnaire

In the final phase of fieldwork, a second questionnaire was developed to collect quantitative data on themes emerging from interview sessions and PA. Questions relating to the age, gender ethnicity, background and number of project users were developed to obtain data that could be compared directly with neighbourhood statistics at ward level.

To gauge attitudes and strength of opinions in relation to the environmental, social and health aspects of community farms and gardens a five-point scale was used to measure responses to the eleven statements listed in Box 2 (below). Participants were asked to tick one of five options relating to how they felt about that statement.

Box 2 Environmental, social and health related statements listed in the postal questionnaire to gauge attitudes and strength of opinions

- Biodiversity at the site has increased since the start of the project
- The project helps teach people about where their food comes from
- The project can help develop environmental awareness
- The project helps users integrate into the community
- It is important to farm/grow plants organically
- The project has helped to clean up the local area
- The project helps users to reconnect with nature
- Project users develop friendships and socialise away from the project
- People living in the local area are supportive of the project
- Caring for animals/gardening provides a common ground for volunteers, clients and staff
- Project users eat more healthily now than when they first started

The questionnaire also asked how volunteers and clients travelled to the project. The aim was to measure the extent to which public transport was selected and where users came from.

To identify important sources of funding, incomes and expenditures a range of financial information was asked for. Projects were also asked if they recycled a variety of materials including glass, plastic, cardboard, cans and organic waste.

This questionnaire was sent out to the project managers at all 22 participating projects in the later stage of fieldwork. A return rate of 45.5% was achieved for the final questionnaire with ten out of 22 projects completing it. In order for a postal survey to be valid the return rate must be at least 10%, hence we can consider 45.5% to be sufficient for accurate analysis.

Information from this questionnaire was used to develop baseline data, which was compared to neighbourhood statistics at ward level. (<http://neighbourhood.statistics.gov.uk>)

The neighbourhood statistics are based on data collected in the 2001 census. The six-year gap between this research and the data collection may have a small impact on the validity of theories relating to population composition and relative project use. For example in 2001 some of the projects had yet to be opened. However, the fact that this data comes from a reliable source and provides directly comparable information compensates for any loss of validity. The decision to use ward level statistics was based upon the variety of information that could be accessed at ward level, which was more closely linked to the area surrounding a project than local authority level information.

2.15 Timeframe

The research project began in January 2007 and ended in June 2008. All data was collected in 2007. The timeframe for project visits/fieldwork was somewhat impacted upon by when projects were free – some had busy periods over summer, others were only present on site once a week – and the distribution of projects. Travel was predominantly by public transport or car sharing.

All case study visits took place during summer 2007 followed by verification in autumn and winter 2007.

2.16 Confidentiality

A policy of confidentiality was implemented. This was necessary to instil confidence in participants and as good practice when working with vulnerable people, and enabled people to talk freely about sensitive and personal issues. All participants were told verbally that no projects or people's names would be used. This was reiterated in all written communications. No photographs of people were taken to avoid the impact on the loss of privacy this would have. Projects were consulted before ward names were entered in this report.

3. The findings

3.1 The emergence of themes

A variety of themes relating to aspects of well-being and quality of life emerged from the data. The main themes of social opportunities, health, therapy, skill development, changes in the local area and environmental awareness began to emerge in project visits. These elements were explored further

using PA and RA to discover more specific sub-themes. The validity of sub-themes was confirmed through verification. The final questionnaire responded to these sub-themes and yielded supporting, quantitative data.

Table 2. The themes and sub-themes emerging from the data using the grounded theory approach

Main theme	Sub-themes
Social interactions and inclusion	Friendship - support, socialisation away from the project
	Inclusion - gender, ethnicity, age, background
	Social skills and teamwork
	Community spaces - tackling antisocial behaviour
	Integration
Health	Physical and mental health - exercise, stress relief
	Healthy eating
Natural therapy	Animals and gardening as tools to engage
	How people feel at projects
	Creativity and expression
	Physical appearance of the local area
	Nurturing
	Rehabilitation
	New life and beginnings
	Animals and gardening assisted interactions
	Companion animals
	Confidence
	Ownership
	Independence
	Responsibility
Skill development, training and education	Learning new skills
	Hands-on skill development
	Formal training and education
	Skill development in excluded young people
	'Real' science
	Stepping-stones to employment
Environmental awareness and activities	Outdoor activities
	Connectedness with nature and environmental awareness
	Environmental practices
	Responsible travel
	Biodiversity
Economic	Funding and sustainability
	The local economy

To illustrate this process of emergent themes a flow diagram (Figure 1) has been created using an example relating to social opportunities. In the first visits to projects the social aspect was repeatedly mentioned without any encouragement. Further investigations using PA revealed that friendship and meeting people were important factors in why people attended projects. Verification confirmed that community farms and gardens can promote social opportunities, facilitating the development of social skills and friendships. The final, postal questionnaire identified that the friendships developed at projects could lead to social interactions off-site.

The themes identified in this study share similarities with those from research into horticultural therapy and environmental volunteering. A study by Sempik *et al* (2003) into why people came to social and therapeutic horticulture projects uncovered several main themes: being outside – nature and freedom, socialising, work and employment, nurture, organic gardening and sustainability. Hine, Peacock & Pretty (2007) discovered six key themes when evaluating the impact of environmental volunteering on volunteers in relation to behaviours and attitudes towards the environment.

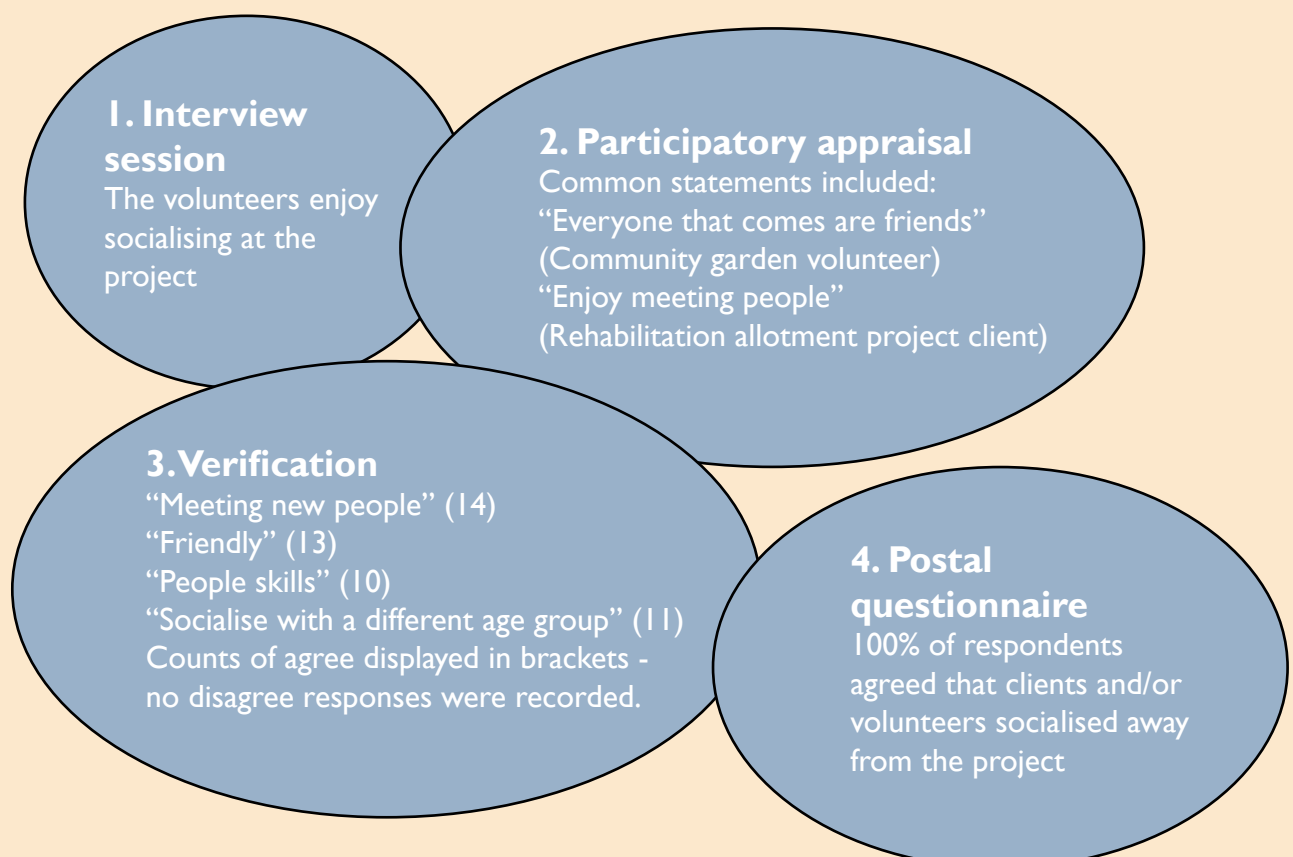
Participants were given the opportunity to explain what they thought was special about their involvement with an environmental volunteer charity (BTCV Cymru). The six key themes emerging were:

1. Natural capital benefits – helping the environment/value of conservation
2. Natural capital benefits – local community
3. Social capital benefits – meeting people
4. Educational benefits – learning new skills and knowledge
5. Health benefits – exercise and fresh air
6. Other comments – enjoyment, staff, outlooks etc

(List adapted from Hine *et al*, 2007)

The congruence of these themes from the current and previous studies indicates that the benefits described here in North East England and Cumbria are similar to those in other areas of the country and Wales. The constant in these different studies is an involvement in activities linked to the environment that are also social, suggesting that these are the key therapeutic factors.

Figure 1. Flowchart illustrating the process of themes emerging in the different phases of data collection in line with the grounded theory approach



3.2 Theme 1 - Social interactions and inclusion

3.2.1 Introduction

The social element of community farm and garden projects was frequently reported throughout the research. Initial visits suggested that for vulnerable groups, attending the project represented their main point of social contact and provided an important source of support. PA and verification demonstrated how these social opportunities could lead to the formation of friendships and promoted the development of social skills through meeting people and teamwork. There is also evidence that community-growing projects working with young people can provide an alternative to socialising on the streets. Statements and responses from project managers suggest community farms and gardens provide community spaces and can promote integration.

Here, neighbourhood statistics at ward level will be compared to project usage figures to examine levels of social inclusion for different genders, ethnicities,

ages and backgrounds. The findings will be related to the four dimensions of social inclusion discussed in relation to social and therapeutic horticulture by Sempik *et al* (2003).

3.2.2 Friendships and support

Friendship is an important part of the community farm and garden experience. Clients and volunteers described how they considered other project users to be friends and were keen for existing friends outside the project to join.

“Everyone that comes are friends”
(Community garden volunteer)

“I want to bring my friend along”
(Bangladeshi women’s allotment group volunteer)

The timelines showed that word of mouth and attendees bringing friends was one of the main routes for people getting involved. This is illustrated by a timeline drawn by a young male who states that he first heard about a community garden from his friend (Figure 2). The name of this young person’s friend has been changed in this image to protect their identity.

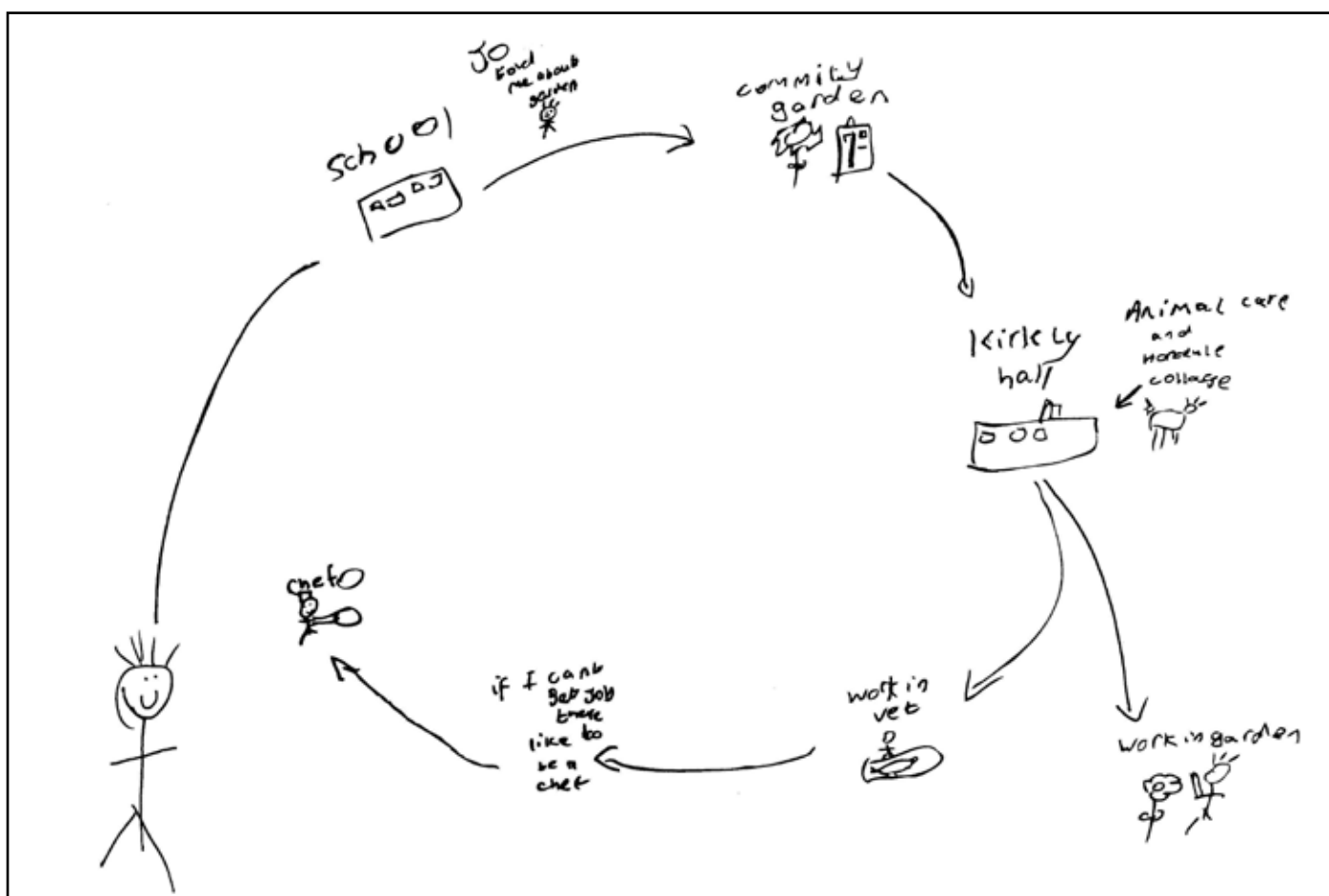


Figure 2. Timeline drawn by a young male at a community garden illustrating how he first heard about the project from a friend

The welcoming atmosphere and friendly people are also important reasons for wishing to return to a project.

“Felt welcoming, neighbouring allotment user are friendly too” (Bangladeshi women’s allotment group volunteer)

The presence of friends makes the working experience enjoyable, even in bad weather.

“Love working with friends – work gets done without really noticing”
(Community garden volunteer)

“It’s lovely here on bad weather and good weather days – the camaraderie is great – especially when given a tea break”
(Community garden volunteer)

Project users emphasised the importance of opportunities for meeting new people especially those with similar interests or who might be going through similar problems.

“Meeting new people”
“Meeting like minded people”
(Community garden volunteers)

The element of friendship was important in establishing support networks in groups of vulnerable people. At an allotment project individuals undergoing drug rehabilitation were able to share their problems with other members describing this element of the project as a ‘support group’.

“...Listening and understanding other people”
“...To talk with those who have lots of personal problems”
“For the company”
(Rehabilitation allotment project clients)

Members and the outside community also use projects as information points where they can receive assistance with general issues such as housing issues, police matters and queries regarding bill payment. Individuals at these projects provide vital, local support for communities. Within these groups information sharing appeared to play an important role in the development of relationships.

“Achieved how to grow vegetable in my own garden and gave others advice about my new skills”
“People are friendly and they share vegetables with us”
(Bangladeshi women’s allotment group volunteers)

“Learning - lots of brains to pick”
(Community garden volunteer)

“Teach other people to ride”
(Community stables volunteer)

These findings support those of Sempik *et al* (2003) who demonstrated that the desire for regular contact and the opportunity to make new friends are key factors in the attendance of people at social and therapeutic horticulture projects and that these friendships can become especially important. Here the value of friendships formed at farms and equestrian projects is also demonstrated. The evidence is consistent with research by Linden & Grut (2002) showing the value of community gardening projects as support groups where people can discuss personal issues. Calleau (2005) agrees noting that the opportunity to work alongside people with similar issues is of particular value to individuals with mental health problems as they can identify with each other and not feel that they are ‘different’.

The findings from this study suggest that community farms, gardens, allotments and equestrian projects all offer support to clients and volunteers although the mechanisms may vary. For example, community garden and allotment users appear to form tight knit groups, which include project managers. On larger projects such as those with livestock and other animals, clients and volunteers often attend with a support worker, hence the role of project managers appears to be slightly different but still very valuable.

“The farm staff are excellent”
(Support worker for disability and special needs services)

Parr (2005) agrees, stating that a supported introduction to gardening activities and team working are valued as ways to help overcome fears that newcomers may have about being challenged by their lack of expertise and the new environment.

Several authors support the importance of a common interest and information sharing. Richards (2005) suggests that for older people, gardening provides social opportunities where individuals feel that they have something in common with others and can gain pleasure from sharing advice, produce and seeds. This is backed up by Seymour (2005) who identified social benefits but also found that participants attended gardening projects to share and gain information.

The findings also suggest that gardens in schools can provide support for individuals who are being

bullied. Pupils at one community garden located within school grounds visited the project on their breaks to escape bullies. The young people using this facility valued the opportunity to spend time somewhere 'safe' with their friends.

“Less bullying than in main school yard”
(Community garden volunteer)

There is evidence that similar approaches are used elsewhere to encourage the development of social networks. Morris (2007) describes a therapeutic horticulture project at a residential boys' school where small group and paired activities are undertaken with the aim of developing cooperative skills and encouraging social engagement with peers. It is possible that these activities could lead to the development of social networks that will extend beyond the therapeutic horticulture group (Morris, 2007).

3.2.3 Socialisation away from the project

Several project managers at farms, gardens and allotments reported that clients and volunteers socialised away from the project. This was quantified in a postal questionnaire sent to all 22 participating projects. Seven project managers who returned the questionnaire strongly agreed that volunteers and/or clients socialised away from the project. Three project managers also agreed, but not strongly.

These projects represent a mix of small, volunteer led groups and much larger sites, indicating that it is not only close knit projects where external socialisation occurs. This result may be skewed by individuals who already knew each other prior to attending the project and therefore continued to socialise outside of it. However, the strength of response to statements regarding new friendships in verification indicates that the majority of friendships are new and therefore the external socialisation of individuals is a direct result of them having met at the project. This highlights the importance of these facilities in creating social opportunities that lead to the formation of significant friendships.

These findings conflict with research conducted by Sempik *et al* (2003). The latter discovered that the number of individuals at social and therapeutic horticulture projects who socialised with each other away from the project was not high with under half of respondents socialising “sometimes” or “quite often” and the other half describing the frequency of social activity away from their project as “rare”.

Sempik *et al* concluded that the horticultural project was their main or only opportunity for social contact. Sempik *et al* (2003) communicated directly with clients whereas the questionnaire used in this study targeted project managers.

The validity of the data collected from this questionnaire depends to some extent on the relationship that managers have with individual project users. Even at larger projects, managers appeared to have a good rapport with clients and volunteers and were aware of their background situations and aspirations. This would suggest that data collected from these individuals regarding projects users is likely to be accurate. Here, the proportion of individuals who socialised outside of the project was not measured, but as 70% of respondents strongly agreed this suggests a relatively high frequency of socialisation and/or a large proportion of users socialising externally. It is possible that confidence, time spent at the project and vulnerability could limit the extent to which project users socialise away from their projects. The study conducted by Sempik *et al* (2003) included 25 projects but the paper this information is taken from focused on users with mental health problems. There may also be a geographical factor, with individuals travelling further to reach projects less likely to interact with those living closer.

In comparison to Sempik *et al* (2003), Calleau (2005) is in agreement with the findings of our research, describing how individuals with mental health problems had no friends prior to attending a garden nursery. At the nursery they establish social networks and meet up outside of the project, even travelling on holiday together, which for some individuals was their first time away from home (Calleau, 2005). Further research is required to determine what factors promote and limit socialisation beyond community farms and gardens.

3.2.4 Social inclusion

Users of farms, gardens, allotments and stables described how they felt welcome at the project, indicating inclusive attitudes.

“Feel more welcome here than on streets”
(Community garden volunteer)

“Friendly, welcoming”
(Community garden volunteer)

The next sections look specifically at social inclusion in relation to gender, ethnicity and age by comparing

community farm and garden data collected in a postal questionnaire and neighbourhood statistics at ward level. This questionnaire was sent to all 22 participating projects and returned by a total of ten. All quantitative project data used here is taken from this questionnaire. In this questionnaire projects were also asked about the background of their users in relation to a variety of factors including education, employment status and health.

It is important to note that these figures represent a snapshot and will change slightly as new users arrive and others move on. It is also important to bear in mind that some users will come from beyond the ward boundaries (one project that did not return the questionnaire noted that approximately 15% of its users came from the ward in which it was based). However, findings discussed in greater detail in Environment (section 3.6) reveal that project users predominantly travel from the local area, hence comparison of project data with ward statistics can be considered meaningful.

The respondents have each been given a number from one to ten (Table 3), which will be used to denote the same project throughout this report (P1, P2, P3 etc). The corresponding ward will be indicated by the same number W1, W2, W3 etc. P10 used three different sites each located in a different ward. Consequently, this project's data cannot be directly compared to ward statistics and is omitted from this analysis.

Table 3. The number and designation of ten projects that returned a postal questionnaire

Number	Type of project
1	Community garden social enterprise
2	Community farm
3	Community garden on an allotment
4	Community garden on an allotment
5	Community garden social enterprise
6	Community allotment
7	Community allotment
8	Community garden
9	Community stables
10	Community allotment

Social inclusion: gender

Data from ten community farms and gardens suggests that males and females are almost equally represented at most projects but disparities in use of projects by different genders do exist (Table 4).

The ward statistics demonstrate that the proportions of males and females living in each area do not deviate significantly from 50:50. Data from half of the projects is close enough to represent the ward demographics. However, five projects are used by proportions of males and females that differ greatly from the neighbour statistics (i.e. 1-25% and 75-99%). Females constitute 75% or more of users at three projects (P6, P7 and P9) but are the minority at P1 and P8. In comparison males only dominate at two groups (P1 and P8) but the overall average indicates that males are present at a slightly higher level. The large disparity between males and females at P1 is skewing the data. Removal of P1 from the average calculation reveals a slightly different situation with females representing the dominant gender.

Table 4. Comparison of use by different genders at nine community projects, displaying data provided by participating groups and percentages calculated from Neighbourhood Statistics at ward level from the 2001 census

Group	Project		Ward	
	% male	% female	% male	% female
1	99	1	50.8	49.2
2	60	40	47.4	52.6
3	50	50	47.1	52.9
4	83 volunteers 40 others	17 volunteers 60 others	47.1	52.9
5	50	50	49.6	50.4
6	20	80	49.0	51.0
7	25	75	48.0	52.0
8	80	20	46.9	53.1
9	25	75	50.3	49.7
10	48	52		
Average (excluding P4)	50.8	49.2		
Average (excluding P1 & P4)	44.8	55.2		

P4 appears to have a greater proportion of male volunteers but this may be somewhat balanced out by the higher percentage of females in other groups of users. The percentage of females is slightly higher in six wards but this does not consistently correspond with increases in the number of female users. Hence, it is not possible to trace a direct link between disproportionate use by a gender and the proportions of each gender in the local area.

P1 is very male dominated. Clients at this project were predominantly individuals with learning difficulties who were referred to the community garden after being shown a selection of activities including working in a café and creative art. When presented with this scenario it appears that males have a much higher tendency to choose practical hands on, outdoor options in comparison to females.

Similarly, the rate of male involvement at P8 is also much higher. However, data from P7 the community allotment is conflicting, with three times the number of females than males participating. Females also dominate P9, the community stables – perhaps this activity has a greater appeal to this gender than to males.

Further conflicting evidence comes from projects that did not return the questionnaire.

Young males dominated a community garden located on a school whereas a community farm respondent stated that young male adults were under-represented and that they would like to encourage more to attend.

Allotment group P3 was visited by a Bangladeshi women's gardening group but still maintained a 50:50 split, indicating that it is possible to strike a balance between meeting the needs of gender specific groups whilst still catering for regular users of a different gender. In addition to interacting with the clients already present at the allotment, the Bangladeshi women stated that they enjoyed opportunities to interact with other females.

“[Like to] socialise with other women”
(Bangladeshi women's allotment group volunteer)

The three projects dominated by females had women in senior roles. However, the majority of staff at P1 are female indicating that this is not an overriding factor in determining gender use. It may however play a role in voluntary projects where the evidence demonstrates that word of mouth is a key access route. P1, P5 and P7 are involved in selling produce and exhibit a range of gender usage,

suggesting that females are not put off by fears they will not be as productive a 'stronger' males.

Overall the data indicates that males and females have an almost equal involvement with community farms and gardens. These findings do show some support for Parr (2005) who found five garden projects assisting individuals with mental health problems across the UK to be dominated by males, but demonstrate that when a broader range of projects is considered, female dominance is also encountered.

Parr (2005) cites the challenge of entering a male dominated space as a deterrent for females, suggesting that women friendly spaces should be available – as demonstrated by the Bangladeshi women's gardening group. Parr (2005) suggests that perceptions of gardening as physical, outdoor, masculine work could also influence health service providers, resulting in gender imbalance in projects where individuals are referred for health reasons.

Here the largest imbalance (P1) occurs when clients with learning difficulties are given several options to choose from, indicating that this perception may extend beyond service providers to service users themselves and could be influenced by prior experience or lack of experience of growing food or working in outdoor settings.

Social inclusion: ethnicity

According to data from 10 projects (Box 3, below), the dominant ethnicities of community farm and garden users are white English and white British. These groups were the only users at two projects and represented the majority of users at five projects. P3 and P4 did not specify the proportions of white British and Bangladeshi users. P10 is the only project to work exclusively with asylum seekers and refugees.

Ward statistics demonstrate that white British is the dominant ethnicity of those living in all these areas, hence it is reasonable to expect project usage to echo the ethnic mix of the area. In W1, W5, W7 and W8 the proportion of mixed, black and Asian ethnicities is extremely low and the corresponding projects are mostly or all white except for P7, which describes the ethnicity of its users as "white British 80-85% Others 15-20%".

Neighbourhood statistics for P7 demonstrate that the proportion of white British individuals is 98.01%,

Box 3. Responses of ten community farm, allotment, garden and equestrian project managers when asked to describe the ethnicity of people using their site

1. White English
2. Mainly White with a small percent of Asian visitors. Increasing number of Polish visitors.
3. A group of Bangladeshi women with their food growing worker & white British
4. White British and Bangladeshi
5. British White in the main
6. Mostly White British
7. White British 80-85% Others 15-20%
8. White British
9. Mainly White British
10. Many - they are all asylum seekers or refugees of many ethnicities

hence the number of other ethnicities present at the project is higher than would be expected if attendance were left to chance, indicating that there have been steps to actively include a range of ethnicities.

Both P3 and P4 share the same ward, where the Bangladeshi population is much smaller than the white population. The diversity recorded at these groups results from an active partnership with a Bangladeshi women's gardening group rather than chance referrals.

The ward statistics do not mention numbers of Polish individuals. There are likely to have been some changes to these figures following the inclusion of more countries in the EU and subsequent immigration.

A community garden that did not return this questionnaire did play host to asylum seekers and refugees during the winter season when their allotment activities were reduced. These findings suggest that community gardening projects promote partnerships between different ethnic groups.

Unlike gender, there does not appear to be any potential link between ethnicity and the type of projects, with farms, gardens, allotments and the stables all involving minority groups. What does appear to differ is the capacity of groups to actively include a range of ethnicities. However this is also likely to be limited by space at projects and the number of managers available to supervise activities. Inclusion may also be linked to wider agendas

within the area. For example if there is a council or government initiative to increase minority ethnic participation in local activities.

These findings are similar to those of Parr (2005) who found that white British dominated the ethnic constitution of five garden projects across the UK. However, the findings do demonstrate that a variety of ethnic groups are attending community farms and gardens, reflecting the inclusive attitude present at these projects and initiatives in place to increase participation, such as the joining of gardening groups from different cultures. In this study language is identified as a potential barrier:

“Nothing, the only problem is that I can't communicate directly to people at allotment because I can't speak English much, so there I communicate through interpreter. It is such a shame”

(Bangladeshi women's allotment group volunteer)

This statement was given in response to the question 'what do you not like about the allotment?' and indicates the need for activities in which people can bond which are not based on verbal communication, such as gardening activities and sharing produce.

“People are friendly and they share vegetables with us”

(Bangladeshi women's allotment group volunteer)

BEN & Brookes (2003) corroborate this suggestion stating that multi-cultural exchange can be promoted through cooking and sharing food. The Black Environment Network (BEN) & Brookes (2003) also suggest that social support can encourage black and minority ethnic (BME) groups into green space:

“The women had brought their own food with them and when lunchtime came they unselfconsciously sat themselves down on the grass among other visitors to the park. If they'd been in ones and twos they probably wouldn't have had the courage to set up a picnic, but being in a larger group gave them a feeling of security.” (BEN & Brookes, 2003, pp12)

BEN & Brookes (2003) note that for some individuals organised group trips can be the first visit to green space since arriving in Britain - in some case several years previously. More work is needed to identify barriers and harness local people with the skills to engage multi-cultural communities.

% of individuals	Age brackets						
	Children under 5	Children 5-12	Young people 13-17	Young people 18-25	Adults 26-50	Adults 51-65	Older people 66 & over
P2	10	40	30	10	5	5	0
W2	6.6	12.9	8	8.4	35.4	15.1	13.5
P3	0	18	0	10	42	30	0
W3	6.9	10.6	6.3	9.8	37.4	15.3	13.6
P4	0	30	30	20	15	5	0
W4	6.9	10.6	6.3	9.8	37.4	15.3	13.6
P5	0	0	0	10	80	10	0
W5	4.4	7.9	5.2	4.7	29.8	28.5	19.4
P6	5	5	50	30	10	0	0
W6	6	10.3	6.1	9.1	35.6	17.2	15.7
P7	5	10	5	5	20	40	15
W7	4.5	9.8	6.4	7.7	34.7	21	16
P8	0	50	20	0	0	25	5
W8	4.5	10	6.2	7.6	31.7	19.3	20.6
P9	5	10	60	10	10	5	0
W9	3.2	4.7	3.1	33.7	32.8	10.3	12.2

Table 5. A comparison of the proportions at which groups of different ages use community farms and gardens (P) and the percentage of the population these age groups exist within the corresponding ward (W). The latter has been collected from neighbourhood statistics and transformed into comparable data. Each number represents an individual project. Ward values are displayed to one decimal place.

Social inclusion: age

In the questionnaire projects were asked to tick all relevant boxes corresponding to the age of project users and give approximate percentages if they were able to. All ten respondents completed this section but one project did not give percentages. In the questionnaire specific categories were used to collect age data. Ward statistics have been grouped into the same categories and transformed into percentages to allow comparisons between the data.

Children under five and adults are on the whole under-represented at community gardens and allotments but not farms and stables. P2, a farm, was visited by parent and toddler groups hence they have a higher percentage of under five year olds than the other seven projects listed. Community gardens and allotments develop links with schools but currently there appears to be limited access for very young children.

One garden project that did not return the questionnaire was located around a community centre and therefore had better facilities for hosting visits from parent and toddler groups. P10 allowed

young children on to the site in order to prevent the exclusion of individuals who were unable to organise childcare.

As would be expected projects hosting primary school visits (P2, P3, P4 and P7) had a greater number of young children aged 5-12 visiting their sites. P6 and P9 predominantly work with excluded or at risk young people which is reflected in much higher percentages of visitors in the age category 13-17 years.

It is also apparent that projects with animals (P2 and P9) draw in children aged 5-12 and young people aged 13-17 years old. Projects working with a mix of unemployed people and people with drug problems, and mental health issues (P3, P4 and P5 respectively) are used by a mix of ages, indicating that the therapeutic value of these projects is not restricted to certain age groups.

Adults over 66 years old were under-represented at all eight projects except for P7 where the proportion is similar to that present in the ward. P8 had an area set aside for the elderly to use, which the data demonstrates has successfully engaged this audience. Data from visits to two projects that did

not return the questionnaire indicates that their users included individuals in their nineties, and older people can be encouraged to join in by giving them opportunities to garden which are otherwise unavailable to them or through special groups aimed at getting the over 60s into gardens as part of a staying healthy routine. Randler, Hollwarth & Schaal (2007) supports the finding that community green spaces are important for this age group stating that as people get older, they increasingly use closer areas for outdoor recreation.

With this in mind larger projects open to recreational users should ensure that they consider the needs of older users and how they might become more accessible to the elderly. The level at which people aged over 66 years old use P7 indicates that there is an interest in gardening in this group that is not being addressed in other projects. This project is actually run voluntarily by local retired people, which perhaps made it easier for other people of a similar age to approach the group or hear about its existence. Evidence from P8 suggests that having an area set aside for this age group to use can increase participation. These findings suggest providing special activities or areas for adults over 66 years old and having people of a similar age involved in the process can increase the participation of this group.

Social inclusion: the background of user groups

In the questionnaire projects were asked to state which groups of people they worked with from a list of 19 options derived from the interview findings (Appendix 2). Space was provided for participants to add in new groups if necessary. Participants were also asked to give an estimate of the proportion of total users that each attending group constituted. The data collected from ten projects indicates that the users of community farms and gardens have extremely diverse backgrounds (Table 6). The number of projects working with each group ranges from one to seven. Each user group in Table 6 was with by at least one project.

The group worked with by the greatest number of projects is people with learning difficulties, suggesting that community farms and gardens are of particular value to these individuals. People in employment, education or training come a close second, indicating that farms and gardens play an important role in learning and skill development.

The fact that black and minority ethnic groups attend five projects supports the finding on ethnicity that these groups are represented at community farms and gardens. The fact that only five projects ticked this box and eight projects are known to work with non-white British people could be an indication that users at three projects are not considered to be from a black or minority ethnic group.

Table 6. The diverse user groups at ten community farms and gardens listed in order of most represented first

Group	No. projects attending
People with learning difficulties	7
People in employment/education/training	6
Black and minority ethnic communities	5
Local residents	5
People not in employment/education/training	5
People with mental health problems	5
People with alcohol problems	4
People with physical disabilities	4
People with specific health problems	3
People with drug problems	2
Refugees and asylum seekers	2
Retired people	2
Ex offenders	1
Excluded people	1
Lesbian, gay, bisexual or transgender people	1
People of a particular faith	1
People on work experience	1
People seeking further education	1
Students	1
Additions made by projects	
School	1
Young people	1

As would be expected in community projects, local residents have a high level of involvement. Individuals with mental health problems and those not in education, training or employment also constitute a large proportion of service users. The number of projects working with people with

alcohol problems, physical disabilities, specific health problems and drug problems, and refugees and asylum seekers, indicates that special facilities or training are required to accommodate these groups. In addition, it is likely that vulnerable individuals will need greater levels of support that are not available at all projects due to the limited number of staff or volunteers.

The only project to state that it worked with lesbian, gay, bisexual or transgender people was an allotment known to have done work raising awareness with young people on related topics. The fact that other projects did not tick this box does not necessarily indicate an exclusion of this group, but more likely the fact that this information is not something they consider when taking on clients and volunteers.

The low number of groups recorded as working with excluded people does not reflect the data collected in interview sessions. This may be partially accounted for by some projects working with young people excluded from school not completing the questionnaire. It is also possible that project managers do not consider individuals using their projects as excluded due to the very fact that they are included in the project.

In addition there was a slight disparity with how projects responded. While some projects entered values that added up to 100%, others provided figures that reached over 100% reflecting the overlap between categories. One project noted that users with mental health and learning difficulties were also unemployed and another that individuals suffered from both drug and alcohol problems. However, the questionnaire was rigorous enough to allow conclusions to be drawn from the data.

Evidence from P10 indicates that this project plays a key role in providing facilities for a range of groups (individuals with learning disabilities and specific health needs) from within its target group of asylum seekers and refugees. In fact this project has the third highest range of groups in attendance. One of these groups was individuals of a particular faith. This is likely to be a reflection of the active role that this project takes in the inclusion of minority groups rather than an exclusion of particular faiths.

Viewing the data according to the number of user groups at each project reveals that P2, a farm, is by far the host to the widest range of project users with 14 different groups (Table 7). This indicates that larger sites open for volunteering, training,

supported placements and recreational visitors can support a more diverse range of users.

Table 7. Data collected from ten community farms and gardens which were asked to state which different groups used their site from a list of 19 options based on a variety of factors including education, employment status and health needs. The total number of groups for each project is displayed.

Project	Group count	Additional groups
P1	2	
P2	14	
P3	6	School
P4	6	
P5	5	
P6	6	
P7	9	
P8	3	
P9	2	Young people
P10	7	
Mean	5.9	
Mode	6.0	

P7, a community allotment, has the second highest user diversity at nine. The lowest diversity of users at a community group is two recorded at P1 and P9. Both these projects work with specific groups – individuals with learning difficulties and excluded young people.

P9 also added in ‘young people’, indicating that perhaps the project felt that the categories provided were too restrictive. Data from project visits confirm that young people in education and those with learning difficulties use the site. The mode (most frequently occurring value) is 6.0, which corresponds with the mean value of 5.9 indicating that projects with similar totals of four, six, and seven, which is half the projects, represent the most common number of user groups.

The majority of projects are free to access, have small membership fees or donation boxes - hence there is likely to be minimal economic exclusion of low income participants.

The stables project offers discounted or free rides and training in return for time spent volunteering. In this way young people and adults are able to access services that would normally be beyond what they could afford.

Many projects are specifically established in disadvantaged areas to provide opportunities for excluded people but these projects also exist in comparatively affluent areas (according to Neighbourhood statistics, 2001) where they offer an equally important service.

Community farms and gardens also promote inclusion by making aspects of their sites more accessible to people with mobility problems.

“Raised beds so it is easy for me to garden”
(Bangladeshi women’s allotment group volunteer)

Social inclusion: the four dimensions

Burchardt *et al* (2002 in Sempik *et al*, 2003) identified the four dimensions of social inclusion as consumption, production, political engagement and social interaction. This section has examined the evidence that these projects promote and support opportunities for social interaction. Production and consumption are also key aspects of growing projects.

All projects with garden spaces or crop growing are involved in the production of food, which is often consumed, by clients and volunteers.

“After growing it’s good to eat and enjoy the produce”
(Community garden volunteer)

Some growers sold their produce to local people to make an individual profit.

“Selling vege [sic]+ eggs to make money/profit”
(Community garden volunteer)

In some circumstances the consumption of produce is not possible due to the need for it to be sold to sustain the project or limited opportunities and/or ability for/of clients to prepare their own meals. However, it can still be said that participants are making use of a service, which allows them to access creative, training and recreational opportunities that would otherwise be unavailable to them.

A growing number of gardening projects are becoming involved in social enterprise, selling their produce to supplement their income or by acting as a small business. Vegetable box schemes are becoming increasingly popular and often plants such as herbs and shrubs are also sold. The growth of social enterprise is partly a response to an uncertain funding climate and projects wishing to become self-sustaining to secure their future.

Ten projects returned a questionnaire sent to all 22 participating groups. Only one project of the ten – the stables – was not involved in food growing. Six out of nine food growing projects were involved in selling produce with the income from this actively ranging from 0.004%, 10%, 25% and 75% of their overall funding (from four projects that provided figures).

Whether for personal consumption, individual gains or to ensure survival of a project, production plays an important role in many community farms and gardens.

The data indicates that where rehabilitation and youth engagement are the primary focuses, there is less emphasis on production. This is consistent with Sempik *et al* (2003) who suggested that productivity could be lower at social and therapeutic horticulture projects where it was not the main aim. However, even at lower levels of production, projects still took pride in their ability to grow food indicating that while production is not the emphasis it is still a key part of the overall experience of community growing projects.

“Grow vege [sic] – enjoy it – think they are the best in the allotment”
(Community garden volunteer)

We found project users were involved in the design of gardens and formal meetings often getting involved with elements of running the project including maintaining websites and making delivery orders.

This is again consistent with Sempik *et al* (2003) who maintains that while social and therapeutic horticulture projects may not provide engagement in party political systems (the fourth element of social inclusion) users are involved in the running of projects, decision making and frequently attend formal meetings, councils and committees. Sempik *et al* (2003) believe that these activities demonstrate an active engagement in the governance of the project, which could lead to engagement with wider political systems.

These findings indicate that community projects involved in food growing activities cover all four dimensions of social inclusion. Whilst not directly involved in the consumption and production of food, equine projects still offer valuable services and may have different mechanisms of inclusion, which could be identified through further research.

These findings correspond with other studies that have found gardening to be an inclusive activity.

“Plants need care and nurture from anyone who can do the task. It matters not who you are or what you have done. Plants are non-judgemental, non-discriminatory and non-threatening. Plants respond to care and attention given to them, not to the strengths or weaknesses of the person.”
(Robertson, 2007, pp15)

3.2.5 Social skills and teamwork

Interview sessions discovered a wide range of team activities taking place at community projects including:

- Construction work requiring at least two people
- Deciding what to plant where
- Creating scarecrows
- Willow weaving
- Mucking out livestock
- Environmental activities
- Teaching newcomers to horse ride
- Administrative tasks

Such opportunities allow participants to improve their social skills, which is of particular value to users who have limited interactions with other people due to health constraints, their previous lifestyle or because they are relatively new to the country.

“Have been able to improve my social skills”
(Allotment rehabilitation project volunteer)

“Made me more able to mix with others”
(Bangladeshi women’s allotment group volunteer)

On a project visit an allotment client described how at first he did not want to attend and hated working with other people. However, this individual had since come to value the support and advice from other members which helps him to talk, instead of keeping worries inside - so now when he feels frustrated he comes to the allotment which helps him to cut down on alcohol.

Community farms and gardens are also valuable for individuals already possessing social skills who wish to put them into practice and develop them further.

“My people working skills are always being tested” (Community garden volunteer)

The diversity of service users enables people to interact with groups that they would not normally

come into contact with and promote acceptance of others and understanding of different cultures and lifestyles. This is especially true when different projects form partnerships or visit each other. For example an asylum seekers and refugee allotment project used a community garden during the winter months and a Bangladeshi women’s gardening group visited a drug rehabilitation project.

“Yes. Mainly how to talk with those who have lots of personal problems”

“Learnt how to socialise with different age group”

“Yes, listening + understanding other people”

“Accept people as they are”

(Rehabilitation allotment project clients)

In verification ten agree responses and no disagree responses were recorded for people skills including from farm volunteers and individuals volunteering at a farm that predominantly worked with equines, indicating that these projects deliver similar benefits through improved social skills to those offered by allotments and gardens. Teamwork is likely to be especially important in projects operating as social enterprises which must ensure that levels of production are high enough to sustain an income.

Statements collected from a poster developed by a farm volunteer to describe the benefits of horses describe how interactions with these animals can help build team skills.

“People who have difficulty working with other people often find that a horse can teach them the meaning of teamwork”

This finding suggests that animals can be used as a starting point when trying to develop the social skills of hard to reach groups. This evidence supports findings by Gladwell (2007) who demonstrated that participation in gardening projects can help improve communication and social skills. Sempik *et al* (2003) found that project members described working together for the good of their project as one of the most valued aspects and in many cases clients, organisers and volunteers had been working together since the very beginning of the project transforming derelict land into a garden.

Research conducted by Gladwell (2007) records that gardening provides an opportunity for young people to socialise and work as part of a team. Linden & Grut (2002) agree, stating that there are plenty of opportunities for co-operation, and for giving and receiving on allotment sites.

Rahm (2002) investigates this theory further by stating that participation in activities linked to a farm or garden such as cafés can lead to opportunities to talk to ‘business’. According to Rahm (2002) interactions with individuals beyond the normal group of family and friends promotes the development of polite and respectful behaviour and improved communication skills.

Ozer (2006) suggests that group work in a garden could temporarily reshuffle the patterns of classroom interactions allowing different students to work together. This finding indicates that school visits to gardens have more than just an educational value.

Ewing, MacDonald, Taylor & Bowers (2007) state that the size of horses means that they must be given respect, citing a lack of this attribute as a frequent problem with at risk children. This is perhaps why they were found in this study to be of value to those who have trouble working with other people. Ewing *et al* (2007) go on to say that working with equines can improve the social skills of young people and promote feelings of social acceptance and peer popularity.

3.2.6 Community spaces

Farms and gardens are essentially community green spaces for local people.

Farms and gardens linked to indoor facilities were of particular value to parent and toddler or preschool groups, providing a recreational area and allowing support groups to meet, such as one set up to help parents with twins. These groups were dominated by women hence several projects had introduced ‘lads and dads’ barbeques and father figure sessions to ensure men were not excluded. A weight watchers group also used one project.

One farm developed ‘muck out madness’ a session held every weekend encouraging local people to come in and help with the animals. Not only does this help the project get its tasks done but it also provides an opportunity to enhance community spirit and togetherness. Other innovative ways to get the community involved include a music festival ‘chicken stock’ hosted by a different farm.

In addition many projects take part in open days, May day community events, and circulate newsletters to keep local communities informed of their activities. PA data indicates that projects enjoyed holding open days to showcase their

project to local people. For a group of adults with learning difficulties, a Gateway into the Community scheme open day represented one of their favourite activities.

“Organising events for other people to come to the garden”

“Open days – people come to visit”
(Community garden volunteers)

‘Open days’ received ten agree responses from all four verification projects and no counts of disagree. PA data also indicates that these facilities can promote community involvement.

“The community round about gets involved in project on the garden”
(Rehabilitation allotment project client)

“Coming to the garden is a way of finding out what is happening locally – information”
(Community garden volunteer)

In PA and RA project users were asked what impact they thought the farm, garden, allotment or stables had on the local area. The responses were resoundingly positive:

“It has had a positive impact because it gives people something to become involved with, something they enjoy”

“The community get involved in projects at allotment”

“Positive, because you can get more people involved”

“Positive. People see it as theirs and it’s a good thing”

“Positive because it helps a lot of people who need it”

“Positive. Young people see the allotment as a community thing and will not vandalise it.”

“Place to volunteer – especially for local children”

“Focus for the community”
(Community garden volunteers)

“Some of the vegetables are given to local community. This is good”
(Rehabilitation allotment project client)

“...Good at involving the community”
(Ex-community farm volunteer who now works in the community and voluntary sector)

“[Focus for the community] formally as a place to volunteer – especially for local children. Informally there are many points of access for local people, and for the local primary & secondary schools there have been

opportunities for structured learning, work experience, even contributions to putting on events – for example, dramatics at Halloween events.”

(Member of community farm management committee)

These statements indicate that community farms and gardens can provide important facilities and services that are otherwise unavailable to local people. In addition to the volunteering opportunities mentioned above, community-growing projects also provide access to green space not just as a recreational facility but also as a resource for growing food, an environment that can be designed and altered.

“Haven’t got my own vege [sic] garden at the moment”

(Community garden volunteer)

One community garden developed voluntarily in response to local problems had an area set-aside specifically for young people. Each individual had their own plot where they were able to build chicken pens and make independent decisions about what to grow.

When asked about their plots young people were able to describe in detail what they had planted where, and how they enjoyed taking the produce home or sold it to make a small profit. In this circumstance the garden provided an important social facility that was absent in the area resulting in many young people congregating in public areas.

Users descriptions of how they had benefitted from this project, included:

“I come everyday. Good to be responsible – seeing plants grow”

“Gets me off the streets – people suspect you will be naughty on the streets”

“Learnt to behave”

“Somewhere to get together + talk to mates”

“Learnt about animals”

“Reaching our goals in life”

“Getting licenses/certificates for machinery to use in future”

Prior to the start of this project these young people had been perceived as a problem and as participating in anti-social behaviour. The research demonstrates the value of community projects targeting these groups and providing facilities that promote a sense of ownership and opening hours that allow young people to come after school, at weekends and in the evening.

These findings are also seen in the evidence from a community stables project.

“Project keeps young people busy – come straight from school, more than just a youth club”

(Community stables volunteer)

In some cases other facilities are not available in the area for young people.

“Also good at involving the community and reaching out to young people especially who might otherwise become involved in less constructive activities as there is not always a lot for young people in the area to become involved in.”

(Ex-community farm volunteer who now works in the community and voluntary sector)

Even where community and youth services are available they may already be stretched to capacity or people may have been excluded for bad behaviour.

“Community centre won’t let me in all places had been taken”

(Community garden volunteer)

Reducing levels of antisocial behaviour can make areas a nicer place for everyone to live. Individuals perceived as the cause of antisocial behaviour do not necessarily enjoy hanging out on the streets. They feel as if they have no where else to go and may have trouble at home. They too enjoy reductions in antisocial behaviour.

“Less lads on the streets – reduces the amount of trouble, bit nicer place to live”

(Community garden volunteer)

“Difference to local area – young people got somewhere to come to rather than hanging around on the street and develop interests”

(Community stables volunteer)

Community projects can also tackle problems regarding underage drinking by offering alternative activities.

“Not drinking on the streets”

(Community stables volunteer)

Some volunteers actually wished that their facility was open later so they could stay in the evenings.

“Wish stables was open later”

(Community stables volunteer)

PA statements indicate a link between community projects and reductions in anti-social behaviour.

However rather than support this finding verification results are conflicting. There are disparities in how verification projects responded to statements relating to antisocial behaviour. The levels of antisocial behaviour are likely to vary from project to project and people of differing ages and backgrounds may have different perceptions of what they regard as antisocial behaviour.

It is noticeable that projects more frequently used by young people agreed to these statements whereas the project predominantly used by older people disagreed. This would suggest that community farms and gardens only reduce antisocial behaviour by young people when the project is geared towards attracting this age group and offers an alternative place to socialise. Flint & Kearns (2004) support this theory stating that by providing places for different groups, for example somewhere for young people to legitimately 'hang out', green space can diffuse community tensions.

Individuals involved with growing projects often have other roles within the community, which led to their involvement at the farm or garden or are a direct result of their participation. Examples include working voluntarily with friends of woodland, refugee or church groups, or the promotion of a cause with links to food growing such as fair trade.

The only occasions where projects reported that they had struggled to engage the community were linked to lack of funding to support events or employed a staff member to supervise activities, changes in the local area such as the removal of houses to make way for a larger development or lack of support for individuals in charge resulting in them running out of energy to keep the project going. These findings highlight the need to raise the profile of community farms and gardens.

PA statements are supported by findings from a postal questionnaire. Nine out of ten respondents agreed that people living in the local area were supportive of their project, six of these individuals agreed strongly. The one remaining agreed that people on the allotment site rather than the local area were supportive of the project.

One project that did not return the questionnaire said that people living in houses overlooking the site keep an eye on the area in case of trouble but no project reported any long-term crime problems indicating a sense of ownership generated by community involvement might have acted to prevent crime.

Projects reported a few incidents of vandalism or the occasional stolen tool but on the whole levels of crime were low or non-existent. The ownership local people feel towards a project is likely to play an important role in deterring crime.

These findings correspond with studies on urban parks, which Brown (2004) states play a role in the social lives of users. Several studies support the theory that green spaces promote community interactions. Black & Crawford (2004) describe how parks, attractive places to walk and environmental improvement programmes help to encourage social contact within a community. Brown (2004) expands on this suggesting that green space provides places where neighbours can meet and get to know each other, allowing the development of friendships.

A study by Kweon, Sullivan & Wiley (1998) discovered that older adults who have more exposure to green common spaces share a stronger sense of local community than those with less exposure to green community spaces. These individuals report a stronger sense of unity among residents, experience a stronger sense of belonging to the neighbourhood and feel that neighbours are more supportive of one another than individuals who have less exposure to green common spaces (Kweon *et al*, 1998). However, Kweon *et al* (1998) noted that the level of exposure to community green spaces was not significantly related to the self-reported health of older adults or fear of crime even though Brown (2004) suggested that community green space could potentially lead to a reduction in violent behaviour.

Looking more specifically at gardens and growing spaces, Gladwell (2007) found that young people were able to socialise whilst working on the garden; sitting alongside each other, planting and talking at the same time.

Rahm (2002) agrees that gardening projects established for specific groups can also be used to teach the local community the value of gardens as a source of food, providing an opportunity to appreciate nature and acting as a valuable community resource. According to Brodie & Biley (1999) the introduction of animals can promote social happiness and harmony for the general population.

3.2.7 Integration

The value of community farms and gardens as facilitators to integration became apparent during the initial phase of data collection where inter-generational and inter-racial activities were observed or described by project managers. The case study allotment project working with rehabilitating individuals hosted several visited from a Bangladeshi women's gardening group who also completed RA questionnaires.

The opportunity to grow food is a useful tool to engage immigrants previously involved in agricultural work before moving to the UK and provides an opportunity for crossing language barriers and for users to experience fruit and vegetables from different cultures.

“Because I used to grow vegetables in Bangladesh”

“Yes, I learnt about different vegetable that people could grow also I know about English vege e.g. corn, runner beans, celery, broad beans and different type of cabbages”

“People are friendly and they share vegetables with us”

(Bangladeshi women's allotment group volunteers)

These statements indicate that sharing produce and knowledge provides a basis for groups from different backgrounds to interact. As well as promoting acceptance within immediate group members, community sites situated within traditional allotments provide opportunities for service users to come into contact with other plot holders. In some cases there may initially be feelings of uncertainty amongst individual plot holders, but over time they come to accept the new users.

“I don't live near the allotment, but first I had a negative impact on the area because I felt as some of the other allotment users were a bit funny towards our groups. But now they are used to our groups”

“Felt welcoming, neighbouring allotment users are friendly too”

“Some neighbours are nice too!”

(Bangladeshi women's allotment group volunteers)

One project manager described how they had improved their relationships with other plot holders by helping them to carry out tasks, which required several people for heavy lifting or by welcoming new

plot holders particularly women who in some cases were daunted by the predominant male presence and found the community group more approachable when asking for advice.

Opportunities for social integration are also of value to vulnerable groups who have limited social interactions. Community farms and gardens offer opportunities for excluded young people to socialise with different age groups and those with learning difficulties to interact with members of the public. A community garden staff member involved in the creation of a garden at a nearby school took volunteers with learning difficulties along to help. Evidence also comes from PA.

“Learnt how to socialise with different age group”

(Client at a drug rehabilitation allotment project)

“[Clients have] learnt how to react around the public”

(Learning disabilities support worker)

Sites used by young offenders and individuals on probation are likely to support the integration of these individuals back into society, which may be aided by giving them a useful role to play in the world outside prison. This theory is supported by the fact that several individuals on placement at a community farm whilst on community service subsequently returned.

“On completion of community service returned to the farm to help out on weekends”

(Young offender support worker)

Comments regarding integration scored highly in verification: learning to socialise with a different age group received 11 agree responses; to be more open-minded nine, and working with disabled people seven. None of these statements were disagreed with.

Further support comes directly from project managers. Results from the postal questionnaire show that eight out of ten project managers who returned a questionnaire strongly agreed with the statement that the project helped users integrate into the community. Two project managers also agreed but not strongly.

As well as hosting visits themselves several study projects took volunteers and clients on trips both to horticultural and non-horticultural sites which is likely to further increase confidence away from home and assist integration.

“Have trips here to go on”
(Community garden volunteer)

Calleau (2005) supports this theory describing how individuals with mental health problems may not be keen to venture far from home without support. Calleau (2005) states trips organised by a gardening project can encourage friendships and help volunteers to re-integrate back into the community. Sempik *et al* (2003) state that allowing the public to mix with individuals with mental health problems by selling produce helps to build links between clients and the community.

Research by Linden and Grut (2002) supports the theory of improved socialisation of asylum seekers and refugees on allotments. Their studies demonstrate how those new to the country and struggling with difficult pasts can form relationships with other plot holders, which in turn can have a healing effect.

“The relationship with fellow allotmentees within the project, and with British plot-holders, became important to him. The sense that he now has friends among his neighbours has helped to restore his shattered dignity and sense of self.” (Linden and Grut, 2002, pp130).

Kweon *et al* (1998) looks at the theory in a broader sense demonstrating that exposure to green community spaces is positively linked to higher levels of social integration in older adults.

The findings from this study and supporting literature (Calleau, 2005; Kweon *et al*, 1998; Linden and Grut, 2002) indicate that farms and gardens play an important role in promoting integration as they provide pockets of community green space and attract a diverse range of users.

3.2.8 Summary

At their most successful, community farms and gardens can instigate the development of support networks and promote acceptance among different members of the community. Farms and gardens engage people through social opportunities and empower local people by developing their capacity to deal with social situations, which enables them to take a more active role in their community. These findings highlight how community farms, gardens, allotments and stables can promote and facilitate integration between a wide range of users. The data indicates that such facilities can be used to tackle bullying in schools – an approach that could

be adopted by educational bodies to help remedy this problem. There is also evidence to suggest that proactive outreach work to include black and minority ethnic groups and people from countries new to the EU who are taking up residency in the UK could ease conflict between nationals and immigrants and breakdown language barriers between these groups.

The findings demonstrate that community farms and gardens are adopting strategies for promoting inclusion including:

- Allowing clients to bring their children along if this would otherwise prevent them attending
- Building raised beds to promote ease of access
- Developing cross-cultural partnerships
- Setting aside special areas for different age groups

The data indicates that people of all ages and walks of life can get involved as activities can be tailored to ability and support is always provided. The majority of projects have an open door policy and will welcome anyone into the group. The only projects with restricted access are those where clients enter by referral only. Social inclusion is an important element of community projects. However it must be considered that in some circumstances opening up a site used by very vulnerable individuals to other groups may be detrimental to the former. Project visits and collaborations are a good way of promoting integration when site size limits the number of users that can be there at any one time.

Access to projects appears to be dependent on knowledge that they exist which appears to be mainly generated by word of mouth. Some profile raising is needed particularly amongst physical and mental health practitioners to increase client referral. Further research is needed to identify barriers that may be preventing particular groups from participating so that any unintentional exclusion can be resolved.

The idea of tempting young people off the streets with gardening and farming activities may not be a thought that springs to people's minds but the fact that one project for local young people has a waiting list is testament to this approach.

3.3 Theme 2 - Healthy eating and exercise

3.3.1 Introduction

During project visits it became apparent that community farms and gardens were used by people with health problems, both physical and mental, including individuals who had suffered from strokes, depression or were battling to improve their well-being following drug abuse.

Themes relating to physical and mental health continued to emerge in PA and RA. Verification confirmed the health benefits received by volunteers and clients in relation to improved diets and exercise opportunities, which appear to be linked to the outdoors and fresh air. There is also evidence that group activities support positive mental health. These findings are discussed in relation to recent studies and the current state of health in the UK.

3.3.2 Physical and mental health

Gardening, farming and horse riding can be very physical, providing opportunities for exercise that is both productive and enjoyable. While some participants described their dislike of digging others cited it as their main form of exercise, which they enjoyed.

“Achieved exercise to keep me healthy”
(Rehabilitating drug users at a community allotment)

“Love the physical work of digging”
(Community garden volunteer)

“The exercise associated with the care and riding of horses can also add to your fitness”
(Statement taken from a poster created by a community farm volunteer to describe the benefits that young people receive from horses)

As well as full time volunteers and clients, more casual users whose jobs are less active enjoy exercise opportunities.

“Helps to keep me fit, my work is not normally as active”
(Learning disabilities support worker)

Increases in gardening knowledge and confidence can lead to greater participation in domestic gardens promoting exercise offsite as well as on.

“Other improvements: working on my own garden more effectively, learning more about herbs and vege [sic]”
(Community garden volunteer)

These statements demonstrate that community farms and gardens offer exercise opportunities that are associated with activities that are considered to be enjoyable rather than for the sake of exercising itself. The social element of garden and/or farm activities could encourage users who would be put off by more solitary forms of exercise.

“Love working with friends – work gets done without really noticing”
(Community garden volunteer)

This social aspect might also support users who are deterred from recreational exercise in other green space because it is perceived as unsafe.

In rural areas, access to green space will not be a restriction. However the wider countryside may not have the same social draw. There is also evidence that the social element of community activities enhances mental health.

“Also mentally I feel good by going as group.”
(Community allotment volunteer)

The social benefits and opportunities to take food away may be why gardening can take over from other forms of exercise.

“Volunteering in the garden has (to some extent) taken over from walking and riding a bike!”
(Community garden volunteer)

The statement “Love the physical work of digging” received ten agree responses in verification from both men and women demonstrating that the latter are not put off by labour intensive work as discussed in section 3.2. The only verification project that did not respond to this statement had limited involvement in gardening activities. No disagree responses were recorded.

Six agree responses were also recorded from two projects for the statement “Volunteering in the garden has (to some extent) taken over from walking and riding a bike!” indicating the popularity of gardening over other activities.

One project specifically targeted the over 50s running health events on keep fit and tai chi. The overall aim was to encourage these groups to make use of the exercise opportunities available in the garden. This project was one of several involved

in the research trying to establish links with local doctors with the aim of receiving 'Green gym' referrals from Primary Care Trusts and the NHS.

There is also evidence that exercise at community projects can help to reduce stress and improve mental health.

"Riding can help reduce stress and stop the mental conversations which causes it"
(Statements taken from a poster created by a community farm volunteer to describe the benefits that young people receive from horses)

PA statements also indicate that project users value the pleasant surroundings associated with farms and gardens.

"Fresh air and beautiful environment"
(Community garden volunteer)

These surroundings may also be linked to improved mental health. The data clearly demonstrates that involvement with community farms and gardens can benefit the physical and mental health of participants through exercise, social opportunities and pleasant surroundings.

Kuo (1998) supports this theory indicating that there is growing evidence that access to nature can support physical and psychological health in built, urban landscapes.

Hine *et al* (2007) agrees and suggests that connectedness to nature is an important predictor of subjective well-being. Black and Crawford (2004) state that access to appropriate good quality green space can have a positive impact on both mental and physical health. Thus the community projects provide opportunities to tackle features of their environment they find offensive.

"Improved areas in the town by planting tubs"
(Community garden volunteer)

This research corroborates existing evidence demonstrating the health benefits of community gardening, farming and animal related projects but highlights the need for increased recognition amongst health care practitioners to improve the process of client referral.

Parr (2005) describes the difficulties that projects face in maintaining consistent referral patterns:

- The perception of gardening as a 'luxury' service in already stretched mainstream service budgets.

- A lack of awareness amongst primary care providers (such as GPs) and the difficulties of accessing them to raise awareness.
- The unstable nature of funding sources in the voluntary sector resulting in fluctuating staff numbers with knock on effects in terms of referrals.

(Parr, 2005, pp25)

According to Crawford (2004) there is a growing body of evidence suggesting a relationship between local access to appropriate green space and the levels of physical activity amongst residents. The findings in this study support results from an evaluation of green gyms. According to BTCV (2008) the concept of green gyms is exercise whilst conducting conservation activities, for example planting a new hedge or removing vegetation that has overgrown onto a path. These sessions last for up to three hours and are taken at the pace of volunteers (BTCV, 2008).

The study conducted by Yerrell (2008) found that on average, the physical health status of green gym participants improved significantly. In addition those with the lowest physical health scores on the introductory questionnaire were nine times more likely to be the ones improving their physical health the most and individuals with poor mental health were three times more likely to be the ones improving the most.

Similarly Bird (2004) states that the maximum benefits of physical activity are in the elderly who are currently the least active. Richards (2005) agrees, stating that gardening can be a regular form of exercise in which people can also feel the benefits from the outside air. Other studies such as BEN & Brookes (2003) have demonstrated the value of tai chi in encouraging Chinese people to use green space. Here we see that the exercise benefits of this activity could be used to engage a wider audience.

Bird (2004) states that physical inactivity is a major preventable health risk, affecting about 60% of the population resulting in chronic disease and lack of independence - hence correcting this is a public health priority. According to Bird (2004) the recommendation for adults of 30 minutes of moderate activity at least five days a week is still not as well understood as diet or smoking recommendations.

Bird (2004) suggests that nature conservation and gardening activities are moderate forms of exercise sufficient to result in physical benefits. Ozer

(2006) agrees citing weeding, digging and general maintenance as good activities for exercise. With this in mind the role of community projects as providers of free or inexpensive social exercise is likely to become increasingly important.

Brodie & Biley (1999) agree that social support has an important influence on personal health. Sempik et al (2003) note that cooperation (section 3.2 Social interactions and inclusion) is highly valued amongst individuals with mental health problems.

A study conducted by a volunteer at a nursery highlights the effect of gardening on mental health. Calleau (2005) describes how after attending the nursery, volunteers' visits to psychiatric hospitals reduced dramatically with some not returning at all. In addition self-harming behaviour stopped or reduced and 53% of volunteers had their medication reduced and in some cases now take no medication at all (Calleau, 2005).

Velde, Cipriani & Fisher (2005) describes how animals can be used by occupational therapists working with clients with chronic and persistent mental illness to improve alertness and cognitive ability, allowing clients to focus and remain attentive for longer periods of time.

3.3.3 Healthy eating

Food growing activities featured strongly throughout PA. On a project visit one manager noted that the volunteers on benefits could not necessarily afford to buy good food so access to fresh vegetables was important. Another gardening project rewarded volunteers with a healthy cooked lunch. Adults with learning difficulties visiting a community garden as part of a Gateway into the Community programme drew a selection of vegetables in the PA session (Figure 3).

These drawings were associated with the statement:

Figure 3. A selection of items grown in a community garden drawn by a group of three women with learning disabilities using the garden through a Gateway into the Community group. (From left to right: onion, tomato, carrots, sweetcorn.)



"To grow fruit and veg – strawberries, apples, lettuce, tomatoes"

(Community garden volunteer)

Individuals using food growing and farm projects described how they help bridge the gap between food seen in shops and an understanding of where it comes from, providing memorable hands-on experiences. For some individuals, particularly young people, these experiences represented their first encounters with growing crops and/or fresh eggs.

"Gardening had always been an interest but food growing was a whole new experience for me"

(Ex-community farm volunteer who now works in the community and voluntary sector)

"Enjoy seeing the young person's faces when they realise that a duck egg comes first from the duck and not from ASDA"

(Probation support worker)

"Positive as it allows urban people a glimpse of country life, important that young people get to see how a working farm works, understand where their food comes from etc"

(Member farm management committee)

"To see children come to understand the growing of vegetables"

(Community garden volunteer)

In a postal questionnaire sent to all 22 groups project managers were asked if their project helped to teach people where their food comes from. Eight out of a total of ten respondents agreed – six of these groups strongly agreed. The allotment working with asylum seekers and refugees was neutral. Evidence from this project's interview session demonstrates that the majority of users have agricultural backgrounds suggesting that they are already aware of where their food comes from when they join the group. The equine centre replied

with “N/A” representing the fact that they were not involved in growing food or keeping livestock.

The research indicates that there is a potential link between food growing experiences and healthier diets, which can spread beyond direct project users to family members.

“Take home the vege [sic] - encourages us to try something new”

(Community garden volunteer)

“Bring veg at home for the family”

(Bangladeshi women’s allotment group volunteer)

In the postal questionnaire, project managers were asked if their clients and volunteers ate more healthily now than when they started attending the project. Two project managers strongly agreed; two managers at a farm and allotment respectively also agreed but not strongly and three were neutral.

The people using the projects where managers strongly agreed were rehabilitating drug users and young males on a deprived estate. The neutral projects worked with unemployed adults, students, people with mental health issues, and refugees and asylum seekers.

The questionnaire did not record the quality of people’s diets prior to attending the project therefore it is possible that for individuals with existing healthy diets no change was noted. This is likely to explain the response of the allotment working with asylum seekers and refugees who it has been noted already came from food growing backgrounds. However, another neutral project had actually been involved in a five-a-day initiative to promote healthy eating amongst its users, indicating that there was a need for these individuals to adopt healthier diets but that this had not necessarily occurred.

It is also possible that on sites where a higher proportion of the plants are grown for aesthetics rather than the production of food consumption this will be less. Other factors may limit the uptake of healthier diets such as the ability to cook meals, financial constraints and general unwillingness.

The stables project disagreed that project users ate more healthily since starting the project. This finding in no way demonstrates a failing on the part of this project but highlights that contact with food growing activities is key to bridging the gap from field to plate and promoting healthy diets.

Another initiative adopted by projects that did not return the questionnaire was hosting an onsite café or linking to an offsite facility in which food produced in the farm, garden or allotment could be cooked, allowing volunteers and clients who do not have access to cooking facilities to get involved in the preparation of food and eat a healthy meal.

Projects also ran healthy eating schemes and in some cases rewarded volunteers with a cooked meal. One project in a deprived area felt that it was important for projects users on low incomes and poor diets to receive a decent meal in return for help onsite.

The importance of these findings is highlighted when related to recent research on ‘concrete children’. The Year of Food and Farming (YOFF) is a campaign to help children find out more about the countryside and where their food comes from through memorable first hand learning experiences (www.yearoffoodandfarming.org.uk, 2007).

As part of this campaign YOFF commissioned research into the relationship between childhood experiences and knowledge about food. According to a study overseen by Sigman (2007) 27% of 8-9 year olds have never come within touching distance of farm animals and 19% of children have never picked fruit and eaten it. These figures demonstrate a frightening lack of knowledge increasing the need for food growing projects on doorsteps.

Sigman (2007) tested the ability of children to place basic foodstuffs in their everyday context. The ‘concrete children’ were far more likely not to know how mushrooms and spinach were grown compared to children who often visit the countryside. The YOFF study states that experience of where their food originates is crucial in engaging children about their diets (Sigman, 2007).

Seeing food grow outdoors acts as a visual reinforcement significantly improving children’s nutritional knowledge which is still present six months later. This evidence supports the findings of this study, which demonstrates that young people develop a greater interest in vegetables when they have the opportunity to grow them. Here the data also indicates that this theory extends to adults as well as children.

An important finding in the YOFF study (Sigman, 2007) is that contact with growing food outdoors can positively influence children’s preference for vegetables including those to which they have not

been directly exposed (broccoli, peas, courgettes and carrots).

Sigman (2007) also states that school gardens can increase agricultural literacy, knowledge of the food chain and may also have an impact on dietary choices. Evidence discussed in section 3.4 on natural therapy indicates that users of community projects with animals are able to differentiate companion species to those used for food, demonstrating an awareness of food chains.

Ozer (2006) suggests that there is a potential for school gardens and farm-to-school programmes to tackle obesity problems by promoting healthier diets. Ozer (2006) cites the inclusion of science and nutrition concepts relevant to food growing in such programmes as key to their success.

Rahm (2002) agrees noting that while food cycles are considered to be a basic part of scientific learning/elementary understanding of science, experiences that support this learning are not readily available to children who grow up in areas where there is little nature. However, as students only spend part of their day in school, resources and support for healthy eating in the community and at home are also critical (Ozer, 2006).

This finding indicates that projects involving schools, communities and welcoming family visits are likely to have the greatest success in promoting a lasting change to healthier diets.

3.3.4 Summary

This study suggests that where there has been little or no knowledge about healthy eating and limited means with which to obtain healthy food, community food growing projects have a positive impact on the diet of users.

Community allotments, gardens, farms, and stables all have positive impacts on the physical and mental health of clients and volunteers, predominantly through exercise and social activities, but also by allowing local people to improve their environment.

Community farms and gardens encourage people to take responsibility for their health and become more proactive which Wanless (2002) states can be a route to dramatic improvements in public health. Pretty, Griffin, Peacock, Hine, Sellens, & South (2005) conclude that:

“Green exercise has important implications for public and environmental health. A fitter

and emotionally more content population would clearly cost the economy less, as well as reducing individual human suffering. Thus increasing support for and access to a wide range of green exercise activities for all sectors of society should produce substantial economic and public health benefits.”
(Pretty *et al*, 2005, pp3)

Future studies could further investigate the health benefits of community farms and gardens using the PA technique of body mapping. Drawing proved to be a useful tool for engaging young people and could therefore be employed to identify what factors promote exercise and the uptake of healthier diets by getting them to think about how attendance at the project impacts upon them both physically and mentally.

These findings could be used to develop good practice guidelines identifying barriers to the uptake of healthier diets and how they can be overcome.

3.4 Theme 3 - Natural therapy

3.4.1 Introduction

Discussions with managers and service users began to reveal the therapeutic value of community growing and animal projects, which was confirmed by a participant during a PA session.

“Therapeutic, working with the animals”
(Learning disabilities support worker)

Exploration through PA discovered several elements to this finding. Both growing activities and interaction with livestock and companion animals yielded positive changes in behaviour, well-being and how people felt about themselves. It also became apparent that such activities were valuable tools for engaging troubled people and initiating interactions between these individuals and those around them.

For the purpose of this study, the therapeutic benefits of interacting with the environment and animals are described using the term ‘natural therapy’. Natural therapy represents the multitude of benefits associated with social and therapeutic horticulture and animal-assisted therapy provided by farms and gardens in a holistic, community setting. These benefits arise through interactions with nature, project animals, horticultural and farming activities, other project users and project managers.

PA specifically investigated how people feel at projects and this is included here as an extended sub-theme as there are many links between feelings and the therapeutic value of activities. The social benefits were so significant that they warranted their own section (3.2) rather than being an offshoot of social and therapeutic activities in this section. In this section only the social interactions occurring as a direct result of contact with nature will be discussed.

3.4.2 Animals and gardening as tools to engage

The ability to engage local people is crucial to the survival of community farms and gardens that rely on the support of volunteers. The data highlights the capacity of living things to engage a variety of ages.

On visits farm staff described how young animals grabbed the attention of the local community with children coming in on a daily basis when new arrivals were due. Similarly, an allotment plot holder noted

that hens caught the attention of school children walking past. PA demonstrated the value of animals in the form of livestock, horses or the garden rabbit as tools to engage people with learning difficulties.

“People with learning needs recognise and show interest in animals”
(Learning disabilities support worker)

The diversity of users visiting the farm discussed in section 3.2.4 Social inclusion, indicates that animals draw in a wide range of people. In a postal questionnaire sent to all 22 research projects ten respondents supplied approximate usage figures.

Calculations based on these figures (taking the middle value where a range has been provided and excluding school visits) indicate that ten projects can support approximately 1410 clients and volunteers a month during summer and 998 in winter.

Overall the total number of volunteers in both seasons was roughly 200 more than the number of clients. The winter figure is lower as would be expected for predominantly outdoor activities during colder months.

Projects working with children and young people may also have higher rates of attendance for these groups during the school holidays.

The greatest number of users was found at stables which maintained 200 volunteers and 300 clients each month all year round probably due to indoor riding facilities.

A farm has the second highest usage figures with 400 volunteers and 100 clients each month during summer and 200 and 50 respectively in winter. The usage levels of community gardens and allotments range from 70 volunteers a week in summer to two volunteers each month in winter. Client levels at gardens and allotments range from 40-50 a month in summer to 0-5 in winter months.

When asked what he liked about the project by his support worker in an RA questionnaire a young offender responded with “animals”. Statements from this support worker indicate that this group of young offenders had had little contact with farm animals before beginning their community service.

“Enjoy seeing the young person’s faces when they realise that a duck egg comes first from the duck and not from ASDA”
(Young offender support worker)

Further evidence from the support worker suggests that even though such placements are part of compulsory community service, individuals may come to value them returning on completion of their services.

“On completion of community service [young offenders] returned to the farm to help out on weekends”

(Young offender support worker)

These findings suggest that practical work with animals can engage hard to reach groups during enforced placements but also afterwards through volunteering opportunities where individuals choose to return. It is possible that work undertaken during community service could act as an incentive to return for example to see how crops planted have grown or livestock is faring.

The attraction of plants, vegetables and animals spans different cultures hence community farms and gardens can engage people from a wide range of backgrounds as referred to in section 3.2 - Social interactions and inclusion.

“Because I used to grow vegetables in Bangladesh”

(Bangladeshi women’s allotment group volunteer)

Evidence from Rahm (2002) adds weight to the theory that involvement in growing activities can engage young people and act as an incentive for them to return. A study by Rahm (2002) found that young city farmers spent extra hours in the garden to increase their gardening skills and see how their plants were progressing.

Robertson (2007) explains that plants can act as a tie between a person and a place allowing troubled individuals to return to support units under the premise of checking plants they helped to pot. Robertson (2007) agrees that plants can be used to engage hard to reach groups.

“Using plants in the LSU [Learning Support Unit] has...proved to be one of the more important ‘tools’ in my repertoire of ways to engage with difficult students”

(Robertson, 2007, pp16)

Morris (2007) states that when dealing with young people there is often a need for immediate rewards, arguing that this necessitates careful planning of tasks that generate a sense of satisfaction in each session rather than waiting for the longer-term rewards of growing plants.

Evidence from this study conflicts with Morris (2007). One of the case study projects working with young males did not run special activities; each individual was left to work on their plot as they pleased. The fact that these individuals had a sense of ownership and valued the site for social opportunities could compensate for any need to wait for the rewards of growing.

However, one group needing quicker opportunities for validation included asylum seekers. During the interview the manager of an allotment project working with refugees and asylum seekers described the difficulty of involving clients with pending asylum requests to plants seeds when they are unsure if they will be in the country to see the crop.

Here we have demonstrated that living things play a crucial role in attracting young people and engaging a wide audience. These next sections explore the therapeutic aspects of plants and animals starting with how people feel at projects, then investigating the nurturing and creative opportunities provided. The value of animals and plants as tools with which to assist interactions, build confidence and instil a sense of responsibility will also be discussed.

3.4.3 How people feel at projects

In order to fully appreciate the benefits of community farms and gardens it is important to understand how they make people feel.

During first visits project managers described the changes they had seen in clients and volunteers who gradually appeared to become happier and more relaxed at the project. In PA and RA, similar themes of positive feelings emerged. Feelings of relaxation, appreciation, happiness, achievement, and being welcome were the most frequently mentioned. All statements received a response of agree. Only three disagree responses were recorded in verification in comparison to 195 counts of agree. There is congruence with those that featured most strongly in PA eliciting the greatest strength of response in verification (Table 8, below).

Table 8. The number of agree and disagree responses recorded at four projects during data verification for statements relating to how people feel when they are at a community farm/garden.

Statement	Total agree	Total disagree
Happy	18	0
Sense of achievement when things have grown	18	0
Appreciated	17	0
Rewarding	17	0
Busy	15	0
Relaxed	15	0
Safe	15	0
Well-being	14	0
Relaxing but feel like working too	13	0
Welcoming	13	0
Pride	11	0
Excitement	10	0
Normality	9	1
Doesn't feel like isolated	8	2
Get attached to the horses - bond	2	0

Only 2 statements were disagreed with:

- “Doesn't feel like isolated” (2)
- “Normality” (1)

These statements were originally made by a Bangladeshi women's allotment group volunteer and a Learning Disabilities Support Worker respectively. The latter stated that feelings of normality were one of the many benefits felt by her clients. The allotment volunteer stated that not feeling isolated was something that attending the project had helped her to achieve.

Two males at the community garden disagreed with “Doesn't feel like isolated”. It is possible that they had not been attending the project long and therefore had not made bonds, which would alleviate their feeling of isolation. Or perhaps their feeling of isolation stemmed from being unable to find work – a problem that the garden was aimed at overcoming.

One female at the city farm disagreed with the feeling of “normality”. The majority of females that took part in verification at the farm were there for recreational purposes. This is not necessarily

a negative. The sense of normality volunteers and clients feel may extend from the farm providing ‘work’ and purpose. Alternatively, it could be that, to recreational users, farm surroundings are not ‘normal’ which may be why they enjoy visiting them.

In both cases the number of agree responses to both these statements outweighed the number of disagrees indicating that on the whole community farms and gardens can instil normality into people's lives and alleviate isolation. Research by Calteau (2005) supports this finding demonstrating that individuals with mental health problems feel less lonely and isolated after coming to a garden nursery in comparison to how they felt at home.

The visual aspect of farms and gardens is important – the greenery associated with these projects can promote feelings of relaxation and happiness.

“Makes me feel happy by seeing the site because I like green colour”
(Bangladeshi women's allotment group volunteer)

“I find it relaxing and enjoyable to look at”
(Community garden volunteer)

Gardening projects can help to relieve daily stresses and promote a sense of happiness.

“I come up to the garden and get a total feeling of tranquillity. ‘Problems’ disappear and I feel so much better”
(Community garden volunteer)

The visual nature of farms and gardens with growing vegetables, the creation of new pavements or raised beds, flowers and livestock means that participants can see the results of their hard work and be reminded of their achievement.

“Sense of achievement when things have grown”
“I come away feeling very positive and an enormous sense of achievement”
“It's a very satisfying way to spend one or two days a week always very rewarding – especially now that ‘structure’ in the form of pathways, and a polytunnel, a shed and water containers have been installed.”
(Community garden volunteers)

“Gives clients a sense of achievement and a helpful role in life, raises their self esteem”
(Learning disabilities support worker)

Gardens may also be appreciated by others outside the project adding to the sense of achievement.

“Achievement – nice when our work is complemented and our work is appreciated”
“Enjoy being appreciated – feeling valued”
(Community garden volunteers)

“Most of them [individuals with learning difficulties], but not all, don’t like unloading the very heavy pig feed from the delivery lorry. The ones who do enjoy this get a feeling of having achieved a good job that not everyone can do.”
(Learning disabilities support worker)

Attending community farm and gardening projects can be a satisfying experience for both clients and their support workers.

“Satisfaction of seeing the clients enjoying doing something completely different and learning as they are going. I am surprised by how much they take in.”
(Learning disabilities support worker)

Conducting physical work and seeing sites develop can be very satisfying.

“Enjoy improving the site, lots of job satisfaction”
(Community garden volunteer)

Caring for animals can be relaxing and in the case of horses, enjoyable for both the person and the animal.

“Grooming is soothing and relaxing, horses love it”
(Community stables volunteer)

Participation at community farm and gardening projects can enable people to do something useful and feel that they are contributing to society.

“Rewarding – helping people with broken homes”
(Community stables volunteer)

“Good as I felt I was helping to make a difference there”
(Rehabilitation allotment project volunteer)

“Gives clients a sense of achievement and a helpful role in life, raises their self esteem.”
(Learning disabilities support worker)

Community farm and garden users often feel as if they are working but in a relaxing environment unlike where they would normally work (Figure 4).

“Relaxing but feel like working too”
(Community garden volunteer)

For those who are no longer able to work due to illness, injury or age, these projects provide an important opportunity for them to feel useful again.

“Feel relaxed, calm and useful when working in garden”
(Community garden volunteer)

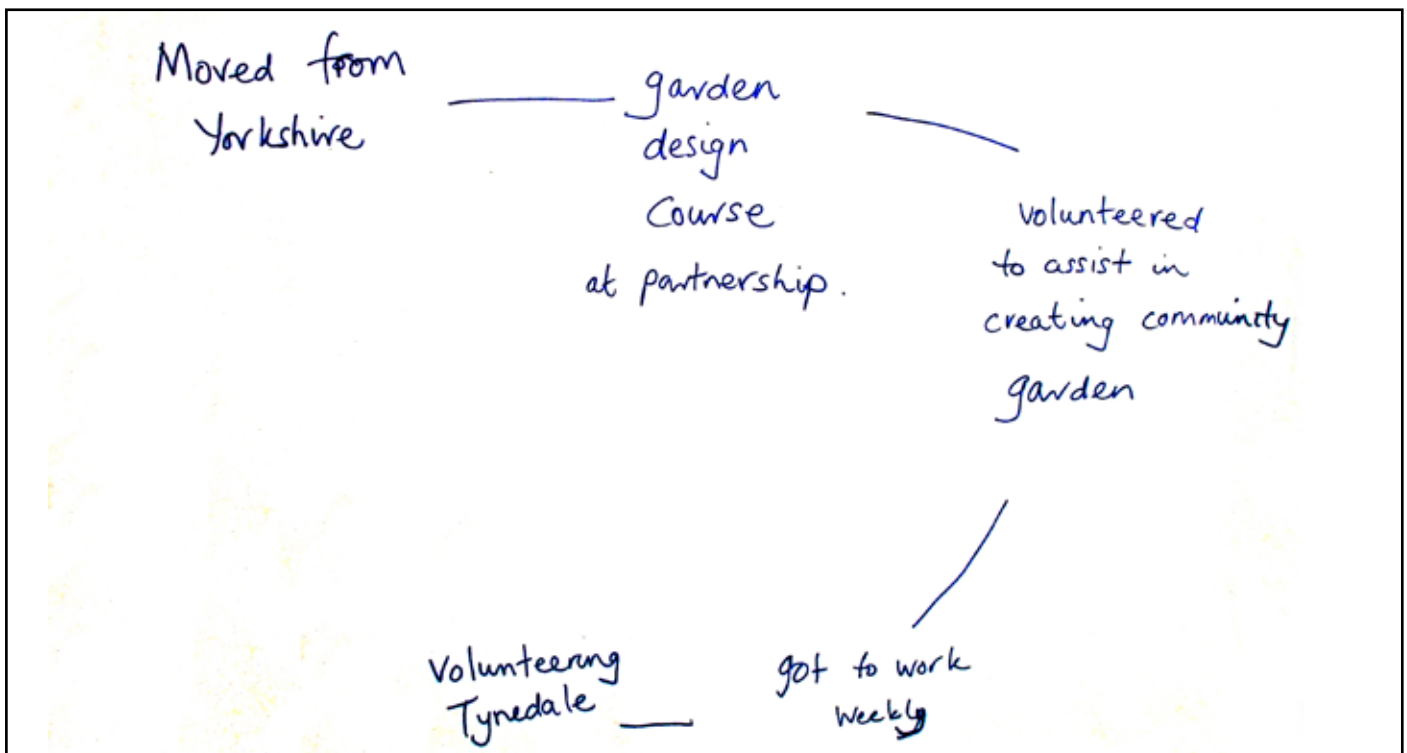


Figure 4. Timeline drawn during participatory appraisal session by a male volunteer at a community garden. Even though they go to the garden voluntarily, the volunteers still describe this activity as “work”.

A change of scenery can lead people to feel as if they are escaping from aspects of their lives that they find stressful such as work or caring for others.

“I feel very relaxed when I’m up in the garden, it’s an escape from my main job when I need calming. I come away feeling very positive and an enormous sense of achievement.”
(Community garden volunteer)

“I feel peace by seeing the site and to get away for a bit from young children”
(Bangladeshi women’s allotment group volunteer)

Similarly a statement taken from a poster at a community farm describes how working with horses can act as a break from the stresses of everyday life.

“[Working with horses can be] invaluable therapy if your life is hectic”

On the other hand, several participants agreed that they felt busy onsite. This statement originated from an adult with learning difficulties volunteering at a community garden on a supported placement. The statement was placed in the positive section of the forcefield analysis suggesting that for individuals who are not in employment feeling busy can be good and may link to feelings of being useful.

“Busy”
(Community garden volunteer on a supported placement)

In contrast, individuals involved in managing projects may at some times feel busy in the negative just like any job.

“Some times the place was really hectic and organisation and coordination of staff and resources was stretched. It was a bit chaotic at times”
(Ex-community farm volunteer who now works in the community and voluntary sector)

Community farms and gardens are perceived as safe places to be by both clients and volunteers and support workers.

“Safe, welcoming, peace”
“Happy and safe”
“I feel peaceful and safe”
(Rehabilitating drug users at a community allotment)

“The staff are friendly and efficient, they have an empathy with our clients, we can relax, briefly in our working day when we visit because we know our clients are safe”

(Support worker for disability and special needs services)

The groups of rehabilitating drug users that described their project as a support group were also the individuals that produced the most ‘safe’ statements in RA. Feelings of safety and being welcome will promote the value of community projects as support groups where people feel that they can open up and discuss personal issues.

In PA, a volunteer at a community garden said that they found the experience grounding and that this benefit was one reason why they came. Volunteers and clients at two verification gardening projects agreed with this statement. McCabe (2007) also comes to the conclusion that “gardening can be very grounding”. Seymour (2005) identifies a similar finding stating that participants in a gardening club recognised the important influence of the environment on health and well-being offering “balance”.

Rahm (2002) agrees that by selling produce they have grown themselves, farm volunteers’ sense of pride increases. Calteau (2005) notes allowing volunteers to do their bit for the community can also generate a sense of well-being. The findings also correspond with research by Linden & Grut (2002) showing the value of community gardening projects as support groups where people feel recognised, supported, safe, and can discuss personal issues. Brown (2004) suggests that feelings of increased safety and perceptions of community safety can stem from contributions of green space to social cohesion and the strengthening of social networks

The feelings and emotions described here are similar to those discussed in Parr (2005). Parr (2005) asked volunteers to describe the therapeutic effects of garden work. The responses included therapeutic, calming, grounding, occupying, distracting, focussing and healing. Parr (2005) also observed that garden work sometimes helped to calm erratic behaviour in individuals with mental health problems providing a focus for negative energy and anger in difficult times. Similarly Black & Crawford (2004) state that contact with the natural environment can improve mood and ability to concentrate. Black & Crawford (2004) go on to say that constraints on the ability of individuals to alter their environment can result in stress.

Brodie & Biley (1999) note that psychological improvements have been found amongst those interacting with animals indicating that their

presence can instigate higher levels of relaxation (Brodie & Biley, 1999).

Ewing *et al* (2007) indicate that animal assisted therapy may help instil empathy with youths who have behavioural or conduct disorders. This is supported by Kaiser *et al* (2004, in Ewing *et al*, 2007) who demonstrated that a five-day therapeutic riding programme could lead to significant reductions in anger levels among able-bodied children.

Akin to these findings Hine *et al* (2008) present evidence that care farming can improve the mood of clients who subsequently feel calmer and more able to trust others. Hine *et al* (2008) also supports the finding that feelings of achievement extend to those helping disadvantaged individuals as expressed by community stables volunteers in this study. According to Hine *et al* (2008) the three main themes emerging from the responses of UK care farmers to a survey were:

- Seeing the effects of care farming on people – making a difference to people’s lives
- Assisting excluded individuals to become included into society and/or work
- Positive feedback from participants, families and referring bodies.

Attention restoration theory

There are several theories related to the feelings of relaxation experienced in natural environments of which the attention restoration theory has received the most attention. Attention restoration theory suggests that countryside greenery can effortlessly engage attention, allowing individuals to attend without paying attention (Sigman, 2007). This theory was put forward by Kaplan and Kaplan (1989, in Sempik *et al*, 2003) who argued that mental fatigue arises in all adults as a result of the effort involved in inhibiting competing influences when attention is directed towards a specific task.

Sempik *et al* (2003) states that a view or experience of nature, which is inherently interesting or stimulating, invokes involuntary attention, which requires no effort and is therefore restorative. According to this theory the sense of rejuvenation experienced after spending time in the countryside may in part reflect a ‘recharging’ of some parts of our ‘attentional system’ (Sigman, 2007). Attention restoration theory has been used to explain the benefits associated with social and therapeutic horticulture (Sempik *et al*, 2003) and here there is

evidence that it plays a role in the benefits received at community farms and gardens.

Sempik *et al* (2003) describe the four dimensions involved in this restorative environment as follows:

- Being away is the sense of escape from a part of life that is ordinarily present and not always preferred. This involves a conceptual change and not necessarily a physical change.
- Fascination is the ability for something to hold attention without the use of effort and whilst this is in play directed attention should be able to rest. Fascination can be derived from process (the act of carrying out an activity) or from content (the intrinsic substance of what is experienced, for example the landscape itself).
- Extent refers to the aspect of an environment that provides the feeling of being ‘in a whole other world’ that is meaningful and well-ordered.
- Compatibility is an affinity with the environment or activity so that a great directed attention is not required in order to engage with it.

(Sempik *et al*, 2003, p5)

Community farms and gardens can provide all four of these dimensions. These facilities allow people to get away, escaping from the responsibilities of work and day to day life or to have a break from other people.

One allotment project staff member described how they worked with young adult males who had been involved with crime and/or drugs. The manager explained that some of these individuals felt that they had an image to uphold but could escape that by coming to the allotment and behaving differently.

PA and RA quotes provide further support:

“Enjoy the work – would rather work here than in a shop”
(Community stables volunteer)

“It’s an escape from my main job when I need calming”
“Having a sense of freedom”
(Community garden volunteers)

[Why?] “Because of the freedom”
“I feel peace by seeing the site and to get away for a bit from young children”
(Bangladeshi women’s allotment group volunteers)

“I enjoy being in a different environment with my learners”

(Learning disabilities support worker)

“To get me out of the house and away from me mother”

(Rehabilitation allotment project client)

“Escape from husband”

(Community garden volunteer on a supported placement)

The last comment was entered part in jest by an individual with learning difficulties but highlights the importance of opportunities for people to make something of themselves independently from friends and family members. The young people at a school community garden said that the garden gave them somewhere to go during breaks to escape bullying.

“Less bullying than in main school yard”

(Community garden volunteer)

The practical nature of horticulture, equestrian and farming activities is a change from academic activities or office work.

“Helps to keep me fit, my work is not normally as active”

(Learning disabilities support worker)

Both clients and volunteers have described how work at these projects is relaxing whilst still holding their interest.

“Interesting – learn how things grow”

(Community garden volunteer)

Summary

There is a link between community farms and gardens and positive feelings related to gardening, animals and the social aspect. These projects allow people to make a social contribution and carry out satisfying activities, which can help to relieve stresses and promote feelings of happiness. Other studies support findings that gardening activities can reduce anxiety and promote feelings of happiness. Gladwell (2007) describes a young person attending a gardening project in Wokingham. The project helped to take their mind off things and make them feel good when they achieved something.

“Some of the young people said they felt ‘tired’ or ‘anxious’ before gardening and then at the end their mood had changed to feeling ‘happy’ and one person commented ‘gardening has taken my mind off things.’”

(Gladwell, 2007, pp6)

Robertson (2007) agrees stating that gardening projects can act as a quiet sanctuary for troubled or bullied children and young people, providing an environment which can help children to sort things out and find a way to move on. Parr (2005) agrees that the relationship developed with nature at community gardens can have restorative properties for both physical and mental health promoting well-being.

The strength with which projects agreed with PA and RA statements suggests that the emotions recorded are truly representative of community growing and riding projects. These findings provide an insight into the therapeutic process and the role of social opportunities and health improvements in promoting positive feelings. Supporting evidence from Argyle, Martin & Lu (1995) suggests that the use of social skills is associated with happiness particularly when used alongside joint activities.

It is interesting to note that clients, volunteers and recreational users responded similarly to ‘feel’ statements, despite the different ways in which they used the project. This suggests that both individuals involved in practical tasks and recreational users passing through or meeting friends receive similar benefits from their relaxing and restorative natural properties. This supports studies which have found that views of nature can promote positive feelings (Ulrich, 1984 in Larson, 2006) and provides a route for the wider community to benefit from community growing spaces.

Studies on attention restoration theory (Kaplan and Kaplan, 1989, Sempik *et al*, 2003) demonstrate how the theory applies to adults. Taylor, Kuo & Sullivan (2001) first indicated that the theory may also apply to children with attention deficit disorders (ADD) and suggested that this fact combined with findings that the theory applies to adults with normal attention functioning indicates that the theory could also apply to all children. This suggestion is supported by findings from this study where there is evidence that community farms and gardens provide opportunities for relaxation in accordance with attention restoration theory in a way that is analogous to social and therapeutic horticulture.

3.4.4 Creativity and expression

On site discussions made it clear that volunteers and clients had a strong involvement in the design of gardens (community gardens and gardens located on farms and allotments) allowing them to shape their

environment and acting as an outlet for creativity and self-expression.

“The opportunity to be creative and make the garden project my own piece of work”
(Ex-community farm volunteer who now works in the community and voluntary sector)

“You can express yourself here”
“[Like] art”
(Community garden volunteer)

Willow weaving was a popular activity at projects with many having tunnels, sometimes shaped like animals including a dragon. School users at a community garden used inspiration from stories and television programmes to develop garden features. This opportunity empowered bullied pupils who instead of not being heard came forward with their ideas and which were valued and put into action promoting an increase in their confidence.

“The scarecrow looks like the monster on Doctor Who” (Community garden volunteer)

The technique of relating aspects of the garden to things that children and young people can relate to, such as television programmes, appears to be a useful way of engaging their interest which then spreads to other aspects of the garden, fostering a sense of ownership. Activities such as these can also inspire work beyond the garden such as creative writing.

“I made a video on Doctor Who about the garden it was fun”
(Community garden volunteer)

Creative opportunities are also important for other generations, allowing adults to use skills that they have developed throughout life to benefit the project or inspiring aspects of their work.

“Having a sense of freedom to use my skills that can benefit the garden + its environmental creativity e.g. painting signs, notice boards etc”
(Community garden volunteer)

“Aspects of life on the farm have informed some of my work as I am an artist”
(Member of farm management committee)

Signs, maps and notices offer opportunities to get creative and make sites more aesthetically appealing at the same time as making them more accessible to users.

“I have learned much from doing interpretation work at the farm”
(Member of farm management committee)

“Learn willow weaving – been very useful to decorate garden”

(Community garden volunteer)

Other examples of static artwork include mosaics and carvings inspired by creatures found on site using a variety of materials including marbles and shells. One farm even extends its creative opportunities to music hosting an annual festival known as ‘chicken stock’ which the project described as an opportunity for young people with an interest in music to get together and perform.

Sempik (2003) and Seymour (2005) agree that the creation and decoration of structures can become an important part of the gardening process and allow members to express themselves creatively.

3.4.5 Physical appearance of the local area

In the Environment section the fact that ten of the 22 community growing projects studied had been created on derelict sites or established on previously unused allotment plots in a state of disrepair was discussed in relation to biodiversity.

This is also likely to have a positive impact on the physical appearance of the local area. Project visits demonstrated that one gardening group in particular is involved in local improvement activities beyond the garden, planting bulbs and seeds to create wildflower habitats on roadside verges and maintaining other green space areas around the town.

“Improved areas in the town by planting tubs”

“Helping to improve the look of our town”

“Doing jobs around the town which would not otherwise be done”

“Other people have asked for our assistance in doing things eg. weeding. We are helping get things done that the council can’t”

(Community garden volunteers)

Such positive changes could act to motivate local people to get involved and take pride in their local area.

“I think that the impact it has on the local area is that people will see how beautiful parts of town/village can be when people put their minds to it”

“People taking more pride in the area due to work around local area”

(Community garden volunteers)

Interestingly this project was located in a relatively rural area indicating that even when towns are surrounded by the countryside, high quality urban green spaces are still important. Other projects agree:

“By making the local area more healthy, the area looks a lot better”

“Positive, it makes the area look warm colourful and on nice days it’s a joy to sit and relax”
(Rehabilitation allotment project client)

“Confidence and pride in the way the local landscape has developed. Loyalty to events put on at the farm”

(Member of farm management committee)

The management committee member also noted that involvement gave them a sense of belonging.

“Patience and pride in watching a piece of derelict industrial waste ground transform a landscape in many ways; a sense of belonging in a place”

(Member of farm management committee)

Several community gardens and allotments across the North East and Cumbria were involved in ‘In Bloom’ competitions, carrying out work around their local area and winning prizes in the Neighbourhood and Small Towns categories. There may be an opportunity for partnerships between ‘In Bloom’ organisers and those in the community and voluntary sector.

Verification confirms that community farms and gardens can improve the physical appearance of an area with all four projects agreeing that their group and activities were “helping to improve the look of our town”. This statement received 14 agree responses making it the most agreed to statement in the category of local area (Table 9).

Table 9. Counts of agree and disagree received from a total of four community farms and gardens in verification. These statements relate specifically to the physical appearance of the local area.

Statement	Total agree	Total disagree
Helping to improve the look of our town	14	0
Patience and pride in watching a piece of derelict industrial waste ground transform a landscape in many ways; a sense of belonging in a place.	8	1
By making local more healthy, the area looks a lot better	5	0
Doing jobs around the town which would not otherwise be done	4	1
People taking more pride in the area due to work around local area	4	3

A high level of agreement was also recorded for “patience and pride in watching a piece of derelict industrial waste ground transform a landscape in many ways; a sense of belonging in a place.” which received eight counts of agree. The statement “people taking more pride in the area due to work around local area” received almost as many disagree responses as it did agree, three and four respectively.

The extent to which people take increased pride in their local area may be influenced by their level of involvement and the extent to which sites are visible across towns and villages. This finding highlights the need for profile raising to ensure that projects get support nationally but also at a grassroots level by increasing recognition in their own neighbourhoods.

In a postal questionnaire sent to all 22 participating projects, project managers were asked if their project had helped to clean up the local area. This questionnaire was returned by ten projects. Five managers agreed that their project has helped to clean up the local area, three of these individuals strongly agreed, one disagreed. The latter worked with asylum seekers and refugees specifically on allotment plots hence the impact on the local area may be considered to be minimal.

Interestingly two of the projects that agreed strongly had previously stated that they had taken on allotment plots that had been maintained poorly

prior to their occupancy. The third strongly agreeing project was a garden developed on an unused, overgrown area of green space. Hence these three projects had made dramatic changes improving the local landscape.

Four projects responded neutrally to the statement: the stables, two allotments and a garden. The latter was established on a farm and therefore its creation had not resulted in any drastic changes in land use or subsequent appearance. The stables equine centre was indoors and did not feature a garden unlike other projects responding with agree.

One allotment responding neutrally had a waiting list and therefore is likely to have been occupied prior to the takeover by the community group, which could mean that it has a history of good occupancy and therefore maintenance. The second neutral allotment may have undergone a similar thought process to the project that disagreed. All work was undertaken onsite where it could only be seen and appreciated by other plot holders as the site was not in view of housing areas. This may have been considered too small an impact to warrant an agree response.

Interestingly both rural and urban areas noted improvements to the physical appearance of places following work by a community farm or garden. In rural locations it might be considered that there is sufficient green space to meet the needs of local people. However, it appears that being able to make positive changes to local green space aids the development of a sense of ownership and part of the process of empowering communities.

Flint & Kearns (2004) support the finding that improving the physical appearance of green space can promote a sense of belonging and pride. Brown (2004) states that improvements to green space are central to community morale and are a vital part of changing the perception of an area, helping to strengthen social networks and foster a sense of safety. According to Black & Crawford (2004) the quality of green space could be used as an indicator of community health and well-being. These findings link into results from this study as discussed above in section 3.4.3, where it is suggested in support of Black & Crawford (2004) that opportunities to alter 'offensive' surroundings can decrease the stress levels in local residents.

3.4.6 Nurturing

Caring for plants and animals is a key part of life at community farms, gardens, allotments and stables and one that participants seem to enjoy. When asked what people liked about the project some of the responses included:

“Love growing vege and seeing all the changes from seed, to edible product”

(Community garden volunteer)

“Growing new plants from seed and cuttings”

(Community garden volunteer)

“Working and caring for horses”

(Community stables volunteers)

This finding corresponds with Sempik *et al* (2003) who found that participants at gardening projects valued looking after plants and watching things grow. Sempik *et al* (2003) describe how a user at a cooperative involved in growing mushrooms for a small commercial market found watching the mushrooms grow fascinating and was developing his own mushroom growing system at home.

Sempik *et al* (2003) state that this work was very intensive and could be equated to factory work but that workers found it to be rewarding because of the nurturing aspect. The project had been established with the aim of preparing users for employment so the activity itself had not been believed to be important but it appeared to play a key role in maximising the benefit received by participants (Sempik *et al*, 2003). Similar strategies were encountered here at community-growing projects acting as social enterprises.

It has been suggested by Bhatti and Church (2001) in Sempik *et al* (2003) that urban gardening is a form of homemaking. Sempik *et al* (2003) argue that the opportunity to participate in gardening activities that relate to finding food and creating shelter are of particular value to people living in institutions, care homes and hostels who are normally denied homemaking activities.

Richards (2005) suggests that offering nurturing garden-related opportunities to older people allows them to care for something, which can help alleviate depression. Robertson (2007) examines the therapeutic process of nurturing further stating that:

“Using horticultural projects with students who exhibit emotional, social and behavioural difficulties has shown time and time again that there is something special about people

working together with nature. A shift in focus occurs from 'person' or 'problem' to caring for a living thing. That 'living thing' becomes... a receptacle for thoughts, feelings and emotions and becomes transformed into a concept with which we can reach out to others." (Robertson, 2007, pp15)

Velde *et al* (2005) focus on animal related therapy stating that some activities can be symbolic for example holding, stroking or talking to a small animal could represent a parental role, which in some cases can act as a meaningful substitute. Velde *et al* (2005) describe how pets can be used to offer nurturing opportunities to long-term care patients as animal assisted therapy (AAT).

The findings from this study into the true value of community farms and gardens correspond with Velde *et al* (2005) regarding the relationship between people and animals. According to Velde *et al* (2005) the physical demands from animals creates a feeling of being needed and promotes a caring atmosphere. In addition there is evidence from this study that gardening can promote similar feelings of nurturing, responsibility, ownership and contribution.

3.4.7 Rehabilitation

Rehabilitation was an important aspect of community projects. Several projects functioned as part of a chain with users moving on to the next step when they were ready to do so. At one allotment project the next step was a café where volunteers would prepare food grown on the allotment. The project worker noted that this aspect of the project was particularly successful in engaging those suffering from alcohol misuse, providing order and social opportunity in their lives.

Three case study projects provide an insight into how community farms and gardens support young people who are abusing drugs and/or alcohol. During discussions with clients at an allotment project in the first stage of data collection one individual said that coming to the project kept him alive - giving him a purpose and providing a distraction from problems and drug addiction. He said that if this facility was not available he thought he might have died.

Similarly PA and RA indicate that attending a project can help participants to cut down on drugs and alcohol.

"Fill the time in"

"It helps me cut down on drink and drugs at the beginning"
(Rehabilitation allotment project clients)

"Not drinking on the streets"
(Community stables volunteer)

Statements also indicate that being in a different environment and having the support of project managers and other users can help clients and volunteers to deal with the problems that caused them to turn to drugs and alcohol.

"It helped me sort my head out"
"Helped straighten me out"
(Rehabilitation allotment project clients)

This can then lead to positive changes in behaviour.

"Learnt to behave"
(Rehabilitation allotment project volunteer and Community garden client)

"Like working with people with behavioural problems – can see them change"
(Community stables volunteer)

"Good for getting people off the streets (young ones – keeping them out of bother)"
(Community garden volunteer)

Young volunteers from the stables and a community garden agreed that the project helped keep them off the street stating that this was one of the most positive things for them. Individuals from both the allotment and a community garden stated that the project helped them learn how to behave. The convergence in these answers indicates that these projects are of great value to troubled young people. This was confirmed in verification (Table 10, below).

Table 10. Verification responses to seven statements relating to rehabilitation. Overall there is a high level of agreement except for one statement.

Statement	Total number of responses		Total number of projects responding	
	Agree	Disagree	Agree	Disagree
“It helped me sort my head out”	6	0	2	0
“Learnt to behave”	6	0	3	0
“Getting on with my life”	2	1	1	1
“Reaching our goals in life”	4	1	2	1
“It helps me cut down on drink and drugs”	0	4	0	2
“Like working with people with behavioural problems – can see them change”	7	0	3	0
“Preparation towards rehabilitation”	1	0	1	0

A key aspect of community farms and gardens is that the rehabilitation process does not stop at this point. It goes on to harness these individuals with skills and motivate them to take control of their lives using newfound confidence. Individuals from the three projects discussed here came up with these statements regarding what the project had helped them to achieve.

“Believing in myself”

“Getting on with my life”

“Started to do more keep fit and bike rides, volunteered to work with young people”
(Rehabilitation allotment project clients)

“Changed what want to do in the future – want to go to agricultural college and study horses”
(Community stables volunteer)

“Reaching our goals in life”
(Community garden volunteer)

These findings clearly indicate the value of community-growing and equine projects to troubled young people by providing a route out of drug and alcohol abuse into an alternative, supported environment which helps to change destructive behaviour patterns. This rehabilitation process encourages young people to take an interest in their local area and provides them with skills to develop a better future.

Community farms and gardens offer placements to young offenders and individuals serving community service sentences. RA statements indicate that community service placements involving outdoor growing and animal related activities can engage hard to reach individuals.

“[Like] animals”

“Although community service they enjoy it”
(Young offender support worker)

Such placements also offer the opportunity to develop new skills.

“[Learnt to] clean out chickens, fed the pigs”
(Young offender)

In some cases individuals choose to volunteer after finishing their sentence.

“On completion of community service [young offenders] returned to the farm to help out on weekends”
(Young offender support worker)

These statements indicate that community projects can develop the skills of young offenders and provide long-term support in an environment that they finding engaging. In addition contact with local people at these projects is likely to be beneficial, integrating offenders who might feel isolated back into the community. It is possible that these benefits could have a positive influence on the ability of these individuals to move forward with their lives and reduce the chance of re-offending. However, further research is needed to investigate this theory with particular reference to community projects.

Community farms and gardens also have a role facilitating the rehabilitation of individuals with learning difficulties.

“[Benefits clients receive include] preparation towards rehabilitation”
(Learning disabilities support worker)

Verification responses demonstrate that overall a high level of agreement was recorded for statements relating to rehabilitation (Table 10). However, one

statement from the allotment project working with drug users which was used to represent all statements relating to reductions in alcohol consumption, received no agree responses and four disagree responses.

“It helps me cut down on drink and drugs at the beginning”
(Rehabilitation allotment project clients)

The verifying projects did not cater specifically for clients with drug/drink problems and therefore would not have any experience that corresponded to that of the allotment project. This study does not take into account the levels of alcohol and drug consumption prior to and since attending a project. Further research could explore this and be used to create good practice guidelines for rehabilitation at community projects.

Six agree statements were recorded for both “learnt to behave” (three out of four projects) and “it helped me sort my head out” (two out of four projects). The statement “like working with people with behavioural problems – can see them change” received the highest level of agree responses with a total of seven. These figures support the positive behavioural changes described in PA.

Interestingly although these statements came from young people, the individuals who took part in verification at the project agreeing with “getting on with my life” and “reaching our goals in life” were retired. These two statements are likely to reflect the feelings of individuals who have gone through a therapeutic process and achieved something.

The individuals who did not agree with these two statements were at a gardening project aiming to give people with learning difficulties the skills to gain employment. For these individuals, getting a job is likely to be the goal hence they do not feel that they have reached it yet.

“Preparation for rehabilitation” received the lowest rate of agreement. This could be linked to people’s perceptions of rehabilitation and the fact that they consider project activities to be enjoyable rather than a ‘serious’ rehabilitation process.

Evidence from this study suggests that community-growing and equine projects go some way to achieving rehabilitation as defined by Sempik *et al*:

“The role of rehabilitation is to restore a person to the quality of life and, in many cases, the employment they had prior to illness, injury or circumstances that damaged that quality and where

this is not possible its role is to maximise the quality of life of the individual”, (Sempik *et al*, 2003b, pp5).

Linden & Grut (2002) support the finding that working in the natural environment can help rehabilitation and suggest that it can add a spiritual dimension to the process. Elings (2006) agrees that gardening can be used to rehabilitate offenders stating that horticulture can be used in prisons as a means of rehabilitation, teaching inmates skills they can use following their release.

3.4.8 New life and beginnings

Some community farms and gardens are specifically targeted at people who have emotional, mental or physical difficulties to overcome. For example this study has involved individuals recovering from drug use, decreased mobility through injury or illness, feelings of depression due to being unable to find employment or starting new life after being in prison. In these instances gardening processes appear to have a particularly poignant meaning representing new life and beginning. A retired man who had suffered a brain injury that meant he could no longer work said that attending the community garden had given him a “new lease of life”.

Discussions with the project manager of an allotment project working with refugees and asylum seekers revealed that for these individuals gardening can be a way of dealing with their past, which in some cases had been quite violent and/or had involved persecution, and finding a way to move forward. The interview revealed that this was especially important for individuals waiting to hear if their applications for asylum had been successful for whom this period of uncertainty was very difficult.

PA data highlights the growing processes and seasonal changes that support the therapeutic process of new beginnings.

“Love growing vege and seeing all the changes from seed, to edible product”

“Enjoy the changes between each visit”
(Community garden volunteers)

The different smells, textures and colours are an important element of gardening.

“Although we’re classed as a vegetable garden – it’s good to grow flowers too – it’s lovely to see different colours, textures etc.”

“Putting flowers in and seeing them bloom and how they smell”
(Community garden volunteers)

All three verification projects involved with gardening agreed that they “enjoy the changes between each visit”.

A volunteer at an equine centre stated in a timeline that coming to the project had been life changing.

“Started helping out...and my life has never been the same again”

(Community stables volunteer)

This individual described the stress that had been caused by a job prior to coming to the stables. Evidence from the timeline suggests that a welcoming, supportive environment can aid new beginnings.

“We were made very welcome”

“I had my first lesson and was hooked...the instructor I couldn't have done it without her”

(Community stables volunteer)

Community farms and gardens also offer fresh starts to individuals who have committed criminal offences. Individuals can see out community service sentences at these facilities, which can engage this hard to reach group and provide opportunities in the long-term.

“On completion of community service [young offenders] returned to the farm to help out on weekends”

“Although community service they enjoy it”

(Young offender support worker)

These findings support research conducted by Linden & Grut (2002) who describe the benefits of gardening to asylum seekers. After filing for asylum, asylum seekers have a six-month waiting period while their claims are considered in which they are not allowed to work, thus preventing them from using professional skills (Linden & Grut, 2002). This can lead to an overwhelming sense of uselessness, especially after a lifetime of activity, forcing these individuals into a position of dependency, impeding the process of rehabilitation, and leaving plenty of time to worry over problems past and present, increasing their stress levels and adding fuel to their pent-up anger and frustration (Linden & Grut, 2002).

“The allotment has given him a place to express anger and frustration and to clear his mind.

When asked why he couldn't do this in a room, he replied that what had made a deep impact on him was the fact the he had put seeds in the ground and then eaten the produce of those seeds.”

(Linden & Grut, 2002, pp130)

Linden & Grut (2002) state that seeds can represent new life emerging indicating that there can be a future for people that have suffered in the past. Sowing seeds can involve attitudes of risk and trust – gardeners asking themselves if the seeds will take to the soil, (Linden & Grut, 2002).

Seymour (2005) agrees suggesting that gardening offers opportunities to control aspects of life and that challenges in the garden could symbolise challenges in real life. Thus overcoming problems onsite has the potential to alleviate issues away from the project. Robertson (2007) describes how plantlets, which fall from the parent plant can be used to instigate discussions about new starts in life and making your way in the world. According to Roberts (2007) this method is of particular value to young people feeling small and insignificant in a world of grown ups.

Data collected from ten community farms and gardens in a postal questionnaire demonstrates that individuals who are not in employment, education or training constitute one of the dominant user groups, visiting 5 out of 10 projects and making up 10-95% of all users. Unemployed individuals could experience a similar process of rehabilitation and new beginnings to that described by Linden & Grut (2002) for asylum seekers.

Sempik *et al* (2003) support these findings describing how a refugee who had been tortured called the allotment a “blue sky hospital” (Sempik *et al*, 2003, pp8). Richards notes that some people choose to plant flowers in memory of a loved one which can help them to recover from the loss. One lady described how the garden had ‘saved’ her when she lost her son, (Richards, 2005).

McCabe (2007) and Richards (2005) support the finding that the colours, scents, textures and sounds found in gardens are valued by service users. McCabe (2007) goes on to describe how seasons can be holistic – connecting people with nature and giving them the sense of time passing and things moving on.

During this time McCabe (2007) states that contending with different aspects of weather will help gardeners to become more resilient. Data collected here suggests that volunteers must learn to cope with changes in staff due to the difficulties in securing long-term funding. In addition volunteers at the stables noted that it was hard when horses left the project.

“Coping with change – new staff and horses”
“Get attached to the horses – bond (hard when they leave)”
(Community stables volunteers)

Perhaps these experiences could have a similar positive impact on volunteers’ resilience.

In this study it was not possible to spend time with the refugees and asylum seekers but discussions with the project manager indicate that the processes occurring are similar to those described by Linden & Grut (2002). It is likely that the anger resulting from inactivity described by Linden & Grut (2002) could arise in other groups such as the unemployed, dissatisfied young people who have been excluded from school, and those suffering from physical and mental health issues. Opportunities for these individuals to contribute to changes in their environment and feel that they are effectively controlling their surroundings have been found to be extremely therapeutic.

3.4.9 Animal and gardening assisted interactions

There is evidence in this study that community farms and gardens can facilitate interactions between volunteers, clients and managers or support workers. During PA two girls described how they enjoyed the stables because everyone there had a common goal of looking after the horses and stated that the good thing about volunteering was the fact that people were there because they wanted to be.

“All got common goal to look after the horses”
“Volunteer – here because you want to be”
(Community stables volunteers)

Volunteers at a community garden project agreed, stating that meeting people with similar interests was important to them.

“Meeting other gardeners”
“Meeting like minded people”
(Community garden volunteers)

All ten project managers who returned a questionnaire sent to 22 participating projects agreed that caring for animals and gardening provides common ground for volunteers, clients and staff. Eight of the ten agreed strongly. This was the most unanimous response to any of the questionnaire statements with all respondents agreeing and it also received the largest number of ‘strongly agrees’.

This common ground and joint activity is likely to form the basis for discussions.

“I got tips about gardening techniques”
(Bangladeshi women’s allotment group volunteer)

“Being able to ask gardener questions/advice”
(Community garden volunteer)

A support worker noted that individuals with learning difficulties enjoyed talking about their activities at the farm and would like to bring others along to share the experience.

“Yes, they love to talk about what they have done and would love to be able to take everyone they know to the farm to show them around.”
(Learning disabilities support worker)

Interview data suggests that projects do host visits from participants and their families. The project manager at a community farm noted that individuals coming to the farm as part of their community service would bring their families along in their free time. Similarly a community garden manager described how a parent had visited the site to see his son’s plot and how the pair had spent the day working on it together.

These findings suggest that community farms and gardens can promote interactions between family members. The act of a parent or other family member coming to see a volunteers’ plot within a garden site, or livestock that a client has helped to care for, could enable them to see positive steps that this individual is taking and support them through that process. Promoting the recognition of achievements may have particular value for the individuals described here with learning difficulties, on community service and dissatisfied young people.

The data also suggests that as well as facilitating interactions on site; community farms and gardens can indirectly improve relationships offsite. During a project visit in stage one of the data collection, a client at an allotment rehabilitation project said that since he had started attending the group his relationship with his mother had improved. This could be a direct result of the positive impact attending the project had on this individual’s life - easing problems and opening up opportunities.

Another way for families and friends to get involved indirectly is by eating the produce brought home by clients and volunteers, which again could involve a process of recognising achievement.

“Bring vege [sic] at home for the family”
(Bangladeshi women’s allotment group
volunteer)

Taking vegetables home to their families featured strongly in the RA responses of the Bangladeshi women’s gardening group when asked what they liked about the project suggesting that this opportunity is integral to these women’s sense of achievement in that they are able to provide for their families and forge their own way in a new country.

In addition to these examples community farms and gardens promote family interactions by supporting regular parent and toddler groups and hosting father and son events. One stables project offered free lessons to children in return for their parents spending time volunteering. While this does not necessarily allow family members to conduct the same activities together it does provide common ground from which discussions could evolve.

Previous studies support this theory of assisted interactions. Velde *et al* (2005) corroborate the theory that common ground or interest can provide support, stating that social interaction is easier when there is an external focus for the conversation.

This finding is expanded by Linden & Grut (2002) who describe how using nature as a frame for reference and source of analogy and metaphor is very helpful for those with language difficulties. Linden & Grut (2002) state that this is particularly useful for victims of torture because the psychological work is so difficult to express in words.

Morris describes how horticultural activities can aid discussions in a therapeutic environment:

“The key to the therapeutic relationship is engagement and horticultural activities offer a ‘low stress’ environment in which to raise issues. The use of horticulture means that there is a shared focus of activity rather than one-to-one focus typical of many talking therapies.”
(Morris, 2007, pp10)

Morris (2007) states that therapeutic horticulture methods can be used to engage participants who have struggled with standard talking techniques. This is supported by Rahm (2002) who suggests that the repetitive tasks involved in gardening create opportunities for discussion whilst working.

Robertson (2007) uses plants in a learning support unit to engage and open up troubled young people

who ‘hate school’ and describes how involving these individuals in gardening activities, such as potting plants, can act as a talking point both during the activity and on subsequent visits as comments on their progress are made. Robertson (2007) states that gardening activities such as watering, fertilising and potting can be used as metaphors with which to identify feelings and emotions. These interactions can help relieve anger and aggression, putting individuals in a more positive frame of mind to return to schoolwork (Robertson, 2007).

Velde *et al* (2005) describe a study by Garland *et al* (1999) that discovered that animals facilitated conversation between residents and significant others and gave the family system an activity in which to participate – an activity which was both meaningful and normalising. Brodie & Biley agree indicating that animals can improve social interactions.

Velde *et al* (2005) go on to suggest that as animals are not typically associated with therapy, their presence can change the social and physical environment in which it is set. The use of animals as therapy is known as animal assisted therapy (AAT) which Brodie & Biley (1999) describe as using animals to solve human problems.

Findings from Chinner & Daziel (1991, in Velde *et al* 2005) demonstrate that AAT can increase patient-staff interaction. Ewing *et al* (2007) discuss the similar process of equine-facilitated psychotherapy or learning (EFP/L), in which the horse is used to get young people to open up and talk about their problems or fears.

3.4.10 Companion animals

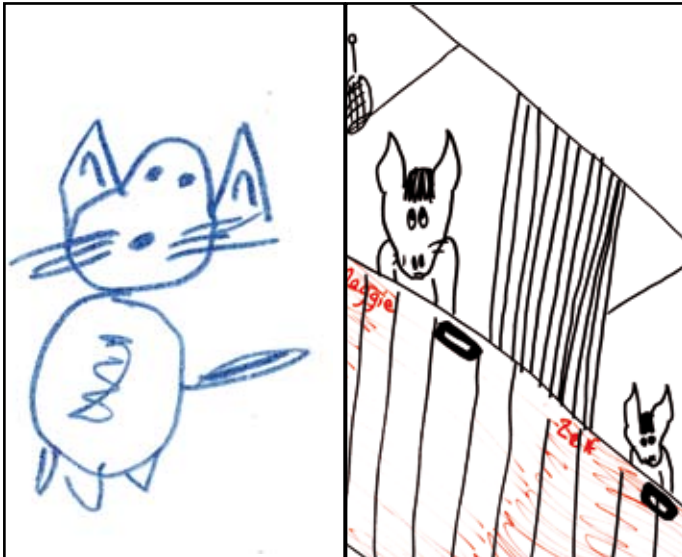


Figure 5a

Figure 5b

While farm animals were popular amongst volunteers and clients, there was no evidence of any significant relationships being developed with cows, pigs or sheep. In contrast, PA data indicates that the way in which equines and small pet animals are valued is different to that of livestock.

Young males at a community garden commented that they enjoyed seeing the pet rabbit and this creature featured in the PA (Figure 5a).

A female teenage volunteer spent a half of a 30 minute long PA session drawing a detailed picture of the equine facility making sure that each horse was in its correct location with food (Figure 5b).

PA was not actually conducted at a farm and RA participants were not requested to draw therefore there is potential that a bias towards relationships with non-farm animals could result through the absence of drawings of farm livestock. However, the RA statements relating to the latter all (except for one describing the “smell of pigs” as a dislike) link into to functional aspects of the farm such as vaccination and shearing.

“Preparing animals for showing and actually showing the animals.”

“Helping with vaccinating the piglets”

“Helping with shearing”

(Learning difficulties support worker)

Similarly a community garden case study project that was home to pigs, goats, chickens and geese yielded no statements indicating that these animals

were seen as companions and focussed more on the production of food.

“Somewhere to keep my chickens – livestock”

“Getting eggs from chickens”

(Community garden volunteers)

Young males at this project drew their plots, which did include sections marked out for chickens but made no attempt to draw more than a box and label it ‘chickens’. This data by no means suggests that farm users do not value their animals but does indicate that a distinction is made between livestock and companion animals. This would suggest that they understand the different roles of animals in the food chain linking back to bridging the gap from field to plate discussed in section 3.3 - Healthy eating and exercise.

Several PA statements from an equine project elaborated on the value of horses as companion animals. Volunteers of mixed ages stated that they enjoy the company of horses and get emotionally attached to these animals.

“Like being around the horses”

“Get attached to the horses – bond”

(Community stables volunteers)

Volunteers placed this last statement in both the positive and negative sections of the forcefield analysis because although they enjoyed the relationship they had with these animals it meant it was hard when an animal left. Statements taken from a poster designed by a volunteer at a non-case study farm project that works predominantly with equines supports findings from the community stables, stating that relationships with horses can be fulfilling and involve the development of partnerships.

“A relationship with a horse can be very fulfilling”

“Builds trust which will allow you to develop a successful partnership”

(Statements taken from a poster created by a community farm volunteer to describe the benefits that young people receive from horses)

The opportunity to develop special relationships with animals can influence what volunteers would like to do in the future by giving them new interests and motivation.

“Changed what want to do in the future – want to go to agricultural college and study horses”

(Community stables volunteer)

These findings are supported by Rosenkoetter (1991, in Velde *et al*, 2005) who states that when an

animal is considered to be a companion or partner they can fill an emotional need. Ewing *et al* (2007) states that relationships with animals can be key to developing the trust necessary for therapeutic processes. Brodie & Biley (1999) agree describing how interaction with animals can lead to decreased loneliness, improved morale and increased social interaction.

3.4.11 Natural confidence boosters

An increase in self-esteem and confidence was a common theme mentioned by all active projects during interviews and featuring strongly in PA and RA.

“Building confidence”
(Community garden volunteer)

“Made me more confident”

“Self-esteem”

“Believing in myself”

(Rehabilitation allotment project clients)

The acquisition of new skills and taking on new roles appears to play a key role in boosting the confidence of clients and volunteers.

“Working with animals has developed the confidence & responsibility of many young people from local communities”
(Member of community farm management committee)

Project managers can play an important role in boosting confidence, supporting individuals with learning difficulties and allowing them to gain experience in a working environment.

“The farm staff are excellent, instilling confidence and worth into their lives, instigating some discipline, which they have never experienced before”

“Clients are more confident when they have a job to do they know they can be successful in. Clients receive praise every step and their behaviour improves during the session”
(Support worker for disability and special needs services)

Statements collected from a poster displayed at a farm predominantly involved in equine work, describe specifically how horses can help to boost confidence.

“Nervous or shy people will gain self confidence from being able to handle a large

animal”

(Community farm volunteer)

The statements collected came from predominantly young people but verification demonstrates that retired individuals also receive this benefit. In verification ‘building confidence’ received 11 counts of agree and one disagree response from a total of three projects ranking as one of the most agreed to statements (14 counts was the highest number received in the category of ‘like/why’).

The fourth verification project did not respond to this statement, perhaps due to the large number of recreational users taking part in verification at this project. This can be explained by referring to section 3.5 on Informal skill development and education. In this section it is demonstrated that the farm recreational users did not respond to verification statements regarding skills development. The lack of response to the ‘building confidence’ statement by this group supports the finding that learning new skills is key to increases in confidence.

The finding that volunteering, or carrying out supported horticultural or equine related work, can boost the self-esteem and confidence of people of all ages is supported by several studies.

Research conducted by Richards (2005) highlights the sense of value and self-esteem felt by older generations following the achievement of successfully growing flowers. Ewing *et al* (2007) state that the size of horses means that they must be given respect, citing lack of this attribute as a frequent problem with at risk children. Ewing *et al* (2007) go on to say that these young people can show dramatic improvements in their confidence and social skills after spending time with the equines.

Further support comes from MacDonald & Cappo (2003, in Ewing *et al*, 2007) whose studies into equine facilitated learning (EFPL) have shown significant increases in the self-esteem, feelings of social acceptance and peer popularity of participants.

Rosenkoetter (1991, in Velde *et al* 2005) agrees suggesting that relationships with animals provide comfort and improve self-esteem. This finding is supported by Hine *et al* (2008) who report that care farm clients receive increased confidence in conjunction with an enhanced trust in other people.

Gladwell (2007) highlights that for increases in self-esteem and confidence individuals must change their attitudes towards themselves, indicating that this can be achieved through gardening projects. Calteau

(2005) notes such confidence boosting gardening processes can be of particular value to individuals suffering from mental health problems.

3.4.12 Ownership

The aspect of ownership appeared in PA with young males at a community garden stating:

“Get your own eggs”
“Get to grow own vege”
“Like collecting my eggs”

PA also yielded evidence that creative opportunities could also instigate a sense of ownership.

“[Like] the opportunity to be creative and make the garden project my own piece of work”
(Ex-community farm volunteer who now works in the community and voluntary sector)

Richards (2005) describes how some people feel an attachment to domestic gardens, which can act as an extension of their home, linked to their sense of history and identity. It is likely that community-growing spaces evoke similar feelings for local people involved in their creation and maintenance.

Robertson (2007) supports this theory stating that being involved in the creation and care of plants can give someone a place. Gladwell (2007) discusses how handing a garden over to young people can allow them to develop a sense of ownership where they are free to pick their own seeds and make mistakes in a supported environment.

3.4.13 Independence

RA data indicates that community farms and gardens can promote independence.

“Achieved a bit of independence”
(Bangladeshi women’s allotment group volunteer)

This statement received seven agree responses in verification – six from a garden working with individuals with learning difficulties and one from a community farm. This indicates that vulnerable or excluded groups particularly benefit from opportunities to increase their independence.

The group with learning difficulties volunteered at a project aiming to give these individuals the skills necessary to find employment – helping them to achieve independence.

A member of a Bangladeshi women’s gardening group, originally gave the statement in response

to a question asking what attending the allotment had helped her to achieve. Investigation of other answers given by this lady suggests that key to this achievement were opportunities to develop a life in a new country that was separate from the role of motherhood involving new friends and skills – particularly gardening and the English language, and access to fresh food for cooking.

The literature investigating gardening and farming activities in relation to independence predominantly focuses on older generations. Richards (2005) describes how older people may be forced to alter their gardens to create lower maintenance spaces in the hope that this will enable them to stay in their home. In these circumstances community-growing projects could provide a useful resource for older people allowing them to continue to be involved in gardening in a supported environment where they are not fully responsible. Several projects visited had raised beds to promote access by the elderly or disabled and/or had worked to ensure that paths were suitable for individuals with mobility issues or partial sight. Richards (2005) states that gardening is “a good tonic” for older people allowing them to maintain interests from their youth, be involved in decision-making and look forward to seeing what happens in the garden the following year.

3.4.14 Responsibility

Themes of responsibility and routine began to emerge during interview sessions. Project managers at two projects working with individuals with learning disabilities described how they aimed to support these people into employment by allowing them to gain experience in a work environment. Groups working with excluded young people stated that these individuals arrived having had trouble at school and/or at home and struggled with figures in authority but learnt to take on roles of responsibility and respect others. PA data indicates that young people enjoy taking on roles of responsibility within the settings of community farms and gardens. A young male volunteer listed this as one of the most positive aspects of a community garden in forcefield analysis.

“Get responsibility”
(Community garden volunteer)

Young people also value the respect they are given in response to taking on responsibility.

“Being given respect”

“Being spoken to like an adult”

(Community stables volunteers)

Both “get responsibility” and “being given respect” received 11 counts of agreement in verification, ranking as one of the most agreed to statements (14 counts was the highest number received in the category of ‘like/why’). All four verification projects responded to the first statement and three to the latter. No counts of disagree were recorded for either statement. This indicates a strong level of support for these statements from people of mixed ages.

There is evidence that learning to care for living things is integral to the process of instilling a sense of responsibility. Horses require a strict routine of feeding, exercise and mucking out and are reliant on clients and volunteers for their care.

“Hard communicating with young people when they first arrive but good to see change, helped by routine, horses need things at specific times”
(Community stables volunteer)

A volunteer at a community farm developed a poster describing the benefits young people receive from working with horses. Statements from this poster support those collected in PA:

“Caring for a horse teaches young people to be responsible”

“Caring for and interacting with horses can make you more reliable, thorough, trustworthy, honest and consistent”

The evidence suggests that answering to other volunteers and/or clients and animals can act as an extra incentive for people to behave well which could be of particular value when working with individuals who do not respond well to authority.

“Learn to be responsible not just for themselves but for the other workers and the animals...helps to stabilise their behaviour as they don’t want to miss out on future visits”
(Learning disabilities support worker)

Caring for animals can lead to the development of a good work ethic.

“Also they [volunteers] will learn that hard work pays off and develop a good work ethic”
(Statement taken from a poster created by a community farm volunteer to describe the benefits that young people receive from horses)

Community farms and gardens are valuable facilities for individuals on probation to carry out community service. Even though the experience is obligatory rather than voluntary, tasks at the community farm were still favoured over other activities. Individuals improved their behaviour to ensure that they did not miss this visit. In fact some individuals

continued to volunteer after the completion of their community service.

“On completion of community service [young offenders] returned to the farm to help out on weekends” (Young offender support worker)

In contrast to young people highlighting opportunities for taking on responsibility, a retired individual from a different project stated that he enjoyed not being fully responsible.

“Not being fully responsible”
(Community garden volunteer)

This statement was collected from a community garden managed by volunteers with the help of two professional gardeners. In verification this statement received three agree responses and two disagree from a total of two projects.

Interestingly one of the agree responses came from a project working with young people with learning difficulties. The individuals disagreeing noted that they actually were responsible for the running of the project, suggesting that the agree responses from this project came from individual(s) who took on active roles but were not involved in leadership. The opportunity for involvement without full responsibility is likely to be of value to individuals who volunteer as well as maintaining employment, people taking a more relaxed approach to life in their retirement and vulnerable groups who value new roles within a supported environment.

The majority of statements presented in this section come from projects working with animals – a farm, an equine centre and a community garden that is home to a small selection of livestock. Hence the evidence appears to point more towards caring for animals as a route to instilling responsibility rather than interactions with plants. However, verification responses to “get responsibility” highlights that users of community-growing projects that do not keep animals also value opportunities for responsibility.

The responding garden and allotment projects were both involved in selling produce therefore volunteers take on some responsibility for the

future of the project by ensuring that produce is of a high standard for sale. Gardeners must also consider soil conditions, care for cuttings and seedlings and crop rotation.

“How to grow things using alternative methods, trying to be more imaginative. The importance of rotating crops and successional sowing”

“Learn to grow what suits conditions in garden – soil etc”

“Learnt about cuttings and seeds, especially useful when sell plants – fundraising”

(Community garden volunteers)

Section 3.5 on Informal skill development, education and training also highlights the different roles that garden and allotment project clients and volunteers take on such as handling orders and answering phones. This supports the theory that growing activities that are not linked to animals also provide opportunities to take on new responsibilities.

Literature supports the finding that involvement in growing activities can instil responsibility. McCabe (2007) states that gardening can provide order, continuity and a sense of direction for people’s energies. Rahm (2002) specifically agrees that involvement with social enterprises can teach individuals to be responsible within a supported working environment. Participants in a City Farmers’ Programme described by Rahm (2002) worked

hard to ensure crops were marketable. They viewed this experience as a summer job, taking on the responsibilities of turning up on time, filling in timesheets, treating others with respect and cooperating to achieve shared goals.

In a study by Hine *et al* (2008) care farmers report clients developing work habits and a sense of personal responsibility. Evidence from Ewing *et al* (2007) agrees that horses can be used to instil responsibility. According to Velde *et al* (2005) giving patients responsibility for a living thing allows them to assume a new role, developing a sense of ownership, and opportunity for contribution. Gladwell (2007) states that ‘owning’ a project can be an important way for young people to take on responsibility and highlights that it is important for this role to be maintained whether or not things go according to plan. Gladwell (2007) suggests that in these circumstances gardening projects can support young people to take control, increase participation, and help them to identify and work towards personal goals.

This finding is mirrored by evidence gathered here from a young male volunteer who was given his own plot to design and maintain at a community garden and has since been able to work towards a more positive future.

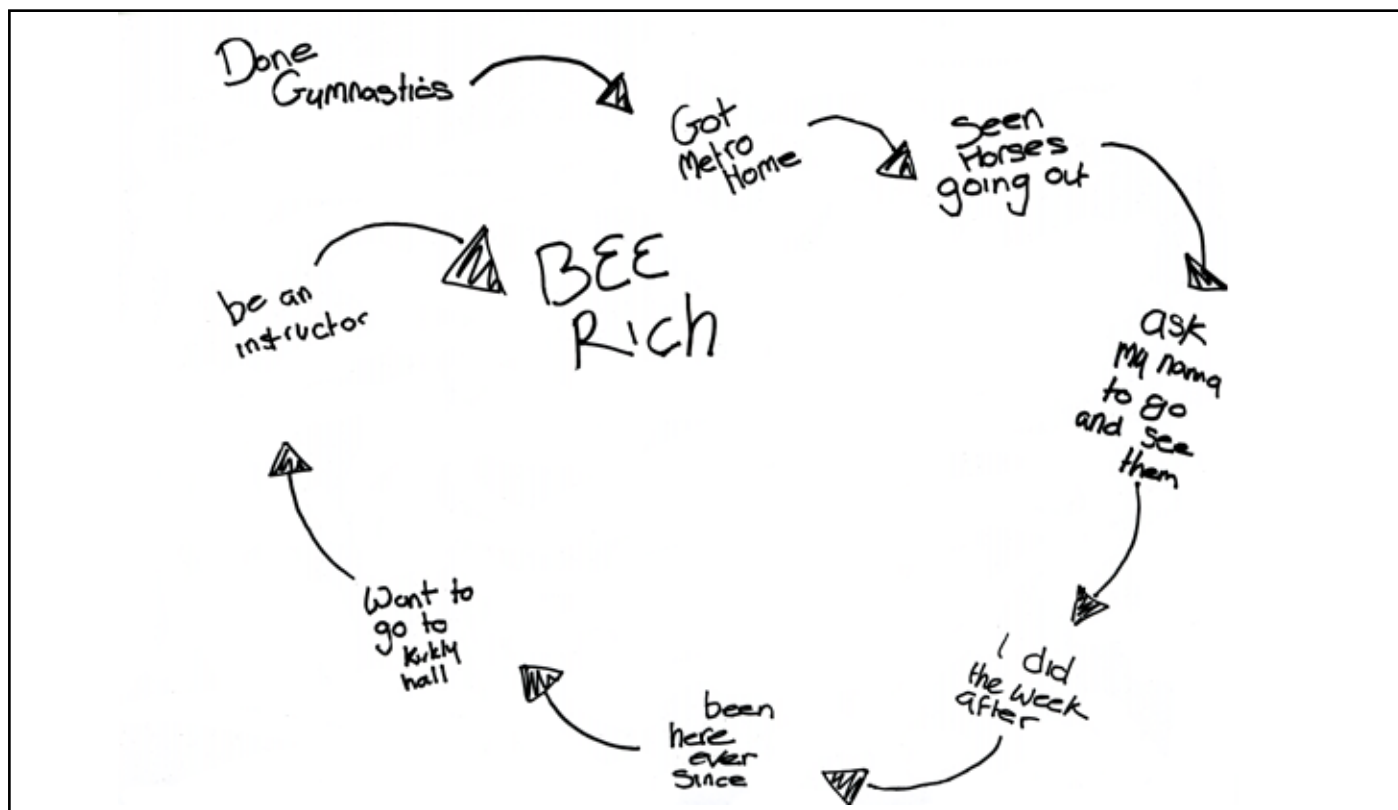


Figure 6. Example of timeline drawn by young person attending a case study project showing their future goals and how these had developed after taking part in the project

“Reaching our goals in life”
(Community garden volunteer)

Velde *et al* (2005) suggest that learning to care for an animal could help lead to the development of a new occupation or assist in sustaining meaningful activity in a person’s life. In their timelines several young people indicated that attending the project had confirmed what they wanted to do in the future or given them a new goal to work towards (Figure 6, above).

3.4.15 Summary

The findings indicate that supported, therapeutic activities in community farms and gardens benefit a wide range of groups from local volunteers to hard to reach excluded young people, offenders and individuals with learning disabilities or health problems. Community gardening projects are not necessarily established with the intention of providing a formal therapeutic horticulture or care farm facility – therapy appears to occur holistically perhaps aided by the informal nature of these projects in comparison to other routes of therapy.

The success of community farms and gardens in engaging hard to reach groups may be due in part to the hands-on activities that take place and visual indicators of achievement: for example plants growing, vegetables being produced, the creation of woodwork or signage and production of eggs and healthy livestock. The evidence also suggests that young people who have struggled with authority in formal education, at home or in employment respond positively to the needs of plants.

Community farms and gardens offer opportunities for responsibility that motivate young people and encourage them to take positive steps towards their futures.

Evidence here and in other studies indicates that growing projects can have a great value for asylum seekers and refugees yet usage statistics from ten projects indicate low levels of inclusion for this group. The vulnerable nature of these individuals may necessitate that they have projects specially catering just for them. However, data from the Bangladeshi women’s gardening group highlights the benefits that these individuals felt in terms of confidence, integrating with local people and improving their language skills. Perhaps there could be a process whereby asylum seekers and refugees begin at specialised projects and move on to others when they feel ready to do so.

Findings from this study support the theory of attention restoration and indicate that community farms and gardens promote relaxation and happiness by offering opportunities to escape into a different environment.

The data exhibits congruency with farms, gardens and equestrian projects producing very similar benefits. The results on gardening coincide with other studies that have investigated its therapeutic value and prove that gardening can be a rewarding activity for all ages. However, in comparison to social and therapeutic horticulture and animal-assisted therapy, there is a paucity of literature on the benefits of working on a farm with livestock. Recent research into care farming should go some way to rectifying this balance but there is still a need to concentrate on the benefits individuals and communities receive from community farms both in an urban and rural setting.

3.5 Theme 4 - Informal skill development, training and education

3.5.1 Introduction

The value of community farms and gardens as educational resources became apparent from the first project visits. Several project managers had records of training courses their clients and volunteers had been on. Other projects that did not run formal training courses, but facilitated voluntary learning, created certificates to mark achievements. Discussions at case study projects revealed that the type of learning offered by community farms and gardens is of particular value for dissatisfied young people and individuals with learning disabilities. Verification confirmed that learning new skills was one of the most important elements of community farms and gardens. Here we explore the nature of these skills and investigate why they succeed in engaging excluded young people and those with learning difficulties, in addition to providing valuable learning opportunities for local people. Skills relating to interactions with other people are discussed in section 3.2 - Social interactions and inclusion.

3.5.2 Learning new skills

Learning new skills was one of the most important reasons for people coming to projects.

“Very interesting to come and learn new skills”
(Community garden volunteers)

And encouraging them to return in the future – this statement received ten agree responses in verification.

“Yes I want to keep going to develop my gardening skills and knowledge”
(Community garden volunteers)

Community farms and gardens offer opportunities for outdoor learning and engaging people, young and old, in their natural environment.

“How to plant trees”

“Learning about animals”
(Community garden volunteers)

“Learnt about plants and growing them”

“I have learnt new outdoor skills”
(Allotment rehabilitation project volunteers)

Support workers at community farms noted how the livestock engaged young people with learning difficulties.

“People with learning needs recognise and show interest in animals”
(Learning disabilities support worker)

Garden volunteers noted that they learnt a lot by observing plant growth.

“Observation – watching plants grow, see what is happening to plants and why – greenfly, dry etc”
(Community garden volunteer)

The engaging nature of gardening and farming activities and an alternative setting create a positive environment for skill development.

“The benefits people with learning difficulties receive from the farm environment and farm staff have progressed over the years”
(Support worker for disability and special needs services)

The alternative setting and activities could be why learning at community farms and gardens is perceived as enjoyable and worthwhile.

“Increased knowledge in a fun and worthwhile way”
(Learning disabilities support worker)

An important element of community farms and gardens is the opportunity to learn by doing in a supported environment.

“Learning through doing new skills, new challenges - how to garden more effectively, what sort of plants to grow, lots of brains to pick”
(Community garden volunteer)

Many of the skills learnt at community farms and gardens are new to people.

“Everything learnt here is a new skill”
(Community stables volunteer)

Sharing skills with others was an important part of the community projects, assisting the development of relationships (section 3.2.2).

“Training – came here as a volunteer and now training other volunteers”

“Teach other people to ride”
(Community stables volunteer)

“Achieved how to grow vegetable in my own garden and gave others advice about my new skills”

(Bangladeshi women's allotment group volunteer)

“Learning - lots of brains to pick”

“Good ideas are gained by being with other people so that your own garden can be improved upon”

(Community garden volunteers)

Community farms and gardens also offer opportunities to learn skills that are not linked to horticulture or agriculture. These facilities provide informal opportunities for immigrants to improve their language skills, which can help to tackle social exclusion (section 3.2.4).

“Yes, I want to learn English to communicate with other allotments users to find out about more of good gardening process”

(Bangladeshi women's allotment group volunteer)

The transient nature of funding at community projects means that there can be a high staff turnover. This means users of these projects have to learn to cope in a changing environment. At the equine centre this was particularly so when horses moved on from the project.

“Get attached to the horses – bond (hard when they leave)”

“Coping with change – new staff and horses”
(Community stables volunteers)

Verification demonstrated that volunteers and clients who attend regularly develop new skills whereas those who only visit for recreational purposes are less likely to be involved in activities where these skills are learnt.

This corresponds with the PA findings and data collected from project managers in the initial questionnaire sessions. This can be determined by comparing the verification responses of projects with volunteers to those of the farm where a large number of recreational users took part.

Out of the eight female participants at the farm seven were recreational users and one worked in the café on site. The responses of this individual were indicated by a different colour sticker allowing the responses of female recreational users to be identified separately. The recreational group did not respond at all to skill statements in comparison to volunteers and clients who responded positively.

3.5.3 Hands-on skill development

Growing and equine projects offer extensive opportunities for hands-on learning whilst conducting day-to-day tasks. Clients, volunteers and support workers alike can extend their animal knowledge at farms, stables and gardens with livestock.

“I have picked up a lot of knowledge about farm work and the animals (silly things, like pigs are born with teeth, gestation periods). Watching a lamb being born”

(Learning disabilities support worker)

“Learnt all about horses”

(Community stables volunteer)

“Yes new animal handling skills, livestock management techniques”

(Ex-community farm volunteer who now works in the community and voluntary sector)

Horse riding specifically can help people develop coordination skills.

“Having a pony develops new skills...helps gain coordination skills”

(Statement taken from a poster created by a community farm volunteer to describe the benefits that young people receive from horses)

Gardening projects teach people skills that they can take home and use in their own garden if they have one, as well as providing alternative new methods of cultivating plants.

“Get new ideas for my own garden”

“How to grow things using alternative methods, trying to be more imaginative. The importance of rotating crops and successional sowing.”

“Working on my own garden more effectively, learning more about herbs and vege [sic]”

(Community garden volunteers)

Participants learn more about gardening processes and plant requirements.

“Yes, learnt how to sow seeds in a row instead of throwing seeds directly in a box, certain seeds doesn't do well and I got a few tips about this”

(Bangladeshi women's allotment group volunteer)

“Learn to grow what suits conditions in garden – soil etc”

“I have learnt new skills, generally on gardening, on particular growing vegetables and flowers and on how to enrich soil. Also how to make

paths and raised flower beds.”
(Community garden volunteers)

There are also opportunities to learn practical site management techniques such as hedge laying, construction work and artistic skills.

“There are several practical skills that I’d like to learn, which the farm offers – hedge laying for example”
(Member of community farm management committee)

“Woodwork”
(Allotment rehabilitation project volunteer)

“Learn willow weaving – been very useful to decorate garden”
(Community garden volunteer)

A support worker taking a group with learning difficulties aged between 22–42 years to a community farm listed the favourite activities of the group.

“Any hands on work with the animals”
“Interacting with the farm staff”
“Helping with shearing”
“Helping with vaccinating the piglets”
“Replacing fencing”

The support worker noted that the group preferred the farm to other placements involving (in order of preference) “cooking, badminton and the gym, photography and computers”. When asked how they personally benefited from the visits the support worker replied:

“I enjoy being in a different environment with my learners and watching their achievements. I was very proud of my clients when they entered sheep into a major country show, they controlled the sheep well in the show ring, and did everything the judge asked them to, and went on to win, what more could I hope for.”
(Learning disabilities support worker)

When asked what he had learnt at a community farm a young offender responded with similar practical skills developed by those with learning disabilities, indicating that these activities have value for more than one hard to reach group.

“Clean out chickens, fed the pigs”
(Young offender)

Participating in community gardening groups can be an effective way for people from other countries to learn about new vegetables and different growing methods.

“Yes, I learnt about different vegetables that people could grow also I know about English veg e.g. corn, runner beans, celery, broad beans and different type of cabbages”

“Yes - different and easy way of gardening, compared to how we grow things back home in Bangladesh”
(Bangladeshi women’s allotment group volunteers)

This evidence suggests that hands-on learning opportunities can be used to engage a wide audience crossing language barriers and connecting with young and old alike. Hands-on learning engages hard to reach groups who may struggle with formal education, such as those with learning difficulties or individuals undergoing rehabilitation, and helps them develop new skills.

Gladwell (2007) supports these findings stating that practical tasks such as digging and preparing beds engages young people who struggle with academic learning. Calleau (2005) indicates that the hands-on approach is also of value to volunteers with mental health problems who can develop new interests and learn a variety of new skills such as propagating, potting, carpentry, office skills, laying patios etc.

3.5.4 Formal training and education

There are opportunities at many community farms and gardens to turn hands-on activities into formal qualifications. Projects offer and facilitate formal training opportunities in horticulture and animal care.

“Gardening Course”
(Rehabilitating drug user at a community allotment)

“Some want to go on and take NVQs in animal care”
(Support worker for disability and special needs services)

Projects with livestock can offer in-house small animal training, which can be used to gain diplomas, college placements and work experience. Additional subjects can also be catered for including first aid, food hygiene and the use of machinery.

“I know more about first aid and working safely”

“Food Hygiene”
(Rehabilitating drug users at a community allotment)

“Getting licenses/certificates for machinery to use in future”

(Community garden volunteer)

Community growing projects can also offer training to meet ASDAN Awards criteria, teach women self-defence, instruct elderly people on how gardening can help them to exercise and encourage healthy eating. Training empowers volunteers and clients, especially when they can use their new skills to teach others.

“Training – came here as a volunteer and now training other volunteers”

(Community stable volunteer)

Ten of the 22 projects featured here had established links with local schools. At these projects pupils are able to learn about aspects of biology, for example life cycles, companion planting, plant nutrition, and growing requirements. Garden activities are also linked to geography, maths and creative writing. Community projects provide a useful facility for schools that may not have the space or financing for their own growing or farm area. It also provides access to livestock and vegetables reinforcing knowledge about where food comes from.

Volunteering at projects is a good way to build knowledge in an area of interest and can be used to demonstrate commitment and passion for learning to strengthen university applications as well as reaffirming young people that this is the course of study they wish to pursue. One farm held a ‘vet week’ geared around veterinary study for individuals seeking further education.

Money can act as a barrier preventing individuals whose families are on low incomes from pursuing further education. Community projects specifically established in deprived areas help tackle this problem offering free or funded learning programmes. The equine centre in particular offered free rides and training in return for time spent volunteering either by individuals themselves or parents. Calleau (2005) agrees that volunteer opportunities help to overcome financial barriers particularly for individuals with mental health problems who have been excluded from college. Calleau (2005) states that in some cases bursaries are offered by community gardens to sponsor learning.

Gladwell (2007) states that gardening projects encourage children to exercise, appreciate outdoor activities and develop a sense of freedom that a classroom environment cannot give. This evidence

indicates that the benefit received by pupils visiting community-growing projects extends beyond the educational experience. Morris (2007) agrees that the development of academic skills such as literacy and numeracy can be linked to gardening activities stating that they can be included in the therapeutic processes of horticulture.

3.5.5 Skill development for excluded young people

Young people at four of the 22 research projects in particular had been referred to, or encouraged to attend, the scheme because they were at risk of exclusion, had already been excluded from school or were struggling to achieve academically due to problems in other areas of their lives. In PA these individuals, both male and female, stated that they preferred opportunities for hands-on learning in comparison to their school education.

“Better than school more practical, hands on”

(Community garden volunteer)

One of the four projects is a community garden located in the grounds of a secondary school developed by a former student, who returned to do this after completing their formal education there. Originally this garden had not been involved in academic work receiving only the pupils sent out of lessons for bad behaviour. Subsequently, the garden began to act as a refuge for young people with learning difficulties, providing practical, hands-on learning options and helped to tackle feelings of isolation.

The school now runs horticultural NVQs and ASDAN courses relating to horticulture, work in the community and personal effectiveness. This garden provides a vital opportunity for young people who are struggling academically who may be at risk of leaving school without any motivation or interest in their future. These young people are given the opportunity to develop skills that could lead them on to further education or employment before they become fully disengaged with formal education systems. Since opening opportunities for horticultural education, the garden has received interest from pupils of mixed age and gender.

Two of the four projects used horses to motivate excluded and/or at risk young people and help them to take action towards better futures. These training programmes link work with horses to elements of the national curriculum including English and maths. One stables called this programme ‘gallop

to learning' offering placements which enabled young people to attend for either a full day or half day per week. Whilst on placement they gain real work experience, getting involved in all the different aspects of running the project, from horse care to field maintenance.

The option of learning to ride is useful in motivating those who are unwilling or unsure about participating in the horse care. The young people also receive structured training sessions, which can be accredited. Individuals in this programme described how they had reduced their involvement in what is commonly perceived as anti-social behaviour and become active volunteers keen to attend agricultural college.

“Keeps us off the streets”
“Not drinking on the streets”
“Put in lots of energy...give it your all”
(Community stables volunteers)

Further testament to the effectiveness is a quote from a young male at a community garden who had gone from socialising on the street to being motivated about his future.

“Reaching our goals in life”
(Community garden volunteer)

One young male at the second equestrian site said that the project had not made him want to go to college and disagreed with the statement regarding going to college to study horses and a general one that was put up at his request “I want to go to college”. This individual had been attending the project for a few months after problems at school. In contrast a young female who had been attending for longer agreed saying that the project had changed what she wanted to do in the future and that she wished to go to college and learn about horses.

The impact on young people may be linked to the reason why they arrived in the first place and willingness to commit to the project. If after finishing at the project young people are not keen to return to education they have been given some experience and skills, which will help them seek employment.

Other studies support the finding that hands-on gardening, farming and equine activities can engage and motivate excluded young people encouraging them to learn. According to Velde *et al* (2005) animals can help therapy clients focus and remain attentive for longer periods of time. A study by Ewing *et al* (2007) investigated equine-facilitated psychotherapy or learning (EFP/L) specifically

and stated that this process aims to instil a sense of order, create an understanding of boundaries, improve focus and instil trust.

A city farmers' programme in midwest America described by Rahm (2002) recorded similar results in response to participants' opportunities for hands-on learning. The programme targeted youths at risk of dropping out of school who have few opportunities to engage in other extracurricular activities. These individuals deemed the hands-on approach to be particularly valuable, describing it as central to the programme. Sustained interactions with plants in the garden provided a unique learning environment.

3.5.6 'Real' science

The approach of hands-on, outdoor learning offers opportunities for unstructured, scientific learning. This type of learning can occur whilst conducting everyday growing activities.

“Enjoy seeing the young person's faces when they realise that a duck egg comes first from the duck and not from ASDA”
(Young offender support worker)

“Gardening had always been an interest but food growing was a whole new experience for me”
(Ex-community farm volunteer who now works in the community and voluntary sector)

Learning opportunities are enhanced by being able to gain knowledge from experienced farmers and gardeners.

“Learning - lots of brains to pick”
(Community garden volunteer)

“Training – came here as a volunteer and now training other volunteers”
“Teach other people to ride”
(Community stables volunteers)

“Achieved how to grow vegetable in my own garden and gave others advice about my new skills”
(Bangladeshi women's allotment group volunteer)

Asking questions also means that volunteers and clients are directing their own learning and pursuing subjects that they find interesting.

“Good ideas are gained by being with other people so that your own garden can be

improved upon”
(Community garden volunteers)

This learning is incidental as it is not the main aim of the activities except where specific courses are being taught. The data demonstrates how clients and volunteers value opportunities to share information between themselves and train new group members, indicating that learning is linked to the development of social relationships.

These findings suggest that participation in gardening and farming activities at community projects can be used to teach local people science in a way that is accessible, supported and real, in that the process of plant growth and the birth of new livestock occurs right before their eyes.

Rahm (2002) is in support, stating that farms and gardens emphasise ‘doing science’, rather than knowing science, which is of value to children who develop a greater understanding of science when provided with opportunities to study what is meaningful and real to them. Rahm (2002) suggests that integrating science into activities as a means of achieving a goal can be more successful than teaching science that is not embedded in everyday practices. Zoldoova & Prokop (2006) agree, proposing that field science education is one of the most effective ways to increase pupils’ interest in studying science.

Rahm (2002) also notes the value of youth organisations and after school programmes whose primary aim is not science literacy per se. The science is embedded in activities and the ease with which experienced gardeners can be approached helps young people to ask questions and encourage learning where they are the creators and not merely the consumers of scientific curriculum. Answers are more likely to focus on practical aspects that aid work whilst still linking to scientific fact.

Calleau (2005) and Rahm (2002) agree describing how self-directed learning is enhanced by active participation and actions that emerge from discussions. Rahm (2002) indicates that providing students who do not envisage a career in science with a means to access a kind of science that they perceive as meaningful or valuable, can encourage a positive learning experience. Rahm (2002) also suggests that hands-on learning leads to a greater understanding of how vegetables grow and appreciation for the work of farmers. Morris (2007) is also in support, stating that therapeutic horticulture can help teach people about life cycles.

3.5.7 Stepping-stones to employment

Eight of the 22 participating projects worked solely, or had special placements, for those with learning disabilities or suffering from mental health problems. In addition to valuable therapeutic benefits these projects offer an opportunity to develop skills necessary to gain employment. Three of these projects operated as social enterprises involving their clients with selling plants and running vegetable box schemes. This establishes a work environment where deadlines must be met whilst still providing vital support.

Many of the farms and gardens involve their clients and volunteers in administration tasks, ordering supplies, answering the phone and maintaining websites thus increasing levels of responsibility and providing an insight into running a project. Individuals with learning disabilities at one project had moved on to become paid gardeners for the local council. Such opportunities are also of value to unemployed volunteers who struggle to find work due to changes in employment opportunities and are feeling excluded due to not being computer literate.

In addition to placements offering support to individuals to find routes into employment, it became apparent that individuals were beginning their careers at larger projects as staff or volunteers and heading off to form their own community sites. One community farm had been a starting point for two individuals who had since gone on to work at other farm and allotment projects. Another individual who had been a volunteer at the farm has since moved on to work for an environmental organisation using experience gained at the farm.

“Much of my experience relevant to my current job was gained at the farm”

(Ex-community farm volunteer who now works in the community and voluntary sector)

Volunteering can also lead to direct employment, with funding allowing projects to take on long-term volunteers to continue to carry out tasks they conducted in a voluntary capacity.

3.5.8 Summary

Community farms and gardens offer valuable volunteer and training opportunities both formally and informally. Skill development can be recreational or act as a stepping-stone to higher education and/or employment. The hands-on method of learning

attracts individuals disengaged with traditional education systems, builds the capacity of local communities and is accessible to those with mental health issues and learning difficulties.

In addition to the alternative outdoor setting, the learning opportunities offered by community farms and gardens differ to those typical of formal education facilities in that they have active links with the community. Skill sharing is an important part of learning at community projects, empowering local people and promoting an enthusiasm for science. Evidence from Sigman (2007) discussed in Environment 3.6, highlights how people have become disconnected with nature and are unaware of where their food comes from. In this climate, community farms and gardens have an important role to play as facilities that teach young people about science in an accessible, hands-on manner.

The findings here are in accordance with other studies that have demonstrated how involvement with gardening projects can help improve young peoples' general learning, including literacy and numeracy skills (Gladwell, 2007; Morris, 2007 & Rahm, 2002) and demonstrate the value that animals have as an educational tool. RA statements demonstrated that community-growing projects offer valuable learning opportunities for immigrants to improve their language skills and learn about vegetables grown and cooked in their new home country. These opportunities could act to promote integration of these individuals into the community as discussed in section 3.2 Social interactions and inclusion.

Increasing recognition of the learning offered by community farms and gardens would further legitimise this work and open up more opportunities for people of all ages.

3.6 Theme 5 - Environmental awareness and activities

3.6.1 Introduction

The environment featured strongly throughout the four phases of data collection. It became apparent that the development of a community farm or garden could transform derelict ground or revitalise abandoned allotment plots. In addition to creating better places for people and wildlife, project visits demonstrated the role of community farms and gardens in tackling global environmental issues through local food production.

Sub-themes of enjoying the outdoors and appreciating wildlife emerged in PA and were confirmed by verification. A final postal questionnaire was developed to uncover more about environmental practices and attitudes. The findings suggest that community-growing projects offer opportunities to connect with nature and increase knowledge of environmental issues, which can lead to positive changes in behaviour. The value of such behaviour is discussed in the context of local action on global environmental issues and potential for future strategies.

3.6.2 Outdoor activities in urban green space and the wider countryside

Several community projects stated that they provided valuable green space in areas where local people did not have their own gardens or amenity grassland was sparse or considered to be unsafe. This was confirmed in PA particularly where participants stated that without this facility they had no opportunity to grow their own food.

“Haven’t got my own vege [sic] garden at the moment”
(Community garden volunteer)

Community farms and gardens can act as stepping-stones to other outdoor activities. This process appears to be facilitated by new interests in the environment and outdoor skill development. In PA and RA, five people from three growing projects said that they enjoyed outdoor activities or had become more interested in them.

“To enjoy some outdoor activity”
“Enjoy working outdoors in a relaxed

atmosphere”
(Community garden volunteers)
“I have learnt new outdoor skills”
“Doing outdoor activities”
“I have become more interested in outdoor activities”
(Rehabilitation allotment project clients)

In verification the latter statement was one of the top agreed to statements within the category of impact on future decisions with nine agree responses.

Several statements alluded to increased interest and participation in outdoor activities.

“Love the physical work of digging etc”
(Community garden volunteer)
“Became involved in environment work, got my own allotment”
(Bangladeshi women’s allotment group volunteer)
“Started to do more keep fit and bike rides, volunteered to work with young people”
(Rehabilitation allotment project client)

In addition over 50 statements relating to enjoying gardening or developing interests in this activity were recorded in PA and RA from the six case study projects involved in growing activities (not from the equine centre which had no garden). These figures indicate a real strength of feeling and highlight the importance of gardens in getting people outside. The data also demonstrates that it is not just being outside that is important but the location, indicating that outdoor activities in unfavourable surroundings would not be as valued by participants.

“Fresh air and beautiful environment”
(Community garden volunteer)

The pleasant surroundings described here may be important in promoting feelings of relaxation and safety described in section 3.4 Natural therapy.

Project visits demonstrated that community farms and gardens can host outdoor activities beyond farming and gardening including greenwood activities, dry-stone wall creation and woodland activities where the habitat exists.

As part of the Year of Food and Farming campaign in 2007, research was commissioned to investigate the relationship between childhood experiences and knowledge about food. This study was conducted by Sigman (2007) who discovered that 20% of children never visit the countryside. Data presented in the

England Leisure Visits report published in 2006 demonstrates that urban destinations are more frequently selected for recreation than countryside spaces. The figures show 78% (2.78 billion) of all leisure visits in 2005 were to an urban destination – with 73% to an inland town/city and 5% to a seaside town/city. Almost a quarter, 22% (0.77 billion trips) were to a rural destination with the countryside making up 20% and seaside coast 2% (England Leisure Visits, 2006). These findings highlight the need for green spaces in urban areas that link to traditional countryside activities such as farming.

In 2003 the Countryside Agency (now separated into Natural England and the Commission for Rural Communities) commissioned the Black Environment Network (BEN) and Brookes to create the 'Capturing Richness' report with the aim of recording evidence collected by BEN to share with other organisations. This study investigates the barriers preventing countryside visits by black and minority ethnic communities and highlights the benefit these groups feel when particular strategies are put in place to increase participation in outdoor activities and contact with the natural world. BEN & Brookes cite lack of transport and economic and language barriers as reasons why black and minority ethnic communities are under-represented in the countryside but highlight that there is a widespread feeling among these groups that they have no entitlement to be in the countryside and do not know where to find it.

Saleem Oppal, a BEN Development Worker describes how Chinese women taken from an urban area to a National Park found the opportunity to do Tai Chi in such an unspoiled setting to be "a very satisfying experience" and "an expression of feeling at one with nature" (BEN & Brookes, 2003). The women went on to explain that in Chinese parks people practising tai chi is a common early morning sight but that this was not possible in urban parks in England "because they felt conspicuous and were afraid that people would stare and disturb them." (BEN & Brookes, 2003).

Further evidence from BEN & Brookes (2003) indicates that the confidence boost associated with social support is key to encouraging black and minority groups to use green space. This finding suggests that community projects, which are proven in this study to be linked to the development of social support networks, could provide a route for black and minority ethnic groups to participate in outdoor activities. Evidence that community

farms and gardens promote feelings of safety and encourage self-expression (section 3.4 - Natural therapy) indicates that these sites would provide an environment suitable for black and minority ethnic groups. Gladwell (2007) agree stating that gardens allow people to enjoy the experience of being outside in a safe environment. Inclusion could be facilitated by community growing projects offering opportunities for traditional activities such as tai chi as well as existing initiatives to grow oriental and exotic fruit and vegetables.

3.6.3 Connection with nature and environmental awareness

Participation in outdoor activities, particularly growing activities, that are inherently linked to environmental processes such as seasons and the weather, increases contact with nature.

"Love growing vege [sic] and seeing all the changes from seed, to edible product"
"Enjoy the changes between each visit"
(Community garden volunteers)

Attending gardening projects can make people more aware of the creatures living in these habitats. An adult with learning difficulties on a Gateway to the Community programme drew a ladybird in PA (Figure 7) and commented that she enjoyed the wildlife at the garden.



Figure 7. Ladybird drawn by adult female with learning difficulties during participatory appraisal

Project users are also engaged by the different smells, textures and colours of plants and enjoy contact with the soil in which they are grown.

"Although we're classed as a vegetable garden – it's good to grow flowers too – it's lovely to see different colours, textures etc"
(Community garden volunteer)

"Like fiddling with soil"
(Community garden volunteer on a supported placement)

Outdoor experiences and involvement in growing activities can lead to a greater understanding of environmental issues and trigger interest in conservation and local wildlife.

“Develop interests in conservation issues and local wildlife & the environment”

(Farm management committee member)

“Became involved in environment work, got my own allotment”

(Bangladeshi women’s allotment group volunteer)

Volunteers seem to initially go to a project purely to meet people and grow vegetables but, as time passes, improving the environment may become just as important.

“To learn about gardening and environmental work” (

Rehabilitation allotment project client)

Some community projects are located in very urban areas where children may have grown up with limited contact with nature. Tackling global environmental problems can seem overwhelming or unimportant especially when individuals are not connected with nature at a local level. Engaging local communities in their surrounding environment can act as the first step in tackling wider conservation issues. A postal questionnaire was sent to all 22 study projects. All ten responding groups agreed that their project helped users to reconnect with nature – five of these individuals agreed strongly. The stables were neutral on other environmental topics but felt that it made a contribution here.

In the same questionnaire eight managers agreed that their project helped people to develop environmental awareness (four of these individuals agreed strongly) and two were neutral. The neutral projects were the stables and an allotment working with refugees and asylum seekers many of whom had agricultural backgrounds. This could suggest that they were already aware of environmental issues prior to coming to the project. These findings suggest that there is a link between reconnecting with nature and developing environmental awareness, the former potentially acting as a precursor to the latter.

This theory is supported by Hine *et al* (2007) who hypothesised that increased connection with nature leads to an increase in environmental awareness and responsibility and an increase in environmentally friendly practice. Hine *et al* (2007) investigated environmentally friendly practices that volunteers carried out in their own lives whereas here we looked specifically at project activities.

It would follow that such behaviours would influence attitudes towards every day activities such

as those mentioned by Hine *et al* (2007), including recycling, turning the tap off whilst brushing teeth to conserve water, not leaving electrical equipment on standby, using energy saving light bulbs and buying organic food.

Hine *et al* (2007) stated that volunteers were more likely to adopt environmentally friendly practices when they are relatively inexpensive and easy to carry out. This is likely to hold true for users of community farms and gardens considering that users are often volunteers and clients who are not in employment. Buying organic food can be considered by volunteers to be too costly (Hine *et al* 2007). Community growing projects provide local people with access to organic produce that in some cases is free to project members or available in vegetable box schemes.

Further support comes from Parr (2005) who notes that interaction with nature can benefit individuals and communities through increased knowledge regarding environmental impacts and raising awareness about being eco-sensitive. This knowledge can extend to global and local sustainability issues including food security and poverty (Parr 2005).

In this study data from projects working with young people, adults and retired individuals is congruent in suggesting that community farms and gardens can engage both young and old people in the natural environment. However, older service users appeared to have a greater affinity with wildlife than young people aged 10-20. Young males at a community garden were more interested in animals that were kept on site than wild species, compared to adults with learning difficulties at a different garden, who said that the wildlife was one of the most positive things about the garden.

However, it is interesting to note that while the young males had not necessarily developed an interest in the wildlife, the project manager strongly agreed to all environmental statements indicating that while these people were not stating that they were keen to get involved in conservation work like volunteers at different projects, they are likely to have increased their environmental knowledge since beginning at the project. This demonstrated the importance of considering starting points when determining the extent to which changes in behaviour have occurred.

Similarly Hine *et al* (2007) found that a connection to nature varies with age. Gladwell (2007) suggests that gardening encourages the development of

environmental knowledge in young people, which could explain the interest demonstrated by young people in this study. Richards (2005) investigated the importance of domestic gardens and gardening to older people and discovered that those involved in gardening love to feel close to nature and that many were concerned about the environment.

Hine *et al* (2007) also found a difference in gender; statistically significant results demonstrated that women were slightly more connected to nature than men and volunteers above 30 years of age were more connected than those under 30. The results from this study do not indicate such a bias, however further investigation could reveal disparities in environmental connectivity and gender and shed additional light on the inconsistencies relating to connection to nature and age.

Sempik *et al* (2003) refer to the hypothesis of 'biophilia' that has been used to explain the inherent attraction people have to nature. According to Peter & Kahn (1997):

"The biophilia hypothesis asserts the existence of a fundamental, genetically based, human need and propensity to affiliate with life and lifelike processes."

McCabe (2007) agrees that seasons can help to connect people with nature. Randler *et al* (2007) state that wildlife in urban green spaces enhances visits to these sites and appears to improve identification skills and knowledge.

Randler *et al* (2007) also suggest that enjoyable experiences with animals can foster positive attitudes and can be predictors of environmental behaviour. Hence, the opportunities offered by community farms and gardens to develop increased knowledge of wild garden creatures, domesticated livestock and equines and interact positively with these animals is likely to be key to the process of promoting environmental awareness.

3.6.4 Environmental practices

Project visits during the first phase of data collection demonstrated that gardening on a budget can encourage innovative ideas for recycling. Project managers were eager to show the ways they had reused unwanted items by turning them into plant containers.

The concept of reducing waste appeared to apply to other activities with projects composting organic materials and recycling. One project even installed

compost toilets. Volunteers and clients were also enthused by recycling; a young volunteer cited this as one of the positive aspects of the garden.

"Recycling!"
(Community garden volunteer)

Responses from a postal questionnaire sent to all research projects and returned by ten groups, demonstrates a high level of involvement in recycling (Figure 8, below). Paper, cardboard and organic waste are the most commonly recycled materials. Glass, plastic and cans were recycled at some projects but not others.

Recycling may be limited by what materials are actually used on site and by facilities in the local area for the disposal of these products. Community farms and gardens are also beginning to branch out into alternative energy sources. One research project was in the process of setting up a wind turbine. Such installations could act as demonstrations to the public encouraging further uptake and awareness.

In addition to saving energy and reducing waste, community-growing projects are interested in adopting environmentally friendly methods of gardening.

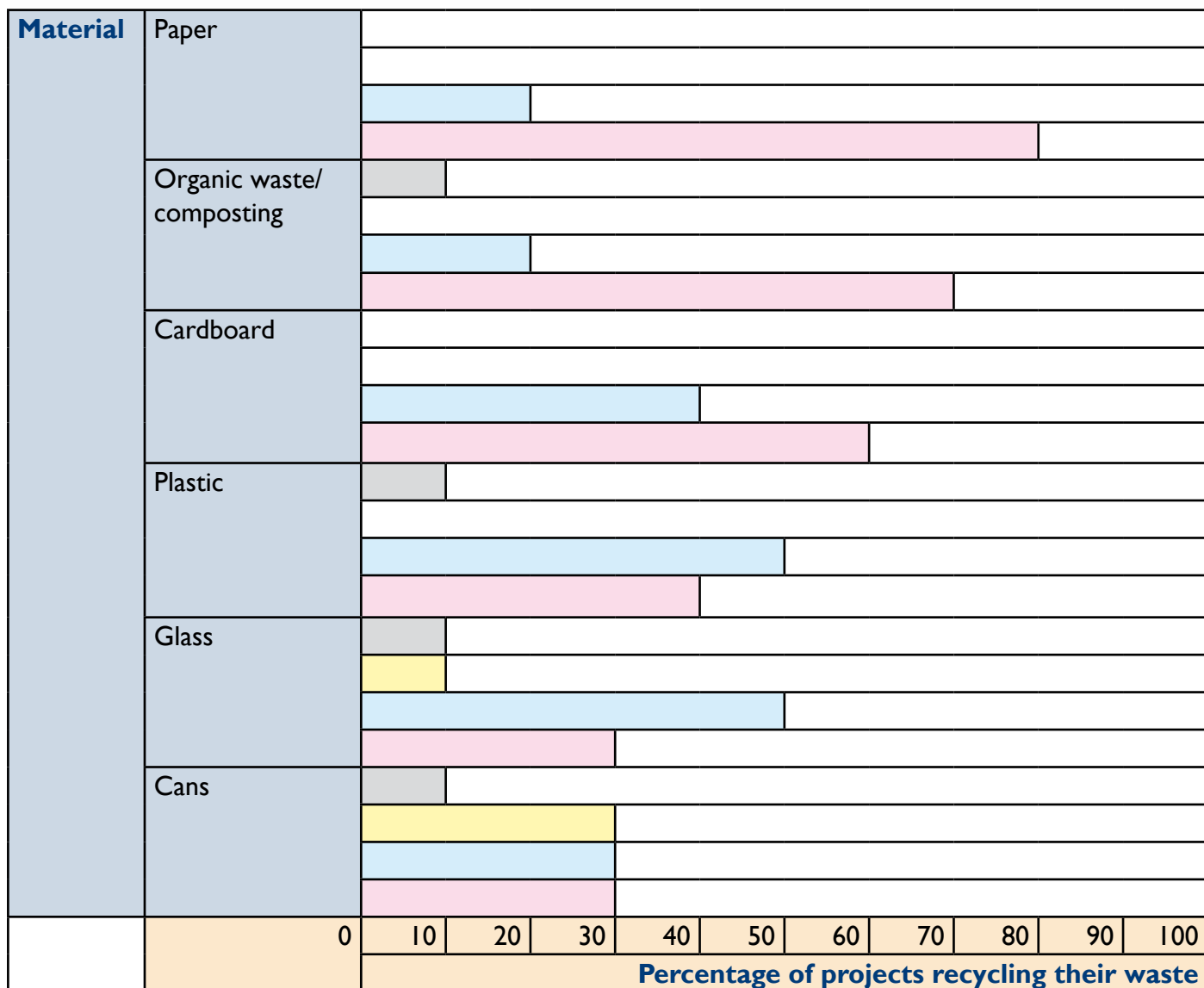
"Interest in organic gardening"
(Community garden volunteer)

In the postal questionnaire project managers were asked if they felt that it was important to farm or garden organically. From a total of ten responses, six project managers strongly agreed that it was important to be organic, One agreed and three were neutral.

Staff from a community garden that did not return the questionnaire explained on a visit that they had previously been an organic site but had to return to using weed control as they did not have the time or manpower to tackle this problem. The worker went on to explain that although some volunteers were happy to just pick weeds that this did not satisfy the project aims of harnessing people with skills for employment. The staff team were keen to reinstate organic methods in the future but required more funding to pay for dedicated time maintaining the garden.

Perhaps the biggest step towards reducing environmental impacts is one that is integral to the activities of the project – local food production. Through this process, community farms and gardens are effectively tackling climate change by ensuring that clients and volunteers or the recipients of box

Figure 8. Percentage of projects involved in recycling paper, organic waste, cardboard, plastic, glass and cans (total of ten projects in sample)



Key:

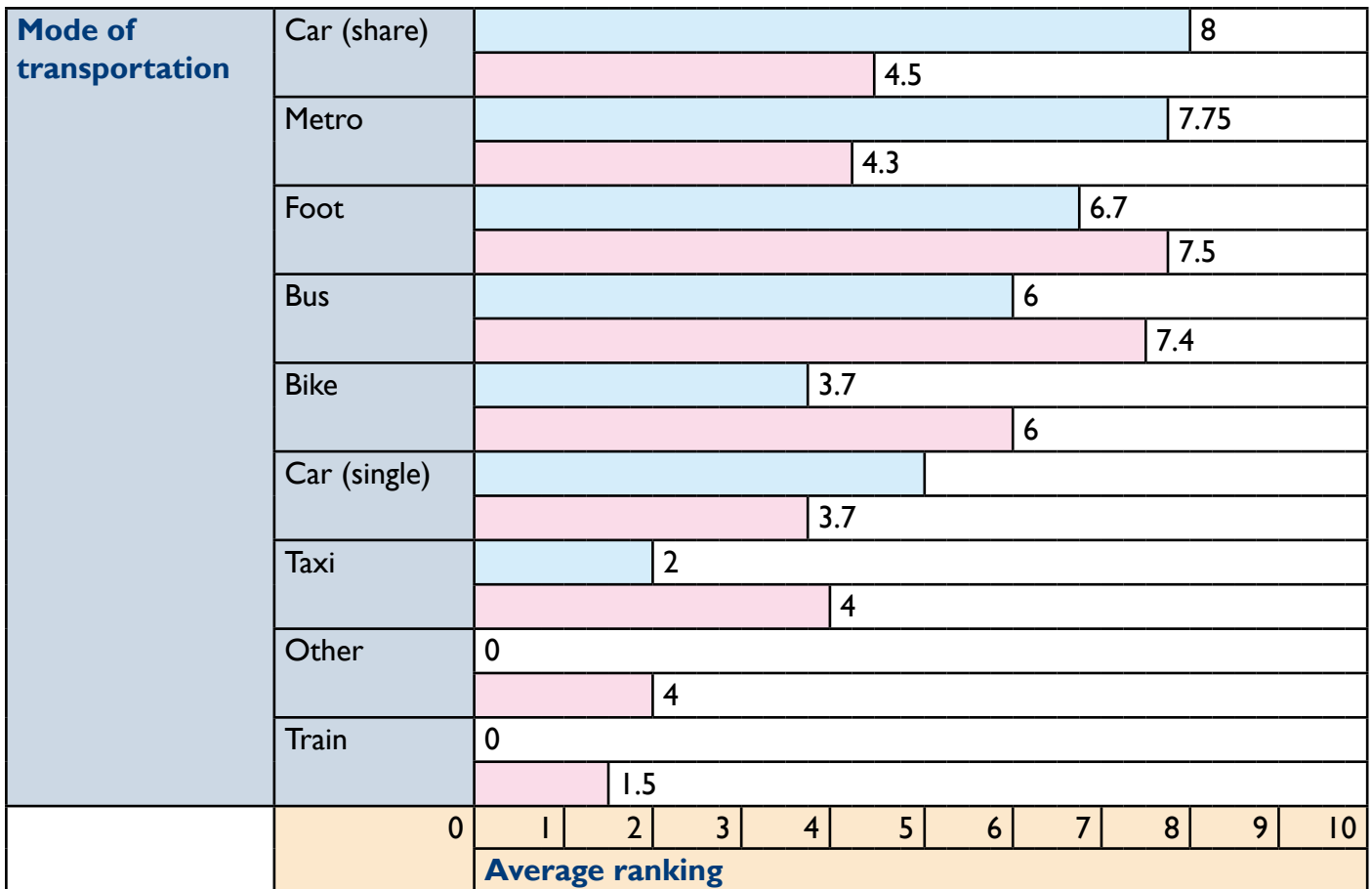
	Total blank
	Total n/a
	Total no

schemes receive locally produced fruit, vegetables and in some cases meat. In this way community-growing projects are reducing the need for local people to travel larger distances to purchase fruit and vegetables and ensuring that the food they eat has a low carbon footprint.

These findings are supported by Sempik *et al* (2003) who state that the philosophy of gardening organically and being environmentally ethical is a strong feature in many horticulture projects with clients being conscious of looking after the planet and not damaging the environment. Sempik *et al* (2003) suggest that vulnerable people identify with a vulnerable planet and attempt to take care of it.

Ozer (2006) describes how school garden programmes can be used to “teach concepts and values related to promoting the sustainability of the natural environment and the conservation of natural resources” to young people.

“Through curricular activities such as visits to local farms, farm-to-school lunch programmes, recycling and composting, students learn about how food production and consumption patterns impact the natural environment” (Ozer, 2006, pp10)



Key:

	Users travelling from the local area
	Users travelling from the local area and nearby towns/cities

Figure 9. The average ranking of mode of transport used to access a total of eight community farms and gardens. Users split into two groups of three and five according to where they have travelled from: the local area or the local area and nearby towns/cities respectively.

3.6.5 Responsible travel

The postal questionnaire mentioned in previous sections asked project managers to rank the most popular modes of transportation utilised by clients and volunteers to access the site. The options provided included on foot, bike, bus, metro, train, car (single), car (sharing), taxi and other. Nine of the ten respondents completed this section.

The most commonly used methods of transport were the bus and walking, closely followed by the metro and bike riding. Travel by car both singly and sharing scored similarly. Train travel was not a popular choice – probably due to the fact that none of these projects were located close to a major station. Taxis are used but not frequently.

In order to determine how choice of transport was influenced by distance to travel, the results from this section were split into two groups of three and five according to where project users travelled from; just

the local area, or the local area and nearby towns and cities respectively (Figure 9).

Perhaps surprisingly travelling on foot ranked as the commonest form of transport at the latter whereas individuals travelling from the local area were more likely to use their cars. However, further investigation of the data reveals that individuals from the local area were more likely to organise car shares in comparison to groups that also had individuals travelling from further afield. This may represent people unable to share as they are coming from different directions.

It is important to note that some individuals may be restricted to travelling by car due to mobility or health problems. Conversely it is also possible that the high level of travel on foot and public transport is a reflection of lack of car ownership or that clients and volunteers are more likely to attend, or be referred to, projects that are relatively easy for them to access.

The age and ability of project users will also determine if they are able to travel by car. Hence it can be concluded that overall there is a trend towards more environmentally friendly modes of transportation but further investigation is needed to ascertain if these results reflect conscious decisions to take public transport instead of driving as a means of reducing carbon emissions or if other factors suggested above are influencing transport choice.

3.6.6 Biodiversity

The creation of gardens and introduction of organic methods is likely to have a positive effect on local wildlife. Ten of the 22 community growing projects studied had been created on derelict sites or established on previously unused allotment plots in a state of disrepair. Seven of the 22 projects had been, or were, actively involved in the creation of special wildlife gardens and several had set up bird feeding stations and/or fitted bird boxes to trees or buildings. In addition two projects had one or more ponds, one of which was home to a protected species, great crested newts (*Triturus cristatus*). Community-growing projects could also be helping slow worms (*Anguis fragilis*) a species known to frequent compost heaps.

To investigate the benefit to wildlife project managers were asked in a postal questionnaire if biodiversity had increased at their site since the project started. As no scientific measure was used for this it is purely subjective, although it is based on the observations of local people. However the findings are likely to be accurate enough for broad conclusions to be drawn.

Out of the ten projects that returned the questionnaire, seven project managers agreed that biodiversity at their site had increased (three of these individuals strongly agreed). One project was neutral, one stated that this question was not applicable to them and another did not respond to this statement. This garden project was actually involved in the creation of wetland habitat with the aim of attracting and supporting new wildlife populations.

Interestingly the projects that strongly agreed noted on site visits that the allotment or garden had previously been abandoned. The neutral project was located on a farm site and consequently the introduction of additional crops for the group may not have had a big impact on the existing land

management and therefore the wildlife present. The stables responded with “N/A” reflecting the fact that this project was not involved in growing activities.

It is possible that community-growing projects could have a more widespread effect on local biodiversity than the site itself. By increasing the knowledge and confidence of participants, farms and gardens are encouraging others to get active in their own gardens.

“Other improvements: working on my own garden more effectively, learning more about herbs + vege [sic]”
(Community garden volunteer)

One community garden was also involved in the creation of wildflower patches on verges around the town. Such activities would be beneficial for health as discussed in section 3.2 but could also have a positive effect in the creation of wildlife corridors and refuges in urban landscapes.

Several studies have investigated populations of wildlife in urban environments and support the theory that gardens and allotments can boost local biodiversity.

A study by Wilby & Perry (2006) on biodiversity in London supports the theory that gardens have an important role in the conservation of wildlife and highlights the value of these sites as part of a network of green corridors and biodiversity strategies.

Baker & Harris (2007) note that wildlife gardening practices such as increasing the number of wildlife-friendly habitats and/or food-bearing plants is associated with garden use by hedgehogs and mice.

According to the latest British Trust for Ornithology (BTO) survey of urbanised areas, allotments and residential areas with gardens provide an important habitat for house sparrows featuring higher densities of this species than residential areas without gardens and parks (Toms 2008).

Toms (2008) mentions that compared to other habitats there were reduced signs of breeding activity (fewer males were recorded chirping – a call which demonstrates ownership) on allotments indicating that these habitats are used mainly for foraging and not as nest sites.

This evidence suggests that more could be done to teach communities about creating homes for wildlife such as introducing bird boxes. However, Toms (2008) highlights the importance of allotments as feeding sites in urban landscapes and hopes that the

resurgence of interest in allotments will continue to support house sparrow populations. He adds that the presence of livestock and not being too tidy are likely to be key factors in food availability. Toms adds:

“Allotments form a unique part of the urban environment in the UK...the whole allotment area offers tilled soil, areas of cultivated plants with an array of annual weeds and grasses...an important feeding site for house sparrows and other passerines.”

(Toms, 2008 pp12)

This study also ran simulations to investigate the impact small reductions in residential gardens would have on population numbers. The model indicates that such an occurrence would have a dramatic, adverse affect on the abundance of house sparrows. This finding corresponds to Baker and Harris (2007) who suggest that as human population growth necessitates further housing developments, the role of urban green spaces in conservation will become increasingly important.

Gaston, Smith, Thompson & Warren, (2005) tested five methods for increasing garden biodiversity including the introduction of artificial nest sites for solitary bees, wasps and bumblebees, small ponds, dead wood for fungi and other saproxylic (wood dwelling) organisms, and patches of nettles for butterfly larvae. It was concluded that whilst some methods were very effective, others have a low probability of success on the timescales and spatial scales likely to be acceptable to many garden owners, which could act to deter the uptake of such practices. Gaston *et al* (2005) suggested that:

“If one of the functions of small scale biodiversity enhancement is to develop and encourage awareness of biodiversity and its conservation, then encouragement to conduct particular activities must be balanced with a realistic appraisal of their likely success”.

(Gaston *et al*, 2005, pp411)

An activity likely to encourage wildlife relatively quickly is feeding garden birds. Fuller, Warren, Armsworth, Barbosa, & Gaston (2008) investigated the value of this and their findings indicate that supplementary feeding does not appear to enhance species richness but may increase the abundance of birds already present in an area. Fuller *et al* (2008) go on to suggest that garden bird feeding could be encouraged as part of a large-scale conservation strategy particularly in urban areas.

These findings support the theory that community gardening projects are beneficial for wildlife and suggest management techniques that could be adopted to further increase the value to biodiversity. The fact that participation in growing activities encourages people to improve their own gardens is particularly interesting when considered in the context of Gaston *et al* (2005) who state that the private ownership of domestic gardens can actually act as a constraint to safeguarding and improving the influence of these sites on biodiversity, as statutory tools cannot be enforced on these sites.

The findings from this study suggest that working at a grassroots level to engage and build the capacity of local people could overcome this barrier. Gladwell (2007) agrees that involvement in gardening projects can encourage young people to take an interest in wildlife, which in turn can lead to the creation of wildlife habitats.

Built up areas, gardens and allotments are listed habitats within North East England and Cumbria's Local Biodiversity Action Plans. Cities, towns and villages are listed as a whole in the Cumbria LBAP (www.ukbap.org.uk). Partnership working between environmental organisations involved in implementing Local Biodiversity Action Plans and community-growing projects, could provide the support and knowledge needed by the latter to further their role in wildlife conservation. This would provide a route for environmental organisations to achieve their targets, educate a wider audience and recruit much needed volunteers whilst raising the profile of community farms and gardens.

3.6.7 Summary

The findings prove that community farms and gardens encourage greater interest in the outdoors and increased levels of participation in outside activities. This is particularly poignant considered in the context of poor use of the countryside by black and minority ethnic groups and increasing health fears over sedentary lifestyles. There is potential for growing projects to act as stepping-stones into the wider countryside. Partnerships between community groups, farmers and countryside organisations could facilitate this process, which could also provide significant health benefits (see section 3.3).

Evidence from previous studies (BEN & Brookes, 2003) indicates that supported outdoor activities can be used to tackle the exclusion of black and

minority ethnic groups from the countryside. It is suggested that community-growing projects could facilitate this process particularly in urban areas where people without access to personal transport may find it harder to access the wider countryside.

How people travel to projects should be addressed to identify any potential barriers or influence – if people have a greater likelihood of attending projects within walking distance or a quick bus ride there may be a need for a targeted approach to identify areas that do not have community-growing projects available to them and remedy this.

Results from this section support findings from section 3.5 Informal skill development, training and education. They highlight the value of hands-on activities in engaging a wide audience particularly young people.

These findings demonstrate that community farms and garden projects have an understanding of environmental practices and a willingness to adopt them. However, projects can be limited by lack of funding causing staff hours to be stretched across a variety of tasks such as funding, administration and volunteer supervision and having to put on hold some of their environmental objectives as a consequence. With increased support, community farms and gardens could add their weight to tackling global environmental issues such as climate change. Their ability to thing global by acting locally to provide local food could be strengthened.

Environmental Stewardship schemes aim to work with farmers to manage the countryside for people and wildlife but there has yet to be an incentive to manage our own gardens environmentally other than an altruistic passion for nature. Goode (1989) states that the support of local people may be crucial to the success of urban wildlife projects. Consequently, the ability of community farms and gardens to engage and connect people with nature could play a key role in future conservation strategies.

3.7 Theme 6 - Economic

3.7.1 Introduction

The financial aspects of maintaining a community farm or garden featured strongly throughout the research. Interview sessions revealed that securing long-term funding for core costs such as wages is a common concern for project managers. Site visits also demonstrated that when projects are successful in applying for grants there is a tendency for the money to be spent within the community through the hire of local contractors and/or employment of volunteers.

PA data revealed that the uncertain nature of funding can have a negative impact on project users who have developed relationships with staff who can no longer be kept on due to financial constraints. Information collected in a postal questionnaire highlights the role of national and regional funding bodies in sustaining community farms and gardens and indicates that more projects are branching out into social enterprise.

3.7.2 Funding and sustainability

Issues of funding and sustainability were a recurring theme throughout the research. Seventeen of the 22 participating projects had financial concerns. These projects expressed the difficulties of securing funding particularly when the site was managed by a small number of staff or volunteers. In these circumstances applying for funding could take up valuable time needed for site maintenance or administration – several project managers reported that they had to take on a variety of tasks in order to make ends meet.

One allotment project in particular had come to a standstill when funding for a staff member ran out. Subsequently, this project has been stuck in a position where money is needed to appoint a new project leader but existing staff are too stretched to take on this extra responsibility.

In addition to time available for writing funding bids, the financial stability of projects appeared to be linked to relationships with local authorities, the ability to generate an income and the ability to access information about where to look for funding. The latter was affected by access to the internet which one project did not have hence they relied on other bodies to pass on this information.

At the time of project visits, nine of the total 22 groups were in the process of applying for funding. Nine managers – some who were in the process of applying for funding and others who were not – stated that funding was a problem at their project. Only six projects described their funding situation as relatively secure or “not a problem”. These six comprised two small gardening groups that had only been in operation for a few years, two farms with links to the local council, an equestrian centre working to be self-sustaining and an allotment project.

PA data indicates that the constant battle for funding can be frustrating but can also act as good experience.

“How to deal with the frustrations of filling in application forms”
(Member of community farm management committee)

“Also raised much needed funds for the farm garden, which was good experience.”
(Ex-community farm volunteer who now works in the community and voluntary sector)

In a postal questionnaire all 22 projects were asked to list their sources of funding so as to identify the dominant sources of income. Data was collected from ten respondents, eight of which provided approximate figures for each source of funding they received. The most striking feature of this data was the high degree of variation between the projects with no two exhibiting a similar funding make-up. These figures were combined to create overall percentages, which are illustrated in Figure 10 (below).

When all the figures provided by eight community farms and gardens are combined, charitable trusts provide the largest source of income. When projects are considered individually the income from charitable trusts ranges from 15-100%. These findings indicate that income from this source is an important factor in sustaining community farms and gardens.

Regional funding bodies also appear to be key sources of income. If the value for the Northern Rock Foundation (NRF) was added to that of other regional funders it would constitute almost a third of the total indicating that funding from this organisation plays an important role within the North East England and Cumbria. Funding received from NRF ranges from 10%-40%. Two quite different

Source of funding	Charitable trusts	28.62					
	Selling produce	13.75					
	Regional funding bodies (other than NRF)	13.12					
	Local authority	11.25					
	Earned income	6.87					
	Northern Rock Foundation (NRF)	6.25					
	European development funding	5.75					
	National lottery	4.37					
	Training courses	3.75					
	Client fees	3.75					
	Membership fees	1.25					
	Member donations	0.62					
	Private donations	0.62					
	0	5.0	10.0	15.0	20.0	25.0	30.0
	Percentage						

Figure 10. Percentage income calculated from data from eight community farms and gardens

figures were provided for other regional funders; 5% and 100%.

The struggle to secure funding has led many community projects to seek opportunities to become self-sustaining. Seven of the food growing projects surveyed had set up initiatives to sell their produce. An equine project that was not involved in the production of food supplemented its income through a gift shop selling horse related items, which was run by volunteers. Data from five projects demonstrate that the income from selling produce can range from 0.004% of total project income to 75% indicating that for some groups this is the dominant income whereas for others it is a supplement to grant funding.

Local authorities (LA) can also play a key role in supporting community farms and gardens. One

project linked to the council received 70% of its income from the LA. However the graph highlights that client fees are only a small percentage of the overall income from LAs (or health authorities/social services). This suggests that there are opportunities for community farms and gardens to take on the role of placement providers but that this is not occurring uniformly across North East England and Cumbria.

Comparison of total percentage income for eight projects and the number of groups using that source of funding (from the total ten respondents) demonstrates that there is a positive correlation between the percentage of income and the number of groups using a particular source.

Source of funding	Number of projects	Income %
Charitable trusts	5	28.62
Selling produce	6	13.75
Regional funding (Other than NRF)	4	13.12
Local Authority	3	11.25
Earned income	1	6.87
Northern Rock Foundation (NRF)	2	6.25
European development funding	1	5.75
National lottery	3	4.37
Client fees paid by local authorities or social services	2	3.75
Training courses	1	3.75
Membership donations	2	1.62
Member fees	2	1.25
Private donations	1	0.62
Client fees paid by health care trusts	1	N/A
National funding bodies (Other than Lottery)	1	N/A
Charges for services	0	0.00
Entrance fees	0	0.00
Procurement	0	0.00
Social enterprise	0	0.00

Table 11. Data from ten community farms and gardens indicating usage of different sources of funding. Overall percentages have been calculated from eight projects that provided figures.

In addition to the two projects listed in Table 11, an allotment noted that it had received funding from the NRF in the past. The findings demonstrate that membership fees are not adopted by many projects and when they are adopted they do not constitute a large proportion of the income.

Private donations only play a small role and despite the numerous training opportunities described in section 3.5 on Informal skill development, training and education, only a small proportion of income is generated in this manner. An increased awareness of donation opportunities, health placements or opportunities for business to give support through sponsorship or undertaking staff team building

activities at community farms and gardens, could provide a much needed income boost.

Interestingly community groups selling produce to raise money did not class themselves as social enterprises. Perhaps this finding highlights a need for increased training of communities in this field or it may reflect the informal nature in which produce is sold by some projects (e.g. sales at local churches) meaning that groups do not think of themselves as businesses.

Comparison of annual income and expenditure data from the eight projects who provided figures in their questionnaire (Table 12) illustrates a positive correlation between these two variables (income

Annual expenditure	Annual income				Total
	£0 - £24,999	£25,000 - £49,999	£50,000 - £99,999	£100,000+	
£0 - £24,999	3				3
£25,000 - £49,999		1	1		2
£50,000 - £99,999	1		2		3
£100,000+				2	2
Total	4	1	3	2	

Table 12. Comparison of annual income and expenditure of eight community farms and gardens

and expenditure) with a general trend of increases in expenditure as income rises. Interestingly the two projects with the largest income and expenditure generated over 50% of their income. These figures highlight that community farms and gardens are not making a substantial profit from their activities and in some cases have an expenditure which is larger than their income.

3.7.3 The local economy

Data collected on project visits indicated that, when they were able to, community farms and gardens had a tendency to spend grant money locally by employing local people. Several managers stated that they had, or were in the process of applying for, funding to pay volunteers to take on more senior roles. This was also recorded in RA.

“I also got some part time casual work from the farm”

(Ex-community farm volunteer who now works in the community and voluntary sector)

This ethic also extended to hiring local contractors to ensure that money went back into the local area. Selling produce and generating local business will also have a positive impact on the local community through job creation.

Some food growing projects had been involved with the development of cafés through which they could sell their produce. In addition to providing access to buy fresh food community-growing projects provide an opportunity for individuals to grow their own food. PA and RA data demonstrates that this can help clients and volunteers to save money or make a profit. This opportunity was particularly valued by the Bangladeshi women’s allotment group and young community gardeners living in a deprived ex-coal mining community.

“Saved a little bit of money on grocery bills”
(Bangladeshi women’s allotment group volunteer)

“Selling vege [sic] + eggs to make money/profit”
(Community garden volunteer)

Other projects that were unable to sell their produce gave any surplus to local elderly people for free.

The role of community farms and gardens in skill development and education is also likely to support the local economy indirectly by preparing more people for employment. In addition the development

of projects in some cases leads to employment opportunities for local people. Further research is needed to capture this benefit by tracking the movement of locally spent money through an area and following the lives of individuals attending projects whilst seeking employment.

According to Wilby & Perry (2006) a good environment can make a significant contribution towards improving economic conditions. Hence, by improving the physical appearance of an area and improving the well-being of local people, community farms and gardens could be making an indirect contribution to local economies.

3.7.4 Summary

Community farms and gardens carry out a lot of work benefiting thousands of people every year. This would not be possible without support from national and regional grant organisations and local authorities. Project managers described their concerns over funding regarding the loss of the Northern Rock Foundation and the potential effect the Olympics might have on the availability of Lottery funds. The Northern Rock Foundation has made a significant contribution to the community and voluntary sector in North East England and Cumbria. Without the support of this organisation groups in the target area will struggle and look to other funding bodies to fill the gap, leading to increased competition for funding which is already limited.

In order to survive, projects are looking to diversify their incomes and become more self-sustaining through the sale of produce or services. Increased recognition of the health benefits delivered by community farms and gardens could lead to a greater provision of supported placements for individuals with physical and mental health issues.

It is a credit to the volunteers and paid individuals running community farms and gardens that they manage to deliver so many benefits to project users whilst battling to secure funding sometimes facing the loss of their own jobs. In addition to funding, volunteer support is key to the continuation of community farms and gardens. Without this many projects simply would not exist.

3.8 What people did not like about their project

A large amount of incredibly positive data has been collected that highlights the benefits of community farms and gardens to individuals and communities. In comparison only a small quantity of negative data has been recorded in response to questions regarding what people did not like about their project. In PA the most frequently mentioned dislike was bad weather.

“Bad weather”

“When it’s wet!”

(Rehabilitation allotment project clients)

“Sometimes the weather”

“When it was raining”

(Community garden volunteer)

Unsurprisingly gardeners also disliked slugs and weeds.

“The thing I really have taken a dislike to? Slugs”

“Pulling out weeds”

(Community garden volunteers)

A dislike for digging was also recorded.

“Hate digging”

(Community garden volunteer)

The smell of pigs was also reported as a negative aspect.

“Pigs smell bad”

(Community garden volunteer)

“Smell of pigs”

(Young offender support worker)

Smoking was also listed as a negative along with the potential for project users to steal eggs from each other.

“People smoke – the fumes”

“People can steal eggs from each other”

(Community garden volunteer)

Statements from a community garden volunteer indicate a dislike of produce being wasted and the site not being cared for properly by other users.

“Seeing produce wasted...not clearing up after work...not putting things back in place”

(Community garden volunteer)

Other statements relate to worries over resources and ensuring everyone is enjoying themselves.

“Sometimes the place was really hectic and organisation and coordination of staff and

resources was stretched. It was a bit chaotic at times”

(Ex-community farm volunteer who now works in the community and voluntary sector)

“Worry about whether everyone is getting enough out of it/finding jobs for everyone”

(Community garden volunteer)

For individuals attending an allotment as part of a Bangladeshi women’s gardening group not being able to communicate directly with other allotment users was frustrating.

“Nothing, the only problem is that I can’t communicate directly to people at allotment because I can’t speak English much, so there I communicate through interpreter. It is such a shame”

(Bangladeshi women’s allotment group volunteer)

Another member of this gardening group stated that she wanted a larger area for growing vegetables.

“Nothing, but I want to grow more of different/oriental vegetables in the greenhouse so I want a bigger greenhouse/polytunnel”

Volunteers at a community stables noted that it was hard when horses left the project due to the attachment formed with these animals.

“Get attached to the horses – bond (hard when they leave)”

(Community stables volunteer)

Other statements highlight concerns projects have over ensuring access for individuals in wheelchairs and installing environmental initiatives.

“Not much wheelchair access”

“No compost toilet”

(Community garden volunteers)

Some people even said that they could think of nothing that they did not like about the project.

“Nothing”

(Rehabilitation allotment project client)

The negative statements that received the highest number of agree responses in verification were (total agree count in brackets):

- “Bad weather” (8)
- “Not clearing up after work” (7)
- “Seeing produce wasted” (7)
- “Nothing, but I want to grow more of different/oriental vegetables in the greenhouse so I want a bigger greenhouse/polytunnel” (6)

Of all the negative comments collected during participatory appraisal, “hate digging” and “pulling out weeds” received the most disagree responses (seven and five respectively). The practical tasks loathed by some people are enjoyed by others. Five responses agreed that there was “nothing” that they disliked about the project.

The majority of these statements are linked to a dislike of activities that constrain work or a wish to be able to do more, rather than any major issues with the project itself.

3.9 Overview of verification data

3.9.1 Introduction

Overall the responses are remarkably consistent. The garden, allotment, farm with a range of livestock and farm that worked predominantly with horses all responded similarly.

The majority of differences in the way projects responded to verification can be explained by the different facilities available, the presence or absence of animals or variations in user groups. For example, one farm only had a small involvement with gardening activities and therefore exhibited a low response rate to statements relating to plants and growing food. Similarly projects without livestock did not respond to statements relating to the benefits of these animals.

The large amount of verification material may have deterred some participants but the majority seemed happy to engage with it enjoying the process, reading statements and noting similarities between their experiences and those described by the statements.

3.9.2 Summary of verification responses

As it was possible for individuals to place more than one sticker next to a statement, the number of stickers does not necessarily indicate the number of people. Hence, the number of stickers will be described as response counts. These responses represent a strength of feeling towards a statement either negative or positive. A much higher number of agree responses were received for each category than disagree responses (Figure 11). This indicates that verification projects noted more similarities between themselves and case study projects than differences, which suggests that the data collected

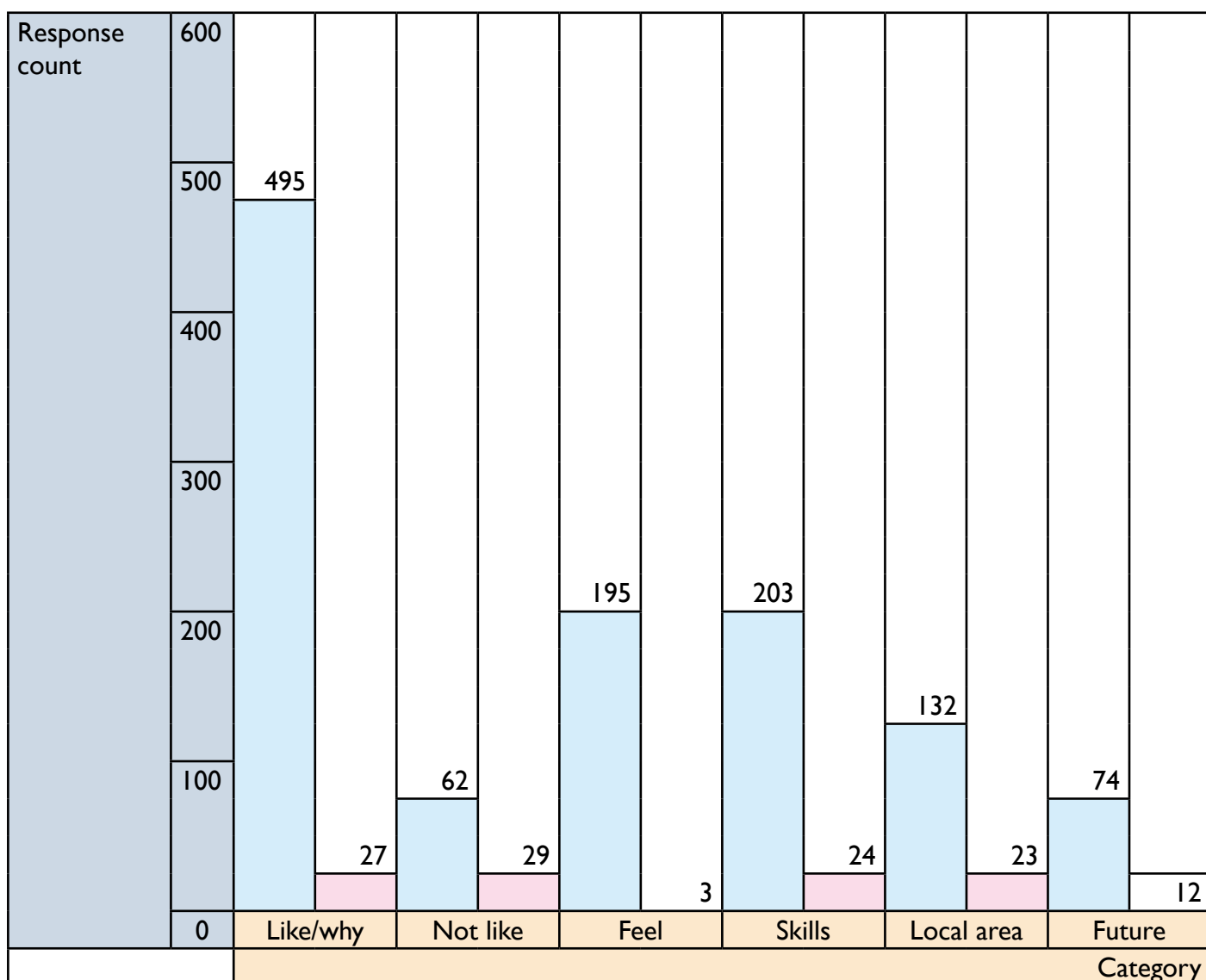


Figure 11. Total number of agree and disagree responses recorded during verification at four community farms and gardens. Responses are displayed according to category.

from case study projects using participatory appraisal and rapid appraisal is representative of the community farm and garden movement.

The category of 'like/why' received by far the largest count of agree at 495. However, this category also had the highest number of statements. In comparison the category 'feel' had the smallest number of statements but the third highest overall count of agree. This suggests that individually these statements received a higher agree count than the other topics. Despite having more verification statements than 'feel' and 'skill', 'not like' received the lowest count of agree indicating a much weaker response to this category.

Table 13. Total number of responses received during verification at four projects to statements collected using participatory appraisal and rapid appraisal

Topic	Total agree responses	Total disagree responses	Number of statements
Like/why	495	27	66
Not like	62	29	19
Feel	195	3	15
Skills	203	24	23
Local area	132	24	23
Future	74	12	16

Table 13 shows the total number of responses received during verification at four projects to statements collected using participatory appraisal and rapid appraisal. The statements were presented in six topics: what people like about the farm/garden and why they go there; what they do not like about the farm/garden; how they feel when they are at the farm/garden; new skills that they have learnt at the farm/garden; any impact the farm/garden has had on the local area; any influence the farm/garden has had on future plans. Participants were asked to respond by agreeing or disagreeing. If they felt that the statement was not relevant to them or their project it could be ignored with no response. There is a considerable difference in the number of agree and disagree responses.

Calculation of the percentage of agree and disagree responses received for each category shows 'Feel' to be the most agreed to at 98.5% 'like/why' is a close second at 94.8% (Table 14). The level at which 'local area', 'future' and 'skills' were agreed to ranges from 85.2% to 89.4% indicating that these categories also received a high response rate. The percentage of

agree responses for 'not like' was 12.3% below 'local area' indicating that this category elicited the most conflicting responses.

Table 14. Percentage of agree and disagree responses recorded for each category in verification at four community farms and gardens

Topic	Agree %	Disagree %
Like/why	94.8	5.2
Not like	68.1	31.9
Feel	98.5	1.5
Skills	89.4	10.6
Local area	85.2	14.8
Future	86.0	14.0

Statements added by participants during verification are displayed in Box 4. These statements are not included in the overall figures as they were only included in the verification during which they were elicited.

Box 4. Statements added during verification by participants. Response counts are displayed in brackets. The response is one of agreement, unless otherwise stated. What do you like about the farm/garden/allotment/stables?

Category: Like/why

- Don't treat you like kids at school (1)
- Project workers (volunteers) good (1)

Category: Not like

- Sheep (1)

Category: Feel

- Stressed (2)

Category: Skills

- Answering the phone (1)
- Learnt about horses (2)
- How to put buildings together (4)

Future

- Want to go to college (1 disagree)

Six verification statements were not responded to positively or negatively:

- "Yes martial arts"
- "Yes, I want to learn English to communicate with other allotment users to find out about more of good gardening process"

- “Can get poachers here”
- “People can steal eggs from each other”
- “Used to grow veg [sic] in Bangladesh”
- “Different way of gardening compared to how we grow things back home”

Some of these statements relate specifically to people who have come to the UK from a different country and are still learning the language – no representatives from this group took part in verification.

Interview data confirms that crime levels were generally low and none of the verification projects mentioned any criminal activity similar to that described in PA. Only one individual mentioned that they had developed an interest in martial arts in RA – this was not repeated anywhere else in the research.

The top statements

Table 15. The statements most agreed to in verification displayed according to category

Statement	Agree	Disagree
Category: Like/why		
• All of it	14	0
• Freedom	14	0
• Meeting new people	14	0
• Wildlife	14	0
• Fresh air and exercise	14	1
• Friendly	13	0
• Learning things	13	0
• Like gardening	13	0
• The atmosphere	13	0
Category: Not like		
• Nothing, but I want grow more of different/oriental vegetables in the greenhouse so I want a bigger greenhouse/polytunnel	6	0
• Bad weather	8	2
• Seeing produce wasted	7	0
• Not clearing up after work	7	1
Nothing	5	0
• Worry about whether everyone is getting enough out of it/finding jobs for everyone	5	1
• Slugs	5	3

Category: Feel		
• Happy	18	0
• Sense of achievement when things have grown	18	0
• Appreciated	17	0
• Rewarding	17	0
• Busy	15	0
• Relaxed	15	0
• Safe	15	0
Category: Skills		
• Yes	15	0
• Socialise with a different age group	14	0
• Teach other people	14	0
• Learning how to garden	14	1
• Learning through doing	13	0
• Learning about animals	12	0
• People skills	12	0
• To be more open-minded	12	0
Category: Local area		
• Important that young people get to see how a working farm works, understand where their food comes from etc	14	0
• Positive because it helps lots of people who need it.	13	0
• Helping to improve the look of our town	13	0
Category: Future		
• Yes	11	0
• Want to keep going	11	0
• Yes I want to keep going to develop my gardening skills and knowledge	11	0
• Made me more able to mix with others	10	0
• I have become more interested in outdoor activities	9	0

Overall ‘feel’ received the strongest agree response and ‘not like’ the weakest. The figures indicate that in each category there was no distinct top statement with several statements sharing joint highest scores. Interestingly the highest counts all reach double figures except for the category of ‘not like’. As suggested earlier in this section, the top ‘feel’ statements received a higher number of counts than other categories reaching 18.

4. Conclusion

The benefits received at community farms and gardens have been described in different sections according to theme. However, perhaps the biggest benefit of all could be the connection between the themes, which allows so many benefits to be delivered by one project. The friendship, social support and information sharing appear to be just as important as relaxing surroundings in establishing a therapeutic environment. The overlap between environmental and health themes demonstrate how key the natural environment is to our wellbeing. Integrating science with real growing activities is shown here to be a valuable technique for teaching a range of users aspects of biology whilst providing the therapeutic benefits that come with nurturing.

Community farms and gardens encourage local people to become more socially active and develop stronger ties to an area through environmental improvement, which in turn promote the uptake of eco-friendly practices and benefit local wildlife populations. By working with local people and starting at their level of environmental understanding, community farms and gardens can facilitate steps towards local action on global issues. Harnessing this energy and increasing opportunities for participation across the UK could have a big impact on the behaviour of residents.

Findings from this study demonstrate that involvement with a community-growing project as a volunteer can lead to individuals creating their own sites. Hence raising the profile of community farms and gardens, with the subsequent increase in participation, could lead to increased numbers of people developing their own projects in the long-term.

As people generally visit their local site there is a need to identify gaps in provision. However, care should be taken to avoid increased competition for already limited funding as a direct result of increased numbers of projects. Increased partnership working between community groups could lead to joint rather than competing bids which could be of particular value in bringing together people from different walks of life and sharing facilities for mutual benefit.

A wide range of projects were selected for participation in this report in order that any variation in the delivery of benefits should be encompassed but also to ensure that these findings

represent the benefits of the community farm and garden movement as a whole, not just the study area.

A key finding that can be taken from this is that community farms and gardens are valuable resources in both deprived and relatively affluent areas. The evidence highlights that in deprived areas projects raise the aspirations of local people and provide them with the skills to bring about positive changes to both their own lives, and their neighbourhood.

Community farms and gardens are an accessible resource. With increased funding, recognition and promotion, groups that are currently minority users could increase their participation levels. Continued funding and support from charitable trusts and the National Lottery is vital. The loss of funding from the Northern Rock Foundation, which has played a significant role in aiding the establishment and continuation of these projects in North East England and Cumbria, will place increased pressure on other sources. Several projects have moved into more sustainable areas of funding and are running social enterprises.

The findings clearly demonstrate the value of community managed gardens and farms. Both provide important social opportunities and can be effective in tackling social exclusion. Attending such projects can restore feelings of worth and rebuild the confidence of clients and volunteers. Many projects also act as stepping-stones, opening up future possibilities to disaffected young people. Farm animals play an important role in engaging people and can be used to instil a sense of responsibility. The results for gardening coincide with other studies that have investigated its therapeutic value and prove that gardening can be a rewarding activity for all ages.

4.1 Critique of the methodology

Time was the biggest limiting factor. PA sessions could not last longer than a couple of hours, often less, particularly when working with volunteers and clients who were only able to access the facility once or twice a week. Time was also limited for projects operating as businesses. Visits also had to be carefully organised around seasonal growing activities.

PA proved to be a useful tool in collecting a wide range of data from various groups. All projects engaged in the process but there were disparities in the response to particular techniques meaning that a flexible approach and quick thinking was sometimes necessary. Young people who enjoyed the creative aspect of mapping, drew the favourite parts of their projects in great detail. In contrast adults at one project were intimidated by this technique and did not attempt any drawings. However, opportunities to draw ensured that individuals who were unable to read or write could participate whilst statements written on their behalf were read back to them to ensure accuracy.

There was a tendency for older generations to be more forthcoming about the health benefits. To overcome this, the PA technique of body mapping could have been implemented to encourage younger people to think in more detail about how attending the project had impacted upon their physical and mental health. However, the implementation of this technique would have meant losing another to avoid consuming too much time.

Where RA questionnaires were used in place of PA there may have been some loss of data as facilitators were not present to ask questions. To compensate these questionnaires included additional questions as well as those used in PA with the aim of expanding answers.

Overall participants appeared to enjoy verification noting the links between themselves and other projects, however there was some confusion regarding how to respond to the 'not like' statements where it was necessary to agree with factors that they did not like. This issue was overcome by having facilitators available to help.

When working with individuals with learning difficulties onsite support workers assisted with the process and groups were split into twos and threes. However, no black or minority ethnic groups took part in verification. This was due to the much lower levels of participation by these groups and limited access to them where they did exist due to the sensitive issues surrounding their involvement in the project, as in the case of asylum seekers. Another study could perhaps work specifically with these groups and operate over a longer timescale to allow opportunities to build up trusting relationships, which would facilitate the collection of data. Another factor to overcome would be language barriers, which may necessitate the use of a translator.

Space was also a limiting factor at some projects particularly when bad weather meant that it was not possible for PA to occur outside and everyone had to huddle around plants in a greenhouse, which may have impacted negatively on the group's ability to work together. PA and verification were easiest to facilitate when participants were split into small groups of two or three in allocated spaces, that did not interfere with other activities and where surfaces were available for flip charts to be positioned. One verification participant did not complete the task due to a sudden rush of people wanting to get involved making it hard to access the tables. This could be avoided in future studies by having another set of verification tables located on another part of the site when larger groups are likely to be participating at any one time.

4.2 Community farms and gardens in rural and urban locations

The bulk of literature focuses on the benefit of growing projects in an urban setting. Here five projects located in the countryside (four in Cumbria and one in the North East) and three semi-rural projects have been included.

Despite the different settings, there appear to be no differences in the perceived value of rural projects to clients and volunteers when compared to those described by more urban projects. Both individuals in urban landscapes and those in relatively scenic rural areas stated that they enjoyed the pleasant surroundings provided by the project.

However, a key finding demonstrates that it is not enough just to have pleasant surroundings; the ability to alter one's environment is linked to well-being. This indicates that it would be wrong to assume that individuals living in scenic rural areas already have sufficient green space available to them: this habitat is not theirs to cultivate and 'own'. In addition both rural and urban communities benefited from the social element attached to community farms and gardens.

While this study demonstrates the value of community farms and gardens in rural locations, it has also uncovered a disparity in the geographic spread of projects with the majority of study projects being based in urban settings. In addition the only projects found to have gone out of existence entirely were located in relatively

rural areas of Cumbria. When geographical area is considered there are comparatively fewer community-growing projects in Cumbria and north of Blyth than equivalent areas across the rest of the North East England.

FCFCG has a system of fieldworkers who are freelance individuals with relevant expertise, such as in horticulture or managing livestock, who provide support at a grass-roots level. This system has proved to be effective at increasing contact between isolated community groups and appropriate organisations in rural areas such as Cornwall to encourage the creation of more farms and gardens and provide much needed support. More proactive, targeted development work is needed from FCFCG and other relevant organisations to ensure that rural communities have access to the same benefits as those living in urban areas.

4.3 Good practice

This research has uncovered examples of good practice, which could be adopted by more projects to promote inclusion (section 3.2), help the environment (section 3.5) and enhance the local economy (section 3.7).

The findings demonstrate a proactive approach is needed to increase the participation of black and minority ethnic groups in community farms and gardens. Innovative approaches have also been used to increase the involvement of older generations, address gender imbalances and reduce the number of young people socialising on the streets.

Targeting specific groups and ensuring activities cater for these individuals can attract audiences who may otherwise not participate. Examples include:

- Allowing clients to bring their children along if this would otherwise prevent them attending
- Building raised beds to promote ease of access
- Developing cross-cultural partnerships
- Setting aside special areas for different age groups
- Extending opening times to provide young people with a safe, social facility in the evenings
- Having single gender gardening groups

Other examples of good practice include local spending, the use of environmentally friendly practices, promotion of healthy eating, partnership working and transitions towards generating a sustainable income from mixed sources. FCFCG will

incorporate these model practices into its national good practice guidelines for community growing projects.

4.4 Implications

Hine *et al* (2008) sums up the implications for the future of care farming in the UK. These suggestions are also applicable to community farms and gardens.

“There is much pressure on health and social care providers, the prison and probation services and on education providers in the UK to supply successful solutions for a range of current health and social challenges such as obesity, depression, prison overcrowding, re-offending rates, disconnection from nature and the increase in number of disaffected young people... So then, the health sector and social services need additional options to compliment medical treatments and to offer more choices for rehabilitation, therapy and work training. Public health bodies need effective and economical options to tackle emergent health problems. Local authorities need more options for social care. Offender management services and the criminal justice system need further options to facilitate reintegrating offenders into society and employment. Disaffected young people need more alternatives to the traditional schooling environment. Land managers and conservation bodies need more initiatives to enable people to engage with nature.”

(Hine *et al*, 2008, pp6)

Findings from this study into the true value of community farms and gardens demonstrate the significant contribution that these projects are making towards social, health, environmental, education and economic government agendas relating to social inclusion, tackling obesity, biodiversity, unemployment and youth disaffection and regeneration. Increased environmental awareness, local food production and wiser travel choices also have a big impact on the ability of local people to help combat climate change.

The staff, volunteers and clients of community farms and gardens are a powerful resource and must be supported if their activities are to continue. By raising the profile of these projects, and the benefits they deliver to individuals and communities, FCFCG hopes to increase recognition and influence funding and policy decisions at a local, regional and national

level. There is a need for health practitioners to become more aware and willing to use community facilities as recipients of client referrals.

4.5 Recommendations

“FCFCG hopes that this research will increase recognition for community farms and gardens inspiring more people to get involved and influence policy development and resource allocation in their favour - at a local, regional and national level. Usage figures collected in this study indicate that ten projects can employ 34 people and engage and empower an average of 1,200 volunteers, clients and visitors every month. It is vital that these resources are maintained.”

Recommendations regarding the development of community farms and gardens, particularly growing spaces and links to educational bodies can be made in addition to highlighting areas for future research.

4.5.1 Planning

This study supports others before it in advocating the involvement of communities by local authorities in strategic planning to ensure that new developments meet the needs of local people, particularly by providing areas of green space. The opportunity to design and alter surroundings has been proved in this study to promote well-being and generate a sense of ownership, thus reducing the risk of crime and/or vandalism. Effective consultation with local people should ensure that people from all walks of life feel welcome, promoting cohesion and integration. Participation in such procedures and subsequent learning opportunities through the creation of community-growing projects would empower local people and engage them in their communities and natural surroundings.

The findings from this study also suggest that a move to incorporate community-growing spaces into planning would have a positive impact on both the physical and mental health of local people. Such a strategy could potentially help address certain conditions such as stress, unhappiness and obesity before further medical assistance is required, which could have a dramatic impact on stretched NHS resources.

4.5.2 Links to education

This study adds weight to growing evidence on the value of outdoor learning and how interacting with the environment can have far reaching educational benefits. The findings demonstrate that community farms and gardens have positive impacts on the lives of disaffected young people by engaging them where other mechanisms have failed, instilling a sense of responsibility, raising their aspirations and giving them the capacity to reach those goals. The findings indicate that by working with schools it is possible to offer young people who are struggling academically an alternative education before they become disengaged.

Several initiatives such as Growing Schools and the School Farms Network are already working in this area. However, there is still a need to bridge the gap between community-growing activities and educational facilities. Some project workers felt that their lack of knowledge regarding the school curriculum would prevent them receiving students. It is also possible that school funding and awareness of how to find outdoor learning opportunities could limit such visits. There is a need to build on existing relationships between the voluntary sector and educational bodies to identify barriers and support the development of partnerships. Schemes that provide travel bursaries for schools, particularly those in the most deprived areas, could aid the success of such partnerships.

4.5.3 Future research

This research has identified several areas in need of further investigation.

1. Greater research is needed to identify why projects cease to operate and how this could be alleviated.
2. Much of the literature on animal assisted therapy has focused on formal therapy occurring in health care rather than in an informal, community setting. Further research is needed to investigate the latter, which could have implications for the choice of companion and farm animals used at community and school projects to deliver the widest benefit.
3. Seymour (2005) discusses the need in communities for people to share and receive information, but limited research has gone on to explore the role of information sharing as part of the therapeutic process which

was highlighted by the clients and volunteers involved into the current study.

4. There are an increasing number of growing-projects being established on school sites. Research could build on findings from this study by further investigating if such projects improve attitudes towards the environment. There is also a need to identify strategies for involving parents and carers in such initiatives to deliver the widest benefit in terms of supporting young people and encouraging the uptake of healthier diets. Studies should also assess barriers to school involvement such as lack of funding.
5. This report begins to shed light on the economic impact community farms and gardens can have on a local area but long-term studies are required to capture the effects of local spending and skill development for employment. Such studies could assess the wider economic benefits to communities.
6. According to Schmid (2004) there is a scarcity of research on the creative aspect of therapy. Evidence from community-growing projects demonstrates that creative opportunities are connected to therapeutic processes and can be employed to engage young people, particularly when linked to other aspects of their lives such as favourite television characters.

A crucial element of any future research should be the return of information to projects at a grassroots level. This study demonstrates that partnerships between relevant charitable organisations and academic bodies provide a route for this to occur.

References

- Argyle, M., Martin, M. & Lu, L. (1995)
'Testing for stress and happiness: the role of social and cognitive factors'
Stress and Emotion, vol. 15, Spielberger, C.D. and Sarason, I.G. (eds), Washington: Taylor and Francis, pp. 173-187
- Baker, P.J. & Harris, S. (2007)
'Urban mammals: what does the future hold? An analysis of the factors affecting patterns of use of residential gardens in Great Britain'
Mammal Review, 37, 4, 297-315
- Black Environment Network (BEN) & Brookes, R. (2003)
'Capturing richness - Countryside visits by black and ethnic minority communities'
Countryside Agency
- Bird, W. (2004)
'Natural Fit, Can green space and biodiversity increase levels of physical activity?'
Royal Society for the Protection of Birds
- Black, S. & Crawford, F. (2004)
'No 8 Greenspace, health and well-being'
Making the links, Greenspace Scotland
- Brodie, S. J. & Biley, F. C. (1999)
'An exploration of the potential benefits of pet-facilitated therapy'
Journal of Clinical Nursing, 8, 329-337
- Brown, A. (2004)
'No 9 Greenspace and community safety'
Making the links, Greenspace Scotland
- BTCV (2008) www2.btcv.org.uk/display/greengym
- Calleau, J. (2005)
'The benefits of volunteers attending Cherry Tree Nursery'
GrowthPoint - The Journal of Social and Therapeutic Horticulture, 101, 20-22
- Ewing, C. A., MacDonald, P. M., Taylor, M. & Bowers, M. J. (2007)
'Equine-facilitated learning for youths with severe emotional disorders: A quantitative and qualitative study'
Child Youth Care Forum, 36, 59-72
- Elings, M. (2006) 'People-plant interaction'
Farming for Health, 43-55
- Jan Hassink and Maijken van Dijk (eds)
- Flint, J & Kearns, A. (2004)
'No 1 Greenspace and regeneration'
Making the links, Greenspace Scotland
- Fuller, R. A., Warren, P. H., Armsworth, P. R., Barbosa, O. & Gaston, K. J. (2008)
'Garden bird feeding predicts the structure of urban avian assemblages'
Diversity and Distributions, 14, 131-137
- Gaston, K. J., Smith, R. M., Thompson, K. & Warren, P. H. (2005)
'Urban domestic gardens (II): experimental tests of methods for increasing biodiversity'
Biodiversity and Conservation, 14, 395-413
- Gladwell, L. (2007)
'Gardening at the Berkshire adolescent unit at Wokingham hospital'
GrowthPoint - The Journal of Social and Therapeutic Horticulture, 110, 4-8
- Goode, D. A. (1989)
'Urban nature conservation in Britain'
Journal of Applied Ecology, 26, 3, 859-873
- Hine, R., Peacock, J. & Pretty, J. (2007)
'Evaluating the impact of environmental volunteering on behaviours and attitudes to the environment'
Report for BTCV Cymru, University of Essex
- Hine, R., Peacock, J. & Pretty, J. (2008)
'Care farming in the UK: Evidence and Opportunities'
National Care Farming Initiative, Department of Biological Sciences, University of Essex, Colchester
- Kuo, F. E., Bacaicoa, M. & Sullivan, W. C. (1998)
'Transforming inner-city landscapes: trees, sense of safety, and preference'
Environment and Behaviour, 30, 28-59
- Kweon, B., Sullivan, W. C. & Wiley, A. R. (1998)
'Green common spaces and the social integration of inner-city older adults'
Environment and behaviour, 30, 832-858
- Larson, J. (2006)
'What's so therapeutic about horticulture?'
The Nature of Success: Success for Nature
Centre for Therapeutic Horticulture, University of Minnesota, USA
- Linden, S. & Grut, J. (2002)
'The healing fields, working with psychotherapy and nature to rebuild shattered lives'
Frances Lincoln in association with The Medical Foundation for the Care of Victims of Torture

- Neighbourhood Statistics, (2001)
www.neighbourhood.statistics.gov.uk
- Macdonald, D. W., Tattersall, F. H., Service, K. M., Firbank, L. G. & Feber, R. E. (2007)
'Mammals, agri-environment schemes and set-aside – what are the putative benefits?'
Mammal Review, 37, 4, 259-277
- Martin, P. Y. & Turner, B. A. (1986)
'Grounded theory and organisational research'
Journal of Applied Behavioral Science, 22, 141
- McCabe, G. (2007)
'The seasons, the gardener and recovery'
GrowthPoint - The Journal of Social and Therapeutic Horticulture, 110, 17-20
- Morris, T. (2007)
'Social and therapeutic horticulture at a boys' special residential school,'
GrowthPoint - The Journal of Social and Therapeutic Horticulture, 110, 9-11
- Parr, H. (2005)
'Sustainable communities? Nature work and mental health'
University of Dundee, Economic & Social Research Council
- PeaNUT (2007)
The University of Northumbria
<http://northumbria.ac.uk/sd/academic/sas/randel/consult/pa/paoverview/?view=Standard>
- Peter, H. & Kahn, J. R. (1997)
'Developmental psychology and the biophilia hypothesis: children's affiliation with nature'
Developmental Review, 17, 1-61
- Pretty, J., Griffin, M., Peacock, J., Hine, R., Sellens, M. & South, N. (2005)
'A Countryside for Health and Wellbeing: The Physical and Mental Health Benefits of Green Exercise'
Countryside Recreation Network, Sheffield
- Ozer, E. J. (2006)
'The effects of school gardens on students and schools: conceptualisation and considerations for maximizing healthy development'
Health Education and Behaviour, XX, X, 1-18
- Rahm, J. (2002)
'Emergent learning opportunities in an inner-city youth gardening program'
Journal of Research Science in Teaching, 39, 2, 164-84
- Randler, C., Hollwarth, A. & Schaal, S. (2007)
'Urban park visitors and their knowledge of animal species'
Anthrozoos, 20, 1, 65-74
- Research International Ltd. (2006)
'England Leisure Visits, Report of the 2005 Survey'
Natural England
- Richards, S. (2005)
'Maintaining independence in old age: the importance of domestic gardens and gardening'
GrowthPoint - The Journal of Social and Therapeutic Horticulture, 101, 10-11
- Riley, K., Ellis, S. Weinstock, W., Tarrant, Jim. & Hallmond, S. (2007)
'Re-engaging disaffected pupils in learning: insights for policy and practice'
Improving Schools, 9, 1, 17-31
- Robertson, G. (2007)
'Gardening at the Thomas Tallis School learning support unit'
GrowthPoint - The Journal of Social and Therapeutic Horticulture, 110, 13-16
- Schmid, T. (2004)
'Meanings of creativity within occupational therapy practice'
Australian Occupational Therapy Journal, 51, 80-88
- Sempik, J. (2005)
'Where are the numbers? Why is there a lack of quantitative data on the effects of therapeutic horticulture'
GrowthPoint - The Journal of Social and Therapeutic Horticulture, 101, 12-14
- Sempik, J. & Aldridge, J. (2006)
'Care farms and care gardens: horticulture as therapy in the UK'
in J. Hassink. & M. van Dijk (eds.) *Farming for Health: green-care farming across Europe and the United States of America*. Dordrecht: Springer
- Sempik, J., Aldridge, J. & Becker, S. (2003)
'Treating the Maniacs? Horticulture as a Therapy: from Benjamin Rush to the present day'
Draft paper presented at Horticultural Geographies Conference, Centre for Child and Family Research
- Sempik, J., Aldridge, J. & Becker, S. (2003b)
'Social and therapeutic horticulture: Evidence and messages from research'
Thrive in association with the Centre for Child and Family Research, Loughborough University
- Sempik, J., Aldridge, J. & Finnis, L. (2004)
'Social and Therapeutic Horticulture: the state of

practice in the UK'
Centre for Child and Family Research, Evidence Issue 8

Sempik, J. & Aldridge, J. (2006)
'Care farms and care gardens: horticulture as therapy in the UK'
in J. Hassink. & M. van Dijk (eds.) *Farming for Health: green-care farming across Europe and the United States of America*. Dordrecht: Springer

Seymour, K. (2005)
'What is the meaning of horticulture for people attending a gardening club?'
GrowthPoint - The Journal of Social and Therapeutic Horticulture, 101, 11

Sigman, A. (2007)
'Agricultural Literacy, Giving concrete children food for thought'

Taylor, A. F., Kuo, F. & Sullivan, W. C. (2001)
'Coping with ADD - The surprising connection to green play settings'
Environment and Behaviour, 33, 54-77

Toms, M. (2008)
'Gardens crucial to sparrow success'
BTO News, 274, 10-12

Velde, B. P., Cipriani, J. & Fisher, G. (2005)
'Resident and therapist views of animal assisted therapy: implications for occupational therapy practice'
Australian Occupational Therapy Journal, 52, 43-50

Wanless, D. (2002)
'Securing of future health: taking a long-term view'
Health Trends Review team at HM Treasury

Wilby, R. L & Perry, G. L. W. (2006)
'Climate change, biodiversity and the urban environment: a critical review based on London, UK'
Progress in Physical Geography, 30, 73-98

UK Biodiversity Action Plans, (2008)
www.ukbap.org.uk

Year of Food and Farming, (2007)
www.yearoffoodandfarming.org.uk

Zoldosova, K. & Prokop, P. (2006)
'Education in the field influences children's ideas and interest toward science'
Journal of Science, Education and Technology, 15, 3, 304-313

Glossary

AAT: animal assisted therapy

Biodiversity: the range of organisms present in a particular ecological community or system

Care farm: a commercial farm or agricultural landscape which is being used as a base for promoting mental and physical well-being through normal farming activity

Community-growing projects: allotments, gardens, farms and any other type of project involved in food growing at a community level.

Community farms and gardens: city farms, community gardens, community allotments, community equine centres; any land-based community project

EFL: equine facilitated learning

LA: local authority

Organic: of living things, relating to, derived from, or characteristic of living things; developing naturally: occurring or developing gradually and naturally, without being forced or contrived

PA: participatory appraisal

PCT: Primary Care Trust

RA: rapid appraisal

Saprophytic: (of some plants or fungi) feeding on dead or decaying organic matter

Social enterprise: a profit-making business set up to tackle a social or environmental need

Appendices

b) Are there any dates when you are definitely not going to be free?

Appendix 1 - Information requested in initial questionnaire

Section 1 - Details

Project:

Name:

Contact details:

Section 2 - Staff/volunteer responsibilities

- a) How did you get involved with the project?
- b) How long have you been involved in the project?
- c) How many people work/volunteer here?
- d) What are your responsibilities / general duties?
- e) Could you outline the duties of anyone who is not present?

Section 3 - Set up

- a) Are there any groups that meet here on a regular basis? If yes when?
- b) Or do people tend to constantly flow through the site?

Section 4 - Facilities / opportunities

- a) Does the site offer training courses or educational opportunities?
- b) What happens on a day-to-day / week-to-week basis?

Section 5 - Problems / challenges

- a) Any problems/issues facing at the moment?
- b) Have you had any problems with crime?

Section 6 - Return visit

- a) Are you willing for me to return later in the year?

Appendix 2 - Final questionnaire

All information will be treated with the strictest confidence and not passed on to a third party. No people or project names will be used in any research publications.

Name of project:

Please describe your project in one sentence:

Number of years that the project has been running:

1. As far as you are aware how do users travel to the project? (Please rank the methods from 1 to 9 with 1 being the way that most people travel to the project and 9 being the least popular mode of transportation)

Foot:	Bike:	Bus:	Metro:
Train:	Car (Single person):	Car (Sharing):	Taxi:

Other:

2. As far as you are aware where do users come from? (Please tick)

	Local area:	Nearby towns/cities:	Across the country:
--	-------------	----------------------	---------------------

3. Does the project recycle? (Please tick yes, no or N/A)

	Yes	No	N/A		Yes	No	N/A
Glass				Cardboard			
Plastic				Cans			
Paper				Organic waste/ composting			

4. Please tell us how much you agree or disagree with the following statements (Please tick one box for each statement)

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Biodiversity at the site has increased since the start of the project					
The project helps teach people about where their food comes from					
The project can help develop environmental awareness					
The project helps users integrate into the community					
It is important to farm/grow plants organically					
The project has helped to clean up the local area					
The project helps users to reconnect with nature					
Project users develop friendships and socialise away from the project					

People living in the local area are supportive of the project					
Caring for animals/gardening provides a common ground for volunteers, clients and staff					
Project users eat more healthily now than when they first started					
5. How many paid staff work at your project?					
6. Please give approximate numbers of volunteers and/or clients who would use the project during a typical summer and winter month.					
	Summer		Winter		
Volunteers					
Clients					
7. What percentage of project users are male/female?	Male:	%	Female:	%	
8. Please describe the ethnicity of the people who use your project.					
9. What ages are the people that use your project? (Please tick all relevant boxes. Please give an approximate percentage of total users if you are able to)					
Children (Under 5)	%	Adults (26 – 50)	%		
Children (5 – 12)	%	Adults (51 – 65)	%		
Young people (13 – 17)	%	Older people (66 & over)	%		
Young people (18 – 25)	%				
10. Who are the main groups of people that use your project? (Please tick all relevant boxes. Please give an approximate percentage of total users if you are able to)					
People in employment/education/training					%
People not in employment/education/training					%
Black and minority ethnic communities					%
Refugees and asylum seekers					%
People with physical disabilities					%
People with specific health problems					%
People with mental health problems					%
People with learning difficulties					%
People with alcohol problems					%
People with drug problems					%
People seeking further education					%
Excluded people					%
Students					%
People on work experience					%
Local residents					%
Ex offenders					%

Lesbian, gay, bisexual or transgender people						%
People of a particular faith						%
Retired people						%
Other (Please specify)						%
I 1. What is your annual income? (Please tick)						
A. £0-£24,999	B. £25,000-£49,999	C. £50,000-£99,999	D. £100,000 +			
I 2. What is your annual expenditure? (Please tick)						
A. £0-£24,999	B. £25,000-£49,999	C. £50,000-£99,999	D. £100,000 +			
I 3. What are your sources of funding? (Please tick relevant boxes and/or let us know percentage of total funding if possible)						
National Lottery		%	Charitable trusts			%
Other national funding bodies		%	Client fees – paid by local authorities or social services			%
Northern Rock Foundation		%	Client fees – paid by health care trusts			%
Other regional funding bodies		%	Social enterprise			%
Private donations		%	Procurement			%
Selling produce		%	Entrance fees			%
Membership fees		%				%
Charges for services (please specify)						%
Other (please specify)						%

The research project is confidential. No project or people names will be used. Thank you very much for taking the time to complete this questionnaire. Please return it to the Federation of City Farms and Community Gardens in the freepost envelope provided. If you have any queries about this questionnaire please contact Helen Quayle on tel. 0191 263 5125 or email. helenq@farmgarden.org.uk