



# **Care farming in the UK: Evidence and Opportunities**

Rachel Hine, Jo Peacock and Jules Pretty  
Department of Biological Sciences,  
University of Essex, Colchester

***Report for the National Care Farming Initiative (UK)***

***January 2008***

# Care Farming in the UK – Evidence and opportunities

## Report for the National Care Farming Initiative (UK)

Rachel Hine\*, Jo Peacock and Jules Pretty

Department of Biological Sciences and Centre for Environment and Society, University of Essex

\*Corresponding author: email [rehine@essex.ac.uk](mailto:rehine@essex.ac.uk)

## Contents

	<b>Page</b>
<b>Acknowledgements</b>	<b>4</b>
<b>Glossary of Terms</b>	<b>5</b>
<b>Executive Summary</b>	<b>6</b>
<b>1. Background and context for research</b>	<b>12</b>
1.1 Definition of Care Farming	12
1.2 The role of the National Care Farming Initiative	12
1.3 Context for the research	12
1.4 Purpose and aims of the study	13
<b>2. Introduction</b>	<b>14</b>
<b>3. The value of contact with nature</b>	<b>18</b>
3.1 Exercise and health	18
3.2 Nature and health & well-being	19
3.3 Green Exercise	22
3.4 From Green Exercise to Green Care	24
<b>4. Green Care</b>	<b>25</b>
4.1 Historical context	25
4.2 Diversity in Green Care	26
4.2.1 Social and Therapeutic Horticulture	27
4.2.2 Animal Assisted Therapy	28
4.2.3 Ecotherapy	29
4.2.4 Green exercise as a treatment option for depression	29
4.2.5 Care Farming	30
4.2.6 Offender and nature schemes	31
4.2.7 Wilderness therapy	32
<b>5. Green Care in agriculture – Care Farming</b>	<b>33</b>
5.1 Multifunctionality in Agriculture	33
5.2 Concepts and typology of Care Farms	35
5.3 Evidence from Europe and beyond	38
5.3.1 Numbers and types of care farm	38
5.3.2 Research: Benefits of care farming	42
5.4 Care Farming in the UK	46
<b>6. Care Farming in the UK – The evidence so far: Extent</b>	<b>48</b>
6.1 The extent of care farming in the UK - Methodology	48
6.2 The extent of care farming in the UK - Results	48
6.2.1 About the care farms	48
6.2.2 About the care farmers and their staff	54
6.2.3 About services provided on care farms and their cost	54
6.2.4 About the people attending care farms	58

6.2.5 Successes and benefits	60
6.2.6 Challenges	65
6.3 Summary of results from UK care farm study	66
<b>7. Care farming in the UK – The evidence so far: Mental health benefits</b>	<b>68</b>
7.1 Snapshot health benefit analysis – Methodology	68
7.2 Snapshot health benefit analysis – Results	69
7.2.1 General information	69
7.2.2 Health benefit analysis	70
7.2.3 What participants enjoy about spending time on a care farm	74
7.3 Summary of results of UK health benefit analysis	74
<b>8. Care farming in the UK – Case studies</b>	<b>76</b>
8.1 Organisational and legal structures for care farms in the UK	76
8.2 Case studies – Examples of care farming initiatives in the UK	78
8.2.1 Amelia Methodist Trust Farm	78
8.2.2 Carlshead Project	79
8.2.3 Growing Well	80
8.2.4 Highfield Happy Hens	81
8.2.5 Houghton Project	82
8.2.6 Lambourne End	83
8.2.7 Pennyhooks	84
8.2.8 Top Barn Farm	85
8.2.9 Welgate City Farm	86
8.2.10 Willowdene farm	86
8.2.11 Care farming: Local authorities and tenant farms, Cornwall County Council	87
8.2.12 Development of the idea of car farming in Waveney, Suffolk	88
8.2.13 Scoping project: care farming in Wales	89
8.2.14 Care farming for PPOs: west Mercia Constabulary and Probation Services with BODS Care farm	90
<b>9. Conclusions and recommendations</b>	<b>92</b>
9.1 Key findings	92
9.2 Issues affecting research	95
9.2.1 Limitations of study	95
9.2.2 Evaluation issues for care farming	96
9.3 Implications for policy	98
9.3.1 Agriculture	99
9.3.2 Health and Social care	100
9.3.3 Education, training and Employment	101
9.3.4 Police, probation and offender management	102
9.3.5 Rural development and social inclusion	103
9.3.6 Partnership working	104
9.3.7 Funding	104
9.4 Future research needs	105
<b>10. References</b>	<b>107</b>
<b>Appendices</b>	<b>114</b>
Appendix A. Care farming questionnaire	114
Appendix B. Care Farms participating in Research	118
Appendix C. Between farm differences in participant general information from health benefit analysis study.	119

## **Acknowledgements**

The research for this study was supported by The National Care Farming Initiative (UK) with funding from Natural England.

The authors would like to thank the following for their help in this study: Beren Aldridge (Growing Well), Lorraine Brown (Amelia Trust), David Davoll (BODS), Doeke Dobma (Waveney Community Forum), Jon Dover (NCFI), Ian Egginton-Metters (Federation of City Farms & Community Gardens), Elizabeth Ellison (Wellgate City Farm), Rev'd Dr Gordon Gatward (Arthur Rank Centre), Matt Home (Willowdene), Tim James-Moore (Houghton Project), Professor Kim A Jobst (Consultant Physician & Medical Homeopath), Helen Quayle (FCFCG), Stephen Parsons (Harper Adams University College), Dr Joe Sempik (Loughborough University), Tony Sharps (Lambourne End), John Stacey-Marks (Amelia Trust), Debbie Wilcox (NCFI), Noelle Wilson (Top Barn Training)

Many thanks also go to all of the NCFI(UK) network members and care farmers who took the time to help us with the research by completing questionnaires (for a full list please see Appendix B).

Special thanks to participants and staff at Wellgate City Farm, Lambourne End Centre, The Houghton Project, Top Barn Training, Willowdene Farm, Amelia Methodist Trust Farm and BODS for taking part in the health benefits analysis study.

## Glossary of Terms

AAT	Animal Assisted Therapy
AAA	Animal Assisted Activities
ADER	Agricultural Development Eastern Region
BSE	Bovine Spongiform Encephalopathy
BTCV	British Trust of Conservation Volunteers
CARAT	Counselling, Assessment, Referral, Advice and Throughcare
CBT	Cognitive Behavioural Therapy
CHD	Coronary Heart Disease
CIC	Community Interest Company
CLA	Country Landowners Association
CoP	Community of Practice
COST	European CO-operation in the field of Scientific and Technical research
CVT	Canine Visitation Therapy
DCLA	Department for Communities and Local Government
DEFRA	Department for Food and Rural Affairs
DfES	Department for Education and Skills
DoH	Department of Health
DWP	Department for Work and Pensions
FCFCG	Federation of City Farms and Community Gardens
FFH	Farming for Health
FTE	Full-time Equivalent
GP	General Practitioner
IPS	Independent and Provident Society
LEA	Local Education Authority
LSC	Learning and Skills Council
NCFI(UK)	National Care Farming Initiative (UK)
NFU	National Farmers' Union
NHS	National Health Service
NGOs	Non Governmental Organisations.
NOMS	National Offender Management Service
O&N	Offender and Nature
PAHA	Physical Activity and Health Alliance
PCT	Primary Care Trust
POMS	Profile of Mood States
PPO	Prolific and other Priority Offender
PSA	Public Service Agreement
PTE	Part-time Equivalent
RDA	Rural Development Agency
RSE	Rosenberg Self-Esteem
SoFar	Social Farming Project
SEU	Social Exclusion Unit
STH	Social and Therapeutic Horticulture
TMD	Total Mood Disturbance
WHO	World Health Organisation

## Executive Summary

### Introduction

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. The agricultural sector in the UK has been fraught with difficulties and set backs such as BSE, foot and Mouth and bluetongue as well as fluctuations in markets, late subsidy payments and adverse climatic conditions (such as flooding in recent years) resulting in threats to the economic viability of farms.

So then, the health sector and social services need additional options compliment medical treatments and 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. Farmers need new ways to ensure the economic viability of farms, without having to leave farming.

Green care in agriculture or 'care farming' could offer a potential solution to address some of these issues. Care farming is defined as the use of commercial farms and agricultural landscapes as a base for promoting mental and physical health, through normal farming activity<sup>1</sup> and is a growing movement to provide health, social or educational benefits through farming for a wide range of people. These may include those with defined medical or social needs (e.g. psychiatric patients, those suffering from mild to moderate depression, people with learning disabilities, those with a drug history, disaffected youth or elderly people) as well as those suffering from the effects of work-related stress or ill-health arising from obesity. Care farming is therefore a partnership between farmers, health and social care providers and participants.

Could care farming be the answer to many of these emergent health and social issues? Is it possible to combine the care of people with the care of the land? Can care farming be a more cost-effective option in areas of social rehabilitation? Could care farming keep our farmers farming? Can our agricultural landscapes be used to provide significant health and well-being benefits for participants? Can it really be possible that there is a win-win option for farmers, participants, health and social care providers, offender management services and education bodies alike?

### The Evidence

Evidence of the positive relationship between exposure to nature and an individual's health is continually growing. More and more public bodies, government departments and voluntary organisations are promoting the importance of contact with nature. The successful combination of natural landscapes, contact with animals and a meaningful workplace means that care farms can offer much variety to participants, depending on the context, motivations and need. This research seeks to look at what we know already about care farming, to scope the extent of care farming in the UK and to outline the potential for care farming in the UK.

---

<sup>1</sup> Hassink 2003, Braastad 2005, NCFI (UK) 2007

Successes from Europe and examples from here in the UK demonstrate that care farming is a workable option to help tackle many of these challenges. Care farming is a growing movement and there are now over two thousand green care farms in Europe<sup>2</sup>, with the Netherlands and Norway leading the way in terms of numbers of care farms. Such green care farms are often formally tied to local social services and hospitals, and provide a new component of care in the community. Farmers are usually paid for providing a kind of 'health service' whilst continuing with agriculture, thus helping to maintain the economic viability of farms. Some countries have such a well-developed network of care farms with a formal support organisation (The Netherlands, Belgium), whereas other countries have less formal support structures and a more fragmented coverage of care farms.

In the UK, the concept of care farming is relatively new although there is an increasing amount of interest from many sectors including farmers, health care professionals and social care providers, the prison and probation services. An initial scoping study of the range and number of current care farming initiatives currently operating in the UK was conducted and 76 care farms returned questionnaires to the University of Essex.

### Care farms survey

The survey includes 19 city farms, 16 independent farms and 41 farms linked to external institutions or charities. The size of care farms varies between 0.3 ha to 650 ha and the majority of care farms all have a mix of field enterprises and livestock. In terms of organisational structure, a third of care farms in the study are farms, 29% are a 'charity and company limited by guarantee', 25% are city farms and 22% are charities.

Although the funding sources for care farms varies extensively both between farms and between categories of care farm, nearly half of the care farms surveyed (49%) receive some funding from charitable trusts and 33% receive client fees from the local authority. Thirty eight percent of care farms receive some other funding sources including LSC, Health Care Trusts, Social Services, Big Lottery Fund and public donations.

A total of 355 full-time staff and 302 part-time staff are employed by the 76 care farms in the survey (657 paid staff in total) together with 741 volunteers. Care farms in the UK offer many different services including the development of basic skills (87% of farms), of work skills (70%), of social skills (65%) and some form of accredited training or education (63%).

Perhaps the biggest variation seen in the farms surveyed features the fees charged by care farms for green care services. These fees vary widely, both in terms of amount and by how they are charged (i.e. per person, per day, per group, for farm facilities etc.). Some care farms are providing services for no charge at all, whilst fees on other farms range from £25–£100 per day (most frequently around £30 per day).

The total number of care farm users in the UK is around 5869 per week. However, there is much variation between the levels of usage at different types of care farm. As expected more people (230) attend city farms per week, an average of 46 clients per week are seen at farms linked to external institutions or charities and an average of 29 users per week attend privately-run farms. There is also much variety in the client groups attending care farms in the UK (over 19 different groups) and most care farms provide services for a mix of client groups rather than for just one. Most (83%) of care farms cater for people with learning difficulties, over half (51% of farms) provide a service for disaffected young people and 49% of farms cater for people with mental health needs.

---

<sup>2</sup> Hassink et al 2006a

The majority of care farms have clients referred to them by a range of different sources simultaneously including from social services, self-referral or from 'other' sources such as Connexions, private care providers, the prison service, Youth Offending Teams, PCTs, community drug teams, individuals on Direct Payments and the voluntary sector. Nearly a half of farms receive clients through education authorities or other education service providers (including Further Education colleges, Pupil Referral Units, Behavioural Support Units etc).

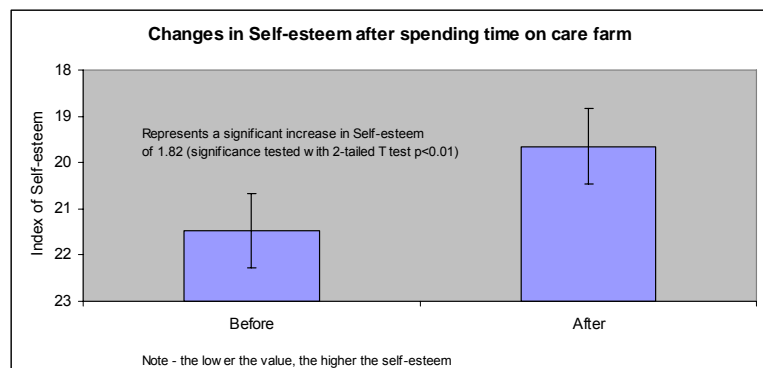
Care farmers report that the physical benefits experienced by clients include improvements to physical health and farming skills. Mental health benefits consist of improved self-esteem, improved well-being and improvement of mood with other benefits including an increase in self-confidence, enhanced trust in other people and calmness. Examples of social benefits reported by care farmers are independence, formation of a work habit, the development of social skills and personal responsibility.

UK care farmers who responded to the survey discussed the perceived successes of their care farms and although they vary widely, three broad themes emerged: i) seeing the effects of care farming on people, making a difference to people's lives; ii) helping the excluded become included into society and/or work; and iii) positive feedback from participants, families and referring bodies alike.

## Health benefit analysis

A more in-depth analysis involving clients of different types of care farm was also conducted to provide some empirical data addressing psychological health and well-being effects. Seventy two participants from 7 care farms around the country took part in a snapshot health benefit survey. Participants included people with mental health needs, those who were unemployed, homeless or vulnerably housed, disaffected young people, those recovering from drug and alcohol misuse, older people, offenders, ex-offenders and people recovering from accident or illness.

Health benefit data was collected using a composite questionnaire which, was administered immediately before and immediately after participants spent time on the care farms. This allowed us to identify any changes in health parameters which were a direct result of exposure to the care farm environment. The questionnaires included internationally recognised, standardised tools which measure participants' levels of self-esteem and mood, as these health parameters had been identified as positive outcomes in the existing care farming research.



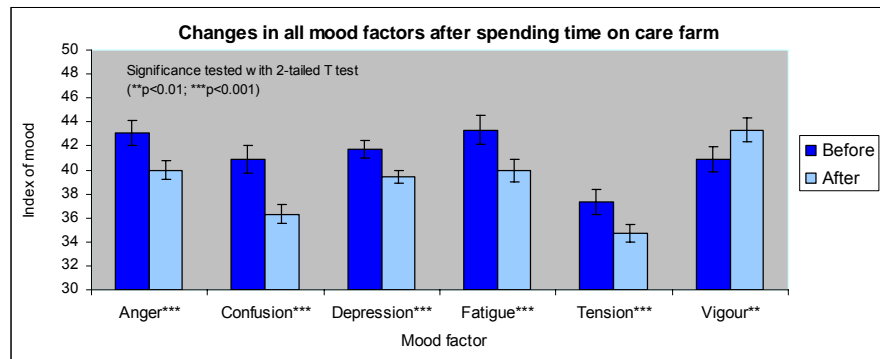
Results from the Rosenberg Self-esteem tests showed there was an increase<sup>3</sup> in participants' self-esteem after spending time on the care farm with 64% of participants experiencing an improvement in their self-esteem. The Profile of Mood States results

<sup>3</sup> (p<0.01)



indicated that there were statistically significant<sup>4</sup> improvements in all 6 mood factors. The Total Mood Disturbance (TMD) scores (which provide an indicator of overall mood) also revealed a highly significant<sup>5</sup> improvement, with the majority of participants (88%) experiencing improvements in their overall mood.

The findings clearly show that spending time participating in care farm activities is effective in enhancing mood and improving self-esteem. Working on a care farm can significantly increase self-esteem and reduce feelings of anger, confusion, depression, tension and fatigue, whilst also enabling participants to feel more active and energetic. Care farming therefore offers an ideal way of helping a wide variety of people to feel better.



## Conclusions

Sharing the farm, their farming skills and knowledge with others, and being able to make a real difference to vulnerable people's lives has been the primary motivation for UK care farmers. Evidence from both Europe and the UK has demonstrated that care farming is a win-win situation for farmers and rural communities, allowing the farm to stay economically viable, the farmer to continue in agriculture and a chance to provide a health, social rehabilitation or education service for the wider society. Care farming represents an example of multifunctional agriculture and offers a way to recognise the variety of different public goods and services our farms provide rather than simply focusing on food production, thus deriving extra value from the land.

There are at least 76 care farms in the UK at the current time, providing a range of health, social rehabilitation or educational benefits to over five thousand people a week from a range of 'client' groups. These care farms exist largely in spite of government policy rather than because of it and increasing support for and access to a wide range of green care and care farming activities for vulnerable and excluded groups in society should produce substantial economic and public health benefits as well as reducing individual human suffering. However, for this promotion to be successful several key issues which could be ameliorated by policy support in future, such as funding structures, recognition of legitimacy and a recognised referral procedure, need to be addressed.

## Recommendations:

Care farming has important policy implications for a wide range of sectors and is relevant for a range of different government departments, NGOs and the private and voluntary sectors. To move the agenda forwards it is important to identify recommendations for the relevant sectors:

<sup>4</sup> (range between p< 0.01 and p<0.001)

<sup>5</sup> (p<0.001)

### Agriculture

1. Farmers need a scientific basis for green care services, and they need development of health policies and economical systems that make such services a predictable income.
2. Agricultural policy makers should promote the concept of farmland as a multifunctional resource which can provide not only food, environment and landscape features but also opportunities for health, social rehabilitation and education services through care farming.
3. Agencies with responsibility for supporting farming such as DEFRA, Natural England and farmers' organisations such as the NFU and CLA should be encouraged to take a lead role in promoting care farming.

### Health and Social Care

4. There is still limited acceptance of the role that care farming can play in health, from healthcare and social service providers.
5. Healthcare professionals generally should be encouraged to take the idea of care farming more seriously and policy-makers in health and social care should recognise the benefits of a UK wide network of care farms delivering health and social care options
6. Referral to care farming projects should be incorporated into health and social care referral systems.
7. Allocation of health and social care budgets should be informed by cost-benefit analysis of care farming initiatives.
8. Local authorities and other agencies responsible for providing social care services would also benefit from recognising the potential of care farming activities to increasing the health and mental well-being of patients and clients.

### Education, Training and Employment

9. Education policy-makers should support and promote the work of care farms and investigate funding regimes for participants referred by the education sector.
10. The benefits of meaningful work on care farms should be highlighted, supported with resources and actively promoted by all those involved in the education and employment sectors (including DfES, DWP, LSC, LEAs, DCLG and the private and voluntary sectors for example).

### Police, Probation and Offender Management Services

11. The Home Office, the Ministry of Justice, Police, offender management services and Probation Services should recognise the potential of care farming to deliver both mental health and employment dividends to for offenders and ex-offenders and support the growth of care farms across the UK.
12. Evidence suggests the economic advantages of care farming in the management of ex-offenders, policy makers are urged to examine cost benefit analyses of care farming projects.
13. Crime and social service agencies of all types should consider the therapeutic value of care farming as part of strategies to address anti-social behaviour amongst adolescents.

### Rural Development and Social Inclusion

14. Agencies responsible for economies and communities in rural areas should welcome the concept of care farming, and actively promote care farming as an option for farmers and rural communities.
15. RDAs should take a lead role in the promotion of care farming for the benefit of rural areas and contribute to supporting the development of care farming initiatives.
16. All agencies with responsibility for the reduction of social exclusion should recognize the potential for care farming and support the growth of care farming in the UK.

### Partnership working

17. Good partnership working between the care provider, the farmer and the client in order to match the client to the right farm and to tailor-make the care farm experience is

necessary. Engagement of all stakeholders will therefore be of crucial importance in the development of care farming initiatives across the UK.

18. Care farming has implications for many sectors, suggesting the need for cross-disciplinary and sectoral strategies and action. The importance of partnership working between government departments including Defra and the Department of Health with input from DfES, DWP, The Home Office and the Ministry of Justice is therefore paramount.
19. Care farming in the UK needs a lead department and requires the identification of a champion department charged with promotion and support. This champion should facilitate farmers, referral agencies and clients to initiate innovative care farming projects.

#### Funding

20. The funding of care farming has been highlighted by care farmers, potential care farmers, referral agencies and the NCFI(UK) alike as the biggest challenge facing the existence and spread of care farming in the UK. Recognised and sustainable funding structures and systems are crucial for farmers to continue to offer health, social rehabilitation and educational opportunities to participants on care farms. Therefore the development of funding regimes for care farms should be considered a priority.

#### **Future research needs**

- There is a need for more robust, scientific evidence of the benefits of care farming for policy makers and service providers alike in order to validate care farms and to secure future funding. Future research into the health benefits of care farming should strive towards including as many components of a RCT standard as possible to aid credibility to this research within the health sector. Sound research should also provide the basis for health policies and economic systems that make it possible for such services to earn a predictable income.
- Once again, this highlights the need for collaboration between academic research institutions and health and social care professionals. A cross-sectoral joined up approach to research is desirable
- Enhanced monitoring and evaluation of care farming and other green care programmes is needed to assess changes in health and social outcomes and economic measures. A universal, standardised tool could be developed to improve monitoring and evaluation methods for a range of care farming activities, and to allow comparisons to be made both nationally and internationally.

# 1. Background and Context for Research

## 1.1. Definition of care farming

Green care in agriculture or 'care farming' is defined as the use of commercial farms and agricultural landscapes as a base for promoting mental and physical health, through normal farming activity<sup>6</sup>. It is a growing movement to provide health (both mental and physical), social or educational benefits through farming for a wide range of people. These may include those with defined medical or social needs (e.g. psychiatric patients, those suffering from mild to moderate depression, people with learning disabilities, people with a drug history, disaffected youth or elderly people) as well as those suffering from the effects of work-related stress or ill-health arising from obesity. Care farming is a partnership between farmers, health and social care providers and participants.

## 1.2 The role of the National Care Farming Initiative - NCFI(UK)<sup>7</sup>

Care farming is still in its early stages of development in the UK, although the numbers of care farms are increasing. Farmers that have been offering on-farm health, education and welfare services for people in need have often felt isolated in the past with an absence of a national network.

The remit of the NCFI(UK) is to promote and support the expansion of care farming throughout the UK and therefore seeks to offer care farmers and interested parties the benefits of collaborative action through the following activities:

- awareness raising and mutual support
- marketing through a dedicated national website
- insurance, health and safety and other advice
- networking events and opportunities to share best practice
- advocacy and government policy development
- training opportunities
- building the evidence base by co-ordinating research
- providing a portal for commissioners of care to contact care farming practitioners

The NCFI(UK) is a partnership of organisations with the expertise and commitment to develop the initiative, and to support the creation of whatever infrastructure the practitioners deem appropriate to meet their needs in the future. The accountable body for the partnership is Harper Adams University College under its charitable objectives, with a joint official Partnership Agreement (and associated financial and employment procedures) in place to cover any eventuality, and a Steering Group consisting of the partners and other experts<sup>8</sup>.

## 1.3 Context for the research

The NCFI(UK), with funding from Natural England, has commissioned the University of Essex to conduct a scoping study to discover the current extent and diversity of care farming

---

<sup>6</sup> Hassink 2003, Braastad 2005, NCFI (UK) 2007

<sup>7</sup> NCFI(UK) 2007

<sup>8</sup> NCFI (UK) Steering Group Members: Sir Don Curry (Chairman of the Sustainable Farming & Food Implementation Group); Dr Michael Dixon (Chairman, The NHS Alliance); Ian Egginton-Metters (Assistant Director, Federation of City Farms & Community Gardens); Rev'd Dr Gordon Gatward (Director, Arthur Rank Centre); Rachel Hine (Assistant Director, Centre for Environment and Society, University of Essex); Professor Kim A Jobst (Consultant Physician & Medical Homeopath); Stephen Parsons (Head of Research, Harper Adams University College), Debbie Wilcox (Network Co-ordinator, NCFI) and Jon Dover (Policy Officer, NCFI)

in the UK (essentially who is care farming? who is benefiting and how? what are the motivations for care farming? and what are the successes and challenges?). This research will then form the baseline data on which to build future research needs, help and support to farmers and implications for policy.

#### **1.4 Purpose and aims of the study**

The aims of this study are to:

- Examine the evidence base for the benefits of contact with nature and in particular green care services from agriculture.
- Provide evidence from published literature to support the development of care farming
- Conduct a first overview of the range and number of current care farming initiatives currently operating in the UK
- Carry out a more detailed analysis of approximately five different types of care farm to provide further data on psychological health and well-being effects to participants in order to give baseline information from which we hope to build a body of evidence to support the promotion and spread of care farming in the UK.
- Provide advice on good practice for appraising care farming activities in the countryside, including an analysis of evaluation criteria and a commentary on examples of good practice in appraisal, monitoring and evaluation found in the published literature and from existing research in Europe.
- Identify further research priorities for care farming in the UK.

## 2. Introduction

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. The agricultural sector in the UK has also been fraught with difficulties and set backs which have threatened the economic viability of farms. The health sector and social services need additional options to compliment medical treatments and existing services; offender management services and the criminal justice system need further options to enable the reintegration of offenders into society; farmers need new ways to ensure the economic viability of farms.

Due to our increasingly sedentary lifestyles, our poor diets and our disconnection from other people and from nature, the current health status of the UK population is suffering. Obesity, Coronary Heart Disease (CHD), Type II diabetes and mental illness are the biggest challenges facing both individuals and organisations responsible for public health. Tackling these health problems (i.e. both treatment and prevention) will cost a great deal and is likely to be a burden on the public purse.

In the last 50 years, the diets of most people in the UK have undergone enormous changes<sup>9</sup>. On average, people now consume more food calories than they burn, and increasingly they consume food which is full of simple sugars and an excess of salt. The incidence in obesity (a recognised risk factor for a range of conditions, including Type II diabetes, cardiovascular disease, specific cancers and diminished life expectancy) is rising rapidly. Over a third of adults and children alike are overweight or obese<sup>10</sup>. Childhood obesity greatly increases the likelihood of acquiring Type II diabetes in adulthood<sup>11</sup>. Obesity causes over 30,000 deaths a year in England and estimations concerning the costs of obesity suggest that it cost the National Health Service £500 million a year (reported figure from 2002), contributes to 18 million days of sickness per year and has an overall cost of up to £7.4 billion a year in England<sup>12</sup>.

Cardiovascular disease (including coronary heart disease and strokes) is the primary contributor to mortality and morbidity rates in the UK. More than 200,000 deaths in England annually are a result of this disease and it explains 39% of all deaths in men and women. There is an explicit distinction between active and inactive individuals, with inactive people experiencing almost twice the risk of dying. Similarly, the risk of developing Type II diabetes (non-insulin-dependent diabetes) is increased by 33-50% in inactive people compared to physically active individuals<sup>13</sup>. Physical inactivity in itself is a considerable public health burden and was directly responsible for 3% of disability adjusted life years lost in the UK in 2002, with an estimated direct cost to the National Health Service calculated at £1.06 billion<sup>14</sup>. A 5% decline in the number of inactive people could save £300 million annually<sup>15</sup>.

Mental ill health can severely affect the quality of life of sufferers and it is a leading cause of disability. Anxiety and depression are commonplace in modern society and by 2020 it is predicted that depression will be the second most common cause of disability in the developed world<sup>16</sup>. It is believed that at least one in six individuals suffer from a 'significant' mental health problem at any one time and some reports put this figure as high as one in

<sup>9</sup> Popkin, 1998, 1999; Pretty, 2002

<sup>10</sup> British Heart Foundation 2007

<sup>11</sup> Ferro-Luzzi and James, 2000

<sup>12</sup> DoH, 2004, National Audit Office 2001

<sup>13</sup> Pretty et al 2005a, 2005b, 2007a

<sup>14</sup> Allender et al 2007

<sup>15</sup> DoH, 2004, National Audit Office 2001

<sup>16</sup> WHO 2007

four<sup>17</sup>. Mental illness is not only a challenge for the health sector, but it also inflicts additional economic and social costs through output losses. It is estimated that the total costs of mental illness in England in 2002-03 were approximately £77.4 billion<sup>18</sup> and public spending on mental health service provision is continually rising.

Our disconnection from nature and from our food is also having an affect on the UK population. Young people, for example, are currently becoming more and more disconnected from nature and as a result are currently making fewer visits to the countryside than ever before. This loss of connection between children and nature is termed by many as the 'extinction of experience' - where each generation passes on less experience of the natural environment. When these young people then become the policy makers and environmentalists of the future they lack the understanding of nature and consequently its value<sup>19</sup>. Engaging children with nature from a young age can encourage them to participate in more outdoor exercise and make more frequent countryside visits throughout adulthood which means accessing the health benefits associated with contact with nature<sup>20</sup>.

Adults and young people alike have become disconnected from other people, from society and from a sense of community. It is our connections with other people, our connectedness to social groups and networks that are so important and it is this 'social capital' which also has a positive effect on our health<sup>21</sup>. Developing social capital both for individuals and for communities can therefore contribute to reducing health inequalities associated with social exclusion.

Care of vulnerable people in the UK is also a mounting challenge. At any one time in England over 1.5 million people rely on social workers and other support staff for help<sup>22</sup>. Vulnerable people such as children or families who are under stress, many older people, people with disabilities, people with emotional or psychological difficulties, with problems related to drugs or alcohol, with financial or housing problems and people who need help with daily living activities all require support and social care. Social care is defined as "*The group of services that provide personal care and support to people in a social situation – such as family; the community; a communal setting; to help them achieve independence and to promote their positive contribution as citizens*"<sup>23</sup>. Social care and support is therefore very varied and complex and so represents one of the major public services. Social care provision is principally the responsibility of local councils<sup>24</sup> who come under increasing pressure to provide services to a growing number of those in need.

There has been an increase in the numbers of disaffected young people who, excluded from school, are vulnerable and who are most likely to turn to crime and antisocial behaviour. According to NACRO (a crime reduction charity), as many as 160,000 16-18 year olds are not involved in any form of education, employment or training and these are the young people who are far more likely to get involved in crime than those who attend school or college or have a job. This has contributed to the growing 'gang culture' which is regularly highlighted in the media and together with the so-called 'ASBO Generation' and it is proving to be a challenge for many statutory organisations (such as education authorities, health and social care providers, the police and the prison service), for the voluntary sector and also to the wider community.

---

<sup>17</sup> Peacock et al 2007, Mind 2007.

<sup>18</sup> The Sainsbury Centre for Mental Health 2003

<sup>19</sup> Pyle 1978, Bird 2007

<sup>20</sup> Peacock et al 2007

<sup>21</sup> Cooper et al 1999, Pevalin and Rose, 2003, Morgan and Swan 2004, Bird 2007

<sup>22</sup> Millar 2003, D o H 2007b

<sup>23</sup> Platt 2007

<sup>24</sup> Department of Health 2007a

There are currently nearly 80,000 men, women and children in prison in England and Wales today, compared to a prison population of 42,000 in 1993 and we now have a higher percentage of people in prison than in any other country in Western Europe. Prisons cost £2.2 billion a year and re-offending rates after release are at about 60% for adults and over 75% for young offenders<sup>25</sup>. Unemployed ex-offenders are twice as likely to re-offend as those with jobs, but low self-esteem, poor education and a lack of skills or work experience mean that many offenders find it difficult to find employment<sup>26</sup>.

The costs of tackling antisocial behaviour and crime in general are ever increasing, growing pressures are put on our prisons and probation services and the challenge of reducing these re-offending rates seems ever present. Estimates of the cost of crime to society from a number of recent studies range from £35 billion to £60 billion per year (for England and Wales in 2000)<sup>27</sup>.

In addition to a disconnection with nature, the UK population has become distanced both from the food that they eat and from those who produce it. British farming is at a low point, and farmers have had to face a multitude of worries in recent years. BSE, Foot and Mouth disease and bluetongue have caused real problems for UK farmers and together with export bans, late subsidy payments, fluctuations in market prices and the recent incidences of flooding many farms are struggling to remain economically viable. In the 2007 Farmers' Voice Survey carried out for Defra, there is widespread concern for the state of the farming industry, with around a third of farmers surveyed intending to either give up farming completely or diversify.

So then, the health sector and social services need additional options to compliment medical treatments and offer more choices for rehabilitation, therapy and work training. Public health bodies need effective and economical options to tackle inactivity, poor diets and the emergent problems of obesity, CHD, Type II diabetes and mental illness. 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. Farmers need new ways to ensure the economic viability of farms, without having to leave farming.

Green care in agriculture or 'care farming'<sup>28</sup> is a growing movement to provide health (both mental and physical), social or educational benefits through farming for a wide range of people including those with defined medical or social needs as well as those suffering from the effects of work-related stress or ill-health arising from obesity. Care farming is therefore a partnership between farmers, health and social care providers and participants.

Can care farming offer a potential solution to some of these emergent health and social issues? Is it possible to combine the care of people with the care of the land? Can care farming be a more cost-effective option in areas of social rehabilitation? Could care farming keep our farmers farming? Can our agricultural landscapes be used to provide significant health and well-being benefits for participants? Can it really be possible that there is a win-win option for farmers, participants, health and social care providers, offender management services and education bodies alike?

---

<sup>25</sup> Howard League for Penal Reform 2007

<sup>26</sup> NACRO 2007

<sup>27</sup> Brand and Price 2000

<sup>28</sup> defined as the use of commercial farms and agricultural landscapes as a base for promoting mental and physical health, through normal farming activity - Hassink 2003, Braastad 2005, NCFI (UK) 2007



Evidence of the positive relationship between exposure to nature and an individual's health is continually growing. More and more public bodies, government departments and voluntary organisations are promoting the importance of contact with nature. The successful combination of natural landscapes, contact with animals and a meaningful workplace means that care farms can offer much variety to participants, depending on the context, motivations and need. This research seeks to look at what we know already about care farming, to scope the extent of care farming in the UK and to outline the potential for care farming in the UK.

### 3. The Value of Contact with Nature

#### 3.1 Determinants of health

Two of the primary determinants of physical and mental health are widely acknowledged to be diet and physical activity. A balanced diet and appropriate levels of physical activity are associated with substantial increases in life expectancy<sup>29</sup>. Ill-health arising from over-consumption of certain constituents of diets is now a major public health cost<sup>30</sup> and at the same time, the nature of work and leisure has changed so that many people have adopted increasingly sedentary lifestyles thus further contributing to ill-health.

Participating in regular physical activity is generally accepted as a highly effective method both for preventing illness and for tackling existing illness. Moderate regular exercise reduces morbidity rates by 30-50% and has a particularly protective effect against maturity onset Type II diabetes, coronary heart disease, musculo-skeletal diseases and cancer. It lowers blood pressure, improves blood lipid and glucose profiles and boosts the immune system. It also enhances mental health by improving mood and self-esteem, reducing stress, enriching an individual's quality of life and diminishing the chance of depression. The understanding of the intimate inter-relationship between mental and physical health has grown in recent years and it is generally recognised that the status of one considerably affects the other. Therefore, exercise can be used as a successful tool to ensure that better health states are experienced.

Despite the robust evidence for staying active, over the last fifty years, the UK has witnessed a dramatic fall in the levels of daily physical activities. Because people have become increasingly sedentary in all aspects of their daily lives (including in their leisure time, in travelling to and from work and during work itself) on average, adults expend 500 kcal less energy per day in comparison to fifty years ago and in the past twenty years, there are indications that people are becoming less likely to engage in organised sports and leisure activities.

Due to this activity transition, populations have suffered very significant public health consequences. The annual costs of physical inactivity in England are reported to be approximately £8.2 billion<sup>31</sup>. This figure excludes individuals who are obese due to inactivity, which contributes an extra £2.5 billion annual cost to the economy.

The level of weekly physical activity required to achieve general health benefits, as recommended by the Department of Health (2004), is said to be *"at least 30 minutes a day of at least a moderate intensity on 5 or more days of the week"*. However, estimates say that only 35% of men and 24% of women actually meet this recommendation. The prevailing misconception for a large percentage of the population is that current physical activity levels are sufficient to avoid ill-health. In order for these recommended levels of exercise to be met many of us must change our lifestyles and significantly alter our perceptions.

The average UK diet has also changed greatly in the past fifty years. According to the National Food Survey<sup>32</sup>, which has been collecting data on weekly consumption of foods since 1942, we now consume less milk/cream, eggs, vegetables, bread, direct sugar, fish and fats, and more cheese, fresh fruit, cereals and meat than in the 1940s. Of particular concern for public health are the drop in vegetable consumption (34%) and the decline in fish consumption (59%). Diet is thought to be a factor in 30% of cases of cancer in developed

<sup>29</sup> CDC 1996; Ferro-Luzzi and James, 2000; DoH, 2004

<sup>30</sup> Pretty, 2002; Wanless, 2002; Lang and Heasman, 2004

<sup>31</sup> Department of Health, 2004

<sup>32</sup> Defra, 2002

countries<sup>33</sup>. The strongest association between diet and cancer is provided by the positive relationship between the consumption of vegetables and fruit and a reduction in the risk of cancers of the digestive and respiratory tracts, with some epidemiological evidence of an association between intake of salt and gastric cancer<sup>34</sup>. Thus, although diets have undoubtedly shown some improvements over the past 25 years, people are still consuming too many fats and sugars, and too many calories generally, for physical well-being.

As a result of these broad changes in diet, diet-related illness now has severe and costly public health consequences<sup>35</sup>. A Eurodiet study in 2001 concluded that *“disabilities associated with high intakes of saturated fat and inadequate intakes of vegetable and fruit, together with a sedentary lifestyle, exceed the cost of tobacco use”*. Some problems arise from nutritional deficiencies of iron, iodide, folic acid, vitamin D and omega-3 polyunsaturated fatty acids, but most are due to excess consumption of energy and fat (causing obesity), sodium as salt (high blood pressure), saturated and trans fats (heart disease) and refined sugars (diabetes and dental caries). High energy diets, rich in sugars, are shown to be nearly as harmful as diets containing excessive amounts of fatty foods. In response to these trends, the UK Government recommends an intake of at least five portions of fruit or vegetables per person per day to help reduce the risk of some cancers, heart disease and other chronic conditions.

There is increasing evidence that disconnections both from other people and also from nature adversely affect our emotional and physical well-being. Our health and well-being are also therefore affected by the secondary roles of close connections to nature and levels of social capital<sup>36</sup>. These connections can involve direct interaction but are also made indirectly through consumption of food, membership of environmental organisations, and by contact with others through social institutions and cultural mechanisms<sup>37</sup>.

As previously mentioned, connectedness to social groups is known to have a positive effect on health<sup>38</sup>. Such connectedness or social capital can be described as a resource of trust, reciprocity and obligations that people can draw upon to provide personal benefits<sup>39</sup>. According to Berardo *“Social Relations and networks are life-enhancing and contribute to longevity”*<sup>40</sup>. Recent years have also seen declines in connections between people, with falls in emotional and physical well-being and increases in public health costs as a result<sup>41</sup>. The role of nature and health and well-being is discussed in more detail in section 3.2.

### 3.2 Nature and health and well-being

There is much convincing evidence which connects regular contact with the natural environment to enhanced physical health and mental well-being. This incorporates a variety of outdoor settings, from the open countryside, fields and forests, remote wildlands, parks and open spaces, to street trees, allotments and gardens. This evidence has been widely collated and reported recently<sup>42</sup> and the key message emerging is that contact with these greenspaces improves psychological health by reducing pre-existing stress levels, enhancing mood and offering both a ‘restorative environment’ and a protective effect from future stresses. A restorative environment is one which promotes recovery from attention fatigue by

<sup>33</sup> Key et al 2002

<sup>34</sup> Riboli and Norat, 2001

<sup>35</sup> Ferro-Luzzi and James, 2000; Eurodiet, 2001

<sup>36</sup> Pretty et al 2005b

<sup>37</sup> Jacobs 1961, Freeman 1984, Coleman 1988, Kellert and Wilson 1993, Pretty, 2002

<sup>38</sup> Pevalin and Rose, 2003

<sup>39</sup> Coleman 1988, Putnam 1993, Pretty et al 2003

<sup>40</sup> Berardo 1985, cited in Bird 2007

<sup>41</sup> Pretty et al 2005.

<sup>42</sup> See studies by Pretty et al 2003, 2005a, 2005b, 2007a; Peacock et al 2007, Mind 2007, Bird 2007 and Burls 2007 for more details.

allowing people to distract, to relax, to free their minds and to distance themselves from ordinary stresses of life in order to help them concentrate and think more clearly<sup>43</sup>. Greenspaces also provide an ideal opportunity and incentive for exercise and can be especially valuable in urban areas for facilitating social contact and helping to bring people together.

A significant relationship between the proximity of urban open green spaces, visiting frequency, duration of stay and the level of self-reported stress experienced has been reported<sup>44</sup>. The quantity of available greenspace has also been correlated with longevity and a reduced risk of mental ill health<sup>45</sup>. Open space is also vitally important for children and studies have shown that children with Attention Deficit Disorder worked better and their concentration improved after participating in activities in green surroundings<sup>46</sup>.

Many of us already recognise and appreciate the health benefits we derive from spending time engaging with nature. In the UK we make 1.2 billion day visits to the countryside each year, with a further 5 billion visits to urban parks. 5 million people are regular anglers, and some 15 million enjoy regular gardening; 6 of every 10 households have a pet; and many millions of others are bird watchers, wild-fowlers, pigeon-racers, dog-walkers, rambles, runners, horse-riders, cyclists and game shooters<sup>47</sup>.

The Department of Biological Sciences of the University of Essex have combined these ideas into a programme of research on 'green exercise'. In our research<sup>48</sup>, we have discerned three levels of engagement with nature:

- i) The first is viewing nature, as through a window, or in a painting but not directly engaging with it. The health benefits derived from viewing nature through windows have been found in workplaces, hospitals, hotels and homes and in travelling to work<sup>49</sup>
- ii) The second is being in the presence of nearby nature, which may be incidental to some other activity, such as walking or cycling to work, reading on a garden seat or talking to friends in a park<sup>50</sup>
- iii) The third is active participation and involvement with nature, such as gardening or farming, trekking or camping, cross-country running or horse-riding<sup>51</sup>

#### **Box 1. University of Essex research on the health benefits of engagement with nature**

A large number of people of different ages were shown nearly 300 photographs of rural and urban scenes to assess which they thought were pleasant or unpleasant. To reach a consensus on what constituted a rural pleasant scene. These were diverse landscapes with various habitats, containing trees, water, blue sky and clouds. Both urban unpleasant and urban pleasant were relatively straightforward to categorise. Damaged, degraded buildings and environments were unpleasant, as was graffiti, scaffolding, concrete blocks, rubbish and broken windows. Where places appeared abandoned or deserted, they were seen as unpleasant. Tall buildings became urban pleasant if there was water in the foreground, particularly if reflected blue from the sky. In general, urban scenes with green, such as urban parks or allotments, together with water and blue sky, were rated as pleasant. This nearby nature was particularly important as a buffer, even at the garden level by homes.

<sup>43</sup> Kaplan and Kaplan 1989, Kaplan 1995, Hartig et al 1991, 2003

<sup>44</sup> Grahn and Stigsdotter, 2003

<sup>45</sup> Takano et al 2002, De Vries et al 2003

<sup>46</sup> Taylor et al 2001

<sup>47</sup> Peacock et al 2007

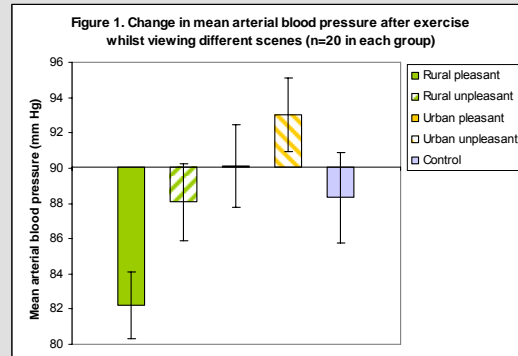
<sup>48</sup> Pretty et al 2005b, 2007a

<sup>49</sup> Moore 1981; Ulrich 1984; Tennesen and Cimprich 1995; Leather *et al.* 1998; Kaplan 2001; Kuo and Sullivan 2001; Diette *et al.* 2003

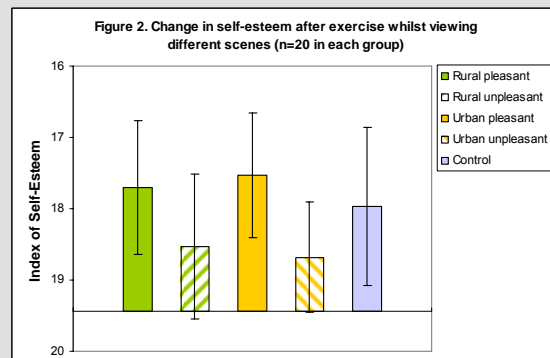
<sup>50</sup> Cooper-Marcus and Barnes 1999; Hayashi *et al.* 1999; Ulrich 1999; Whitehouse *et al.* 2001

<sup>51</sup> Hartig *et al.* 1991, 2003; Fredrickson and Anderson 1999; Williams and Harvey 2001; Herzog *et al.* 2002

We then used these pictures to see what effect they had on people's well-being whilst they engaged in physical activity. This would, we supposed, lead to further benefits for health. In a laboratory study, we tested the effects of exercise for five groups of 20 subjects on a treadmill whilst observing a sequence of pictures projected on the wall (For other similar studies, see Honeyman 1992; Laumann *et al.*, 2003; Staats and Hartig 2004). Four categories of scenes were tested: rural pleasant, rural unpleasant, urban pleasant and urban unpleasant; the fifth control was running without exposure to any images. Blood pressure and two psychological measures (self-esteem and mood) were measured before and after the intervention.



The blood pressure changes were startling between groups. The rural pleasant group saw blood pressure fall by nearly 8mm mercury, whilst the rural unpleasant and control (no pictures) fell by 2 mm (Figure 1). The urban pleasant group was unchanged (effectively an increase in blood pressure relative to control), and the urban unpleasant group saw a significant increase in blood pressure by 3mm mercury. Running in green places has a hypotensive effect; but in cities it is hypertensive. We also measured the effect on self-esteem and mood. The rural pleasant and urban pleasant scenes resulted in large improvements of self-esteem over controls, which in turn ended with higher self-esteem levels than both unpleasant groups (Figure 2). [Note a decrease in score equals an increase in self-esteem]. Both sets of unpleasant scenes thus had a depressive effect on self-esteem. For those people starting with low self-esteem, a larger proportion had significant increases in the rural pleasant group.



Mood is measured in six ways, and these again showed that rural and urban pleasant scenes had the greatest positive effect. Unexpectedly, rural unpleasant scenes (scenes compromised by pollution, waste, unsightly buildings etc) were worse than urban unpleasant, appearing to suggest that views embodying threats to the countryside had a greater negative effect on mood than already urban unpleasant scenes.

Source: adapted from Pretty et al 2005a

Research at the University of Essex has focused on various aspects of these types of engagement, including:

- i) photographic images of different scenes on mood, self-esteem, blood pressure and heart rate on participants undertaking physical activity. The images were classified as 'rural pleasant', 'rural unpleasant', 'urban pleasant', 'urban unpleasant' with a blank screen used as the control<sup>52</sup>;
- ii) different types of outdoor activities (walking, cycling, fishing, nature conservation, woodland activities, horse-riding and boating) on mood and self-esteem at 10 locations in the UK<sup>53</sup>;
- iii) of two urban park and canal regeneration schemes on self-esteem of local users<sup>54</sup>;
- iv) an indoor walk compared to green outdoor walk on mood and self-esteem of participants suffering from a variety of mental health problems<sup>55</sup>;

<sup>52</sup> Pretty et al 2005a

<sup>53</sup> Pretty et al 2005b, 2007

<sup>54</sup> Peacock et al 2006a

<sup>55</sup> Peacock et al 2007, Mind 2007

- v) the multifunctionality of iconic National Trust sites and the role they play in enhancing visitors' psychological well-being (using mood and self-esteem measurements pre and post visit)<sup>56</sup>;

More details of the research looking at level i) can be seen in Box 1 and level iii) or 'green exercise' is examined in more detail in section 3.3. In general, we have found that green exercise results in significant improvements in self-esteem and mood, as well as leading to significant reductions in blood pressure. In addition, the physical activity consumes calories, which further contributes to well-being.

### 3.3 Green Exercise

Exposure to nature has been shown to be good for health and wellbeing and equally, participating in physical activity is known to result in positive physical and mental health outcomes. At the University of Essex we have combined these ideas into a programme of research which investigate the *synergistic* benefits of engaging in physical activities whilst simultaneously being directly exposed to nature and we refer to this as 'green exercise' (see Box 2). Natural England has recently described green exercise as "any informal physical activity that takes place outdoors: from gardening, cycling and walking in urban green areas, to kite flying and conservation projects in the countryside"<sup>57</sup>.

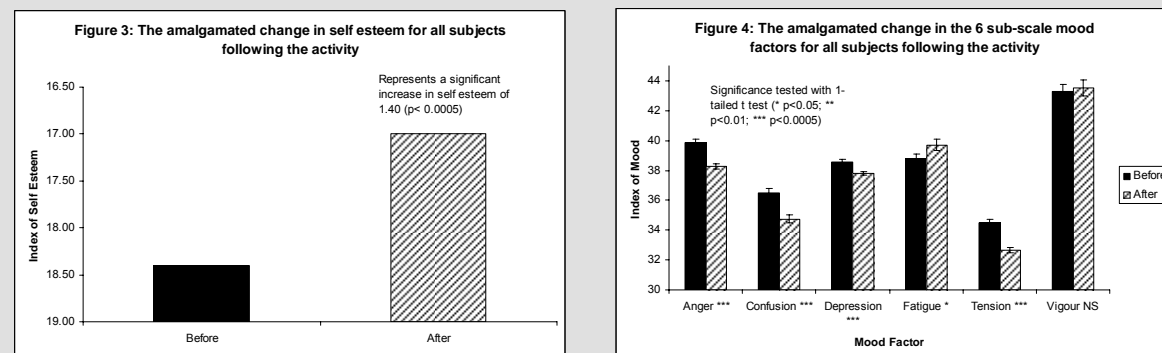
#### Box 2. University of Essex research on the effects of green exercise in the countryside

University of Essex conducted research on the effects of green exercise in the countryside<sup>58</sup>. To do this, we conducted a quantitative analysis of the effects of countryside activities (conservation work, mountain biking, walking, canal boating, woodland activities, horse riding, and fishing) in England, Scotland, Northern Ireland and Wales on the health of 263 people. The ten case studies represented a variety of activities that took place in diverse contexts with varying durations and intensities.

As a result of green exercise, there was a significant overall improvement in self-esteem (Figure 3). Figure 4 also reports the significant reduction in the subscale mood factors of anger, confusion, depression and tension. Although participants felt significantly more fatigued (due to the intensity of the exercise) after the activities they still felt more vigorous and alive. Improvements in self-esteem and mood were found not to be affected by the type, intensity or duration of the green exercise as results were comparable for all ten case studies. This is an encouraging finding as it implies that all intensities and durations of activity generate significant mental health benefits.

The qualitative narrative also highlighted the value of creating social networks and the enjoyment participants derived from meeting new people and becoming part of a social group. Thus, all these activities generated mental and social health benefits, indicating the potential for a wider health and well-being dividend from green exercise.

Our data also showed that the participants studied were a very healthy, active group, who currently meet the Chief Medical Officer's physical activity recommendations of 30 minutes of moderate activity, 5 times a week. It re-emphasises the difficulty in accessing those people who do not currently engage in regular activity. If this active group of individuals can derive numerous health benefits from participating in varying types and intensities of activity, the possible gains for a more inactive group may be substantial.



<sup>56</sup> Hine et al 2007a

<sup>57</sup> Natural England 2007a, Walking the Way to Health 2007

This research has also enabled an insight into some of the underlying reasons for engaging in green exercise activities. Table 1 illustrates these ideas by identifying 4 key principles and separating these into 10 sub-categories, which describe some of the pleasures that have been commonly observed. Green exercise therefore seems to be effective in generating a variety of health benefits which lead to healthier communities and avoided public health costs. With the understanding of the close inter-relationship between mental and physical health gaining acknowledgement, engaging in green exercise activities thus presents an ideal way of advancing collective health states.

Three of the government's six key priorities in their recent Public Health White Paper<sup>59</sup> were to "reduce obesity", "increase exercise" and "improve mental health". Therefore, encouraging more people to adopt green exercise behaviour may contribute to the compliance of these objectives whilst also enhancing the health of the nation. Recognising this, Natural England has recently initiated a campaign to expand the role of the natural environment in supporting health and wellbeing as part of its corporate strategy and has developed a programme of work around health and the natural environment, helping to set up over 400 green exercise schemes<sup>60</sup>.

**Table 1: Four key principles describing why people enjoy engaging in green exercise activities**

Principles	Sub-categories	Descriptors
1. Natural and social connections	a. Social	Being with friends and family, companionship and social interaction, creation of collective identity, making new friends, conviviality
	b. Animals and wildlife	Direct bonding with companion animals (e.g. dogs, horses) and wild animals (both observing and hunting), feeding birds, recognising, counting and collecting (greater value of rarities)
	c. Memories and knowledge	Visiting special places where memories and stories are provoked and recalled (childhood associations), story-telling, personal identity, links to myths, stimulation of imagination, ecological literacy
	d. Spiritual	Large scale and longevity of nature in contrast to humans, transformative capacity of green nature, oneness with nature and animals
2. Sensory stimulation	a. Colours and sounds	Diverse colours of nature and landscapes, views of landscape, beauty of scenery, bird-song and sounds of other animals, light (especially sunrise / sunset), visual and aesthetic appreciation of landscapes
	b. Fresh air	Smell and other senses, being outdoors, exposed to all types of weather, changing of seasons, a contrast to indoor and city life, escape from urban pollution
	c. Excitement	Adrenalin rush, exhilaration, fun, arising from a physical activity or experience of risk (e.g. rock climbing, mountain biking), sense of adventure
3. Activity	a. Manual tasks	Learning a skill and completing a manual task (e.g. conservation activity), challenging, fulfilling and rewarding, sense of achievement, leading to a sense of worth and value
	b. Physical activity	Enjoyment of the activity itself and the physical and mental health benefits associated with it, makes people feel good, more energetic, less lethargic
4. Escape	a. Escape from modern life	Getting away from modern life, relaxing (as a contrast), time alone or with family, a time to think and clear the head, peace and quiet, tranquillity and freedom, privacy, escape from pressure, stress and "rat-race", recharging batteries

Source: Peacock et al 2007, Mind 2007.

<sup>58</sup> Pretty et al. 2005a, b, 2007a

<sup>59</sup> Department of Health 2005

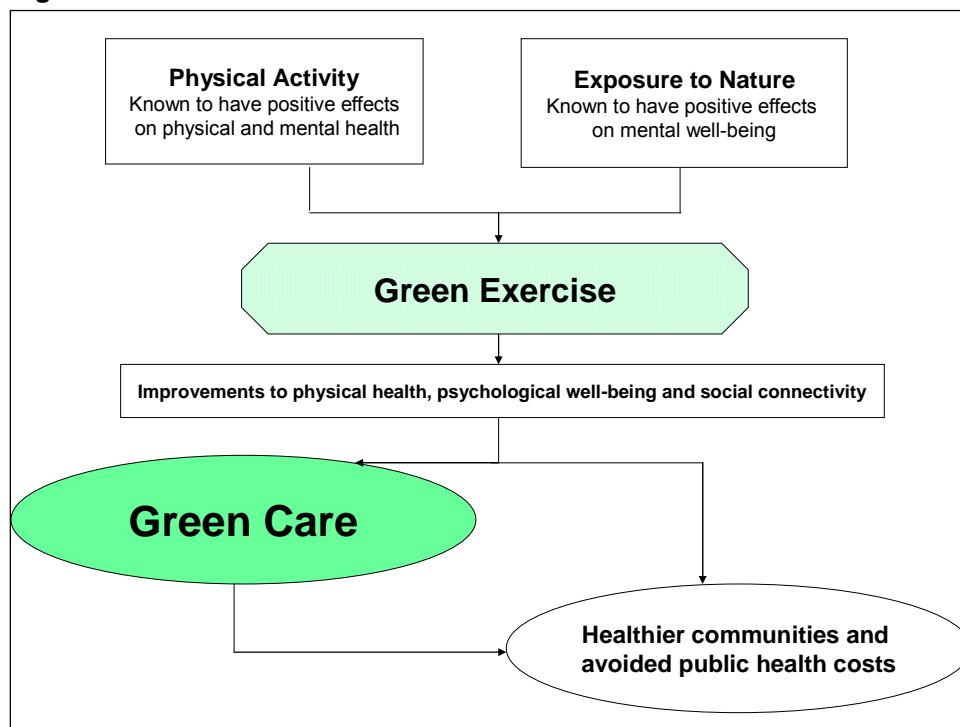
<sup>60</sup> Natural England 2007b

### 3.4 From Green Exercise to Green Care

Findings of this recent research suggest that therapeutic applications of various green exercise activities and other nature based approaches such as therapeutic horticulture<sup>61</sup> are effective at promoting health and well-being. Collectively, such approaches have been termed 'green care' (see Figure 5). Green care has great potential to reduce the costs of public health in the UK by enabling healthier communities.

In the UK there is a growing movement towards green care in many contexts, ranging from social and therapeutic horticulture (STH), animal assisted therapy (AAT), ecotherapy, green exercise activities as a treatment option and care farming. Although there is much diversity in green care, the common linking ethos is essentially to use nature to produce health, social or educational benefits. Different green care contexts are discussed in Section 4.2 and care farming is examined in Chapter 5.

**Figure 5. From Green exercise to Green Care**



<sup>61</sup> Sempik et al 2003



## 4. Green Care

### 4.1 Historical context

Man's connections to nature are embedded in history. Hominids were hunter-gatherers for over 300,000 generations, having daily contact with nature and the land. Using nature to nurture good health is also not a new idea, prisons, hospitals, monasteries and churches have historically been associated with having different outdoor therapeutic spaces.

Prisons have historically maintained prison farms to provide meaningful work and physical exercise for inmates; Dartmoor prison for example has had a prison farm since 1852. Hospitals in the past have also often been associated with nature, Frumkin<sup>62</sup> points out that *"hospitals have traditionally had gardens as an adjunct to recuperation and healing"*. Hospital gardens were initially developed in the Middle Ages, with many hospitals and monasteries looking after the sick traditionally incorporating arcaded courtyards to provide outside shelter for patients and designing beautiful gardens in their surroundings<sup>63</sup>.

The treatment of tuberculosis during the 18<sup>th</sup> and 19<sup>th</sup> centuries inspired a resurgence of interest in using fresh air and sunlight to treat tuberculosis<sup>64</sup>. Typical Victorian asylums included outside design features called 'Airing Courts' (walled areas which adjoined the house and were divided into sections for patient use), grounds for leisure, sports grounds, fields and sometimes as estate farm. An ethos of asylum regimes featured exercise and work out of doors and remained so until the mid 20<sup>th</sup> century<sup>65</sup>. In the same vein, hospitals for more general physical diseases were also designed at this time with grounds for aiding patient convalescence.

The advancement of modern medicines and healthcare technologies has meant that the importance of nature has tended to be overlooked in the last fifty years. Unfortunately, over time, hospital funding priorities have become more concerned with reducing the risk of infection and focusing on efficiency, and this has been reflected in building lacking in greenery and grounds largely concerned with car parking facilities. Consequently, hospitals have evolved into stressful establishments which do not fulfil the emotional needs of patients, their families and staff<sup>66</sup>.

Several therapeutic communities have existed since the 1940s in rural, farm settings, where the benefits of nature have been recognised as being integral to the therapeutic experience. Therapeutic Communities (TCs) are group-based treatment programmes which first came to existence in the UK during the Second World War and now exist in a variety of settings, such as the National Health Service, the educational and criminal justice systems and the voluntary sector<sup>67</sup>

The Camphill Communities are a movement of intentional therapeutic communities founded by Dr Karl König. Dr König (inspired by Rudolf Steiner's philosophy of anthroposophy) wanted to make a difference to the lives of marginalised people and so along with a group of people he established the first Camphill community for children with special needs in Camphill House near Aberdeen, Scotland in 1940<sup>68</sup>. Since then, Camphill has grown into a world-wide network of more than 100 communities in over 20 countries where over 3,000

---

<sup>62</sup> Frumkin 2001

<sup>63</sup> Bird 2007, Nightingale, 1860, 1996, Gerlach-Spriggs et al 1998

<sup>64</sup> Bird 2007

<sup>65</sup> Hickman 2005

<sup>66</sup> Lindheim and Syme 1983, Ulrich *et al* 1991, Horsburgh 1995

<sup>67</sup> Association of Therapeutic Communities 2007

<sup>68</sup> Association of Camphill Communities in Great Britain 2007

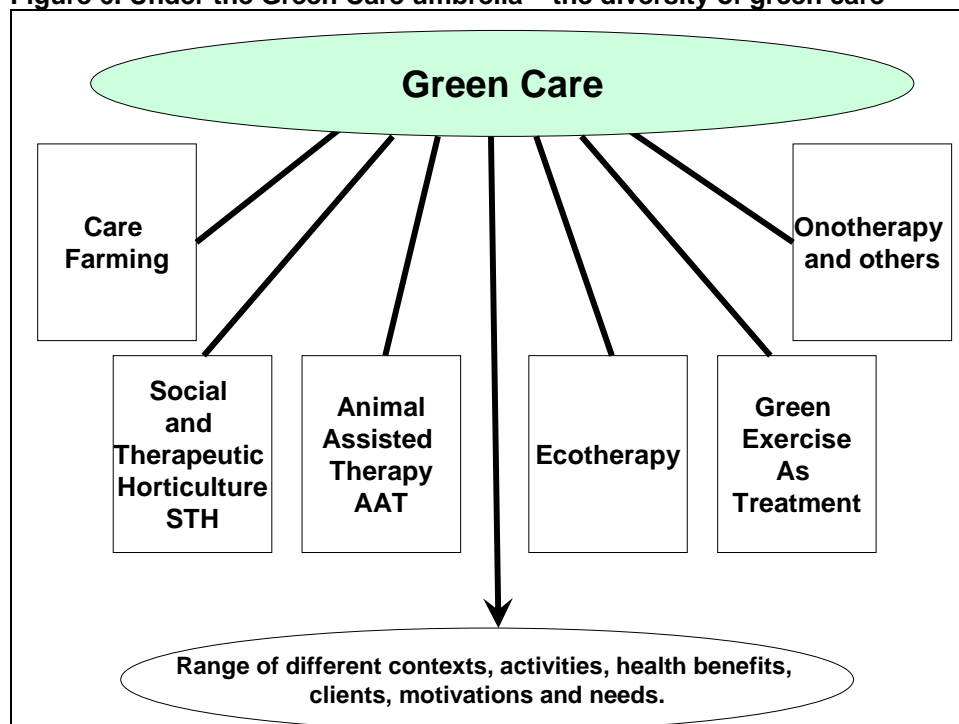
children and adults with learning disabilities, mental health problems and other special needs live and work together in a therapeutic community, often in countryside settings.

The implications from research are that gardens and nature in hospitals enhance mood, reduce stress and improve the overall appreciation of the health care provider and quality of care<sup>69</sup>, which suggests that there is a need for a green transformation of hospitals in the UK. The design of landscaped grounds is also of great importance to elderly residents in retirement communities. The incorporation of natural elements within the setting enhances psychological, social and physical well-being among residents and almost all people living in retirement communities say windows facing green landscapes are essential to well-being<sup>70</sup>

## 4.2 Diversity in Green Care

There is a growing movement towards green care in many contexts, ranging from social and therapeutic horticulture (STH), animal assisted therapy (AAT), onotherapy<sup>71</sup>, pet therapy, ecotherapy, green exercise activities as a treatment option, care farming, wilderness therapy and others. Although there is much diversity under the broader umbrella of 'green care', the common linking ethos is essentially to use nature to produce health, social or educational benefits (see Figure 6).

**Figure 6. Under the Green Care umbrella – the diversity of green care**



There is an increasing interest in various forms of green care in the UK, with many organisations and bodies taking a growing interest in using nature for health benefits including:

- Healthcare professionals
- Social services providers
- Local Authorities

<sup>69</sup> See Sempik 2002, Cooper Marcus and Barnes 1999, Whitehouse et al 2001 for more information

<sup>70</sup> Browne 1992, Pretty et al 2003

<sup>71</sup> Onotherapy is a type of pet or animal assisted therapy popular in Italy using donkeys

- Offender management teams
- Probation services
- Youth services
- Education authorities
- Farmers

Natural England has a specific green exercise programme and the Physical Activity and Health Alliance (PAHA) in Scotland is also promoting green exercise. Offender and nature schemes are developing over the UK and probation services are looking for alternative activities for people on probation, as flagged up in the recent television series featuring Monty Don, *“Growing out of Trouble”*. The British Trust for Conservation Volunteers (BTCV) is ever expanding its network of Green Gyms; Forest Schools are on the increase and we have over 1000 social and therapeutic horticulture projects currently operating in the UK<sup>72</sup>.

One of the distinctions that can be made between green care and green exercise generally is that green care is often used more as a therapy or specific intervention, for a *particular* participant or group of patients rather than simply as a ‘therapeutic’ experience. However, similar distinctions can also be made between different green care options. Animal assisted therapy (AAT) for example tends to use chosen individual animals, specially selected for particular behaviour traits (e.g. calmness) for specific activities to achieve pre-defined goals for individual clients. Care farms on the other hand may cater for a particular person or group of participants with contact with farm animals (which, although may well be used to higher levels of human contact than on other farms, are chosen for the farm rather than for the client), but this contact is more of a therapeutic nature rather than to provide a particular therapy. To confuse the issue still further however, some care farms do offer AAT in addition to the more generalised contact with farm animals.

#### 4.2.1 Social and Therapeutic Horticulture

One of the most successful and popular green care options in the UK is social and therapeutic horticulture (STH) with over 1000 projects catering for over 21,000 clients each week<sup>73</sup>. Horticultural therapy (HT) has been used as a therapy or as an add-on to therapy for many years and in the UK there has been a steady rise since the 1980s in the numbers of garden projects that offer horticultural therapy or social and therapeutic horticulture to many different groups of people.

There is a wide range of activities that are involved in the association between people and plants. Horticultural therapy (HT) is a therapy with pre-defined clinical goals (rather like occupational therapy), whereas social and therapeutic horticulture has a more general focus on well-being improvements through horticulture<sup>74</sup>. To illustrate this point, Sempik et al (2003) define horticultural therapy as *“the use of plants by a trained professional as a medium through which certain clinically defined goals may be met”*; whereas Thrive (the national charity representing STH in the UK) defines social and therapeutic horticulture as: *“the process by which individuals may develop well-being using plants and horticulture. This is achieved by active or passive involvement”*<sup>75</sup>.

In this study the term social and therapeutic horticulture will be used and will include the more ‘formal’ horticultural therapy applications for both therapy and rehabilitation across all disability groups and the use of horticulture for learning of basic skills (e.g. literacy and

<sup>72</sup> Sempik 2007

<sup>73</sup> Sempik et al 2003

<sup>74</sup> Sempik 2007

<sup>75</sup> Thrive 1999 - Growth Point issue 79, Autumn, 1999, p. 4

numeracy); addressing social or key skills (e.g. team working and patience) and the use of the outdoor environment to gain mental and physical health<sup>76</sup>.

In 2003, nearly half of the STH projects provided services for people with learning difficulties; while 40 % work with people with mental health problems<sup>77</sup>. The associated health benefits to those who participate in STH are well documented and also include studies which focus on those who are suffering from mental health problems in particular.

A recent collaboration between the Centre for Child and Family Research at Loughborough University and Thrive called "*Growing Together*" has concluded a major piece of research examining the physical, mental and social health benefits of STH<sup>78</sup>. In this study Joe Sempik carried out a comprehensive survey of literature of STH and discovered a wealth of descriptive literature on horticulture, health and well-being. STH projects are widely used for patients suffering from Alzheimer's disease and a study of over 2000 older people living in the Gironde area of France<sup>79</sup> found that it is also possible that regular participation in gardening may offer some protection against the development of dementia. This prospective study showed that those who took part in gardening (or who travelled, carried out odd jobs or knit) were significantly less likely to develop dementia than those who did not. Later studies have shown that the exercise provided by gardening activities may also be significant in delaying the onset of dementia and Alzheimer's disease<sup>80</sup>.

Social and therapeutic horticulture projects in the UK are diverse and are providing both goal-defined therapy and specific interventions and the more informal 'therapeutic' horticultural experiences.

#### 4.2.2 Animal Assisted Therapy

The Delta Society defines animal assisted therapy (AAT) as: "*a goal-directed intervention in which an animal that meets specific criteria is an integral part of the treatment process. AAT is directed and/or delivered by a health/human service professional with specialized expertise, and within the scope of practice of his/her profession*".

It is generally understood that AAT has its origins in the US in the 1960s with Levinson's research into "*The dog as co-therapist*"<sup>81</sup> where he suggested that a dog could be used as an icebreaker in therapy sessions, to help in communication with the patient and to help foster companionship and further emotional development<sup>82</sup>.

Although pet owners have known for many years that relationships with animals have many health, wellbeing and social benefits, it is only in the last 40 years that animal assisted therapy (AAT), animal assisted activities (AAA), canine visitation therapy (CVT), companion animal therapy or pet-assisted therapy have been a subject of serious study for mental health professionals, nursing and other health care disciplines concerned with emotional well-being and quality of life<sup>83</sup>. Braastad and Berget are conducting research on AAT with patients with psychiatric disorders on green care farms (see section 4.2.5) and a study in 2005 concluded that animal-assisted therapy "*may contribute to the psychosocial rehabilitation and quality of life of chronic schizophrenia patients*"<sup>84</sup>.

---

<sup>76</sup> Thrive 2007

<sup>77</sup> Sempik et al 2003

<sup>78</sup> Sempik et al 2003, 2005

<sup>79</sup> Fabrigoule et al 1995

<sup>80</sup> Rovio et al 2005, Day et al 2000, Chalfont 2006, and Larson *et al.*, 2006

<sup>81</sup> Levinson 1962

<sup>82</sup> Berget 2006

<sup>83</sup> Natural Standard 2007

<sup>84</sup> Nathans-Barel 2005

Riding therapy or equine assisted therapy is probably the most well-known form of AAT in the UK as a recognised form of useful and meaningful therapy for children (and adults) with learning difficulties or physical disabilities.

The more goal-defined therapy or specific intervention projects are usually considered as being animal assisted therapy projects, rather than initiatives where the more informal contact with animals (that can be described as ‘therapeutic’) takes place. However, in the UK there often seems to be confusion with some organisations considering animal care, petting and grooming as AAT rather than as a therapeutic animal contact experience.

#### 4.2.3 Ecotherapy

Ecotherapy is described as the practice of supporting people with disabilities to work with nature (both plants and wildlife), with the specific aim of the conservation or establishment of a local habitat or greenspace as a form of therapy<sup>85</sup>. It has been defined as: “A readily available process for building environmentally responsible inner peace, social relationships and global unity, environmentally sound self-improvement and social justice”<sup>86</sup>. Ecotherapy therefore can be said to have the primary purpose of improving the health and social inclusion of the participant and the secondary purpose of benefiting the environment. Just as advocates of pet therapy describe for example “dog as co-therapist”, ecotherapy, ecopsychology and nature-guided therapy tend to use “nature as co-therapist”<sup>87</sup>. Ecotherapists develop and deliver or facilitate specific experiential activities designed specifically to connect people with individual environmental action (and collective responsibility for the planet)<sup>88</sup>. The popularity of using ecotherapy as an intervention for various groups of people is growing; many Offender and Nature (O&N) schemes for example (see section 4.2.6) use elements of ecotherapy in their programmes. The Green Gym programme run by BTCV<sup>89</sup> could also be seen as being a form of ecotherapy as it is a scheme that aims to improve people’s health and the natural environment at the same time through local practical environmental or gardening work.

Ecotherapy can therefore be described both as a therapy or specific intervention and a more general “therapeutic” experience depending on the context.

#### 4.2.4 Green exercise as a treatment option for mild to moderate depression

Mental illness, especially depression, is on the increase, a quarter of women and 10% of men will experience a period of depression requiring treatment, at some point in their lives<sup>90</sup>. Over half of GPs prescribe antidepressants as their first choice of treatment in cases of mild to moderate depression although only 35% actually believe that antidepressant medication is the most effective intervention in these situations<sup>91</sup>. In comparison, only a minority of patients experiencing mild or moderate depression are offered the choice of exercise therapy as a primary treatment response even though the Chief Medical Officer stated that “*physical activity is effective in the treatment of clinical depression and can be as successful as psychotherapy or medication, particularly in the longer term*”<sup>92</sup>. The Mental Health Foundation campaign is promoting exercise referral schemes in treating mild to moderate

<sup>85</sup> Burls 2004, 2005, Burls and Caan 2005 and Burls 2007

<sup>86</sup> Cohen 1995 and Burls 2004.

<sup>87</sup> Clinebell 1996

<sup>88</sup> Game 2007

<sup>89</sup> BTCV 2007

<sup>90</sup> Halliwell 2005

<sup>91</sup> as 69

<sup>92</sup> Department of Health 2004

depression<sup>93</sup> but only a mere 5% of GP's offer exercise therapy as one of their three most common treatment responses, in comparison to 92% of GP's who commonly prescribe antidepressants as a treatment response.

The option of green exercise therapy may prove to be an even more effective treatment response than exercise alone in mild to moderate depression as it encourages people to re-connect with nature and experience the additional positive health benefits that are associated with this. Contact with nature and greenspace is often uplifting and restorative, helps to reduce stress and improve mood and combining this with physical activity is likely to offer a very successful treatment option.

There has been very little robust scientific research conducted which compares green exercise with more traditional treatment options, such as antidepressants or Cognitive Behaviour Therapy (CBT) to date. For the idea to gain credibility and influence for both the health sector and government, more detailed research needs to be undertaken. However the University of Essex has collaborated with South Essex Partnership NHS Foundation Trust to design a feasibility study comparing a green exercise programme with a series of CBT sessions as treatment options for patients suffering from mild to moderate depression<sup>94</sup>.

In Australia there has also been some research initiated into the participation in forest and woodland management as a treatment for depression<sup>95</sup>. The pilot project engages people experiencing depression in nature-based activities in a woodland environment. The project is on-going but initial findings suggest encouraging improvements to physical and mental health, along with a reduction in social isolation.

Using green exercise as a treatment for mild to moderate depression can be considered a form of green care which is more 'therapeutic' than a specific goal-defined therapy or intervention.

#### *4.2.5 Care Farming*

Care farming is a growing movement in Europe<sup>96</sup> is one of the recent developments gaining popularity in the UK, to provide health (both mental and physical), social or educational benefits through farming, for a wide range of people and is therefore a partnership between farmers, health and social care providers and participants.

All care farms offer some elements of 'farming' to varying degrees, be that crops, horticulture, livestock husbandry, use of machinery or woodland management. Similarly all care farms offer some element of 'care', be that health or social care or educational benefits. However there is much variety in care farms, with differences in the extent of farming or care that they offer, the context, the client group and the type of farm. Many care farms offer therapeutic contact with farm livestock but some provide specific AAT, Many farms offer participation in the growing of crops, salads or vegetables for example but some also offer STH in addition or instead.

The distinction between social and therapeutic horticulture projects and care farms is that STH projects do not usually focus principally on commercial production activities whereas many care farms are primarily focused on production on a commercial level.

---

<sup>93</sup> Mental Health Foundation 2007

<sup>94</sup> More details in Peacock et al 2007, Mind 2007

<sup>95</sup> Townsend 2006

<sup>96</sup> Hassink et al 2006a

For some care farms it is the noticeable absence of a 'care' or 'institutional' element and the presence of a working, commercial farm with the farmer, farmer's family and staff that are the constituents of successful social rehabilitation for participants<sup>97</sup>. Yet the situation at other care farms may be more 'care' and 'carer' oriented with the farming element present primarily to produce benefits for clients rather than for commercial agricultural production.

Like other forms of green care, there is a shortage of robust scientific research supporting care farming, despite the large amounts of anecdotal and qualitative data. However, research is underway examining the benefits of care farming for various groups of people and in varying contexts. Studies in Norway at the Norwegian University of Life Sciences are looking at the health benefits of animal assisted therapy on farms for people with mental health disorders<sup>98</sup> and similar studies with animals assisted interventions are being conducted in the Netherlands at Wageningen University<sup>99</sup>.

Care farming can be considered as including both goal-defined therapy or specific intervention and/or a more generalised 'therapeutic' experience. Care Farming is examined in more detail in the forthcoming chapters.

#### 4.2.6 Offender and Nature Schemes

One of the nine major reasons that cause ex-offenders to re-offend has been identified as poor mental and physical health<sup>100</sup> and a significant number of prisoners in the UK suffer from a variety of mental health issues. Offender and Nature (O&N) schemes can address several of the underlying factors contributing to re-offending and are another example of an initiative to improve mental and physical health and well-being by often using a mixture of green exercise activities and ecotherapy. O&N initiatives involve partnerships between offender-management organisations<sup>101</sup> and natural-environment organisations<sup>102</sup>.

Offenders and Nature schemes involve offenders working as volunteers on nature conservation and woodland sites, carrying out tasks such as creating and maintaining footpaths, opening up dense vegetation to create more diverse habitats, establishing ponds and building boardwalks. O&N schemes are seen as reparative work that both benefits the public, whilst providing experience of teamwork, life and skills training to offenders at the same time as boosting their own confidence and self-esteem<sup>103</sup>. Many offenders and supervisors have observed a 'calming' and 'focusing' effect in volunteers. Some O&N schemes explicitly apply ecotherapy, which uses working in natural environments to support people with mental health issues and addiction problems, specifically drawing on the capacity of nature to calm, heal and inspire<sup>104</sup>. As is the situation for many other green care initiatives, although there is much qualitative and anecdotal evidence supporting these projects, there is a lack of 'hard' or quantitative data and there is a need for further evaluation of these schemes.

Offender and Nature schemes are usually thought of as therapeutic in nature rather than as a therapy or specific intervention.

---

<sup>97</sup> Hassink et al 2007

<sup>98</sup> Berget 2006

<sup>99</sup> Bjarne Braastad and Bente Berget (Norway) and Reina Ferwerda and Jorine Rommers (Netherlands)

<sup>100</sup> SEU 2002

<sup>101</sup> Such as National Offender Management Service, Her Majesty's Prison Service and National Probation Service

<sup>102</sup> For example Natural England, Forestry Commission, BTCV and National Trust

<sup>103</sup> Carter and Hanna, 2007

<sup>104</sup> Hall 2004, Burls 2005, Burls and Caan 2005

#### 4.3.7 Wilderness therapy

According to Conner (2007) Wilderness therapy “*is an experiential program that takes place in a wilderness or remote outdoor setting*”. Such programmes provide counselling, therapy, education, leadership training and challenges from ‘back-to basics’ living. The purpose of these interventions is to separate disaffected young people from negative influences and to put them in outdoor environments that are safe to help them to discover what they have taken for granted, and to encourage self-examination and learning to communicate, cooperate and contribute to the well-being of the group<sup>105</sup>.

Wilderness therapy essentially uses the ‘wilderness as co-therapist’ in addition to professional therapy that takes place while out in the wilderness. Findings from wilderness therapy programs have suggested that young people alter naturally when they are removed from negative environments, ‘bad’ influences and triggering events that produce challenging and destructive behaviours. In wilderness therapy, activities are usually supervised by trained health care professionals.

The Wilderness Foundation UK<sup>106</sup> and the University of Essex are currently collaborating on a piece of ongoing research which explores the health benefits derived from participating in wilderness trails for many different groups of young people who have taken part in wilderness therapy programmes. The project is designed to use the power of nature as the catalyst for change, enabling the youngsters to re-evaluate their destructive lifestyle and give them the self assurance to take personal responsibility for the outcome of their life<sup>107</sup>.

Wilderness therapy schemes are usually thought of as therapy or specific interventions although experiencing wilderness is considered to be therapeutic in nature.

---

<sup>105</sup> Conner 2007

<sup>106</sup> For more information see: <http://www.wildernessfoundation.org.uk/Page.asp>

<sup>107</sup> Peacock et al 2006b



## 5. Care Farming - Green Care in Agriculture

### 5.1 Multifunctionality in Agriculture

Care farming or green care in agriculture provides another example of multifunctionality in agriculture. Until recently land use and its associated value has been viewed in a single function context - an area rich in biodiversity is valued and conserved for its biodiversity alone; an agricultural area is valued for its farming services; a heritage site is valued for its history and heritage and so on. However, in recent years, there has been a substantial shift towards recognising that any area of land can provide many *different* environmental, recreational and health services at the same time and so therefore be considered 'multifunctional'.

In the UK, the concept of a multifunctional landscape very much fits in with the principle that land should be managed for sustainable development. Sustainable development acknowledges that the natural environment is essential to a healthy society. In the UK a set of shared principles that provide a basis for sustainable development policy in the UK have been agreed by the UK Government, Scottish Executive, Welsh Assembly Government and the Northern Ireland Administration<sup>108</sup>.

In addition to the Government's general principles of sustainable development, the remit of Natural England directly supports the concept of multifunctionality of land. The general purpose of 'Natural England' is described in the Natural Environment and Rural Communities Act 2006<sup>109</sup> as *"to ensure that the natural environment is conserved, enhanced and managed for the benefit of present and future generations, thereby contributing to sustainable development"*. Natural England aims to provide an integrated approach to sustainable land management, conserving the natural environment and aims to address multifunctionality of the land. The special focus for Natural England is on activities that contribute to environmental services, in particular conservation of biodiversity and also more recently on the health benefits of nature.

The multifunctional character of land has been particularly realised in the agricultural sector. Although the core aim for agriculture remains the production of food, fibre, oil and other primary products, it also provides other important benefits to society and the environment. These include landscape and aesthetics, recreation and amenity, water accumulation and supply, nutrient recycling and fixation, wildlife habitats, storm protection and flood control as well as carbon sequestration<sup>110</sup>. These public services gained from land have also been the focus of the recent Millennium Ecosystem Assessment<sup>111</sup>

In the past the focus has been on the negative externalities of agriculture: water pollution (from pesticides, fertilisers and soil, from farm waste, *Cryptosporidium from livestock etc*); the loss of landscape (hedgerows, picture postcard fields) and biodiversity (wildlife, farmland birds etc.); the spread of food-borne diseases (salmonella, BSE etc.) and gaseous emissions (methane from livestock). However, the concept of multifunctionality in agriculture switches the focus onto the positive side effects of farming.

This was backed up by the Curry Commission, which recommended that subsidy payments under the Common Agricultural Policy (CAP) should be decoupled from production. This establishes the principle that agriculture and land management also have many positive side-

<sup>108</sup> <http://www.sustainable-development.gov.uk/what/what.htm>

<sup>109</sup> <http://www.opsi.gov.uk/acts/acts2006/60016--f.htm#40>

<sup>110</sup> Pretty et al 2000, Tegtmeier and Duffy 2004

<sup>111</sup> Millennium Ecosystem Assessment. 2005

effects, contributing to public goods such as biodiversity, landscape aesthetics, water quality, carbon sequestration and so on<sup>112</sup>

The multifunctional nature of the services provided therefore gives a multifunctional value for the land. From a review of the current literature and previous work on the multifunctionality of land carried out by the University of Essex<sup>113</sup>, 8 key services produced by the land were identified as highlighted in Table 2. Many of the services and functions highlighted in Table 2 have gone unrecognized in the past, or because they have contributed to public goods or services they have not had a cost or value assigned, and so have tended to receive little attention.

**Table 2. Key services produced by the land**

Service type	Issues
<b>1. Farming services</b>	Food, fibre, oil and other primary produce from farms and from other land management (e.g. forestry)
<b>2. Biodiversity</b>	Wildlife in fields, on farms and in non-farmed habitats and ecosystems
<b>3. Historic and heritage</b>	Presence of scheduled monuments (sites and buildings of archaeological and historic importance)
<b>4. Water services</b>	i. Flood protection through rain water absorption and coastal management of sea.
<b>5. Climate change mitigation</b>	ii. Water retention by land into rivers and aquifers i. Carbon sequestered into organic matter in soils or above ground biomass.  ii. Carbon saved by reductions in fossil fuel use  iii. Carbon saved by biomass-based renewable energy production to avoid carbon emissions  iv. Effects of vegetation in reducing air pollution
<b>6. Landscape character</b>	v. Effects of greenspaces on microclimate The unique natural and man-made features of a particular regional landscape, e.g. stone walls, sunken lanes, hedgerows, water meadows, farm buildings etc.
<b>7. Leisure and recreation services</b>	Activities undertaken by the public in rural areas, such as walking, cycling, fishing, boating, horse-riding
<b>8. Health services</b>	The mental and physical health benefits to individuals arising from exposure to green places and engaging in physical activity.

Source: Hine et al 2007a

It is generally accepted by many that farmers and other land managers should be recognised or paid for the public services they produce<sup>114</sup> and although the new combination of agri-

<sup>112</sup> Dobbs and Pretty 2004

<sup>113</sup> Pretty et al 2000. Dobbs and Pretty 2004 and Pretty et al 2007b, Hine et al 2007

<sup>114</sup> Sutherland 2004

environmental schemes in England<sup>115</sup> supports this to a certain extent, on the whole mainstream discussions of multifunctionality in agriculture (and forestry) have tended to neglect the health and the social values of activities associated with nature<sup>116</sup>.

Green care farming however, can be seen as an example of multifunctional agriculture and interestingly many of the care farmers in Europe and the UK are the same farmers who are also involved in environmental conservation, leisure and educational activities<sup>117</sup>.

It is worth noting the difference between multifunctionality in agriculture and on-farm diversification. The Organization of Economic and Cooperation Development (OECD), states that multifunctionality refers to the fact that the economic activity (in this case, farming) may have multiple outputs (agricultural production, healthcare, landscape aesthetics etc) and, by virtue of this, may contribute to several societal objectives at once<sup>118</sup>. Diversification on the other hand, refers to the expansion of an existing firm (the agricultural enterprise) into production activities in different economic sectors<sup>119</sup> (i.e. Bed and Breakfast, caravan storage, haulage, renting out land for non-agricultural purposes etc.)

There does appear that there may be good prospects for further enhancing agriculture's multifunctionality in a coordinated way that builds on past experiences in the UK<sup>120</sup>. Utilising the potential health services from farming and agricultural land can offer another example of the potential for multifunctionality in agriculture. Care farming is therefore part of a growing recognition that land is multifunctional, providing a range of environmental and social goods and services. Green care on farms can also be seen as a way to reconnect people to the land, and to the food produced by domestic farming.

## 5.2 Concepts and typology of Care Farms

All care farms have some degree of 'farming' (crops, livestock, woodland etc.) and of 'care' including health care, social rehabilitation or education or training (see Figure 7), but it is the balance of these elements and the focus that differ. As discussed earlier in this study, there is much variety in care farms, with differences in the extent of farming or care that they offer; the context, the client group and the type of farm. Many care farms offer therapeutic contact with farm livestock or with crop plants but care farms provide specific therapies and interventions such as AAT and STH in addition or instead. Care farming is taken in this study to be an inclusive term, including all of these different types of farm and their variation in motivation and type of application be that social, therapeutic or vocational.

For some care farms it is the noticeable absence of a 'care' or 'institutional' element and the presence of a working, commercial farm with the farmer, farmer's family and staff that are the constituents of successful social rehabilitation for participants<sup>121</sup>. Yet the situation at other care farms may be far more 'care' and 'carer' oriented with the farming element present primarily to produce benefits for clients rather than for agricultural production.

If we consider a care farm with farming production as its primary focus at one end of a scale; and a care farm with its main focus on provision of care services at the other end of the scale, between these two extremes on the scale there are a myriad of different positions, i.e. care farms with slightly different foci, depending on the needs of participants, motivations and goals of the project and the type of farming enterprise (see Figures 7 and 8).

<sup>115</sup> Defra 2007

<sup>116</sup> Nilsson et al 2007

<sup>117</sup> Hassink and van Dijk 2006b

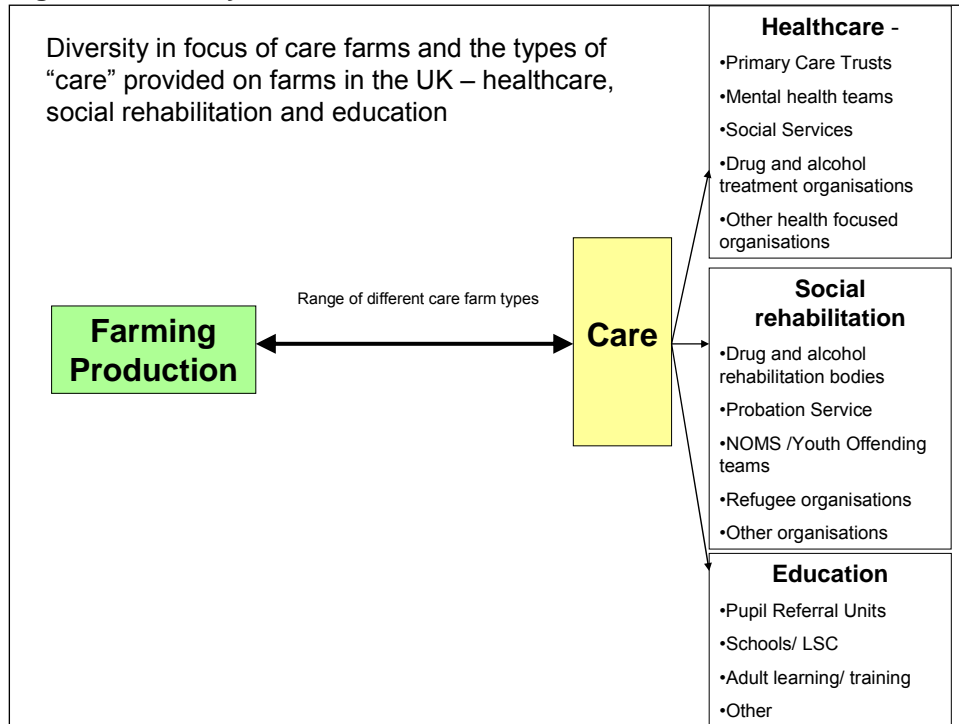
<sup>118</sup> OECD 2008a

<sup>119</sup> OECD 2008b, Nilsson et al 2007

<sup>120</sup> Dobbs and Pretty, 2004

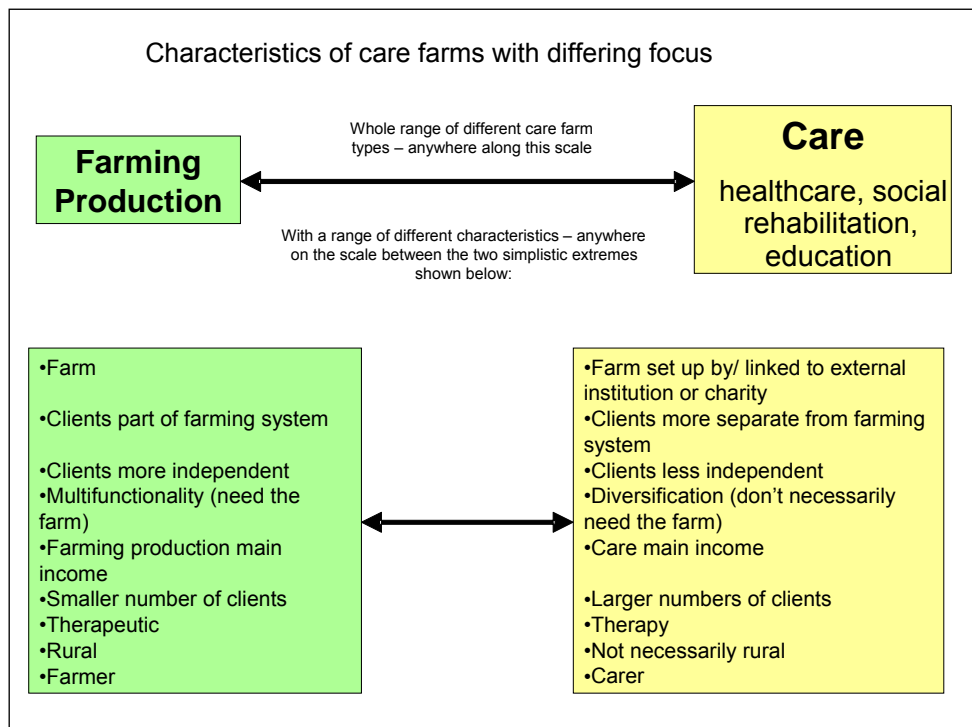
<sup>121</sup> Elings et al 2004, Hassink et al 2007

**Figure 7. Diversity in Care Farms**



There are certain characteristics of care farms at the two opposite ends of our care farming scale which differ depending on the degree and balance of the element of farming production and the element of care. These are represented in a very simplified manner in Figure 8 but it must be emphasised that the differences in characteristics shown in this representation are greatly simplified in order to illustrate the extremes.

**Figure 8. Characteristics of care farm with differing focus**



In reality there are many stages or positions between these extremes and some of the ranges in care farm characteristics are shown in Table 3.

**Table 3. Range in care farming characteristics**

Characteristics	Range
<b>Institutional linkages</b>	Range from independent private farms; larger farms; to farms set up by or strongly linked to external institutions such as prisons, therapeutic communities, schools, hospitals, care institutions or charities
<b>Client numbers</b>	Range from small numbers (e.g. 1-2 participants); larger numbers (e.g. 5-10 clients); to large groups (over 20 people)
<b>Client needs</b>	Range from fully physically independent clients with some kind of other need (drug and alcohol abuse, probation/offenders etc); those who need some kind of support (young children, those with a more acute mental health issue, a physical disability for example); to those needing considerable support (severe mental health conditions, more severe physical disability for example)
<b>Role of clients in farm system</b>	Range from clients having active participation in farm work and day-to-day running of the farm (employee equivalent); active participation (but not employee equivalent); to clients having a more passive supervised role on the farm
<b>Main income</b>	Range from agricultural production as main income; a balance between production and care; to care services being the main income source
<b>Intervention</b>	Range from involvement in all aspects of the farm for therapeutic benefits; a mixture of therapeutic and therapy; to specific therapy interventions or specialised care for particular vulnerable groups
<b>Environment</b>	Range from rural (farms) to urban fringe (city farms)
<b>Role of farmer</b>	Range from farmer (and farmer's family and employees) being main influence and mentors; a balance of farmer and carer; to farmers having a more background role with carers as the main influence.
<b>Organisational structure</b>	Range from private farm; private farm partnership; community Interest company; company limited by guarantee, either charity or non charitable status; to Industrial and provident Society for the benefit of the community.
<b>Motivations</b>	<ul style="list-style-type: none"> <li>• Range from altruistic reasons; a recognition that agriculture can be multifunctional; to a diversification from farming.</li> <li>• Alternatively farms have been set up by schools, colleges, prisons, local authorities etc. to provide for particular groups of participants.</li> </ul>

The evidence from Europe and here in the UK shows that there are differences in the range of care farming choices available both *between* countries and *within* countries<sup>122</sup>. It is this diversity in care farming that is its strength, providing a multitude of different services and settings thus enabling a good range of choice for both participants and referring bodies alike. However it is this diversity that also makes developing a simple, non-prescriptive and workable typology of care farms a particular challenge.

## 5.3 Evidence from Europe and beyond

### 5.3.1 Number and type of care farms

There are many different terms for green care in agriculture across Europe including 'Farming for Health', 'Care Farming', 'Green Care Farming' and 'Social Farming' but all essentially adhere to the same concept – using farming to provide care. There are now over two thousand green care farms in Europe, with the Netherlands and Norway leading the way in terms of numbers of care farms - the Netherlands (818), Norway (500), Italy (350), Belgium (212), Germany (167), Ireland (90), Austria and Slovenia<sup>123</sup>.

Such green care farms are often formally tied to local social services and hospitals, and provide a new component of care in the community. Farmers are usually paid for providing a kind of 'health service' whilst continuing with agriculture, thus helping to maintain the economic viability of farms. Some countries have such a well-developed network of care farms with a formal support organisation (The Netherlands, Belgium), whereas other countries (of which the UK is one) have less formal support structures and a more fragmented coverage of care farms.

The Farming for Health Community of Practice is an international group of researchers and practitioners in the field of green care, (including care farms, STH and AAT and other initiatives concerning special care in green environments) which have been co-ordinating workshops, conferences and meetings since 2004<sup>90</sup>. One of the first tasks of the FFH group was to publish a first overview of the extent and state of care farms in Europe and the US<sup>124</sup>.

Another achievement of the Farming for Health initiative has been to propose and develop the COST Action 866 on 'Green Care in Agriculture'<sup>125</sup> which is an EU funded action made up of a well-functioning multidisciplinary scientific network of scientists working on topics of relevance to green care. The aim of COST 866, which started in 2006, is to increase the scientific knowledge on the best practices for implementing green care in agriculture, with the aim of improving human mental and physical health and the quality of life.

COST is the acronym for the organisation of European Cooperation in the field of Scientific and Technical Research, was founded in 1971, and is an inter-governmental framework. COST is pan-European and allows the co-ordination of nationally funded research on a European level. COST has developed into one of the largest frameworks for research co-operation in Europe and figures from 2006 show around 230 running Actions, involving approximately 30,000 scientists from 34 European member countries and more than 160 participating institutions from 23 non-member countries and NGOs<sup>126</sup>.

<sup>122</sup> Hassink 2003, Hassink and van Dijk 2006a

<sup>123</sup> See Farming for Health (Europe) [www.farmingforhealth.org](http://www.farmingforhealth.org)

<sup>124</sup> Hassink and van Dijk 2006a

<sup>125</sup> [www.umb.nor/greencare](http://www.umb.nor/greencare)

<sup>126</sup> COST 2008

For the COST Action 866 - 'Green care in agriculture', one of the particular areas of priority is to coordinate research in this field by the comparison and discussion of ongoing projects related to health effects on people, and the establishment of a set of good research methodologies<sup>127</sup>. Other priority areas are to coordinate current research and develop new research on the economics and management of green care farming<sup>128</sup>; and to investigate how green care fits into current and future national health and social care policy systems<sup>129</sup>.

Also associated with the Farming for Health initiative, is the SoFar project "*a multi-country specific support action, funded by the EU Commission*"<sup>130</sup> which aims to support the construction of a new institutional environment for social/care farming. The project which started in 2006 has partners in the Netherlands, Flanders, Italy, Republic of Ireland, Slovenia, Germany and France who have also conducted research into the extent of care farming<sup>131</sup>.

Summaries of some of the countries where care farming is more established and where there is more detailed research into the extent of care farming are detailed below.

i) The Netherlands<sup>132</sup>

In the Netherlands the progress and potential of care farms was fully realised by the Ministry of Agriculture, Nature and Food Quality and the Ministry of Health, Welfare and Sports in 1998, which collaborated to stimulate the development and professionalism of care farming nationally, resulting in the rapid growth of care farming. Care farms are considered as "*examples of innovation in the rural area and contributors to the desired integration of care in society*"<sup>133</sup>

Since this time, the numbers of care farms in the Netherlands have risen dramatically (from 75 in 1998 to 818 in 2007) and care farming is now the fastest growing sector of multifunctional agriculture in the country. Care farms in the Netherlands saw 10,000 clients in 2005, 8,000 of these were from non-institutional care farms, where the average annual revenue for care farming activities on these non-institutional farms was €73,000 in 2005.

A major contributor to spread of care farms, particularly for the non-institutionalised farms, has been the introduction of healthcare personal budgets for clients, with almost 60% of farms having one or more clients with a personal budget<sup>134</sup>. In addition, the average payment per client per day was higher for clients accessing personal budgets (€77 /£55) compared to those through care institutions or care farming organisations (€50 /£36)<sup>135</sup>.

The combination of agriculture and social care is seen in the Netherlands as contributing to the diversification of agricultural production, providing new sources of income and employment for farmers (430 additional jobs in 2005) and the rural area, reintegrating agriculture into society and improving the image of farming<sup>136</sup>.

<sup>127</sup> See <http://www.umb.no/?viewID=18590> for more details

<sup>128</sup> See <http://www.umb.no/?viewID=18591> for more details

<sup>129</sup> See <http://www.umb.no/?viewID=18592> for more details

<sup>130</sup> SoFar 2007

<sup>131</sup> See [http://sofar.unipi.it/index\\_file/stateofheart.htm](http://sofar.unipi.it/index_file/stateofheart.htm) for more details

<sup>132</sup> Source: Hassink and van Dijk 2006a, Hassink 2007, SoFar 2007

<sup>133</sup> Ketelaars et al 2001 in Hassink 2007

<sup>134</sup> Hassink 2007

<sup>135</sup> Hassink 2007

<sup>136</sup> Driest 1997, Van Schaik 1997, Hassink 2001, Hassink, 2006b (all in Dutch, cited in Hassink 2007), and Hassink, 2003

ii) Norway<sup>137</sup>

In Norway, between 500-600 care farms provide farm-based services to health and social care providers and to the education sector. Care farms have developed as kindergartens and after-school clubs, provide activities for children with special needs or provide health and social care options for psychiatric patients, those with learning difficulties and elderly people with dementia. Like other countries in Europe, healthcare and welfare services in Norway are moving towards providing care in the community rather than in institutions and care farms help this focus by offering green care services in local communities.

As care farming requires co-operation from many sectors, at the national level in Norway, several ministries have established an inter-ministry committee for green care which is chaired by the Ministry of Agriculture and has representatives from the ministries of Health; Social affairs; Children and family affairs; and Education and research, in addition to Local Government and Regional Development departments.

A study conducted by the Centre for Rural Research<sup>138</sup> found that nearly 8% of a representative selection of Norwegian farmers already provide green care services, are in the process of starting up or are considering starting such services. In 2002 nearly 60% of the care farms had a net income of below € 23,800 and operating profits of below € 11,900 and 66% of the farmers in the survey considered the profitability of green care activities to be better than that of traditional farm production.

iii) Italy<sup>139</sup>

In Italy, care farming is referred to as 'social farming' and consists of a wide variety of contexts, the majority of which have developed as 'bottom-up' initiatives. The 350 social farms in Italy are made up of i) occupational therapy type initiatives; ii) training and employment projects for disadvantaged people; and iii) socio-recreation or education ventures for people with special needs. Social farms are generally either 'non for profit' enterprises (such as social co-operatives) that operate in the social care sector, private farms that are businesses in the agricultural sector or from the voluntary sector.

There is no formal national institution which supports care farming in Italy and consequently the scale and extent of care farms varies geographically. Care farms in Italy are mainly in the centre of the country, with some in the North and a growing number in the South in Sicily and Sardinia<sup>140</sup>.

iv) Belgium<sup>141</sup>

In late 2007 there were around 250 care farms in Belgium (Flanders), made up of 212 private care farms, 38 Institutional farms and 12 other social farming projects. Care farms in Flanders are mainly family-run commercial farms and horticultural enterprise and as in most of Europe these farms cater for a broad range of target groups including people with disabilities, those with mental health problems, disaffected young people, those suffering from drug or alcohol addiction and older people with dementia. Belgium is one of the 2 countries in Europe (together with the Netherlands) that have a national support centre for green care. This support centre was established in 2004 through collaboration between the Flemish Department of Agriculture and Fisheries and the Cera Bank; and covers care farms in 5 provinces.

<sup>137</sup> Source: Haugan et al 2006

<sup>138</sup> Rye and Storstad 2004

<sup>139</sup> Source: Di Iacovo and Pieroni 2006, Di Iacovo et al 2006

<sup>140</sup> Di Iacovo et al 2006

<sup>141</sup> Source: Goris and Dessenin 2007, Goris and Weckhuysen 2007



Since December 2005, care farmers have received a subsidy from the Flemish Department of Agriculture and Fisheries, not as payment for health or social care services provided but rather as a 'compensation' to farmers for time that cannot be spent farming. Official care farm contracts are agreed between the farmer and the care or welfare organisation (i.e. referring bodies) and care farms typically have between 1 and maximum of 3 clients on farm. Subsidies can only be claimed by farmers at farms in commercial agricultural production only and not by charities or other 'not for profit' organisations; and the referring bodies have to be recognised by the Flemish Department of Welfare. Although the subsidies are small (€40 a day - irrespective of the number of clients) and are not direct payments for the services provided on care farms, most care farmers in Flanders agree that this is an important first step in valuing the role of green care in Flanders.

v) Germany<sup>142</sup>

There are thought to be at least 167 social farms in Germany, historically developed from farms that provided additional social responsibilities or as a remit of institutions that integrated supplementary agricultural activities. To date there has been no national survey into the extent of care farming, because Germany consists of 16 federal states, where agriculture, health and social care and education have different laws and organisational structures.

As part of the SoFar project, van Elsen and Kalisch have compiled the data for social services on farms, with their different structures and diverse operators, from national surveys on sheltered workshops and on other social institutions such as prisons, hospitals etc<sup>143</sup>. More than half of the farms surveyed by Lenhard et al. (1997) offer care services and work for people with disabilities and nearly half of them are registered as sheltered workshops.

Care farms in Germany are operated in the main by three types of organization: i) social service organizations (mostly religious and anthroposophical); ii) public social services such as those run by federal states or ministries (e.g. prisons); and iii) other social services such as foundations and self aid associations

vi) Republic of Ireland<sup>144</sup>

The status of care farming in the Republic of Ireland is at a similar stage to the UK, in that up until now there has been a lack of relevant research in this area. The survey by McGloin and O'Connor (2007) from University College Dublin into the extent of care farming in Ireland as part of the SoFar project is the first such study on this topic.

Although the provision of social services on farms on an informal, unpaid basis is a historical feature of Irish agriculture, linking a privately-run farm to social care is a relatively new idea. Social farms in Ireland are predominantly existing external institutions or extensions of institutions rather than private farms. Of the 90 care farms in Ireland, 80 are institutional farms, 8 are other social farming initiatives and only 2 are private care farms.

vii) Summary

There is a wide variety in care farms both between and within countries in Europe. Across all countries, initiatives for care farming have been mainly instigated by farmers rather than by health care providers<sup>145</sup>. In addition green care on farms has been shown to be relatively

<sup>142</sup> Source: Neuberger et al 2006, Van Elsen and Kalisch 2007

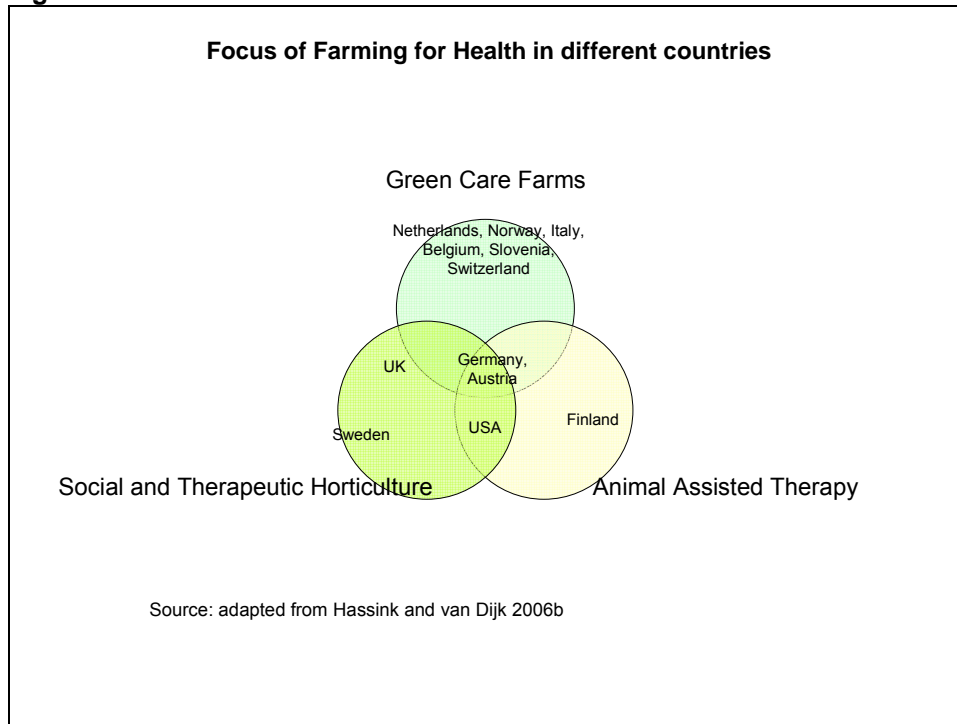
<sup>143</sup> See Van Elsen and Kalisch 2007 for more details of these studies

<sup>144</sup> Source: McGloin and O Connor 2007

<sup>145</sup> Hassink and van Dijk 2006a

important for countries with both intensive agricultural production systems (such as the Netherlands and Belgium) and for those with smaller, more extensive agricultural production (e.g. Norway and Italy)<sup>146</sup>. The different focus areas of care farms in Europe can be found in Figure 9.

**Figure 9. The focus for care farms in different countries**



### 5.3.2 Research: Benefits of care farming

#### i) Type of evidence

In the fields of nature based interventions such as green care and care farming there are several similarities to the limitations of research to date. Although there is much valuable qualitative and anecdotal evidence describing the physical, mental and social health benefits of exposure to nature and green care there remains a shortage of scientifically robust, quantitative evidence. This 'hard' data is necessary to convince healthcare professionals, social care providers, prisoner and probation services and sceptics alike of the merit of green exercise and green care.

There is also a shortage of economic data to accurately estimate the cost implications and total savings for healthcare, social rehabilitation and education from care farming. The full economic benefits of promoting care farms as a health, social or educational care resource are not yet fully realised.

#### ii) Health benefits

The limitations of research concerning health benefits derived from care farming to date are therefore i) a lack of formal evaluation, research and statistics and ii) methodological and

<sup>146</sup> Hassink and van Dijk 2006b

theoretical challenges to research (see section 7.2). These limitations are common to all countries and the majority of forms of green care.

As much of the research into the benefits of green care and care farming in particular, had until recently been largely qualitative and anecdotal, the Farming for Health Community of Practice recognised the need for a sound body of evidence to support the health and 'therapeutic' benefits of care farming in order to influence health and social care professionals and policy-makers alike<sup>147</sup>.

The Farming for Health initiative has therefore been instrumental in developing a COST Action on green Care in Agriculture<sup>148</sup> which is an EU funded action to increase the scientific knowledge on the best practices for implementing green care in agriculture (see section 5.3.1). In particular one of the areas of priority for the action is to coordinate research in this field by the comparison and discussion of ongoing projects related to health effects on people from spending time on a care farm, and the establishment of a set of good research methodologies.

Although as previously mentioned, the recent 'Growing Together' study has concluded a major piece of research examining the physical, mental and social health benefits of STH<sup>149</sup> in the UK and other studies have examined various aspects of the health benefits derived from green care, there are relatively few studies specifically in the field of green care on *farms*.

Such research specifically relating to care farming that has been either recently completed or is currently underway includes:

A study in Norway<sup>150</sup> (Norwegian University of Life Sciences) looked at the health benefits of animal assisted therapy on farms for people with mental health disorders. Although AAT has been well-documented in pets there had been no studies looking specifically at farm animals. In her study, Berget (2006) studied psychiatric patients with a mix of diagnoses (affective, anxiety and personality disorders; and schizophrenia) who worked with mainly dairy cattle twice a week for 3 hours<sup>151</sup>. The study had the majority of the elements of a randomised controlled trial (the 'gold standard' preferred by health professionals), with an aim not primarily related to the treatment of anxiety and depression per se, but rather to examine whether the farm animal intervention had an additional affect to the psychiatric treatment.

The resulting decreases in anxiety and increases in general self efficacy were observed six months after completion of the animal assisted therapy and were not apparent immediately after the intervention. The clearest effect was that patients with affective disorders showed significant increases in self-efficacy and quality of life after 6 months and patients who experienced the largest reduction in depression during the intervention reported the highest increase in coping ability, mood, self-esteem and self-efficacy, whilst those whose self-efficacy increased the most reported the highest increase in coping ability<sup>152</sup>. None of these effects were experienced in the control groups. Although the observed health outcomes are undoubtedly present, they are only moderate, and this is thought to be due to the relatively limited sample size and the rather unspecific nature of the intervention. The results of Berget's 2006 study do suggest that AAT with farm animals may be a useful addition to traditional psychiatric treatment particularly with those patients suffering with affective disorders.

---

<sup>147</sup> Hassink and van Dijk 2006

<sup>148</sup> [www.umb.nor/greencare](http://www.umb.nor/greencare)

<sup>149</sup> Sempik et al 2003, 2005

<sup>150</sup> Berget 2006

<sup>151</sup> Berget 2006

<sup>152</sup> Berget 2006 p4

A study on the effects of human-animal interaction with animal assisted interventions is being conducted in the Netherlands<sup>153</sup> with the objective to make an inventory of existing experiences of AAT on green care farms and resultant health benefits.

In 2005 three long-term research projects were initiated in the Netherlands by Wageningen University<sup>154</sup>, looking at the effect of green care farms on the quality of life of older persons with dementia and for people with psychiatric and/ or drug addiction backgrounds<sup>155</sup>.

One of the studies (Elings and van Erp) looking at the effect of green care farms on the quality of life of people with a psychiatric and/ or drug addiction background has completed the pilot phase of the research. Findings of this pilot study showed physical health, mental health and social effects of participation at a care farm. Physical benefits included: improved physical strength, increased appetite, becoming tired and accomplishing more work; mental health benefits included increased self-confidence, persistence, involvement, personal responsibility, awareness and relaxation; and social benefits included re-socialisation, a sense of responsibility, increased social contacts and increased self respect<sup>156</sup>.

A classic research farm at Wageningen University and research Centre in the Netherlands has been developed into a functioning green care farm, in order to provide a national centre of research and practice on green care<sup>157</sup>. This is a collaboration between Wageningen University, the Louis Bolk Institute and 2 healthcare institutions Arta Lievegoedgroep (psychiatric patients) and Heimerstein (people with learning difficulties). One of the goals of this collaboration is to develop a valid monitoring process to evaluate patient progress in terms of i) symptoms, ii) quality of life, iii) health and disease related direct and indirect costs and iv) patient treatment satisfaction. This system has been developed and validation is now underway<sup>158</sup>.

Like the UK, Denmark, Finland, Italy, Austria and Germany have also initiated research into the health benefits of care farming and this is expected to combine with the research underway in the Netherlands and Norway to produce evidence to support the use of care farming for health benefits.

### iii) Economic considerations

The full economic benefits of promoting care farms as a health, social or educational care resource are not yet fully understood. The economic data to accurately estimate the cost implications and total savings for healthcare, social rehabilitation and education are largely lacking. Therefore, research is required to relate spending time on a care farm to improved health, social rehabilitation and education outcome measures, to enable a full economic costing to be undertaken.

One of the working groups within the COST 866 Green care in agriculture action is currently working to coordinate research and develop new research on the economics and management of green care farming including: the cost-benefit effectiveness of green care across the economic spectrum (at differing levels) within the framework of multifunctional agriculture; market based versus governmental based economics; marketability of public goods and positive agricultural externalities, as well as measurements of the positive externalities of care farming<sup>159</sup>.

<sup>153</sup> Reina Ferwerda and Jorine Rommers, Animal Sciences Group of Wageningen University, The Netherlands

<sup>154</sup> Elings and Hassink 2006

<sup>155</sup> Simone de Bruin, Marjolein Elings, Nicole van Erp, Jan Hassink, Eric Baars

<sup>156</sup> Elings 2007

<sup>157</sup> see <http://www.dehogeborn.nl> for more details

<sup>158</sup> Baars, Hassink and Elings 2007.

<sup>159</sup> <http://www.umb.no/?viewID=18591>

In the UK, research into the economics of care farming is considered crucial and as a result the NCFI(UK) has initiated wider discussion and investigation in this area; and a review of the cost savings to one type of referring agency (the police and probation services) from sending Prolific and other Priority Offenders (PPOs) to participate on a local care farm is underway<sup>160</sup>. This study has found that 2 persistent and priority offenders had a combined past offence and imprisonment history has had an approximate cost of £268,500<sup>161</sup>. Since joining the Herefordshire PPO scheme and participating in care farming activities at SHIFT/BODS Care Farm, neither of the PPOs has re-offended and one has also had negative drug tests. Due to this success, the authors have calculated that there has been a considerable saving of £47,741 to the community. This figure is considered a conservative estimation because i) the figure was derived by comparing the reduction in offending only in comparable periods before and after joining the PPO Scheme and ii) the PPOs have suggested that they had not been caught and arrested for the entirety of crimes they have committed in the past.

This initial study i) recognises the early signs of success with a relatively small number of people on the PPO scheme, ii) with the statistics shows the potential of supporting the development of care farming projects and iii) the necessity for long-term analysis. It is worth considering therefore the effects of scaling up if the necessary resources were available to provide the same intensive supervision of a larger number of people. More details of this study can be found in section 6.6.14.

The Federation of City Farms and Community Gardens is also conducting research into measuring the value and benefits of city farms (see Box 3).

### **Box 3. Measuring the true value of community farms and gardens**

The Federation of City Farms and Community Gardens (FCFCG), in early 2007, began a research project funded by the Northern Rock Foundation to measure the true value of community farms and gardens. The research is being carried out across the North East and Cumbria in conjunction with the University of Northumbria.

The evidence gathered by this research will be used to demonstrate the value of community farms and gardens and to influence policy development and resource allocation at a local, regional and national level. This will benefit members and users of community gardens, allotments, city farms and other related community growing projects.

Within the target area over 20 community gardens, city farms, allotments and stables were chosen based on their geographical location, demographic information and financial status. This selection represents the wide range of people using such projects and contains a mix of staffed and volunteer run sites. Both member and non-member projects are involved to ensure that the research represents the movement as a whole.

The findings so far clearly demonstrate the value of community managed gardening and farm projects. 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 on gardening coincide with other studies that have investigated its therapeutic value and prove that gardening can be a rewarding activity for all ages.

For more information please contact: Helen Quayle Tel. 0191 263 5125 [heleng@farmgarden.org.uk](mailto:heleng@farmgarden.org.uk)

Source: Helen Quayle [heleng@farmgarden.org.uk](mailto:heleng@farmgarden.org.uk)

<sup>160</sup> West Mercia Constabulary 2008

<sup>161</sup> calculated from when they were arrested for the first time (this represents 330 days for one PPO and 282 days for the other)

The contribution that care farms make to farmer's incomes and rural economies has been calculated for care farms in the Netherlands<sup>162</sup>. Over the last 10 years, since the national support centre for care farming was established and funding streams were supported (both through a collaboration between government departments), numbers of care farms in the Netherlands have grown. In the Netherlands approximately 0.9% of all farms are now providing care and in 2005 the annual average revenue from care activities on non-institutional care farms was €73,000 (£52,517). In a recent briefing document<sup>163</sup>, the NCFI(UK) has made conservative projections for the UK context, based on these Dutch statistics. Assuming that after 10 years of similar government supported growth to what has been experienced in the Netherlands, 0.9% of UK farms could be providing care services for a variety of vulnerable groups of people and this would relate to over 2,800 farms, generating £149 million for the rural economy in 10 years<sup>164</sup>.

#### iv) Other

Another relevant piece of research carried out in the Netherlands features a comparison between the specific value of working on a care farm with commercial agricultural production as the key focus; and working on a care farm that produces agricultural products as a secondary focus as part of the programme for the people with learning difficulties<sup>165</sup>.

This study showed that the presence of a 'farmer' is very important for the participants: as "*a role model he is the boss, he is not a therapist or social worker*"<sup>166</sup>. As the farmer is the expert in farming and is strongly linked with the farm, this gives the participants safety and clarity because they recognise the knowledge and expertise of the farmer. This study concluded that knowledge about farming and agriculture seems to be a key factor in supporting clients on the farm and that care institutions are recommended not to build their own social care farm but to cooperate with existing farmers.

#### v) Summary

This research suggests implications for addressing several of the key questions posed in this study; i.e. Can green care be considered a good buy for public health, providing physical, social and mental health benefits? Can care farming provide further options for treating mental ill-health? Could some of the annual £10 billion of costs of obesity, coronary heart disease and physical inactivity in the UK be avoided?

## 5.4 Care Farming in the UK

Although the number of social and therapeutic horticulture projects in the UK has been recently determined by Thrive and Dr Joe Sempik at Loughborough University (over 1000 projects in 2007), no such study has to date has determined the number of care farms in the UK.

While the term "care farming" is well-recognised in Europe, in the UK, the concept is relatively new. There is an increasing amount of interest from many sectors including farmers, health care professionals and social care providers, the prison and probation services and there are a number of care farms already operating throughout the UK. However the numbers of care farms are thought to be small and the movement is very embryonic at present, with no national framework.

---

<sup>162</sup> Hassink 2007

<sup>163</sup> Dover 2008

<sup>164</sup> Dover 2008

<sup>165</sup> Elings et al 2004

<sup>166</sup> Elings et al 2004 p 176

This uncertainty as to the extent and state of care farming in the UK has led the National Care Farming Initiative (UK)<sup>167</sup> (with funding from Natural England) to commission research on the current number of care farms and the benefits they provide. This study represents the first attempt to ascertain the scale of care farming in the UK, but it is expected that the 76 care farms that completed the NCFI(UK) questionnaire represent an underestimate of the total number of care farms in the UK (complete results from the University of Essex/ NCFI(UK) survey can be found in Chapter 6.). In Ireland, as part of the SoFar project, researchers at University College Dublin are also currently undertaking to provide a comprehensive picture of the nature and extent of Social Farming in Ireland<sup>168</sup>

There are several contexts in the UK which undoubtedly include some care farms:

- Farms
- City farms
- School farms
- Prison farms
- Therapeutic communities (such as Camphill communities)
- Community gardens

According to the Federation of City Farms and Community Gardens (FCFCG) there are currently 56 city farms and many more in developmental stages. City farms employ over 550 people, attract over 3 million visitors a year and have an annual turnover of £40 million<sup>169</sup>. 19 city farms took part and are represented in this study.

The School Farms Network states that there are 66 school farms in the UK, mainly found in the South East of England and the West Midlands<sup>170</sup>. Approximately 6 school or college farms took part in our study.

Of the remaining 5 prison farms in the UK, 2 took part in our study. As part of the prison farm modernisation programme, 23 farms have recently been closed down, the land and livestock sold on. All arable land has been phased out (2,778 acres of land sold off) and all but 2 dairy herds in a move towards horticultural work<sup>171</sup>. Examples of this are Dartmoor Prison which had a farm on site since 1852 but has recently been sold and Hollesley Bay Prison farm which as well as being known as one of the largest prison farms in the country, was also famous for its rare Suffolk Punch horses.

Therapeutic communities are groups of vulnerable people who work as a democratic community and who often provide group psychotherapy for community members. Out of over 40 therapeutic communities in the UK, some that are based on farms, and work the land together as a community for therapeutic benefits, can be described as care farms. The Camphill movement is an important part of therapeutic communities in the UK with 50 Camphill communities in UK and Ireland<sup>172</sup>, and in the same way, those based on farms consider themselves as care farms. Three Camphill therapeutic communities have taken part in this study.

<sup>167</sup> See National Care farming Initiative (UK) website [www.ncfi.org.uk](http://www.ncfi.org.uk)

<sup>168</sup> McGloin and O'Connor 2007

<sup>169</sup> FCFCG 2007

<sup>170</sup> School farms Network 2007

<sup>171</sup> HMPS 2006

<sup>172</sup> Association of Camphill Communities in Great Britain 2007

## **6. Care farming in the UK – The Evidence so far: Extent**

### **6.1 The extent of Care Farming in the UK - Methodology**

The scoping study was undertaken for the National Care farming Initiative (UK) by the University of Essex in order to discover the current extent and diversity of care farming in the UK (essentially who is care farming? who is benefiting and how? what are the motivations for care farming? and what are the successes and challenges?). This research will then form the baseline data on which to build future research needs, help and support to farmers and implications for policy.

A questionnaire survey was designed by the University of Essex team with input from Dr Joe Sempik to enable comparisons with the recent UK survey conducted by Thrive of STH projects. Comments on the pilot questionnaire received from the NCFI (UK) steering group members and several city farms, and these were incorporated into the final version of the questionnaire (which can be seen in Appendix A).

The questionnaire was then forwarded to all members of the NCFI(UK) network and further disseminated to city farms, therapeutic communities, prison and school farms and interested parties with the aim to reach as many care farms as possible. Over 400 questionnaires were sent out to possible care farms or interested parties.

The difficulty with any initial scoping study in a field with no recognised formal network or directory of either care farm practitioners or the various referral bodies is that we cannot guarantee that all farms that are engaged in green care activities will hear of the research. Although an extensive effort was made to contact various organisations, non-statutory bodies and voluntary groups in the research the numbers reported in this research are likely to be underestimates of the true picture.

### **6.2 The extent of Care Farming in the UK - Results**

The results of the scoping study for care farms in the UK have been arranged into the following 6 sections:

- i) About the care farms
- ii) About the care farmers and their staff
- iii) About services provided on care farms and their costs
- iv) About people who attend the care farms
- v) Successes and benefits
- vi) Challenges

In this study the term 'client' is used to describe people who attend care farms however it should be noted that many care farms prefer to refer to attendees as 'participants', 'service users' or 'volunteers'. The term 'client' was chosen in order to avoid confusion with 'volunteer' which in this study represents volunteer care farm staff.

#### *6.2.1 About the Care Farms*

This section contains information about the care farms, including:

- number and size of farms
- geographical location
- type of enterprises and livestock



- Type of site and organisational status
- sources and proportions of funding

A total of 76 care farms returned questionnaires to the University of Essex and were then sorted due to differing farm characteristics into 3 broad categories: i) city farms, ii) farms and iii) farms linked to external institutions or charities (including school farms, prison farms, therapeutic communities, hospital farms etc.).

Figure 10. Location map of 76 UK care farms in the survey.



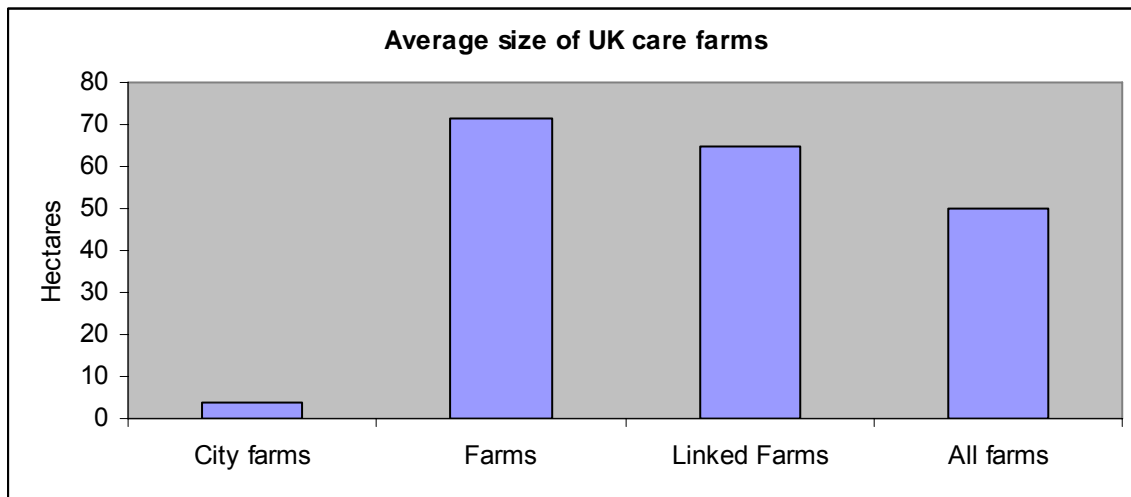
The 76 farms in the survey to date include 19 city farms, 16 independent farms and 41 farms linked to external institutions or charities.

Care farms who took part in this study are located mainly in England but also in Scotland and Wales. In England currently there appears to be a concentration of care farms in the centre of the country from Gloucestershire, through the West Midlands up to North Yorkshire. Figure 10 shows the locations of the 76 care farms in this survey.

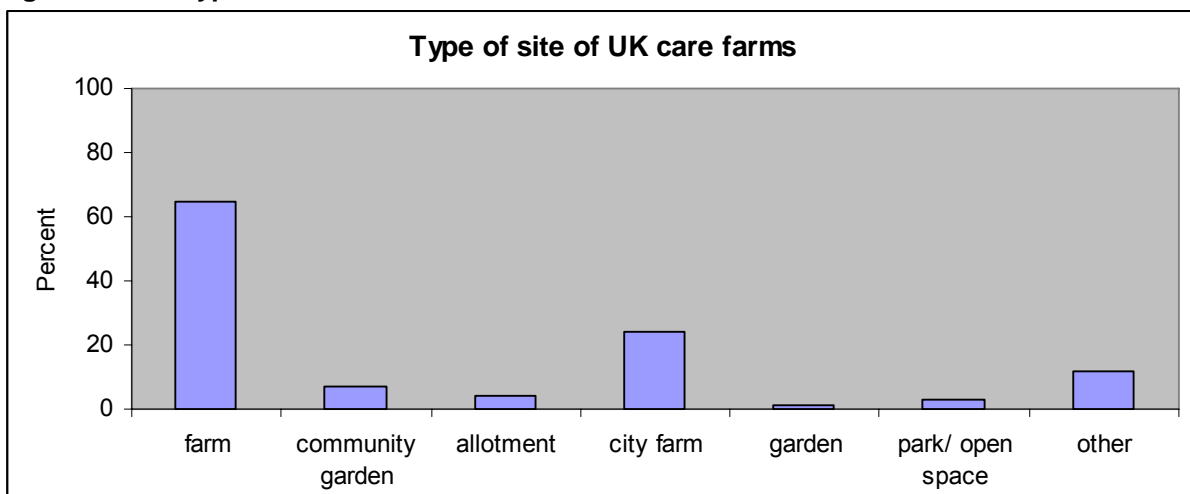
The size of care farms varies between 0.3 hectares (ha) to 650 ha with the average farm size at 49.9 ha. The average farm size varies between the 3 broad categories of farm with city farms having the smallest average area at 3.8 ha, private farms having the largest average area at 71.5 ha and linked farms at 64.8 ha (see Figure 11).

Care farmers in the survey were asked to describe their site type from a range of options, 65% of UK care farmers specify their site as a farm, 24% as a city farm and 12% as 'other' (as seen in Figure 12.). School farm, college campus, education centre and croft are amongst the site types specified by respondents as constituting 'other'.

**Figure 11. Average size of UK care farms**



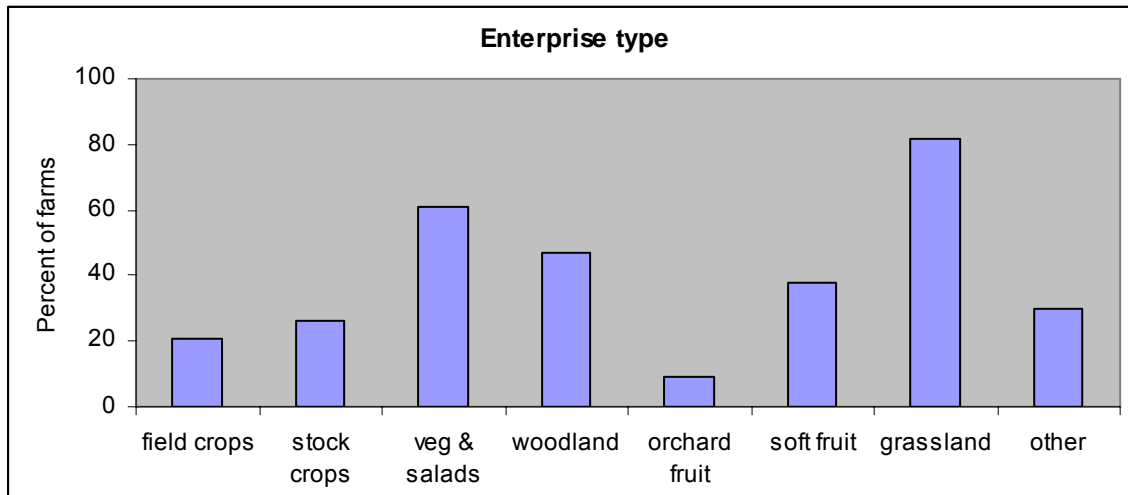
**Figure 12. Site type of care farms**



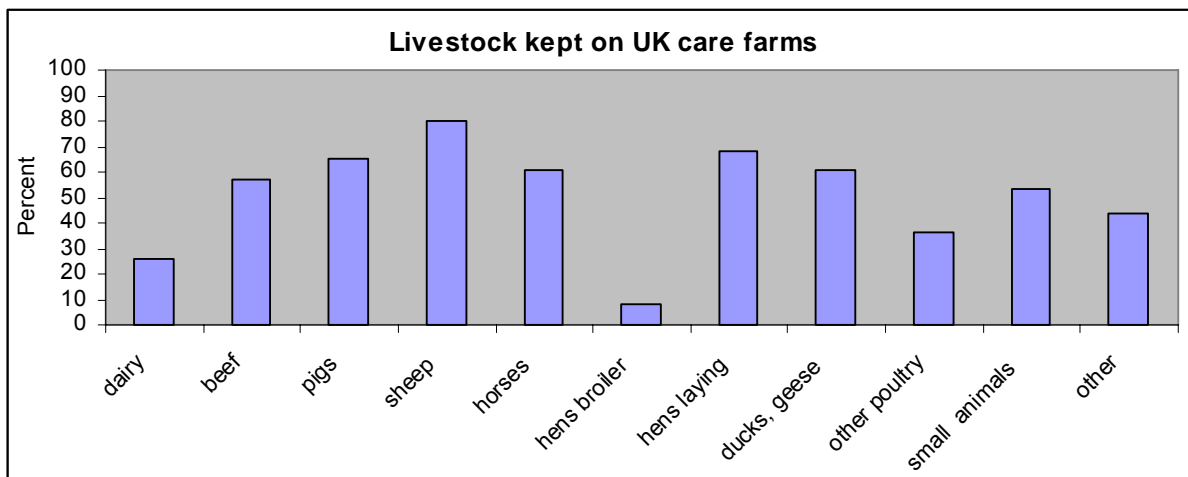
The majority of care farms all have a mix of field enterprises and livestock, with 82% of farms having grazing land, land for vegetable and salad crops (61%) and woodland (47%) (see Figure 13).

Care farms generally have a variety of livestock on their sites, with the most popular livestock types being sheep (80% of farms), laying hens (68%) and pigs (65%). Several of the farms linked with institutions or charities farms also have more unusual animals on their holdings including alpacas, llamas, marmosets and an emu for example. Figure 14 shows the livestock type by the percentage of farms.

**Figure 13. Land enterprise type on UK care farms**



**Figure 14. Livestock type on UK care farms**



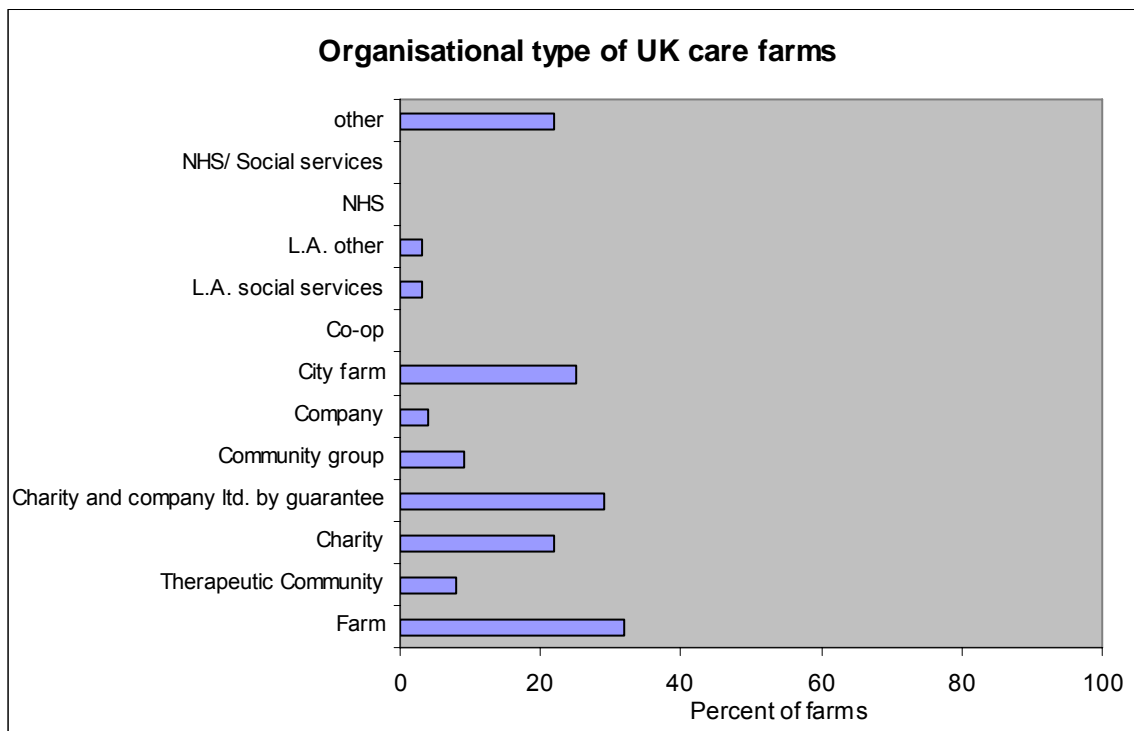
The length of time that care farms have been running in the UK varied widely, ranging from 1 year to 37 years, with an average of 14 years. There were slight variations between the 3 sorts of farm with the average length of time care farming being 19yrs at city farms, 10 yrs at farms and 13yrs at 'linked' farms.

Farmers were then asked to classify the type of organisational structure of their care farm. 32% of farmers describe their organisation type as a farm, 25% as a city farm, 22% as a

charity and 29% as a 'charity and company limited by guarantee' (see Figure 15 for more details).

There are as expected differences in organisational type between the 3 groups of care farms. All city farmers describe their organisational type as a city farm (100%) but 26% are also defined as 'charity and company limited by guarantee'. Of the 16 private type farms, 69% described their organisation type as farms, 25% as charities and 13% as 'charity and company limited by guarantee'. Out of the 41 farms linked to other organisations or institutions, 37% describe themselves as a 'charity and company limited by guarantee', 27% as farms and 24% as charities.

**Figure 15. Organisational type**



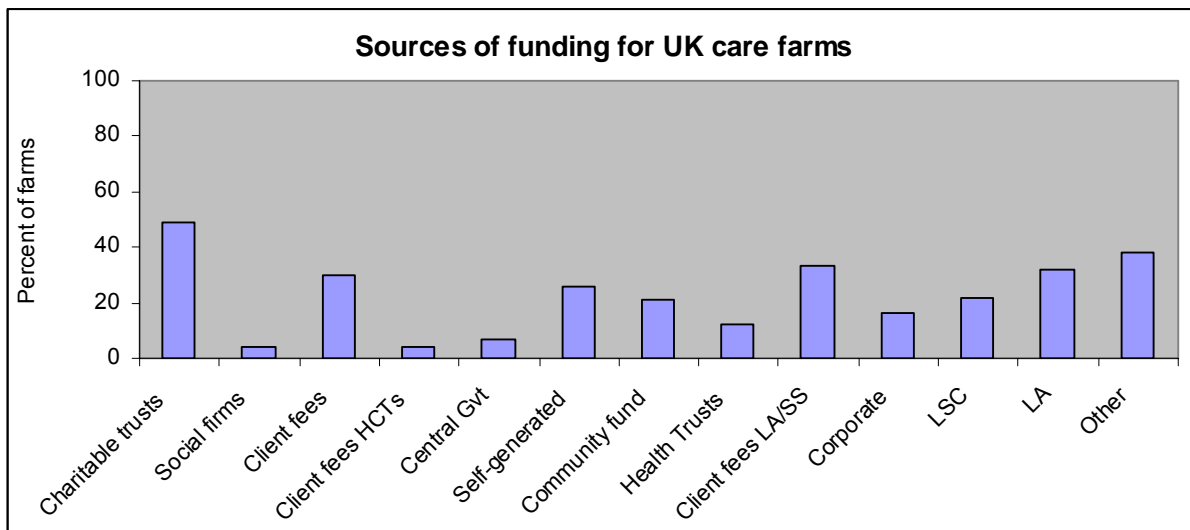
Funding sources for care farms also vary extensively. Nearly half of the care farms surveyed (49%) receive some funding from charitable trusts, 38% receive some funding from other sources, and 33% receive client fees from the local authority (see Figures 16 and 17). Other funding sources specified by UK care farmers include:

- Big Lottery Fund
- public donations
- trading activities
- venue hire
- gift aid
- rent from residents
- European Social Fund
- Local Housing Authority
- restricted grants

Again there are some differences in funding sources between the 3 groups of care farms (as shown in Figure 17):

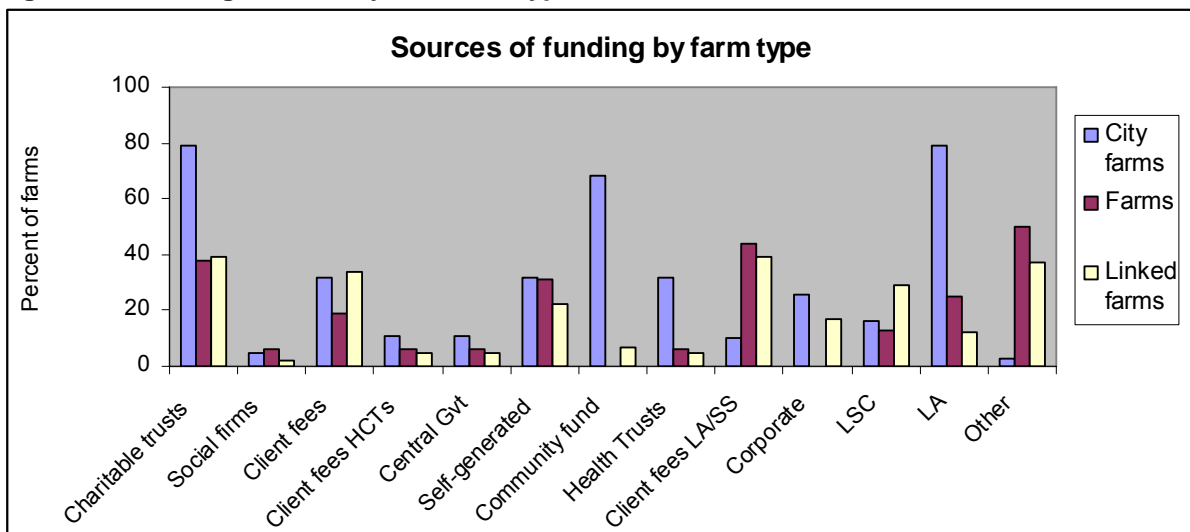
- i) city farms - 80% of farms have some funding from local authorities, 80% from charitable trusts and 68% of farms receive some funding from Community Funds.
- ii) private farms - 50% receive some funding from 'other' sources, 44% from client fees paid for by the local authority and 38% of farms receive funding from charitable trusts
- iii) farms linked to external institutions or charities - 39% of farms obtain some funds from charitable trusts, 39% from client fees paid for by the local authority and 37% of farms receive funds from 'other' sources.

**Figure 16. Funding sources of care farms**



**Notes:** Client fees = direct payment by clients; Client fees HCT = client fees paid by Health Care Trusts; Health Trusts = paid by Health Care Trusts other than client fees; Client fees LA/SS = client fees paid by local authorities or social services; LSC = Learning and Skills Council; LA = paid for by Local Authority - other than client fees.

**Figure 17. Funding sources by care farm type**

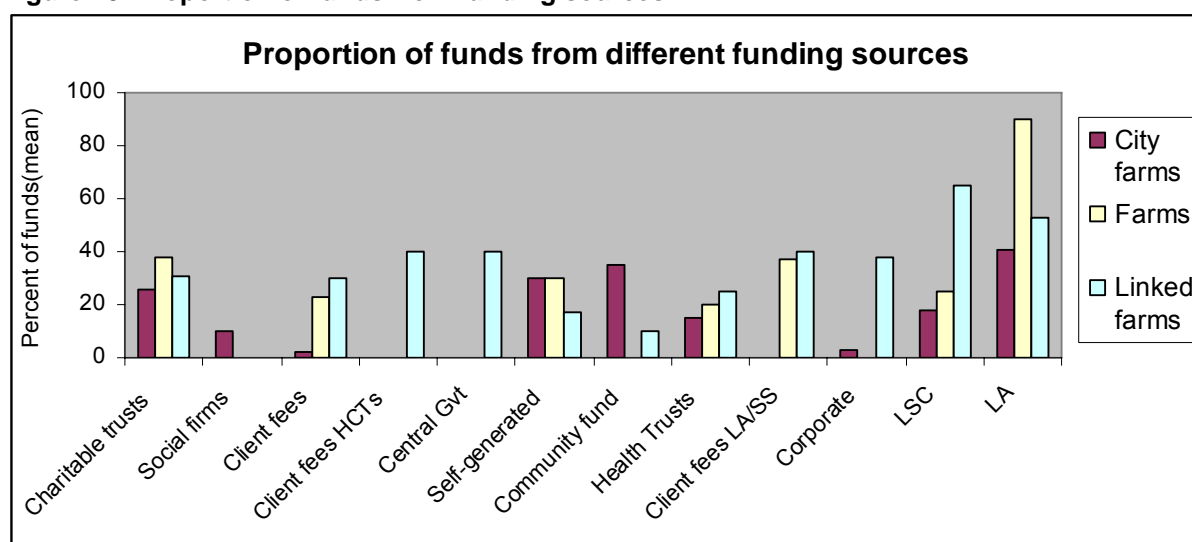


**Notes:** Client fees = direct payment by clients; Client fees HCT = client fees paid by Health Care Trusts; Health Trusts = paid by Health Care Trusts other than client fees; Client fees LA/SS = client fees paid by local authorities or social services; LSC = Learning and Skills Council; LA = paid for by Local Authority - other than client fees.

Care farmers were also asked to indicate, where possible, the proportion of funds from each source. The results are shown in Figure 18. However, as only 22 out of the 76 farmers gave us this information, these results are likely to be more of an indication rather than the rule.

There is some variation between the 3 types of care farm with i) city farms receiving an average of 41% from local authorities and an average of a 20-30% of their funds each from Community Funds, self-generated means and charitable trusts; ii) farms receiving an average of approximately 90% of funds from local authorities, 38% from charitable trusts and 37% from client fees paid for by the local authority or social services; and iii) linked farms appeared to receive funding from a more diverse range of funding sources, but with an average of 65% from the Learning and Skills Council, 53% from local authorities and approximately and average of 40% each from client fees paid for by the local authority or social services, central government and client fees paid for by health Care Trusts.

**Figure 18. Proportion of funds from funding sources**



**Notes:** Client fees = direct payment by clients; Client fees HCT = client fees paid by Health Care Trusts; Health Trusts = paid by Health Care Trusts other than client fees; Client fees LA/SS = client fees paid by local authorities or social services; LSC = Learning and Skills Council; LA = paid for by Local Authority - other than client fees.

### 6.2.2 About the care farmers and their staff

This section contains information about care farmers and their staff and includes:

- motivations for starting a care farm
- number of staff employed on the farm
- qualifications held by care farmers and their staff

Farmers were asked about their initial motivations for becoming a care farm. Answers were of course varied (depending on the context of the farm) but the most frequently stated reasons include:

- to make a difference,
- to extend a service,
- to give opportunity to vulnerable or disadvantaged groups
- to provide a connection to nature

Some of the myriad of different reasons for becoming a care farmer are highlighted in Box 4.

**Box 4. Motivations for setting up a care farm**

*“To try and create a better society”*

*“We get approached by many residential care homes & day centres for adults with physical and mental disabilities to provide some meaningful tasks on the Farm for those people who are interested in working outdoors and/or with animals.”*

*“A need to try and make a difference to children’s lives and futures”*

*“To pass on my knowledge to others who would not normally have a chance to become involved with livestock/ farming”*

*“To demonstrate a viable farm diversification that was not removed from farming, but completely linked with it. To address the ever growing urban-rural divide by reconnecting disaffected youth with their roots and basic principles of living”*

*“We have a son with severe learning difficulties”*

*“I was asked to help with the virtual school project, engaging challenging teenagers in seasonal projects that would improve their self esteem”*

*“Teacher & farmer, so teach rural science on farm. Facilities no longer available at school.”*

*“We have always welcomed people in need of space to our farm. I teach young people with autism, then my head teacher asked me to have group of the most severe students here when they were displaced from a nature reserve during foot & mouth. It proved so successful, in that they were retaining skills from year to year & learning team work & reducing behaviour difficulties, that she asked me to have another group”*

*“The school farm is attached to a mainstream 11-16 Comprehensive School. The farm was established to provide vocational training as part of the school in the early 70s at a time when students were leaving and getting good jobs in agriculture.”*

*“Set up as a therapy centre using agricultural and domestic animals, equines and horticulture therapy.”*

*“Need for a provision for young homeless men became apparent to a Baptist pastor and some church members. Opened a residential home for men and the farm was there to provide daytime therapeutic activities for them”*

*“I had observed the positive influence that working with plants/animals can have on the disaffected with particular regards to self-esteem.”*

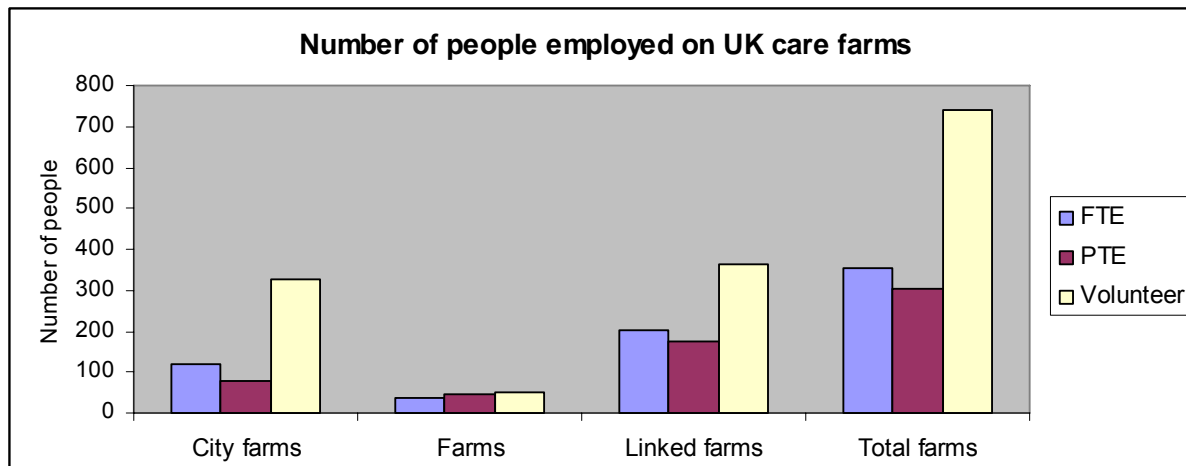
**Table 4. Average numbers of staff per care farm**

Care farm type	FTE staff	PTE staff	Volunteers
<b>Total numbers of staff per care farm group</b>			
City farm	118	78	327
Farm	36	48	51
Farm linked to other organisations	201	176	363
All care farms	355	302	741
<b>Average number of staff per care farm</b>			
City farm	7	5	20
Farm	3	3	5
Farm linked to other organisations	6	5	10
All care farms	5	5	12

A total of 355 full-time staff and 302 part-time staff are employed by the 76 care farms in the survey (657 paid staff in total) together with 741 volunteers (Figure 19 and Table 4).

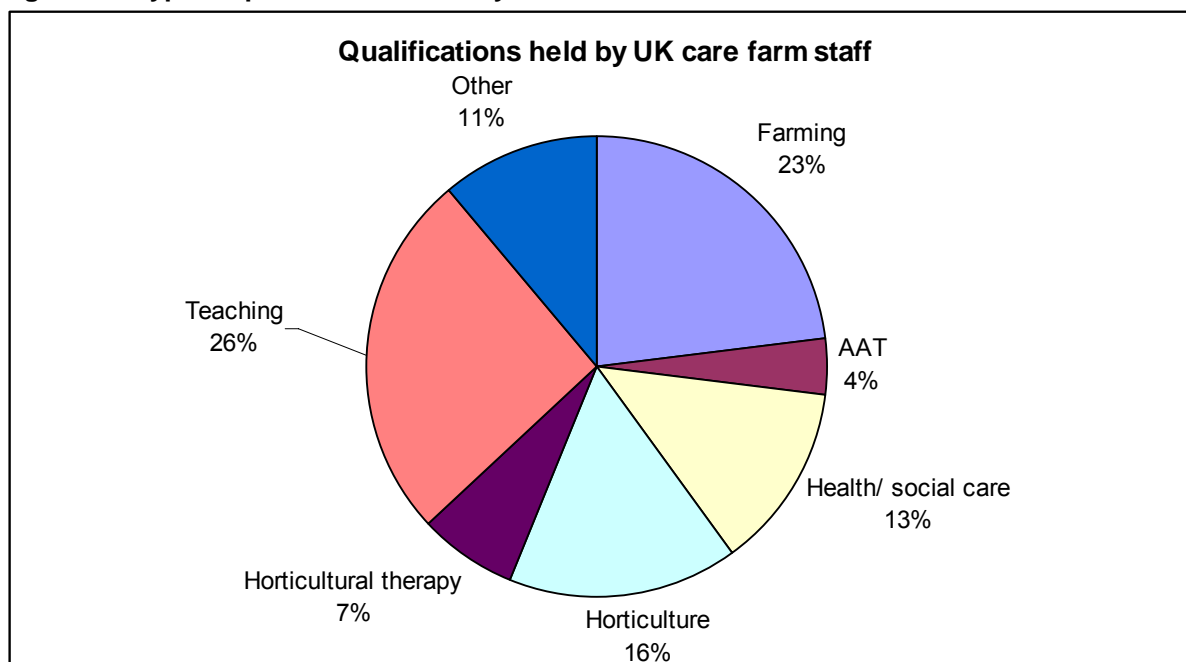
Average numbers of staff per type of care farm are also represented in Table 4. City farms and farms linked to other institutions or charities tend to employ more staff per farm than on the privately-run farms and have the highest numbers of volunteer staff.

**Figure 19. Number of staff employed on UK care farms**



The type of formal qualifications held by care farm staff varies but 72% of farms have staff with teaching qualifications, 63% of farms have staff with farming qualifications, 43% of farms have staff with horticulture qualifications and 35% of farms have staff with health and social care qualifications. Proportions of qualification types of UK care farm staff can be seen in Figure 20.

**Figure 20. Type of qualifications held by care farm staff**





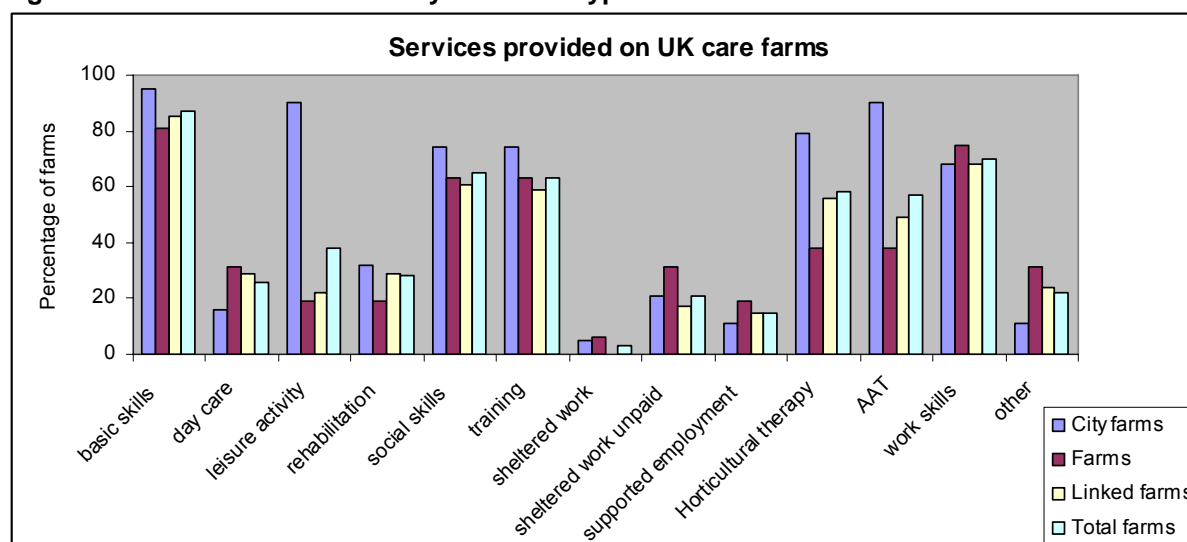
### 6.2.3 About the services provided on care farms and their cost

This section contains information about the services provided on UK care farms and their cost, including:

- details of services provided
- duration of care farm sessions
- proportion of care farms who offer residential care
- how many days per week are spent care farming
- fees charged for services provided

The services provided by care farms in our survey are varied, but overall the most common are the development of basic skills (87% of farms), of work skills (70% of farms), of social skills (65% of farms) and some form of accredited training or education (63% of farms). Full details can be seen in Figure 21 which shows the breakdown of services provided by care farm type.

**Figure 21. Provision of services by care farm type.**



**Notes:** training = accredited training such as NVQ etc; AAT = Animal Assisted Therapy; work skills = work skills training

The duration of care farm sessions vary from a 2 hour session, a half day, or on the farm for the whole day. Alternatively some care farms offer care farming every day for a week or for a full-time course of care for a specified number of weeks. The most common length of time for a session was for one day (between 6-8 hours) however, the average length of time for a session varied between 5 hours on city farms, 7 hours on farms and 9 hours on linked farms

Of the care farms in the UK survey, the majority do not offer residential care but (33%) of care farms are residential. These residential care farms are predominantly care farms linked to external institutions or charities. The 25 farms that offer residential care represent 10% of city farms (n=2) 10% of farms 19% (n=3) and 49% of care farms linked to external institutions or charities (20 farms).

The numbers of days a week that care farms provide green care ranges from 1 to 7, with 5 days per week being the most common. A third of care farms in the UK are open 5 days a week and just over a third are open 7 days a week. City farms provide green care services

on average 6 days a week, private farms average 4 days a week and linked farms average 5 days a week.

Perhaps the biggest variation in the survey features the fees charged by care farms for green care services. These fees vary widely, both in terms of amount and by how they are charged (i.e. per person, per day, per group, for farm facilities etc.). Some care farms are providing services for no charge at all, whilst fees on other on farms range from £25–£100 per day (most frequently around £30 per day). Other care farms charge £60 for groups of 12; others charge nothing for open access individually but £15 per day for organisations. Some care farmers stated that they charge £8 per hour per person, others £30 per hour for use of farm facilities and others charge £45 per hour per group of 8 students. More variety in fees for services provided on care farms include £19 per client from social services, £160 per child per week and £52 per day unit cost.

#### 6.2.4 About the people attending Care Farms

This section contains information about the people attending care farms in the UK and includes:

- number of care farm clients a week
- variety of client groups that attend UK care farms
- different referral agencies who refer clients to care farms

The total number of care farm users in the UK is around 5869 per week. However, there is much variation between the levels of usage at different types of care farm. As expected more people attend city farms as care farms per week with an average of around 230 users attending each week. This compares with an average of 46 clients per week at farms linked to external institutions or charities and 29 users per week at farms. More details on the number of care farm users per week are shown in Table 5.

**Table 5. Number of care farm users a week**

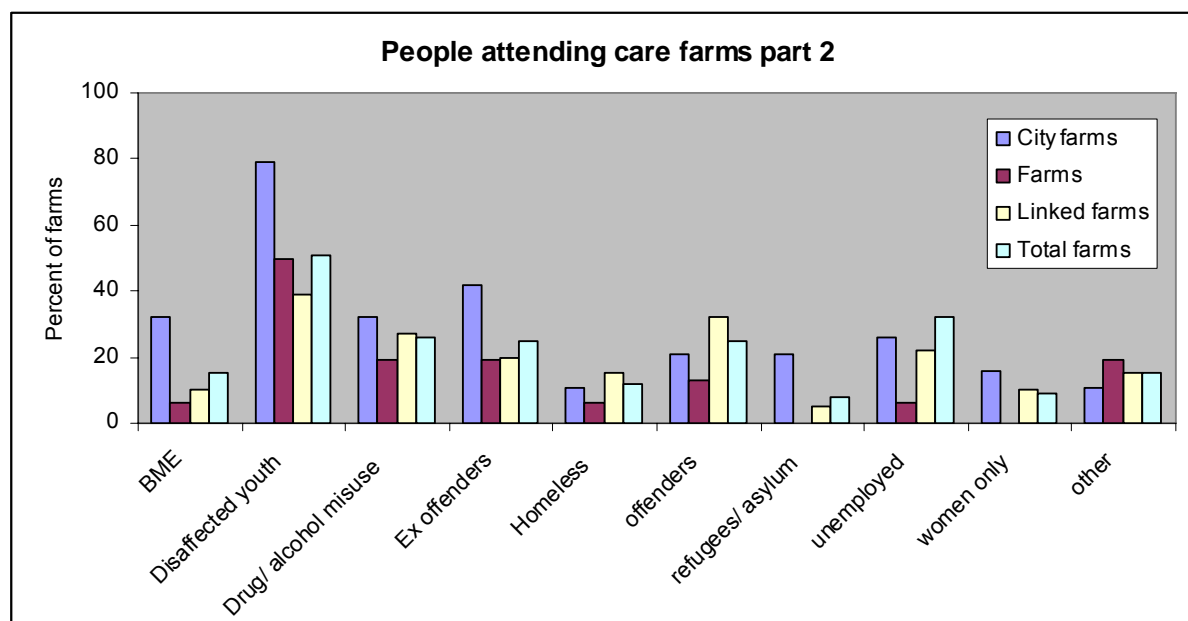
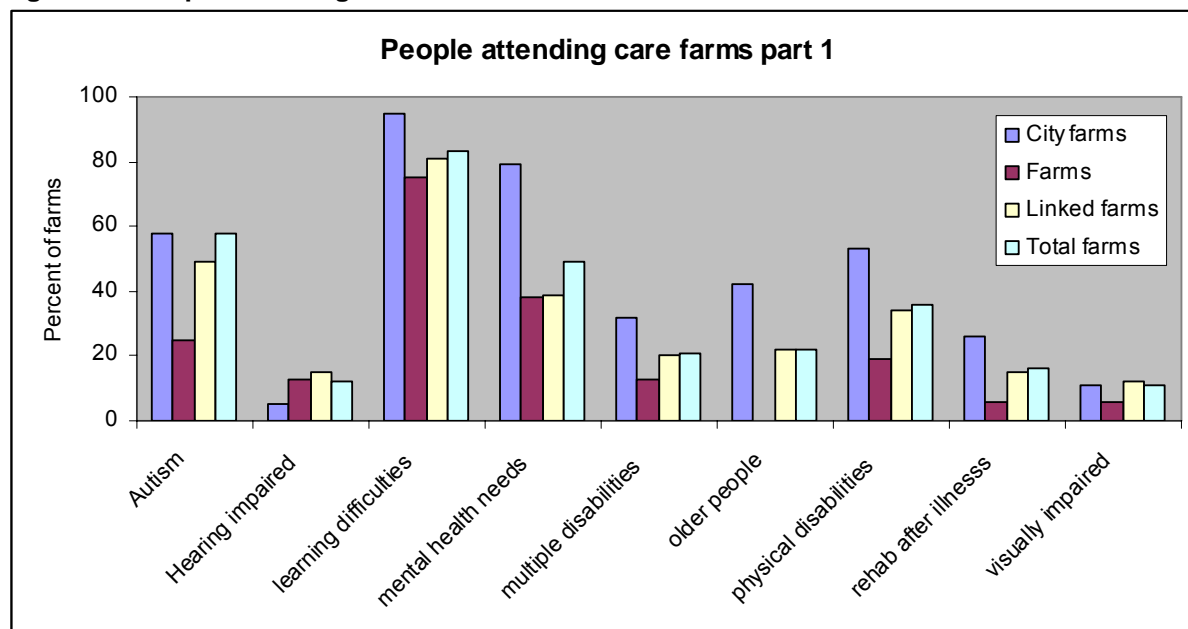
Care farm type	Total no. of users a week	Mean no. of users a week per farm	Range
City farm	3677	230	12 - 1000
Farm	465	29	2 - 70
Farm linked to other organisations	1736	46	4 - 30
All care farms	5869	84	2 - 1000

**Table 6. Most common client groups catered for on UK care farms.**

Care farm type	1 <sup>st</sup> most common client group (% of farms)	2 <sup>nd</sup> most common client group (% of farms)	3 <sup>rd</sup> most common client group (% of farms)
City farm	Learning difficulties (95%)	Disaffected youth (79%)	People suffering from mental ill-health (79%)
Farm	Learning difficulties (75%)	Disaffected youth (50%)	People suffering from mental ill-health (38%)
Farm linked to other organisations	Learning difficulties (81%)	People with autism (49%)	People suffering from mental ill-health and Disaffected youth (39% each)
All care farms	Learning difficulties (83%)	Disaffected youth (51%)	People suffering from mental ill-health (49%)

There is much variety in the client groups attending care farms in the UK. The majority (83%) of care farms cater for people with learning difficulties, over half (51% of farms) provide a service for disaffected young people and 49% of farms for people with mental health needs. The majority of farms cater for mixed groups of clients. The trends for the three categories of care farm largely mirrored these overall trends with the exception of linked farms, where 'people with autism' was the second most common client group (see Figure 22 and Table 6).

Figure 22. People attending care farms in the UK

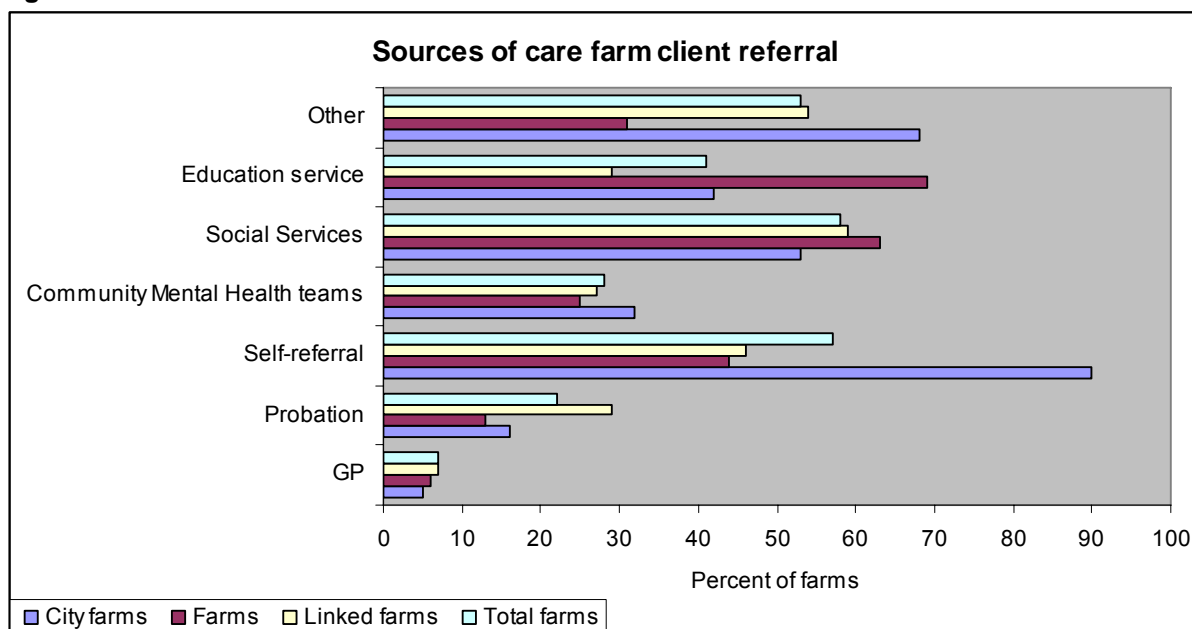


There is much variation between the types of organisation which refer clients to UK care farms. However the majority of farms have clients referred to them by social services (58% of farms), have clients who are self-referred (57%) or receive clients from 'other' sources (53% of farms). The sources of referral specified by farmers as constituting 'other' sources include:

- Connexions
- Job Centre Plus
- private care providers
- HM Prison Service
- Skills for Work programme
- Youth Offending Teams
- Primary Care Trusts
- Community drug teams
- private secure care firms
- residential establishments
- volunteer centres
- community organisations
- churches
- MENCAP
- housing associations
- individuals on Direct Payments
- friends and family of those in need of help

41% of farms receive clients through education authorities or other education service providers (including schools, schools for children with special needs, Further Education colleges, Pupil Referral Units, Behavioural Support Units etc). Community mental health teams and the probation service refer clients to around a quarter of all care farms each. More details about the sources of care farm client referral are shown in Figure 23.

**Figure 23. Sources of care farm client referral**



The only differences between the different types of care farm regarding sources of client referral are i) more of the city farms receive clients who are self-referred (90%) than the other types of care farm and ii) more privately-run farms receive clients from education services (69%) than the other types of care farm.

### 6.2.5 Successes and Benefits

This section is about the successes seen at care farms and the benefits to clients from attending a care farm including:

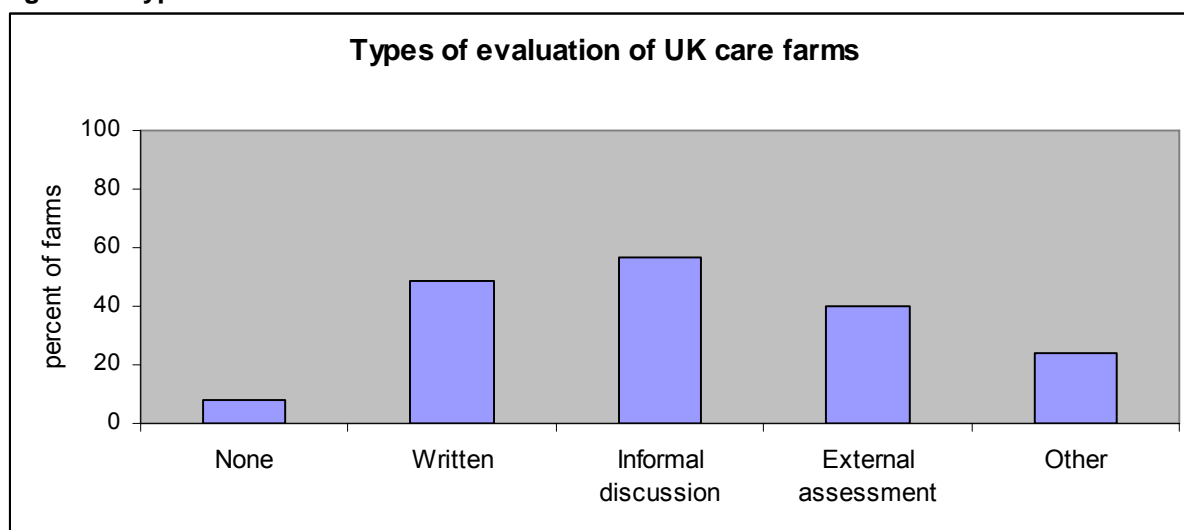
- evaluation of UK care farms
- successes of UK care farms
- physical, mental and social benefits to clients
- what is special about care farming from the care farmers' perspective

We asked care farmers in the UK about the forms of evaluation that they currently use on their farms to evaluate the degree of success that the green care has on clients. The vast majority (70 out of the 76 care farms) do carry out some kind of evaluation on the farm. The 3 most common methods of evaluation are informal discussions (57% of farms), written evaluation (49% of farms) and external assessment (40% of farms) as shown in Figure 24. Other forms of evaluation specified by farmers include photographic evaluations, evaluation events, monitoring files and committee meetings, as well as external bodies such as Commission for Social Care Inspections (CSCI), Ofsted inspections, Riding for the Disabled Association inspections.

Differences in evaluation methods between the 3 groups of care farms include

- i) All of the city farms and farms carry out evaluation and only 6 of linked farms do not evaluate.
- ii) 80% of city farms evaluate by informal discussion. This is higher than for the other two groups (farms 50% and linked farms 49%)
- iii) only 21% of city farms have external evaluation compared to 50% of farms and 44% of linked farms
- iv) approximately 50% of all farms conduct written evaluation
- v) a higher number of privately-run farms (38%) carry out 'other' forms of evaluation compared to city farms (21%) and linked farms (20%)

**Figure 24 Types of evaluation on UK care farms**



UK care farmers were also asked to describe what they feel have been the successes of their care farms. The perceived successes vary widely between individual care farms but 3 broad themes have emerged:

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

Examples of the some of the comments received from farmers, outlining the successes of their care farms are shown in Box 5.

**Box 5. Some successes of UK care farms**

***“Stopping antisocial behaviour by at least 50% in the area”***

***“Worked with a wide range of age ranges & still get calls looking to place people.”***

***“Providing excluded members of society with the opportunity to work with others in a caring environment where they can benefit from the therapeutic environment of working with plants and animals. We have had many individual successes with clients who have had their lives changed by their involvement on our farm.”***

***“See people improving life skills and gaining a qualification”***

***“In the case of our community farm this work is one of the reasons that we came into existence in the first place. On a personal level working within this field allows me to feel that the job I do is important and making a difference.”***

***“To see people with learning difficulties develop and their characters open up so they become valued members of the community “***

***“Seeing real benefits to real people”***

***“We manage to provide so many placements safely”***

***“Giving kids in care the will to live life and open their horizons. Giving these kids belief in themselves, that with application, they can achieve much”***

***“Very positive feedback from students. Better school attendance, success of past students in entering training schemes on leaving school”***

***“This success is now being noted by local care managers & community nurses who are starting to send us new clients.”***

***“To see others benefit from our lovely farm that we ourselves so enjoy. It is a privilege to see the progress created in others’ lives, simply by sharing the farm livestock & environment with them.”***

***“Becoming recognised as a good placement provider for students and other volunteers – some with special needs. Having an increased number of visitors coming to the farm and becoming a well-known part of the community.”***

***“Pupils with severe learning difficulties achieving foundation level vocational qualifications”***

***“Getting groups of different service users to support each other”***

***“Several hundred young people and adults who were disadvantaged in some way have been given the opportunity to fulfil their potential and escape the day centre or failing mainstream education trap. A by product is that we have brought over £1 million over the last 7 years to the local rural economy and given over 25 people jobs”***

***“Successful rehabilitation of long term addicts/alcoholics”***

***“Very small percentage of people re-offending or returning to homelessness.”***

***“Seeing people get better, grow and develop and use our project as a stepping stone - some with qualifications they never expected to have”***

***“Development of good work habits”***

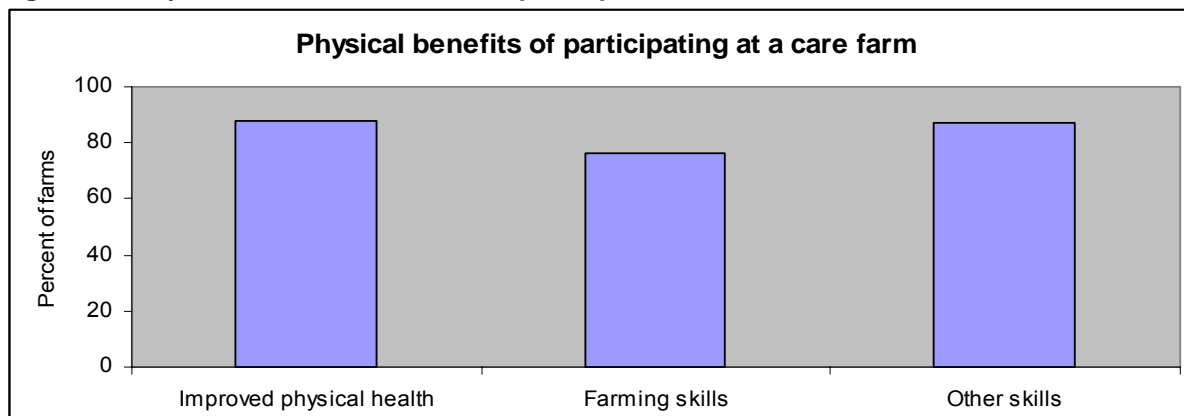
***“Our work in an inner city community setting has always focussed on disadvantaged individuals including people with Learning Disabilities, mental health problems, long term unemployment, young people with challenging behaviour and more. Using animals and plants has been a worthwhile tool for engaging and providing therapeutic support”***

Care farmers were then asked to describe the benefits that they felt participants gained from attending their care farms. These perceived benefits to participants of UK care farms have been split into 3 categories: those affecting physical health or physical attributes; mental health benefits; and social benefits.

The majority of all care farmers described that the physical benefits to clients include improvements to physical health (88% of farms), other skills (87% of farms) and farming

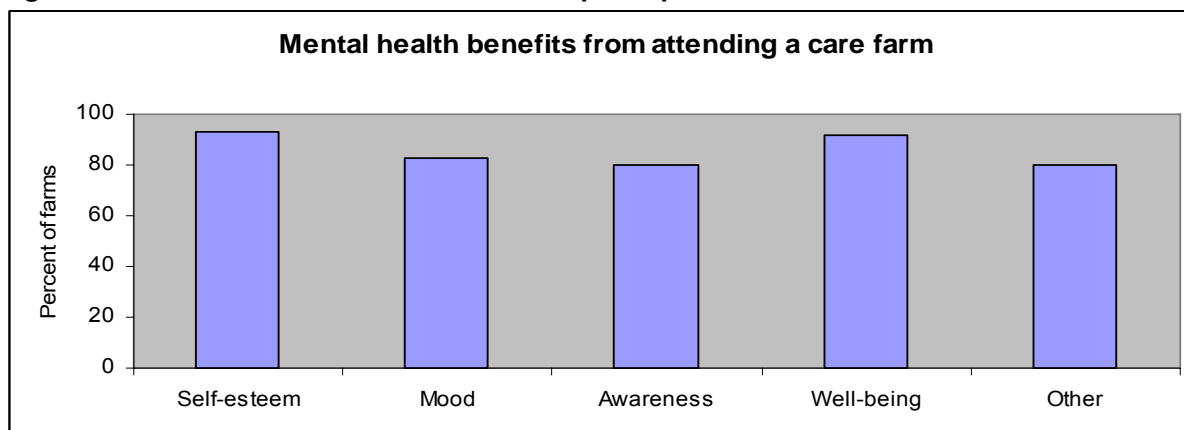
skills (76% of farms) as shown in Figure 25. Physical benefits specified in the 'other' category that were mentioned by farmers include: development of dexterity, motor function horticultural skills, riding ability and practical skills, growing own food for health, altering habits (no alcohol or drug use) and time management skills. The trends for the 3 different types of care farm showed a similar pattern.

**Figure 25. Physical benefits to care farm participants**



The mental health benefits clients receive from attending the care farm as specified by the care farmers are shown in Figure 26 and feature improved self-esteem (93% of farms), improved well-being (92% of farms) and improvement of mood (83% of farms). Other benefits specified included an increase in self-confidence, enhanced confidence or trust in other people and calmness.

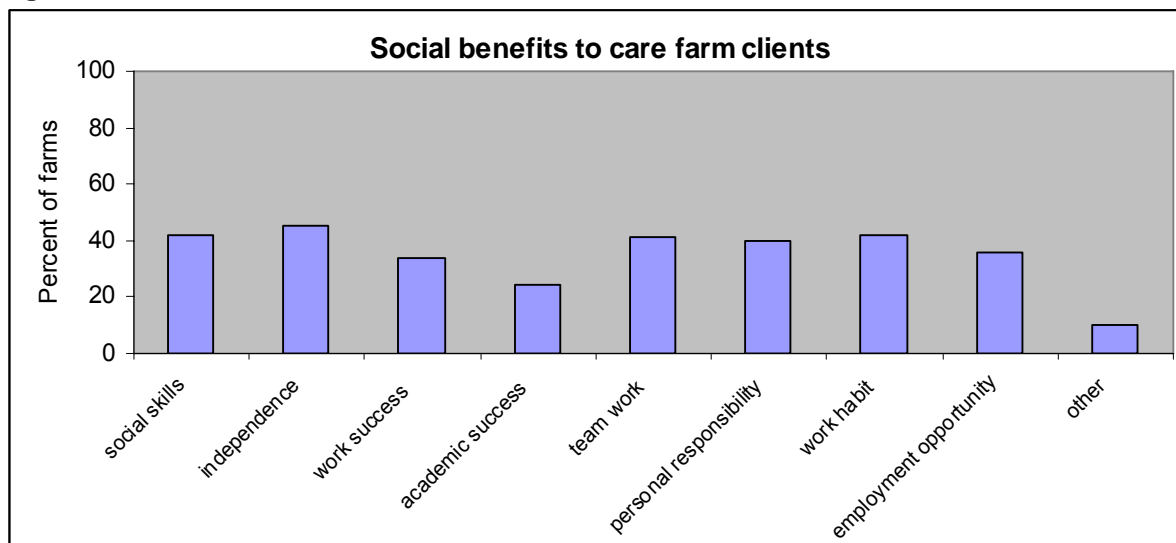
**Figure 26. Mental health benefits to care farm participants**



Social benefits reported by farmers are independence (45% of farms), formation of a work habit (42%), the development of social skills (42%) and personal responsibility (40%) as shown in Figure 27. Other social benefits mentioned by care farmers include an improvement in discipline, responsibility, flexible attitude, initiative, motivation, commitment and health awareness.

Care farmers who responded to the survey were then asked to tell us what makes care farming special to them. A wealth of anecdotes and stories of success were forthcoming and some are shown in Box 6.

Figure 27. Social benefits to care farm clients



#### Box 6. What is special about care farming?

***“Care farming is special for us because we see the benefits to individuals who sometimes come to us with a long history of social exclusion, complex mental health issues and learning disabilities. To see these people thrive and develop within our project and sometimes move on to employment is very gratifying”***

***“Farm work and animals in particular are a great way to break down barriers and outdoor work can be of particular therapeutic benefit.”***

***“Several hundred young people and adults who were disadvantaged in some way have been given the opportunity to fulfil their potential and escape the day centre or failing mainstream education trap”***

***“To see others benefit from our lovely farm that we ourselves so enjoy. It is a privilege to see the progress created in others’ lives, simply by sharing the farm livestock & environment with them”***

***“Nice to see farming putting a smile on someone’s face”***

***“I enjoy watching people grow as they come over time into more self dependent & aware individuals.”***

***“It puts people in the landscape with purpose and creates a social environment.”***

***“Seeing the quiet and shy/nervous students and volunteers doing well and developing confidence in themselves and with their relationships with other people. Also that they are learning how to respect and care properly for the animals they come to help care for”***

***“Making a difference to the lives of kids who would otherwise have dropped out of school completely or got into further trouble.”***

***“When parents thank you for making the difference to their kids”***

***“Care farming can help a wide range of people with differing needs, and the therapeutic value of caring for livestock is wonderful to see in operation”***

***“People who find it very difficult to relate to other people or have suffered abuse can trust animals more easily and also take responsibility in caring for them.”***

***“A real farm experience to benefit a large number of people who want to learn and experience practical work opportunities and are able to really contribute to the day to day management of the farm”***

***“Not getting stuck with one thing, being challenged on a daily basis. Seeing happy people doing sensible and needed work”***

***“I have never come across an intervention that is so successful in helping broken and emotionally damaged individuals to rebuild their lives.”***



## 6.2.6 Challenges

This section is about the challenges facing care farmers in the UK and the assistance and support that farmers would like from the National Care Farming Initiative (UK).

The key challenges faced by UK care farmers are largely due to funding and resources, a lack of perceived legitimacy, health and safety requirements and issues related to insurance and tax. Around 80% of care farmers told us that funding is the biggest challenge facing them, either in terms of sourcing funding, accessing continuous and long-term funding or to justify to referring bodies that green care services on care farms need to be costed and paid for. A selection of the comments highlighting the challenges faced by those care farming in the UK are shown in Box 7.

### Box 7. Challenges facing UK care farmers

***“How to prove to the politicians and finance departments that what we do is valuable. How can we measure the above benefits without drowning in a sea of bureaucracy”***

***“We need enough qualified staff, to enable the farm to grow to encompass the number of people who would like /benefit from being here”.***

***“I feel constantly stretched by the demands of running a business as well as caring for our students. The key areas seem to be – Health & Safety, accountancy & tax, employment issues, fund raising and staffing”***

***“Having enough work experience and employment opportunities, the amount of work that we have available limits the number of young people we are able to accept on the farm”***

***“Not being taken seriously by statutory agencies and lack of or availability of funds (or a dedicated fundraiser)”***

***“Developing a positive and widely-known ‘trade-mark’ style and image, convincing government and the ‘care’ world that our approach is an effective and important one for social well-being, - and accessing secure supporting funding from what have been traditionally education, social welfare and health budgets.”***

***“The biggest challenge by far has been funding. I have had to fight tooth and nail for the facilities we have and although we are gaining the recognition we deserve, it is still difficult to promote the values of such an initiative to those who control the finances. It is also difficult to convey in a concise way the vast array of benefits the young people get from working in such programmes.”***

***“Funding the full cost of the service”***

Care farmers were also asked how they thought the NCFI(UK) could help or support them. The answers are again varied, however main requests include:

- Help with sourcing funding
- Advice on insurance and relations with local government
- Providing exemplar risk assessments
- Publicity

Other requests included: i) evaluation models; ii) suggested rates per client to charge; iii) training courses relating to care farming; iv) help with benchmarking achievements to get the message across to the politicians; v) a simplified and universal, user-friendly quality assurance system which is recognised nationally; vi) to provide a format for similar initiatives nationwide to communicate successes and developments in their area; and vii) advice on whether to stay as a company or become a charity or social enterprise

All of the comments and requests for support have been forwarded in full to the NCFI(UK).

### 6.3 Summary of results from UK care farm study

- A total of 76 care farms returned questionnaires to the University of Essex and were separated into 3 broad categories: i) city farms, ii) farms and iii) farms linked to external institutions or charities (including school farms, prison farms, therapeutic communities, hospital farms etc.). The 76 farms in the survey include 19 city farms, 16 independent farms and 41 farms linked to external institutions or charities.
- Care farms who took part in this study are located mainly in England but also in Scotland and Wales. The size of care farms varies between 0.3 hectares (ha) to 650 ha and 65% of UK care farmers describe their site as a farm, 24% as a city farm and 12% as 'other' and the majority of care farms all have a mix of field enterprises and livestock. In terms of organisational structure, a third of care farms in the study are farms, 29% are a 'charity and company limited by guarantee', a quarter are city farms and 22% are charities.
- Although the funding sources for care farms varies extensively both between farms and between categories of care farm, nearly half of the care farms surveyed (49%) receive some funding from charitable trusts, 38% receive some funding from other sources, and 33% receive client fees from the local authority. Other funding sources specified by UK care farmers include LSC, Health Care Trusts, Social Services, Community Fund, Big Lottery Fund, public donations, European Social Fund and Local Housing Authorities.
- A total of 355 full-time staff and 302 part-time staff are employed by the 76 care farms in the survey (657 paid staff in total) together with 741 volunteers. City farms and farms linked to other institutions or charities tend to employ more staff per farm than on the privately-run farms and have the highest numbers of volunteer staff. Formal qualifications held by care farm staff again varies but the majority have staff with teaching qualifications (72%) or of farming qualifications (63%) and some have staff with horticulture or health and social care qualifications
- Care farms in the UK offer many different services including the development of basic skills (87% of farms), of work skills (70%), of social skills (65%) and some form of accredited training or education (63%). The duration of care farm sessions vary from a 2 hour session, a half day, or on the farm for the whole day and the majority of care farms provide care for a 5 days a week. The majority of care farms in the UK do not offer residential care but around a third of farms are residential.
- Perhaps the biggest variation seen in the farms surveyed features the fees charged by care farms for green care services. These fees vary widely, both in terms of amount and by how they are charged (i.e. per person, per day, per group, for farm facilities etc.). Some care farms are providing services for no charge at all, whilst fees on other on farms range from £25–£100 per day (most frequently around £30 per day). Some care farmers stated that they charge £8 per hour per person, others £30 per hour for use of farm facilities and others charge £45 per hour per group of 8 students. More variety in fees for services provided on care farms include £19 per client from social services, £160 per child per week and £52 per day unit cost.
- The total number of care farm users in the UK is around 5869 per week. However, there is much variation between the levels of usage at different types of care farm. As expected more people (230) attend city farms per week, an average of 46 clients per week are seen at farms linked to external institutions or charities and an average of 29 users per week attend privately-run farms. There is also much variety in the client

groups attending care farms in the UK (over 19 different groups) and most care farms provide services for a mix of client groups rather than for just one. The majority (83%) of care farms cater for people with learning difficulties, over half (51% of farms) provide a service for disaffected young people and 49% of farms cater for people with mental health needs.

- The majority of care farms have clients referred to them by a range of different sources at the same time including from social services, self-referral or from 'other' sources such as Connexions and Job Centre Plus, private care providers, the prison service, Youth Offending Teams, Primary Care Trusts, community drug teams, individuals on Direct Payments and the voluntary sector. Nearly a half of farms receive clients through education authorities or other education service providers (including schools, schools for children with special needs, Further Education colleges, Pupil Referral Units, Behavioural Support Units etc).
- Care farmers report that the benefits experienced by clients are varied. These perceived benefits have been split into 3 categories: those affecting physical health or physical attributes; mental health benefits; and social benefits. Physical benefits to clients include improvements to physical health and farming skills. Mental health benefits consist of improved self-esteem, improved well-being and improvement of mood with other benefits including an increase in self-confidence, enhanced trust in other people and calmness. Examples of social benefits reported by care farmers are independence, formation of a work habit, the development of social skills and personal responsibility.
- UK care farmers who responded to the survey discussed the perceived successes of their care farms and although they vary widely, three broad themes emerged: i) seeing the effects of care farming on people, making a difference to people's lives; ii) helping the excluded become included into society and/or work; and iii) positive feedback from participants, families and referring bodies alike. Many comments from farmers on what makes care farming special for them were received and examples include: *"Farm work and animals in particular are a great way to break down barriers and outdoor work can be of particular therapeutic benefit";* and *"I have never come across an intervention that is so successful in helping broken and emotionally damaged individuals to rebuild their lives."*
- The key challenges faced by UK care farmers are largely due to funding and resources, a lack of perceived legitimacy, health and safety requirements and issues related to insurance and tax. Around 80% of care farmers told us that funding is the biggest challenge facing them, either in terms of sourcing funding, accessing continuous and long-term funding or to justify to referring bodies that green care services on care farms need to be fully costed and paid for. Care farmers were also asked how they thought the NCFI(UK) could help or support them and main requests include: help with sourcing funding; advice on insurance and health and safety; relations with local government; and publicity.

## 7. Care farming in the UK – The Evidence so far: Mental health benefits

### 7.1 Snapshot health benefit analysis- Methodology

An in-depth analysis of the mental health and well-being benefits to participants derived from spending time on a care farm was conducted in late 2007. Participants from 7 care farms around the country took part in a snapshot health benefit survey to provide some empirical data addressing psychological health and well-being effects. It is hoped that this initial snapshot study will be the first step to building up a body of robust scientific evidence to inform health and social care providers (amongst others) and to support the promotion and spread of care farming in the UK.

Farms were chosen from the three types of care farm, 2 are city farms, 3 are privately-run farms and 2 are farms linked to external institutions or organisations. Farms were chosen with slightly different set-ups, farm sites, participant groups, activities and contexts in order to show the variety of services available. More details of the care farms included in the survey can be found in section 5.5.

A mixed method design incorporating both quantitative data and qualitative narrative was used to collect health benefit data using a composite questionnaire. The questionnaires were administered immediately before and immediately after participants spent time on the care farms, to enable comparisons to be made and to allow us to identify any changes in health parameters as a direct result of exposure to the care farm environment. The questionnaires included internationally recognised, standardised tools which measure participants' levels of self-esteem and mood and qualitative questions were also asked for detailed narrative and more information on farm activities. Participants were asked to complete the questionnaires individually and not to compare or discuss their answers with other participants. The standardised questionnaires included in this snapshot health benefit study are not suitable for completion by children or those with learning difficulties. Questions were answered according to how the participant felt at *that particular moment in time*.

The standardised tools incorporated in order to determine any changes in psychological states derived from time spent on a care farm, measured self-esteem and mood. These were chosen as the scoping study revealed that participation in care farming significantly enhanced self-esteem and mood (see Figure 26 above). Self-esteem was measured before and after the care farm session using the one-page Rosenberg Self-Esteem Scale (RSE)<sup>173</sup>, which is a widely used measure of self-esteem in health psychology.

Mood change was measured before and after the care farm session using the Profile of Mood State questionnaire (POMS)<sup>174</sup>. This is a short form one-page version of the POMS test which has a background of successful use for mood change post-exercise. The POMS subscales measured were anger, confusion, depression, fatigue, tension and vigour. In addition, a Total Mood Disturbance (TMD) score was calculated to denote an overall assessment of emotional state. This method is regularly used as it provides an indicator of overall mood. It involves summing the POMS subscale T-scores of anger, confusion, depression, fatigue and tension and then subtracting the T-score for vigour<sup>175</sup>.

---

<sup>173</sup> Rosenberg 1989

<sup>174</sup> McNair *et al* 1984

<sup>175</sup> McNair *et al.* 1992, p.6

## 7.2 Snapshot health benefit analysis- Results

Participants in this health benefit analysis were clients visiting 7 farms in total: 2 city farms (Wellgate City Farm and Lambourne End Centre); 3 privately-run care farms (The Houghton Project (Houghton Court Farm), Top Barn Training (Top Barn Farm) and Willowdene Farm; and 2 farms linked to external institutions or organisations (Amelia Methodist Trust Farm and BODS)

### 7.2.1 General information

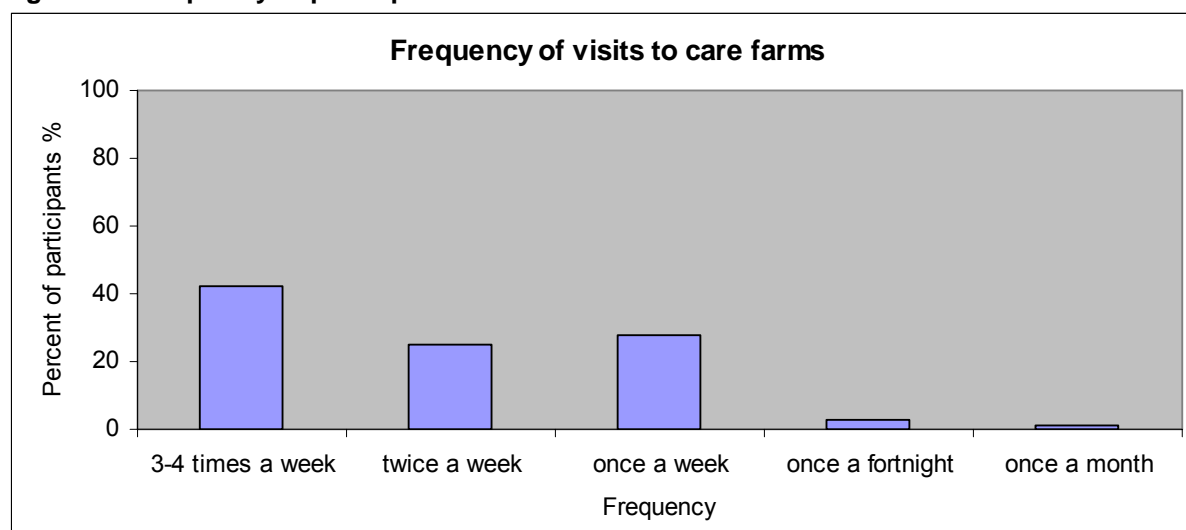
This section includes general information about the participants who took part in the study: gender; age; how long participants spent on farm and the activities undertaken, on the day of the survey; how frequently participants visit the care farm and how long participants have been coming to the care farm. For analysis purposes the general information of participants from all 7 farms have been combined however the differences between farms are highlighted in Appendix B. at the end of the report.

Overall a total of 72 participants took part in the health benefit study, of which 55 (76%) are male and 17 (24%) are female. Ages of participants range from 16 to 65, 44% of the participants are aged between 16-30 years, 41% are aged between 31-50 years and the remaining 15% are aged between 51-65 years.

The main groups of people who took part in the study include people with mental health needs, those who are unemployed, homeless or vulnerably housed, disaffected young people, those recovering from drug and alcohol misuse, older people, offenders, ex-offenders and people recovering from accident or illness.

The length of time that participants had been visiting the care farm varied widely both between and within the farms in the survey but ranged from 1 month up to several years. The majority of participants (95%) visit their care farm at least once a week, as shown in Figure 28. The average time spent on the care farm at each session is 5 ½ hours although in our study it varied between 2-8 hours.

**Figure 28. Frequency of participant visits to care farms**



Participants were asked what activities that had taken part in whilst at the care farms on the day of the survey. Activities varied widely but included:

- cleaned out turkeys and put fresh straw down
- fed the pigs
- planted trees
- mixed animal feeds
- mucked out
- watered pigs and goats
- worked with the donkeys, sheep and horses
- weeding
- clean out stables
- collected eggs
- farm work
- helped to fix things on the farm
- fed and groomed horses
- took a fence down
- milking
- fed and watered cows
- routine feeds
- cleaned tractor

### 7.2.2 Health benefit analysis

Out of the 72 participants who took part in the health benefit study, 19 had been unable to complete all or some part of the mood and self-esteem measures. Consequently their questionnaires were invalidated and could not be included in the analysis. The sample size of the snapshot health benefit analysis was therefore 51 participants, where questionnaires had the mood and self-esteem measures completed in full, with both pre and post data available.

Initially, a one-way between groups ANOVA was conducted to identify if there were any significant differences in the participants' preliminary mood and self-esteem scores between the 7 care farms. This did not reveal any significant findings, indicating that participants' starting levels of self-esteem and mood were comparable across the 7 care farms, thus enabling analysis of all 51 participants as one dataset.

Secondly, paired samples t-tests were conducted to identify any significant changes in starting self-esteem and mood levels and those reported after spending time on the care farm<sup>176</sup>.

#### i) Self Esteem

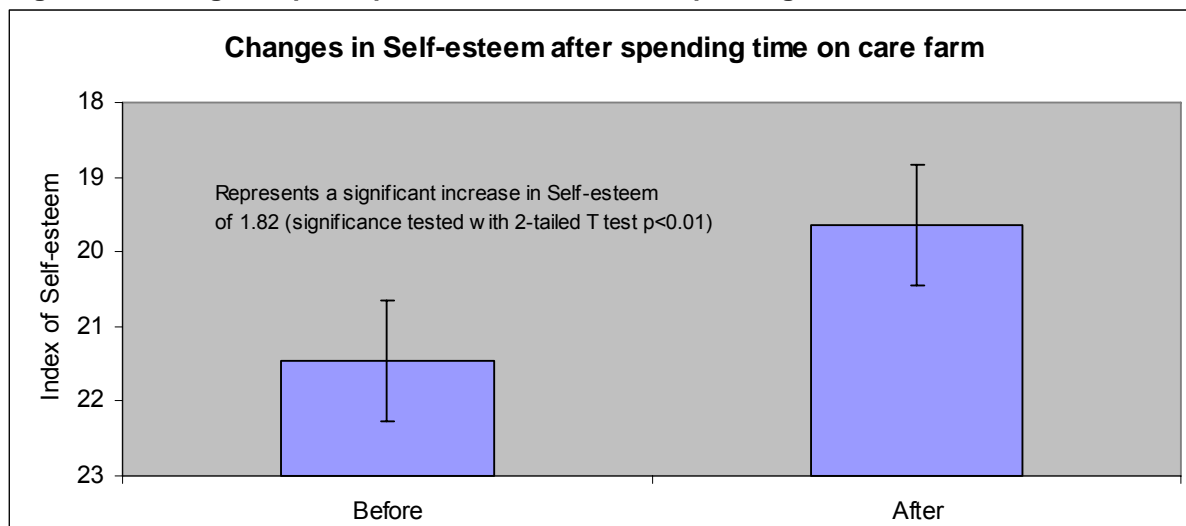
Self-esteem scores using the RSE ranged from a high of 10 to a low of 39 (*Note - the lower the value, the higher the self-esteem*).

64% of participants saw an improvement in their self-esteem after spending time on the care farm. To test if these improvements in participants' self esteem were statistically significant, a paired-samples t-test was conducted. This found a very statistically significant decrease in self-esteem scores (representing an increase in self-esteem) between before (M=21.47, SD=5.80) and after spending time on the farm [M=19.65, SD=6.43,  $t(50) = 3.05$ ,  $p < 0.01$ ]<sup>177</sup>. Figure 29 highlights these improvements in self-esteem scores.

<sup>176</sup> Although the University of Essex has used these standardised measures of psychological states widely in varied settings under the context of green exercise, this is the first study to use these measures specifically for care farming. The nature and direction of the change in pre and post mood or self esteem scores cannot therefore be predicted with complete confidence and for this reason, two-tailed tests were used.

<sup>177</sup> The eta squared statistic (0.16) indicated a small effect size.

**Figure 29. Changes in participants' self-esteem after spending time on the care farm**



Note - the lower the value, the higher the self-esteem

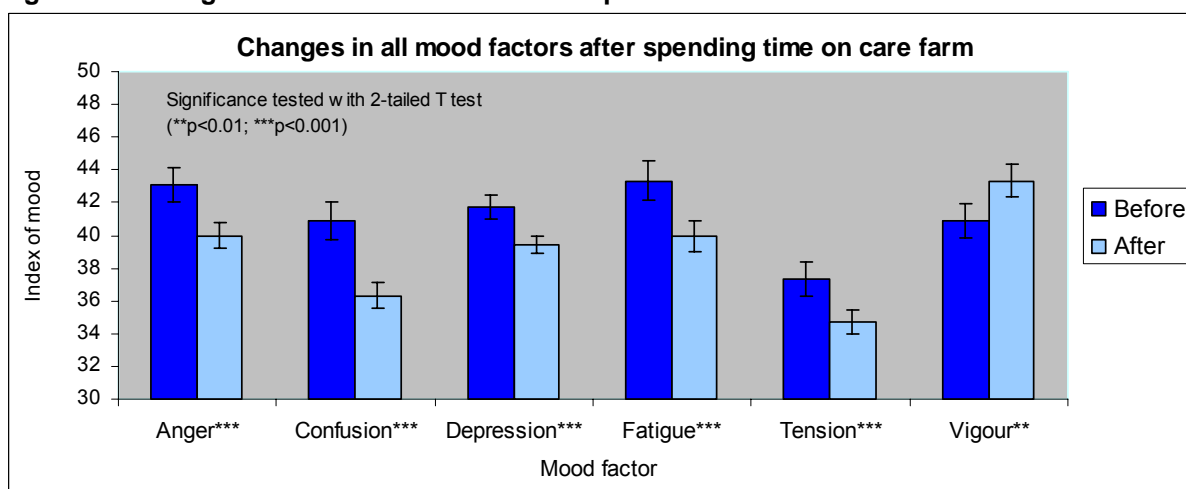
ii) Profile of Mood States

A paired-samples t-test was also conducted to evaluate the impact of spending time on a care farm on 6 mood sub-factors: anger, confusion, depression, fatigue, tension and vigour (these results can be found in Figure 30).

iii) Anger

There was a highly statistically significant decrease in participants' anger scores between before (M=43.12, SD=7.40) and after spending time on the farm [M=40.00, SD=5.55, t(50) = 5.19, p<0.001]<sup>178</sup>. Anger scores ranged from 37-62 at time 1 (before) and 37-56 time 2 (after) and 94% people experienced a reduction in feelings of anger after their time on a care farm.

**Figure 30. Changes in mood factors after time spent on a care farm**



<sup>178</sup> The eta squared statistic (0.35) indicated a large effect size.

iv) Confusion

There was a highly statistically significant decrease in confusion scores between before (M=40.90, SD=7.93) and after spending time on the farm [M=36.31, SD=5.77,  $t(50) = 6.74$ ,  $p < 0.001$ ]<sup>179</sup>. Confusion scores ranged from 30-63 before and 30-57 after and 78% participants experienced a reduction in their feelings of confusion after spending time on the care farm.

v) Depression

There was a highly statistically significant decrease in the depression scores of participants between before (M=41.71, SD=5.12) and after spending time on the farm [M=39.45, SD=3.89,  $t(50) = 4.50$ ,  $p < 0.001$ ]<sup>180</sup>. Depression scores ranged from 37-53 before and 31-53 after and 70% of participants experienced a reduction in their feelings of depression.

vi) Fatigue

There was a highly statistically significant decrease in participants' fatigue scores between before (M=43.31, SD=9.03) and after spending time on the farm [M=39.94, SD=6.66,  $t(50) = 3.95$ ,  $p < 0.001$ ]<sup>181</sup>. Fatigue scores ranged from 34-64 before and 34-58 after. It is worth noting that although participants were often physically tired after the physical activities they had been undertaking whilst on the farm, 61% of people saw a reduction in their feelings of fatigue after time spent on a care farm.

vii) Tension

There was a highly statistically significant decrease in participants' tension scores between before (M=37.33, SD=7.55) and after spending time on the farm [M=34.69, SD=5.3,  $t(50) = 4.04$ ,  $p < 0.001$ ]<sup>182</sup>. Tension scores ranged from 31-59 before and 31-52 after and 74% of participants experienced a reduction in feelings of tension after spending time on the care farms.

viii) Vigour

There was a very statistically significant increase in participants' vigour scores between before (M=40.90, SD=7.38) and after spending time on the farm [M=43.35, SD=7.23,  $t(50) = -10.63$ ,  $p < 0.01$ ]<sup>183</sup>. Vigour scores ranged from 26-57 both before and after and 70% of participants saw an increase in their vigour levels after time spent on the care farms. So even though they had been working on a care farm for several hours, participants felt less fatigued and more active and energetic.

ix) Total Mood Disturbance

A Total Mood Disturbance (TMD) score was calculated to denote an overall assessment of emotional state. This method is regularly used as it provides an indicator of overall mood.

### Figure 31. Change in participants' Total Mood Disturbance after spending time on a care farm

<sup>179</sup> The eta squared statistic (0.48) indicated a large effect size.

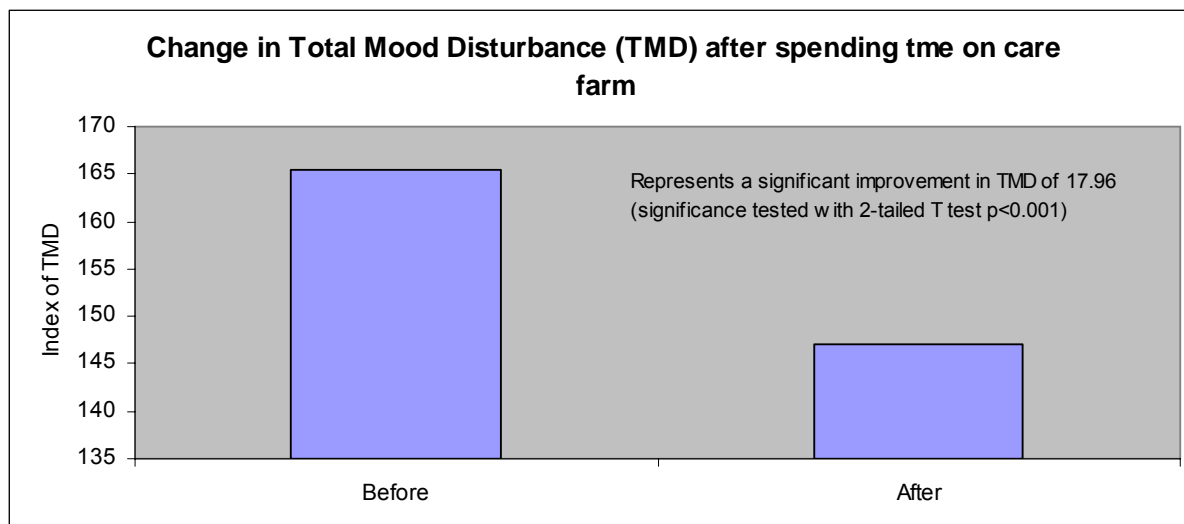
<sup>180</sup> The eta squared statistic (0.29) indicated a large effect size.

<sup>181</sup> The eta squared statistic (0.24) indicated a large effect size.

<sup>182</sup> The eta squared statistic (0.25) indicated a large effect size.

<sup>183</sup> The eta squared statistic (0.17) indicated a large effect size.

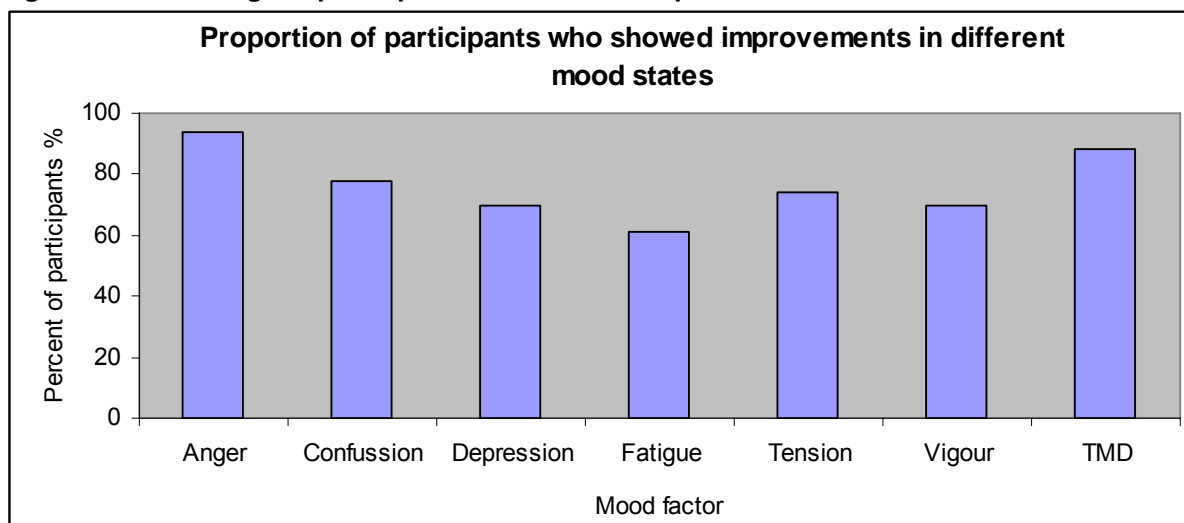




There was a highly statistically significant decrease in participants' TMD scores between before ( $M=165.47$ ,  $SD=36.40$ ) and after spending time on the farm [ $M=147.04$ ,  $SD=25.94$ ,  $t(50) = 6.30$ ,  $p < 0.001$ ]<sup>184</sup> (Note – the lower the score, the better the overall mood). The changes in Total Mood Disturbance are shown in Figure 31. TMD scores ranged from 112-272 before and 112-228 after spending time on the farm and the majority of participants (88%) experienced improvements in their overall mood.

Figure 30 highlights the statistically significant improvements in all 6 mood factors and Figure 32 shows the percentage of participants who showed improvement in the different mood states.

**Figure 32. Percentage of participants who showed improvement in the different mood states**



x) In summary

The findings clearly show that spending time participating in care farm activities is effective in enhancing mood and improving self-esteem. Working on a care farm can significantly reduce

<sup>184</sup> The eta squared statistic (0.44) indicated a large effect size.

feelings of anger, confusion, depression, tension and fatigue, whilst also making participants feel more active and energetic. Care farming therefore offers an ideal way of helping a wide variety of people to feel better.

#### 6.4.3 What participants enjoy about spending time on a care farm

The participants in our survey were also asked to tell us in their own words what they enjoyed most about spending time on the care farm. Responses are rich and varied but largely centred around the enjoyment of being out in the fresh air, having contact with farm animals, spending time with other people and feeling confident as a result of learning new skills. A selection of comments received detailing what participants enjoy most about being on the care farms can be found in Box 8.

#### Box 8. What participants enjoy most about being on a care farm

***“Spending time with people and animals - I think it makes me feel better about myself”***

***“I enjoy being part of the running of the farm on a day to day basis. I enjoy all aspects of training, working and living on the farm as part of the experience and as a way of life”***

***“Fresh air, out in the open, animals and a sense of freedom”***

***“I enjoy spending time on the farm because it is a really nice family environment”***

***“Making new friends, learning new skills”***

***“I enjoy working on the farm”***

***“gives me some self-worth and is helping me therapeutically with my issues”***

***“I like the animals and people are very friendly”***

***“being in a safe environment, work training”***

***“I like to get stuff done – it’s satisfying - can’t sit in a chair all day so this helps me get up”***

***“working with stock, especially with sheep”***

***“I like looking at the animals, like the surroundings, meeting and talking with people - helps me with getting back into work, to gear myself up again. Feeling stronger and physically fitter because of it - especially after my breakdown”***

***“The tranquillity, socializing”***

***“Open place, don’t feel so much pressure, like the animals, good staff, like stroking the animals - I want to cuddle them sometimes, I feel more free”***

***“being part of a productive team”***

***“I enjoy the people and how friendly they are, I also enjoy the animals because they are so full of energy and friendly”***

***“I like the safeness of the farm, the fresh air and I like the work”***

***“The countryside and the company”***

***“A sense of achievement from doing something on my own”***

### 7.3 Summary of results of care farm survey and health benefit Analysis

- 72 participants from 7 care farms around the country took part in a snapshot health benefit survey to provide further data on psychological health and well-being effects to participants. The majority of participants in this study are male (76%) and ages ranged from 16 to 65. The main groups of people who took part in the study include

people with mental health needs, those who are unemployed, homeless or vulnerably housed, disaffected young people, those recovering from drug and alcohol misuse, older people, offenders, ex-offenders and people recovering from accident or illness.

- Health benefit data was collected using a composite questionnaire which, was administered immediately before and immediately after participants spent time on the care farms, this allowed us to identify any changes in health parameters as a direct result of exposure to the care farm environment. The questionnaires included internationally recognised, standardised tools which measure participants' levels of self-esteem (RSE) and mood (POMS).
- Results from the Rosenberg Self-esteem tests showed there was a very statistically significant increase<sup>185</sup> in participants' self-esteem after spending time on the care farm with 64% of participants experiencing an improvement in their self-esteem. The Profile of Mood States results indicated that there was a statistically significant<sup>186</sup> improvement in all 6 mood factors. Total Mood Disturbance (TMD) scores (which provide an indicator of overall mood) also revealed a highly significant<sup>187</sup> improvement, with the majority of participants (88%) experiencing improvements in their overall mood.
- The results from this small care farming study support previous research findings reported by the University of Essex, which refer to significant improvements in self-esteem and total mood disturbance from various green exercise and green care activities.
- The findings clearly show that spending time participating in care farm activities is effective in enhancing mood and improving self-esteem. Working on a care farm can significantly increase self-esteem and reduce feelings of anger, confusion, depression, tension and fatigue, whilst also enabling participants to feel more active and energetic. Care farming therefore offers an ideal way of helping a wide variety of people to feel better.

---

<sup>185</sup> (p<0.01)

<sup>186</sup> (range between p< 0.01 and p<0.001)

<sup>187</sup> (p<0.001)

## 8. Care farming in the UK: Case Studies

### 8.1 Organisational and legal structures for care farms in the UK<sup>188</sup>

As seen from the evidence from care farms in Europe and in the UK, there are a variety of organisational and legal routes that farmers can take having decided to embark on starting a care farm. Key features and implications for the farmer of some of the different types of legal and organisational structures are shown in Table 7.

A key feature of care farming is that development is largely entrepreneur led, often by a member of the family that owns the farm. Although several countries in Europe now actively facilitate and promote the expansion of care farms, in the initial stages the majority of growth has been farmer-led. It is then up to the care farmer to decide which organisational and legal structure best suits his needs and those of his client referral agencies.

Currently in the Netherlands for example, farm businesses contract directly with statutory social care to offer placements for individuals requiring care. However, the UK health system has not, until very recently, encouraged *private* businesses to provide care in this way, and this has led many UK care farmers to adopt social enterprise or charitable organisational models.

For farmers considering starting up a care farm (and indeed for many of those who are already operating as care farms), the choice of organisational structure is often a difficult one. Some have opted to stay as privately run farms; others have decided to take the charitable status route; whilst others have chosen to become social enterprises. There are pros and cons for all of the options available and it is currently a subject for intense debate amongst UK care farmers.

The choice of legal structure is led by the implications for the farmer of each structure (see Table 7). As care farming in the UK is not currently a high profit activity, care farms have generally chosen organisational structures that maximise access to capital and revenue return whilst reducing risk to the farm and maintaining some control. Often whether the farmer intends to draw a wage from the care farming activity determines the choice of a charitable or non-charitable structure.

Social enterprises are profit-making businesses set up to tackle a social or environmental need<sup>189</sup> which reinvest the majority of their profits for the benefit of their community. There are estimated to be over 55,000 social enterprises in the UK with a combined turnover of over £27 billion and which contribute £8.4 billion per year to the UK economy<sup>190</sup>. In the UK, many examples of care farming have developed within social enterprise organisational structures, creating an incorporated legal entity, separate from the farm, from which to undertake the care farming activity.

Depending on farm organisation and motivations, care farming can be seen as i) a form of farm diversification, with many income generating activities stacked alongside the social activity of care farming and/or ii) as an example of multifunctionality in agriculture, where additional income is derived from providing new services essentially without changing the farming production system.

<sup>188</sup> This section has been written in conjunction with Beren Aldridge, Manager, Growing Well, Cumbria

<sup>189</sup> Social enterprise Coalition 2008

<sup>190</sup> Social enterprise Coalition 2008

**Table 7. Key features and implications of some different care farm organisational structures**

<b>Organisational Structure</b>	<b>Key Features</b>	<b>Access to Capital</b>	<b>Implications for the farmer</b>	
<b>1. Private Farm partnership</b>	<ul style="list-style-type: none"> <li>Profits dispersed to partners</li> </ul>	<ul style="list-style-type: none"> <li>Loan finance</li> <li>Private investment</li> </ul>	<ul style="list-style-type: none"> <li>Complete control over the activity</li> <li>All risk borne by the farmer</li> <li>All income from the care farming retained by the farmer</li> </ul>	<ul style="list-style-type: none"> <li>Poor access to capital</li> <li>High risk</li> <li>High benefit</li> <li>High level of control</li> </ul>
<b>2. Community Interest Company (CIC)</b> (Charitable status unavailable)	<ul style="list-style-type: none"> <li>Annual report to Regulator of Community Interest Companies</li> <li>Minimum of three on board of directors</li> <li>Some profit dispersing to directors</li> </ul>	<ul style="list-style-type: none"> <li>Loan finance</li> <li>Some private investment</li> <li>Minimal access to any grant aid</li> </ul>	<ul style="list-style-type: none"> <li>Shared control and shared risk of the care farming</li> <li>Farmer can invest some capital in the organisation and get some reasonable return</li> <li>Farmer can be employed by the organisation</li> <li>Farmer can sit on the board of directors</li> </ul>	<ul style="list-style-type: none"> <li>Poor access to Capital</li> <li>Medium risk</li> <li>Medium benefit</li> <li>High level of control</li> </ul>
<b>3. Company Limited by Guarantee</b> (No charitable status)	<ul style="list-style-type: none"> <li>Annual report to Companies House</li> <li>Minimum of three on board of directors</li> <li>Non profit dispersing structure.</li> </ul>	<ul style="list-style-type: none"> <li>Loan finance</li> <li>Grants from local authorities and government</li> <li>Minimal access to charitable trust grants</li> </ul>	<ul style="list-style-type: none"> <li>Farmer can be employed by the organisation</li> <li>Farmer can sit on the board of directors</li> </ul>	<ul style="list-style-type: none"> <li>Some access to capital</li> <li>Low Risk</li> <li>Medium Benefit</li> <li>Medium level of control</li> </ul>
<b>4. IPS<sup>144</sup> for the benefit of the community</b> (No charitable status)	<ul style="list-style-type: none"> <li>Annual report to the Financial Services Authority</li> <li>Minimum of three directors</li> <li>Non profit dispersing structure</li> </ul>	<ul style="list-style-type: none"> <li>Loan finance</li> <li>Grants from local authorities and government</li> <li>Grants from charitable trusts</li> </ul>	<ul style="list-style-type: none"> <li>Farmer can be employed by the care farm</li> <li>Farmer cannot sit on the board of directors</li> </ul>	<ul style="list-style-type: none"> <li>Strong access to capital</li> <li>Low Risk</li> <li>Medium Benefit</li> <li>Low level of control</li> </ul>
<b>5. Company Limited by Guarantee</b> (Registered with the Charities Commission)	<ul style="list-style-type: none"> <li>Annual report to Companies House</li> <li>Annual report to the Charities Commission</li> <li>Minimum of three on board of directors</li> <li>Non profit dispersing structure.</li> </ul>	<ul style="list-style-type: none"> <li>Loan finance</li> <li>Grants from local authorities and government</li> <li>Grants from charitable trusts</li> </ul>	<ul style="list-style-type: none"> <li>Farmer can be employed by the care farm</li> <li>Farmer cannot sit on the board of directors</li> </ul>	<ul style="list-style-type: none"> <li>Strong access to capital</li> <li>Low Risk</li> <li>Medium Benefit</li> <li>Low level of control</li> </ul>

<p><b>6. IPS<sup>191</sup> for the benefit of the community</b> (Registered Tax Exempt with the Inland Revenue)</p>	<ul style="list-style-type: none"> <li>• Annual report to the Financial Services Authority</li> <li>• Minimum of three directors</li> <li>• Strong emphasis on community control</li> <li>• Non profit dispersing structure.</li> </ul>	<ul style="list-style-type: none"> <li>• Loan finance</li> <li>• Grants from local authorities and government</li> <li>• Grants from charitable trusts</li> </ul>	<ul style="list-style-type: none"> <li>• Farmer can either be employed by the care farm or sit on the board of company</li> </ul>	<ul style="list-style-type: none"> <li>• Strong access to capital</li> <li>• Low risk</li> <li>• Medium benefit</li> <li>• Low level of control</li> </ul>
---	---	---	---	--

Source: Beren Aldridge – personal communication 2008

As a form of diversification or multifunctional agriculture, the care farm may provide social care day placements (income from a social care contract), provide those individuals with training (income provided by a training contract) whilst engaging those individuals in an income generating farm activity (raising poultry, harvesting vegetables, producing dairy products etc) or the farm remains largely operating as a private farm and additional income is derived from individuals working on the farm as part of their healthcare, social rehabilitation or education programme.

## 8.2 Case studies – Examples of care farming initiatives in the UK

Case studies in this section comprise existing newly established and longer running care farms (in alphabetical order), regional initiatives to develop the potential of care farming and examples of care farming initiatives taken by a County Council with Estate farms and a police and probation service.

### 8.2.1 Care farm: Amelia Methodist Trust Farm, Vale of Glamorgan

The Amelia Methodist Trust was conceived back in 1980 when an elderly couple were searching for ways in which they could invest some of their life's earnings into good causes. A minister was seconded who had always had a concern for marginalised and disaffected young people. It was strongly felt right from the beginning that the countryside, animals and open space away from urban and city life was the right context for such a project. In September 1991, the Trust acquired a 140 acre farm in the Vale of Glamorgan and this farm (Whitton Rosser Farm) became The Amelia trust Farm.

Today, 16 years later, the farm is open to the public seven days a week; around fifty young people access the farm each day (on an individual basis) during term-time; school groups visit the farm as part of their National Curriculum or for NVQ courses; young people and adults with special needs use the farm on a regular basis; and other young people's groups (Princes Trust, youth clubs, Duke of Edinburgh's Award schemes etc) also get involved in various ways.

The farm sees young people between 13–16 years old, (although the Trust is flexible on both ends of this according to circumstance) and although they cater for both genders the greater percentage are young males (as with school exclusions, young people appearing before the courts and suicide attempts). Many young people who leave the farm at sixteen often have no job to go to or find themselves still in quite dire domestic circumstances. They often see

<sup>191</sup>Industrial and Provident Societies

the farm almost as a surrogate family and therefore often come back to visit or seek further support and guidance.

The workshops which are available each day include woodworking, pottery, IT, art, music studio, cooking, life-skills, animal care, woodland management and environment and conservation work. Additional to this, the farm hosts a Pupil Referral Unit for young people at Key Stage 3 and 4 levels and this includes individual tuition in basic skills. The Trust feels they have achieved something of their purpose by seeing a young person grow in confidence and self-esteem, improve their vocational and social skills, broaden their horizons and view of life and develop a greater sense of purpose with improved feelings of hope and trust. In most cases, young people leave with the ASDAN Youth Award certificate (Bronze, Silver or Gold) or increased literacy, numeracy or IT skills. Some also leave with GCSEs. In the process of all this, a reduction in the use of illegal drugs or alcohol is often seen, and instances of self-harming no longer occur. All this is seen as benchmark of success and the growing of a more rounded human being. A return to school or a place in college or a job is clearly the icing on the cake.

To young people with emotional and behavioural difficulties, attending the farm offers a chance to feel valued and wanted with a growing sense of community, belonging and ownership. The emphasis is upon the farm being a place for 'work experience' and because of the varied programme which is offered, young people grow in confidence and self-esteem discovering their many talents and skills. There are opportunities for counselling and for help with substance and alcohol misuse, as well help with 'moving on' to college, work or whatever the next step is to be.

The Trust now has 17 staff on the payroll with another 12 staff working on site but employed by other agencies (voluntary and statutory). Young people are referred by social services, youth offending teams, ISSP, adolescent mental health teams, schools and even sometimes by desperate parents. The Trust is a self-governing independent charity with a company limited by guarantee and they need to find £700,000 each year to meet their overheads and outgoings. Amazingly the money comes exclusively from their own efforts at fundraising, from approaching charities and trusts, from donations, from the sale of meat and egg products from the farm, the hire of the hostel (youth groups, uniformed organisations, school groups), and from the charge we make per day for each young person (now £40 a day).

The Amelia Trust firmly believes that work of this kind dealing with a range of human need is best done in a rural setting surrounded by nature, animals, open space, peace and calm. The results are clear to see and as one seventeen year old wrote recently *"there will always be a place in my heart for the Amelia Trust"*.

**Source: Adapted from an NCFI(UK) case study written by John Stacy-Marks, The Amelia Trust Farm<sup>192</sup>**

### 8.2.2 Care farm: Carlshead Project, West Yorkshire

Carlshead Farms comprise 500 acres of varied farmland, near Wetherby, which is used for a variety of agricultural purposes. The farm is family owned and includes sheep farming, the growing of short rotation coppice willow for renewable electricity and heat, eco office lets, and horse breeding. Some of the land is planted with arable crops, and a neighbouring farmer keeps cattle on the land. In addition, the farm is in a Countryside Stewardship Scheme, which involves high levels of wildlife conservation and the renewal of hedgerows

<sup>192</sup> More details can be found at: <http://www.ncfi.org.uk/documents/Amelia%20Trust%20Case%20Study%20-%20NCFI.pdf>

and fences on the farm. The Stewardship Scheme has become an integral part of on-farm learning projects, allowing a hands-on approach to conservation.

Carlshead is an alternative educational training project, based on a working farm. Founded in 2004, the farm offers facilities for students aged between 14 and 16 with a range of different needs, including learning or behavioural difficulties, those who are not attending school or are at risk. Carlshead offers students a broad curriculum that includes green woodwork, furniture making, art, cooking, tractor mechanics, restoration and driving, coarse fishing, small animal care, and an equine course that teaches the basics of horse care, stable management, psychology, and groundwork training of young horses.

Students are referred to them by the Local Education Authority once they have been excluded or are at risk of exclusion from mainstream schools. They are generally within the 14-16 age range, split fairly evenly between male and female, with learning and/or behavioural difficulties. Some of the students may also be special needs. Students attend courses at Carlshead between one and five days a week, from 9.30am to 2.30pm.

All their courses are accredited through the Open College Network at level 1 (some level 2) to give the students GCSE equivalent points. Many of their leavers go on to further education colleges such as Park Lane, Thomas Danby, Askham Bryan and the Doncaster Racing College. Group sizes are small to give a teacher to student ratio of 1:4; there is also a Mentor for every group of 4 students. The staff are carefully selected for their communication skills and job skills. Most of the staff work on a part-time basis so that they can still continue their trades. They are for the most part not qualified teachers, but motivated self starters. For example, their mechanic works for them one day a week and runs his own mobile agricultural engineering company the rest of the week. This ensures the teaching experience is more akin to an apprenticeship than a classroom.

Carlshead is a not-for-profit company limited by guarantee. Its board (which comprises the four family members) meets regularly to oversee the direction and management of the project. This particular structure was chosen because it gave the freedom to develop a care farming business model, fully integrating the care farm with the farming business but at the same time avoiding management by committee while offering transparent financial motives and legal ring-fencing of the business. Carlshead Ltd is VAT registered as a training facility, it is not a school. This was vital if they were not to be at a 17.5% disadvantage as rent charged by the farm is VAT-able and comprises a large part of our expenses.

**Source: Adapted from an NCFI(UK) case study written by Gareth Gaunt, Carlshead Project<sup>193</sup>**

### *8.2.3 Care farm: Growing Well, Low Sizergh Farm, Cumbria*

Low Sizergh Farm is run by a family partnership with a three generation tenancy from the National Trust. Growing Well is therefore situated on land owned by the National Trust. Growing Well was founded in 2004 with the aim of providing people recovering from mental health problems opportunities to develop their confidence and skills by volunteering within a thriving business. Growing Well achieves this by offering volunteering opportunities throughout the running of our Soil Association certified social enterprise. Some of their volunteer placements are purchased under a contract with Cumbria County Council, but we maintain an open door policy to all community members recovering from mental health problems, regardless of their eligibility for contract funding.

<sup>193</sup> More details can be found at: <http://www.ncfi.org.uk/documents/Carlshead%20Project%20Case%20Study%20-%20NCFI.pdf>



The two core business aims of Growing Well are to grow and sell local organic produce and to provide accredited training in horticulture. They also run a programme of community involvement, encouraging membership of Growing Well and providing educational visits to the site. Growing Well believes it is unique in the UK in co-locating a rural social enterprise with a successful locally owned farming business. The symbiotic relationship benefits both businesses; we sell our produce at market rates to the farm which they sell to their customers, and they benefit from the increased profile that our social activities generate.

Growing Well is an Industrial and Provident Society (IPS) for the Benefit of the Community. As such they are a corporate entity, with limited liabilities for their members, regulated by the Financial Services Authority. Their objectives are charitable and they are recognised as a tax exempt charity by the Inland Revenue. The IPS legal structure was chosen deliberately so that membership and control of Growing Well could be offered to local community members (particularly our volunteers).

As of the summer of 2007, Growing Well requires approximately £150,000 per annum in operational costs. They currently generate about two thirds of costs from trading activities; mental health recovery activities under contract with Cumbria County Council, horticultural training activities under contract with Kendal College and sales of organic crops. The remaining costs are met with the support of charitable trusts.

The staff team is made up of 3 FTEs: a manager, a growing coordinator, a training co-ordinator and 2 PTEs: an administrative co-ordinator and a horticultural tutor. Skills, qualifications and experience represented within the staff team include: horticultural training and assessment, primary education, clinical psychotherapy and counselling, horticultural therapy, vocational rehabilitation, administration, leadership and management.

Volunteers are involved with Growing Well from a minimum of half a day up to 2 days per week and are offered a placement for up to two years. In the final months of a placement they sign-post volunteers to other services that can help them with the transition to other activities. Growing Well is currently open to work with volunteers on 4 days a week. In the first thirty months, they have provided 1900 day placements for over fifty volunteers, with about two-thirds of our participants being male. Twenty-five of that volunteer team are currently engaged with Growing Well, and eight have left to return to employment or further education. All volunteers report significant gains in confidence and self esteem.

**Source: Adapted from an NCFI(UK) case study written by Beren Aldridge, Growing Well<sup>194</sup>**

#### *8.2.4 Care farm: Highfield Happy Hens*

Highfields Happy Hens is a poultry farm set in Etwall in the south Derbyshire countryside. The farm and the work that it provides has helped young people with big problems find peace, hope and a future through realistic training and companionship. We didn't go into free range egg production for eggs but rather we ran an open home on our farm for homeless youngsters and they needed something to do. In 1989 Highfields Happy Hens was born, we built our first shed of 2,500 birds and we built a shed a year, all very second hand until we had 20,000 birds. In 2001 we started working for the Youth Offending Service with youngsters who were too young to go to prison. Then we started working with the education authority as most of our young offenders had been excluded from school. We started as 'school' for just one lad in 2001. Now we have up to 30 each week. To our surprise and pride many have just sat their GCSE's and at least 2 are going to college. The education authority tells us that we are the only positive project they have for getting youngsters back to school.

<sup>194</sup> More details can be found at: <http://www.ncfi.org.uk/documents/Growing%20Well%20Case%20Study%20-%20NCFI.pdf>

In 2003 our world collapsed, the RSPCA and the Lion Brand both had problems when assessing our sheds which were in very poor condition and finally condemned them. I had a complete breakdown and was off work for 6 months. If we lost our hens the whole project would close down but to rebuild was surely financially impossible. However with help from local companies (Harlows, New Quip and Tim Bates plant hire) we designed replacement sheds at a cost of around £16-20 a hen using much of our old equipment. As a result of the work we do with young offenders, many people started to offer to sponsor a hen (£16-20) and local churches, schools, the WI and others all got involved. We were able to start rebuilding in 2004 and now in 2007 (and over £450,000 later) we have completed the last shed.

The farm charges client commissioners covering 9am until 3pm each day. We have one qualified special needs teacher but otherwise the main qualifications for our staff are a clear desire to work with and help young people. We do not take on volunteers as all people involved require a full CRB (criminal record) check.

Like many organisations that dedicate so much to helping the less fortunate, we rely on customers and donations to be able to continue our work effectively. With this in mind we have also diversified into offering conference facilities to businesses and individuals, birthday parties, farm tours and accredited vocational training in commercial horticulture and agriculture. To increase our income and create more jobs we have also become an open farm, charging visitors to look round. We sell animal food and allow people to collect their own eggs and some vegetables. Our eggs won the National Award for Quality in 2001, the highest accolade a free range farm can receive. Highfields Happy Hens has received a number of industry awards in recognition of the quality of its produce and farming best-practice.

There is another side to this incredible story that so many damaged young lives have been turned around. One of our lads from 18 years ago, now married, has bought a farm and is building a 12,000 bird shed which may, like Highfields, be used to look after young offenders. Hundreds of young people have had their lives radically changed over the 16 years that Highfields Happy Hens has been in existence. We get phone calls and surprise visits from those we have helped, months or even years later, thanking us for giving them space to deal with their problems.

**Source: Adapted from an NCFI(UK) case study written by Roger and Beryl Hosking, Highfield Happy Hens**<sup>195</sup>

### *8.2.5 Care farm: Houghton Project, Herefordshire*

The Houghton Project is based within a 200-acre working farm in Bodenham, Herefordshire and it is run as a mixed farm, allowing us to provide training and experience in both animal and horticultural production for people of all ages. Students visiting the farm experience at first hand a range of agriculture related activities, including animal care, food production, building maintenance, fencing, hedge laying, coppicing, woodland maintenance and wildlife habitat management.

In addition to the opportunities of working on the farm and in the vegetable garden, students have access to craft workshops and 15 acres of woodland, providing a resource for forest management skills. Central to all aspects of the training, education and work opportunities

<sup>195</sup> More details can be found at: <http://www.ncfi.org.uk/documents/Highfields%20Happy%20Hens%20Case%20Study%20-%20NCFI.pdf>

that are offered at the Houghton Project is the principle of social inclusion, aiming that service users engage in an active role within their local community.

With access to a classroom, a number of outbuildings and toilet facilities, we have the resources within which to develop student's skills, interests and training requirements. The Houghton Project recognises that training and employment are important routes to social inclusion. Although paid employment will not be a realistic option for all, much of our work centres on the need for service users to receive training and preparation for employment. The development of a range of occupational activities, to maximise social participation, enhances self-esteem and also improves clinical outcomes.

We appreciate that the social and occupational aspects of daily living are often central to a successful and comprehensive package of care. We can offer a viable opportunity to assist service users with social skills and social networks and address the social isolation often experienced by people who use the service. We can provide new opportunities for young people who display developmental delay or difficulties. This may take the form of learning difficulties, disaffected and challenging behaviour, childhood neglect or social sensitivities. Many of our students have experienced frustration in their previous attempts to learn. However, with regular attention from a tutor and an emphasis on practical and physical skills, students tend to learn willingly and experience success. We can provide training for both small groups and one-to-one for individual students.

Practical experience has allowed our staff to develop an understanding of people who face issues of poverty, stigma and discrimination on the grounds of their age, gender, race, sexuality and/or disability. They are fully committed to the principles of empowerment and their practice centres around a process that focuses on the individual's strengths for effecting change.

**Source: Adapted from an NCFI(UK) case study written by Jennifer Haste & Tim James-Moore, The Houghton Project<sup>196</sup>**

### *8.2.6 Care farm: Lambourne End Centre*

Lambourne End is a community farm and outdoor centre in rural Essex, just north of Chigwell which has been providing high quality personal development experiences for many years, primarily (but not exclusively) for people from east and north London, Essex and Hertfordshire.

The facilities at Lambourne End include: 54 acres of open countryside; a working farm with livestock including rare breeds; accommodation for 38 people and camping facilities; conference and training facilities; an outdoor swimming pool; and equipment for a range of outdoor activities. The Centre is being developed to be a thriving inclusive resource which is particularly welcoming to young people.

The facilities here enable us to provide a programme of activity that focuses on personal development and which builds young people's confidence and sense of achievement through team building activities, practical work, outdoor pursuits and arts and crafts. We encourage young people to have fun discovering, building friendships and exchanging views, whilst enriching their spiritual well-being and raising their self-esteem.

The Community Farm is a working farm with livestock including rare breeds, where visitors can learn about animal husbandry and crop management. Most of the farm work has a

<sup>196</sup> More details can be found at: <http://www.ncfi.org.uk/documents/Houghton%20Project%20Case%20Study%20-%20NCFI.pdf>

hands-on approach and there are a choice of programmes that focus on the natural environment, conservation and horticulture.

Alongside the YMCAs, which we work closely with, we work with groups from a wide variety of backgrounds but predominantly with young people. By developing links with schools and LEAs we have users who are facing exclusion or are experiencing difficulties with their education. We are also working with The Federation of City Farms and Community Gardens to provide an outreach centre for all London members. We are establishing a support system for community groups who would like to use our facilities where we signpost them to potential sources of funding in order to reduce the burden on their finances. Groups that we are currently working with regularly include: Sure Start, Greenhouse Trust, Young Parent's Project, Unity 70, Eleanor Smith School, Roma Support Group, Oakwood Baptist Church, Trinity Centre, Chelmsford YMCA Focus & E2E Groups, and Forest YMCA.

**Source: Adapted from Lambourne End website and with input from Tony Sharps, Lambourne End Centre<sup>197</sup>**

### *8.2.7 Care farm: Pennyhooks Project, Oxfordshire*

Pennyhooks Farm is situated on the Oxfordshire/Wiltshire border and comprises 100 acres of our own ground and 20 acres of land rented from a neighbour. The whole farm is organic grassland and comes under the quality assurance and accreditation schemes of the Soil Association and Countryside Stewardship Scheme. We also have a County Wildlife Site. We use 85 acres with our clients, of which 25 acres are water meadows with rare flora - (part of the County Wildlife site) - which gives conservation work for our students. We run an organic herd of 40 Aberdeen Angus cows plus previous year's calves. In total this means we have between 80-100 cattle on the farm and we also have various other livestock for students to handle and learn to care for.

We were initially motivated to start care farming to share our farm experiences and started care farming in 2001 (but had previously had regular visits from children with disability). The farm is currently open to students 5 or 6 days each week, 48 weeks a year. We have only 2 full-time staff, 6 part-time and 3 volunteers. We do not directly employ many staff as they come with the students (1:1). However care farming is still limited at Pennyhooks by lack of buildings for workshops or residential care and lack of core funding for staffing.

Our student group are young people on the Autistic Spectrum, some with Asperger's syndrome. They are predominantly male due to the higher prevalence of autism in boys (5 out of 32 of our students are female). These are people who benefit from the Accredited Countryside Stewardship Course we run (through the Open Colleges Network). The course delivers training and practice in countryside and personal skills, helping to build confidence. Students experience being trusted and believed in to do real farm work. The space of the farm and seasonal routines reduce anxieties. Our students are referred by care managers, psychologists, teachers, connexions and community nurses. Our main sources of funding are social services funding panels, school PTA budgets, fund raising and charitable donations. Students are funded at £125 per student per day plus a carer, although some school and college classes come for £200 per group per day with more of their own staff.

Students have a wide variety of real work opportunities that give chances to channel physical strength for the greater good of the farm - feeding & bedding up cows in winter; moving electric fences in summer, moving and stacking pollarded logs to use in the dual fuel heating system in our new building; conservation work on wetland habitats (e.g. pond maintenance,

<sup>197</sup> More details can be found at: <http://www.lambourne-end.org.uk/>

planting trees, raking reeds, fencing off orchids), taking full care of goats, donkeys, hens and pig; flower and vegetable growing in new therapeutic garden; harvesting and cooking into shared meals. Working in the open spaces of the farm creates calmness. The farm jobs also teach an important lesson of interdependence with others - being trusted and believed in to be able to take responsibilities for the farm.

These students can really be thought of as an 'untapped resource' and not a drain on resources. All they need is a farm on which to learn and sympathetic carers to support them as they learn. Everybody wins - the students, the carers, the farmers, the funders and wider society.

**Source: Adapted from an NCFI(UK) case study written by Lydia Otter, Co-manager, Pennyhooks Project<sup>198</sup>**

### *8.2.8 Care farm: Top Barn Farm*

Top Barn Farm is a working farm located in the heart of the countryside near the beautiful city of Worcester, with 500 acres of land nestling alongside the River Severn at Holt Heath. Top Barn is a family run business, originally an arable and horticultural farm growing cereal, sugar beet, vegetables and fruit along with farming a pedigree herd of South Devon beef cattle and 500 breeding ewes. Top Barn Training is a registered charity and was started in 1999 by Noelle Wilson and David Harper and being a not-for-profit organisation means that its profits are ploughed straight back into the centre, resulting in constant improvement in the facilities available to students.

Using land reclaimed from gravel extraction, students from Top Barn Training have built a small-holding on the farm, which has gardens, a sensory trail, livestock (pigs, goats and poultry) green buildings and craft facilities. The farm estate is also used to enhance the breadth and scale of projects on offer. The sense of ownership of the facilities is outstanding and students have immense pride in their centre. At Top Barn Training the belief is producing high quality meat and vegetables, naturally without chemicals and produce is grown in such a way that assists students in understanding where their food comes from.

Top Barn Training is a unique training centre specialising in delivery of land-based skills such as: horticulture, farm animal care, rural skills, farmhouse cooking and alternative building. Many of the courses offered by Top Barn Training are specially designed for adults with disabilities and for young people who find the challenges of schooling difficult. From every practical experience gained there is a therapeutic value from working as part of a team, seeing a project nurtured through to completion and being proud of your part in its outcome.

All the students who come to the training centre, whether they have a physical or learning disability, make a difference to the future of the training centre, because it's the students who are creating the environment, deciding what it will look like and how it will be enjoyed by future visitors. This compliments our philosophy that training, in whatever form it takes, is not only about gaining practical skills but it is also about broadening the perspective of the world in which we live.

Top Barn Training works with Worcestershire Social Services, Pupil Referral Units local colleges and schools to provide training, education and therapeutic opportunities for all, particularly those with disabilities.

**Source: Adapted from Top Barn website with input from Noelle Wilson<sup>199</sup>**

<sup>198</sup> More details can be found at: <http://www.ncfi.org.uk/documents/Pennyhooks%20Case%20Study%20-%20NCFI.pdf>

<sup>199</sup> more details can be found at: <http://www.topbarntesting.co.uk/>



### 8.2.9 Care farm: Wellgate City Farm

Wellgate Community Farm is a 1.5 acre city farm in Romford, Essex. It was established in 1982 with the aim of creating 'a growing place for groups and individual through education, training, therapy and recreation'. It is home to a variety of farm and domestic animals including cows, sheep, goats, ponies, pigs, chickens, ducks, geese, turkeys, rabbits and guinea pigs. The farm also has a horticultural plot, a small conservation area, a classroom, a workshop, wheelchair-accessible pathways, a picnic area and toilets/hand washing facilities.

Wellgate's educational work encompasses a number of different activities, including: i) mobile visits – taking animals from the farm to primary schools usually for key stage one children; ii) farm visits – providing curriculum-linked farm tours and practical demonstrations for pupils and teachers from local primary schools; iii) vocational development programmes – working with disengaged students from local secondary schools; iv) seasonal events – such as taking 'harvest hampers' to schools during Harvest Festival and providing 'hatch packs' with incubators and eggs to schools in the springtime.

Alongside these activities, Wellgate Community Farm works in partnership with a local outdoor education centre to provide a practical personal development programme for 14-19 year olds who lack confidence and self esteem. Programme participants spend one day per week for 36 weeks carrying out practical animal care and buildings' maintenance tasks on the farm as part of working towards vocational qualifications. There is a strong emphasis on small groups, individual attention, flexible pace and practical activities in order to build confidence, develop skills and facilitate progression. Indeed, the farm also offers a one-year City and Guild Level 1 Land Based Studies course in partnership with a local college which can provide a helpful transition for programme completers.

Liz Ellison, the farm manager, sees the benefits of an experience at the farm in terms of:

- getting up close to animals and hearing, touching and smelling them, which can help to overcome fears and increase understanding and respect for animals and their environments
- seeing a working farm, which can contribute to a better understanding of where our food comes from and how this relates to sustainable development and animal welfare issues.

For participants on the vocational programmes, there are additional benefits associated with the opportunity to develop new skills and build self-confidence through learning in an environment that is away from school. Over the last five years, 90% of participants have left as 'positive outcomes' with 62% continuing in education.

**Source: Adapted from FACE website<sup>200</sup>**

### 8.2.10 Care farm: Willowdene Farm

Willowdene Farm is located in south Shropshire and is a family run residential rehabilitation and training centre established and registered in 1988. The farm consists 80 acres of semi-ancient woodland and 36 acres of pasture/arable land. Before commencing rehabilitation work, Willowdene had been a commercially successful pig farm. Traditional activities since Willowdene's conception had focused around forestry, but in recent years we have reintroduced livestock back onto the farm: we now run 30 Suffolk /Charollais cross ewes; have begun developing a pedigree Blonde Aquitaine cattle herd and there are several horses, ducks, and chickens. The presence of livestock has proved to be invaluable to the

<sup>200</sup> More details can be found at: [http://www.face-online.org.uk/index.php?option=com\\_content&task=view&id=731&Itemid=656](http://www.face-online.org.uk/index.php?option=com_content&task=view&id=731&Itemid=656)

resident group and now forms a major part of the programme. In addition a variety of crops are grown and Willowdene is working towards being sustainable in vegetables and animal feed.

Willowdene has three major areas of operation: i) rehabilitation of men who have had a substance mis-use background; ii) land based training to those on the rehabilitation programme and surrounding communities; and iii) farming and forestry activities. All of these activities fall within what we consider to be a holistic approach to Care Farming. We cater for male substance mis-users (referred to as students) from across the UK aged between 20 and 50 years of age, the majority of which are classed as severe and often Willowdene is considered their final chance for rehabilitation. Willowdene is open 365 days a year, is residential and we offer a 39 week programme catering for up to 15 residents at any one time. Our main student referral sources are Community Drug Teams, Primary Care Trusts, Mental Health Teams, CARAT<sup>201</sup> Teams and Community Justice Intervention Programmes.

Residents coming to Willowdene have usually lost everything; their health is often extremely poor, they have become disconnected with their families, unskilled and unable to make a fresh start on their own. We offer a therapeutic environment where they can transform their lives by dealing with the issues that brought about a substance mis-use problem. In addition each resident has the opportunity to gain up to 25 nationally recognised qualifications, following which they are offered a full resettlement programme which ensures every resident leaves into employment and accommodation.

Daily activities are based around the work ethic and training. As students are trained in the various skills at Willowdene they are able to use these in realistic practical situations which, preparing them for work through relevant work experience. Another element critical to the success of the programme is the structured therapeutic input that addresses the issues that caused the students to enter into a chaotic lifestyle. The staff team (7 FTE, 6 PTE and 3 volunteers) possess a range of skills and qualifications to include, psychotherapy, counselling, teaching qualifications, farm, forestry, business management, engineering and key and basic skills tuition, but above all each staff member has a passion to help and care for men for whom society has rejected.

Since 2003 Willowdene Rehabilitation and Training is a not-for-profit company limited by guarantee, with charitable objectives and although all of our residents are government funded, we rely on external training and grant funds to secure the ongoing running of the business. The farming side of the business breaks even, but we consider its therapeutic contribution to be priceless.

Before coming to Willowdene, residents are often considered as the outcasts of society and many people believe their addiction was self inflicted. Through a structured approach to care farming individuals leaving the farm are not only drug free, highly skilled, but have sorted out many of their life issues and are ready to live the lives they were designed for

**Source: Adapted from an NCFI(UK) case study written by Dr Matt Home, Willowdene Farm<sup>202</sup>**

### *8.2.11 Care farming: Local authorities and tenant farms, the case of Cornwall County Council*

Cornwall County Council owns 4,500ha of farmland, split into 113 farms which have traditionally been rented out to assist the next generation of entrants into the farming

<sup>201</sup> CARAT - Counselling, Assessment, Referral, Advice and Throughcare

<sup>202</sup> More details can be found at: <http://www.ncfi.org.uk/documents/Willowdene%20Farm%20Case%20Study%20-%20NCFI.pdf>

industry. The County Council had long held ambitions to broaden the scope of the estate by using farms to provide multifunctional benefits such as opportunities for social services or education.

When a farm became vacant in 2006, Cornwall County Council advertised for a tenant who would not only run an agricultural business from the farm but who would also provide places for adult social care clients, based around activities on the farm, as an integral part of their business plan. The County Council also made funding available for improving facilities on the farm to meet the needs of providing care and training opportunities.

Plushayes Farm is a 30ha organic, mixed farm on the edge of Bodmin Moor. As a farm it was difficult to envisage how it could remain viable (i.e. provide a full-time living and build the asset base of the tenant without resorting to part-time work off the estate). A tenant was selected (Stephanie Pedrick) who, having already established a similar service on a much smaller holding, could develop their project at Plushayes. The County Council was very clear from the outset that activities at Plushayes must be rooted in agricultural activities with clients gaining benefit from real and meaningful work at whatever level was appropriate to the individual.

The Council has committed £25,000 of capital improvements to the farm. Re-roofing a stone barn, new electrics and toilet facilities have been carried out through a builder and the finishing touches are being carried out through the clients of Adult Social Care being involved in the conversion work itself. The scheme has allowed an existing provider to expand and develop their service using the assets of the Estate to support the wider objectives of the Council.

Although another tenant farmer on the Estate has been nurturing and caring for over 30 long-term foster children for over 16 years, this initiative at Plushayes is a significant letting for the County Council and potentially for the national network of County Farms Estates. It establishes a model of delivery for adults with learning needs in which the use of a public asset generates a return both financially through a rent and in service/care terms through the provision of up to 20 client spaces.

The Chief Land Agent for Cornwall County Council, Jonny Alford says of the scheme *“the current policy for the County Farms Service in Cornwall placed a duty on the Service to look for ways of supporting key services of the Council, as well as fulfilling the primary aim of supporting the agricultural community and economy. Plushayes offers us an exciting chance to do this”*

**Source: Adapted from an NCFI(UK) case study written by Adam Birchall, Principal Land Agent, Cornwall County Council<sup>203</sup>.**

### *8.2.12 Development of the idea of care farming in Waveney, Suffolk*

In June 2006 as a rural community development officer for the Waveney Community Forum in the Waveney District, Suffolk, I started to explore the idea of care farming in Suffolk, having seen for myself the success of care farms in the Netherlands. Encouraged by my employer I organised an information meeting in Beccles in September 2006 for local farmers and other interested parties. After the success of this initial meeting, a lot of ground work continued including visiting the farmers on their farms, exploring opportunities for welcoming people on to their farms and discussing the practicalities in more detail.

<sup>203</sup> More details can be found at : <http://www.ncfi.org.uk/documents/Cornwall%20County%20Council%20Case%20Briefing%20-%20NCFI.pdf> and extra material from NCFI 2006 and Cornwall County Council 2006



In January 2007, a small grant through the Rural Community Partnership to take care farming forward enabled me to meet many professionals from the health and social care sector and representatives from farming organisations. I made a business case for care farming and approached potential funders but the processes and procedures for these applications are complex, time consuming and need continuing resources. However a considerable progress has been achieved in a year and a half:

- Support from local MP Bob Blizzard for Waveney and as a result from meetings he asked questions in Houses of Parliament in support of NCFI
- Received £5 thousand grant for a fact finding visit to care farms in the Netherlands involving Suffolk farmers and health and social care commissioners (postponed until spring 2008 due to outbreaks of Foot & Mouth, Blue Tongue and Bird Flu in autumn 2007).
- Joint bid with the Norfolk Rural Business Advice Service for Leader funding for developing care farming in Waveney Valley (total value care farming aspect £200,000 over 3 years). Status: awaiting invitation to final stage.
- Support and interest from local farmer organisations: Farmers Crisis Network, NFU East Anglia, Suffolk Smallholders Society, ADER (Agricultural Development Eastern Region).
- Support and interest from health and social care sector organisations; Great Yarmouth & Waveney PCT, Suffolk Social Services Adult & Communities, Suffolk County Council Rural Development, Suffolk Connexions, Norfolk & Waveney Mental Health Partnership, North Suffolk Youth Offending Team.

**Source: Doeke Dobma, Rural Community Project Officer for Waveney Community Forum<sup>204</sup>**

### 8.2.13 Scoping project: 'Care farms in Wales'

In Wales, like the rest of the UK, there is no formal structure for care farms and activity is limited with only a few working farms specifically adapted for disadvantaged groups. Examples are the Amelia Trust near Barry; Cefn Mably (Vision21) Cardiff; The CURLEW centre in Powys; Coleg Gwent in Monmouthshire; Fairwater community garden in Cardiff; Clynyfw Countryside centre and farm in Pembrokeshire; Primrose Organic Farm at Felindre and various City Farms which have been specially set-up to cater for disadvantaged people.

The project 'Care Farms in Wales' which became known as 'Community Country Connections' is a pilot developed by Enterprise Development Associates Ltd. (EDA) and supported by the Brecon Beacons National Park Authority Sustainable Development Fund, the Powys Equals Partnership and Welsh European Funding Office.

The primary aim of Community Country Connections was to conduct a scoping project into the needs and benefits of 'Care Farms' in Wales. The project focuses on how rural communities and farming in particular could help meet the present and future health and social care needs of our society; and the potential impact such farms could have on economic activity through diversification and increased employment. The pilot project was to undertake a number of activities but principally to run a series of taster sessions on 10 farms in the Brecon Beacons National Park, with 30 individuals to identify, record and evaluate the benefits of the experiences gained in relation to service users and farmers.

The pilot project covered the period from October 2006 to June 2007 and has exceeded its target, holding 37 taster sessions on 12 farms, involving 31 individuals and resulting in 85

<sup>204</sup> For more information contact [Ddobma@aol.com](mailto:Ddobma@aol.com)

placements. The participants came from a range of backgrounds such as long term unemployed; disabled; homeless; and those with drug and/or alcohol dependency and their age ranged between 18 and 62 years. Activities undertaken by participants included planting seedlings and shrubbery plants, feeding animals, lambing, grass cutting, horse care, woodland clearing and fencing.

Feedback from all involved has been very positive with most of the farmers indicating a willingness to provide more placements and regular work opportunities. The individuals have shown enthusiasm, motivation and conscientiousness in their work and a very positive attitude to the placement opportunity.

As a result of this pilot project, a social enterprise called 'Working Farms' has been developed. Working Farms is being taken forward by Powys Sense Ltd., who are currently looking for help to continue the placements and develop the work and training. It is hoped to provide minibuss transport from Llandrindod Wells, via Builth and Brecon and from Abergavenny to provide structured OCN training, work & rural crafts enterprises on the farms, initially in the Brecon area and then throughout Powys. Funding is being sought for transport and placement costs. *"This is a simple project that in the space of ten weeks has shown that there are people out there who want to work and farmers with the skills and commitment to help them"*.

**Source: Taken from Care Farms in Wales: Pilot Project, Final Report. June 2007 with input from Trevor Stringer, Powys Sense<sup>205</sup>**

#### *8.2.14 Care farming for Prolific and Priority Offenders: Collaboration between West Mercia Constabulary, Probation Services and BODS/SHIFT care farm in Herefordshire*

A Prolific and other Priority Offenders (PPOs) initiative has been set up in Herefordshire to work with offenders whose offending is linked to drug and alcohol misuse (primarily PPO and Offenders subject to Drugs Rehabilitation Requirement (DRR) and Drug Treatment and Testing Orders (DTTO)). The projects all aim to address the causes of offending behaviour and provide a long-term outcome and are aimed at offering more than merely a diversion. These land-based projects intend to provide a therapeutic intervention by using the natural environment to provide individuals with new challenges and experiences.

In September 2006 the Herefordshire PPO scheme started a pilot project of engaging PPOs with a rural outdoor charity known as BODS. This is a care farm charity that reaches out to those that have the least opportunity to experience adventure in a natural setting. BODS is based at Werndee Woods, St Weonards, Herefordshire.

The BODS approach emphasises safety, fun and equality of opportunity and participation. The concept is to make the most of the unique opportunities for social education and personal development that adventure and nature provides. Outdoor adventure is not seen as simply recreation, it also contains a therapeutic quality through connection with nature. Through adventure, BODS encourages people to: value learning, increase self confidence, improve inter-personal skills and to develop their own potential. The project provides adventure activities, survival skills and heritage crafts to young people between 11 – 25 years of age thus connecting and engaging young people with nature and creating a sense of respect for the environment.

<sup>205</sup> For further information about the pilot project contact: Dr Caryl Cresswell, Enterprise Development Associates (EDA) Ltd. [info@enterprise-associates.co.uk](mailto:info@enterprise-associates.co.uk) and for further information about the Working Farms project contact: Trevor Stringer on 07932 426435 or 01544 340212

The BODS project also used the farm on whose land it was based at Coppice Farm, St Weonards. This commercially operated farm is run by Adam Evans whose family have been tenant farmers for many years. Adam has a passion for working with and helping people in the community and was involved in providing support to the BODS project. It soon became apparent that there many opportunities to engage PPOs in work on the farm itself and a small number of PPOs began carrying out supervised tasks on the farm. These tasks ranged from basic maintenance of machinery to tending for sheep during a very busy lambing season.

It was evident to those PPO scheme staff involved in taking PPOs to the project just what a huge difference it made to their daily lives. A sense of belonging and being trusted to carry out a variety of tasks increased their self-esteem to a level not seen previously. Whilst engaged with the project in a very rural area it also immediately reduced the opportunity for any PPO to be able to commit crime. The turn round in their outlook and attitude is nothing short of amazing, albeit some do have 'lapses' along the road of rehabilitation.

In March 2007 the Chief Constable of West Mercia, Mr Paul West, visited the project during an official visit to Herefordshire Division. He subsequently wrote a letter of thanks to all he met and said *"For anyone who is any doubt of the benefits to community safety and harm reduction that such projects bring, an hour spent with the three participants would more than convince them of the merits"*. The words of the PPOs themselves speak volumes for the benefits of this type of project when they say *"I've never been helped like this before. Why hasn't anyone done anything like this a long time ago to stop me committing crime and ending up back in jail every time"*.

An evaluation of this PPO initiative has found that 2 persistent and priority offenders had a combined past offence and imprisonment history has had an approximate cost of £268,500<sup>206</sup>. Since joining the Herefordshire PPO scheme and participating in care farming activities at SHIFT/BODS Care Farm, neither of the PPOs has re-offended and one has also had negative drug tests. Due to this success, West Mercia constabulary have calculated that there has been a considerable saving of £47,741 to the community. This figure is considered a conservative estimation because i) the figure was derived by comparing the reduction in offending only in comparable periods before and after joining the PPO Scheme and ii) the PPOs have suggested that they had not been caught and arrested for the entirety of crimes they have committed in the past.

This initial study i) recognises the early signs of success with a relatively small number of people on the PPO scheme, ii) with the statistics shows the potential of supporting the development of care farming projects and iii) the necessity for long-term analysis.

**Source: Taken from West Mercia Constabulary Report 2008 and with input from Jon Dover, NCFI(UK) and Dave Davoll, BODS<sup>207</sup>**

<sup>206</sup> calculated from when they were arrested for the first time (this represents 330 days for one PPO and 282 days for the other)

<sup>207</sup> More information can be found at: <http://www.bods.info/> or by contacting NCFI(UK) [enquiries@ncfi.org.uk](mailto:enquiries@ncfi.org.uk)

## 9. Conclusions and Recommendations

### 9.1 Key Findings

- 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. The agricultural sector in the UK has been fraught with difficulties and set backs such as BSE, foot and Mouth and bluetongue as well as fluctuations in markets, late subsidy payments and adverse climatic conditions (such as flooding in recent years) have resulted in threats to the economic viability of farms. Successes from Europe (particularly the Netherlands, Norway, Belgium and Italy) and examples from the UK demonstrate that care farming is a workable option to help tackle many of these challenges.
- In the UK there is a growing movement towards green care in many contexts, ranging from social and therapeutic horticulture (STH), animal assisted therapy (AAT), ecotherapy, green exercise activities as a treatment option and care farming. Care farming is a growing movement in Europe<sup>208</sup> and is one of the recent developments gaining popularity in the UK, to provide health (both mental and physical), social or educational benefits through farming activities, for a wide range of people including psychiatric patients, those suffering from mild to moderate depression, people with learning disabilities, people with a drug history, disaffected youth or elderly people; as well as those suffering from the effects of work-related stress or ill-health arising from obesity. Care farming is a partnership between farmers, health and social care providers and participants.
- There are now over two thousand green care farms in Europe, with the Netherlands and Norway leading the way in terms of numbers of care farms - the Netherlands (818), Norway (500), Italy (350), Belgium (212), Germany (167), Ireland (90), Austria and Slovenia<sup>209</sup>. Such green care farms are often formally tied to local social services and hospitals, and provide a new component of care in the community. Farmers are usually paid for providing a kind of “health service” whilst continuing with agriculture, thus helping to maintain the economic viability of farms. Some countries have such a well-developed network of care farms with a formal support organisation (The Netherlands, Belgium), whereas other countries (of which the UK is one) have less formal support structures and a more fragmented coverage of care farms.
- In the UK, the concept of care farming is relatively new although there is an increasing amount of interest from many sectors including farmers, health care professionals and social care providers, the prison and probation services. An initial scoping study of the range and number of current care farming initiatives currently operating in the UK was conducted and 76 care farms returned questionnaires to the University of Essex.
- The survey included 19 city farms, 16 independent farms and 41 farms linked to external institutions or charities. The size of care farms varies between 0.3 hectares (ha) to 650 ha and 65% of UK care farmers describe their site as a farm and 24% as a city farm and the majority of care farms all have a mix of field enterprises and livestock. In terms of organisational structure, a third of care farms in the study are farms, 29% are a ‘charity and company limited by guarantee’, 25% are city farms and 22% are charities.

<sup>208</sup> Hassink et al 2006a

<sup>209</sup> See Farming for Health (Europe) [www.farmingforhealth.org](http://www.farmingforhealth.org)

- Although the funding sources for care farms varies extensively both between farms and between categories of care farm, nearly half of the care farms surveyed (49%) receive some funding from charitable trusts and 33% receive client fees from the local authority. Thirty eight percent of care farms receive some other funding sources including LSC, Health Care Trusts, Social Services, Big Lottery Fund and public donations.
- A total of 355 full-time staff and 302 part-time staff are employed by the 76 care farms in the survey (657 paid staff in total) together with 741 volunteers. Formal qualifications held by care farm staff again varies but the majority have staff with teaching qualifications (72%) or of farming qualifications (63%) and some have staff with horticulture or health and social care qualifications. Care farms in the UK offer many different services including the development of basic skills (87% of farms), of work skills (70%), of social skills (65%) and some form of accredited training or education (63%).
- Perhaps the biggest variation seen in the farms surveyed features the fees charged by care farms for green care services. These fees vary widely, both in terms of amount and by how they are charged (i.e. per person, per day, per group, for farm facilities etc.). Some care farms are providing services for no charge at all, whilst fees on other on farms range from £25–£100 per day (most frequently around £30 per day).
- The total number of care farm users in the UK is around 5869 per week. However, there is much variation between the levels of usage at different types of care farm. As expected more people (230) attend city farms per week, an average of 46 clients per week are seen at farms linked to external institutions or charities and an average of 29 users per week attend privately-run farms. There is also much variety in the client groups attending care farms in the UK (over 19 different groups) and most care farms provide services for a mix of client groups rather than for just one. Most (83%) of care farms cater for people with learning difficulties, over half (51% of farms) provide a service for disaffected young people and 49% of farms cater for people with mental health needs.
- The majority of care farms have clients referred to them by a range of different sources at the same time, including from social services, self-referral or from 'other' sources such as Connexions and Job Centre Plus, private care providers, the prison service, Youth Offending Teams, Primary Care Trusts, community drug teams, individuals on Direct Payments and the voluntary sector. Nearly a half of farms receive clients through education authorities or other education service providers (including schools, schools for children with special needs, Further Education colleges, Pupil Referral Units, Behavioural Support Units etc).
- Care farmers report that physical benefits experienced by clients include improvements to physical health and farming skills. Mental health benefits consist of improved self-esteem, improved well-being and improvement of mood with other benefits including an increase in self-confidence, enhanced trust in other people and calmness. Examples of social benefits reported by care farmers are independence, formation of a work habit, the development of social skills and personal responsibility.
- UK care farmers who responded to the survey discussed the perceived successes of their care farms and although they vary widely, three broad themes emerged: i) seeing the effects of care farming on people, making a difference to people's lives; ii) helping the excluded become included into society and/or work; and iii) positive feedback from participants, families and referring bodies alike.

- A more in depth analysis involving clients of different types of care farm was conducted to provide some empirical data addressing psychological health and well-being effects to participants. Seventy two participants from 7 care farms around the country took part in a snapshot health benefit survey. Participants included people with mental health needs, those who were unemployed, homeless or vulnerably housed, disaffected young people, those recovering from drug and alcohol misuse, older people, offenders, ex-offenders and people recovering from accident or illness.
- Health benefit data was collected using a composite questionnaire which, was administered immediately before and immediately after participants spent time on the care farms, this allowed us to identify any changes in health parameters which were as a direct result of exposure to the care farm environment. The questionnaires included internationally recognised, standardised tools which measure participants' levels of self-esteem and mood as these health parameters had been identified as positive outcomes in the existing care farming research.
- Results from the Rosenberg Self-esteem tests showed there was an increase<sup>210</sup> in participants' self-esteem after spending time on the care farm with 64% of participants experiencing an improvement in their self-esteem. The Profile of Mood States results indicated that there was a statistically significant<sup>211</sup> improvement in all 6 mood factors. Total Mood Disturbance (TMD) scores (which provide an indicator of overall mood) also revealed a highly significant<sup>212</sup> improvement, with the majority of participants (88%) experiencing improvements in their overall mood.
- The findings clearly show that spending time participating in care farm activities is effective in enhancing mood and improving self-esteem. Working on a care farm can significantly increase self-esteem and reduce feelings of anger, confusion, depression, tension and fatigue, whilst also enabling participants to feel more active and energetic. Care farming therefore offers an ideal way of helping a wide variety of people to feel better.
- Sharing the farm, their farming skills and knowledge with others, and being able to make a real difference to vulnerable people's lives has been the primary motivation for UK care farmers. Evidence from both Europe and the UK has demonstrated that care farming is a win-win situation for farmers and rural communities, allowing the farm to stay economically viable, the farmer to continue in agriculture and a chance to provide a health, social rehabilitation or education service for the wider society. Care farming represents an example of multifunctional agriculture and offers a way to recognise the variety of different public goods and services our farms provide rather than simply focusing on food production, thus deriving extra value from the land.
- There are at least 76 care farms in the UK at the current time, providing a range of health, social rehabilitation or educational benefits to over five thousand people a week from a range of 'client' groups. These care farms exist largely in spite of government policy rather than because of it and UK both care farmers and care providers alike have highlighted several key issues which could be ameliorated by policy support in future, such as funding structures, health and safety and insurance regimes and a recognised referral procedure.

---

<sup>210</sup> (p<0.01)

<sup>211</sup> (range between p< 0.01 and p<0.001)

<sup>212</sup> (p<0.001)

## 9.2 Issues affecting research

### 9.2.1 Limitations of study

#### i) Care farms study

The remit of the scoping study of care farms undertaken for the National Care farming Initiative (UK) in this research was to discover the current extent and diversity of care farming in the UK (essentially who is care farming? who is benefiting and how? what are the motivations for care farming? and what are the successes and challenges?). Although over 400 questionnaires were sent out to farms and other interested parties around the country, the difficulty with this scoping study is that due to the absence of a *formal* network or directory of either i) care farm practitioners or ii) referral bodies, there is a probability that some care farms will have been omitted from the research. In addition, not all of the known care farms operating in the UK or those who are members of the NCFI(UK) network completed and returned questionnaires for this study. Therefore the 76 care farms reported in this study are likely to represent an underestimate of the true number of care farms in the UK.

#### ii) Health benefit analysis

The health benefit analysis of participants of UK care farms of this research was designed specifically as a small-scale 'snapshot' or a 'one moment in time' study of the changes in psychological health and well-being experienced by a range of participants after spending time on a care farm. The results of this snapshot study undoubtedly

- give a more detailed and quantitative analysis of the mental health and well-being benefits experienced by participants on care farms
- provide the *first part* of what it is hoped will be a body of robust scientific evidence supporting the effectiveness of care farming in the UK
- provide data to inform health, social care and education providers, farmers, policy-makers and the public on the current success and future potential of care farming.

However there are limitations to this pilot health benefit analysis:

- Although significant improvements to participants' mood and self-esteem were seen in this study during one session on a care farm, longitudinal changes in physical and mental health and social functioning over a longer period of time are not measured. It is these longer-term changes to health, behaviour, lifestyles and social inclusion that participants, farmers and referring agencies state are equally as important.
- The results from this small care farming study support previous research findings reported by the University of Essex, which refer to significant improvements in self-esteem and total mood disturbance from various green exercise and green care activities. Although the significant improvements to self-esteem and mood are considerable, there is no control condition in this study. That is, no comparison to other options for participants, for example a comparison between attending a care farm and partaking in farm activities; and taking part in alternative activities in other settings (either inside or outside).
- Whilst the standardised questionnaires included in this snapshot health benefit study are validated and widely recognised by mental healthcare professionals, they are not suitable for completion by children, those who have limited literacy or those with learning difficulties. As many of the participants on UK care farms are either children,

people with learning difficulties, people with very limited literacy or unable to use questionnaires for other reasons, in order to be fully inclusive in health benefit analysis on care farms, additional or alternative methods need to be used.

### 9.2.2 Evaluation issues for care farming

#### i) Diversity of settings

The evaluation of many green care and care farming projects presents many interesting challenges.

1. the variety of projects and initiatives incorporated within the 'green care' or 'care farming' definition

There is much, rich diversity in care farming which, although offers many choices for participants and referring agencies, makes it particularly challenging for evaluation and research. There are a variety of different activities under the definition of 'farming' such as livestock husbandry, commercial crop production, horticulture, forestry, mechanics, and countryside management. This research has shown that there are a number of different types of care farm locations (farms, city farms, outdoor centres, allotments etc). Care farm clients have differing needs; projects have different motivations and care farm services are often delivered by people with different skills, varying backgrounds and different qualifications.

2. the complexity of relationships with different dimensions of 'care'

The "care" that care farms provide again is incredibly varied and farms may provide health care, social rehabilitation or education (and training) or a combination of all three. This makes comparison both between other interventions and between care farms problematic.

3. the production of evidence of the effectiveness of health-related activities

This effectiveness of evidence is discussed in part ii) below.

#### ii) Effectiveness of evidence

In the field of healthcare evaluation, the robustness and effectiveness of evidence is traditionally assessed using an idea of a 'hierarchy of evidence'. In the traditional hierarchy, particular elements of evaluation design are seen as indispensable if the 'scientific' nature of evidence is to be preserved. Foremost among these are:-

- the application of a comparative method including a 'control' sample
- the use of randomness as a principle in the construction of samples
- the use of 'blinding' (where research participants only (single blind) or participants and researchers (double blind) are uncertain of which individuals have received an intervention and which a placebo)
- the use of replicable methodology and standardised, validated instruments for the measurement of health gain and other outcomes

Because the randomised control trial (RCT) contains 3 of the elements above (comparison, randomisation and blinding) it is seen as the 'gold standard' in effectiveness methodology. The RCT is considered a 'fair test', involving the comparison of two treatments or interventions under conditions that remove any bias either in the selection of participants or



the measurement of outcomes<sup>213</sup>. However, evaluation of green care interventions may find it difficult to live up to this standard, as they, by their very nature, preclude the use of one (or several) desirable methodological elements. The main reasons for this are:-

- Care farming largely does not involve the application of a discrete or defined 'treatment' such as a medicine.
- Care farming is not amenable to placebo (e.g. it is not possible to design an activity that is just like being on a farm, but isn't being on a farm at all.)
- It could be construed as unethical to deny participants access to a care farm (i.e. withholding treatment) when they consider that it might be beneficial to their health and well-being.
- Care farming activities cannot easily be blinded as it would not be possible for a patient to be honestly unsure whether they had been on a farm or not.
- The outcomes being looked for are not necessarily discrete or easily measurable (e.g. feelings of improved general wellbeing, increased social inclusion etc)

Given that care farming is characterised by all of the above, we can see that the 'gold standard' of a blinded and randomised control trial has up until now not necessarily been considered an appropriate (or even possible) choice. Nevertheless, dismissing the RCT as 'inappropriate' for the evaluation of nature-based interventions may be limiting the perception of the effectiveness of such initiatives.

Researchers at Loughborough University have gone some way in addressing this issue in a recent feasibility study of the randomised control trial approach in social and therapeutic horticulture.<sup>214</sup> The results from this study have important implications for other nature based activities, including care farming.

Sempik (2007) surmised that 2 out of the 3 elements of RCTs could in principle, be met by STH projects and has devised an outline protocol for a study of social and therapeutic horticulture. Regarding the issue of comparison, Sempik concludes that the use of a waiting list control with 'treatment as usual' rather than an 'active' control could be an appropriate and ethical option. Randomisation could be achieved by randomly selecting participants at the start of allocation to either the STH intervention or to the waiting list control. Finally although 'blinding' of the *participants* to the STH project is still considered impossible, 'blinding' of *researchers* is attainable<sup>215</sup>.

Although this protocol for STH is not a randomised control trial, if future research in this area and evaluation of nature-based interventions (including care farms) strives to achieve as many of the components of a RCT as possible, it is likely to increase the credibility of the findings and be more persuasive. If such assessment of care farms also includes a qualitative element to the research, in addition to quantitative measures, it is likely to be a more comprehensive study and give an enhanced, balanced picture of the intervention.

### iii) Ethics

Whether it is to justify existence of a project, to prove the benefits to participants from spending time on care farms or to secure future funding, it is crucial that the outcomes of care farming initiatives are measured. Most evaluation work (quantitative or qualitative) is considered as a type of research and in many settings this brings up the issue of ethics. Ethical dimensions should therefore be taken into account when considering research into care farming especially if people with special needs or from vulnerable groups are involved.

---

<sup>213</sup> Sempik 2007

<sup>214</sup> See Sempik 2007

<sup>215</sup> Sempik 2007

The right to privacy and protection from physical or emotional harm must also be considered, for example, when dealing with children, the issue of parental consent should be addressed.

In healthcare settings in the UK, research is likely to be within the remit of NHS Research Ethics Committees, and possibly NHS Trust Research and Development committees. Even if there are no formal healthcare links with the care farm project, evaluation work may still fall under the remit of Local Authority or University ethical regulations. Although undeniably necessary, the extensive ethical application procedures in the UK, often take several months before research can begin, thus can limit the progress of the research and can make applying for ethical approval a very time-consuming and administrative chore<sup>216</sup>.

### 9.3 Implications for policy

There seems to be an increasing awareness by health and social care providers, policy makers and the general public, of a broader concept of health, one that includes wellbeing and quality of life. As part of this, the links between 'nature' and 'health' are also becoming more and more recognised. In the UK, a number of government departments and non-government organisations have already recognised the importance of green spaces for public health, including the DTLR, National Urban Forestry Unit, Natural England, Scottish Wildlife Trust, Department of Health, National Trust, Groundwork, RSPB, and MIND<sup>217</sup>.

The concept of a broader definition for health also goes hand in hand with the emergent concept that agricultural land can be multifunctional and our countryside (and urban greenspaces) can provide a multitude of different benefits and services. In addition to food production, biodiversity, recreation, water and climate change mitigation services and landscape aesthetics for example our farmland can also provide health and social care services.

Care farming has important policy implications for a wide range of sectors and evidence from Europe and the UK has shown that care farming produces a myriad of different benefits for farmers, participants and referring bodies alike, in addition to the wider benefits to local communities and for public health. Therefore care farming is relevant for a range of different government departments, NGOs and the private and voluntary sectors.

Increasing support for and access to a wide range of green care and care farming activities for vulnerable and excluded groups in society should produce substantial economic and public health benefits as well as reducing individual human suffering. However, for this promotion to be successful, the key challenges (such as a lack of: awareness, recognition of legitimacy, policy support and funding) need to be addressed.

The implications for policy from care farming have been organised into the following categories:

- Agriculture
- Health and social care
- Education and training
- Employment
- Police, probation and offender management

<sup>216</sup> Peacock et al 2007

<sup>217</sup> DLTR 2002, National Urban Forestry Unit. 2002, Scottish Wildlife Trust 2003, Department of Health 2005, Groundwork 2005, RSPB 2004, Bird 2007, Natural England 2007, Mind 2007

- Rural development
- Social exclusion
- Partnership working
- Funding

### 9.3.1 Agriculture

1. Care farming has the potential to provide many benefits for agriculture in the UK, by increasing incomes and providing opportunities for multifunctionality and business diversification. Farming has been beset with difficulties in recent years with BSE, foot and mouth and bluetongue disease, coupled with export bans, late subsidy payments, fluctuations in market prices and the recent incidences of flooding. Care farming offers a potential solution, and may therefore go some way to help struggling farms to remain economically viable, whilst at the same time continuing with agricultural production.
2. In the process of providing health, social rehabilitation and educational services on farms for groups often excluded in society, care farming has also been shown to reconnect farms and farmers with their local communities, to engender a positive image of farming and to raise the self-esteem of farmers as they see the changes in the lives of participants and their families as a result of participating on their farms.
3. Evidence from the Netherlands has shown the importance of the 'farmer' on care farms, as an expert in farming, one who is strongly linked with the farm, as this gives the participants feelings of safety and clarity because they recognise the knowledge and expertise of the farmer. In addition to this, in the Netherlands and Belgium, where farming systems are similar to those in the UK, it is the smaller, privately run care farms (i.e. non institutional farms) in commercial production, which tend to cater for smaller numbers of clients, are the fastest growing type of care farm.

These two factors suggest that care farming could be a realistic option for smaller, privately run farms in the UK and implies that in order to be successful, care farms do not necessarily need to make huge changes to farm infrastructure or to alter production systems. Currently in the UK, the numbers of privately run, commercial production focused care farms are small, but there is clearly much potential for growth.

4. However, farmers need a scientific basis for green care services, and they need development of health policies and economical systems that make such services a predictable income. Care farmers in the UK have highlighted several key issues which they feel could be ameliorated by policy support, such as funding and organisational structures, health and safety and insurance regimes and a recognised referral procedure.
5. Agricultural managers and policy makers need to encourage the farming industry to promote the concept of farmland as a multifunctional resource which can provide not only food, environment and landscape features but also opportunities for health, social rehabilitation and education services through care farming.
6. Full recognition of the multifunctionality of agriculture by farmers, land managers and policy-makers is crucial and should be reflected in integrated policy and practice. Agencies with responsibility for supporting farming and maintaining our natural environment such as DEFRA, Natural England and farmers' organisations such as the NFU and CLA should be encouraged to take a lead role in promoting such an integrated and holistic approach.

7. In addition the agricultural sector needs to take lead role in the education of both stakeholders and the general public on the range of health, education and social care services that farms can provide.
8. In countries where the care farming sector is growing rapidly (the Netherlands and Belgium in particular), success has been characterised by government support. In both cases collaboration between different governmental departments, led by the department of agriculture, has directly enabled and facilitated this growth in care farming. If care farming is to flourish in the UK a joined-up approach (perhaps led by Defra, involving the Department for Health and DCLG for example) is necessary.

### 9.3.2 Health and Social Care

9. Care farming has great potential in the health and social care sector. A growing body of evidence from Europe and from this initial small-scale study from the UK has shown the health and well-being benefits to many different groups of people derived from care farming activities. In these times of great pressure on health and social care services; the drive to provide care in the local community; and with the growing concern for the health of our nation, care farming can offer an additional option for healthcare. A wide range of people have been shown to derive health and well-being benefits from participating at a care farm, including those with defined medical or social needs (psychiatric patients, those suffering from mild to moderate depression, people with a drug or alcohol history, people with learning difficulties and elderly people with dementia for example) as well as those suffering from work-related stress or social exclusion.

However, there is still limited acceptance of the role that care farming can play in health, from healthcare and social service providers. Whilst the full extent of the range of different health benefits from care farming needs to be better understood, researched and more effectively communicated, the health sector needs to consider the contribution that care farming can make to both individual health and public well-being, and stress the therapeutic value of the outdoors (both rural and urban) for delivering physical and mental health and well-being. Healthcare professionals generally should be encouraged to take the idea of 'care farming' more seriously and GPs should be encouraged to consider and recognise the value of 'green prescriptions'.

10. The idea of 'personalised medicine' rather than the 'one size fits all' approach (i.e. *"remedies that are appropriate for sub-populations suffering from a condition or illness rather than all of those with the condition"*<sup>218</sup>) is a growing one here in the UK. Indeed in a recent report outlining the proposed way forward for adult social services, the Department of Health aims for *"person-centred planning and self directed support to become mainstream and define individually tailored support packages"*<sup>219</sup>. As part of this strategy, personal budgets for everyone eligible for publicly funded adult social care support are planned, and Lord Darzi in his October 2007 NHS next stage review suggested that in the future personal budgets (paid for by the NHS) for people with long-term conditions would be key<sup>220</sup>.

The introduction of healthcare personal budgets has been a major contributing factor to the success and spread of care farming in the Netherlands. The development and widespread growth of direct payments across the UK is likely to enable more clients to choose to participate at care farms, and the Department of Health, DCLG and the

---

<sup>218</sup> Sempik 2007

<sup>219</sup> DoH 2007b

<sup>220</sup> Darzi 2007

voluntary sector should therefore encourage and facilitate the development of personal budgets and the direct payments scheme for health and social care services in the UK.

11. Care farming represents an additional option or an alternative choice for health and social care in the UK. Successful care farming initiatives in Europe and the UK rely on an ethos of tailor-making the treatment options to the individual rather than one programme of care for all clients, thus fitting in to the concept of personalised healthcare advocated by the NHS. Participation at a care farm whilst being excellent opportunity for many vulnerable or excluded people may not of course be suitable for everyone (in the same way as every other intervention). However policy-makers in health and social care should recognise the benefits of a UK wide network of care farms delivering health and social care options and incorporate care farming into mainstream healthcare policy in the future.
12. Allocation of health and social care budgets should be informed by cost-benefit analysis of care farming initiatives and referral to green care projects should be incorporated into health and social care referral systems
13. Just as farmers, land managers and agricultural policy-makers should consider and advertise the health implications of their resources; health agencies should also advertise the mental health and well-being benefits of green care initiatives such as care farming. In the same way, it is important that the general public is made aware of the benefits of contact with nature. A major problem in encouraging more 'green prescriptions' is to overcome the patient's perception of whether green care is as an effective treatment response. Sometimes, patients subconsciously believe that taking a pill will automatically make them feel better, whereas leaving their doctor's surgery with a recommendation to engage in activities at a care farm or another form of green care initiative may not be deemed as an effective or even a satisfactory treatment.

Health and social care professionals and policy-makers are therefore urged to promote the idea that nature can help people feel better. Local authorities and other agencies responsible for providing social care services would also benefit from recognising the potential of care farming activities to increasing the health and mental well-being of patients and clients.

### *9.3.3 Education, Training and Employment*

14. Care farming has many implications for the education, training and employment of people who are marginalised from society. Care farming initiatives in the UK and in Europe have highlighted the value of being engaged in meaningful activity on care farms which are engaged in agricultural production (both crops and livestock systems). This has had a particular effect on disaffected young people, those who are excluded from school, display challenging behaviour or who have become involved in drugs or alcohol misuse and this study has shown, that many participants on existing UK care farms are referred by local education authorities, the LSC and pupil referral units. The Department for Education and Skills (DfES), the Learning and Skills Council, DCLG and local education authorities (LEAs) should therefore i) support and promote the work of care farms and ii) investigate funding regimes for participants referred by the education sector.
15. In addition to disaffected young people, care farms also provide education, skills and training opportunities for a multitude of other people: for adults and children with learning disabilities and children from 'special' schools; those with drug and alcohol addiction problems; those who are either unemployed or have been deemed 'unemployable'; offenders and ex-offenders and many more. Many people from all of these vulnerable groups have increased their skills base, gained qualifications, been reintroduced to the

'work ethic', increased their employability or have found even employment or returned to the education system as a result of spending time on a care farm. The benefits of meaningful work on care farms should be highlighted, supported with resources and actively promoted by all those involved in the education and employment sectors (including DfES, DWP, LSC, LEAs, DCLG and the private and voluntary sectors for example).

16. There have been concerns recently about i) the impact of a culture of safety and low risk that has constrained children's access to outdoor environments, (both urban and natural spaces)<sup>221</sup> and ii) the increasing disconnection of children from the natural world and the food that they eat. Care farming, forest schools and general access to open farms could go some way in redressing these issues and should be encouraged.

One opportunity to promote the idea health and educational benefits of farms to farmers, the Government and the public presents itself in the shape of the "Year of Food and Farming"<sup>222</sup>. September 2007 sees the start of the Year of Food and Farming, which aims to promote healthy living by giving young people direct experience of the countryside, farming and food by visiting farms and growing and preparing food. Two of the focus points of the campaign will be enabling young people to experience what the countryside can offer and to learn more about environmental issues linked to food and the countryside. The notion that farming landscapes and our countryside provide multifunctional benefits, including health and education services, rather than merely producing food and picture postcard vistas can thus be promoted.

### 9.3.4 Police, Probation and Offender Management Services

17. As has been shown in this report, probation services in some areas of the UK are already recognising the potential in care farming and horticultural projects to provide natural, green environments to deliver both mental health and employment dividends to ex-offenders. In times with increasing prison populations, a prevalence of prisoners with mental health problems and concerns over the effectiveness of current probation services, there is great potential for care farming to be used as an option in the rehabilitation of offenders into society. The Home Office, the Ministry of Justice, Police, offender management services (such as NOMS, youth offending Teams etc.) and Probation Services should therefore recognise the potential of care farming for offenders and ex-offenders and support the growth of care farms across the UK.
18. The economic advantages of care farming in terms of cost-effectiveness in the management and social rehabilitation of offenders also need to be addressed. Although further research in this area undoubtedly needs to be initiated, initial results from the study by West Mercia Constabulary and Probation Services suggests that great savings can be made to offender management budgets and to the tax-payer from adopting care farming as a way of reducing re-offending and reintegrating offenders into society. Offender management agencies are therefore urged to consider care farms as an option in offender and probation management.
19. In the same way, the prison service, once well-renowned for recognising the benefits to inmates of working on a prison farm or garden, should look into increasing this potential for a happier, calmer and more socially adjusted prison population.

<sup>221</sup> Nilssen et al 2007

<sup>222</sup> A campaign supported by Defra, DfES, Department of Health, Farming and Countryside Education and the Royal Agricultural Society of England (RASE), the National Farmers Union, the Country Land and Business Association and the Food and Drink Federation. For more information see: <http://www.yearoffoodandfarming.org.uk/Default.aspx>

20. Crime and social service agencies of all types should consider the therapeutic value of care farming as part of strategies to address anti-social behaviour amongst adolescents.

### 9.3.5 Rural Development and Social Inclusion

21. Care farming has major implications for rural development in the UK. Care farms generate additional income for farmers and the rural economy; create additional jobs in rural areas (care activities on farms resulted in almost 600 additional jobs in rural areas in the Netherlands in 2006<sup>223</sup>); enhance the development of social capital in rural areas and foster reconnections both between i) the rural and urban populations and ii) farming and wider society.

Agencies responsible for economies and communities in rural areas should therefore welcome the concept of care farming and support and actively promote care farming as an option for farmers and rural communities.

22. Care farming meets at least 3 out of the 5 statutory objectives for Rural Development Agencies (RDAs)<sup>224</sup>: That is: to further economic development and regeneration; to promote employment; to enhance the development and application of skills relevant to employment; and to contribute to sustainable development. RDAs also support enterprise and new businesses to provide jobs and stimulate the economy. Care farms have been shown to strengthen the economic viability of rural communities and many are social enterprises so also contribute socially as well as financially to the wider society. RDAs should therefore take a lead role in the promotion of care farming for the benefit of rural areas and contribute to supporting the development of care farming initiatives.
23. Care farming also addresses social exclusion issues. Care farming by its very nature provides healthcare, social rehabilitation and/or education opportunities for some of the most vulnerable groups and excluded people in society. Evidence from Europe and from this study in the UK has shown that care farming has been instrumental in reintegrating participants back into education, employment and society and as therefore contributes to social inclusion.

In addition, care farming also helps farmers to become more integrated into their local communities. The economic viability of many farms has weakened over the last 20 years, many farm staff have been let go, the next generation farmers were forced to take jobs in other sectors and many farmers have been left to run farms on their own, often in very remote and marginalised conditions. With the difficulties that have faced farmers over this time, many have themselves become distanced from local communities and isolated. Care farming offers opportunities for farmers to stay in business, on their own farms, engaged in agricultural activities; and at the same time provide an important service to their local communities by welcoming people onto the farm.

Care farming is relevant to the work of the Social Exclusion Task Force of the Cabinet Office with particular interest to PSA Delivery Agreement 16, whose remit is to increase the proportion of socially excluded adults in settled accommodation<sup>225</sup>. All agencies with responsibility for the reduction of social exclusion should therefore recognize the potential for care farming in this area and support the growth of care farming in the UK.

---

<sup>223</sup> Hassink et al 2007

<sup>224</sup> England's RDAs 2008

<sup>225</sup> The Cabinet office 2007

### 9.3.6 Partnership working

24. Successful examples of care farming show the importance of good partnership working between the care provider, the farmer and the client in order to match the client to the right farm and to tailor-make the care farm experience. Engagement of *all* stakeholders will therefore be of crucial importance in the development of care farming initiatives across the UK.
25. Care farming has implications for many sectors, suggesting the need for cross-disciplinary and sectoral strategies and action. The successful scale-up of care farming opportunities in the UK is dependant on an enabling policy environment with direct policy support. In the best examples of countries where care farming is flourishing (the Netherlands, Belgium and Norway) the sector is backed up by government support and in particular with different government departments working together. The importance of partnership working between government departments including Defra and the Department of Health with input from DfES, DWP, The Home Office and the Ministry of Justice is therefore paramount.
26. Care farming needs to be placed within cross-departmental government policy to deliver successful and lasting outcomes and there is also a need for infrastructure as a result of joined up thinking and action between these government departments. It would be a wasted opportunity if care farming, because of its diversity, was weakened by dislocation and inertia between government departments.
27. Care farming in the UK needs a lead department and requires the identification of a champion department charged with promotion and support. This champion should facilitate farmers, referral agencies and clients to initiate innovative care farming projects.
28. Encouraging full stakeholder participation in care farming research should also be a priority. Academic institutions, the farming and health sectors, the private sector, voluntary groups and care farm participants should be encouraged to work in partnership in this area.

### 9.3.7 Funding

29. The funding of care farming has been highlighted by care farmers, potential care farmers, referral agencies and the NCFI(UK) as the biggest challenge facing the existence and spread of care farming in the UK. This indeed is a challenge also facing other countries in Europe where suitable funding structures and regimes are lacking. Recognised and sustainable funding structures and systems are crucial for farmers to continue to offer health, social rehabilitation and educational opportunities to participants on care farms. Therefore the development of funding regimes for care farms should be considered a priority.
30. Many care farm clients have serious health, social, law and order and educational problems simultaneously and so it would seem unreasonable for any one government department or sector to foot the bill in isolation. It has been suggested by many care farmers that funding structures should be centralised and standardised as a solution to this issue.



## 9.4 Future research needs

### i) Generic issues

There is a need for more robust, scientific evidence of the benefits of care farming for policy makers and service providers alike in order to validate care farms and to secure future funding. Sound research should also provide the basis for health policies and economic systems that make it possible for such services to earn a predictable income.

Once again, this highlights the need for collaboration between academic research institutions and health and social care professionals. A cross-sectoral joined up approach to research is desirable

Enhanced monitoring and evaluation of care farming and other green care programmes is needed to assess changes in health and social outcomes and economic measures. A universal, standardised tool could be developed to improve monitoring and evaluation methods for a range of care farming activities, and to allow comparisons to be made.

### ii) Extent of Care farming in the UK

This study represents the first scoping study into the extent and range of care farming services available in the UK. However, in the process of conducting this research the authors are aware that this study has not been exhaustive and is likely to represent an underestimation of the full extent of farms offering such services for health, social rehabilitation and education benefits. Therefore there is likely to be a need for ongoing and wider ranging research into the extent of care farming in the UK

### iii) Health ,social and educational benefits

In terms of the health, social and educational benefits to care farm participants, more robust and scientific evidence is required. A larger scale health benefit analysis is also recommended. Key issues that need to be addressed in future research include:

- Standardised valuation tools and measures which are recognised in the health and social care sectors should be used wherever possible to provide legitimacy.
- Evaluation methods that are suitable and that complement the abilities of a wide range of care farm participants (including children, those with special educational needs and for those with disabilities) should also be included in future research.
- A mix of both quantitative and qualitative methods is desirable in future research to give a more complete rounded picture of health and social outcomes.
- Health benefit analyses should be designed with as many components of a RCT that is possible (i.e. with control groups and randomisation wherever possible, see section 9.2) to aid credibility within the health sector.
- Health and social benefits of specific groups of care farm participants could be examined in future research.
- In the same way, research into the benefits of different types of care farming activity in addition to a holistic approach could be assessed.
- Care farm participants should also be involved in the design of future research wherever possible.

### iv) Economic benefits

There is a need for funding of further robust scientific research to be conducted and in particular we need to understand more about the financial savings and economic costings of

increasing participation in care farming activities. Better analysis of the economic dimensions should look at monetary as well as non-monetary aspects of care farming, issues of social responsibility and consider impacts on local rural and agricultural development. Other economic research avenues include:

- Cost benefit analyses comparing care farming relative to other interventions should also be initiated to inform health and social policy at the national, regional and local levels.
- Research into possible funding regimes and structures is needed, together with a consultation on the best organisational and legal structures for care farms to adopt.

## 10. References

- ADAS. 2007. Farmers' Intentions in the Context of CAP Reform in England – Analysis of ADAS Farmers' Voice 2007 Survey Final Report. Report for Defra. Available at: <http://statistics.defra.gov.uk/esg/ace/research/pdf/farmersvoice2007.pdf>
- Aldridge B. 2008. Personal communication – Care farms and social enterprise. Growing Well. Website: <http://www.growingwell.co.uk/>
- Allender S, Foster C, Scarborough P and Rayner M. 2007. The burden of physical activity-related ill health in the UK. *Journal of Epidemiology and Community Health* 2007; **61**: 344-348
- Association of Camphill Communities in Great Britain. 2007. Website: <http://www.camphill.org.uk/>
- Association of Therapeutic Communities. 2007, Website: <http://www.therapeuticcommunities.org/info-tcuk.htm>
- Baars E, Hassink J and Elings M. 2007. The development of a monitoring system for monitoring patient progress at health care farm. Paper presented at COST Action 866 conference: *Green Care in Agriculture: Health effects, economics and policies*. June 2007 Vienna, Austria.
- Berget B. 2006. *Animal Assisted therapy: Effects on persons with psychiatric disorders working with farm animals*. PhD Thesis. Norwegian University of Life Sciences.
- Bernardo FM. 1985. Social networks and life preservation. *Death Studies*, 9(1), 37-50.
- Bird W. 2007. *Natural Thinking: Investigating the links between the Natural Environment, Biodiversity and Mental Health*. Royal Society for the Protection of Birds. Available at: [http://www.rspb.org.uk/Images/naturalthinking\\_tcm9-161856.pdf](http://www.rspb.org.uk/Images/naturalthinking_tcm9-161856.pdf)
- Braastad B. 2005. Green care in agriculture. COST action proposal. Norwegian University of Life Sciences, Norway
- Brand S and Price R. 2000. The economic and social costs of crime. Home Office Research Study 217 Available at: <http://www.homeoffice.gov.uk/rds/pdfs/hors217.pdf>
- British Heart Foundation. 2007. *Diet, physical activity and obesity statistics 2006* Heart Statistics website. Available at: <http://www.heartstats.org/datapage.asp?id=5749>
- BTCV. 2007. Green Gym Website: <http://www2.btcv.org.uk/display/greengym>
- Browne CA. 1992. The role of nature for the promotion of well-being of the elderly. In *The Role of Horticulture in Human Well-Being and Social Development: A National Symposium*, (eds). Relf D. pp 75-9. Portland: Timber Press
- Burls A. 2004. Ecotherapy in Practice and Education. Open space People space conference proceedings. Available at: <http://www.openspace.eca.ac.uk/conference/proceedings/PDF/Burls.pdf>
- Burls A. 2005. New landscapes for mental health. *The Mental Health Review* 10(1): 26–29;
- Burls A and Caan A. 2005. Human health and nature conservation. *BMJ*; 331:1221-1222
- Burls A. 2007 People and green spaces: promoting public health and mental well-being through ecotherapy. *Journal of Public Mental Health* 6 (3)
- The cabinet Office. 2007. *PSA Delivery Agreement 16: Increase the proportion of socially excluded adults in settled accommodation and employment, education or training*. HM Treasury. Available at: [http://www.cabinetoffice.gov.uk/upload/assets/www.cabinetoffice.gov.uk/social\\_exclusion\\_task\\_force/chronic\\_exclusion/psa\\_da\\_16.pdf](http://www.cabinetoffice.gov.uk/upload/assets/www.cabinetoffice.gov.uk/social_exclusion_task_force/chronic_exclusion/psa_da_16.pdf)
- Carter C and Hanna J. 2007. *Offenders and Nature: Helping people, helping nature*. (draft) Forest Research, Forestry Commission, Natural England, NOMS and The Home Office – draft publication.
- CDC (Centres for Disease Control and Prevention). 1996. *Physical Activity and Health*. A Report of the Surgeon General. Washington D C
- Chalfont GE. 2006. *Connection to Nature at the Building Edge: Towards a Therapeutic Architecture for Dementia Care Environments*. PhD Thesis. University of Sheffield.
- Clinebell H. 1996. *Ecotherapy: Healing ourselves, healing the earth: A guide to ecologically grounded personality theory, spirituality, therapy and education*. Minneapolis. Fortress
- Cohen M.J. (1995) Counselling and Nature: The Greening of Psychotherapy, *Interpsyche Newsletter*, <http://www.pacificrim.net/~nature/counseling.html>
- Coleman J. 1988. Social Capital in the Creation of Human Capital. *The American Journal of Sociology* 94: S95-S120
- Conner M. 2007. What is Wilderness Therapy and a Wilderness Program? Available at: <http://www.wilderness-therapy.org/Wilderness/WhatsWilderness.htm>
- Cooper H, Arber S., Fee L and Ginn J. 1999. *The influence of social support and social capital on health. A review and analysis of British data*. London: Health Education Authority.

- Cooper-Marcus C and Barnes M. 1999. *Healing Gardens: Therapeutic Benefits and Design Recommendations*. New York: John Wiley and Sons
- Cornwall County Council. 2006. Website: <http://www.cornwall.gov.uk/index.cfm?articleid=34298>
- COST. 2008. European Cooperation in the field of Scientific and Technical research. Website: <http://www.cost.esf.org/index.php?id=9>
- Darzi, Lord. 2007. *Our NHS, Our Future: NHS Next stage review, Interim report*. Department of Health, London Available at: [http://www.ournhs.nhs.uk/fromtypepad/283411\\_OurNHS\\_v3acc.pdf](http://www.ournhs.nhs.uk/fromtypepad/283411_OurNHS_v3acc.pdf)
- Delta Society. 2007. Website: <http://www.deltasociety.org/AnimalsAAAAbout.htm>
- Department for Environment; Food and Rural Affairs (Defra). 2002. *National Food Survey 2000*, Department for Environment, Food and Rural Affairs, London
- Defra. 2007. Website: <http://www.defra.gov.uk/erdp/schemes/es/default.htm>
- Department of Health. 2004. *At least five a week: Evidence on the impact of physical activity and its relationship to health*. A report from the Chief Medical Officer. London
- Department of Health. 2005. *Choosing Health: making healthy choices easier*. Available at: [http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/Browsable/DH\\_4097491](http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/Browsable/DH_4097491)
- Department of health. 2007a. Website: <http://www.dh.gov.uk/en/Policyandguidance/Healthandsocialcaretopics/Socialcare/index.htm>
- Department of Health 2007b. *Putting people first: a shared vision and commitment to the transformation of adult social care*. Available at: [http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH\\_081118](http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_081118)
- DLTR. 2002. *Green Spaces Better Places - Final Report of the Urban Green Spaces Taskforce*. Office of the Deputy Prime Minister. Available at: [http://www.odpm.gov.uk/stellent/groups/odpmurbanpolicy/documents/page/odpm\\_urbpol\\_607952.pdf](http://www.odpm.gov.uk/stellent/groups/odpmurbanpolicy/documents/page/odpm_urbpol_607952.pdf)
- De Vries S, Verheij R A, Groenewegen P P and Spreeuwenberg P. 2003. Natural environments -- healthy environments? An exploratory analysis of the relationship between greenspace and health. *Environment and Planning A* 35: 1717 – 31
- Di Iacovo F and Pieroni P. 2006. Between agriculture and social work, non for profit and entrepreneurship: State of the art of “social farming” in Italy. Report for SoFar Project available at: [http://sofar.unipi.it/index\\_file/state%20of%20art\\_Italy\\_new.pdf](http://sofar.unipi.it/index_file/state%20of%20art_Italy_new.pdf)
- Di Iacovo F, Senni S and De Knight J. 2006. Farming for health in Italy in Hassink J and van Dijk M (eds). 2006a. *Farming for Health: Green-care farming across Europe and the United States of America*. Springer. Dordrecht. Available at: [http://library.wur.nl/frontis/farming\\_for\\_health/20\\_di\\_iacovo.pdf](http://library.wur.nl/frontis/farming_for_health/20_di_iacovo.pdf)
- Dobbs T, Pretty J, 2004, “Agri-environmental stewardship schemes and ‘multifunctionality’” *Review of Agricultural Economics* 26 220-237
- Dobma D. 2008. Rural Community Project Officer, Waveney Community Forum, Suffolk. Personal Communication.
- Dover J. 2008. The Potential Development of Care Farming in the UK Projections from November 2007 Dutch research. NCFI Briefing Paper available at: <http://www.ncfi.org.uk/documents/Potential%20of%20Care%20Farming%2008%20-%20Dutch%20to%20UK%20Projection.pdf>
- Driest PF. 1997. Care Farms: an Introduction. Nederlands Instituut voor Zorg en Welzijn, Utrecht, 30 pp. (in Dutch) cited in Hassink J, Zwartbol Ch, Agricola H, Elings M and Thissen J. 2007. Current status and potential of care farms in the Netherlands. *Wageningen Journal of Life Sciences* NJAS 55(1)
- Elings M, Hassink J, Spies H and Enders-Slegers M. 2004. Boer, zorg dat je boer blijft: een onderzoek naar de specifieke waarden van een bedrijfsmatige zorgboerderij. Wetenschapswinkel Wageningen UR, Wageningen. Rapport Wetenschapswinkel Wageningen UR no. 194B. Available in Dutch at: <http://library.wur.nl/wag/bestanden/clc/1739795.pdf> Cited in: Elings M and Hassink J. 2006. Farming for Health in the Netherlands. In Hassink J and van Dijk M (eds). 2006a. *Farming for Health: Green-care farming across Europe and the United States of America*. Springer. Dordrecht. Also available at: [http://library.wur.nl/frontis/frming\\_for\\_health/](http://library.wur.nl/frontis/frming_for_health/)
- Elings M and Hassink J. 2006. Farming for Health in the Netherlands. In Hassink J and van Dijk M (eds). 2006a. *Farming for Health: Green-care farming across Europe and the United States of America*. Springer. Dordrecht. Also available at: [http://library.wur.nl/frontis/farming\\_for\\_health/](http://library.wur.nl/frontis/farming_for_health/)

- Elings M. 2007. Effects of green-care farms on quality of life of people with a psychiatric and/or drug-addict background. Paper presented at COST Action 866 conference: *Green Care in Agriculture: Health effects, economics and policies*. June 2007 Vienna, Austria.
- England's RDAs. 2008. Website: <http://www.englishrdas.com/home.aspx>
- Eurodiet. 2001. *The Eurodiet Reports and Proceedings. Public Health Nutrition Special Issue 4*: 265-436
- Fabrigoule C, Letenneur L, Dartigues J, Zarrouk M, Commenges D and Barberger-Gateau P. 1995. Social and leisure activities and risk of dementia: a prospective longitudinal study. *Journal of American Geriatrics Society* vol: 43, pp. 485-490.
- Federation of City Farms and Community Gardens. 2007. Website: <http://www.farmgarden.org.uk/about-us>
- Ferro Luzzi A and James P. 2000. *European Diet and Public Health: The Continuing Challenge*
- Freeman, H. (1984) *Mental Health and the Environment* eds. London: Churchill Livingstone; Tuan Y-F. 1977. *Sense and Place*. Minneapolis: University of Minnesota Press
- Frumkin H. 2001. Beyond toxicity. Human health and the natural environment. *American Journal of Preventative Medicine* 20 (3): 47-53
- Gallis C. (Eds). 2007 *Green care in Agriculture: Health Effects, economics and policies*. Proceedings from 1<sup>st</sup> European COST Action 866 conference, Vienna 2007. University Studio Press, Thessaloniki.
- Game G. 2007. Personal communication
- Gerlach-Spriggs N, Kaufman R E and Warner S B. 1998. *Restorative Gardens: The Healing Landscape*. New Haven, CT: Yale University Press
- Goris K and Dessein J. 2007. Social farming in Flanders and Belgium: State of the art. SoFar Project. Available at: [http://sofar.unipi.it/index\\_file/State\\_of\\_the\\_Art\\_Flanders%5b1%5d.pdf](http://sofar.unipi.it/index_file/State_of_the_Art_Flanders%5b1%5d.pdf)
- Goris K and Weckhuysen H. 2007. Green care in Flanders. Presentation for Farming For Health CoP, Gent 2007.
- Grahn P and Stigsdotter U A. 2003. Landscape planning and stress. *Urban Forestry & Urban Greening* 2: 1-18
- Groundwork. 2005. Available at: <http://www.groundwork.org.uk/policy/reports/030711-delivering-health-targets.doc>
- Hall J. 2004. *Phoenix House Therapeutic Conservation Programme: underpinning theory*. English Nature Research Report Number 611. Peterborough
- Halliwell E. 2005. *Up and Running? Exercise therapy and the treatment of mild or moderate depression in primary care*. London, Mental Health Foundation.
- Hartig T, Mang M and Evans G W. 1991. Restorative effects of natural environment experiences. *Environment and Behaviour* 23: 3-26
- Hartig T, Evans G W, Jamner L D, Davis D S and Garling T. 2003. Tracking restoration in natural and urban field settings. *Journal of Environmental Psychology* 23: 109-123
- Hassink, J., 2001. Improving social policies with social farms. *Zorg + Welzijn* 1: 21. (in Dutch) cited in Hassink J, Zwartbol Ch, Agricola H, Elings M and Thissen J. 2007. Current status and potential of care farms in the Netherlands. *Wageningen Journal of Life Sciences* NJAS 55(1)
- Hassink J. 2003. Combining agricultural production and care for persons with disabilities: a new role of agriculture and farm animals. Wageningen University, Netherlands In: A.Cirstovao & L.O. Zorini (Eds), *Farming and Rural Systems Research and Extension. Local identities and Globalisation*. Fifth IFSA European Symposium, 8-11 April 2002, Florence. Agenzia Regionale per lo Sviluppo e l'Innovazione nel Settore Agro-forestale della Regione Toscana (ARSIA) Florence, pp. 332-341.
- Hassink J and van Dijk M (eds). 2006a. *Farming for Health: Green-care farming across Europe and the United States of America*. Springer. Dordrecht. Also available at: [http://library.wur.nl/frontis/farming\\_for\\_health/](http://library.wur.nl/frontis/farming_for_health/)
- Hassink J and van Dijk M. 2006b. farming for health across Europe: Comparison between countries, recommendations for research and policy agenda. In *Farming for Health: Green-care farming across Europe and the United States of America*. Springer. Dordrecht. Also available at: [http://library.wur.nl/frontis/farming\\_for\\_health/](http://library.wur.nl/frontis/farming_for_health/)
- Hassink J. 2006. Healthy People by Agriculture and Nature. Van Gorcum, Assen, 228 pp. (in Dutch) cited in Hassink J, Zwartbol Ch, Agricola H, Elings M and Thissen J. 2007. Current status and potential of care farms in the Netherlands. *Wageningen Journal of Life Sciences* NJAS 55(1)
- Hassink J, Zwartbol Ch, Agricola H, Elings M and Thissen J. 2007. Current status and potential of care farms in the Netherlands. *Wageningen Journal of Life Sciences* NJAS 55(1)



- Haugan L, Nyland R, Fjeldavli E, Meistad T and Braastad B. 2006. Green care in Norway: farms as a resource for the educational, health and social sector in Hassink J and van Dijk M (eds). 2006a. *Farming for Health: Green-care farming across Europe and the United States of America*. Springer. Dordrecht. Available at: [http://library.wur.nl/frontis/farming\\_for\\_health/09\\_haugan.pdf](http://library.wur.nl/frontis/farming_for_health/09_haugan.pdf)
- Her Majesty's Prison Service (HMPS). 2006. A farming revolution. *Prison Service News*. Available at: <http://www.hmprisonservice.gov.uk/prisoninformation/prison servicemagazine/index.asp?id=2010,18,3,18,0,0>
- Hickman C. 2005. *Therapeutic Gardens: An overview of the history of hospital gardens in England from 1800*. Paper Presented at the Forum UNESCO University and Heritage 10th International Seminar "Cultural Landscapes in the 21st Century" Newcastle uponTyne, April 2005. Available at: <http://www.ncl.ac.uk/unescolandscapes/files/HICKMANClare.pdf>
- Hine R, Peacock J and Pretty J. 2007a. *Green Lungs for the East of England*. Report for the National Trust (in press)
- Hine R, Peacock J and Pretty J. 2007b. Care farming in the UK: Recent research findings on the scope and range of care farms in the UK. In Gallis C. (Eds). 2007 *Green care in Agriculture: Health Effects, economics and policies*. Proceedings from 1<sup>st</sup> European COST Action 866 conference, Vienna 2007. University Studio Press, Thessaloniki.
- Honeyman M C. 1992. Vegetation and stress: a comparison study of varying amounts of vegetation in countryside and urban scenes. In *The Role of Horticulture in Human Well-Being and Social Development: A National Symposium* (eds) Relf D. pp 143-145 Portland: Timber Press
- Horsburgh C R. 1995. Healing by design. *New England Journal of Medicine* 333: 735-740
- Howard League for Penal Reform. 2007. Website: <http://www.howardleague.org/index.php?id=overcrowding>
- Jacobs J. 1961. *The Life and Death of Great American Cities*. London: Random House
- Kaplan, R. and Kaplan, S. (1989) *The Experience of Nature: A Psychological Perspective*. New York: Cambridge University Press
- Kaplan, S. 1995. The restorative benefits of nature: Toward an integrative framework in *Journal of Environmental Psychology* 15, 169-182.
- Katelaars D, Van Erp N and Hassink J. 2002. Healing through working: research on the therapeutic working communities for people with psychiatric problems. Trimbos Instituut, Utrecht and Louis Bolk Instituut, Driebergen (in Dutch cited in Hassink 2007)
- Kellert S R and Wilson E O. 1993. *The Biophilia Hypothesis*. Washington: Island Press
- Key T J, Allen N E, Spencer E A, Travis R C. 2002. The effect of diet on risk of cancer. *Lancet*, 360: 861-868
- Lang T and Heasman M. 2004. *Food Wars*. London: Earthscan
- Larson E, Wang L, Bowen J, McCormick W, Teri L and crane P. 2006. Exercise is associated with reduced risk for incident dementia among persons 65 years or older. *Annals of Internal Medicine*, vol. 144 pp 73-81
- Laumann K, Garling T and Stormark KM. 2003. Selective attention and heart rate responses to natural and urban environments. *Journal of Environmental Psychology* 23: 125-134
- Lenhard J, Moevius R and Dabbert S. 1997. Struktur und Organisationsformen von Therapie- und Betreuungseinrichtungen in der Landwirtschaft - eine explorative Studie. *Berichte über Landwirtschaft* 75: 459-485. Cited in Van Elsen T and Kalisch M. 2007. Social Farming in Germany – state of the art. SoFar project. Available at: [http://sofar.unipi.it/index\\_file/State\\_of\\_the\\_Art\\_Germany.pdf](http://sofar.unipi.it/index_file/State_of_the_Art_Germany.pdf)
- Levinson b. 1962. The dog as co-therapist. *Mental Hygiene* 46: 59-65
- Lindheim R and Syme S L. 1983. Environments, people and health. *Annual Review of Public Health* 4: 335-339
- McGloin A and O Connor D. 2007. An Overview of Social Farming in Ireland: The State of the Art. Sofar project. Available at: [http://sofar.unipi.it/index\\_file/Final\\_Irish\\_Revised\\_State\\_of\\_the\\_Art\\_May\\_2007%5b1%5d.pdf](http://sofar.unipi.it/index_file/Final_Irish_Revised_State_of_the_Art_May_2007%5b1%5d.pdf)
- McNair D, Lorr M and Droppleman LF. 1984. *EdITS Manual for the Profile of Mood States*. San Diego, Educational and Industrial Testing Service.
- McNair D M, Lorr M and Droppleman L F. 1992. *EdITS Manual for the Profile of Mood States*. Revised 1992. San Diego, CA: Educational and Industrial Testing Service
- Mental health Foundation. 2007. Website: [www.mentalhealth.org.uk/campaigns/mhaw/exercise-and-depression](http://www.mentalhealth.org.uk/campaigns/mhaw/exercise-and-depression)

- Millennium Ecosystem Assessment. 2005. *Ecosystems and Human Well-being: Current State and Trends*. Findings of the Condition and Trends Working Group. Island Press, Washington. Also available at: <http://www.millenniumassessment.org/en/index.aspx>
- Millar J. 2003. *Understanding Social Security: Issues for Policy and Practice*. Policy Press London.
- MIND. 2007. Ecotherapy: The green agenda for mental health. Available at: <http://www.mind.org.uk/NR/rdonlyres/D9A930D2-30D4-4E5B-BE79-1D401B804165/0/ecotherapy.pdf>
- Morgan A and Swan C. 2004. Social capital for health: issues of definition, measurement and links to health. Health Development Agency. Available at: <http://www.nice.org.uk/page.aspx?o=502681>
- Nathans-Barel I, Feldman P, Berger B. 2005. Animal-assisted therapy ameliorates anhedonia in schizophrenia patients. A controlled pilot study. *Psychother.Psychosom.* 74(1):31-35.
- NACRO. 2007. Website: <http://www.nacro.org.uk/services/criminaljustice.htm>
- National Audit Office. 2001. Tackling Obesity in England. Available at: [http://www.nao.org.uk/publications/nao\\_reports/00-01/0001220es.pdf](http://www.nao.org.uk/publications/nao_reports/00-01/0001220es.pdf)
- NCFI(UK). 2006. Newsletter November 2006. Available at: <http://www.ncfi.org.uk/documents/4th%20Newsletter.pdf>
- NCFI(UK). 2007. Website: <http://www.ncfi.org.uk/>
- National Urban Forestry Unit. 2002. *Greenspace and Healthy Living*. The Comedy Store, Manchester
- Natural England. 2007a. Website: <http://www.countryside.gov.uk/LAR/Recreation/WHI/greenexercise.asp>
- Natural England 2007b. Website: <http://www.naturalengland.org.uk/campaigns/health/default.htm>
- Natural Standard. 2007. Website: <http://www.naturalstandard.com/index-abstract.asp?create-abstract=/monographs/alternativemodalities/patient-pettherapy.asp>
- Neuberger K, Stephan I, Hermanowski R, Flake A, Post F and van Elsen T. 2006. Farming for Health: aspects from Germany. In Hassink J and van Dijk M. 2006. *Farming for Health: Green-care farming across Europe and the United States of America*. Springer. Dordrecht. Available at: [http://library.wur.nl/frontis/farming\\_for\\_health/15\\_neuberger.pdf](http://library.wur.nl/frontis/farming_for_health/15_neuberger.pdf)
- Nightingale F. 1860. 1996. *Notes on Nursing (Revised with Additions)*. London: Balliere Tindall
- Nilsson K, Baines C and Konijnendijk C. (Eds) 2007. Health and the Natural Outdoors. COST and European science Foundation Strategic Workshop Final Report. Brussels Belgium.
- OECD. 2008a. Website: <http://stats.oecd.org/glossary/detail.asp?ID=1699>
- OECD. 2008b. Website: <http://stats.oecd.org/glossary/search.asp>
- Peacock J, Hine R and Pretty J. 2007 *Got the Blues, then find some Greenspace: The Mental Health Benefits of Green Exercise Activities and Green Care*. University of Essex report for Mind week.
- Peacock J, Hine R and Pretty J. 2006a. The Health Benefits of Environmental Improvements to a Circular Route at Easington Coastal Path. Report for the Environment Agency and Durham Heritage Coast by University of Essex.
- Peacock J, Hine R, Griffin M and Pretty J. 2006b. *The Health Benefits of a Wilderness Experience*. University of Essex report for the Wilderness Foundation.
- Pevalin D J and Rose D. 2003. *Social capital for health - Investigating the links between social capital and health using the British Household Panel Survey*. University of Essex
- Platt D. 2007. The status of social care – a review 2007. report commissioned by the Secretary of State for Health. Department of Health. Available at: [http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH\\_074217](http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_074217)
- Popkin BM. 1999. Urbanisation, lifestyle changes and the nutrition transition. *World Development* 27: 1905-16
- Popkin BM. 1998. The nutrition transition and its health implications in lower-income countries. *Public Health Nutrition* 1(1): 5-21
- Pretty J, Brett C, Gee D, Hine R, Mason C F, Morison J I L, Raven H, Rayment M and van der Bijl G. 2000. An assessment of the total external costs of UK agriculture. *Agricultural Systems* 65 (2), 113-136
- Pretty J N. 2002. *Agri-Culture. Reconnecting People, Land and Nature*. London: Earthscan
- Pretty J, Peacock J, Sellens M and Griffin M. 2005a. The mental and physical health outcomes of green exercise. *International Journal of Environmental Health Research*
- Pretty J, Griffin M, Peacock J, Hine R, Sellens M and South N. 2005b. A countryside for health and wellbeing; the physical and mental health benefits of green exercise. Countryside Recreation Network, Sheffield

- Pretty J, Samson C, Peacock J and Hine R. 2005c. Why Engage With Nature and Green Space? University of Essex Discussion Paper
- Pretty J, Peacock J, Hine R, Sellens M, South N and Griffin M. 2007a. Green Exercise in the UK Countryside: Effects on Health and Psychological Well-Being, and Implications for Policy and Planning. *J. Environ. Planning and Manage.* 50(2) 211-231
- Pretty J, Smith G, Goulding KWT, Groves SG, Henderson I, Hine RE, King V, van Oostrum J, Pendlington DJ, Vis JK and Walter C. 2007b. Multi-Year Assessment of Unilever's Progress Towards Agricultural Sustainability: Indicators, Methodology and Pilot Farm Results. *International Journal of Agricultural Sustainability* (In press)
- Putnam RD. 1993. *Making democracy work*. Princeton University Press, Princeton, New Jersey
- Pyle RM. 1978. The Extinction of Experience. *Horticulture* 56, 64-67
- Riboli E and Norat T. 2001. Cancer prevention and diet: opportunities in Europe. *Public Health Nutrition* 4: 473-84
- Rosenberg M. 1989. *Society and the Adolescent Self-Image*. Middletown, CT, Wesleyan University Press.
- Rovio S, Kareholt I, Helkala E-L, Viitanen M, Winblad B, Toumilehto J, Soinen H, Nissinen A and Kivipelto M. 2005. Leisure time physical activity at mid-life and the risk of dementia and Alzheimers disease. *The Lancet Neurology* 4 705-711
- Rye JF and Storstad O. 2004. *Trender i norsk landbruk 2004 [Trends in Norwegian Agriculture 2004]*. Norsk Senter for Bygdeforskning, Trondheim. Rapport Bygdeforskning no. R-04/04. Cited in Haugan L, Nyland R, Fjeldavli E, Meistad T and Braastad B. 2006. Green care in Norway: farms as a resource for the educational, health and social sector in Hassink J and van Dijk M (eds). 2006a. *Farming for Health: Green-care farming across Europe and the United States of America*. Springer. Dordrecht. Available at: [http://library.wur.nl/frontis/farming\\_for\\_health/09\\_haugan.pdf](http://library.wur.nl/frontis/farming_for_health/09_haugan.pdf)
- The Sainsbury Centre for Mental Health. 2003. *The economic and social costs of mental illness*. London.
- School Farms Network. 2007. Website: <http://www.farmgarden.org.uk/school-farms-network.html>
- Scottish Wildlife Trust. 2003. *Natural Greenspaces in Towns and Cities*. Scottish Wildlife Trust, Edinburgh
- Sempik J, Aldridge J and Becker S. 2002. *Social and Therapeutic Horticulture: Evidence and messages from research*. Rep. Evidence issue 6, Loughborough University, Thrive & ccf (Centre for child and family research)
- Sempik J, Aldridge J and Becker S. 2003. *Social and Therapeutic Horticulture: Evidence and messages from research*. Rep. Evidence issue 6, Loughborough University, Thrive & CCFR (Centre for child and family research)
- Sempik J, Aldridge J and Becker S. 2005. Health, Well-being and Social Inclusion: Therapeutic Horticulture in the UK. Policy press, Bristol.
- Sempik J. 2007. Researching social and therapeutic horticulture for people with mental ill-health: A study of methodology. Thrive in association with the Centre for Child and Family Research, Loughborough University.
- Social Enterprise Coalition. 2008. Website: <http://www.socialenterprise.org.uk/page.aspx?SP=1345>
- Social Exclusion Unit (SEU). 2002. *Reducing Re-Offending by Ex-Prisoners*. London: Office of the Deputy Prime Minister found at: <http://www.socialexclusionunit.gov.uk/downloaddoc.asp?id=64>
- SoFar. 2007. Sofar project website: <http://sofar.unipi.it>
- Staats H and Hartig T. 2004. Alone or with a friend: A social context for psychological restoration and environmental preferences. *Journal of Environmental Psychology* 24: 199-211
- Sustainable development Commission. 2007. *Healthy Futures: The natural environment, health and well-being*. Sustainable development Commission. 2007. Available at: <http://www.sd-commission.org.uk/publications/downloads/HF6-final.pdf>
- Sutherland W. 2004. A Blueprint for the Countryside. *Ibis* 146(2) 230-238
- Takano T, Nakamura K and Watanabe M. 2002. Urban residential environments and senior citizens' longevity in megacity areas: the importance of walkable green spaces. *Journal of Epidemiology and Community Health* 56: 913-8
- Taylor A F, Kuo F E and Sullivan W C. 2001. Coping with ADD: the surprising connection to green play settings. *Environment and Behaviour* 33: 54-77
- Tegtmeier EM and Duffy MD. 2004. External costs of agricultural production in the United States. *Int. J. Agric. Sust.*, 2 (1), 1-20;
- Thrive. 1999. Growth Point issue 79, Autumn, 1999, p. 4



- Thrive. 2007. Website: <http://www.thrive.org.uk/about-thrive-social.asp>
- Townsend M. 2006. Feel blue? Touch green! Participation in forest / woodland management as a treatment for depression. *Urban Forestry and Urban Greening* 5: 111-120.
- Ulrich R S, Simons R F, Losito B D, Fiorito E, Miles M A and Zelson M. 1991. Stress Recovery During Exposure to Natural and Urban Environments. *Journal of Environmental Psychology* 11: 201-30
- Van Elsen T and Kalisch M. 2007. Social Farming in Germany – state of the art. SoFar project. Available at: [http://sofar.unipi.it/index\\_file/State\\_of\\_the\\_Art\\_Germany.pdf](http://sofar.unipi.it/index_file/State_of_the_Art_Germany.pdf)
- Van Schaik J. 1997. *Where Agriculture and Care Meet. Stock taking of Practical Experiences on Care Farms*. Stichting Omslag, Vorden, 168 pp. (in Dutch) cited in Hassink J, Zwartbol Ch, Agricola H, Elings M and Thissen J. 2007. Current status and potential of care farms in the Netherlands. *Wageningen Journal of Life Sciences* NJAS 55(1)
- Walking the Way to Health. 2007. Website: <http://www.whi.org.uk/details.asp?key=2133|0|33B8275939023|p|827|0&parentkey=2133|0|33B8275939023|p|827|0>
- Wanless D. 2002. *Securing Our Future Health: Taking a Long-Term View*. London
- West Mercia Constabulary. 2008. *Care Farming: Harvesting the Benefits. A Review of Herefordshire PPO Scheme use of SHIFT/BODS Care Farm*. Report representing a collaboration between NCFI(UK), West Mercia Constabulary, West Mercia Probation Services and Herefordshire Community Safety and Drugs partnership. (In press)
- Whitehouse S, Varni J W, Seid M, Cooper-Marcus C, Ensberg M J, Jacobs JR and Mehlenbeck R S. 2001. Evaluating a children's hospital garden environment: utilisation and consumer satisfaction. *Journal of Environmental Psychology* 21: 301-314
- World Health Organisation (WHO). 2007. Website: [http://www.who.int/mental\\_health/management/depression/definition/en/](http://www.who.int/mental_health/management/depression/definition/en/)

## Appendix A – The care farming questionnaire

# Care Farming in the UK

### Can you spare a few minutes to answer our questionnaire?

**Care Farming** can be defined as the use of farms and agricultural landscapes as a base for promoting human mental and physical health - combining productive farming and land management with elements of health & social care

The National Care Farming Initiative (UK), Natural England and the University of Essex are carrying out the first study into Care Farming in the UK. Currently there is very little information and we would like to find out more - How many people are care farming? Who is doing what and where? Why? How many care farms are there in the UK? What is being achieved?

We are sending this questionnaire out to everyone that we know of who is involved in Care Farming in some way and the results of the survey will be announced at the 2007 National Care Farming Conference on March 27<sup>th</sup>. Please help us to find out more so that we can continue working to promote and support the expansion of care farming throughout the UK. We value your comments and would be most grateful if you could spare the time to complete our questionnaire.

Any information given to us will be treated in strictest confidence and will not be passed on to a third party. When you have completed the questionnaire please return to Rachel Hine by email to [rehine@essex.ac.uk](mailto:rehine@essex.ac.uk), to the Freepost address: Rachel Hine, Centre for Environment and Society, University of Essex, Freepost NATE1541, Colchester CO4 3SB or by fax to 01206 872592.

Thank you

Name of farm/project

Contact name

Address:

Postcode:

Phone:

Email:

Website:

1. Size of farm/ project in hectares  or size of farm in acres

2. What enterprises / land uses do you have on your farm? (please tick relevant boxes)

Field crops	<input type="checkbox"/>	Commercial orchard fruit	<input type="checkbox"/>
Crops for stock feeding	<input type="checkbox"/>	Soft fruit	<input type="checkbox"/>
Vegetables and salads	<input type="checkbox"/>	Grassland and rough grazing	<input type="checkbox"/>
Woodland	<input type="checkbox"/>	Other land	<input type="checkbox"/>

3. What livestock do you have on your farm? (please tell us approximate numbers)

Cattle - dairy	<input type="text"/>	Chickens - broiler	<input type="text"/>
----------------	----------------------	--------------------	----------------------

Cattle - beef	<input type="checkbox"/>	Chickens - laying	<input type="checkbox"/>
Pigs	<input type="checkbox"/>	Ducks, geese	<input type="checkbox"/>
Sheep	<input type="checkbox"/>	Other poultry	<input type="checkbox"/>
Equine – horses, donkeys	<input type="checkbox"/>	Small animals	<input type="checkbox"/>
Other (please tell us)	<input type="checkbox"/>		

**4. Why did you start care farming? (your initial motivation)**

**5. How many years have you been engaged in care farming?**

**6. What kind of organisation are you? (please tick relevant box)**

Farm	<input type="checkbox"/>	City Farm	<input type="checkbox"/>
Therapeutic Community	<input type="checkbox"/>	Co-operative	<input type="checkbox"/>
Charity	<input type="checkbox"/>	Local Authority – Social Services	<input type="checkbox"/>
Charity & company limited by guarantee	<input type="checkbox"/>	Local Authority - other	<input type="checkbox"/>
Community group	<input type="checkbox"/>	NHS/ Health Care Trust	<input type="checkbox"/>
Company	<input type="checkbox"/>	NHS/ Social Services (joint)	<input type="checkbox"/>
Other (please specify)	<input type="checkbox"/>		

**7. Does your farm make provision for residential clients?**

Yes

No

**8. How many individuals use your care farm in a typical week?**

**9. Who are the main groups of people that attend the care farm? (by “main” we mean approx 20% or more of the people who attend) (please tick relevant boxes)**

Autism (and challenging behaviour)	<input type="checkbox"/>	Multiple disabilities	<input type="checkbox"/>
Black and ethnic minority groups	<input type="checkbox"/>	Offenders	<input type="checkbox"/>
Disaffected youth	<input type="checkbox"/>	Older people	<input type="checkbox"/>
Drug and alcohol misuse	<input type="checkbox"/>	Physical disabilities	<input type="checkbox"/>
Ex offenders	<input type="checkbox"/>	Refugees/ asylum seekers	<input type="checkbox"/>
Hearing impaired	<input type="checkbox"/>	Rehabilitation after accident/ illness	<input type="checkbox"/>
Homeless and vulnerably housed	<input type="checkbox"/>	Unemployed	<input type="checkbox"/>
Learning difficulties	<input type="checkbox"/>	Visually impaired	<input type="checkbox"/>
Mental health needs	<input type="checkbox"/>	Women only groups	<input type="checkbox"/>
Other (please specify)	<input type="checkbox"/>		

**10. Which of the following describes what your farm/ project provides? (please tick all relevant boxes)**

Basic skills training	<input type="checkbox"/>	Sheltered work (paid)	<input type="checkbox"/>
Day care	<input type="checkbox"/>	Sheltered work (unpaid)	<input type="checkbox"/>
Leisure activity	<input type="checkbox"/>	Supported employment	<input type="checkbox"/>
Rehabilitation	<input type="checkbox"/>	Horticultural Therapy	<input type="checkbox"/>
Social skills development	<input type="checkbox"/>	Animal Assisted Therapy	<input type="checkbox"/>
Accredited training (NVQ etc)	<input type="checkbox"/>	Work skills training	<input type="checkbox"/>
Other (please specify)	<input type="checkbox"/>		

**11. How are your clients/ patients/ participants referred to the project? (please tick relevant boxes)**

By GP	<input type="checkbox"/>	By Community Mental Health Teams	<input type="checkbox"/>
By the Probation Service	<input type="checkbox"/>	By Social Services	<input type="checkbox"/>
Self Referral	<input type="checkbox"/>		
By other agencies, organisations or individuals (please specify)			

**12. How many days a week are spent care farming**      days  or hours

**13. Which of the following best describes your site? (please tick only one box)**

Farm	<input type="checkbox"/>	City Farm	<input type="checkbox"/>
Community Garden	<input type="checkbox"/>	Garden	<input type="checkbox"/>
Allotment	<input type="checkbox"/>	Park/ open space	<input type="checkbox"/>
Other (please specify)			

**14. Staffing** – please tell us about the staff who work with the care farming part of your farm/ project.

**How many full-time paid staff do you have on the care farm?**

**How many part-time paid staff do you have on the care farm?**

**How many volunteer staff do you have on the care farm?**

**15. Do you, your partner or your farm staff, have formal qualifications in...**

Farming	<input type="checkbox"/>	Horticulture	<input type="checkbox"/>
Animal Assisted Therapy	<input type="checkbox"/>	Horticultural therapy	<input type="checkbox"/>
Health or Social Care	<input type="checkbox"/>	Teaching	<input type="checkbox"/>
Other (please specify)			

**16. Where applicable, what is the approximate typical fee per client per session?**

**17. How long is your typical session?** (e.g. 2 hours, day, half day etc)

**18. What are your sources of funding?** (please tick relevant boxes and/or let us know percentage of total funding if possible)

Charitable trusts	<input type="checkbox"/>	%	Community Fund	<input type="checkbox"/>	%
Social firms	<input type="checkbox"/>	%	Health trusts (other than client fees)	<input type="checkbox"/>	%
Client fees - direct payment by clients	<input type="checkbox"/>	%	Client fees – paid by local authorities or social services	<input type="checkbox"/>	%
Client fees – paid by health care trusts	<input type="checkbox"/>	%	Corporate or commercial sources	<input type="checkbox"/>	%
Central Government (including regional offices)	<input type="checkbox"/>	%	Learning and Skills Council	<input type="checkbox"/>	%
Self-generated sales	<input type="checkbox"/>	%	Local Authority (other than client fees)	<input type="checkbox"/>	%
Other (please specify)					

**19. How do you currently monitor or evaluate the effectiveness of your care farm?**

We don't at the moment		Informal discussion	
Written evaluation		External assessment/ quality assurance	
Other ( <i>please specify</i> )			

**20. Which of the following *physical* benefits do you think your care farm provides to the users?**

Improved physical health		Development of other skills	
Development of farming skills			
Other ( <i>please specify</i> )			

**21. Which of the following *mental health* benefits do you think your care farm provides to the users?**

Increased self-esteem		Increased awareness	
Improved mood		Increased well-being	
Other ( <i>please specify</i> )			

**22. Which of the following *social* benefits do you think your care farm provides to the users?**

Social skills		Team working	
Independence		Increased personal responsibility	
Work success		Development of work habit	
Academic success		Employment opportunities	
Other ( <i>please specify</i> )			

**23. What would you say are the biggest challenges, problems or limitations facing your care farm?**

**24. What would you say have been biggest successes on your care farm?**

**25. What help or support from the National Care Farming Initiative would make things easier?**

**26. What makes care farming special for you?**

**Thank you very much for taking the time to complete our questionnaire**

Please send completed questionnaire by the end of April to: Rachel Hine, Centre for Environment and Society, University of Essex, Freeport NATE1541, Colchester CO4 3SBR.

If you have any queries about this research please contact Rachel Hine on 01206 872219 or email: [rehine@essex.ac.uk](mailto:rehine@essex.ac.uk) If you would like to know more about the National Care farming Initiative (UK) please contact Debbie Wilcox on [enquiries@ncfi.org.uk](mailto:enquiries@ncfi.org.uk) or see website <http://www.ncfi.org.uk>



## Appendix B. Care farms participating in the research

- Gorgie City Farm  
Sandhills project - Youth  
Recreation and Leisure  
(SPYRALS)
- Newham City Farm
- Heeley City Farm
- Down to Earth Environmental  
Education Centre & Community  
Farm
- Gorgie City Farm
- Felicia Park Urban Community  
Farm
- Rice Lane City Farm
- Wellgate Community Farm
- Freightliners City Farm
- Lambourne End Centre
- Stonebridge City Farm
- Swansea City Farm
- Spitalfields City Farm
- Bath City Farm
- Coventry City Farm
- Tam O'Shanter Urban Farm
- Lawrence Weston Community  
Farm
- Deen City Farm
- Tickwood
- Carlshead Ltd
- Hampton Hayes Farm
- Commonwork
- Highfields Happy Hens
- Cronkshaw Fold Farm and Study  
Centre
- Lewstone Farm
- Rising sun
- Pennyhooks Project
- Top Barn Training
- Watershed Riding for the Disabled  
group
- Lower Shaw Farm
- Growing Well
- Willowdene Farm
- Glachbeg Croft Education centre
- Houghton Project
- Amelia Methodist Trust Farm
- Friends Of Animals League
- Uttoxeter Community Farm
- Warriner School Farm
- Monkshill Farm - The Royal School  
for Deaf Children and Westgate  
College
- VSA Easter Anguston Farm
- Glevum Farm Trust
- Millenium Farm Trust
- Game Lea Farm
- Farms for Families
- Milbury Voyage Bird and Animal  
Centre
- Lords House Farm
- Coleg Elidyr
- Norman Wood Farm Project
- Horticulture for the Disabled at Elm  
Farm
- Home Farm, Hartbury College
- Gilead Foundation
- The Magdalen Project
- Caring For Life
- Larkrise Community Farm
- Unstone Grange Organic Growing  
Project
- Valley Farm Centre
- Bods
- Ponderosa Rural Therapeutic  
Centre
- Gardening and Horticultural  
Enterprise
- Ruskin Mill College – Gables Farm
- Kirkley Hall
- Thrift Farm
- BOLTON WISE
- Loch Arthur Farms
- HM Prison Service - Kirkham
- Jigsaw Environmental
- HM Prisons - Grendon & Springhill
- Oathill Community College
- Farms for City Children
- South of England Rare Breeds  
Centre
- The Mount Camphill
- Landmarks

### Appendix C. Between farm differences in participant general information from health benefit analysis study.

Name of care farm	Gender split (%Male: % Female)	Age range and mean age
Houghton Project	100:0	18-58 (M=37)
Wellgate	55:45	16-51 (M=28)
Lambourne End	56:44	16-53 (M=27)
Willowdene	100:0	27-43 (M=33)
Amelia Trust	50:50	16-19 (M=17)
Top Barn	71:29	21-65 (M=44)
Bods	75:25	19-46 (M= 29)
All farms	76:24	16-65 (M=34)

Name of care farm	Range in length of time visiting the care farm (in months)	How long spent on farm per visit (in hours)
Houghton Project	1-48	4-7
Wellgate	1-264	4-8
Lambourne End	1-120	2-8
Willowdene	1-18	3-8
Amelia Trust	18-48	4-8
Top Barn	1-84	4-7
Bods	2-30	3-5
All farms	1-264	2-8

Name of care farm	Frequency of visits to care farm (% of participants)				
	3-4 times a week	Twice a week	Once a week	Once a fortnight	Once a month
Houghton Project	28	22	50	0	0
Wellgate	46	36	18	0	0
Lambourne End	100	0	0	0	0
Willowdene	100	0	0	0	0
Amelia Trust	0	75	25	0	0
Top Barn	12	41	47	0	0
Bods	25	0	0	50	25
All farms	42	25	28	3	2